Surface Water Supply of the United States 1954

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

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1331

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

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Prepared under the direction of J. V. B. WELLS, *Chief, Surface Water Branch*

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SCOPE OF WORK

This volume is one of a series of 18 reports presenting measurements of stage, discharge, and content of streams, lakes, and reservoirs in the United States during the water year ending September 30, 1954. Since 1888, when the United States Geological Survey first studied streamflow in relation to problems of irrigation, similar measurements have been made at more than 13,050 gaging stations in the 48 States and at many others in the Territories of Alaska and Hawaii. On September 30, 1954, the Geological Survey and cooperating organizations were maintaining 6,750 gaging stations, including those in Alaska and Hawaii. Discharge measurements only were made at many other points in the 1954 water year, most of which are published at the end of each 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 Commission, H. P. Koppleman, chairman, and W. S. Wise, director; city of Hartford, Department of Public Works, C. W. Cooke director; city of New Britain, Board of Water Commissioners, J. J. Kiniry, chairman, succeeded by Russell Willoughby, and G. W. Wood, chief engineer.

Maine: Maine Public Utilities Commission, S. T. Pike, chairman.

Massachusetts: State Department of Public Health, S. B. Kirkwood, commissioner, and C. I. Sterling, Jr., chief sanitary engineer; State Department of Public Works, J. A. Volpe, commissioner; Metropolitan District Commission, C. W. Greenough, commissioner, and H. J. Toole, director and chief engineer of Water Division; city of Attleboro, C. K. Brennan, mayor.

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

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

Vermont: Water Conservation Board, Philip Shutler, 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 39 gaging stations, of which 1 was in Connecticut, 11 in Massachusetts, 6 in New Hampshire, and 11 in Vermont.

Full cooperation exists between the Geological Survey of the United States Department of the Interior and the Water Resources Branch, Department of Northern Affairs and National Resources, Canada. On waters adjacent to the international boundary, certain stations are maintained jointly by the United States and Canada under the terms of the Boundary Waters Treaty of 1909, and others are maintained under a subsequent agreement between the two Governments. The records from all these stations are obtained in such a

manner as to be equally acceptable and available in both countries. These stations are herein designated 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: Bangor Hydro-Electric Co., St. Croix Paper Co., and Union Water Power Co.

Massachusetts: New England Power Association, Western Massachusetts Electric Co., and Worcester Electric Light 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	420 Statehouse.
Massachusetts c/	Boston	939 Post Office Building.
New Hampshire d/	Boston, Mass	Do
Rhode Island	...do	Do
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 Wentworth 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. Provisional records of discharge prior to publication, and other unpublished data concerning the gaging station records may usually 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:

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 is the depth to which an area would be covered if all the water draining from it in a given period were uniformly distributed on its surface. The term is used for comparing runoff with rainfall, which is also usually expressed in inches.

Acre-foot is the quantity of water required to cover an acre to the depth of 1 foot and is equivalent to 43,560 cubic feet. The term is commonly used in relation to storage for irrigation.

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 OF LISTING GAGING STATIONS

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.

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. Typical structures in use at gaging stations are shown in figure 1.

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 determinations of peak discharge (such as slope-area or contracted-opening determinations, 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, this 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 and runoff of the stream. Records are published for the water year which begins on October 1 and ends on September 30. A calendar for the water year 1954 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 the 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,

PREFACE

This report was prepared by the Geological Survey in cooperation with the States of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont, and with other agencies, by personnel of the Water Resources Division, C. G. Paulsen, chief, under the general direction of J. V. B. Wells, chief, Surface Water Branch, and B. J. Peterson, chief, Annual Reports Section.

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

B. L. Bigwood----------Hartford, Conn.
H. B. Kinnison----------Boston, Mass.
M. R. Stackpole----------Augusta, Maine

CALENDAR FOR WATER YEAR 1954

OCTOBER 1953

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 1953

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 1953

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 1954

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 1954

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						

MARCH 1954

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 1954

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 1954

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 1954

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 1954

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 1954

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 1954

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		

A, OTTER BROOK NEAR KEENE, N. H.

B, PEQUABUCK RIVER AT FORESTVILLE, CONN.

C, MILL RIVER AT NORTHAMPTON, MASS.

FIGURE 1.—GAGING-STATION STRUCTURES.

and datums of previous gages used during the period of records available. 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 indicator, 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. Runoff 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 usually given in the first report in which data for the reservoir are published, but it is omitted from succeeding reports.

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.

Runoff 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 runoff in inches are not published unless storage or diversion records are included to indicate the extent of the regulation or diversion, or unless satisfactory adjustments can be made 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

To facilitate publication of the annual series of reports, the area of the United States is divided into 14 parts whose boundaries coincide with certain natural drainage lines. Formerly, the results of streamflow measurements were published in 14 volumes, one for each of the 14 parts. Beginning with the reports for 1951, the records are 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 2.

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.

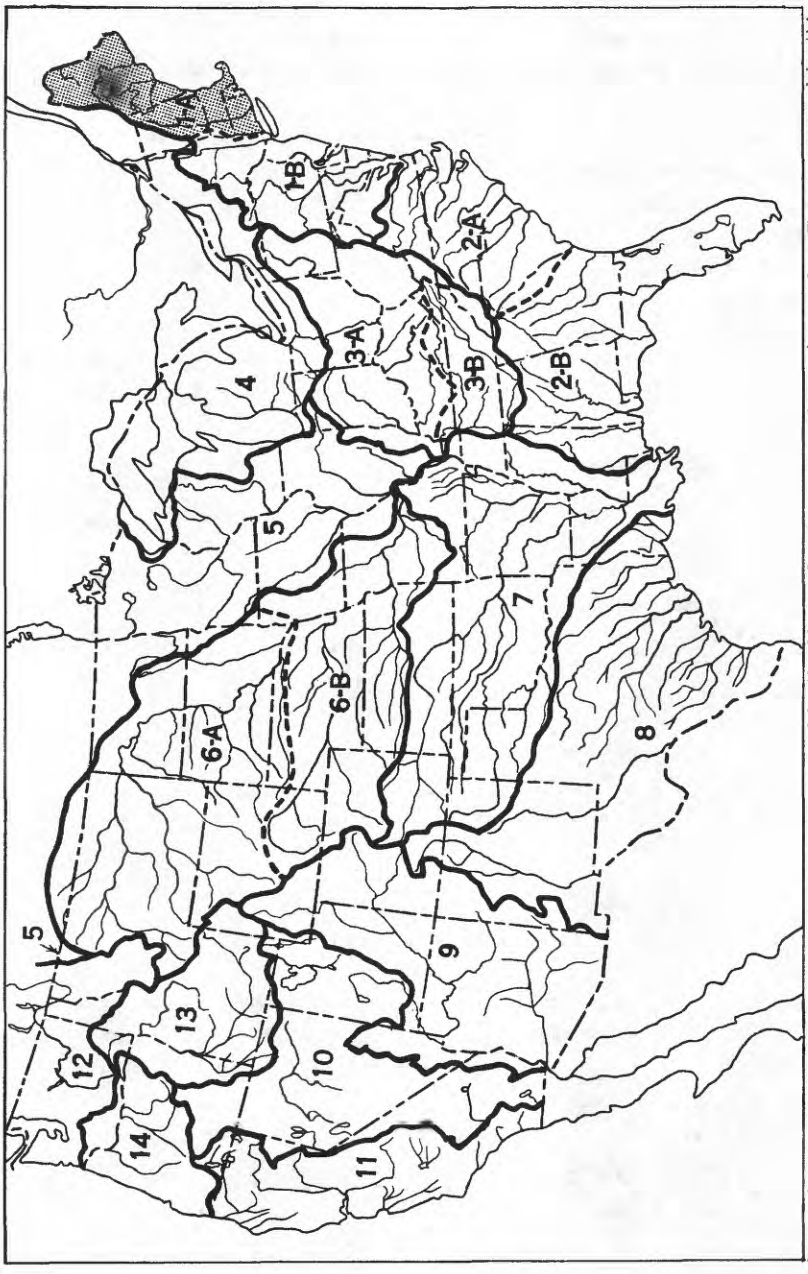

Figure 2.--Map of the United States showing areas covered by the 18 annual volumes on surface-water supply. The area covered by this report is shaded.

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.
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, 1899-1954

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

The records at most of the stations discussed in these reports extend over many years. Discharge measurements at many points other than regular gaging stations have been made each year and are published under "Miscellaneous discharge measurements" at the end of each report. The streams and points of measurement are listed in the same order as the streams and gaging stations in the body of the report. An index of the records obtained before 1904 has been published in Water-Supply Paper 119.

A compilation of records for the area covered by this report through September 1950 has been published as WSP 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.

Records of discharge have been published also in State reports. Most of these records are also compiled in Water-Supply Paper 1301, however, some of them are not contained in publications of the Geological Survey. The following table contains a list of these reports for the area covered by this report.

State reports containing compilations of records of discharge

State	Period	Report	Issued by
Connecticut...	1900-1927	Bull. 44, Water resources of Connecticut.....	State Geological and Natural History Survey.
Do.....	1912-33	5th biennial report.....	State Water Commission.
Maine.....	1887-1920	1st annual report.....	Maine Water Power Commission.
New Hampshire.	1889-1922	Annual and statistical report, vol. 12.....	Public Service Commission.
Rhode Island..	1929-41	7th annual report.....	Department of Public Works.
Do.....	1929-50	Geological Bull. 6, Ground-water resources of Rhode Island.	Rhode Island Development Council.

Note.--In addition to the records contained in the reports listed above, the following States have issued annual or biennial reports in which are contained records of discharge: Connecticut, Maine, and Rhode Island.

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:

Report

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.
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.

RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

The following table contains a list of gaging stations for the area covered by this report, at which records of discharge were collected during the water year October 1953 to September 1954 by agencies other than the Geological Survey. The records of these stations are

not contained in publications of the Geological Survey, nor have they been published elsewhere.

Records of discharge collected by agencies other than the Geological Survey

Stream	Location	Period	Collected by
Androscoggin River.....	Lewiston, Maine.....	1929-54	Central Maine Power Co.
Kennebec River.....	Bingham, Maine.....	1931-54	Do.
Penobscot River.....	Old Town, Maine.....	1915-54	T. W. Clark.
Race Brook.....	Orange, Conn.....	1911-54	New Haven Water Co.
Saco River.....	Hiram, Maine.....	1930-54	Central Maine Power Co.
Do.....	West Buxton, Maine.....	1940-54	Do.
Stillwater Branch Penobscot River.	Stillwater, Maine.....	1915-54	T. W. Clark.
Wepawang River.....	Orange, Conn.....	1911-54	New Haven Water Co.
West River.....	Guilford, Conn.....	1930-54	Do.

HYDROLOGIC CONDITIONS

Streamflow during the 1954 water year averaged slightly above median to excessive over most of the area covered by this report. Runoff was deficient over most of the area during most of October; heavy precipitation late in October brought runoff for the month up to near median. Runoff was also deficient in southern New Hampshire and southwestern Maine during January and in southeastern Massachusetts during March. Medium-high stages were experienced over most of the area August 31 and September 1 due to hurricane Carol. Moderate floods and record or near record-high monthly runoff for September occurred over most of the area as a result of the passage of hurricane Edna and accompanying rainfall on Sept. 11. For two key gaging stations in the area covered by this report, a comparison of the monthly and yearly mean discharge during the 1954 water year with the median discharge for the 25-year period 1921-45 is shown in figure 3 on the following page.

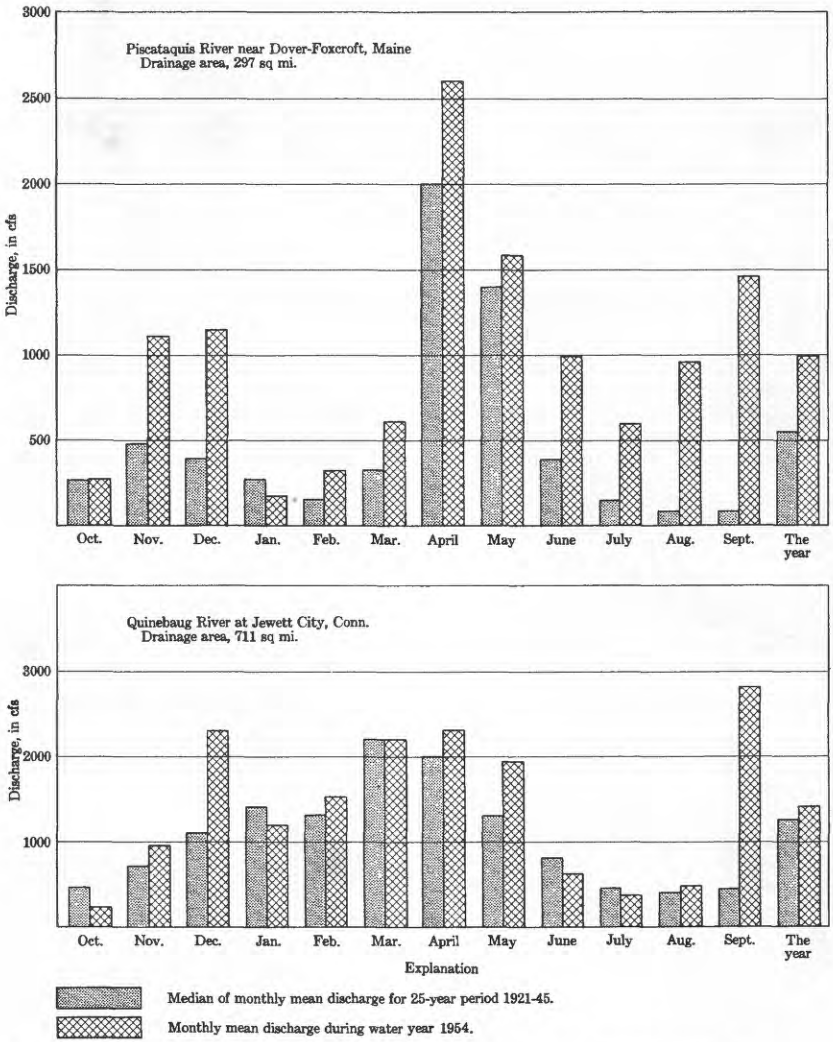

Figure 3. Comparison of discharge at two key gaging stations during 1954 water year with median discharge for 25-year period.

ST. JOHN RIVER BASIN

St. John River at Ninemile Bridge, Maine

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

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

Records available.--November 1950 to September 1954.

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

Extremes.--Maximum discharge during year, 27,800 cfs Apr. 23 (gage height, 9.81 ft), from rating curve extended above 15,000 cfs by logarithmic plotting; maximum gage height, 10.39 ft Apr. 12 (backwater from ice); minimum discharge, 120 cfs Oct. 7 (gage height, 0.58 ft).
1950-54: Maximum discharge, that of Apr. 23, 1954; minimum, 59 cfs Sept. 5, 1953 (gage height, 0.25 ft).

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

Rating table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.5	102	3.0	2,180
.7	149	4.0	4,230
1.0	240	5.0	7,050
1.3	368	6.0	10,700
1.6	551	7.0	14,600
2.0	882	8.0	18,700
2.5	1,430	9.6	26,700

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	176	1,200	1,350	610	250	1,690	425	7,480	3,200	7,150	1,470	810
2	165	1,060	1,070	550	245	1,870	420	8,060	6,810	6,570	1,290	2,000
3	*149	928	846	510	255	1,810	405	7,820	14,800	8,410	1,040	2,070
4	142	1,020	855	470	270	1,490	385	7,720	13,500	6,420	937	2,090
5	132	1,460	900	435	270	1,430	375	13,600	9,940	4,380	1,080	2,260
6	122	1,260	1,740	410	280	1,310	365	17,000	5,880	3,180	*1,430	1,900
7	146	937	2,620	390	305	1,190	355	17,400	9,070	2,640	1,470	1,530
8	185	828	5,420	375	310	1,090	425	14,500	7,890	2,880	1,230	1,420
9	282	766	5,230	360	315	1,020	495	11,500	6,390	2,510	1,010	1,760
10	484	706	4,520	330	320	975	665	10,700	4,930	2,020	819	1,700
11	775	666	5,200	320	320	880	975	9,790	3,710	1,660	1,040	1,730
12	956	*625	5,230	310	320	830	1,390	10,000	2,900	1,350	5,600	10,600
13	819	588	4,360	290	310	775	1,940	8,770	2,280	1,310	10,500	13,800
14	657	544	3,420	285	305	705	2,800	6,920	1,940	1,980	9,150	11,300
15	538	511	2,260	275	300	655	3,760	5,500	1,660	1,990	6,620	8,920
16	441	491	1,360	270	300	610	5,140	4,440	1,360	1,700	4,600	7,190
17	379	478	975	265	*295	575	6,990	3,670	1,140	1,290	3,490	5,550
18	330	478	665	265	300	540	10,600	3,200	937	984	2,940	4,130
19	291	472	625	*265	310	495	15,600	2,820	783	810	2,250	3,250
20	263	472	665	265	335	485	20,000	2,440	657	905	1,740	2,940
21	240	472	775	265	380	480	20,400	2,130	566	1,240	1,380	3,040
22	220	454	880	260	435	470	21,600	2,380	570	1,470	1,100	2,860
23	203	447	955	260	495	*465	26,600	4,220	1,190	2,740	900	3,180
24	188	466	975	260	595	455	24,700	4,330	1,810	3,990	775	3,180
25	173	666	965	260	705	440	19,600	3,690	1,380	3,850	715	2,710
26	173	875	930	255	880	440	14,900	3,530	*993	3,040	837	2,630
27	176	2,680	880	255	1,120	440	*11,700	3,380	1,190	2,200	1,050	3,200
28	188	2,770	820	250	1,430	440	9,220	2,770	10,300	1,980	1,050	3,270
29	259	2,250	775	250	-	435	7,720	2,570	13,500	1,580	873	3,350
30	710	1,780	705	250	-------	430	7,220	3,270	9,880	1,330	682	3,530
31	1,120	-------	650	250	-------	425	-------	3,830	-------	1,300	588	-------
Total	11,082	28,350	58,621	10,065	11,955	25,345	237,170	209,430	141,156	84,859	69,656	117,900
Mean	357	945	1,891	325	427	818	7,906	6,756	4,705	2,737	2,247	3,930
Cfsm	0.277	0.733	1.47	0.252	0.331	0.634	6.13	5.24	3.65	2.12	1.74	3.05
In.	0.32	0.82	1.70	0.29	0.34	0.73	6.84	6.04	4.07	2.44	2.01	3.40

Calendar year 1953: Max 17,200 Min 63 Mean 1,978 Cfsm 1.53 In. 20.82
Water year 1953-54: Max 26,600 Min 122 Mean 2,755 Cfsm 2.14 In. 29.00

Peak discharge (base, 10,000 cfs).--Apr. 23 (6:30 p.m.) 27,800 cfs (9.81 ft); May 7 (3:30 a.m.) 18,100 cfs (7.87 ft); June 3 (2:30 p.m.) 15,600 cfs (7.24 ft); June 28 (10 p.m.) 15,200 cfs (7.14 ft); Aug. 13 (11:30 a.m.) 10,700 cfs (6.01 ft); Sept. 12 (10:30 p.m.) 14,800 cfs (7.04 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 15 to Apr. 16.

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 Allagash River.

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

Records available.--July 1910 to November 1911 (published as "near Dickey"), September 1946 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 590 ft (from topographic map). July 5, 1910, to Nov. 21, 1911, staff gage at site 1,000 ft downstream at different datum.

Average discharge.--8 years (1946-54), 4,684 cfs.

Extremes.--Maximum discharge during year, 58,600 cfs Apr. 24 (gage height, 15.10 ft); maximum gage height, 18.48 ft Apr. 13 (backwater from ice); minimum daily discharge, 255 cfs Oct. 6.

1910-11, 1946-54: Maximum discharge, 68,700 cfs May 9, 1947 (gage height, 16.30 ft), from rating curve extended above 54,000 cfs; 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 or no gage-height record, which are fair.

Revisions.--WSP 1141: Drainage area.

Rating tables, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-24		Oct. 25 to Sept. 30			
1.3	229	1.8	315	6.0	8,500
1.5	354	2.0	500	7.0	11,600
1.7	500	2.5	1,080	9.0	19,500
1.9	660	3.0	1,770	11.0	30,000
2.2	940	4.0	3,600	13.0	42,800
2.5	1,250	5.0	5,810		
2.8	1,620				

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	370	1,680	2,810	1,580	535	2,450	1,040	16,800	6,940	16,200	3,970	2,170
2	345	1,770	2,220	1,480	535	2,720	980	18,600	7,240	12,600	3,820	2,830
3	310	1,580	1,820	1,340	520	2,680	930	19,100	22,000	14,700	3,190	4,140
4	295	1,480	1,650	1,280	520	2,640	860	18,200	28,100	13,400	*3,060	4,540
5	275	1,660	1,770	1,170	510	2,600	835	24,100	20,600	10,000	6,090	5,240
6	255	2,120	1,960	1,080	510	2,490	860	35,000	16,300	7,510	7,260	4,870
7	305	1,800	3,910	980	500	2,410	1,000	39,100	16,500	6,250	6,150	3,900
8	390	1,580	7,990	905	500	2,340	1,310	32,700	14,900	5,950	4,870	3,290
9	590	1,450	9,520	835	500	2,270	1,770	29,600	12,400	5,810	3,880	3,170
10	1,010	1,350	*8,170	810	490	2,180	2,360	23,900	10,200	4,870	3,150	3,380
11	1,620	1,280	7,310	780	490	2,070	3,300	24,400	8,060	4,120	3,510	3,260
12	2,000	1,220	7,790	745	480	1,980	3,910	24,400	6,630	3,440	9,070	16,700
13	1,710	1,160	7,120	720	460	1,900	5,570	21,600	5,430	3,140	18,200	30,000
14	*1,500	1,090	5,830	670	440	1,830	7,340	17,000	4,630	3,520	16,800	23,400
15	1,200	1,060	4,890	665	430	1,770	9,250	13,600	3,950	4,370	12,400	16,200
16	925	980	3,820	645	*410	1,740	10,800	11,500	3,440	4,090	9,200	12,200
17	795	992	2,700	610	420	1,650	12,600	9,760	3,060	3,480	7,560	9,670
18	690	980	1,520	600	470	1,590	16,300	8,650	2,890	2,940	6,630	7,620
19	610	980	1,080	575	545	1,540	27,900	7,580	2,660	2,810	5,550	6,250
20	550	1,020	955	*555	700	1,490	35,300	6,580	2,270	3,230	4,500	5,590
21	500	1,040	1,080	565	835	1,440	39,600	5,860	1,850	3,440	3,780	6,000
22	460	1,040	1,210	555	980	1,380	43,800	5,590	1,740	3,900	3,190	6,080
23	425	1,060	1,410	555	1,180	1,340	53,400	7,230	2,130	4,240	2,960	6,280
24	390	1,090	1,620	545	1,340	*1,330	*55,700	9,400	2,940	6,100	2,830	*6,550
25	*360	1,170	1,930	535	1,550	1,260	45,000	8,620	3,290	6,860	2,850	6,030
26	350	2,030	2,020	545	1,770	1,180	32,700	8,030	2,770	6,100	2,910	5,500
27	*340	3,840	1,930	555	2,020	1,140	24,300	7,510	2,590	5,190	2,890	5,710
28	366	5,170	1,900	555	2,270	1,110	19,500	6,600	17,400	4,690	2,890	6,030
29	544	4,540	1,800	555	-	1,080	16,800	5,690	30,600	4,090	2,910	6,280
30	847	3,620	1,740	535	-------	1,080	16,100	5,790	22,700	3,420	2,680	6,760
31	1,070	-------	1,650	510	-------	1,070	-------	7,040	-------	3,560	2,270	-------
Total	21,397	51,832	103,125	24,035	21,910	55,750	491,115	479,510	286,210	184,020	171,020	229,640
Mean	690	1,728	3,327	775	783	1,798	16,370	15,470	9,540	5,936	5,517	7,655
Cfsm	0.256	0.640	1.23	2.87	0.290	0.666	6.06	5.73	3.53	2.20	2.04	2.84
In.	0.30	0.71	1.42	0.33	0.30	0.77	6.76	6.61	3.94	2.54	2.35	3.17

Calendar year 1953: Max 41,500 Min 200 Mean 4,014 Cfsm 1.49 In. 20.18
Water year 1953-54: Max 55,700 Min 255 Mean 4,807 Cfsm 2.15 In. 29.20

Peak discharge (base, 27,000 cfs).--Apr. 24 (1 a.m.) 58,600 cfs (15.10 ft); May 7 (8 a.m.) 39,800 cfs (12.57 ft); June 4 (2:30 a.m.) 29,700 cfs (10.95 ft); June 29 (5 a.m.) 32,400 cfs (11.43 ft); Sept. 13 (8:30 a.m.) 31,000 cfs (11.19 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 20 to Apr. 17 (no gage-height record Mar. 19-23). Doubtful gage-height record Oct. 1-26; discharge computed on basis of 2 discharge measurements and records for stations in St. John River basin.

Allagash River near Allagash, Maine

Location.--Lat 47°04'15", long 69°04'50", on left bank a quarter of a mile upstream from Allagash Inn and 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 1910 to November 1911, September 1931 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 604.6 ft above mean sea level, datum of 1929. July 1910 to November 1911 staff gage at site 3 miles downstream at different datum.

Average discharge.--23 years (1931-54), 1,925 cfs.

Extremes.--Maximum discharge during year, 15,500 cfs Apr. 23 (gage height, 9.31 ft); maximum gage height, 10.54 ft Apr. 18 (backwater from ice); minimum discharge, 168 cfs Oct. 7 (gage height, 1.79 ft).
1910-11, 1931-54: Maximum discharge, 23,400 cfs May 5, 1933 (gage height, 11.32 ft); maximum gage height, 13.14 ft May 1, 1939 (ice jam); minimum daily discharge, 91 cfs Mar. 9-15, 1948.

Remarks.--Records good except those for period of ice effect, which are fair. Some storage in lakes above station.

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

Rating table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.8	171	3.5	1,590
1.9	208	4.0	2,300
2.0	250	5.0	4,000
2.4	480	6.0	6,090
2.6	631	7.0	8,540
2.8	800	8.0	11,400
3.1	1,100	10.0	18,100

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	225	656	1,370	1,310	585	2,000	575	8,280	2,560	8,280	2,470	1,860
2	208	639	1,310	1,260	545	1,890	585	8,540	3,220	8,440	2,270	1,930
3	201	631	1,220	1,140	525	1,720	585	8,380	6,160	9,600	2,060	1,720
4	186	714	1,210	1,080	495	1,590	585	8,440	6,090	7,920	*2,400	1,720
5	175	757	1,400	1,030	480	1,460	575	10,500	5,760	6,630	4,110	1,640
6	171	681	1,450	1,060	465	1,330	570	12,200	5,850	6,000	3,890	1,500
7	193	623	1,940	1,070	440	1,160	625	12,000	5,870	5,450	3,340	1,380
8	242	623	2,880	1,080	425	1,040	715	11,100	5,670	4,980	3,100	1,420
9	279	615	2,560	1,070	410	990	890	10,600	5,390	4,330	2,850	1,370
10	353	608	2,530	1,060	400	890	1,190	11,000	4,980	3,890	2,550	1,290
11	473	576	2,590	1,030	365	845	1,560	11,400	4,530	3,400	3,720	1,660
12	480	553	2,480	1,020	355	800	2,150	10,800	4,020	3,100	8,540	4,820
13	419	546	2,440	980	350	755	3,070	9,830	3,560	2,980	7,280	7,410
14	*382	509	2,320	930	350	740	3,450	8,650	3,220	3,340	5,940	6,000
15	365	495	2,280	890	340	715	3,720	7,890	2,900	3,180	5,230	5,540
16	353	487	2,110	865	*340	705	3,810	7,210	2,630	2,830	4,770	5,100
17	353	480	1,850	825	330	670	4,000	6,420	2,510	2,510	4,650	4,690
18	331	480	1,720	785	310	665	4,390	5,610	2,400	2,270	4,110	4,350
19	299	480	1,560	765	295	655	5,210	4,850	2,260	2,380	3,610	4,060
20	289	480	1,430	*730	290	650	7,070	4,350	2,120	3,220	3,250	3,830
21	274	473	1,460	730	300	640	8,800	4,020	2,000	2,750	2,930	3,580
22	250	473	1,490	720	360	630	11,500	4,000	1,860	2,670	2,640	3,410
23	242	480	1,430	715	480	630	14,900	4,210	2,500	2,790	2,390	3,360
24	*237	531	1,410	705	630	*630	*14,100	3,890	2,390	2,880	2,280	*3,070
25	221	561	1,380	695	755	640	12,400	3,630	1,940	2,750	2,280	2,800
26	216	1,320	1,380	690	890	640	11,100	3,630	1,760	2,610	2,280	2,770
27	216	1,520	1,370	655	1,100	625	9,950	3,320	2,070	2,610	2,140	2,770
28	250	1,800	1,360	640	1,460	610	8,940	2,910	7,910	3,520	1,930	2,800
29	412	1,600	1,360	625	-	600	8,280	2,740	11,700	3,100	1,760	2,930
30	631	1,470	1,340	625	-------	600	8,070	2,770	9,060	2,630	1,630	3,200
31	664	-------	1,330	625	-------	585	-------	2,740	-------	2,610	1,540	-------
Total	9,590	21,861	53,960	27,405	14,070	28,100	153,365	215,710	124,890	125,650	103,940	93,980
Mean	309	729	1,741	884	502	906	5,112	6,958	4,163	4,053	3,353	3,133
Cfsm	0.247	0.583	1.39	0.707	0.402	0.725	4.09	5.57	3.33	3.24	2.68	2.51
In.	0.28	0.65	1.60	0.82	0.42	0.84	4.56	6.42	3.72	3.74	3.09	2.80

Calendar year 1953: Max 10,500 Min 147 Mean 1,774 Cfsm 1.42 In. 19.26
Water year 1953-54: Max 14,900 Min 171 Mean 2,664 Cfsm 2.13 In. 28.94

Peak discharge (base, 5,700 cfs).--Apr. 23 (9 p.m.) 15,500 cfs (9.31 ft); May 6 (8 p.m.) 12,500 cfs (8.37 ft); June 3 (5 p.m.) 6,630 cfs (6.24 ft); June 28 (11:30 p.m.) 13,800 cfs (8.80 ft); Aug. 12 (2 p.m.) 9,430 cfs (7.32 ft); Sept. 12 (2 p.m.) 10,100 cfs (7.56 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 18 to Apr. 19.

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.--496 sq mi.

Records available.--October 1951 to September 1954.

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

Extremes.--Maximum discharge during year, 8,120 cfs Apr. 25 (gage height, 11.03 ft); minimum, 86 cfs Oct. 6 (gage height, 2.18 ft).
1951-54: Maximum discharge, that of Apr. 25, 1954; minimum, that of Oct. 6, 1953.

Remarks.--Records excellent above 200 cfs and good below. Lake area above station has not yet been developed for storage.

Cooperation.--This station is one of the international gaging stations maintained by Canada under agreement with the United States.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.1	68	5.0	1,540
2.3	113	7.0	3,340
2.5	166	9.0	5,540
3.0	339	10.0	6,780
3.5	556	11.0	8,080
4.0	831		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	99	147	524	323	158	447	331	3,730	1,310	735	922	684
2	97	155	515	308	155	542	316	3,590	1,320	800	928	652
3	92	161	482	304	152	580	320	3,590	1,550	915	882	647
4	92	163	442	300	155	657	304	3,630	1,940	989	895	647
5	90	166	434	296	163	712	289	3,660	2,320	1,020	*1,140	647
6	88	166	417	282	166	758	278	3,750	2,400	1,000	1,840	657
7	95	166	447	278	163	782	300	3,960	2,320	935	2,580	636
8	111	172	510	275	158	782	320	4,150	2,160	869	2,680	621
9	113	188	605	264	155	764	368	4,040	2,030	788	2,350	580
10	121	194	735	260	150	729	464	3,880	1,880	735	1,960	547
11	129	200	837	254	147	701	605	3,970	1,720	679	1,910	561
12	139	210	825	246	147	657	794	4,480	1,540	636	2,330	857
13	*142	219	800	240	142	605	976	4,650	1,400	600	3,070	1,460
14	142	223	753	232	139	580	1,160	4,540	1,290	556	3,560	2,210
15	144	226	712	223	139	561	1,260	4,000	1,180	519	3,380	2,410
16	144	229	662	216	139	538	1,300	3,500	1,060	496	2,990	2,240
17	142	229	610	213	139	519	1,360	3,040	976	460	2,560	1,970
18	139	226	556	203	142	487	1,600	2,680	889	434	2,320	1,730
19	139	226	505	197	139	455	2,080	2,420	800	417	2,170	1,540
20	136	226	469	197	139	442	2,940	2,160	735	413	2,030	1,400
21	134	229	447	*197	139	442	3,990	1,950	679	409	1,850	1,300
22	126	232	425	194	161	425	5,030	1,800	626	428	1,650	1,250
23	123	246	421	185	166	*405	6,290	1,720	647	501	1,470	1,210
24	121	254	413	172	188	392	7,520	1,690	610	585	1,310	1,190
25	118	254	392	169	226	380	*8,070	1,660	580	679	1,190	*1,180
26	121	308	384	169	293	376	7,430	1,630	551	807	1,090	1,190
27	121	355	376	169	372	368	6,340	1,560	538	863	976	1,190
28	123	417	368	166	430	347	5,380	1,480	580	895	895	1,200
29	136	487	351	163		347	4,590	1,400	615	922	825	1,200
30	139	519	343	161		343	4,010	1,350	674	928	758	1,240
31	142		335	161		335		1,320		935	701	
Total	3,798	7,193	16,095	7,017	4,962	16,458	76,015	90,980	36,920	21,958	55,212	34,846
Mean	123	240	519	226	177	531	2,534	2,935	1,231	708	1,781	1,162
Cfsm	0.248	0.484	1.05	0.456	0.357	1.07	5.11	5.92	2.48	1.43	3.59	2.34
In.	0.29	0.54	1.21	0.53	0.37	1.23	5.70	6.82	2.77	1.65	4.14	2.61

Calendar year 1953: Max 5,760 Min 88 Mean 843 Cfsm 1.70 In. 23.09
Water year 1953-54: Max 8,070 Min 88 Mean 1,018 Cfsm 2.05 In. 27.86

Peak discharge (base, 3,200 cfs).--Apr. 25 (9 a.m.) 8,120 cfs (11.03 ft); May 8 (4 p.m.) 4,170 cfs (7.82 ft); May 13 (3 p.m.) 4,800 cfs (8.37 ft); Aug. 14 (2:30 p.m.) 3,610 cfs (7.27 ft).
* Discharge measurement made on this day.

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 1954. Published as "at Wallagrass" 1903-8, 1911.

Gage.--Water-stage recorder. Datum of gage is 511.4 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.--30 years (1903-8, 1929-54), 1,357 cfs.

Extremes.--Maximum discharge during year, 9,380 cfs Apr. 24 (gage height, 9.47 ft); minimum, 71 cfs Oct. 7 (gage height, 2.18 ft).
1903-8, 1911, 1929-54: Maximum discharge, 11,000 cfs Apr. 26, 1934, May 8, 1947; maximum gage height, 10.50 ft Apr. 26, 1934; minimum discharge, 46 cfs Oct. 9, 10, 1950.

Remarks.--Records excellent except those below 100 cfs, which are good, and those for period of ice effect, which are fair. Large lake area above station has not yet been developed for storage.

Revisions.--WSP 1001: Drainage area.

Rating tables, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 15				Dec. 16 to Sept. 30			
2.1	55	3.3	479	3.0	354	5.0	2,000
2.2	75	3.6	654	3.3	508	6.0	3,420
2.4	125	4.0	930	3.6	688	8.0	6,660
2.6	187	4.5	1,350	4.0	990	9.5	9,430
2.8	257	5.0	1,860	4.5	1,440		
3.0	335	6.0	3,210				

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	84	207	1,200	1,020	435	575	675	7,120	2,900	2,650	1,990	1,880
2	75	221	1,210	990	410	655	663	6,950	2,860	3,320	1,920	1,740
3	75	235	1,220	965	390	755	638	6,770	3,260	4,000	1,880	1,650
4	77	250	1,230	930	385	840	625	6,590	3,440	4,600	1,780	1,570
5	77	243	1,290	905	375	905	656	6,510	3,500	4,880	*2,650	1,480
6	75	246	1,300	890	365	950	619	6,680	3,580	4,960	*2,840	1,360
7	89	246	1,530	855	365	975	722	6,520	3,630	4,910	2,940	1,300
8	109	287	1,690	825	360	965	804	6,320	3,530	4,760	2,920	1,230
9	125	319	1,770	810	355	920	922	6,130	3,450	4,600	2,820	1,160
10	143	319	1,930	790	365	905	1,010	6,150	3,340	4,330	2,720	1,090
11	158	323	2,050	770	365	880	1,130	6,440	3,200	4,060	3,780	1,390
12	146	327	2,090	755	375	865	1,300	6,700	3,000	3,770	5,790	2,360
13	131	335	2,100	740	380	840	1,410	6,710	2,830	3,500	6,300	2,470
14	128	339	2,110	715	385	825	1,490	6,630	2,690	3,280	6,320	2,600
15	128	344	2,130	690	385	825	1,600	6,400	2,510	3,040	6,100	2,660
16	128	339	2,230	670	385	825	1,720	6,130	2,340	2,830	5,790	2,660
17	125	353	2,130	650	390	820	1,980	5,770	2,170	2,650	5,500	2,650
18	125	357	2,010	640	*395	810	3,060	5,480	2,030	2,440	5,180	2,560
19	125	361	1,900	605	405	810	4,080	5,180	1,890	2,270	4,860	2,490
20	125	361	1,760	590	410	811	4,890	4,860	1,770	2,230	4,540	2,420
21	125	361	1,700	*575	410	825	5,750	4,570	1,650	2,230	4,200	2,260
22	125	366	1,670	565	415	825	7,080	4,360	1,540	2,120	3,880	2,210
23	125	384	1,610	550	415	818	8,800	4,330	1,510	2,040	3,580	*2,120
24	125	389	1,520	530	420	797	*9,300	4,160	1,630	2,000	3,360	1,990
25	120	413	1,440	510	430	*769	9,120	3,980	1,480	1,960	3,070	1,920
26	122	801	1,350	495	435	776	8,750	3,920	1,420	1,890	2,800	1,880
27	125	879	1,300	475	455	748	8,320	3,680	1,340	1,830	2,600	1,810
28	137	986	1,260	465	510	742	7,930	3,500	1,390	1,940	2,400	1,770
29	184	1,070	1,170	455	-	728	7,580	3,310	1,860	2,090	2,210	1,730
30	197	1,150	1,120	445	-------	722	7,320	3,200	2,250	2,090	2,050	1,780
31	211	----	1,080	435	-------	688	-------	3,060	-------	2,050	1,920	----
Total	3,844	12,811	50,100	21,305	11,170	25,194	109,944	168,110	73,990	95,320	110,690	58,190
Mean	124	427	1,616	687	399	813	3,665	5,423	2,466	3,075	3,571	1,940
Cfsm	0.142	0.490	1.86	0.789	0.458	0.933	4.21	6.23	2.83	3.53	4.10	2.23
In.	0.16	0.55	2.14	0.91	0.48	1.08	4.70	7.18	3.16	4.07	4.73	2.49

Calendar year 1953: Max 9,080 Min 75 Mean 1,521 Cfsm 1.75 In. 23.70
Water year 1953-54: Max 9,300 Min 75 Mean 2,029 Cfsm 2.33 In. 31.65

Peak discharge (base, 5,700 cfs).--Apr. 24 (4:30 a.m.) 9,380 cfs (9.47 ft); Aug. 14 (5 a.m.) 6,350 cfs (7.82 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 20 to Mar. 19.

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 1954.

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.--28 years, 9,596 cfs.

Extremes.--Maximum discharge during year, 97,000 cfs Apr. 24 (gage height, 22.17 ft); minimum, 755 cfs Oct. 6, 7 (gage height, 0.80 ft).
1926-54: 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 period of ice effect, which are fair.

Cooperation.--This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Rating table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.8	755	8.0	14,200
1.1	965	9.5	19,700
1.5	1,270	11.0	25,900
2.0	1,710	13.0	35,400
3.0	2,800	15.0	46,100
4.0	4,300	18.0	65,200
5.0	6,200	22.0	95,500
6.5	9,640		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	972	2,550	6,790	4,300	1,820	4,700	3,170	37,600	14,300	32,100	9,720	6,680
2	930	3,010	6,040	3,910	1,790	5,030	3,100	39,200	14,300	28,000	9,460	7,250
3	881	2,980	5,410	3,750	1,750	5,300	3,060	40,400	28,000	30,300	8,690	8,170
4	881	2,850	5,200	3,700	1,750	5,500	2,970	39,000	40,900	30,400	*8,840	8,810
5	818	2,920	5,280	3,730	1,740	5,600	2,940	43,400	35,900	25,800	14,200	9,200
6	776	3,190	5,490	3,860	1,700	5,500	2,900	57,700	30,400	20,600	17,400	9,060
7	853	3,230	6,820	3,910	1,700	5,410	3,170	65,000	29,800	19,400	16,600	7,940
8	1,090	3,170	11,000	3,790	1,700	5,200	3,580	59,700	28,400	18,000	15,100	7,140
9	1,180	2,930	14,900	3,400	1,680	5,010	4,710	50,300	25,600	16,800	13,400	6,660
10	1,460	2,800	*14,700	3,200	1,680	4,860	6,600	47,400	22,000	15,100	11,700	6,620
11	1,820	2,700	13,800	3,050	1,670	4,770	8,190	49,900	19,200	13,000	14,600	7,400
12	2,370	2,630	13,600	3,000	1,660	4,640	10,100	50,000	16,700	11,600	26,800	22,400
13	2,520	2,550	13,500	2,950	1,650	4,550	12,000	46,800	14,400	10,600	37,200	42,600
14	*2,460	2,450	12,200	2,900	1,640	4,460	13,500	41,000	12,600	10,600	37,200	38,200
15	2,200	2,400	11,000	2,800	1,640	4,350	15,500	35,300	11,200	11,100	31,200	29,900
16	1,960	2,340	8,980	2,700	*1,630	4,300	18,000	30,800	10,100	10,900	26,100	24,600
17	1,800	2,310	6,700	2,600	1,620	4,200	18,800	27,400	9,260	9,770	23,100	21,000
18	1,660	2,290	5,900	2,500	1,600	4,100	25,500	24,500	8,500	8,590	20,500	18,100
19	1,530	2,260	5,220	2,410	1,600	4,050	38,600	21,800	7,820	8,010	18,100	15,700
20	1,400	2,290	4,840	*2,350	1,600	3,950	50,600	19,600	7,200	9,330	16,000	14,200
21	1,320	2,330	5,070	2,300	1,610	3,840	62,400	17,600	6,660	9,480	14,100	13,800
22	1,230	2,350	5,410	2,240	1,700	3,810	72,200	16,900	6,390	9,360	12,300	13,700
23	1,170	2,380	5,600	2,210	1,910	3,750	87,500	17,700	6,940	9,770	10,900	13,500
24	1,130	2,430	5,330	2,160	2,300	*3,670	*95,300	19,500	7,560	11,200	10,000	*13,500
25	*1,050	2,600	5,030	2,130	2,680	3,600	84,300	18,900	7,780	12,600	9,410	12,800
26	1,030	3,990	5,030	2,100	3,200	3,540	68,700	18,000	7,050	12,100	9,060	12,000
27	*1,020	6,560	5,120	2,050	3,810	3,500	55,200	16,900	6,700	11,200	8,830	11,800
28	1,050	8,260	5,030	2,020	4,350	3,460	46,100	15,500	18,800	11,600	8,570	12,200
29	1,290	8,580	5,030	1,950	-	3,400	40,800	14,000	46,900	11,100	8,010	12,500
30	1,710	7,560	4,900	1,900	-------	3,350	38,000	13,300	39,300	9,870	7,290	13,500
31	2,090	----	4,700	1,870	-------	3,300	-------	14,100	------	9,480	6,620	-
Total	43,651	100,690	233,620	87,740	55,180	134,700	897,490	*1,009.2	540,660	457,760	481,000	440,930
Mean	1,408	3,356	7,536	2,830	1,971	4,345	29,920	32,550	18,020	14,770	15,520	14,700
Cfsm	0.247	0.590	1.32	0.497	0.346	0.764	5.26	5.72	3.17	2.60	2.73	2.58
In.	0.28	0.66	1.52	0.57	0.36	0.88	5.87	6.60	3.54	3.00	3.15	2.88

Calendar year 1953: Max 69,800 Min 670 Mean 8,863 Cfsm 1.56 In. 21.13
Water year 1953-54: Max 95,300 Min 776 Mean 12,280 Cfsm 2.16 In. 29.31

Peak discharge (base, 45,000 cfs).--Apr. 24 (6:30 a.m.) 97,000 cfs (22.17 ft); May 7 (1 p.m.) 65,700 cfs (18.07 ft); June 29 (11 a.m.) 50,300 cfs (15.71 ft).

* Discharge measurement made on this day.

‡ Expressed in thousands.

Note.--Stage-discharge relation affected by ice Dec. 18 to Apr. 18 (no gage-height record Jan. 11-18).

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.--328 sq mi.

Records available.--June 1951 to September 1954.

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

Extremes.--Maximum discharge during year, 16,600 cfs June 29 (gage height, 11.94 ft); minimum, 12 cfs Oct. 6 (gage height, 0.77 ft).
1951-54: Maximum discharge, that of June 29, 1954; minimum, 5.4 cfs Sept. 17, 1952 (gage height, 0.64 ft).

Remarks.--Records excellent except those below 25 cfs and those for periods of ice effect or no gage-height record, which are fair. Flow partly regulated by Machias and Rowe Lakes (combined capacity, about 280,000,000 cu ft) used for log driving.

Rating tables, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 29				June 30 to Sept. 30			
0.7	8.0	2.5	690	1.4	267	4.0	2,480
.8	14	3.0	1,070	1.6	371	5.0	3,720
.9	23	4.0	2,040	2.0	622	6.0	5,200
1.1	50	5.0	3,250	2.5	1,010	7.0	6,910
1.3	95	7.0	6,450	3.0	1,440	8.0	8,750
1.6	195	9.0	10,400				
2.0	383	11.0	14,500				

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	275	268	950	280	78	675	152	1,960	1,000	4,600	629	344
2	220	282	753	275	73	725	146	2,100	875	3,180	608	335
3	140	277	658	265	69	790	136	2,190	2,010	2,880	548	335
4	22	292	592	255	67	870	132	2,230	2,490	2,500	*680	330
5	14	282	618	245	63	870	122	2,330	2,230	2,040	1,120	330
6	12	264	670	240	63	820	122	2,860	1,580	1,740	1,350	335
7	215	241	902	230	60	770	160	2,860	1,520	1,480	*1,220	340
8	142	254	1,250	225	58	725	270	2,840	1,260	1,260	968	380
9	116	268	1,380	215	56	705	300	2,080	1,070	1,040	782	460
10	119	228	1,410	210	54	690	290	2,370	1,010	860	723	620
11	125	207	1,500	205	54	665	245	3,290	555	737	1,900	970
12	122	207	1,360	200	52	530	210	3,090	331	636	3,500	1,600
13	113	191	1,200	194	52	385	196	2,920	341	643	4,380	2,900
14	101	181	1,050	190	50	330	184	2,020	444	723	3,690	3,600
15	95	177	950	180	50	290	180	1,760	554	686	2,540	3,050
16	88	170	820	178	50	245	178	920	445	622	1,800	2,200
17	83	163	658	178	48	196	172	855	360	561	1,430	1,580
18	81	159	535	172	48	178	1,830	1,180	380	483	1,150	1,220
19	78	156	470	170	*48	172	2,790	950	173	440	917	1,050
20	76	149	450	170	69	170	3,450	755	184	458	745	900
21	76	142	425	170	122	166	3,990	373	355	483	643	770
22	73	135	410	*170	240	162	4,560	1,020	184	608	561	670
23	69	142	390	160	300	166	*5,910	1,250	264	767	489	560
24	69	181	375	150	360	162	6,130	1,130	331	959	471	508
25	65	220	360	142	440	*162	5,450	1,000	416	884	446	458
26	71	790	340	140	510	170	4,170	1,220	394	767	411	*458
27	73	1,210	330	136	560	196	3,250	1,010	520	665	388	483
28	90	1,400	320	116	620	205	2,570	870	7,090	693	377	515
29	177	1,400	310	95	-	196	1,940	560	13,200	737	366	522
30	268	1,240	300	88	------	172	1,840	599	8,750	715	329	561
31	287	------	290	82	------	160	------	915	------	679	308	------
Total	3,555	11,276	22,026	5,726	4,314	12,718	51,075	51,507	50,316	35,526	35,469	28,384
Mean	115	376	711	185	154	410	1,703	1,662	1,677	1,146	1,144	946
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 11,200 Min 12 Mean 660 Cfsm 2.01 In. 27.29
Water year 1953-54: Max 13,200 Min 12 Mean 854 Cfsm 2.60 In. 35.34

Peak discharge (base, 3,200 cfs).--Apr. 24 (12:30 a.m.) 6,220 cfs (6.87 ft); May 11 (7:30 p.m.) 3,900 cfs (5.45 ft); June 29 (1:30 p.m.) 16,600 cfs (11.94 ft); Aug. 13 (9:30 a.m.) 4,520 cfs (5.55 ft); Sept. 14 (time unknown) 3,630 cfs (4.93 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 19 to Apr. 18. No gage-height record Sept. 4-23; discharge estimated on basis of recorded range in stage and records for Aroostook River at Washburn.

Aroostook River at Washburn, Maine

Location.--Lat 46°46'35", long 66°09'30", on right bank just upstream from Bangor and Aroostook Railroad bridge, 0.1 mile downstream from Salmon Brook and 1 mile south of railroad station at Washburn, Aroostook County.
Drainage area.--1,620 sq mi, approximately.
Records available.--August 1930 to September 1954.
Gage.--Water-stage recorder. Datum of gage is 436.4 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1948, at datum 2.0 ft higher.
Average discharge.--24 years, 2,585 cfs (unadjusted).
Extremes.--Maximum discharge during year, 32,400 cfs June 29 (gage height, 11.84 ft); minimum, 97 cfs Oct. 6 (gage height, 1.42 ft).
1930-54: Maximum discharge, 37,800 cfs Mar. 22, 1936 (gage height, 11.80 ft); 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.
Revisions (water years).--WSP 951: 1935. WSP 1301: 1933-50 (adjusted monthly runoff).

Rating tables, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 29				June 30 to Sept. 30			
1.4	89	3.6	2,530	2.8	1,160	4.0	3,130
1.6	170	4.0	3,290	3.1	1,590	5.0	5,300
1.8	275	5.0	5,470	3.5	2,240	6.0	7,990
2.2	578	6.0	7,990				
2.6	1,000	7.0	11,000	Note.--Same as preceding table above 6.0 ft.			
2.9	1,390	9.0	18,400				
3.3	2,010	11.2	29,000				

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	340	1,760	5,080	1,640	750	2,250	1,220	9,080	4,800	21,500	2,830	1,360
2	370	1,660	3,990	1,590	750	2,320	1,160	9,020	5,080	15,600	2,510	1,720
3	355	1,360	3,250	1,530	720	2,530	1,130	9,110	8,700	13,800	*2,220	1,640
4	330	1,320	2,940	1,520	720	2,710	1,130	9,020	10,700	11,400	2,810	1,640
5	157	1,330	2,900	1,500	750	2,900	1,130	8,960	10,500	8,880	6,290	1,650
6	116	1,220	3,490	1,490	770	2,960	1,320	10,500	9,610	8,260	7,530	1,480
7	194	1,130	4,960	1,530	770	2,900	1,680	11,300	8,650	7,260	6,940	1,290
8	710	1,500	7,450	1,600	750	2,820	2,900	11,000	7,270	6,180	5,300	1,500
9	561	1,530	8,400	1,620	740	2,710	3,800	9,920	6,290	5,100	4,250	1,600
10	484	1,470	8,210	1,600	750	2,620	5,010	9,820	5,560	4,190	3,430	1,540
11	569	1,360	8,790	1,530	770	2,400	5,360	13,200	4,520	3,570	7,660	2,410
12	615	1,210	8,710	1,430	770	2,230	5,470	13,800	3,410	3,130	16,300	16,900
13	578	1,100	7,370	1,390	760	2,040	5,360	12,200	2,860	3,150	17,800	23,000
14	535	1,020	5,930	1,320	750	1,920	5,120	9,640	2,510	3,690	15,000	19,800
15	476	1,050	4,780	1,250	760	1,780	5,170	7,990	2,350	3,450	11,000	14,500
16	420	1,000	3,700	1,180	770	1,540	5,470	6,620	1,960	3,000	8,130	11,000
17	383	976	2,800	1,160	780	1,430	5,930	5,220	1,520	2,530	6,640	8,680
18	340	928	2,530	1,120	*810	1,360	9,110	5,150	1,660	2,120	5,430	6,140
19	320	892	2,280	1,100	820	1,260	17,200	4,470	1,170	1,920	4,480	4,880
20	294	860	2,180	1,070	820	1,220	18,600	4,040	1,020	2,050	3,590	4,270
21	288	904	2,200	*1,070	840	1,320	19,000	3,150	988	2,190	3,090	3,830
22	270	770	2,260	1,060	1,000	*1,350	19,700	3,870	1,060	4,210	2,710	*3,490
23	275	780	2,400	1,010	1,390	1,350	*22,500	5,490	1,260	6,340	2,480	*3,300
24	288	1,040	2,480	930	1,680	1,400	24,400	5,540	1,760	7,130	2,210	2,960
25	220	1,540	2,390	880	2,010	1,360	22,900	5,260	1,870	6,910	1,970	2,650
26	226	4,080	2,210	860	2,110	1,350	18,800	5,880	1,660	5,780	1,880	2,550
27	231	7,890	2,040	820	2,230	1,330	14,800	5,260	1,600	4,710	1,800	2,600
28	275	8,400	1,940	790	2,300	1,360	12,100	4,650	11,400	4,140	1,710	2,850
29	476	7,450	1,810	770	-	1,390	10,000	3,850	27,300	3,710	1,620	2,940
30	952	6,200	1,730	770	-------	1,350	9,260	3,990	28,900	3,320	1,460	2,890
31	1,530	-------	1,660	760	-------	1,250	-------	4,250	-------	3,110	1,300	-------
Total	13,178	63,730	122,860	37,890	28,840	58,710	276,730	231,250	177,938	182,330	162,370	157,060
Mean	425	2,124	3,963	1,222	1,030	1,894	9,224	7,460	5,931	5,882	5,238	5,235
(†)	-0.7	+101	+60	-155	-304	-218	+607	+111	+67	-69	-1.9	+0.8
Adjusted for change in reservoir contents												
Mean	424	2,225	4,023	1,067	726	1,676	9,831	7,571	5,998	5,813	5,236	5,236
Cfsm	0.262	1.37	2.48	0.659	0.448	1.03	6.07	4.67	3.70	3.59	3.23	3.23
In.	0.30	1.53	2.86	0.76	0.47	1.19	6.77	5.38	4.13	4.14	3.72	3.60

	Observed			Adjusted			
Calendar year 1953:	Max 30,200	Min 116	Mean 2,960	Mean 2,976	Cfsm 1.84	In. 24.92	
Water year 1953-54:	Max 28,900	Min 116	Mean 4,145	Mean 4,162	Cfsm 2.57	In. 34.85	

Peak discharge (base, 13,000 cfs).--Apr. 24 (8 p.m.) 24,500 cfs (10.30 ft); May 12 (1 a.m.) 14,400 cfs (7.98 ft); June 29 (11:30 p.m.) 32,400 cfs (11.84 ft); Aug. 13 (10:30 a.m.) 18,000 cfs (8.91 ft); Sept. 13 (4 p.m.) 24,000 cfs (10.21 ft).
* 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. 14 to Apr. 19.

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 1954 (monthly discharge only for some periods, published in WSP 1301).

Gage.--Water-stage recorder. Datum of gage is 333.9 ft above mean sea level, datum of 1929.

Average discharge.--14 years, 282 cfs.

Extremes.--Maximum discharge during year, 6,590 cfs Sept. 12 (gage height, 9.28 ft); minimum, 3.7 cfs Oct. 6 (gage height, 2.12 ft).
1940-54: Maximum discharge, that of Sept. 12, 1954; 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 below 60 cfs, which are good, and those for periods of ice effect, which are fair.

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

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 28				June 29 to Sept. 12				Sept. 13-30	
2.1	2.9	3.2	282	2.7	88	5.0	1,360	3.1	200
2.2	8.0	3.5	425	2.9	150	6.0	2,320	3.5	360
2.3	17	3.8	584	3.1	230	7.0	3,400	4.0	620
2.4	29	4.3	885	3.5	400	8.0	4,660	4.5	930
2.5	45	5.0	1,440	4.0	650	9.0	6,150	5.0	1,300
2.6	67	6.0	2,430	4.5	980			6.0	2,210
2.8	122	7.0	3,520					7.0	3,320
3.0	196	8.0	4,750					8.0	4,700

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.1	146	386	230	49	320	210	663	518	692	380	194
2	4.6	132	319	275	52	375	192	640	675	575	350	182
3	4.6	126	269	280	63	450	184	601	1,010	615	*314	162
4	4.2	126	242	280	77	555	176	551	1,140	620	645	154
5	4.2	116	405	275	89	790	176	568	915	495	1,220	144
6	3.7	100	601	250	97	1,040	180	618	833	365	1,080	131
7	6.8	89	1,060	230	100	850	481	623	758	306	784	115
8	18	100	1,510	215	97	700	833	573	657	294	625	128
9	20	129	*1,330	205	94	585	1,100	513	556	262	505	128
10	22	126	1,120	188	91	500	1,150	675	466	230	430	115
11	23	116	1,330	170	89	475	1,150	1,010	410	198	950	500
12	25	103	1,220	158	86	350	1,130	1,150	371	178	1,300	5,570
13	25	94	952	142	86	305	1,140	1,370	314	182	1,080	4,380
14	24	84	770	130	86	280	1,050	746	524	222	868	1,970
15	*23	77	681	116	*77	278	922	595	481	202	645	1,230
16	22	79	612	100	72	245	892	502	221	170	525	937
17	18	67	551	91	67	240	1,190	487	196	144	475	740
18	17	67	530	*86	65	230	3,620	450	173	121	390	620
19	17	77	475	86	63	220	4,620	400	150	115	318	520
20	17	58	425	81	65	204	3,760	362	132	147	306	485
21	14	54	385	77	69	204	3,120	323	122	230	314	435
22	15	37	365	72	72	*213	2,830	391	113	1,070	286	*385
23	14	65	330	72	89	205	3,380	425	110	1,170	242	348
24	14	169	280	69	112	196	3,170	400	154	952	222	296
25	11	230	240	69	142	188	2,160	487	143	710	218	260
26	15	765	225	67	172	200	*1,510	634	116	580	238	252
27	18	1,280	196	67	215	200	1,190	568	126	485	218	248
28	31	900	172	65	255	215	1,360	456	1,080	400	178	248
29	69	629	172	63	-	217	820	430	1,280	465	170	232
30	126	481	176	58	-------	215	734	562	903	435	147	220
31	154	----	196	54	------	215	-------	606	------	420	140	----
Total	785.2	6,622	17,525	4,321	2,691	11,260	44,430	18,379	14,627	13,050	15,563	21,329
Mean	25.3	221	565	139	96.1	363	1,481	593	488	421	502	711
Cfsm	0.145	1.26	3.23	0.794	0.549	2.07	8.46	3.39	2.79	2.41	2.87	4.06
In.	0.17	1.41	2.72	0.92	0.57	2.39	9.44	3.91	3.11	2.78	3.31	4.53

Calendar year 1953: Max 4,460 Min 3.7 Mean 300 Cfsm 1.71 In. 23.26
Water year 1953-54: Max 5,570 Min 3.7 Mean 467 Cfsm 2.67 In. 36.26

Peak discharge (base, 2,100 cfs).--Apr. 19 (3 a.m.) 4,870 cfs (8.09 ft); Sept. 12 (6:30 p.m.) 6,590 cfs (9.28 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 18 to Mar. 14, Mar. 17-19, 23, 25, 27, 28, Mar. 30 to Apr. 5.

St. Croix River at Vanceboro, Maine

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.--435 sq mi, approximately.

Records available.--October 1928 to September 1954.

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

Average discharge.--26 years, 680 cfs.

Extremes.--Maximum discharge during year, 4,470 cfs Apr. 23 (gage height, 9.24 ft); minimum, 84 cfs Apr. 12 (gage height, 3.07 ft).
1929-54: Maximum discharge, that of Apr. 23, 1954; 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 below 150 cfs, which are good. Flow regulated by Chiputneticook Lakes (combined usable capacity, about 13,200,000,000 cu ft).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

3.0	75	5.5	825
3.2	102	6.0	1,130
3.5	149	7.0	1,920
4.0	257	8.0	2,980
4.5	401	9.2	4,420
5.0	590		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	189	223	244	858	1,140	370	684	187	1,220	300	760	1,000
2	189	223	242	858	1,120	221	688	174	1,220	945	197	755
3	188	223	244	847	1,110	223	684	185	1,240	1,260	197	755
4	193	225	244	842	1,130	225	684	189	1,240	1,260	200	755
5	193	223	250	830	1,120	228	990	189	655	1,250	*202	755
6	191	221	247	825	1,120	230	1,280	1,110	1,330	1,240	202	1,040
7	195	221	254	820	1,120	230	1,290	1,830	1,990	1,100	555	1,350
8	195	221	257	815	1,100	230	1,290	1,200	1,980	970	858	1,350
9	198	221	240	1,120	1,080	232	1,300	1,080	1,950	970	852	1,330
10	206	221	214	1,490	1,070	230	1,300	1,920	1,220	970	852	1,320
11	194	221	221	1,490	1,050	230	1,310	2,380	720	970	864	740
12	189	221	221	1,480	1,050	232	935	2,360	320	970	864	352
13	189	221	223	1,470	1,040	232	87	2,350	323	970	864	352
14	189	221	225	1,440	1,030	232	88	1,720	326	970	864	358
15	189	221	242	1,410	1,020	234	89	2,050	895	964	864	361
16	193	221	244	1,410	1,010	234	91	1,550	1,240	964	990	364
17	190	221	244	1,390	1,010	234	98	1,270	1,240	964	1,120	367
18	190	221	247	1,370	1,010	232	104	1,260	1,220	1,090	1,110	370
19	190	219	247	1,350	1,000	232	540	1,240	1,200	1,160	1,540	373
20	190	219	247	1,340	982	234	1,570	1,240	1,200	1,160	1,780	373
21	190	219	247	1,330	976	237	*2,090	1,230	1,200	1,160	1,800	376
22	190	219	247	1,330	875	237	2,670	755	1,190	1,060	1,830	376
23	188	219	247	1,330	526	237	3,920	630	1,180	880	1,810	379
24	225	223	247	1,320	531	237	4,350	1,220	1,170	445	1,780	382
25	221	223	247	1,270	535	460	4,310	1,230	1,160	262	1,760	382
26	221	232	250	1,260	543	693	2,850	1,240	1,160	605	1,740	386
27	221	237	250	1,230	547	698	1,790	1,240	1,150	940	1,700	386
28	221	240	250	1,230	547	698	715	1,220	1,160	1,060	1,680	685
29	223	242	247	1,210	-	688	202	610	700	1,500	1,650	1,150
30	223	244	550	1,190	-------	688	202	845	300	1,810	1,620	1,210
31	223	...	858	1,160	-------	688	.....	1,240	.....	1,760	1,600	...
Total	6,186	6,726	8,437	37,315	26,392	10,306	38,201	36,944	33,099	31,929	34,705	20,132
Mean	200	224	272	1,204	943	332	1,273	1,192	1,103	1,030	1,120	671
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 2,770 Min 156 Mean 657 Cfsm - In. -
Water year 1953-54: Max 4,350 Min 87 Mean 796 Cfsm - In. -

* Discharge measurement made on this day.
Note.--No gage-height record Oct. 17-22, Jan. 9-13, Feb. 13-17; discharge estimated on basis of recorded range in stage.

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 of dam of Grand Lake.

Drainage area.--224 sq mi.

Records available.--October 1928 to September 1954.

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

Average discharge.--26 years, 343 cfs.

Extremes.--Maximum discharge during year, 2,280 cfs May 19 (gage height, 5.65 ft); minimum, 41 cfs Oct. 3 (gage height, 1.22 ft).
1928-54: 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 ice effect or no gage-height record, which are fair. 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 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.7	99	3.5	790
1.9	141	4.0	1,080
2.2	225	5.0	1,760
2.5	326	5.5	2,160
3.0	541		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	446	118	130	162	515	187	198	271	347	381	354	665
2	442	118	127	164	515	189	198	274	347	381	354	670
3	345	120	123	164	300	189	198	274	354	389	350	665
4	385	120	123	167	184	195	198	278	354	381	365	665
5	377	118	185	170	184	195	198	555	354	377	365	655
6	373	116	127	173	184	192	200	1,200	358	377	369	650
7	377	116	139	173	184	192	200	1,530	745	377	*369	565
8	373	118	136	174	184	192	200	1,900	930	373	369	435
9	361	118	136	174	184	192	200	1,750	912	369	365	690
10	354	120	146	174	184	192	205	1,570	906	369	365	695
11	347	120	146	174	184	195	207	1,580	894	365	369	650
12	344	120	144	174	184	195	204	1,580	485	365	369	380
13	336	118	144	174	182	195	204	1,560	385	365	373	350
14	326	118	144	174	180	195	200	1,010	393	365	373	354
15	322	118	146	174	181	195	200	1,030	389	365	369	365
16	322	116	146	174	181	195	200	850	385	361	365	361
17	316	250	148	174	319	195	200	1,020	381	358	373	361
18	308	300	148	300	546	195	200	965	381	354	365	365
19	305	184	150	515	541	195	200	950	377	354	540	369
20	302	110	152	515	541	195	890	1,390	381	358	705	369
21	291	110	152	515	536	198	*1,090	485	381	358	705	377
22	288	108	154	515	419	198	1,450	344	381	361	705	377
23	284	112	154	515	189	198	1,930	344	381	358	700	381
24	284	114	156	515	187	198	2,110	344	389	358	695	381
25	278	114	158	515	187	198	2,070	350	381	354	695	381
26	281	130	159	515	187	201	2,100	354	381	354	690	373
27	278	127	159	515	187	201	2,080	354	377	350	685	377
28	245	130	159	515	187	198	2,030	340	381	350	685	377
29	138	132	159	515	-	201	1,490	344	385	347	675	373
30	120	132	159	515	-------	201	450	350	385	347	675	373
31	118	-------	162	515	-------	201	-------	350	-------	347	665	-------
Total	9,666	3,945	4,571	9,908	7,736	6,058	21,500	25,496	13,880	11,268	15,401	14,049
Mean	312	132	147	320	276	195	717	822	463	363	497	468
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 1,130 Min 96 Mean 304 Cfsm - In. -
Water year 1953-54: Max 2,110 Min 108 Mean 393 Cfsm - In. -

* Discharge measurement made on this day.
Note.--No gage-height record Dec. 17-25, Jan. 23 to Feb. 6, Apr. 6-10, 14-20; discharge estimated from record at storage dam three-quarters of a mile upstream. Stage-discharge relation affected by ice Jan. 8-22, Feb. 12-14.

St. Croix River near Baileyville, Maine

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, approximately.

Records available.--November 1919 to September 1954.

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

Average discharge.--35 years, 2,181 cfs.

Extremes.--Maximum discharge during year, 20,800 cfs Apr. 19 (gage height, 11.25 ft); minimum daily, 779 cfs Oct. 21.
1919-54: Maximum discharge, about 23,300 cfs May 1, 1923 (gage height, 13.90 ft); minimum daily, 100 cfs (estimated) July 20, 1924, when plant was closed down.

Remarks.--Records excellent except those below 600 cfs, which are good. Flow regulated by Chiputneticook Lakes, Grand and other lakes (combined usable capacity, about 25,000,000,000 cu ft).

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

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.9	590	4.0	4,210
1.2	800	6.0	7,800
1.5	1,040	8.0	12,400
2.0	1,520	10.0	17,500
3.0	2,770	11.0	20,100

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,000	985	2,330	2,440	2,440	2,410	2,530	3,420	2,490	4,040	1,450	2,310
2	1,030	1,040	2,240	2,390	2,450	2,490	2,480	3,420	2,730	3,610	2,270	2,660
3	1,440	1,070	2,140	1,230	2,500	2,480	2,300	3,240	4,410	3,690	2,360	2,710
4	1,340	1,040	1,970	2,160	2,480	2,270	1,590	2,850	4,490	2,360	2,570	2,660
5	935	1,020	2,240	2,420	2,480	3,270	2,420	2,770	4,410	1,650	*2,660	2,490
6	912	1,080	2,100	2,490	2,260	3,920	2,520	2,730	4,200	2,460	2,740	955
7	880	1,230	5,970	2,420	2,060	3,570	2,410	3,550	4,320	2,290	2,200	2,200
8	872	1,330	5,550	2,490	2,300	2,660	2,450	5,290	4,010	2,410	2,480	1,710
9	912	1,280	5,030	2,520	2,500	2,450	3,470	3,980	3,890	2,360	2,520	1,750
10	1,160	1,520	6,690	2,360	2,500	2,390	4,910	5,250	4,160	2,400	2,710	1,740
11	995	1,500	7,270	2,420	2,490	2,440	5,620	7,270	3,570	1,820	2,310	2,620
12	1,130	1,750	7,020	2,390	2,110	2,490	6,250	8,060	2,690	2,240	2,730	11,900
13	888	1,960	4,840	2,480	2,440	2,460	5,270	7,530	2,200	2,180	2,590	*11,000
14	980	1,940	2,580	2,490	2,280	2,130	4,070	7,120	2,230	2,240	2,740	7,400
15	855	1,960	3,060	2,590	2,240	2,300	3,320	6,040	2,520	2,290	2,360	6,470
16	1,020	1,290	*2,810	2,600	2,480	2,500	3,220	4,180	2,450	2,400	2,610	5,940
17	1,220	1,340	2,480	1,310	2,500	2,460	6,070	4,220	2,440	2,280	2,620	4,770
18	1,030	1,230	2,560	2,440	2,500	2,490	15,800	3,860	2,480	2,030	2,660	3,910
19	1,080	1,270	2,550	2,570	2,270	2,360	19,900	3,260	2,560	2,200	2,800	2,940
20	1,220	1,320	1,450	2,480	2,500	2,370	*16,400	2,770	1,270	2,360	2,700	2,720
21	779	1,600	2,460	2,460	2,130	2,280	13,900	2,500	2,320	2,330	2,690	2,850
22	*824	1,400	2,490	2,390	2,250	2,350	14,000	2,840	2,200	2,350	2,460	2,520
23	*1,030	1,500	2,480	2,320	2,460	*2,490	13,500	2,370	2,020	2,320	2,590	2,440
24	815	1,490	2,100	1,320	2,460	2,490	13,500	2,710	2,130	2,550	2,630	2,460
25	1,130	2,080	1,260	2,410	2,330	2,490	13,500	2,800	2,150	2,210	2,760	2,360
26	1,070	4,640	2,210	2,560	2,460	2,250	13,300	3,580	2,190	2,530	2,620	1,360
27	1,180	6,090	1,190	2,500	2,440	2,460	10,200	3,420	1,940	2,330	2,630	2,130
28	1,160	5,310	2,210	2,400	1,600	2,210	6,830	2,710	2,060	2,300	2,660	2,360
29	1,210	3,950	2,050	2,500	-	2,370	5,960	2,570	2,620	2,310	1,610	2,310
30	1,170	3,450	2,480	2,520	-------	2,440	4,140	2,080	3,650	2,220	2,550	2,140
31	1,190	-------	2,180	1,260	-------	2,500	-------	2,420	-------	2,060	2,640	-------
Total	32,457	58,665	95,990	71,330	65,910	78,240	221,830	120,810	86,800	74,820	77,920	103,785
Mean	1,047	1,956	3,096	2,301	2,354	2,524	7,394	3,897	2,893	2,414	2,514	3,460
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 12,500 Min 590 Mean 2,343 Cfsm - In. -
Water year 1953-54: Max 19,900 Min 779 Mean 2,982 Cfsm - In. -

* Discharge measurement made on this day.

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 1954 (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. Prior to Sept. 30, 1921, staff and chain gages on highway bridge at different datum.

Average discharge.--41 years (1905-21, 1929-54), 946 cfs.

Extremes.--Maximum discharge during year, 11,600 cfs Apr. 19 (gage height, 14.56 ft); minimum, 36 cfs Oct. 5 (gage height, 2.57 ft).
1905-21, 1929-54: 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 cofferdams during reconstruction of highway bridge upstream.

Remarks.--Records excellent except those for periods of ice effect, 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 tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 27				Nov. 28 to Sept. 30			
2.7	50	4.5	925	3.5	250	7.0	3,120
2.9	78	5.0	1,370	3.8	400	9.0	4,910
3.2	145	6.0	2,260	4.1	585	11.0	7,070
3.5	250	7.0	3,120	4.5	890	13.0	9,460
3.8	400	9.0	4,910	5.0	1,330	15.0	12,200
4.1	608			6.0	2,220		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	214	1,120	1,090	875	715	1,810	1,190	2,260	1,040	1,250	470	325
2	210	917	1,120	730	755	1,840	1,070	2,470	922	1,020	477	378
3	206	890	1,150	794	874	2,260	1,070	2,490	1,020	834	458	356
4	203	507	1,180	874	979	2,890	988	2,370	1,090	678	*692	325
5	87	528	1,740	1,020	1,380	3,420	898	2,390	997	458	1,320	290
6	56	406	2,190	1,180	1,640	2,800	866	2,940	962	452	1,100	264
7	310	542	3,280	1,760	1,450	2,110	1,170	3,650	997	435	850	268
8	280	909	4,150	1,040	1,190	1,690	2,170	3,550	938	394	730	282
9	340	1,230	3,650	915	979	1,440	2,340	3,200	858	372	641	290
10	350	1,050	3,370	890	874	1,280	1,980	3,860	810	305	634	277
11	315	845	4,080	875	785	1,220	1,730	4,510	320	286	1,130	520
12	282	717	4,210	875	745	1,140	2,320	4,430	915	295	1,330	4,800
13	250	579	3,830	905	710	1,080	2,500	3,920	1,010	405	1,090	6,900
14	238	472	3,340	995	680	1,010	2,130	2,950	745	412	775	5,450
15	226	472	3,360	1,150	627	980	1,810	1,870	545	350	692	4,420
16	214	452	3,380	1,150	*627	970	1,720	700	520	400	655	3,570
17	210	426	2,920	1,060	670	955	3,580	1,010	495	372	592	2,720
18	210	413	1,950	1,060	685	940	10,000	1,260	483	325	526	2,080
19	210	400	1,360	1,040	786	920	11,200	970	458	295	446	1,660
20	206	400	1,460	990	818	920	9,360	1,020	435	277	400	1,590
21	203	400	1,310	1,040	810	1,900	7,640	938	423	277	389	1,610
22	108	400	1,350	1,240	1,250	*2,110	6,250	730	406	282	362	1,530
23	54	230	1,340	1,130	3,120	1,720	5,310	715	400	320	340	1,450
24	72	2,340	1,300	1,020	3,110	1,420	4,720	810	429	384	330	1,310
25	138	2,610	1,190	890	2,490	1,300	4,220	1,100	446	384	315	1,170
26	435	3,710	1,030	745	2,160	1,350	3,640	1,380	406	389	300	1,100
27	528	4,280	1,090	720	1,980	1,800	2,860	1,280	464	417	282	1,040
28	720	3,200	938	720	1,920	1,710	2,440	1,100	786	378	268	979
29	1,480	2,210	1,080	715	-	1,500	2,200	850	1,150	345	254	914
30	1,650	1,420	1,060	715	------	1,770	2,000	979	1,380	340	254	858
31	1,450	------	980	715	------	1,370	------	1,230	------	423	250	------
Total	11,455	33,875	65,478	29,828	34,809	49,625	101,372	62,932	21,850	13,554	18,352	48,726
Mean	370	1,129	2,112	962	1,243	1,601	3,379	2,030	728	437	592	1,624
Cfsm	0.810	2.47	4.62	2.11	2.72	3.50	7.39	4.44	1.59	0.956	1.30	3.55
In.	0.93	2.76	5.33	2.43	2.83	4.04	8.24	5.12	1.77	1.10	1.50	3.96

Calendar year 1953: Max 7,930 Min 36 Mean 1,120 Cfsm 2.45 In. 33.28
Water year 1953-54: Max 11,200 Min 54 Mean 1,348 Cfsm 2.95 In. 40.01

Peak discharge (base, 3,200 cfs).--Nov. 27 (1:30 a.m.) 4,550 cfs (8.60 ft); Dec. 12 (2 a.m.) 4,240 cfs (8.26 ft); Feb. 23 (10 p.m.) 3,480 cfs (7.41 ft); Mar. 5 (8 a.m.) 3,580 cfs (7.52 ft); Apr. 19 (2 a.m.) 11,600 cfs (14.56 ft); May 11 (5:30 p.m.) 4,550 cfs (8.60 ft); Sept. 13 (10:30 a.m.) 7,080 cfs (11.01 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 23, 24, Dec. 30 to Jan. 2, Jan. 9 to Feb. 2, Feb. 11-14, Mar. 10-20.

East Machias River near East Machias, Maine

Location.--Lat 44°46'05", long 67°24'30", on left bank just downstream from outlet of Hadley Lake, 3 miles upstream from East Machias, Washington County.

Drainage area.--251 sq mi.

Records available.--October 1926 to September 1954.

Gage.--Staff gage and crest-stage indicator; gage read once daily. Datum of gage is 34.9 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1950, at datum 1.00 ft higher.

Average discharge.--27 years (1927-54), 511 cfs.

Extremes.--Maximum discharge during year, 3,380 cfs Apr. 20 (gage height, 8.73 ft); minimum, 91 cfs Oct. 22, 23 (gage height, 1.88 ft).
1926-54: Maximum discharge, 3,660 cfs Dec. 15, 1950 (gage height, 9.05 ft); minimum, 8.4 cfs Nov. 8, 1947 (gage height, 0.65 ft, present datum).

Remarks.--Records good.

Revisions (water years).--WSP 971: Drainage area. WSP 1231: 1928-30.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-25, July 16 to Sept. 30)

1.7	81	5.0	1,010
2.0	124	6.0	1,500
2.5	208	7.0	2,100
3.0	310	8.0	2,800
4.0	595	9.0	3,620

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	192	375	1,420	725	433	1,050	963	1,700	705	495	186	146
2	176	410	1,330	678	428	1,090	945	1,560	701	510	184	146
3	164	410	1,250	647	455	1,120	909	1,440	701	520	182	142
4	158	410	1,180	632	479	1,220	874	1,340	686	480	*215	138
5	154	395	1,200	617	491	1,330	840	1,300	670	445	235	136
6	146	380	1,200	655	524	1,350	789	1,290	655	425	265	130
7	136	395	1,430	749	559	1,370	840	1,280	640	390	275	128
8	142	410	1,520	749	548	1,340	892	1,250	625	355	290	122
9	136	445	1,550	745	538	1,290	972	1,220	588	330	280	138
10	136	490	1,580	709	491	1,240	1,070	1,270	545	315	285	170
11	136	480	1,730	678	433	1,180	1,180	1,320	517	295	345	210
12	136	465	1,740	*647	444	1,150	1,270	1,390	491	265	410	285
13	136	450	1,750	610	455	1,110	1,310	1,370	467	260	405	540
14	128	425	1,770	588	461	972	1,350	1,350	444	255	395	815
15	120	405	*1,790	566	450	936	1,370	1,310	423	245	390	1,080
16	*120	380	1,780	545	*433	883	1,400	1,240	402	230	375	1,200
17	120	360	1,690	524	439	831	1,620	1,180	380	220	360	1,260
18	114	345	1,610	501	441	840	2,240	1,130	357	215	340	1,280
19	104	335	1,500	479	444	848	*3,080	1,080	333	225	310	1,240
20	104	320	1,340	485	447	857	3,360	982	310	230	280	1,220
21	97	305	1,280	491	508	865	3,360	936	295	205	260	1,170
22	91	285	1,240	504	581	909	3,280	874	280	186	245	1,120
23	91	355	1,200	511	733	*954	3,120	814	265	182	230	1,040
24	94	535	1,150	467	848	936	3,000	757	275	178	215	975
25	93	705	1,090	433	900	918	2,800	765	265	176	200	910
26	116	1,080	1,020	444	963	945	2,660	773	250	170	188	855
27	120	1,300	954	450	1,020	983	2,390	765	290	170	178	805
28	160	1,420	892	461	1,040	963	2,200	749	330	166	168	740
29	200	1,450	857	473	-	963	2,110	725	400	166	158	685
30	280	1,430	814	461	-------	982	1,860	709	470	172	150	640
31	335	-------	781	450	-------	991	-------	705	-------	180	148	-------
Total	4,435	16,950	41,638	17,674	15,986	32,396	54,054	34,554	13,760	8,656	8,147	19,466
Mean	143	565	1,343	570	571	1,045	1,802	1,115	459	279	263	649
Cfsm	0.570	2.25	5.35	2.27	2.27	4.16	7.18	4.44	1.83	1.11	1.05	2.59
In.	0.66	2.51	6.17	2.62	2.36	4.80	8.01	5.12	2.04	1.28	1.21	2.89

Calendar year 1953: Max 3,020 Min 61 Mean 666 Cfsm 2.65 In. 36.03
Water year 1953-54: Max 3,360 Min 91 Mean 733 Cfsm 2.92 In. 39.67

* Discharge measurement made on this day.

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.

Drainage area.--232 sq mi.

Records available.--February 1948 to September 1954.

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.--6 years, 522 cfs.

Extremes.--Maximum discharge during year, 6,890 cfs Apr. 19 (gage height, 15.50 ft); minimum, 83 cfs Oct. 22, 23 (gage height, 7.61 ft).
1948-54: Maximum discharge, 7,250 cfs Nov. 28, 1950 (gage height, 15.81 ft); minimum, 33 cfs Sept. 17, 1948 (gage height, 7.15 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 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

7.5	69	10.0	850
7.7	96	11.0	1,460
8.0	149	12.0	2,250
8.5	270	14.0	4,580
9.0	425	16.0	7,770
9.5	620		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	118	726	1,080	420	390	1,070	749	668	542	495	221	141
2	110	612	892	410	390	1,200	694	624	476	425	229	147
3	100	526	773	400	430	1,360	672	612	495	360	192	133
4	92	454	681	390	540	1,600	612	578	484	290	*715	127
5	88	389	759	425	825	1,930	546	699	461	237	850	110
6	88	341	1,120	500	850	1,530	511	1,030	538	197	591	99
7	100	355	1,330	665	800	1,200	624	1,450	488	174	422	95
8	181	900	1,860	500	660	1,000	945	1,340	447	153	323	143
9	199	801	2,110	360	550	860	1,130	1,130	399	139	256	139
10	194	650	2,010	290	490	778	1,130	1,250	363	127	250	122
11	185	526	2,220	*240	425	708	1,030	1,290	338	116	499	425
12	168	450	2,020	235	360	637	1,230	1,280	311	115	507	4,220
13	153	399	1,700	230	255	582	1,430	1,090	282	105	376	4,280
14	137	360	1,460	245	245	550	1,310	913	273	104	296	3,350
15	127	329	1,520	425	*240	528	1,180	749	259	108	237	2,790
16	118	308	1,580	540	270	499	1,140	659	234	139	199	2,070
17	110	287	1,350	490	325	469	1,560	663	211	120	174	1,610
18	102	270	1,050	430	410	439	4,880	620	192	110	151	1,240
19	98	253	907	435	445	418	*6,330	546	179	105	131	956
20	96	242	811	540	470	454	4,270	495	170	102	129	907
21	90	234	704	655	490	1,050	2,750	469	168	95	118	855
22	88	226	630	655	850	*1,180	2,100	476	151	98	110	754
23	85	320	585	585	1,910	972	1,840	499	149	108	100	663
24	90	1,400	550	540	1,390	826	1,700	480	192	147	96	566
25	96	1,220	525	500	1,100	768	1,480	637	183	164	96	488
26	181	2,560	500	475	1,050	768	1,260	745	155	153	93	457
27	305	3,160	480	455	1,080	1,010	1,070	646	197	143	86	429
28	510	2,630	460	435	1,100	1,020	929	542	326	143	82	399
29	855	1,930	455	425	-	886	826	476	341	129	82	370
30	983	1,400	435	410	-------	902	731	663	436	129	78	338
31	902	---	425	400	-------	821	--------	694	--------	199	79	------
Total	6,749	24,258	32,982	13,705	18,340	28,013	46,659	24,013	9,440	5,229	7,768	28,423
Mean	218	809	1,064	442	655	904	1,555	775	315	169	251	947
Cfsm	0.940	3.49	4.59	1.91	2.82	3.90	6.70	3.34	1.36	0.728	1.08	4.08
In.	1.08	3.89	5.29	2.20	2.94	4.50	7.48	3.85	1.52	0.84	1.24	4.55

Calendar year 1953: Max 5,630 Min 46 Mean 622 Cfsm 2.68 In. 36.36
Water year 1953-54: Max 6,330 Min 78 Mean 673 Cfsm 2.90 In. 39.38

Peak discharge (base, 1,500 cfs).--Nov. 27 (1 a.m.) 3,310 cfs (13.01 ft); Dec. 11 (4 p.m.) 2,250 cfs (12.00 ft); Feb. 23 (7 a.m.) 2,650 cfs (12.40 ft); Mar. 4 (11 p.m.) 2,180 cfs (11.92 ft); Apr. 19 (3 a.m.) 6,890 cfs (15.50 ft); Sept. 12 (6:30 p.m.) 4,990 cfs (14.29 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 22 to Feb. 23, Mar. 4 (no gage-height record Jan. 14-20).

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 1954. October 1910 to September 1913, published as Union River at Amherst.

Gage.--Water-stage recorder. Altitude of gage is 165 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.--35 years, 261 cfs.

Extremes.--Maximum discharge during year, 2,560 cfs Apr. 18, Sept. 12; maximum gage height, 7.96 ft Apr. 18; minimum discharge, 24 cfs Oct. 4, 5 (gage height, 3.28 ft). 1909-19, 1929-54: 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 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

3.2	18	5.0	515
3.3	26	5.5	780
3.4	37	6.0	1,100
3.6	66	7.0	1,770
4.0	155	8.0	2,600
4.5	305		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	345	965	265	55	280	357	679	269	232	101	71
2	29	334	827	250	58	335	330	609	282	220	122	70
3	26	302	696	240	68	415	309	564	305	211	*150	68
4	24	269	584	215	84	786	285	525	319	194	266	68
5	24	235	674	210	106	798	269	589	341	177	298	68
6	26	208	723	210	100	690	285	734	345	155	298	63
7	30	199	1,100	215	94	615	510	833	341	132	282	60
8	35	235	1,130	215	84	564	657	827	327	119	263	75
9	41	226	1,010	205	80	515	718	815	295	105	223	75
10	47	217	1,170	182	73	491	707	833	269	94	211	77
11	53	205	1,310	160	66	444	774	827	244	84	244	380
12	*58	194	1,240	150	61	397	946	827	220	79	235	2,030
13	58	179	1,190	138	56	360	939	746	208	70	223	1,770
14	52	163	1,110	132	53	337	900	668	196	66	208	1,830
15	49	158	1,090	*124	61	323	882	594	177	90	185	*2,050
16	44	147	991	116	60	302	870	540	158	73	163	1,890
17	41	137	839	112	70	279	1,540	496	142	64	147	1,690
18	40	132	734	106	88	256	2,490	440	129	56	129	1,490
19	38	129	610	100	102	244	2,430	388	115	53	122	1,260
20	37	124	510	99	*118	*272	2,370	349	105	52	115	1,130
21	36	115	450	90	124	357	2,320	323	101	52	105	959
22	33	112	449	86	210	360	*2,140	323	92	107	94	810
23	30	178	510	82	390	345	1,960	316	86	107	86	690
24	30	501	465	80	390	337	1,780	279	92	115	80	584
25	32	550	420	79	380	337	1,600	368	84	124	75	501
26	79	1,740	380	73	365	368	1,420	454	82	117	70	436
27	84	1,450	357	70	340	436	1,220	384	103	105	64	376
28	211	1,310	335	68	310	409	1,060	349	129	97	60	330
29	323	1,200	305	66	-	405	900	319	171	86	56	298
30	376	1,100	298	64	------	422	774	327	205	86	53	269
31	368	----	280	61	-------	393	-------	302	--------	92	58	----
Total	2,387	12,394	22,752	4,263	4,046	12,872	33,742	16,627	5,932	3,414	4,786	21,468
Mean	77.0	413	734	138	144	415	1,125	536	198	110	154	716
Cfsm	0.520	2.79	4.96	0.932	0.973	2.80	7.60	3.62	1.34	0.743	1.04	4.84
In.	0.60	3.11	5.72	1.07	1.01	3.23	8.48	4.17	1.50	0.86	1.20	5.40

Calendar year 1953: Max 1,930 Min 17 Mean 325 Cfsm 2.20 In. 29.80
Water year 1953-54: Max 2,490 Min 24 Mean 396 Cfsm 2.68 In. 36.35

Peak discharge (base, 1,000 cfs).--Nov. 26 (8 a.m.) 2,120 cfs (7.44 ft); Dec. 11 (7 a.m.) 1,330 cfs (6.35 ft); Apr. 18 (11 a.m.) 2,560 cfs (7.96 ft); Sept. 12 (3 a.m.) 2,560 cfs (7.95 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 3-11; discharge estimated on basis of records for nearby stations. Stage-discharge relation affected by ice Dec. 19-21, 24, 25, 28, 29, Dec. 31 to Mar. 3.

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 1954 (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.--52 years, 1,876 cfs (unadjusted).

Extremes.--Maximum discharge during year, 17,700 cfs Sept. 12 (gage height, 11.91 ft); minimum, 239 cfs Oct. 25 (gage height, 4.17 ft).
1902-54: Maximum discharge, 37,000 cfs Apr. 30, 1923 (gage height, 16.9 ft, site then in use, present datum); minimum daily (1914-54), 77 cfs Nov. 19, 1924.

Remarks.--Records excellent except those for period of ice effect, which are fair. Flow partly regulated by Chamberlain, Telos, Second and Grand Lakes, and Round Pond (see p. 41).

Revisions (water years).--WSP 501: Drainage area. WSP 1301: 1907-12, 1913-29(M).

Rating table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

4.1	212	6.0	1,860
4.3	296	7.0	3,520
4.5	403	8.0	5,700
5.0	770	10.0	11,300
5.5	1,250	12.0	18,100

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	434	923	2,200	1,540	1,180	1,900	1,170	3,360	2,910	6,740	1,890	1,770
2	409	761	1,860	1,360	1,160	2,180	1,130	3,260	3,380	5,260	*1,230	2,240
3	409	692	1,730	1,440	1,170	2,570	1,080	3,090	5,140	3,860	1,590	2,140
4	497	667	1,640	1,540	1,180	3,020	1,130	2,840	5,210	3,540	1,480	1,680
5	530	603	2,160	1,460	1,200	3,020	1,280	3,150	6,050	3,260	2,700	1,460
6	497	517	2,790	1,370	1,250	2,860	1,410	4,220	6,050	2,630	2,910	1,320
7	559	477	3,600	1,460	1,210	2,770	1,730	5,260	4,760	3,320	2,320	1,230
8	709	675	*4,800	1,690	1,190	2,600	2,490	5,700	4,960	3,300	2,240	1,150
9	651	941	3,620	1,720	1,180	2,440	3,190	6,220	4,650	2,400	2,160	1,150
10	619	833	3,420	1,580	1,170	2,290	2,630	6,580	4,040	2,290	1,680	1,320
11	603	718	5,280	1,480	1,150	2,170	2,360	6,450	3,280	2,230	4,400	2,000
12	545	692	4,350	1,340	1,140	2,060	2,320	7,450	2,880	2,030	7,310	14,600
13	497	603	4,520	1,250	1,130	1,970	2,380	7,100	2,460	1,810	7,180	15,600
14	446	552	4,760	1,170	1,170	1,860	2,400	5,920	1,770	1,470	6,760	12,600
15	409	530	4,020	1,150	1,230	1,760	2,140	5,100	2,110	1,220	5,120	11,800
16	409	497	3,320	1,150	1,290	1,640	2,200	5,120	1,990	1,770	4,390	9,410
17	392	477	2,500	1,140	1,330	1,590	2,650	4,200	1,660	1,220	4,020	6,610
18	352	458	2,630	1,130	1,360	1,480	8,120	4,250	1,340	887	3,940	3,840
19	341	434	2,840	1,080	*1,400	1,460	12,100	3,820	1,100	833	3,020	4,410
20	326	415	3,000	1,050	1,370	1,430	11,300	2,860	1,110	914	1,930	3,840
21	336	409	2,930	1,060	1,360	1,400	11,100	2,970	980	1,170	1,820	4,580
22	296	409	2,240	1,110	1,480	1,370	*11,500	3,860	923	1,540	2,080	3,820
23	274	464	1,730	1,190	2,030	1,360	14,700	4,940	1,160	2,420	1,890	3,090
24	247	1,240	2,000	1,150	1,990	1,330	14,000	4,410	1,660	2,820	1,650	2,520
25	243	1,480	2,950	1,140	1,890	*1,280	11,400	3,820	1,850	4,300	1,320	1,760
26	274	7,870	2,600	1,140	1,820	1,270	9,700	4,560	1,640	2,690	1,270	1,800
27	484	7,240	2,360	1,160	1,780	1,250	8,420	3,580	2,280	2,470	1,470	2,080
28	603	4,310	2,240	1,170	1,760	1,250	6,740	3,190	5,790	2,490	1,380	2,240
29	1,540	3,080	1,960	1,170	-	1,260	5,030	3,260	6,810	2,740	1,490	1,960
30	1,320	2,460	1,830	1,170	-	1,240	3,700	2,750	7,230	2,200	1,270	1,770
31	1,270	-	1,730	1,180	-	1,180	-	2,970	-	1,770	923	-
Total	16,521	41,427	89,610	39,740	38,570	57,260	161,500	136,260	97,173	77,594	84,833	125,990
Mean	533	1,381	2,891	1,282	1,378	1,847	5,383	4,395	3,239	2,503	2,737	4,200
(†)	-140	+601	+625	-347	-792	-660	+1,277	+776	+47	-32	+23	-86
Adjusted for change in reservoir contents												
Mean	393	1,982	3,516	935	586	1,187	6,660	5,171	3,286	2,471	2,760	4,114
Cfsm	0.367	1.85	3.29	0.874	0.548	1.11	6.22	4.83	3.07	2.31	2.58	3.84
In.	0.42	2.06	3.79	1.01	0.57	1.28	6.94	5.57	3.42	2.66	2.97	4.28

	Observed			Adjusted				
Calendar year 1953:	Max 17,800	Min 167	Mean 2,065	Mean 2,142	Cfsm 2.00	In. 27.16		
Water year 1953-54:	Max 15,600	Min 243	Mean 2,648	Mean 2,759	Cfsm 2.58	In. 34.97		

* 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. 18 to Apr. 4.

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.--3,130 sq mi, approximately (including about 240 sq mi drained by Chamberlain Lake through Telos Canal).

Records available.--June 1940 to September 1954.

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

Average discharge.--14 years, 5,478 cfs (unadjusted).

Extremes.--Maximum discharge during year, 34,600 cfs Sept. 13 (gage height, 11.25 ft); minimum daily, 2,580 cfs Nov. 15.
1940-54: Maximum discharge, 40,200 cfs May 21, 1945 (gage height, 11.09 ft), from rating curve extended above 17,000 cfs; minimum daily, 1,430 cfs Aug. 17, 1941.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by several reservoirs above station (see p. 41).

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,640	3,030	5,090	4,400	4,400	5,180	4,100	7,560	7,820	14,800	4,450	4,200
2	3,130	2,590	5,090	4,050	4,650	6,470	4,050	7,050	8,360	12,200	*4,750	6,370
3	3,080	3,510	4,880	4,300	4,350	6,420	4,050	7,720	12,200	9,840	4,400	6,310
4	2,850	3,360	4,710	3,410	4,400	7,770	3,460	7,300	14,000	9,360	5,930	5,930
5	2,990	3,300	5,630	4,600	4,500	7,870	3,560	9,400	15,400	6,370	5,560	4,050
6	3,360	3,000	5,350	4,300	4,700	7,500	4,100	14,200	14,000	7,720	6,420	3,460
7	3,560	3,410	8,500	4,700	4,100	6,790	5,130	22,400	16,900	7,660	6,420	4,250
8	4,200	2,930	8,840	5,180	4,550	6,580	5,620	25,600	18,200	7,350	4,100	4,860
9	3,700	4,420	7,300	4,860	5,020	6,530	6,100	26,800	17,500	6,470	5,130	5,180
10	3,600	3,790	6,900	3,950	4,650	6,100	6,040	31,200	17,600	5,880	4,450	5,560
11	3,030	3,700	9,450	4,860	4,750	5,880	5,460	30,600	15,000	3,510	8,170	9,180
12	2,990	3,690	8,030	5,240	4,750	5,770	5,670	29,100	12,400	5,560	13,200	24,200
13	2,850	3,540	7,450	4,910	4,750	5,350	7,050	26,400	7,980	6,310	14,500	32,900
14	2,810	3,410	7,720	4,910	4,300	4,650	7,250	20,900	10,000	5,350	13,700	28,100
15	3,030	2,580	6,950	3,600	4,750	4,960	6,740	18,000	9,400	5,180	10,400	28,900
16	3,260	3,500	6,530	3,460	5,080	4,650	6,580	15,200	7,200	4,750	10,400	26,800
17	3,080	3,030	5,400	3,850	5,130	5,020	8,670	13,100	5,240	5,990	13,300	22,200
18	2,940	3,000	5,400	5,180	4,960	4,650	15,800	9,990	4,960	2,900	17,600	20,200
19	2,640	3,310	5,560	4,150	4,800	4,150	21,700	9,790	5,880	3,410	15,600	17,400
20	2,590	3,030	4,960	4,300	4,450	5,130	19,200	8,670	3,460	4,350	14,000	14,500
21	2,940	3,650	4,800	4,300	3,950	3,800	19,000	8,500	3,310	3,950	13,500	14,100
22	2,940	2,590	5,560	4,910	4,600	4,550	*20,200	9,790	2,940	4,910	7,400	13,800
23	3,260	3,140	5,020	4,400	5,770	4,350	22,800	8,400	3,800	6,370	6,950	13,200
24	2,990	4,630	4,100	4,050	6,310	4,800	22,900	9,990	4,800	7,250	5,400	12,600
25	2,680	6,010	3,510	4,250	6,100	4,650	17,400	11,300	5,240	5,620	5,620	11,800
26	3,410	13,900	4,650	4,960	5,350	4,700	15,200	11,700	5,460	5,560	5,990	9,990
27	3,080	9,850	5,240	5,020	5,720	4,550	12,800	10,400	4,250	5,830	5,670	11,600
28	4,200	7,580	4,600	4,550	4,500	4,200	11,400	9,180	10,600	5,670	6,150	11,600
29	5,400	5,760	4,200	4,910	-	4,650	9,320	8,260	14,400	6,260	5,080	10,900
30	5,510	6,300	4,910	4,650	--------	4,150	7,720	4,650	14,400	5,460	4,400	10,300
31	5,180	--------	4,960	4,000	--------	4,000	--------	6,370	--------	5,460	4,910	--------
Total	103,920	129,540	181,290	138,210	135,340	165,820	309,070	439,520	292,700	197,300	253,550	394,440
Mean	3,352	4,318	5,848	4,458	4,834	5,349	10,300	14,180	9,757	6,365	8,179	13,150
(†)	-1,491	+1,419	+3,549	-1,511	-2,305	-1,491	+10,380	+2,679	+280	-531	-1,210	-672
Adjusted for change in reservoir contents												
Mean	1,861	5,737	9,397	2,947	2,529	3,858	20,680	16,860	10,040	5,834	6,969	12,480
Cfsm	0.562	1.73	2.84	0.890	0.764	1.17	6.25	5.09	3.03	1.76	2.11	3.77
In.	0.65	1.93	3.27	1.03	0.80	1.35	6.97	5.87	3.38	2.03	2.43	4.21

	Observed			Adjusted			
Calendar year 1953:	Max 30,000	Min 2,300	Mean 5,693	Mean 6,452	Cfsm 1.95	In. 26.47	
Water year 1953-54:	Max 32,900	Min 2,580	Mean 7,509	Mean 8,269	Cfsm 2.50	In. 33.92	

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, of several reservoirs above station.
Note.--Stage-discharge relation affected by ice, backwater from aquatic vegetation or high stages of the Mattawamkeag River for practically the entire year. No gage-height record Nov. 5 to Dec. 7; discharge estimated on basis of records from power station just upstream.

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.--1,400 sq mi, approximately.

Records available.--October 1934 to September 1954.

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

Average discharge.--20 years, 2,362 cfs.

Extremes.--Maximum discharge during year, 23,500 cfs Apr. 24 (gage height, 13.15 ft); minimum, 57 cfs Oct. 5, 6 (gage height, 0.20 ft).
1934-54: Maximum discharge, 29,200 cfs Mar. 23, 1936 (gage height, 15.34 ft); minimum, 38 cfs Sept. 19, 1952 (gage height, 0.14 ft).

Remarks.--Records excellent except those for periods of ice effect and those below 80 cfs, which are fair.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.2	57	3.0	1,820
.4	130	4.0	2,860
.6	212	6.0	6,080
.9	360	8.0	10,500
1.2	539	10.0	15,400
1.5	738	12.0	20,500
2.0	1,070	14.0	25,700

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82	1,490	6,910	1,500	540	1,990	1,910	10,100	3,480	3,990	1,170	888
2	74	1,410	5,700	1,420	540	2,200	1,850	8,550	3,510	3,900	1,160	922
3	71	1,330	4,860	1,440	540	2,410	1,790	7,520	3,940	3,670	1,150	929
4	60	1,270	4,050	1,430	540	2,800	1,690	6,780	4,950	3,390	1,510	922
5	57	1,190	3,900	1,340	560	3,210	1,670	6,360	5,930	2,970	2,520	867
6	57	1,100	4,540	1,200	590	3,460	1,660	6,500	6,320	2,500	*3,240	813
7	82	997	5,780	1,090	615	3,520	2,190	6,950	6,200	2,140	3,460	758
8	126	976	7,830	1,010	645	3,540	3,410	7,080	5,830	1,900	3,320	731
9	170	1,090	9,420	930	630	3,540	4,420	6,480	5,200	1,750	3,010	690
10	217	1,160	9,860	860	615	3,370	4,950	6,060	4,470	1,580	2,660	670
11	244	1,160	10,300	790	600	3,200	5,590	7,040	3,850	1,420	2,690	1,000
12	244	1,110	10,700	745	600	3,040	6,440	8,600	3,350	1,300	3,340	5,970
13	244	1,050	10,400	695	630	2,820	7,140	9,360	2,910	1,200	4,160	11,900
14	235	990	9,520	*665	655	2,580	7,460	9,030	2,580	1,150	4,760	14,400
15	217	936	8,440	635	650	2,400	7,390	8,110	2,250	1,150	4,740	15,700
16	208	888	7,480	630	670	2,290	7,310	7,000	2,030	1,080	4,320	15,500
17	195	854	6,260	625	690	2,200	7,740	6,110	1,780	983	3,620	14,000
18	174	813	4,990	615	*740	2,080	12,000	5,330	1,580	847	3,020	11,900
19	170	806	4,310	635	770	1,960	17,800	4,740	1,420	738	2,510	9,750
20	166	860	3,740	670	820	1,860	20,200	4,160	1,280	684	2,140	7,810
21	158	826	3,410	605	890	1,840	21,600	3,490	1,210	745	1,820	6,360
22	146	779	3,230	605	1,060	1,850	22,500	3,250	1,110	806	1,630	5,350
23	134	772	3,230	625	1,300	1,890	23,100	3,380	*1,060	1,130	1,470	4,540
24	130	1,110	2,920	605	1,460	1,910	23,400	3,480	1,130	1,650	1,330	3,960
25	130	1,840	2,690	605	1,560	1,910	22,900	3,720	1,190	1,770	1,230	3,440
26	146	3,610	2,590	615	1,650	1,910	21,700	4,320	1,150	1,720	1,190	3,070
27	170	6,320	2,510	625	1,690	1,990	19,700	4,590	1,150	1,630	1,150	2,820
28	273	8,360	2,220	625	1,830	2,120	17,300	4,390	1,600	1,480	1,110	2,630
29	630	8,530	2,090	605	-	2,060	14,800	3,940	2,660	1,330	1,050	2,490
30	1,110	7,850	2,020	590	-------	2,020	12,200	3,660	3,610	1,190	976	2,410
31	1,460	-----	1,800	560	-------	1,960	-------	3,540	-------	1,160	922	-----
Total	7,580	61,477	167,700	25,590	24,080	75,930	323,810	185,620	88,730	52,953	72,378	153,190
Mean	245	2,049	5,410	825	860	2,449	10,790	5,988	2,958	1,708	2,335	5,106
Cfsm	0.175	1.46	3.86	0.589	0.614	1.75	7.71	4.28	2.11	1.22	1.67	3.65
In.	0.20	1.63	4.45	0.68	0.64	2.02	8.60	4.93	2.35	1.41	1.92	4.07

Calendar year 1953: Max 20,800 Min 57 Mean 2,616 Cfsm 1.87 In. 25.34
Water year 1953-54: Max 23,400 Min 57 Mean 3,395 Cfsm 2.42 In. 32.90

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Jan. 1 to Feb. 21, Mar. 22-27, Apr. 1, 2.

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 1954.

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.--52 years, 584 cfs.

Extremes.--Maximum discharge during year, 13,200 cfs Sept. 12 (gage height, 12.93 ft); minimum, 31 cfs Oct. 6 (gage height, 1.70 ft).
1902-54: 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 and those below 30 cfs, which are fair. Low flow regulated by operation of powerplants 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 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.7	31	4.0	1,060
1.9	58	5.0	1,990
2.2	126	7.0	4,320
2.5	216	9.0	6,910
3.0	415	12.0	11,600
3.5	700		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	1,050	1,070	255	126	635	335	1,960	391	1,820	1,290	1,390
2	36	815	898	*215	120	715	325	1,900	1,050	1,380	1,500	835
3	33	635	746	210	130	980	315	1,740	2,160	1,120	988	599
4	32	510	668	205	162	1,390	295	1,600	1,490	821	2,190	470
5	32	415	1,190	196	215	1,540	280	2,480	1,310	680	1,950	367
6	31	350	1,330	192	255	1,390	285	4,460	1,700	821	1,260	324
7	46	310	3,560	190	245	1,140	490	4,200	1,450	732	958	272
8	150	575	3,350	182	190	905	1,140	2,800	1,200	587	758	301
9	185	500	2,090	182	154	780	1,500	2,330	980	460	587	324
10	160	380	2,300	182	118	695	1,460	3,590	793	381	625	324
11	134	335	2,700	180	85	635	1,580	3,140	654	324	3,930	1,320
12	130	325	1,840	178	64	560	2,030	2,580	526	294	3,350	10,000
13	118	320	1,420	174	52	525	2,190	1,870	465	279	2,100	3,670
14	98	315	1,240	170	58	520	1,800	1,500	492	264	1,410	3,440
15	90	295	1,280	168	78	500	1,540	1,180	465	240	1,060	3,700
16	80	285	1,170	162	108	415	1,560	950	515	216	891	*2,230
17	76	280	928	160	156	365	2,380	856	405	190	793	1,720
18	72	260	835	160	235	360	7,640	713	320	177	623	1,480
19	70	250	752	156	305	325	7,510	635	282	183	509	1,300
20	69	245	713	152	365	340	4,930	581	250	190	415	1,650
21	68	235	542	*174	415	365	5,620	558	236	219	358	1,370
22	68	225	558	182	465	380	5,730	814	203	925	313	1,120
23	68	515	635	168	635	365	7,810	972	216	988	275	965
24	67	1,540	700	152	1,300	335	*5,990	849	430	1,050	254	807
25	76	2,410	740	140	980	325	4,160	863	358	814	254	739
26	155	10,200	530	138	*800	340	3,150	980	254	746	233	700
27	480	4,120	445	142	715	*480	2,700	739	730	700	206	660
28	650	2,420	390	166	635	380	2,220	587	4,420	635	186	620
29	1,700	1,710	360	*156	-	390	1,970	520	2,670	495	174	590
30	1,970	1,350	320	148	------	405	1,980	542	2,230	410	159	550
31	1,530	------	290	130	------	365	------	482	------	450	*215	------
Total	8,517	33,175	35,570	5,365	9,166	18,845	80,915	48,971	28,645	18,591	29,814	43,837
Mean	275	1,106	1,147	173	327	608	2,697	1,580	955	600	962	1,461
Cfsm	0.926	3.72	3.86	0.582	1.10	2.05	9.08	5.32	3.22	2.02	3.24	4.92
In.	1.07	4.15	4.45	0.67	1.14	2.36	10.13	6.13	3.59	2.33	3.74	5.49

Calendar year 1953: Max 13,700 Min 26 Mean 787 Cfsm 2.65 In. 35.95
Water year 1953-54: Max 10,000 Min 31 Mean 990 Cfsm 3.33 In. 45.25

Peak discharge (base, 4,000 cfs).--Nov. 26 (time unknown) 12,500 cfs (12.56 ft); Dec. 7 (6 p.m.) 5,100 cfs (7.64 ft); Apr. 18 (9:30 p.m.) 10,000 cfs (11.04 ft); Apr. 23 (11:30 a.m.) 8,370 cfs (9.98 ft); May 6 (11:30 p.m.) 4,790 cfs (7.39 ft); June 28 (6:30 a.m.) 5,290 cfs (7.79 ft); Aug. 11 (5 p.m.) 4,580 cfs (7.22 ft); Sept. 12 (6 to 7 a.m.) 13,200 cfs (12.93 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 23 to Apr. 9. No gage-height record Oct. 8 to Nov. 4, Nov. 7-30, Sept. 27-30; discharge estimated on basis of records for nearby stations.

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 1954.

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.--30 years, 610 cfs (unadjusted).

Extremes.--Maximum discharge during year, 5,240 cfs Apr. 24 (gage height, 9.16 ft); minimum, 89 cfs Oct. 24, 25 (gage height, 2.02 ft).
1924-54: 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 except those above 5,000 cfs and those for period of no gage-height record, which are good. Flow partly regulated by Sebec Lake and other reservoirs above station.

Revisions.--WSP 1171: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.0	84	5.0	1,740
2.2	139	6.0	2,500
2.5	251	7.0	3,260
3.0	484	8.0	4,130
3.5	760	10.0	6,100
4.0	1,060		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	106	188	2,300	407	290	654	504	2,250	251	1,370	814	188
2	106	251	1,960	393	285	700	499	2,020	264	1,580	844	192
3	104	470	1,700	388	280	778	499	1,840	319	1,870	838	195
4	102	598	1,460	397	280	964	484	1,720	590	1,640	1,200	195
5	102	576	1,420	388	275	1,120	455	1,700	1,040	1,440	1,690	192
6	102	566	1,350	388	270	1,200	445	1,990	1,050	1,320	1,900	195
7	106	550	*1,580	402	270	1,200	499	2,340	1,070	1,230	1,730	199
8	104	582	1,910	407	270	1,170	571	2,410	1,070	1,110	1,540	243
9	106	587	*1,920	388	270	1,110	659	2,330	1,040	952	1,330	278
10	104	576	1,990	383	270	1,050	742	2,400	994	850	1,240	278
11	104	560	1,800	370	270	994	850	2,510	952	778	1,470	390
12	106	545	2,100	370	270	928	1,040	2,470	916	645	1,670	1,830
13	109	524	1,980	356	270	862	1,220	2,300	868	300	1,700	*2,770
14	104	504	1,810	342	270	808	1,340	2,050	832	142	1,630	2,980
15	102	484	1,750	337	270	772	1,410	1,820	796	127	1,500	3,280
16	99	474	1,640	333	270	730	1,440	1,640	830	121	1,390	3,160
17	99	469	1,490	337	265	677	1,690	1,510	1,100	124	1,280	3,020
18	99	460	1,350	319	260	642	3,090	1,340	680	124	1,140	2,750
19	102	450	1,230	314	260	592	4,540	1,220	247	260	1,050	1,970
20	99	445	1,150	310	265	598	4,690	1,010	247	192	835	2,120
21	99	440	1,080	314	270	598	*4,730	525	194	146	665	1,900
22	96	435	1,040	310	310	582	4,750	203	130	163	631	1,680
23	94	445	1,040	296	350	550	5,060	214	139	206	490	1,520
24	89	484	976	292	430	529	*5,150	226	139	264	374	1,350
25	89	592	904	282	520	509	4,700	239	139	305	337	1,210
26	92	2,090	838	278	605	509	*4,140	260	139	494	270	1,130
27	94	3,530	796	278	626	504	3,630	269	149	635	188	1,070
28	159	3,750	440	296	636	504	3,220	251	214	784	184	1,010
29	198	3,260	540	295	-	504	2,840	226	710	796	184	946
30	115	2,730	407	295	-	519	2,520	260	1,120	778	180	892
31	149	-	416	295	-	514	-	264	-	766	184	-
Total	3,339	27,615	42,367	10,560	9,177	23,371	67,387	41,807	18,229	21,512	30,478	39,133
Mean	108	921	1,367	341	328	754	2,246	1,349	608	694	983	1,304
(†)	-85.5	+361	-291	-85.9	-122	+40	+149	+226	+92.6	-44.8	-213	+28.2
Adjusted for change in reservoir contents												
Mean	22.5	1,282	1,076	255	206	794	2,395	1,575	701	649	770	1,332
Cfsm	0.069	3.92	3.29	0.780	0.630	2.43	7.32	4.82	2.14	1.98	2.35	4.07
In.	0.08	4.37	3.79	0.90	0.66	2.80	8.17	5.56	2.39	2.28	2.71	4.54

	Observed			Adjusted			
Calendar year 1953:	Max 6,700	Min 46	Mean 763	Mean 749	Cfsm 2.29	In. 31.09	
Water year 1953-54:	Max 5,150	Min 89	Mean 918	Mean 922	Cfsm 2.82	In. 38.25	

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Sebec Lake and Wilson Pond.
Note.--No gage-height record Jan. 29 to Feb. 25; discharge estimated on basis of recorded range in stage and record of gate changes in storage dam just upstream.

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 1954.

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.--34 years, 689 cfs.

Extremes.--Maximum discharge during year, 11,900 cfs Nov. 26 (gage height, 8.95 ft); minimum, 18 cfs Oct. 5, 6 (gage height, 1.27 ft).
1920-54: 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 period of ice effect, 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 table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.3	21	3.5	1,340
1.4	33	4.0	1,960
1.5	50	5.0	3,520
1.7	98	6.0	5,300
2.0	198	7.0	7,330
2.5	460	8.2	10,100
3.0	825		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	71	1,060	1,280	380	210	730	475	1,910	639	1,970	1,030	872
2	69	801	1,060	350	200	800	455	1,920	777	1,650	1,120	793
3	67	668	872	330	194	960	415	1,780	1,380	1,450	785	624
4	56	574	769	315	220	1,180	390	1,630	1,320	1,050	1,600	526
5	40	493	1,200	300	265	1,500	390	1,950	1,210	834	1,900	441
6	31	416	1,640	285	290	1,420	395	3,350	1,190	882	1,440	380
7	60	386	3,000	275	280	1,300	700	4,430	1,220	785	1,110	330
8	135	480	3,640	270	260	1,190	1,240	3,370	1,140	661	882	335
9	138	567	2,410	260	210	1,020	1,590	2,540	970	560	714	340
10	125	526	2,360	260	180	880	1,510	2,620	817	493	683	335
11	122	473	3,070	260	160	775	1,640	2,720	706	441	1,810	815
12	125	441	2,360	270	144	700	2,150	2,570	617	391	2,220	7,320
13	110	397	1,780	285	130	615	2,240	2,080	560	374	1,970	4,920
14	98	368	1,460	305	126	560	1,930	1,700	547	368	1,460	3,580
15	93	351	1,410	325	126	535	1,630	1,440	513	335	1,070	4,400
16	84	335	1,240	*340	150	515	1,590	1,270	460	293	825	3,000
17	79	309	1,120	320	194	460	2,380	1,160	428	264	737	2,020
18	79	298	1,010	290	260	410	7,170	1,080	397	240	624	1,570
19	76	288	890	270	305	410	8,300	960	357	245	540	1,250
20	79	278	810	255	355	395	5,900	863	335	259	486	1,280
21	79	264	720	260	410	410	6,040	801	319	293	454	1,200
22	79	259	670	260	475	420	6,120	1,020	288	920	403	1,010
23	79	441	655	260	600	415	8,800	1,200	298	1,100	357	910
24	74	1,710	730	255	800	410	*7,630	1,160	368	1,130	346	793
25	76	1,950	670	245	1,120	405	5,000	1,180	335	960	363	691
26	158	9,890	595	235	1,000	420	3,670	1,190	283	980	335	737
27	340	7,530	545	230	890	520	2,990	1,020	670	930	298	761
28	602	3,790	515	235	785	480	2,400	834	2,500	817	278	699
29	2,080	2,350	465	235	-	445	2,050	753	2,280	683	254	632
30	1,880	1,680	455	230	-------	455	1,950	777	1,870	617	236	595
31	1,520	-------	420	220	-------	475	-------	706	-------	661	*309	-------
Total	8,704	39,373	39,821	8,610	10,339	21,210	89,140	51,984	24,794	22,636	26,639	43,159
Mean	281	1,312	1,285	278	369	684	2,971	1,677	826	730	859	1,439
Cfsm	0.873	4.07	3.99	0.863	1.15	2.12	9.23	5.21	2.57	2.27	2.67	4.47
In.	1.01	4.54	4.60	0.99	1.20	2.44	10.30	6.01	2.87	2.62	3.08	4.99

Calendar year 1953: Max 12,700 Min 31 Mean 863 Cfsm 2.68 In. 36.40
Water year 1953-54: Max 9,890 Min 31 Mean 1,059 Cfsm 3.29 In. 44.65

Peak discharge (base, 3,700 cfs).--Nov. 26 (4 p.m.) 11,900 cfs (8.95 ft); Dec. 8 (2 a.m.) 4,080 cfs (5.33 ft); Apr. 19 (1 a.m.) 9,610 cfs (8.00 ft); Apr. 23 (5:30 p.m.) 9,750 cfs (8.06 ft); May 7 (6 a.m.) 4,610 cfs (5.63 ft); Sept. 12 (1:30 p.m.) 8,360 cfs (7.47 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 16 to Apr. 7.

Piscataquis 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 1954.

Gage.--Water-stage recorder. Datum of gage is 248.68 ft above mean sea level, datum of 1929. Prior to Aug. 13, 1929, staff gage at site 1¾ miles downstream at different datum.

Average discharge.--30 years, 2,273 cfs.

Extremes.--Maximum discharge during year, 27,000 cfs Apr. 19 (gage height, 10.50 ft); minimum, 336 cfs Oct. 24 (gage height, 1.79 ft).
1924-54: 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 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.8	342	5.0	5,090
2.1	537	6.0	7,800
2.5	880	7.0	11,300
3.0	1,440	9.0	19,800
3.5	2,130	10.4	26,500
4.0	2,960		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	474	3,160	6,100	1,250	695	1,400	1,920	7,000	2,450	6,700	3,550	2,360
2	467	2,480	5,200	1,220	685	1,640	1,830	6,500	3,700	5,780	5 140	2,780
3	402	2,120	4,300	1,220	685	2,100	1,670	6,200	5,800	5,760	3,710	2,120
4	396	2,100	3,850	1,200	680	3,100	1,560	5,900	9,200	4,700	5,550	1,730
5	467	1,950	3,550	1,160	715	4,990	1,450	17,500	5,800	3,860	7,480	1,490
6	422	1,730	5,860	1,120	850	4,790	1,500	15,500	7,400	3,570	6,130	1,280
7	422	1,640	8,540	1,090	950	4,300	2,260	13,300	6,000	3,410	5,090	1,240
8	583	1,980	12,100	1,050	990	3,860	4,070	11,500	4,700	3,010	4,390	1,240
9	695	2,340	8,580	1,010	950	3,510	5,260	10,500	3,800	2,550	3,750	1,390
10	646	2,240	*7,740	980	840	3,100	5,390	9,500	3,200	2,180	3,410	1,380
11	638	2,020	9,680	960	720	2,850	5,650	13,500	2,650	1,980	7,240	2,060
12	679	1,850	7,920	940	640	2,590	7,010	9,500	2,200	1,800	9,740	19,600
13	638	1,700	6,480	910	600	2,500	7,680	7,500	2,000	1,490	7,830	19,500
14	575	1,540	5,600	880	585	2,400	6,980	6,000	2,250	1,170	6,210	12,500
15	523	1,480	5,370	870	590	2,350	6,320	5,000	2,200	1,070	4,890	15,000
16	537	1,440	5,290	*870	620	2,150	6,260	4,500	2,100	900	4,110	11,100
17	481	1,420	4,090	860	695	2,000	7,820	3,750	2,400	748	3,730	8,350
18	428	1,320	3,410	850	765	1,850	18,800	3,000	2,190	687	3,270	7,120
19	516	1,180	3,180	850	870	1,670	26,100	2,450	1,380	679	2,820	6,240
20	502	1,180	3,000	840	1,000	1,580	21,600	2,050	1,120	890	2,450	6,260
21	488	1,110	2,750	830	1,200	1,700	19,500	1,880	1,100	1,000	2,080	5,940
22	481	1,080	2,500	820	1,450	1,740	19,700	2,250	970	1,740	1,810	5,120
23	441	1,570	2,610	815	2,000	1,690	*22,000	3,650	950	2,980	1,690	4,530
24	366	2,960	2,530	795	3,200	1,690	18,500	3,250	1,430	3,100	1,430	3,810
25	372	4,420	2,290	785	3,590	1,710	16,000	3,100	1,470	2,850	1,270	3,470
26	713	10,000	1,980	765	3,160	*1,830	13,500	3,600	1,080	2,660	1,110	3,350
27	1,470	23,200	1,730	750	2,700	2,000	10,000	2,750	1,420	2,470	990	3,350
28	1,910	13,700	1,540	740	2,450	2,080	9,000	2,100	7,200	2,640	910	3,100
29	5,090	9,080	1,470	730	-	2,130	8,350	1,820	7,400	2,510	851	2,800
30	4,860	7,060	1,380	715	-------	2,040	7,800	1,900	6,430	2,290	803	2,580
31	4,510	----	1,300	705	------	2,070	-------	1,800	-----	2,390	*851	----
Total	31,192	111,050	141,920	28,580	34,875	75,410	285,480	188,750	101,990	79,564	114,265	162,790
Mean	1,006	3,702	4,578	922	1,246	2,433	9,516	6,089	3,400	2,567	3,686	5,426
Cfsm	0.866	3.19	3.94	0.794	1.07	2.10	8.20	5.24	2.93	2.21	3.17	4.67
In.	1.00	3.56	4.54	0.92	1.11	2.42	9.15	6.04	3.27	2.55	3.66	5.21

Calendar year 1953: Max 39,500 Min 145 Mean 2,977 Cfsm 2.56 In. 34.76
Water year 1953-54: Max 26,100 Min 366 Mean 3,715 Cfsm 3.20 In. 43.43

Peak discharge (base, 13,000 cfs).--Nov. 26 (time unknown) 26,600 cfs (10.41 ft); Dec. 8 (4 a.m.) 13,000 cfs (7.43 ft); Apr. 19 (11 a.m. to 12 m.) 27,000 cfs (10.50 ft); Sept. 12 (11 p.m.) 24,000 cfs (9.91 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 21 to Mar. 25. No gage-height record Dec. 1-5, Apr. 24 to June 16; discharge estimated on basis of records for nearby stations.

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 1954. Records prior to 1910, republished with some revisions in WSP 279.

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.--52 years (1902-54), 11,520 cfs (unadjusted).

Extremes.--Maximum discharge during year, 83,000 cfs Apr. 24 (gage height, 16.88 ft); minimum, 3,900 cfs Oct. 23 (gage height, 2.20 ft).
1901-54: 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 period of ice effect, which are good. Flow regulated by several reservoirs above station (see p. 41).

Cooperation.--Water-stage-recorder graph furnished by T. W. Clark, hydraulic engineer, of Old Town.

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

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,420	10 800	21,400	8,000	6,480	12,000	8,220	28,700	13,500	25,600	8,860	7,890
2	3,960	8,240	17,700	7,680	6,480	12,200	8,080	26,000	13,700	25,800	11,300	9,180
3	4,060	7,840	15,700	7,470	6,460	13,200	7,970	24,200	19,100	22,700	10,500	9,440
4	3,980	7,680	14,100	7,390	6,480	15,000	7,860	22,600	25,600	21,000	12,800	9,000
5	3,960	7,420	14,600	7,390	6,540	18,000	7,780	23,100	26,400	17,200	18,000	8,300
6	4,230	7,010	18,200	7,390	6,580	17,900	7,840	31,100	27,700	14,400	18,800	7,040
7	4,480	6,410	23,500	7,290	6,460	15,400	10,200	43,500	27,500	14,800	17,200	6,480
8	4,890	6,810	34,600	7,240	6,410	14,100	14,600	46,900	29,700	13,800	15,800	7,160
9	5,070	7,390	31,200	7,180	6,360	13,300	18,200	44,400	28,200	12,200	14,000	7,240
10	4,980	8,160	29,500	7,160	6,340	12,900	20,000	45,300	27,200	10,900	13,400	8,030
11	4,870	7,680	34,200	7,080	6,320	12,400	20,600	48,900	25,000	10,100	18,000	9,320
12	4,650	7,340	33,400	7,010	6,290	12,000	22,600	51,000	20,200	8,050	29,800	51,600
13	4,460	7,040	29,300	6,960	6,220	11,700	25,400	46,800	17,800	9,120	30,200	73,900
14	4,520	6,710	27,200	6,940	6,170	11,400	26,300	41,800	13,800	8,690	27,900	65,900
15	4,400	6,410	25,200	6,910	6,080	11,100	24,400	35,100	14,800	8,160	24,700	68,200
16	4,460	5,860	23,400	6,860	6,150	10,900	23,800	30,600	12,500	7,470	20,100	62,700
17	4,440	5,680	19,600	6,810	6,220	10,700	26,300	26,800	10,500	7,470	20,600	53,200
18	4,290	5,660	15,800	6,760	6,200	10,600	49,700	22,200	8,980	7,060	24,200	45,500
19	4,290	5,660	13,800	6,740	6,170	10,300	76,400	19,200	8,830	5,290	23,500	41,300
20	4,230	5,700	12,600	6,710	6,170	10,200	75,100	17,000	8,580	5,660	19,800	34,900
21	4,230	5,470	11,900	6,710	6,170	10,200	70,200	15,400	5,960	6,290	18,000	32,200
22	4,250	5,800	12,200	6,680	6,460	10,200	71,600	15,300	6,120	6,810	15,800	29,200
23	4,230	5,520	13,200	6,660	8,410	10,200	75,900	18,500	6,220	9,260	11,000	26,200
24	4,100	7,870	11,200	6,640	11,900	9,940	81,900	16,600	7,040	10,700	9,820	23,900
25	4,020	11,700	10,300	6,510	*12,300	9,580	71,800	19,000	8,110	12,400	9,150	22,000
26	4,360	30,600	9,850	6,460	12,200	*9,320	60,400	20,000	8,050	10,800	8,720	19,800
27	5,000	49,900	10,000	8,480	12,200	9,080	52,100	21,000	8,110	10,800	8,520	19,200
28	6,540	36,600	9,700	6,510	12,100	8,800	45,100	18,000	12,800	10,800	8,440	19,600
29	10,400	28,900	8,980	*6,510	-	8,610	38,500	16,700	24,000	10,700	8,550	18,400
30	12,700	24,100	8,830	6,510	-------	8,490	32,600	14,400	25,000	10,200	*7,110	17,200
31	12,500	-------	8,690	6,510	-------	8,330	------	12,000	-------	9,440	6,980	-------
Total	160,970	347,960	589,850	215,150	208,320	358,030	1,081,450	862,100	491,000	364,670	491,150	813,980
Mean	5,193	11,600	18,380	6,940	7,440	11,550	36,050	27,810	16,370	11,760	15,840	27,130
(†)	-1,577	+1,780	+3,258	-1,597	-2,427	-1,451	+10,530	+2,905	+373	-575	-1,423	-644

Adjusted for change in reservoir contents

Mean	3,616	13,380	21,640	5,343	5,013	10,100	46,580	30,720	16,740	11,180	14,420	26,490
Cfsm	0.548	2.03	3.28	0.810	0.760	1.53	7.06	4.65	2.54	1.69	2.18	4.01
In.	0.63	2.26	3.78	0.93	0.79	1.76	7.88	5.36	2.83	1.95	2.51	4.47

	Observed			Adjusted		
Calendar year 1953:	Max 88,900	Min 3,380	Mean 12,600	Mean 13,540	Cfsm 2.05	In. 27.86
Water year 1953-54:	Max 81,900	Min 3,960	Mean 16,340	Mean 17,100	Cfsm 2.59	In. 35.15

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, of reservoirs on West and East Branches of Penobscot River, also Sebec Lake and Wilson Pond in Piscataquis River basin.
Note.--Stage-discharge relation affected by ice Dec. 18 to Apr. 3.

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 1954.

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.--39 years, 489 cfs.

Extremes.--Maximum discharge during year, 3,420 cfs Apr. 24 (gage height, 6.77 ft); minimum, 64 cfs Oct. 23, 24, 25 (gage height, 0.77 ft).
1915-54: 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 or no gage-height record, which are fair.

Revisions.--WSP 821: Drainage area.

Rating tables, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 30				May 1 to Sept. 30			
0.7	54	3.0	797	1.3	155	3.0	750
.9	86	4.0	1,340	1.5	205	4.0	1,270
1.1	125	5.0	1,980	2.0	354	5.0	1,910
1.5	219	6.0	2,770	2.5	538	6.0	2,660
2.0	371	7.0	3,620				
2.5	563						

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	81	493	1,050	450	220	625	630	1,970	728	665	371	187
2	78	466	909	415	220	700	603	1,810	728	627	439	200
3	76	421	752	385	215	795	581	1,640	741	644	480	200
4	74	364	620	370	215	900	572	1,540	759	644	582	197
5	69	322	625	365	215	965	555	1,520	764	636	696	192
6	69	285	742	360	215	975	594	1,640	750	598	764	182
7	78	259	1,110	345	210	945	704	1,820	736	554	777	172
8	90	247	1,390	335	210	890	1,010	1,840	732	522	764	169
9	111	253	1,420	330	205	820	1,130	1,830	746	491	723	179
10	125	256	1,540	320	205	770	1,140	1,800	754	461	687	189
11	131	247	*1,670	310	200	720	1,240	1,770	764	431	696	390
12	127	230	1,680	305	198	665	1,240	1,720	764	399	696	1,620
13	121	211	1,660	295	196	630	1,270	1,630	750	450	*687	1,950
14	109	193	1,610	290	196	600	1,230	1,570	718	439	665	2,190
15	101	179	1,550	*285	192	570	1,420	1,490	687	381	632	*2,360
16	94	164	1,460	280	196	555	1,450	1,410	632	335	590	2,280
17	88	153	1,320	275	205	525	1,890	1,350	558	325	566	2,160
18	83	144	1,170	270	220	515	2,710	1,270	491	313	526	2,010
19	78	138	1,020	265	240	500	3,080	1,200	461	303	488	1,830
20	74	129	889	260	275	495	3,290	1,090	480	294	450	1,660
21	72	125	767	255	315	495	3,390	989	526	291	413	1,490
22	68	119	680	255	400	495	3,390	923	515	310	378	1,330
23	64	131	657	250	513	515	*3,400	860	491	354	325	1,170
24	64	256	650	245	576	530	3,390	813	499	381	273	1,020
25	66	435	630	240	*598	559	3,230	818	495	399	238	880
26	92	925	600	240	612	*572	3,010	836	480	402	213	768
27	117	1,210	570	235	630	607	2,800	845	507	392	189	661
28	188	1,280	530	235	650	643	2,560	836	542	374	177	582
29	322	1,250	510	230	-	648	2,370	808	603	351	167	530
30	436	1,160	495	225	------	676	2,200	790	653	335	*157	488
31	497	-- --	480	225	------	643	------	759	------	325	162	------
Total	3,843	12,045	30,756	9,145	8,542	20,543	56,079	41,187	19,054	13,426	14,971	29,236
Mean	124	402	992	295	305	663	1,869	1,329	635	433	483	975
Cfsm	0.415	1.34	3.32	0.987	1.02	2.22	6.25	4.44	2.12	1.45	1.62	3.26
In.	0.48	1.50	3.83	1.14	1.06	2.56	6.97	5.12	2.36	1.67	1.87	3.64

Calendar year 1953: Max 2,660 Min 64 Mean 529 Cfsm 1.77 In. 24.04
Water year 1953-54: Max 3,400 Min 64 Mean 709 Cfsm 2.37 In. 32.20

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 24 to Feb. 22. No gage-height record Feb. 27 to Mar. 24; discharge estimated on basis of recorded range in stage and records for nearby stations.

Penobscot River at Passadumkeag, Maine

Location.--Lat 45°10'55", long 68°37'20", on left bank at Passadumkeag, Penobscot County, at head of Passadumkeag Rips, 1,200 ft downstream from Passadumkeag River.

Drainage area.--7,000 sq mi, approximately (including about 240 sq mi drained by Chamberlain Lake through Telos Canal).

Records available.--November 1938 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 123.6 ft above mean sea level, unadjusted.

Average discharge.--16 years, 12,130 cfs (unadjusted).

Extremes.--Maximum discharge during year, 88,200 cfs Apr. 24 (gage height, 11.56 ft); minimum, 4,060 cfs Oct. 23 (gage height, 3.00 ft).
1938-54: Maximum discharge, 126,000 cfs Apr. 14, 1940 (gage height, 13.62 ft); minimum, 2,600 cfs Sept. 1, 1941 (gage height, 2.44 ft).

Remarks.--Records excellent except those for period of ice effect, which are good. Flow regulated by several reservoirs above station (see p. 41).

Revisions (water years).--WSP 1171: 1940.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,530	11,600	22,800	8,590	6,780	12,900	9,040	30,800	14,500	27,500	10,700	8,130
2	4,110	8,830	19,100	8,220	6,780	13,200	8,880	28,200	14,700	26,600	12,000	9,460
3	4,140	8,130	16,900	8,000	6,740	14,300	8,730	26,500	20,700	23,700	11,400	10,000
4	4,090	8,040	15,000	7,870	6,780	16,200	8,490	25,000	26,600	21,800	13,400	9,460
5	4,090	7,790	15,200	7,870	6,820	19,300	8,260	25,400	27,100	18,000	18,900	8,590
6	4,280	7,270	19,400	7,950	6,780	19,200	8,350	33,000	27,800	15,300	19,800	7,350
7	4,590	6,780	24,900	7,750	6,740	16,600	10,900	45,200	28,800	15,600	18,300	6,780
8	5,010	7,040	36,300	7,660	6,700	15,300	15,800	48,800	30,300	14,500	13,600	7,420
9	5,150	7,580	33,100	7,620	6,630	14,400	19,900	46,700	28,700	13,000	14,900	7,460
10	5,180	8,450	31,700	7,580	6,630	14,000	21,600	47,700	27,900	11,700	14,300	8,350
11	5,040	8,000	36,300	7,500	6,590	13,300	22,600	51,000	25,800	10,900	18,800	10,500
12	4,880	7,620	35,800	7,420	6,560	12,900	24,700	52,900	20,900	8,590	30,400	52,400
13	4,560	7,310	31,600	7,350	6,480	12,600	27,100	49,200	17,900	9,740	31,200	74,600
14	4,650	6,930	29,300	7,310	6,440	12,200	28,000	43,900	14,900	9,350	28,800	68,200
15	4,500	6,740	27,200	7,270	6,330	11,800	26,400	37,200	15,900	8,690	25,500	70,700
16	4,560	6,150	25,600	7,230	6,410	11,600	25,900	32,600	13,200	7,910	20,800	65,000
17	4,500	5,870	21,400	7,160	6,480	11,400	28,200	28,200	11,200	7,830	21,500	55,100
18	4,390	5,870	17,300	7,120	6,480	11,300	52,600	23,700	9,400	7,390	24,900	47,800
19	4,390	5,830	15,200	7,080	6,480	11,000	79,000	20,900	9,400	5,650	24,000	43,000
20	4,390	5,900	13,800	7,040	6,520	10,900	79,800	18,500	9,090	6,050	20,400	36,600
21	4,220	5,650	12,900	7,040	6,590	10,900	74,900	16,900	6,560	6,630	18,500	34,100
22	4,280	5,970	13,100	7,010	7,010	10,900	76,200	16,600	6,820	7,160	15,900	30,900
23	4,250	5,610	14,100	7,010	9,090	10,900	72,500	19,600	6,820	9 620	18,000	27,700
24	4,250	7,910	12,100	7,010	12,700	10,600	86,400	17,900	7,620	11,300	16,400	25,300
25	4,110	12,400	11,200	6,820	13,100	10,300	76,800	20,000	8,490	12,700	9,460	23,200
26	4,390	29,100	10,600	6,780	13,000	10,100	64,400	21,600	8,590	11,300	9,040	20,900
27	5,040	50,700	10,700	6,780	13,100	9,840	55,900	22,100	8,640	11,000	8,690	20,100
28	6,370	38,200	10,400	6,820	13,000	9,620	48,500	19,300	14,300	11,300	8,640	20,300
29	10,700	30,600	9,680	6,820	-	9,460	41,000	17,800	25,200	11,200	8,690	19,100
30	13,400	25,700	9,520	6,820	-------	9,400	35,400	15,200	25,900	10,600	*7,200	17,900
31	13,300	-------	9,350	6,820	-------	9,190	-------	15,200	-------	9,680	7,080	-------
Total	165,340	359,570	611,550	227,320	219,740	385,610	1,146,250	915,600	513,730	382,290	521,200	846,400
Mean	5,334	12,000	19,730	7,333	7,848	12,440	38,210	29,540	17,120	12,330	16,810	28,210
(†)	-1,577	+1,780	+3,258	-1,597	-2,427	-1,451	+10,530	+2,905	+373	-575	-1,423	-644

Adjusted for change in reservoir contents

Mean	3,757	13,780	22,990	5,736	5,421	10,990	48,740	32,440	17,490	11,760	15,390	27,570
Cfsm	0.537	1.97	3.28	0.819	0.774	1.57	6.96	4.63	2.50	1.68	2.20	3.94
In.	0.62	2.20	3.78	0.94	0.81	1.81	7.76	5.34	2.79	1.94	2.54	4.40

	Observed			Adjusted		
Calendar year 1953 :	Max 95,000	Min 3,640	Mean 13,550	Mean 14,300	Cfsm 2.04	In. 27.70
Water year 1953-54 :	Max 86,400	Min 4,090	Mean 17,250	Mean 18,010	Cfsm 2.57	In. 34.93

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in several reservoirs above station.
Note.--Stage-discharge relation affected by ice Dec. 17 to Apr. 3.

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 1954.

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

Average discharge.--13 years, 305 cfs.

Extremes.--Maximum discharge during year, 6,440 cfs Sept. 12 (gage height, 14.83 ft); minimum not determined (occurred during period of no gage-height record).
1941-54: Maximum discharge, that of Sept. 12, 1954; 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 no gage-height record, 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. On Apr. 22, 1954, 205 cfs was measured flowing through the cut.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.3	11	5.0	955
1.5	25	6.0	1,380
1.7	42	8.0	2,380
2.0	76	10.0	3,510
2.5	153	12.0	4,700
3.0	263	14.0	5,920
4.0	560		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	447	626	112	112	505	430	372	188	1,430	162	400
2	18	336	495	100	114	545	400	325	462	940	*317	298
3	17	251	413	96	120	625	380	319	401	646	*209	207
4	17	196	352	93	128	1,210	370	319	352	456	395	212
5	17	153	650	94	140	1,430	380	546	328	328	580	190
6	23	127	1,120	103	172	595	381	1,210	311	249	372	148
7	33	118	1,630	157	205	490	1,000	1,620	286	192	278	125
8	45	256	2,130	184	192	400	1,830	1,190	283	157	212	380
9	52	306	*1,550	194	160	340	1,850	919	244	127	171	372
10	54	268	1,440	128	140	315	1,640	1,050	196	110	186	322
11	45	225	1,800	104	120	285	1,630	1,170	157	96	935	960
12	38	186	1,370	83	104	260	1,800	1,370	132	82	1,420	5,520
13	33	157	1,010	70	97	240	1,830	1,070	113	76	985	5,280
14	30	137	795	63	90	225	1,530	799	113	71	595	3,650
15	26	125	810	*62	83	215	1,320	626	110	70	404	*3,550
16	23	116	750	62	79	215	1,370	495	98	63	311	2,350
17	22	107	630	68	76	210	1,970	476	84	54	270	1,520
18	21	101	525	73	76	215	3,890	419	73	49	221	1,160
19	20	94	440	76	80	230	4,700	338	64	47	165	939
20	20	91	370	83	*90	*275	3,520	288	58	46	140	1,180
21	19	89	315	97	108	340	2,640	249	53	47	124	1,100
22	19	84	290	126	136	400	*2,210	347	50	84	107	835
23	18	98	315	162	290	440	1,880	434	48	89	93	674
24	24	320	370	178	510	460	1,640	386	114	106	87	516
25	38	545	350	160	555	485	1,220	410	124	122	89	407
26	90	2,710	290	160	540	520	975	540	97	139	82	378
27	170	2,610	235	152	495	595	786	422	240	114	75	347
28	290	1,740	194	144	485	710	634	333	1,180	98	67	291
29	500	1,160	160	132	-	560	526	273	2,690	86	66	246
30	745	835	136	120	-------	490	440	253	2,250	76	62	212
31	616	-------	120	112	-------	460	-------	228	-------	108	62	-------
Total	3,101	13,988	21,681	3,548	5,497	14,285	45,172	18,796	10,899	6,358	9,242	33,769
Mean	100	466	699	114	196	461	1,506	606	363	205	298	1,126
Cfsm	0.562	2.62	3.93	0.640	1.10	2.59	8.46	3.40	2.04	1.15	1.67	6.33
In.	0.65	2.92	4.53	0.74	1.14	2.99	9.44	3.92	2.28	1.33	1.92	7.06

Calendar year 1953: Max 4,260 Min 7.0 Mean 381 Cfsm 2.14 In. 29.09
Water year 1953-54: Max 5,520 Min 17 Mean 511 Cfsm 2.87 In. 38.92

Peak discharge (base, 1,600 cfs).--Nov. 26 (8 p.m.) 3,070 cfs (9.24 ft); Dec. 8 (4 a.m.) 2,360 cfs (7.96 ft); Apr. 9 (2 a.m.) 1,920 cfs (7.11 ft); Apr. 19 (6:30 a.m.) 4,910 cfs (12.34 ft); May 7 (4:30 a.m.) 1,720 cfs (6.70 ft); June 29 (5 a.m.) 2,840 cfs (8.84 ft); Sept. 12 (8 p.m.) 6,440 cfs (14.83 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 15 to Jan. 3, Jan. 8 to Apr. 5 (no gage-height record Mar. 6-19; discharge estimated on basis of weather records and records for nearby stations). No gage-height record Oct. 1-30; discharge estimated on basis of recorded range in stage and records for nearby streams.

Reservoirs in Penobscot River basin, Maine

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, 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.

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, for power and log driving; usable capacity of reservoir, 15,000,000,000 cu ft. Records furnished by Great Northern Paper Co.

Chamberlain and Telos Lakes and Round Pond in East Branch Penobscot River basin are controlled by dams at outlet of Chamberlain and Telos Lakes, although regulation is at Telos Dam, in T. 6, R. 11, Piscataquis County. 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.

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; usable capacity, 1,785,000,000 cu ft between gage heights 643.0 and 655.0 ft. Records furnished by Bangor Hydro-Electric Co.

Sebec Lake on Sebec River at Sebec, Piscataquis County, used for power and log driving; usable capacity, 2,511,000,000 cu ft between gage heights 91 and 100 ft. Gage-height record furnished by Bangor Hydro-Electric Co.

Wilson Pond on Wilson Stream, $2\frac{3}{4}$ miles east of Greenville, Piscataquis County, 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.

Monthly change in contents, in millions of cubic feet, water year October 1953 to September 1954

Month	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
October	-3,617	-376	-229
November	+2,118	+1,559	+936
December	+7,832	+1,673	-780
Calendar year 1953	+21,508	+2,417	-440
January	-3,117	-929	-230
February	-3,662	-1,915	-295
March	-2,226	-1,768	+107
April	+23,597	+3,309	+387
May	+5,097	+2,078	+605
June	+605	+122	+240
July	-1,335	-86	-120
August	-3,301	+61	-571
September	-1,520	-223	+73
Water year 1953-54	+20,471	+3,505	+123

† Includes change in 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 Reservoirs, Dole and Poland Ponds.

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 and half a mile downstream from Pleasant Pond Brook.

Drainage area.--148 sq mi.

Records available.--October 1938 to September 1954.

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

Average discharge.--16 years, 234 cfs.

Extremes.--Maximum discharge during year, 4,010 cfs Sept. 12 (gage height, 9.21 ft); minimum, 14 cfs Oct. 4, 5 (gage height, 1.89 ft).
1938-54: 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 or no gage-height record, which are fair. Some regulation at low flow by sawmill at North Whitefield.

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

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 25				Nov. 26 to Sept. 30			
1.8	9.1	2.6	96	1.9	14	3.5	311
1.9	15	3.0	185	2.0	20	4.0	491
2.0	21	3.5	342	2.2	37	5.0	940
2.2	40	4.2	614	2.4	59	6.0	1,520
2.4	64			2.6	87	7.0	2,180
				3.0	166	9.0	3,820

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	136	588	178	123	820	446	338	244	188	49	89
2	16	126	518	168	161	980	423	291	235	164	48	69
3	15	113	449	157	218	970	402	259	259	143	44	55
4	15	104	394	152	207	*1,370	352	278	247	123	69	48
5	14	100	515	148	196	1,180	321	152	241	110	76	46
6	16	100	546	164	186	1,030	318	*580	230	102	59	43
7	22	109	1,400	210	178	897	384	601	210	97	52	42
8	28	138	1,290	166	171	783	461	522	194	89	48	46
9	25	132	1,130	152	160	649	482	563	178	82	45	57
10	20	119	1,180	141	142	592	464	892	159	76	87	59
11	21	113	1,110	132	132	522	555	805	159	68	178	1,210
12	21	109	935	132	52	446	690	955	184	63	152	3,470
13	*21	108	868	130	35	416	645	820	164	59	101	2,210
14	19	102	788	126	26	356	623	727	166	57	81	2,160
15	18	100	839	119	47	335	636	649	166	59	75	1,900
16	18	98	769	119	84	298	640	584	157	*57	75	1,490
17	18	94	623	114	132	269	1,110	518	145	51	81	1,230
18	18	91	530	110	166	241	2,360	438	135	45	84	1,020
19	17	89	457	112	186	224	2,050	384	127	43	80	873
20	17	89	405	135	220	560	1,750	338	115	42	76	902
21	17	86	362	184	890	635	1,490	298	106	45	74	741
22	16	86	362	146	775	507	1,260	278	99	51	67	623
23	16	134	405	132	*705	487	1,060	262	102	48	63	538
24	17	389	335	125	632	480	887	238	204	48	60	468
25	20	580	321	123	686	461	736	247	141	47	59	409
26	38	1,250	298	131	811	545	*627	256	108	44	58	370
27	44	*839	272	136	825	588	546	215	174	42	55	325
28	200	759	244	132	844	518	491	194	415	42	53	281
29	310	732	238	190	-	526	423	186	235	41	49	250
30	222	667	221	136	------	518	376	318	210	42	46	218
31	164	-- -	207	125	------	480	-------	285	-------	48	54	-- --
Total	1,439	7,692	18,599	4,425	8,990	18,683	23,009	13,471	5,509	2,216	2,198	21,242
Mean	46.4	256	600	143	321	603	767	435	184	71.5	70.9	708
Cfsm	0.314	1.73	4.05	0.966	2.17	4.07	5.18	2.94	1.24	0.483	0.479	4.78
In.	0.36	1.93	4.67	1.11	2.26	4.69	5.78	3.39	1.38	0.56	0.55	5.33

Calendar year 1953: Max 3,150 Min 14 Mean 325 Cfsm 2.20 In. 29.83
Water year 1953-54: Max 3,470 Min 14 Mean 349 Cfsm 2.36 In. 32.01

Peak discharge (base, 1,100 cfs).--Nov. 26 (5 a.m.) 1,550 cfs (6.05 ft); Dec. 7 (5 a.m.) 1,710 cfs (6.30 ft); Mar. 4 (5 p.m.) 1,520 cfs (6.00 ft); Apr. 18 (6 p.m.) 2,560 cfs (7.52 ft); Sept. 12 (8:30 a.m.) 4,010 cfs (9.21 ft).
* Discharge measurement made on this day.
Note.--No gage-height record Feb. 13-22; discharge estimated on basis of weather records and records for nearby stations. Stage-discharge relation affected by ice Jan. 9, 11-14, 17, 18, 21-23, 27-30, Feb. 9-11.

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 1954.

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, 17.72 ft Aug. 13; minimum observed, 13.75 ft Oct. 6.
1895-1954: 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. 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. During June, July, August, and September some water was diverted through gates in dam at West Outlet.

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

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

Gage height, in feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13.95	14.46	15.00	16.76	15.65	14.56	14.35	16.47	17.58	17.60	17.46	17.28
2	13.89	14.46	15.05	16.76	15.57	14.62	14.30	16.58	17.56	17.55	17.48	17.29
3	13.88	14.51	15.10	16.77	15.50	14.62	14.30	16.71	17.65	17.52	17.48	17.30
4	13.82	14.52	15.12	16.76	15.46	14.65	14.25	16.80	17.62	17.49	17.57	17.35
5	13.79	14.56	15.21	16.78	15.40	14.66	14.18	17.00	17.59	17.49	17.55	17.36
6	13.75	14.54	15.26	16.76	15.31	14.67	14.13	17.20	17.55	17.55	17.56	17.37
7	13.80	14.54	15.40	16.75	15.25	14.67	14.10	17.35	17.56	17.54	17.54	17.37
8	13.80	14.49	15.53	16.72	15.19	14.67	14.20	17.35	17.50	17.54	17.53	17.38
9	13.78	14.46	15.64	16.64	15.15	14.65	14.29	17.25	17.49	17.54	17.51	17.37
10	13.80	14.46	15.80	16.59	15.05	14.63	14.29	17.21	17.50	17.53	17.51	17.35
11	13.84	14.45	15.90	16.57	15.02	14.63	14.30	17.29	17.51	17.53	17.63	17.35
12	13.86	14.46	16.05	16.55	14.95	14.65	14.35	17.35	17.51	17.50	17.66	17.65
13	13.87	14.44	16.14	16.53	14.88	14.68	14.36	17.33	17.51	17.45	17.72	17.67
14	13.87	14.42	16.25	16.46	14.81	14.68	14.43	17.35	17.52	17.42	17.69	17.69
15	13.88	14.40	16.35	16.43	14.79	14.68	14.50	17.44	17.52	17.39	17.60	17.64
16	13.90	14.40	16.44	16.43	14.79	14.70	14.53	17.46	17.49	17.35	17.54	17.50
17	13.90	14.38	16.48	16.42	14.76	14.73	14.62	17.49	17.48	17.32	17.50	17.37
18	13.90	14.23	16.54	16.37	14.76	14.75	14.85	17.50	17.46	17.29	17.46	17.31
19	13.91	14.28	16.57	16.35	14.75	14.73	14.97	17.53	17.46	17.27	17.44	17.19
20	13.93	14.27	16.59	16.35	14.75	14.74	15.05	17.53	17.47	17.26	17.45	17.18
21	13.94	14.28	16.66	16.29	14.71	14.76	15.20	17.53	17.49	17.24	17.46	17.32
22	13.94	14.23	16.68	16.25	14.71	14.70	15.35	17.56	17.48	17.27	17.45	17.15
23	13.95	14.12	16.68	16.15	14.65	14.70	15.57	17.56	17.54	17.29	17.44	17.15
24	13.95	14.38	16.72	16.07	14.63	14.66	15.80	17.53	17.54	17.33	17.43	17.15
25	13.96	14.35	16.72	16.05	14.58	14.65	15.95	17.53	17.54	17.35	17.42	17.13
26	14.02	14.63	16.76	16.03	14.58	14.55	16.04	17.51	17.54	17.37	17.42	17.14
27	14.05	14.68	16.78	15.93	14.60	14.55	16.11	17.50	17.56	17.38	17.42	17.14
28	14.07	14.80	16.81	15.89	14.54	14.51	16.26	17.50	17.60	17.40	17.38	17.23
29	14.20	14.90	16.84	15.86	-	14.46	16.31	17.51	17.65	17.41	17.30	17.25
30	14.23	14.95	16.82	15.80	-------	14.43	16.35	17.53	17.65	17.42	17.29	17.27
31	14.40	-------	16.83	15.75	-------	14.38	-------	17.55	-------	17.42	17.24	-------

Monthly gage height and contents, water year October 1953 to September 1954

Date	Gage height (feet)	Contents (millions of cubic feet)	Change in contents during month (millions of cubic feet)
Sept.30	14.00	12,537	-
Oct. 31	14.40	13,805	+1,268
Nov. 30	14.95	15,554	+1,749
Dec. 31	16.83	21,574	+6,020
Calendar year 1953	-	-	+10,175
Jan. 31	15.75	18,108	-3,466
Feb. 28	14.54	14,250	-3,858
Mar. 31	14.38	13,742	-508
Apr. 30	16.35	20,032	+6,290
May 31	17.55	23,897	+3,865
June 30	17.65	24,221	+324
July 31	17.42	23,477	-744
Aug. 31	17.24	22,895	-582
Sept.30	17.27	22,992	+97
Water year 1953-54	-	-	+10,455

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 1954.

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.--35 years, 1,838 cfs.

Extremes.--Maximum discharge during year, 13,600 cfs Sept. 14 (gage height, 9.38 ft); minimum, 241 cfs Apr. 12-16 (gage height, 2.48 ft).
1919-54: 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 Brassua and Moosehead Lakes (see p.43, 54) and Second and First Roach Ponds (see p. 54).

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

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.4	204	4.5	2,080
2.6	300	5.0	2,870
2.8	414	6.0	4,840
3.0	542	7.0	7,070
3.4	845	8.0	9,660
3.8	1,240	10	15,800

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,580	250	545	2,900	3,200	1,580	2,500	3,590	3,100	6,060	944	915
2	2,060	355	665	2,870	3,180	1,590	2,450	3,890	5,280	5,220	954	672
3	2,160	830	665	2,870	3,630	1,620	2,430	4,500	8,610	3,040	954	680
4	2,500	944	672	1,160	3,300	1,640	2,390	2,240	8,360	1,760	1,330	687
5	2,470	1,280	680	1,970	2,970	1,640	2,370	3,270	8,600	1,840	1,520	687
6	2,420	1,790	680	2,890	3,840	1,630	2,370	6,370	7,370	2,030	1,850	975
7	2,480	2,210	470	2,870	3,290	1,630	1,690	10,200	8,430	2,030	1,890	1,520
8	2,340	2,420	300	2,870	2,830	1,630	670	11,900	7,600	2,030	1,520	1,600
9	2,220	2,190	300	2,840	2,480	1,630	285	11,800	4,830	2,030	1,520	1,420
10	2,240	2,030	306	2,800	2,430	1,620	285	8,020	3,890	1,760	1,520	1,510
11	1,960	1,540	311	2,800	2,420	990	280	4,770	3,610	1,650	3,090	2,520
12	1,740	1,540	311	2,780	2,390	300	260	7,540	3,820	2,380	5,130	6,930
13	1,740	1,540	316	2,770	2,360	300	241	5,300	3,820	2,230	6,030	8,570
14	1,740	1,540	316	2,530	2,340	295	241	2,670	3,820	2,000	6,400	11,200
15	1,740	1,530	300	1,260	2,320	415	241	1,700	3,820	2,000	5,930	13,100
16	1,750	1,530	306	821	2,310	643	245	1,730	2,990	1,990	3,940	12,500
17	1,750	1,710	630	1,670	2,100	650	250	1,710	2,580	1,980	3,180	10,600
18	1,750	2,290	1,300	2,700	1,660	885	260	1,570	2,180	1,980	2,290	8,180
19	1,760	2,720	1,570	2,730	1,640	1,330	260	2,350	1,640	2,300	1,710	6,020
20	1,770	970	1,770	3,090	1,630	1,340	265	2,750	1,430	2,530	1,480	4,220
21	1,770	1,290	1,470	3,080	2,030	1,540	270	2,770	1,430	2,230	1,500	5,640
22	1,770	2,700	2,300	2,180	2,280	1,870	275	4,110	1,440	1,480	1,500	5,130
23	1,590	1,610	2,300	3,040	2,280	2,210	280	5,640	1,720	1,100	1,480	2,920
24	1,290	275	2,020	3,010	2,250	2,700	275	4,950	2,000	917	1,480	2,920
25	1,220	275	1,650	2,970	2,020	2,670	2,250	4,410	1,860	926	1,560	2,920
26	1,230	295	840	2,960	1,590	2,650	4,060	3,080	1,460	935	1,480	2,410
27	1,130	290	845	3,210	1,580	2,600	4,100	2,580	1,790	1,100	1,480	1,360
28	610	290	1,350	2,740	1,580	2,580	4,160	2,580	3,320	1,120	2,180	944
29	245	290	1,890	2,420	-	2,550	5,160	2,650	5,030	935	2,070	954
30	250	295	2,520	3,010	--------	2,550	4,880	2,700	5,870	935	1,700	725
31	250	--------	2,920	3,220	--------	2,530	--------	2,670	--------	935	1,270	--------
Total	52,525	38,819	32,518	81,031	67,930	49,808	45,693	136,010	121,700	61,453	70,882	120,429
Mean	1,694	1,294	1,049	2,614	2,426	1,607	1,523	4,387	4,057	1,982	2,287	4,014
(†)	-859	+937	+2,191	-1,528	-1,472	-59	+4,967	+2,114	+238	-266	-39	+244

Adjusted for diversion and change in reservoir contents

Mean	835	2,231	3,240	1,086	954	1,548	6,490	6,501	4,295	1,716	2,248	4,258
Cfsm	0.673	1.80	2.61	0.876	0.769	1.25	5.23	5.24	3.46	1.38	1.81	3.43
In.	0.78	2.01	3.01	1.01	0.80	1.44	5.84	6.04	3.86	1.59	2.09	3.83

	Observed			Adjusted			
Calendar year 1953:	Max 9,600	Min 222	Mean 1,920	Mean 2,330	Cfsm 1.88	In. 25.49	
Water year 1953-54:	Max 13,100	Min 241	Mean 2,408	Mean 2,952	Cfsm 2.38	In. 32.30	

† Change in contents, equivalent in cubic feet per second, in Brassua and Moosehead Lakes, and Second Roach and First Roach Ponds; also diversion through West Outlet.

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 1954.

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.--53 years, 2,528 cfs (unadjusted).

Extremes.--Maximum discharge during year, 17,800 cfs Sept. 15 (gage height, 10.10 ft); minimum, 153 cfs Feb. 6 (gage height, 1.23 ft), when gates in dam upstream were closed. 1901-54: 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 except those for periods of ice effect, which are fair. Flow regulated by Moosehead (see p. 43), Brassua and Moxie Lakes, and Indian, Second Roach and First Roach Ponds (see p. 54).

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 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.3	182	3.5	2,270
1.7	381	4.0	3,170
2.0	571	5.0	5,360
2.5	985	7.0	10,600
3.0	1,550	10	17,600

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,960	1,300	1,140	3,080	3,500	1,820	2,840	6,620	3,910	7,520	1,750	2,010
2	2,730	1,140	1,230	3,020	3,400	1,820	2,800	4,900	6,440	6,930	2,050	1,720
3	1,510	1,140	1,220	2,980	3,600	1,820	2,780	4,810	12,000	4,280	1,980	1,330
4	2,570	1,490	1,260	2,490	3,340	1,850	2,760	5,170	10,700	2,820	2,650	1,570
5	2,750	1,530	1,260	1,500	1,920	1,880	2,730	5,170	10,900	2,560	2,690	1,180
6	2,750	1,920	1,270	1,530	186	1,900	2,670	10,500	10,900	2,850	2,820	1,500
7	2,780	2,490	900	1,960	1,600	1,920	2,690	14,600	10,900	2,800	2,950	1,880
8	2,820	2,840	810	2,710	2,690	1,900	1,470	14,900	11,100	2,890	2,160	2,100
9	2,600	3,000	810	3,020	2,710	1,890	1,140	14,700	6,530	2,240	2,040	1,950
10	2,600	2,800	800	3,000	2,660	1,860	1,410	9,300	5,410	2,820	2,490	1,970
11	2,550	*2,300	820	2,980	2,620	1,690	1,720	7,190	4,420	1,900	4,990	3,560
12	2,100	2,050	820	2,960	2,600	1,390	1,280	8,240	4,870	3,050	5,960	9,050
13	1,980	1,990	820	2,870	2,580	1,240	1,470	8,530	4,730	3,000	9,030	12,600
14	1,960	1,960	820	2,690	2,510	1,010	1,550	4,240	4,620	2,960	8,700	15,100
15	1,960	1,960	820	2,300	2,490	918	1,510	2,890	5,210	1,810	8,210	17,300
16	1,960	1,960	845	1,200	2,440	966	1,530	2,280	4,510	2,910	7,190	16,200
17	1,880	1,930	1,300	1,960	2,300	1,020	1,890	2,430	3,500	2,800	7,090	15,100
18	1,960	2,320	1,690	2,440	2,080	1,040	2,540	2,410	*3,740	2,450	3,730	11,300
19	1,350	2,980	2,190	2,940	1,880	*1,270	1,830	3,110	1,830	2,350	2,360	8,930
20	1,830	2,780	2,390	3,230	1,820	1,480	2,010	4,330	975	3,230	2,110	6,180
21	1,960	1,070	2,040	3,300	1,930	1,600	2,570	2,730	1,070	3,010	2,080	7,590
22	1,950	2,260	2,300	3,170	2,290	1,820	2,980	4,400	1,990	2,260	2,040	7,950
23	1,920	3,040	2,800	3,190	2,510	2,100	4,640	7,770	2,020	2,080	2,000	4,240
24	1,670	1,600	2,750	3,150	2,490	2,550	3,540	6,100	2,360	1,810	1,630	2,320
25	1,420	1,140	2,490	3,090	2,440	2,800	3,970	6,180	2,920	1,480	1,860	1,950
26	1,530	2,800	1,920	3,060	2,130	2,940	7,720	3,830	1,880	2,130	2,010	2,280
27	1,590	2,730	1,550	3,020	1,960	2,980	7,900	3,200	846	1,700	1,890	2,210
28	1,540	2,100	1,550	3,170	1,830	2,960	5,150	3,560	5,910	2,060	2,560	1,630
29	1,290	1,600	1,860	3,020	-	2,940	7,360	3,260	7,400	1,710	2,650	1,600
30	1,410	1,290	2,420	3,170	---	2,940	7,330	3,750	7,300	1,440	1,530	1,030
31	1,420	---	2,910	3,420	---	2,910	---	3,440	---	1,510	2,470	---
Total	63,300	61,510	47,805	85,620	66,506	59,224	93,780	184,540	160,891	85,360	105,670	165,330
Mean	2,042	2,050	1,542	2,762	2,375	1,910	3,126	5,953	5,363	2,754	3,409	5,511
(†)	-819	+1,100	+2,214	-1,505	-1,224	0	+5,732	+2,181	+121	-353	-321	+146
Adjusted for change in reservoir contents												
Mean	1,223	3,150	3,756	1,257	1,151	1,910	8,858	8,134	5,484	2,401	3,088	5,657
Cfsm	0.779	2.01	2.39	0.701	0.733	1.22	5.64	5.18	3.49	1.53	1.97	3.60
In.	0.90	2.24	2.76	0.81	0.76	1.41	6.29	5.97	3.89	1.76	2.27	4.02

	Observed			Adjusted		
Calendar year 1953:	Max 12,800	Min 380	Mean 2,569	Mean 2,940	Cfsm 1.87	In. 2.542
Water year 1953-54:	Max 17,300	Min 186	Mean 3,232	Mean 3,840	Cfsm 2.45	In. 3.308

* Discharge measurement made on this day.

† Change in contents, equivalent in cubic feet per second, in reservoirs above Moosehead Lake Outlet, Moxie and Indian Ponds.

Note.--Stage-discharge relation affected by ice Dec. 5-28, Dec. 31 to Feb. 4, Feb. 7-20, Feb. 24 to Mar. 12.

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.--December 1939 to September 1954 (monthly discharge only for some periods, 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.--15 years, 787 cfs (unadjusted).

Extremes.--Maximum discharge during year, 18,000 cfs Sept. 12 (gage height, 11.50 ft); minimum, 61 cfs Mar. 8-11 (gage height, 4.30 ft).
1939-54: Maximum discharge, that of Sept. 12, 1954; no flow for 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. 54).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

4.3	61	7.0	1,830
4.6	116	8.0	3,600
5.0	235	9.0	6,240
5.5	465	10.5	12,400
6.0	780		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	525	84	315	86	530	152	911	580	735	152	2,980	845
2	1,260	84	433	715	825	152	903	2,730	3,210	152	2,280	106
3	1,560	150	835	1,140	825	152	895	4,290	3,870	155	1,590	116
4	960	347	1,030	1,810	425	95	895	1,760	1,620	155	1,540	515
5	443	343	410	2,270	1,460	64	895	3,210	2,560	215	775	370
6	433	710	90	1,550	2,060	64	895	4,480	4,440	158	570	386
7	449	530	95	475	1,430	64	1,440	4,620	3,590	169	678	570
8	454	343	93	650	705	63	725	2,880	2,650	178	678	780
9	433	690	93	1,090	735	61	82	3,640	1,500	175	540	780
10	427	520	95	1,080	919	61	82	5,830	2,190	172	770	802
11	416	239	91	1,400	919	395	77	4,420	2,270	172	1,530	3,170
12	416	*239	84	1,310	911	1,050	77	1,950	1,400	175	1,980	12,400
13	406	235	84	1,080	911	1,040	77	2,050	430	178	*1,440	5,110
14	770	235	84	1,080	911	1,020	79	2,130	944	172	640	4,270
15	935	239	84	1,070	903	1,630	79	1,040	2,090	172	335	4,080
16	1,160	465	84	1,070	635	1,860	79	1,300	1,800	172	455	1,770
17	835	978	84	1,060	460	1,840	81	1,750	1,050	172	870	1,670
18	750	969	84	1,050	460	*1,980	81	1,530	1,900	175	380	2,360
19	1,780	969	84	1,050	460	2,000	86	770	2,440	172	197	1,980
20	1,840	960	84	1,040	460	1,980	90	755	3,230	175	197	2,520
21	1,050	960	780	1,030	460	1,970	90	950	3,350	175	197	1,820
22	1,020	952	360	1,030	720	1,960	103	2,490	3,280	178	200	925
23	994	450	84	1,040	670	1,490	930	1,980	3,100	181	540	1,480
24	969	82	84	920	300	935	6,160	1,720	3,040	184	911	1,120
25	960	116	84	671	*152	935	5,890	1,980	2,670	184	1,020	1,950
26	960	82	84	671	152	935	2,650	1,780	2,090	194	1,610	3,270
27	952	82	84	671	152	927	1,120	1,340	112	330	1,580	2,900
28	720	82	86	305	152	927	612	540	670	670	910	1,670
29	460	82	86	84	-	919	593	575	175	1,170	612	2,200
30	335	84	84	84	--------	903	593	615	161	514	1,770	2,530
31	84	--------	86	82	--------	903	--------	250	--------	605	1,500	--------
Total	24,756	12,301	6,238	28,664	19,702	28,527	27,270	65,935	62,567	7,801	31,275	64,455
Mean	799	410	201	925	704	920	909	2,127	2,086	252	1,009	2,148
(†)	-484	+401	+738	-719	-326	-435	+2,888	+224	-409	+412	-210	-223
Adjusted for change in contents in Flagstaff Lake												
Mean	315	811	939	206	378	485	3,797	2,351	1,677	664	799	1,925
Cfsm	0.606	1.56	1.81	0.396	0.727	0.933	7.30	4.52	3.22	1.28	1.54	3.70
In.	0.70	1.74	2.09	0.46	0.76	1.08	8.14	5.21	3.59	1.48	1.78	4.13

	Observed	Adjusted
Calendar year 1953:	Max 5,620 Min 1 Mean 811	Mean 1,012 Cfsm 1.95 In. 26.39
Water year 1953-54:	Max 12,400 Min 61 Mean 1,040	Mean 1,193 Cfsm 2.29 In. 31.16

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

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 1954 (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 Sept. 29, 1923, staff gage at site 100 ft downstream at same datum.

Average discharge.--49 years (1902-7, 1910-54), 1,412 cfs (unadjusted).

Extremes.--Maximum discharge during year, 16,600 cfs Sept. 12 (gage height, 8.13 ft); minimum daily, 305 cfs Jan. 29.
1901-7, 1910-54: 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. 54).

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 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.9	207	4.0	3,200
2.0	270	5.0	5,660
2.4	610	6.0	8,640
3.0	1,380	7.0	12,000
3.5	2,200		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	633	995	893	465	655	610	1,130	2,770	1,090	1,140	1,940	2,310
2	1,120	831	1,030	843	1,720	666	1,100	4,600	2,310	969	3,110	1,350
3	1,760	712	1,170	1,350	1,780	723	1,100	6,930	5,340	771	2,920	868
4	1,440	819	1,580	2,050	1,530	881	1,110	5,280	4,910	621	2,490	819
5	666	795	1,420	2,400	1,690	747	1,100	4,260	3,670	621	2,050	771
6	621	944	944	1,810	1,860	712	1,090	7,130	6,000	831	1,170	723
7	723	1,160	1,520	805	1,530	666	1,530	8,080	6,350	735	1,090	712
8	831	893	1,790	520	1,130	633	2,020	6,980	5,720	580	1,050	1,050
9	881	1,110	1,410	1,270	1,010	621	1,210	5,390	4,300	492	893	1,090
10	1,070	1,350	*1,310	1,280	1,110	540	1,300	8,980	3,460	473	906	1,100
11	1,030	*771	1,480	1,530	1,170	540	1,280	8,050	3,370	465	1,780	2,060
12	956	712	1,320	1,440	1,160	1,240	1,410	5,630	2,950	447	*2,530	11,800
13	868	666	1,130	1,280	1,180	1,380	1,530	3,980	1,530	456	2,850	11,400
14	982	655	995	*1,380	1,210	1,520	1,500	4,040	1,810	412	2,050	8,580
15	1,340	633	931	1,400	1,300	1,780	1,270	2,730	3,160	388	1,210	8,940
16	1,410	621	843	1,300	795	2,180	1,170	1,930	2,570	380	856	6,550
17	1,410	1,250	723	1,250	700	2,180	1,230	2,610	*1,700	364	1,100	3,950
18	868	1,340	689	1,240	723	2,250	2,770	2,590	2,230	356	1,100	4,040
19	1,760	1,320	735	1,240	735	*2,250	2,900	2,100	2,800	396	600	4,020
20	2,340	1,310	819	1,230	735	2,240	3,010	1,300	3,370	412	520	4,280
21	1,420	1,310	1,010	1,230	700	2,220	3,120	2,100	3,340	438	501	4,090
22	1,310	1,300	1,320	1,230	919	2,170	4,600	2,880	3,090	560	474	2,830
23	1,270	1,210	655	1,230	1,100	2,030	5,400	3,900	3,220	600	429	2,390
24	1,230	*747	600	1,110	931	1,250	10,400	3,790	4,000	771	995	2,440
25	1,200	870	590	1,010	723	1,230	10,300	3,310	2,800	1,050	1,100	2,160
26	1,480	2,690	689	945	666	1,230	8,180	2,980	2,310	621	1,480	3,330
27	1,580	2,100	580	945	644	1,230	4,450	2,610	690	610	1,690	4,160
28	1,560	1,470	600	600	621	1,200	2,480	1,560	2,140	843	1,520	2,700
29	1,160	1,140	600	305	-	1,210	2,240	1,180	1,550	1,240	906	2,830
30	1,690	956	501	395	--------	1,200	2,340	1,420	1,310	1,140	931	2,880
31	1,240	--------	510	395	--------	1,170	--------	931	--------	969	1,590	--------
Total	37,849	32,680	30,387	35,478	30,027	40,499	84,270	122,021	93,090	20,152	43,831	106,223
Mean	1,221	1,089	980	1,144	1,072	1,306	2,809	3,936	3,103	650	1,414	3,541
(†)	-620	+418	+712	-719	-326	-420	+3,191	+224	-459	+425	-217	-331

Adjusted for change in reservoir contents

Mean	601	1,507	1,692	425	746	886	6,000	4,160	2,644	1,075	1,197	3,210
Cfsm	0.689	1.73	1.94	0.487	0.856	1.02	6.88	4.77	3.03	1.23	1.37	3.68
In.	0.79	1.93	2.24	0.56	0.89	1.18	7.68	5.50	3.38	1.42	1.58	4.11

	Observed						Adjusted					
Calendar year 1953:	Max	10,200	Min	220	Mean	1,537	Mean	1,738	Cfsm	1.99	In.	27.05
Water year 1953-54:	Max	11,800	Min	305	Mean	1,853	Mean	2,007	Cfsm	2.30	In.	31.26

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

Note.--No gage-height record Apr. 19-24; discharge estimated on basis of weather records and records for station near Dead River. Stage-discharge relation affected by ice Jan. 3-7, 9-31, Feb. 2-7, 13, 14, 23, Mar. 12, 13.

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 1954 (monthly discharge only for some periods, published in WSP 1301).

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

Average discharge.--23 years, 171 cfs.

Extremes.--Maximum discharge during year, 3,050 cfs Sept. 11 (gage height, 10.30 ft); minimum, 8.1 cfs Oct. 5 (gage height, 5.92 ft).
1931-54: 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.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 25				Nov. 26 to Sept. 9				Sept. 10-30			
5.9	7.2	6.8	153	5.2	12	6.5	225	6.0	105	8.0	950
6.0	12	7.0	215	5.4	26	7.0	458	6.4	199	9.0	1,750
6.2	29	7.4	364	5.6	48	7.5	740	7.0	410	10.0	2,730
6.4	60	8.0	680	5.8	78	8.0	1,090	7.5	655		
6.6	102			6.0	115	9.5	2,580				
				6.2	165						

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.4	229	255	38	21	192	100	734	115	492	540	390
2	8.5	168	214	34	20	200	96	740	510	369	593	298
3	8.5	131	185	34	24	225	89	645	908	272	361	187
4	8.5	107	165	35	38	380	92	609	570	205	478	147
5	8.1	87	252	36	62	370	104	950	430	173	458	111
6	8.5	72	324	40	51	330	82	1,150	512	249	324	92
7	15	62	1,070	44	38	300	144	1,170	449	223	239	82
8	35	87	971	44	30	255	249	866	390	171	185	111
9	43	107	565	40	24	225	313	747	301	134	149	122
10	43	109	*538	36	20	200	309	1,080	236	111	200	*116
11	42	*100	593	34	17	193	336	915	193	94	1,210	810
12	36	87	458	33	14	176	395	688	157	83	*1,310	2,340
13	29	76	348	31	13	162	421	523	139	80	754	*1,150
14	25	70	290	*29	12	142	386	403	142	76	440	843
15	21	64	260	28	14	137	336	317	137	67	298	795
16	18	60	220	26	13	129	324	262	117	58	223	548
17	17	58	190	31	14	127	512	233	*102	52	196	432
18	15	55	160	31	14	134	1,540	199	87	48	155	398
19	15	52	140	27	13	*122	1,660	176	75	86	129	353
20	13	48	136	26	14	109	1,520	157	70	107	115	494
21	12	43	130	26	21	107	*1,670	142	64	320	102	436
22	12	42	132	26	89	100	1,910	165	58	517	89	346
23	12	194	142	26	215	98	2,540	187	76	365	76	283
24	11	*499	146	26	245	96	1,900	182	120	290	70	231
25	11	600	116	27	240	94	1,270	190	107	223	67	199
26	72	2,240	96	28	*235	98	929	205	83	185	56	196
27	121	1,130	83	27	225	104	796	171	162	220	51	189
28	199	615	72	26	230	106	*657	139	543	205	47	171
29	408	421	61	24	-	100	609	*127	768	157	47	149
30	460	*317	51	24	--------	100	682	139	627	139	46	140
31	352	--------	46	24	--------	113	--------	122	--------	134	102	--------
Total	2,088.5	7,930	8,409	961	1,966	5,224	21,971	14,333	8,248	5,907	9,110	12,159
Mean	67.4	264	271	31.0	70.2	169	732	462	275	191	294	405
Cfsm	0.740	2.90	2.97	0.340	0.771	1.86	8.04	5.07	3.02	2.10	3.23	4.45
In.	0.85	3.24	3.42	0.39	0.80	2.14	8.97	5.84	3.37	2.42	3.72	4.96

Calendar year 1953: Max 3,640 Min 6.2 Mean 216 Cfsm 2.37 In. 32.24
Water year 1953-54: Max 2,540 Min 8.1 Mean 269 Cfsm 2.95 In. 40.12

Peak discharge (base, 1,200 cfs).--Nov. 26 (5 to 6 a.m.) 2,700 cfs (9.60 ft); Dec. 7 (6 p.m.) 1,270 cfs (8.22 ft); Apr. 23 (11 a.m.) 2,600 cfs (9.52 ft); May 7 (4 a.m.) 1,230 cfs (8.17 ft); Aug. 11 (7 p.m.) 1,710 cfs (8.71 ft); Sept. 11 (8:30 p.m.) 3,050 cfs (10.30 ft).
* Discharge measurement made on this day.
Note.--No gage-height record Dec. 20 to Jan. 13; 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. 15, 16, Jan. 14 to Mar. 10.

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 1954.

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.--26 years (1907-9, 1930-54), 4,233 cfs (unadjusted).

Extremes.--Maximum discharge during year, 31,800 cfs Sept. 15 (gage height, 11.96 ft); minimum daily, 1,480 cfs Dec. 6.
1907-10, 1930-54: Maximum discharge, 58,800 cfs Mar. 20, 1936 (gage height, 14.44 ft), from rating curve extended above 27,000 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. 43), Brassua, Flagstaff, and Spencer Lakes, Second Roach, First Roach, Indian, Moxie and Wyman Ponds (see p. 54, 55). Considerable diurnal fluctuation caused by powerplant above station.

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

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

5.7	1,360	8.5	10,000
6.0	1,910	9.0	12,200
6.5	2,980	10.0	17,600
7.0	4,310	11.0	24,400
7.5	5,930	12.0	32,100
8.0	7,790		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,640	2,820	3,090	3,840	4,130	3,970	4,850	11,000	5,420	9,270	4,330	5,890
2	3,710	2,860	3,480	4,160	3,790	4,090	5,070	11,100	8,950	6,730	6,090	4,180
3	3,740	3,140	3,680	2,310	3,900	3,710	4,820	12,800	18,700	5,830	6,100	3,000
4	2,410	3,100	3,670	4,220	3,710	4,990	3,280	12,900	16,200	3,260	6,490	2,440
5	3,440	3,690	3,100	4,170	3,720	4,790	4,260	10,900	15,900	3,840	5,610	2,350
6	3,510	3,450	1,480	4,150	3,550	3,900	4,540	20,100	17,400	5,000	4,840	2,210
7	3,530	3,150	6,290	4,170	2,610	2,480	4,340	25,300	16,200	4,210	4,260	3,530
8	3,360	2,130	6,380	4,230	3,870	3,620	5,980	26,000	17,700	3,840	3,510	3,310
9	3,280	3,400	5,880	4,080	3,860	3,490	5,250	22,800	11,400	3,390	3,370	3,430
10	3,410	3,270	4,300	2,710	3,710	3,260	3,830	19,800	9,580	3,470	4,160	3,230
11	2,260	3,370	5,350	4,230	3,840	3,490	3,000	18,100	8,130	2,260	7,830	7,220
12	3,290	3,230	4,690	4,130	4,130	3,710	5,450	16,300	8,260	3,590	12,200	23,600
13	3,440	3,320	2,640	4,480	4,420	3,680	5,060	11,800	6,580	3,410	12,900	26,300
14	3,330	3,290	2,790	4,270	2,930	2,690	4,820	9,960	7,200	3,290	11,300	24,700
15	3,180	2,130	3,420	3,950	3,710	3,880	4,220	6,790	8,160	3,280	9,640	29,700
16	3,680	3,440	3,560	4,030	3,470	3,970	4,150	4,240	7,630	3,340	8,590	24,400
17	3,300	3,270	3,450	2,930	3,580	3,950	4,800	7,310	5,800	3,490	8,070	20,700
18	2,300	3,320	3,560	4,100	3,480	4,120	3,820	5,490	6,120	2,080	5,940	15,900
19	3,390	3,390	3,410	4,100	3,640	4,130	6,950	5,960	5,410	3,690	3,480	13,700
20	3,480	3,260	2,220	4,030	3,560	3,780	7,790	6,160	3,300	3,020	3,390	11,800
21	3,530	3,090	3,850	4,210	2,200	3,090	*10,200	6,600	5,720	3,500	2,960	12,500
22	3,410	2,330	3,560	4,270	4,050	3,940	12,700	5,440	5,150	3,690	2,230	11,800
23	3,780	4,050	3,700	3,780	3,550	4,180	21,300	10,500	5,790	3,150	3,310	8,280
24	3,090	3,450	2,260	2,760	3,520	4,130	18,000	12,500	6,930	3,360	3,460	6,280
25	2,300	3,330	2,430	4,430	3,560	4,260	17,200	9,530	5,920	2,850	3,510	5,870
26	3,120	10,600	3,430	4,180	3,840	4,060	17,700	9,020	4,010	3,400	3,200	3,660
27	3,000	7,380	2,230	4,210	3,920	3,980	15,300	6,680	2,130	3,130	3,620	5,710
28	3,340	5,830	3,760	4,260	2,680	2,740	11,000	6,780	8,150	3,330	3,350	6,200
29	2,770	3,160	3,730	4,400	-	4,380	10,400	4,770	8,610	3,190	2,220	6,170
30	4,120	3,120	3,840	4,170	--------	4,500	11,400	3,110	10,000	3,460	3,770	6,180
31	2,990	--------	4,040	2,810	--------	4,540	--------	4,750	--------	2,780	2,660	--------
Total	101,130	109,350	113,270	121,770	100,930	119,500	241,480	344,490	266,450	118,130	166,390	304,240
Mean	3,262	3,645	3,654	3,928	3,605	3,855	8,049	11,110	8,882	3,811	5,367	10,140
(†)	-1,331	+1,494	+2,770	-2,127	-1,504	-473	+9,024	+2,413	-346	+27	-478	-370

Adjusted for change in reservoir contents

Mean	1,931	5,139	6,424	1,801	2,101	3,382	17,070	13,520	8,536	3,838	4,889	9,770
Cfsm	0.713	1.90	2.37	0.665	0.775	1.25	6.30	4.99	3.15	1.42	1.80	3.61
In.	0.82	2.12	2.73	0.77	0.81	1.44	7.03	5.75	3.51	1.64	2.08	4.03

	Observed						Adjusted					
Calendar year 1953 :	Max	23,200	Min	580	Mean	4,677	Mean	5,236	Cfsm	1.93	In.	26.21
Water year 1953-54 :	Max	29,700	Min	1,480	Mean	5,773	Mean	6,531	Cfsm	2.41	In.	32.73

* 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.

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 1901 to May 1907, August 1925 to September 1954.

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

Average discharge.--33 years (1902-6, 1925-54), 691 cfs.

Extremes.--Maximum discharge during year, 21,500 cfs Sept. 12 (gage height, 17.05 ft); minimum, 58 cfs Oct. 5 (gage height, 2.58 ft).
1925-54: Maximum discharge, 30,800 cfs Mar. 19, 1936 (gage height, 21.17 ft), from rating curve extended above 11,000 cfs; minimum, 18 cfs Oct. 29, 1929 (gage height, 2.02 ft).

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, 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 tables, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 10				Apr. 11 to Sept. 30			
2.6	60	5.0	1,020	3.1	150	8.0	4,530
2.8	87	6.0	1,970	3.5	265	10.0	7,670
3.0	124	7.0	3,120	4.0	460	11.5	10,300
3.5	248	9.0	6,070	5.0	1,070	13.5	14,100
4.0	440	10.5	8,520	6.0	2,020		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	68	599	742	265	168	785	355	2,220	661	2,450	1,120	3,770
2	77	478	502	255	170	840	340	2,240	925	1,760	1,110	1,230
3	65	404	459	255	180	950	325	1,880	2,130	1,300	769	829
4	60	342	440	275	200	1,220	315	1,800	1,550	805	1,070	847
5	65	298	616	280	235	1,360	310	2,780	1,430	552	986	631
6	68	254	772	290	290	1,250	300	4,220	2,500	1,310	775	510
7	101	240	3,500	300	280	1,080	485	4,510	2,010	909	643	443
8	217	445	2,930	295	255	950	1,450	3,020	1,690	727	541	825
9	167	541	1,820	285	230	870	2,190	4,310	1,320	602	447	1,010
10	128	431	1,810	275	205	795	1,970	7,150	1,030	536	715	1,180
11	124	370	*1,930	265	186	710	2,030	3,920	721	474	*2,840	3,120
12	144	*330	1,100	260	172	645	2,370	2,870	625	443	2,340	13,300
13	131	301	915	250	164	590	2,490	2,050	563	414	1,780	4,270
14	122	267	832	*245	172	535	2,010	1,540	673	394	1,110	2,900
15	110	248	887	235	194	495	1,640	1,410	787	343	793	2,420
16	99	245	856	225	230	450	1,690	1,300	*667	305	591	2,000
17	94	228	654	220	280	405	2,050	986	568	269	452	1,750
18	86	220	590	210	350	*415	8,040	888	478	241	386	1,550
19	86	215	530	200	440	440	6,280	817	418	282	339	1,420
20	87	220	485	194	520	465	*4,890	793	378	290	328	1,220
21	87	212	465	194	590	480	6,840	781	355	390	294	1,090
22	86	197	480	198	685	465	8,030	1,660	320	823	262	1,000
23	86	495	500	200	1,100	420	9,940	1,520	343	585	241	900
24	74	1,170	480	200	1,010	395	5,990	1,670	456	552	228	874
25	74	1,620	420	176	*950	395	4,190	1,530	394	456	234	769
26	460	8,450	380	170	895	410	3,360	1,560	324	406	222	769
27	512	3,120	350	172	820	470	2,810	1,060	515	510	204	703
28	455	1,850	325	180	770	420	2,310	874	1,400	829	185	625
29	1,030	1,310	310	184	-	400	2,090	799	2,840	979	172	563
30	1,110	999	285	182	------	395	2,090	867	2,820	661	169	526
31	832	-- --	280	174	------	380	------	781	------	721	705	- - -
Total	6,905	26,099	26,645	7,109	11,741	19,880	89,180	63,806	30,891	21,298	22,051	53,044
Mean	223	870	860	229	419	641	2,973	2,058	1,030	687	711	1,768
Cfsm	0.630	2.46	2.43	0.647	1.18	1.81	8.40	5.81	2.31	1.94	2.01	4.99
In.	0.73	2.75	2.80	0.75	1.23	2.09	9.37	6.70	3.25	2.24	2.32	5.57

Calendar year 1953: Max 26,500 Min 39 Mean 942 Cfsm 2.66 In. 36.10
Water year 1953-54: Max 13,300 Min 60 Mean 1,037 Cfsm 2.93 In. 39.80

Peak discharge (base, 6,000 cfs).--Nov. 26 (4:30 a.m.) 14,700 cfs (13.84 ft); Apr. 18 (12:30 p.m.) 9,380 cfs (10.99 ft); Apr. 23 (6 a.m.) 12,200 cfs (12.48 ft); May 10 (1 a.m.) 10,600 cfs (11.63 ft); Sept. 1 (1:30 a.m.) 7,330 cfs (9.79 ft); Sept. 12 (3 a.m.) 21,500 cfs (17.05 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 18 to Apr. 10. No gage-height record Sept. 13-23; discharge estimated on basis of records for nearby stations.

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 1954.

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

Average discharge.--26 years, 924 cfs.

Extremes.--Maximum discharge during year, 21,100 cfs Sept. 12 (gage height, 12.40 ft); minimum, 49 cfs Oct. 6 (gage height, 2.40 ft).
1928-54: 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 period of ice effect, which are fair. Some regulation at low flow by mills above station.

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

Rating table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.4	49	5.0	1,540
2.5	61	6.0	2,960
2.8	111	7.0	4,920
3.0	160	8.0	7,270
3.5	352	10.0	12,900
4.0	650	12.0	19,700
4.5	1,040		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	59	545	859	365	270	1,220	900	2,490	931	2,300	772	3,500
2	54	405	765	350	270	1,250	825	2,470	915	1,670	803	1,620
3	53	323	671	340	270	1,460	780	2,120	2,180	1,210	657	980
4	55	245	603	335	285	2,960	655	2,050	1,650	931	735	980
5	53	223	803	340	460	5,590	671	3,780	1,600	765	788	811
6	50	210	1,190	350	605	3,500	742	4,810	2,250	1,000	630	630
7	62	193	4,550	355	605	2,490	1,340	5,410	2,200	1,020	520	520
8	61	203	3,970	400	510	1,790	3,980	3,500	1,610	750	439	1,090
9	90	273	2,100	390	450	1,380	4,740	4,490	1,290	610	363	2,010
10	120	338	2,330	350	395	1,180	3,580	9,860	1,080	520	600	2,640
11	107	309	*2,740	340	350	1,040	3,690	5,150	955	467	3,040	5,490
12	100	291	1,880	340	305	955	4,160	3,670	972	422	2,420	17,900
13	92	264	1,510	*340	270	875	5,050	2,800	835	422	1,520	6,040
14	90	242	1,280	320	260	820	3,860	2,330	843	405	1,050	*4,960
15	87	223	1,130	300	255	780	3,060	1,930	1,060	394	803	4,320
16	81	203	955	290	255	735	3,400	1,700	*1,040	352	657	2,780
17	76	193	860	275	270	*685	4,600	1,550	875	304	623	2,460
18	73	187	770	265	305	665	11,400	1,330	720	260	570	2,310
19	70	178	690	265	355	665	10,800	1,170	616	260	545	2,120
20	64	172	665	270	415	655	*6,630	1,070	539	278	433	3,270
21	61	172	650	285	450	655	8,340	1,030	485	439	389	2,550
22	61	172	635	305	650	665	9,310	1,510	444	964	323	1,890
23	61	203	670	305	1,280	665	10,400	1,890	439	819	282	1,690
24	60	895	650	285	*2,070	670	7,200	1,840	564	623	269	1,360
25	59	1,040	585	275	1,760	680	4,920	1,960	539	552	*269	1,150
26	67	7,700	520	265	1,460	715	3,900	2,190	427	508	260	1,100
27	150	3,820	480	280	1,300	1,040	3,270	1,540	785	461	249	1,080
28	309	1,670	455	310	1,200	1,040	2,670	1,230	1,910	772	230	947
29	485	1,230	420	310	-	1,010	2,420	1,110	3,540	657	193	875
30	735	998	405	305	------	970	2,380	1,180	3,030	678	169	851
31	758	---	395	285	-------	955	-------	1,140	-------	692	400	-----
Total	4,303	23,120	36,186	9,790	17,330	39,760	129,673	80,300	36,324	21,505	21,001	79,924
Mean	139	771	1,167	316	619	1,283	4,322	2,590	1,211	694	677	2,664
Cfsm	0.270	1.50	2.27	0.615	1.20	2.50	8.41	5.04	2.36	1.35	1.32	5.18
In.	0.31	1.67	2.62	0.71	1.25	2.88	9.38	5.81	2.63	1.56	1.52	5.78

Calendar year 1953: Max 31,400 Min 44 Mean 1,181 Cfsm 2.30 In. 31.19
Water year 1953-54: Max 17,900 Min 50 Mean 1,368 Cfsm 2.66 In. 36.12

Peak discharge (base, 6,000 cfs).--Nov. 26 (2:30 p.m.) 10,700 cfs (9.28 ft); Dec. 7 (8 p.m.) 7,630 cfs (8.14 ft); Apr. 18 (8 p.m.) 14,800 cfs (10.60 ft); Apr. 23 (12 m.)11,300 cfs (9.47 ft); May 10 (7:30 a.m.) 12,000 cfs (9.70 ft); Sept. 12 (10:30 p.m.) 21,100 cfs (12.40 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 15 to Apr. 4.

Sebasticook River near Pittsfield, Maine

Location.--Lat 44°42'55", long 69°24'55", on right bank 1¾ 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 1954.

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

Average discharge.--25 years (1929-54), 934 cfs.

Extremes.--Maximum discharge during year, 9,510 cfs Sept. 15 (gage height, 10.58 ft); minimum, 22 cfs Oct. 7, 8, 17 (gage height, 1.41 ft).
1928-54: 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, 4.8 cfs Dec. 13, 1941.

Remarks.--Records excellent except those for period of fragmentary gage-height record, which are good. Considerable diurnal fluctuation caused by powerplant 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).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.4	21	3.5	850
1.6	35	4.0	1,300
1.8	60	5.0	2,250
2.0	100	6.0	3,400
2.2	155	7.0	4,600
2.4	225	8.0	5,900
2.6	305	10.0	8,700
3.0	500	11.0	10,100

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	100	725	2,650	205	770	2,880	1,680	2,540	625	3,690	635	590
2	305	655	2,360	510	555	1,910	1,630	1,960	590	3,960	610	610
3	23	585	1,930	535	635	2,160	1,550	1,730	665	3,900	*705	610
4	27	480	1,780	515	605	2,680	1,480	1,500	830	3,330	1,030	665
5	245	370	1,670	505	495	3,160	1,410	1,570	930	2,980	1,290	690
6	280	460	1,680	450	490	3,570	1,330	1,840	931	2,390	1,390	640
7	210	25	2,020	480	250	3,850	1,520	2,220	1,130	1,940	1,440	595
8	134	27	2,590	500	570	3,600	1,940	2,540	1,140	1,710	1,360	735
9	225	360	*2,980	475	455	3,520	2,370	2,620	1,130	1,460	1,290	805
10	23	315	3,380	455	460	3,210	2,790	3,020	1,050	1,180	1,360	860
11	23	320	3,820	480	460	2,910	3,110	3,440	915	970	1,860	1,510
12	285	235	4,000	490	470	2,680	3,470	3,650	840	795	2,830	4,610
13	100	485	3,880	475	485	2,320	3,980	3,600	680	660	3,530	7,380
14	122	40	3,660	365	240	2,140	4,230	3,390	760	595	4,080	9,090
15	144	51	3,450	*505	515	1,870	4,320	3,000	645	525	4,330	9,470
16	285	375	3,280	445	450	1,610	4,360	2,540	620	535	4,060	9,120
17	22	260	2,990	255	440	1,460	4,680	2,300	565	575	3,560	8,370
18	24	340	2,770	645	445	1,300	6,300	1,940	530	545	2,980	7,410
19	122	255	2,230	545	460	1,210	8,260	1,690	490	495	2,410	6,340
20	118	455	1,710	410	420	*1,130	9,060	1,470	295	440	1,930	5,510
21	150	76	1,340	330	435	1,230	9,160	1,220	215	255	1,570	3,690
22	120	76	1,180	188	490	1,320	*8,810	1,020	430	355	1,310	4,420
23	250	480	1,160	460	760	1,270	8,340	895	390	435	1,080	3,900
24	23	350	1,120	250	1,160	1,200	7,830	949	425	480	905	3,420
25	82	460	1,030	500	1,380	1,190	7,100	965	430	655	800	2,880
26	645	1,280	913	465	1,600	1,230	6,430	1,060	415	640	705	2,550
27	225	1,870	814	395	1,630	1,390	5,650	1,050	500	665	625	2,240
28	465	2,350	736	650	1,620	1,460	*4,900	1,000	1,340	650	575	1,890
29	740	2,550	696	495	-	1,530	4,190	830	2,010	650	520	1,540
30	850	2,750	680	370	------	1,610	3,340	634	3,000	610	475	1,280
31	770	----	620	735	-------	1,610	--------	690	------	655	350	----
Total	7,137	19,060	65,119	14,083	18,745	64,010	135,220	58,873	24,516	38,725	51,595	103,420
Mean	230	635	2,101	454	669	2,065	4,507	1,899	817	1,249	1,664	3,447
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 10,800 Min 18 Mean 1,178 Cfsm 2.03 In. 27.62
Water year 1953-54: Max 9,470 Min 22 Mean 1,645 Cfsm 2.84 In. 38.57

* Discharge measurement made on this day.
Note.--Fragmentary gage-height record Oct. 1-25; discharge computed from partly estimated gage heights.

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 1954.

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

Average discharge.--64 years, 329 cfs.

Extremes.--Maximum daily discharge during year, 2,540 cfs Apr. 20, 21; minimum daily, 10 cfs Sept. 6.
1890-1954: 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.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	230	230	230	170	170	345	585	610	375	640	250	230
2	230	230	230	170	170	355	570	475	505	730	250	230
3	230	230	230	170	170	385	550	365	505	685	250	230
4	230	230	230	170	170	430	595	310	505	525	250	230
5	230	230	230	170	170	800	515	270	495	465	250	120
6	230	230	230	170	170	1,170	495	350	465	395	250	10
7	230	230	565	170	230	1,180	485	755	430	335	250	120
8	230	230	700	170	230	1,060	510	1,090	405	315	250	230
9	230	230	645	170	230	1,010	540	1,080	375	310	250	230
10	230	230	590	170	230	965	610	1,060	410	300	250	230
11	230	230	590	170	230	935	685	1,090	410	300	250	230
12	230	230	540	170	230	905	920	1,140	410	295	250	1,060
13	230	230	250	170	230	890	1,140	1,350	405	295	250	1,900
14	230	230	250	170	230	865	1,040	1,460	395	270	250	1,900
15	230	230	250	170	230	810	1,010	1,130	395	250	250	1,900
16	230	230	275	170	230	750	980	1,040	395	250	250	1,900
17	230	230	250	170	230	450	980	1,050	395	250	250	1,850
18	230	230	250	170	230	455	1,580	720	390	250	250	1,760
19	230	230	205	170	230	430	2,360	535	365	250	240	1,660
20	230	230	180	170	230	485	2,540	485	370	250	230	1,580
21	230	230	150	170	230	630	2,540	445	320	250	230	1,520
22	230	230	140	170	230	620	2,340	445	270	250	230	1,390
23	230	230	140	170	230	590	2,120	455	270	250	230	1,220
24	230	230	140	170	230	565	2,020	465	260	250	230	1,060
25	230	230	140	170	230	555	1,860	455	250	250	230	990
26	230	230	125	170	285	595	1,740	425	250	250	230	835
27	230	230	115	170	345	630	1,470	425	250	250	230	690
28	230	230	115	170	355	630	970	425	310	250	230	690
29	230	230	115	170	-	615	685	425	410	250	230	620
30	230	230	170	170	------	605	650	310	495	250	230	545
31	230	-- --	170	170	------	605	------	220	-- ----	250	230	-- - -
Total	7,130	6,900	8,420	5,270	6,375	21,315	35,085	20,860	11,485	10,110	7,500	27,160
Mean	230	230	272	170	228	688	1,170	673	383	326	242	905
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 2,660 Min 10 Mean 457 Cfsm - In. -
Water year 1953-54: Max 2,540 Min 10 Mean 459 Cfsm - In. -

Smaller reservoirs in Kennebec River basin, Maine

Brassua Lake on Moose River, 4 miles southwest of Rockwood, completed in 1928, for power, has usable capacity of 8,560,000,000 cu ft between gage height 43.0 and 73.0 ft. Gage-height record furnished by Kennebec Water Power Co.

Second Roach Pond on Roach River, 6 miles east of Kokadjo, 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.

First Roach Pond on Roach River, at Kokadjo, 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.

Indian Pond on Kennebec River, 13 miles downstream from East Outlet of Moosehead Lake, completed in 1954, for power, has storage capacity of 830,000,000 cu ft in top 5 ft of pond (total capacity of pond, 3,150,000,000 cu ft). Gage-height record furnished by Central Maine Power Co.

Moxie Pond on Moxie Stream, 4½ miles east of The Forks, 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.

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

Spencer Lake on Little Spencer Stream, 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.

Wyman Pond on Kennebec River, 1½ miles upstream from Bingham, completed in 1930, for power, has storage capacity of 2,630,000,000 cu ft in top 20 ft of pond (total capacity of pond, 9,080,000,000 cu ft). Gage-height record furnished by Central Maine Power Co.

Monthly gage height and contents, water year October 1953 to September 1954

Date	Brassua Lake†			Second Roach Pond†		
	Gage height (feet)	Contents (millions of cubic feet)	Change in contents during month (m.c.f.)	Gage height (feet)	Contents (millions of cubic feet)	Change in contents during month (m.c.f.)
Sept.30	59.65	3,674	-	-	0	-
Oct. 31	45.1	322	-3,352	-	0	0
Nov. 30	47.35	678	+356	2.0	11	+11
Dec. 31	48.05	795	+117	-	0	-11
Calendar year 1953	-	-	+688	-	-	0
Jan. 31	43.4	61	-734	-	0	0
Feb. 28	44.25	192	+131	-	0	0
Mar. 31	48.55	883	+691	-	0	0
Apr. 30	69.85	7,290	+6,407	7.5	147	+147
May 31	73.05	8,581	+1,291	9.2	194	+47
June 30	73.1	8,602	+21	9.2	194	0
July 31	72.7	8,439	-163	9.0	188	-6
Aug. 31	72.5	8,358	-81	7.3	142	-46
Sept.30	72.45	8,338	-20	7.6	150	+8
Water year 1953-54	-	-	+4,664	-	-	+150

Date	First Roach Pond†			Indian Pond†		
Sept.30	6.7	760	-	901.2	0	-
Oct. 31	5.1	543	-217	914.7	265	+265
Nov. 30	7.4	856	+313	914.9	268	+3
Dec. 31	5.5	597	-259	929.8	615	+347
Calendar year 1953	-	-	+13	-	-	+615
Jan. 31	6.3	705	+108	935.1	810	+195
Feb. 28	7.5	870	+165	943.4	1,405	+595
Mar. 31	5.0	530	-340	944.4	1,532	+127
Apr. 30	7.6	883	+353	954.0	2,970	+1,438
May 31	7.8	911	+28	955.2	3,186	+216
June 30	7.9	924	+13	955.0	3,150	-36
July 31	7.6	883	-41	954.9	3,132	-18
Aug. 31	8.3	980	+97	953.6	2,902	-230
Sept.30	8.5	1,008	+28	955.0	3,150	+248
Water year 1953-54	-	-	+248	-	-	+3,150

† Gage height and contents at 7 a.m. on first day of following month.

Smaller reservoirs in Kennebec River basin, Maine--Continued

Monthly gage height and contents, water year October 1953 to September 1954

Date	Moxie Pond†			Flagstaff Lake†		
	Gage height (feet)	Contents (millions of cubic feet)	Change in contents during month (m.c.f.)	Gage height (feet)	Contents (millions of cubic feet)	Change in contents during month (m.c.f.)
Sept.30	*9.1	218	-	1,137.2	6,204	-
Oct. 31	7.0	60	-158	1,134.55	4,908	-1,296
Nov. 30	*12.2	478	+418	1,136.7	5,947	+1,039
Dec. 31	*8.8	194	-284	1,140.2	7,924	+1,977
Calendar year 1953	-	-	+194	-	-	+6,328
Jan. 31	*7.0	60	-134	1,136.8	5,998	-1,926
Feb. 28	*7.1	67	+7	1,135.2	5,209	-789
Mar. 31	*7.5	95	+28	1,132.55	4,045	-1,164
Apr. 30	*14.0	640	+545	1,145.35	11,531	+7,486
May 31	14.8	712	+72	1,146.1	12,131	+600
June 30	*14.7	703	-9	1,144.75	11,070	-1,061
July 31	*15.0	730	+27	1,146.15	12,172	+1,102
Aug. 31	14.8	712	-18	1,145.45	11,610	-562
Sept.30	*15.0	730	+18	1,144.7	11,032	-578
Water year 1953-54	-	-	+512	-	-	+4,828

Date	Spencer Lake†			Wyman Pond‡		
Sept.30	*9.0	391	-	82.8	8,760	-
Oct. 31	3.8	26	-365	84.8	9,050	+290
Nov. 30	*4.5	70	+44	84.4	8,990	-60
Dec. 31	-	0	-70	81.4	8,570	-420
Calendar year 1953	-	-	0	-	-	-370
Jan. 31	-	0	0	83.3	8,830	+260
Feb. 28	-	0	0	84.1	8,940	+110
Mar. 31	*4.0	38	+38	83.1	8,800	-140
Apr. 30	*14.0	823	+785	84.9	9,060	+260
May 31	*14.0	823	0	85.0	9,080	+20
June 30	*12.6	693	-130	84.9	9,060	-20
July 31	*13.0	729	+36	84.1	8,940	-120
Aug. 31	12.8	711	-18	85.1	9,100	+160
Sept.30	*9.5	430	-281	81.8	8,620	-480
Water year 1953-54	-	-	+39	-	-	-140

* Approximate only.
† Gage height and contents at 7 a.m. on first day of following month.
‡ Gage height and contents at 12 p.m.

Diamond River near Wentworth Location, N. H.

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

Drainage area.--153 sq mi.

Records available.--July 1941 to September 1954.

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

Average discharge.--13 years, 350 cfs.

Extremes.--Maximum discharge during year, 7,890 cfs Apr. 23 (gage height, 10.27 ft); minimum, 23 cfs Oct. 4, 5 (gage height, 1.14 ft).
1941-54: Maximum discharge, 8,630 cfs June 16, 1943 (gage height, 10.66 ft), from rating curve extended above 3,000 cfs; minimum, 6.8 cfs Aug. 27, 28, 1949, Sept. 1, 1952 (gage height, 0.81 ft).

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

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 22				Apr. 23 to Sept. 30			
1.1	20	4.0	740	1.7	67	5.0	1,270
1.2	27	5.0	1,340	2.0	105	6.0	2,010
1.5	52	6.0	2,140	2.5	190	7.0	3,000
2.0	117	7.5	3,700	3.0	320	8.5	4,850
2.5	213	8.5	4,950	4.0	705	10.0	7,400
3.0	350						

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	161	153	120	79	235	96	2,470	272	461	930	1,310
2	28	125	140	120	77	235	94	2,540	362	330	750	475
3	26	111	114	126	77	275	93	1,920	515	247	372	286
4	23	98	128	120	84	260	94	1,710	420	203	550	392
5	24	86	605	114	86	230	96	1,890	550	260	556	266
6	25	64	522	106	81	210	99	1,790	1,710	320	472	207
7	75	71	1,280	96	74	190	385	1,540	2,010	211	326	305
8	144	81	*1,020	*88	69	170	1,340	1,210	1,570	175	250	1,340
9	111	89	538	80	69	160	1,620	1,970	875	151	200	644
10	128	85	710	76	68	148	1,090	2,190	622	143	194	487
11	151	77	885	74	68	138	917	1,590	652	138	314	2,300
12	127	74	515	71	*69	132	1,480	1,660	543	225	410	4,000
13	127	70	405	69	69	128	1,320	1,220	420	175	551	1,410
14	96	65	337	65	69	126	830	955	523	141	359	1,520
15	76	64	324	64	63	122	648	825	760	116	239	1,200
16	68	64	234	62	64	118	656	728	535	102	194	687
17	62	63	165	60	82	114	930	631	388	92	250	855
18	53	60	160	58	118	*114	1,580	551	311	86	182	770
19	50	57	152	60	186	110	1,540	465	252	105	153	670
20	46	56	150	68	170	108	1,860	435	213	111	144	1,230
21	64	53	146	82	160	106	3,360	396	192	162	130	705
22	69	52	142	114	215	104	4,650	723	167	227	111	601
23	59	160	140	112	680	102	7,380	631	184	179	101	556
24	50	283	136	100	570	100	4,080	480	171	194	95	507
25	44	205	138	94	410	99	2,520	396	136	146	104	424
26	72	1,010	138	90	330	100	2,020	339	128	205	92	476
27	92	485	138	88	275	100	*1,660	292	770	399	86	457
28	90	288	132	84	255	100	1,420	255	850	*220	78	392
29	155	224	120	82	-	99	1,680	283	1,080	216	72	317
30	340	179	120	81	------	98	2,180	465	674	205	68	295
31	254	-- --	118	80	------	97	-------	355	--- -- -	430	600	- - -
Total	2,759	4,560	10,005	2,704	4,617	4,428	47,718	32,905	17,855	6,375	8,933	25,084
Mean	89.0	152	323	87.2	165	143	1,591	1,061	595	206	288	836
Cfsm	0.582	0.993	2.11	0.570	1.08	0.935	10.40	6.93	3.89	1.35	1.88	5.46
In.	0.67	1.11	2.43	0.66	1.12	1.08	11.60	7.99	4.34	1.56	2.17	6.09

Calendar year 1953: Max 5,120 Min 8.9 Mean 326 Cfsm 2.13 In. 28.92
Water year 1953-54: Max 7,380 Min 23 Mean 460 Cfsm 3.01 In. 40.82

Peak discharge (base, 3,600 cfs).--Apr. 23 (6 a.m.) 7,890 cfs (10.27 ft); Sept. 11 (8:30 p.m.) 6,100 cfs (9.28 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 18 to Feb. 11, Feb. 15 to Apr. 8.

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 1954 (monthly discharge only for some periods, published in WSP 1301). Published as "at Errol Dam" prior to 1922.
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.--49 years, 1,876 cfs (adjusted).
Extremes.--Maximum discharge during year, 10,900 cfs Sept. 15 (gage height, 7.65 ft); minimum daily, 370 cfs Nov. 26.
1905-54: 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, Mooselookmeguntic, Richardson, Umbagog and Aziscohos Lakes (see p. 66).
Cooperation.--Records prior to Dec. 9, 1943, furnished by Union Water Power Co.
Revisions.--WSP 1001: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.7	345	3.0	2,420
.8	389	4.0	3,860
1.0	485	5.0	5,390
1.5	786	6.0	7,330
2.0	1,200	8.0	11,800
2.5	1,760		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,730	1,230	1,230	1,570	1,580	1,280	1,570	3,030	2,140	5,980	1,510	2,050
2	1,680	1,240	1,230	1,610	1,560	1,170	1,620	2,390	2,470	4,260	1,590	2,110
3	1,680	1,270	1,280	1,570	1,620	1,030	1,610	2,750	3,130	3,570	1,810	1,890
4	1,680	1,270	1,300	1,480	1,470	835	1,710	3,630	3,510	2,610	1,860	1,920
5	1,670	*1,300	1,050	1,530	1,490	1,230	1,790	3,000	4,400	2,250	1,880	1,960
6	1,610	1,350	964	1,530	1,510	1,270	1,670	2,290	5,410	2,250	1,880	2,050
7	1,430	1,350	445	1,510	1,520	1,180	1,310	3,410	6,560	2,110	1,710	2,010
8	1,460	1,280	690	1,560	1,530	1,230	892	4,320	7,520	1,970	1,730	1,480
9	1,500	1,340	916	1,590	1,560	1,350	900	5,400	7,460	2,110	1,850	1,290
10	1,510	1,270	600	1,590	1,550	1,490	932	7,920	5,740	2,150	1,940	1,310
11	1,510	1,260	770	1,590	1,520	1,570	1,260	9,130	4,850	2,180	1,860	2,430
12	1,520	1,280	860	1,560	1,560	1,710	1,700	9,970	4,080	2,180	1,810	7,270
13	1,520	1,300	965	1,530	1,590	1,730	2,260	9,970	3,220	2,220	1,800	10,200
14	1,520	1,300	1,150	1,560	1,590	1,730	2,640	9,440	3,140	2,200	1,820	10,600
15	1,550	1,310	1,170	1,530	1,560	1,720	3,010	7,070	3,610	2,120	1,920	10,900
16	1,550	1,350	1,370	1,510	1,490	1,670	2,940	5,590	3,220	2,050	2,030	10,700
17	1,530	1,410	1,440	1,550	1,460	1,590	2,810	3,260	2,640	2,010	1,980	10,300
18	1,530	1,410	1,510	1,560	1,460	1,560	2,880	2,690	2,050	1,990	1,850	9,250
19	1,530	1,430	1,530	1,590	1,430	1,570	2,360	2,710	1,880	1,990	1,920	7,300
20	1,550	1,420	1,420	1,530	1,400	1,520	3,260	2,700	1,820	1,930	2,070	5,560
21	1,570	1,410	1,310	1,420	1,390	1,460	4,080	2,420	1,510	1,790	2,190	4,840
22	1,570	1,420	1,200	1,460	1,260	1,490	4,780	2,800	2,100	1,610	2,190	4,720
23	1,570	1,330	1,290	1,530	1,160	1,550	6,740	2,980	1,960	1,480	2,200	4,130
24	1,560	1,260	1,460	1,490	1,060	1,550	8,480	2,950	1,930	1,460	2,220	3,940
25	1,530	1,060	1,410	1,510	1,050	1,530	8,190	3,110	2,080	1,700	2,220	3,920
26	1,490	370	1,260	1,440	1,140	1,500	7,250	2,390	2,220	1,810	2,190	3,890
27	1,520	1,080	1,350	1,490	1,220	1,460	*6,620	1,960	1,640	1,760	2,220	3,860
28	1,360	1,080	1,480	1,470	1,270	1,480	5,410	2,220	3,000	*1,710	2,220	3,660
29	1,330	1,030	1,430	1,510	-	1,480	4,420	2,190	6,290	1,670	2,280	3,470
30	1,050	1,140	1,400	1,530	-------	1,460	4,250	2,070	7,540	1,660	2,390	3,140
31	1,200		1,460	1,570	-------	1,480	-------	2,060	-------	1,640	2,270	-------
Total	47,010	37,550	36,940	47,470	40,000	44,875	99,344	127,820	109,120	68,420	61,410	142,150
Mean	1,516	1,252	1,192	1,531	1,429	1,448	3,311	4,123	3,637	2,207	1,981	4,738
(†)	-1,100	-70	+884	-986	-637	-450	+5,628	+2,453	+67	-501	-537	+508

Adjusted for change in reservoir contents

Mean	416	1,182	2,076	545	792	998	8,939	6,576	3,704	1,706	1,444	5,246
Cfsm	0.398	1.13	1.99	0.522	0.758	0.955	8.55	6.29	3.54	1.63	1.38	5.02
In.	0.46	1.26	2.29	0.60	0.79	1.10	9.54	7.25	3.95	1.88	1.59	5.60

	Observed			Adjusted			
Calendar year 1953:	Max 6,480	Min 370	Mean 1,759	Mean 1,957	Cfsm 1.87	In. 25.42	
Water year 1953-54:	Max 10,900	Min 370	Mean 2,362	Mean 2,797	Cfsm 2.68	In. 36.31	

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

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 1954 (monthly discharge only for some periods, published in WSP 1301). Published as "at Berlin" prior to September 1928.

Gage.--Water-stage recorder since Mar. 16, 1929. Datum of gage is 832.9 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.--41 years, 2,438 cfs (adjusted).

Extremes.--Maximum discharge during year, 15,100 cfs Apr. 22 (gage height, 9.16 ft); minimum, 852 cfs Dec. 20 (gage height, 2.51 ft); minimum daily, 1,430 cfs Nov. 5.
1913-54: 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 except those for periods of backwater from paper mill waste, which are good. Flow regulated by powerplants above station and by Rangeley-Umbagog series of lakes and Kennebago and Aziscohos Lakes (see p. 66).

Revisions.--WSP 1001: Drainage area.

Rating table, water year 1953-54, except periods of backwater from paper mill waste (gage height, in feet, and discharge, in cubic feet per second)

3.0	1,300	6.0	6,000
3.5	1,820	8.0	11,100
4.0	2,460	9.0	14,500
5.0	4,050		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,820	1,520	1,540	1,530	1,670	1,880	1,880	6,550	2,480	8,870	2,270	5,180
2	1,800	1,480	1,580	1,660	1,730	2,010	1,900	5,380	2,620	6,470	2,230	3,550
3	1,810	1,450	1,470	1,700	1,720	2,000	1,940	4,920	3,570	5,000	2,090	2,970
4	1,840	*1,440	1,540	1,620	1,740	1,990	1,890	5,870	3,950	3,850	2,230	2,520
5	1,880	1,430	1,710	1,590	1,640	1,860	2,010	6,450	4,780	2,930	2,360	2,400
6	1,780	1,450	1,760	1,610	1,670	2,060	2,110	5,300	7,450	3,050	2,560	2,320
7	1,830	1,510	2,720	*1,630	1,660	1,870	2,640	5,180	8,380	2,850	2,350	2,390
8	1,780	1,540	2,320	1,540	1,670	1,760	3,330	5,830	9,220	2,460	2,160	4,610
9	1,760	1,540	*1,820	1,550	1,690	1,790	3,830	8,070	9,190	2,310	2,060	4,020
10	1,710	1,580	1,820	1,640	1,720	1,940	3,210	10,600	8,070	2,400	2,140	3,520
11	1,680	1,500	1,790	1,610	*1,700	1,980	2,970	10,600	6,360	2,400	2,310	4,970
12	1,700	1,460	1,790	1,670	1,670	2,010	3,800	11,200	5,560	2,460	2,540	13,100
13	1,690	1,490	1,640	1,590	1,720	2,100	4,370	11,300	4,450	2,460	2,350	11,900
14	1,660	1,480	*1,710	1,560	1,700	2,060	4,180	10,700	3,860	2,430	2,260	12,100
15	1,660	1,460	1,720	1,660	1,720	2,090	4,100	9,800	4,630	2,390	2,150	12,400
16	1,630	1,480	1,660	1,630	1,800	2,010	4,610	7,970	4,650	2,260	2,160	11,700
17	1,630	1,490	1,670	1,620	1,760	1,980	4,900	5,730	3,930	2,150	2,420	11,300
18	1,620	1,530	1,670	1,550	1,730	*1,840	6,740	3,850	3,150	2,100	2,260	11,000
19	1,620	1,530	1,710	1,630	1,740	1,860	6,930	3,500	2,480	2,120	2,100	9,900
20	1,640	1,550	1,760	1,710	1,730	1,920	6,270	3,440	2,330	2,180	2,110	9,700
21	1,620	1,540	1,700	1,730	1,780	1,820	10,400	3,390	2,230	2,190	2,240	7,080
22	1,630	1,530	1,590	1,630	1,690	1,780	11,100	3,800	2,270	2,480	2,310	6,150
23	1,620	1,830	1,580	1,640	1,920	1,800	14,000	4,280	2,620	2,180	2,290	5,600
24	1,620	1,830	1,520	1,700	1,870	1,870	14,000	4,020	2,680	1,940	2,350	4,860
25	1,640	2,060	1,730	1,670	1,680	1,830	12,000	3,730	2,430	1,790	2,310	4,630
26	1,660	3,170	1,600	1,580	1,680	1,900	*10,700	3,680	2,500	2,180	2,330	4,630
27	1,660	1,700	1,480	1,630	1,700	1,870	9,590	2,740	3,550	*2,360	2,270	4,570
28	1,690	1,830	1,560	1,640	1,740	1,780	8,720	2,500	4,840	2,150	2,310	4,480
29	1,680	1,610	1,670	1,580	-	1,900	10,100	2,620	7,740	2,060	2,280	4,120
30	1,860	1,520	1,580	1,630	-------	1,890	6,790	2,730	9,430	2,000	2,390	3,950
31	1,560	-------	1,530	1,640	-------	1,800	-------	2,600	-------	2,160	3,040	-------
Total	52,780	48,530	52,940	50,370	48,440	59,250	181,010	178,330	141,400	86,630	71,230	191,620
Mean	1,703	1,618	1,708	1,625	1,730	1,911	6,034	5,753	4,713	2,795	2,298	6,387
(†)	-1,100	-70	+884	-986	-637	-450	+5,628	+2,453	+67	-501	-537	+508
Adjusted for change in reservoir contents												
Mean	603	1,548	2,592	639	1,093	1,461	11,660	8,206	4,780	2,294	1,761	6,895
Cfsm	0.442	1.14	1.90	0.469	0.802	1.07	8.55	6.02	3.51	1.68	1.29	5.06
In.	0.51	1.27	2.19	0.54	0.84	1.23	9.54	6.94	3.92	1.94	1.49	5.64

	Observed			Adjusted			
Calendar year 1953:	Max 16,400	Min 1,160	Mean 2,352	Mean 2,550	Cfsm 1.87	In. 25.41	
Water year 1953-54:	Max 14,000	Min 1,430	Mean 3,185	Mean 3,620	Cfsm 2.66	In. 36.05	

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Rangeley-Umbagog series of lakes and Kennebago and Aziscohos Lakes.
Note.--Stage-discharge relation affected by paper mill waste Oct. 1 to Apr. 12, Sept. 13-30.

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., at Rumford, Oxford County, 0.8 mile upstream from Swift River.

Drainage area.--2,067 sq mi.

Records available.--May 1892 to September 1954 (monthly discharge only for some periods, 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.--62 years, 3,669 cfs (adjusted for storage).

Extremes.--Maximum daily discharge during year, 28,900 cfs Apr. 23; minimum daily, 1,580 cfs Dec. 24.
1892-1954: 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 Rangeley-Umbagog series of lakes and Kennebago and Aziscohos Lakes (see p. 66).

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

Revisions.--WSP 1001: Drainage area.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,760	2,200	2,330	1,590	1,960	3,270	2,530	13,000	3,870	12,000	3,470	12,000
2	1,860	1,950	2,430	1,800	1,970	3,920	2,610	11,500	4,120	9,160	3,480	6,160
3	1,800	1,820	2,420	2,050	1,980	4,810	2,590	10,300	5,210	6,780	3,040	4,200
4	1,780	1,710	2,150	2,260	2,230	6,480	2,450	11,400	5,690	5,500	2,910	3,560
5	1,900	1,670	2,910	2,260	2,090	5,010	2,610	13,300	6,250	4,510	3,080	2,730
6	1,960	1,690	3,450	2,100	1,970	4,230	3,040	13,300	9,300	4,440	3,240	2,740
7	2,310	1,720	9,100	2,190	2,030	3,760	6,500	11,600	10,500	3,590	3,220	3,200
8	2,100	1,640	7,380	1,800	1,920	3,500	10,600	10,200	11,400	3,400	2,920	6,550
9	1,840	1,950	4,730	1,710	1,970	3,070	10,500	22,600	11,100	3,010	2,570	9,860
10	1,970	1,800	4,560	1,810	2,000	3,100	7,710	28,600	9,980	2,940	2,920	8,260
11	1,780	1,870	4,580	2,060	1,970	3,060	7,320	20,100	8,330	2,990	4,190	15,000
12	1,830	1,700	3,670	1,990	1,940	2,910	9,980	18,200	7,030	3,030	4,070	27,400
13	1,770	1,670	3,360	2,050	1,880	2,910	9,640	17,400	6,080	2,980	3,580	18,500
14	1,780	1,860	3,030	1,920	1,800	2,930	8,390	15,500	5,450	3,000	3,180	16,200
15	1,690	1,600	3,220	1,830	1,960	2,900	7,470	14,400	5,980	3,110	2,720	15,600
16	1,720	1,610	2,780	2,000	2,000	2,800	8,540	12,600	6,470	2,870	2,690	14,100
17	1,690	1,710	1,980	1,970	2,120	2,740	11,400	10,700	5,440	2,600	3,040	13,300
18	1,720	1,820	1,960	1,960	2,180	2,600	21,300	7,490	4,440	2,430	2,940	13,000
19	1,690	1,780	2,160	1,940	2,200	2,680	18,000	6,060	3,600	2,530	2,580	12,500
20	1,680	1,890	2,650	2,020	2,130	2,530	15,700	5,760	3,130	2,530	2,650	14,300
21	1,680	1,900	3,010	2,190	2,140	2,600	21,500	5,670	3,080	2,800	2,460	10,300
22	1,720	1,860	3,120	2,480	3,450	2,450	26,000	9,700	2,610	3,340	2,560	7,840
23	1,690	4,180	2,790	2,330	5,020	2,370	28,900	8,590	3,310	3,060	2,600	6,960
24	1,680	4,490	1,580	2,100	4,070	2,490	26,300	7,310	3,720	2,780	2,600	5,840
25	1,720	8,100	2,370	2,230	3,700	2,600	21,600	6,410	3,210	2,450	2,620	5,290
26	2,110	14,600	2,980	2,090	3,170	2,840	19,000	6,000	2,950	2,490	2,470	5,150
27	2,000	6,110	2,380	2,040	3,030	3,110	16,000	4,970	4,360	3,260	2,630	4,970
28	2,230	3,770	1,850	2,040	3,160	2,710	14,600	4,090	8,550	2,940	2,360	4,830
29	2,880	3,290	2,330	1,950	-	2,890	13,100	3,670	12,000	3,160	2,340	4,330
30	4,110	2,810	2,480	1,970	-------	2,890	12,100	4,170	13,600	2,860	2,560	4,200
31	2,840	-------	1,930	2,000	-------	2,770	-------	4,410	-------	3,090	7,270	-------
Total	61,290	86,770	97,670	62,730	68,040	98,930	367,980	339,000	190,760	115,630	94,960	278,870
Mean	1,977	2,892	3,151	2,024	2,430	3,191	12,270	10,940	6,359	3,730	3,063	9,296
(†)	-1,100	-70	+884	-986	-637	-450	+5,628	+2,453	+67	-501	-537	+508
Adjusted for change in reservoir contents												
Mean	877	2,822	4,035	1,038	1,793	2,741	17,900	13,390	6,426	3,229	2,526	9,804
Cfsm	0.424	1.37	1.95	0.502	0.867	1.33	8.66	6.48	3.11	1.56	1.22	4.74
In.	0.49	1.53	2.25	0.58	0.90	1.53	9.66	7.47	3.47	1.80	1.41	5.29

	Observed						Adjusted					
Calendar year 1953:	Max	52,800	Min	1,390	Mean	4,017	Mean	4,215	Cfsm	2.04	In.	27.69
Water year 1953-54:	Max	28,900	Min	1,580	Mean	5,103	Mean	5,538	Cfsm	2.68	In.	36.38

† Change in contents, equivalent in cubic feet per second, in Rangeley-Umbagog series of lakes and Kennebago and Aziscohos Lakes.

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 1954.

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

Average discharge.--25 years, 196 cfs.

Extremes.--Maximum discharge during year, 9,970 cfs Sept. 11 (gage height, 10.14 ft); minimum, 10 cfs Oct. 5, 6 (gage height, 1.08 ft).
1929-54: Maximum discharge, 14,500 cfs June 15, 1942 (gage height, 12.42 ft), from rating curve extended above 7,000 cfs; maximum gage height, 12.58 ft Sept. 17, 1932; minimum discharge, 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 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Sept. 11				Sept. 12 to Sept. 30	
1.1	11	2.5	255	2.0	124
1.2	17	3.0	437	2.5	255
1.4	33	4.0	1,010	3.0	437
1.6	55	5.0	1,810	4.0	1,010
2.0	124	6.5	3,510	5.5	2,330

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	104	145	97	55	170	90	1,200	178	371	220	585
2	13	79	130	93	53	255	86	1,020	315	245	168	226
3	12	65	114	90	49	325	84	680	414	186	108	143
4	11	58	110	86	54	400	83	802	295	145	173	132
5	11	49	280	86	55	225	88	1,080	298	170	147	97
6	11	39	258	86	56	188	102	1,230	685	265	116	84
7	59	44	1,750	90	51	162	429	1,000	485	159	91	88
8	65	51	*645	68	49	148	686	669	383	124	71	630
9	41	56	371	61	49	142	680	2,700	278	104	63	610
10	38	54	476	65	49	134	437	1,630	229	91	132	470
11	43	53	550	61	44	126	458	870	268	83	425	3,030
12	39	50	330	*56	43	122	642	709	226	84	330	1,990
13	33	47	262	43	40	106	626	526	176	79	205	575
14	28	43	217	41	36	99	441	437	239	69	139	1,000
15	24	43	229	43	36	90	368	421	285	58	100	585
16	22	42	180	42	41	88	387	398	233	51	91	371
17	20	42	154	38	51	*88	540	364	173	44	150	368
18	20	42	132	34	69	86	2,180	327	145	42	95	342
19	17	44	124	38	68	88	*1,240	278	120	68	76	410
20	16	47	124	38	69	90	1,400	255	104	102	71	721
21	15	43	124	41	74	91	2,510	262	97	186	59	390
22	15	42	128	43	290	95	2,940	658	83	252	53	371
23	15	255	138	48	460	93	3,100	418	143	137	44	306
24	15	385	142	43	*340	84	1,620	364	145	124	44	236
25	16	985	134	43	210	86	1,180	390	91	97	49	211
26	128	2,240	124	47	162	84	1,000	353	74	97	42	245
27	86	489	106	53	148	90	809	252	515	*250	37	205
28	200	298	104	55	152	99	715	214	715	188	30	180
29	260	211	104	55	-	86	843	223	905	163	29	159
30	340	168	100	55	------	91	1,050	285	590	143	29	145
31	168	..	104	55	------	90	--------	214	--- ---	139	925	---- -
Total	1,795	6,168	7,889	1,794	2,853	4,121	26,814	20,229	8,887	4,316	4,312	14,905
Mean	57.9	206	254	57.9	102	133	894	653	296	139	139	497
Cfsm	0.604	2.15	2.65	0.604	1.06	1.39	9.33	6.82	3.09	1.45	1.45	5.19
In.	0.70	2.40	3.06	0.70	1.10	1.60	10.41	7.86	3.45	1.67	1.67	5.79

Calendar year 1953: Max 7,160 Min 5.4 Mean 243 Cfsm 2.54 In. 34.43
Water year 1953-54: Max 3,100 Min 11 Mean 285 Cfsm 2.97 In. 40.41

Peak discharge (base, 2,400 cfs).--Nov. 26 (12 p.m.) 6,550 cfs (8.43 ft); Dec. 7 (7 a.m.) 3,240 cfs (6.29 ft); Apr. 18 (5 to 6 a.m.) 2,680 cfs (5.82 ft); Apr. 22 (7 p.m.) 4,590 cfs (7.26 ft); May 9 (6 p.m.) 5,660 cfs (7.92 ft); Aug. 31 (6 p.m.) 2,870 cfs (5.98 ft); Sept. 11 (9 p.m.) 9,970 cfs (10.14 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 18 to Apr. 5.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 270 ft (from topographic map).

Average discharge.--13 years, 303 cfs.

Extremes.--Maximum discharge during year, 6,260 cfs Sept. 12 (gage height, 7.45 ft); minimum, 24 cfs Oct. 4, 5, 6 (gage height, 1.09 ft).
1941-54: Maximum discharge, 13,900 cfs Mar. 27, 1953 (gage height, 11.18 ft); minimum, 16 cfs Oct. 1, 2, 1941, Sept. 13, 14, 1949; minimum gage height, 0.97 ft Sept. 13, 14, 1949.

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

Rating tables, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Sept. 12				Sept. 13-30	
1.1	25	3.0	600	2.2	260
1.2	34	4.0	1,330	2.6	420
1.6	98	6.0	3,750	3.0	620
2.0	190	7.0	5,450	4.0	1,350
2.5	355			6.0	3,750

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	154	239	190	70	550	406	406	274	577	376	785
2	26	120	212	200	70	640	344	372	389	442	*310	624
3	25	100	185	154	73	855	328	347	480	340	242	355
4	25	87	172	118	84	1,240	278	433	410	274	268	255
5	25	68	248	114	98	1,520	261	740	402	248	258	198
6	25	66	351	118	112	990	313	998	506	303	212	162
7	27	68	1,000	140	108	785	590	1,160	527	258	180	142
8	27	93	1,320	150	102	630	1,110	934	415	185	152	159
9	26	122	840	132	96	530	1,290	1,430	332	150	133	250
10	26	118	733	118	78	455	1,090	3,200	274	133	255	550
11	27	104	696	*108	85	395	1,080	2,320	261	138	675	1,440
12	27	91	554	98	85	335	1,280	1,330	268	131	640	5,430
13	27	85	447	89	85	305	1,320	948	242	120	447	3,740
14	27	78	384	84	87	280	*1,120	752	261	116	328	2,010
15	27	72	340	80	96	260	969	618	389	131	245	1,550
16	26	70	305	75	116	*245	1,040	538	420	129	198	1,080
17	26	66	280	73	150	240	1,600	532	340	108	193	880
18	25	65	250	75	180	240	3,340	476	271	94	174	740
19	25	61	225	80	220	250	3,760	406	224	89	147	668
20	25	58	205	89	320	280	2,310	359	190	96	138	908
21	25	57	190	100	395	265	1,650	344	172	110	122	866
22	25	57	196	93	500	275	1,490	471	157	198	108	680
23	25	82	205	84	*660	285	1,300	549	172	198	96	565
24	25	169	215	75	640	310	1,100	554	230	177	89	447
25	27	285	220	70	600	328	871	549	190	187	84	384
26	30	980	178	70	560	410	733	554	159	185	82	388
27	30	995	174	73	525	824	606	447	305	204	73	363
28	43	560	158	78	500	527	549	368	522	380	70	327
29	131	393	140	77	-	495	532	328	636	471	66	288
30	212	299	140	75	------	480	461	347	702	363	60	264
31	201	-- -	182	72	------	433	------	321	------	415	194	- -
Total	1,295	5,623	10,984	3,152	6,695	15,437	33,121	23,131	10,120	6,950	6,615	26,498
Mean	41.8	187	354	102	239	498	1,104	746	337	224	213	883
Cfsm	0.244	1.09	2.07	0.596	1.40	2.91	6.46	4.36	1.97	1.31	1.25	5.16
In.	0.28	1.22	2.39	0.69	1.46	3.36	7.21	5.03	2.20	1.51	1.44	5.76

Calendar year 1953: Max 10,800 Min 25 Mean 382 Cfsm 2.23 In. 30.31
Water year 1953-54: Max 5,430 Min 25 Mean 410 Cfsm 2.40 In. 32.55

Peak discharge (base, 1,700 cfs).--Apr. 19 (3:30 a.m.) 4,170 cfs (6.26 ft); May 10 (3 p.m.) 3,380 cfs (5.75 ft); Sept. 12 (4 p.m.) 6,260 cfs (7.45 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 15 to Mar. 23.

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 1954.

Gage.--Water-stage recorder and concrete control. Datum of gage is 394.5 ft above mean sea level, datum of 1929. Prior to Apr. 30, 1924, chain gage at same site and datum.

Average discharge.--33 years (1913-23, 1931-54), 138 cfs.

Extremes.--Maximum discharge during year, 3,220 cfs Sept. 12 (gage height, 8.93 ft); minimum, 10 cfs Oct. 25 (gage height, 1.78 ft).
1913-24, 1931-54: 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. Slight diurnal fluctuation at low and medium flow by sawmills and gristmills above station.

Revisions (water years).--WSP 726: Drainage area. WSP 1301: 1914-23(M).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.6	5.8	3.5	180
1.8	11	4.0	285
2.0	18	5.0	585
2.5	49	6.0	1,030
3.0	98	8.0	2,380

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	70	143	47	47	283	154	239	115	267	156	580
2	43	59	127	43	44	330	141	237	148	192	112	263
3	38	47	112	43	47	402	138	250	252	130	80	154
4	24	41	95	45	51	776	114	387	206	92	124	101
5	14	35	190	47	69	592	114	571	252	80	90	73
6	12	*30	219	51	67	379	132	610	390	112	69	59
7	26	32	725	81	59	281	355	636	302	82	56	53
8	37	69	*552	63	55	237	613	442	272	65	48	61
9	27	74	362	51	53	200	620	1,340	216	55	40	275
10	21	64	357	49	50	188	483	1,680	167	49	91	417
11	18	55	321	46	48	174	543	812	145	44	226	1,050
12	18	48	251	46	45	150	585	543	124	41	169	2,150
13	16	43	215	44	38	140	602	411	109	38	118	755
14	15	40	196	42	33	127	483	330	124	38	77	588
15	14	35	213	43	38	126	442	272	233	55	59	454
16	13	37	198	42	43	111	543	274	208	49	50	325
17	12	34	152	41	49	*104	970	325	156	37	63	309
18	12	32	136	40	60	98	2,320	256	116	33	51	281
19	11	29	101	40	64	94	1,550	212	92	30	41	265
20	11	30	99	38	68	121	900	192	76	29	35	509
21	11	28	102	47	75	143	970	186	67	64	30	354
22	11	27	109	53	292	124	985	272	59	120	26	281
23	11	60	120	42	560	114	895	259	57	72	24	230
24	11	135	94	38	448	118	652	261	71	65	22	178
25	11	194	88	38	330	138	496	228	57	122	22	157
26	21	650	86	40	276	182	390	204	49	111	20	190
27	27	417	78	45	263	272	330	163	109	106	17	157
28	57	270	65	50	287	208	351	138	222	143	16	133
29	118	204	68	51	-	200	332	130	370	120	14	114
30	141	165	61	48	------	200	274	180	390	152	14	103
31	104	-- -	59	48	-------	196	--------	145	- ----	180	235	-
Total	944	3,054	5,694	1,442	3,559	6,808	17,477	12,185	5,154	2,773	2,195	10,618
Mean	30.5	102	184	46.5	127	220	583	393	172	89.5	70.8	354
Cfsm	0.400	1.34	2.41	0.610	1.67	2.89	7.65	5.16	2.26	1.17	0.929	4.65
In.	0.46	1.50	2.78	0.70	1.74	3.33	8.54	5.95	2.52	1.35	1.07	5.19

Calendar year 1953: Max 6,220 Min 6.7 Mean 175 Cfsm 2.30 In. 31.24
Water year 1953-54: Max 2,320 Min 11 Mean 197 Cfsm 2.59 In. 35.13

Peak discharge (base, 1,000 cfs).--Apr. 18 (10:30 a.m.) 2,710 cfs (8.37 ft); May 9 (11 p.m.) 2,360 cfs (7.98 ft); Sept. 12 (12:30 a.m.) 3,220 cfs (8.93 ft).
* Discharge measurement made on this day.

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 1954.

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

Average discharge.--14 years, 557 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 5,300 cfs Apr. 19 (gage height, 8.34 ft); minimum, 25 cfs Oct. 18 (gage height, 1.19 ft).
1940-54: 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 periods of ice effect, which are fair. Flow regulated by Pennesseewassee and Thompson Lakes (see p. 66) and several powerplants above station.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.2	26	3.0	565
1.5	71	4.0	1,120
2.0	190	6.0	2,670
2.5	356	8.1	4,990

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	77	176	430	122	215	1,230	862	922	680	787	502	716
2	73	179	364	154	230	1,450	832	832	754	770	*476	743
3	82	170	312	300	230	1,530	787	814	910	700	472	578
4	97	134	284	315	230	2,230	660	950	880	596	494	520
5	94	122	356	323	260	2,240	650	1,310	904	511	468	463
6	92	110	418	338	245	2,070	660	1,680	982	502	451	350
7	97	114	1,040	356	225	1,780	856	1,810	1,040	440	442	312
8	94	146	1,340	271	245	1,500	1,320	1,760	982	254	402	345
9	90	144	1,290	260	240	1,240	1,600	2,380	844	216	356	430
10	99	159	1,180	264	220	1,080	1,650	3,760	710	238	490	565
11	99	173	1,060	*238	220	994	1,610	4,610	660	196	615	1,800
12	97	162	928	250	205	910	1,730	3,720	645	350	565	*4,190
13	*86	139	782	245	192	856	1,790	2,890	610	447	542	4,940
14	64	112	675	235	190	850	*1,810	2,280	650	426	516	3,760
15	44	122	690	230	196	814	1,770	1,890	770	410	468	2,740
16	36	139	675	230	205	748	1,730	1,640	732	398	430	2,250
17	31	119	555	205	225	*660	2,200	1,520	690	398	447	1,810
18	26	114	485	200	245	592	3,890	1,450	640	367	410	1,580
19	27	110	438	240	255	552	4,960	1,290	592	390	383	1,470
20	27	110	410	240	288	710	4,680	1,160	534	398	349	1,610
21	26	105	406	230	323	886	3,440	1,070	476	410	319	1,580
22	27	103	418	220	601	862	2,830	1,070	455	430	298	1,430
23	29	148	442	225	765	832	2,550	1,120	507	430	274	1,250
24	34	182	360	205	952	804	2,340	1,120	596	430	261	1,080
25	35	365	330	205	1,030	804	2,010	1,170	538	438	248	988
26	45	798	320	215	1,140	1,010	1,660	1,070	516	430	210	922
27	45	952	315	245	1,190	1,190	1,390	928	735	386	*190	880
28	80	880	325	240	1,210	1,110	1,240	804	695	371	190	804
29	108	680	370	220	-	1,050	1,130	732	770	398	190	738
30	114	534	355	220	-	1,000	1,040	874	770	430	184	675
31	136	-	310	215	-	892	-	776	-	472	395	-
Total	2,111	7,501	17,663	7,456	11,772	34,476	55,677	49,402	21,267	13,419	12,037	41,519
Mean	68.1	250	570	241	420	1,112	1,856	1,594	709	433	388	1,384
(†)	-28.4	+7.7	+51.2	-38.8	+92.6	+23.9	+86	+75	-25.1	-69.5	-70.9	+74.5

Adjusted for change in reservoir contents

Mean	39.7	258	621	202	513	1,136	1,942	1,669	684	363	317	1,458
Cfsm	0.121	0.787	1.89	0.616	1.56	3.46	5.92	5.09	2.09	1.11	0.966	4.45
In.	0.14	0.88	2.18	0.71	1.62	3.99	6.60	5.87	2.33	1.28	1.11	4.96

	Observed			Adjusted			
Calendar year 1953:	Max 15,600	Min 26	Mean 720	Mean 729	Cfsm 2.22	In. 30.15	
Water year 1953-54:	Max 4,960	Min 26	Mean 752	Mean 766	Cfsm 2.34	In. 31.67	

* 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 Dec. 17, 18, 26-31, Jan. 3, 4, 9, Jan. 12 to Feb. 19, Mar. 4-6.

Androscoggin River near Auburn, Maine

Location.--Lat 44°04'15", long 70°12'35", on left 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 1954 (monthly discharge only for some periods, published in WSP 1301).

Gage.--Water-stage recorder. Datum of gage is 109.18 ft above mean sea level, datum of 1929.

Average discharge.--26 years, 5,965 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 49,600 cfs Sept. 12 (gage height, 14.53 ft); minimum daily, 485 cfs Oct. 18.
1928-54: 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 determination 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. Considerable fluctuation caused by powerplants above station. Flow regulated by powerplants above station and by Rangeley-Umbagog series of lakes, Kennebago, Aziscohos, Pennesseewassee, Thompson and Auburn Lakes and Gulf Island Pond (see p. 66).

Revisions (water years).--WSP 781: 1930, 1933-34. WSP 1301: 1929-36, 1940-50 (adjusted monthly runoff in inches).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.6	444	4.0	5,350
1.0	695	6.0	11,100
1.5	1,100	8.0	18,900
2.0	1,650	12.0	38,400
3.0	3,240	14.0	47,200

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,640	3,720	5,180	2,450	3,670	7,880	6,080	17,600	7,550	17,200	5,300	14,000
2	2,670	4,050	4,490	2,130	3,650	8,310	5,860	17,200	6,280	15,100	5,500	15,700
3	1,180	3,620	4,220	2,000	3,620	9,520	5,110	15,800	7,680	11,600	5,430	9,100
4	510	3,040	4,090	3,980	3,570	13,500	4,560	15,300	9,380	9,000	5,050	7,060
5	2,880	3,010	4,130	4,000	3,620	16,100	5,100	18,400	8,770	7,810	4,740	5,420
6	2,520	2,690	3,340	4,000	2,110	12,300	5,380	21,100	10,600	6,960	4,730	4,860
7	2,940	1,150	10,700	4,070	1,110	9,830	6,560	21,700	14,400	6,830	4,640	4,800
8	3,060	610	18,000	4,210	3,890	9,230	13,700	18,700	14,500	6,200	4,000	5,190
9	3,430	3,330	12,600	2,580	3,600	7,850	18,800	20,900	13,900	5,500	4,590	9,800
10	1,540	3,040	11,000	1,310	3,610	7,600	16,600	41,700	13,800	4,690	5,510	15,700
11	590	2,020	8,520	3,810	3,640	7,350	14,600	*39,400	12,700	2,920	5,890	19,700
12	2,920	3,390	7,920	3,350	3,590	6,300	15,000	31,800	11,000	5,140	8,200	46,000
13	2,570	3,220	6,740	3,290	1,560	5,350	18,100	27,800	9,790	4,010	6,930	43,400
14	2,560	1,610	6,750	3,760	1,860	5,360	16,500	24,500	8,910	4,640	5,960	32,900
15	2,630	580	6,200	3,560	3,750	6,090	14,600	21,800	9,320	4,690	4,620	29,000
16	2,700	3,380	6,630	1,740	3,810	5,740	14,600	20,000	9,250	4,210	5,060	24,800
17	970	2,810	5,820	1,020	3,670	5,110	17,700	17,900	9,450	4,320	4,340	22,200
18	485	2,690	4,360	3,880	3,660	4,980	31,600	15,300	8,390	3,430	4,300	21,200
19	2,840	2,700	2,800	3,240	3,600	5,030	38,600	11,500	7,120	3,930	4,410	20,300
20	2,430	2,780	2,610	3,590	1,740	5,240	31,500	10,700	5,540	4,000	3,990	22,500
21	2,370	1,280	4,650	3,680	1,980	5,980	29,500	9,730	5,800	3,920	3,780	22,700
22	2,290	570	5,000	3,790	5,650	5,260	34,300	10,400	5,570	4,810	3,170	17,800
23	2,320	3,600	5,420	1,780	6,940	5,440	38,100	14,500	4,440	5,100	4,030	14,600
24	1,000	5,130	4,150	1,540	9,870	5,330	39,000	13,100	5,950	5,020	3,800	13,100
25	545	7,090	2,640	3,860	8,490	5,310	38,500	12,000	6,060	3,990	3,790	11,300
26	3,120	19,300	3,270	3,570	7,960	5,880	30,800	11,300	4,930	3,910	3,750	10,700
27	2,680	21,300	4,290	3,650	7,340	7,210	26,900	9,950	4,730	4,160	3,740	9,910
28	3,040	10,300	4,270	3,840	7,380	6,930	22,700	8,360	8,530	5,160	3,020	9,630
29	3,790	7,500	4,230	3,650	-	6,500	20,600	7,460	14,800	5,270	1,980	9,230
30	3,940	5,710	4,200	1,770	-------	7,140	18,500	7,320	17,400	5,280	3,770	8,360
31	4,660	-------	3,520	910	-------	6,440	-------	7,720	-------	5,260	4,070	-------
Total	73,820	135,220	181,740	94,010	118,940	226,090	599,450	540,940	276,540	184,060	142,090	500,960
Mean	2,381	4,507	5,863	3,033	4,248	7,293	19,980	17,450	9,218	5,937	4,584	16,700
(†)	-1,088	-35	+917	-979	-550	-406	+5,746	+2,531	+29	-605	-626	+637
Adjusted for change in reservoir contents												
Mean	1,293	4,472	6,780	2,054	3,698	6,887	25,730	19,980	9,247	5,332	3,858	17,340
Cfsm	0.397	1.37	2.08	0.631	1.14	2.11	7.90	6.13	2.84	1.64	1.18	5.32
In.	0.46	1.53	2.40	0.73	1.19	2.43	8.81	7.07	3.17	1.89	1.36	5.94

	Observed						Adjusted					
Calendar year 1953:	Max	94,100	Min	440	Mean	6,881	Mean	7,091	Cfsm	2.18	In.	29.55
Water year 1953-54:	Max	46,000	Min	485	Mean	8,422	Mean	8,882	Cfsm	2.73	In.	36.98

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Rangeley chain of lakes, Aziscohos Reservoir, Gulf Island Pond, Auburn, Pennesseewassee and Thompson Lakes.

Cathance River near Topsham, Maine

Location.--Lat 43°57'15", long 69°56'30", on right bank just upstream from falls, 0.9 mile upstream from highway bridge and lowest dam on the river, 1.6 miles downstream from bridge on U. S. Highway 201, and 2.3 miles northeast of Topsham, Sagadahoc County.

Drainage area.--36.4 sq mi.

Records available.--October 1952 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 25 ft (from topographic map).

Extremes.--Maximum discharge during year, 2,040 cfs Sept. 12 (gage height, 7.26 ft); minimum, 0.3 cfs Oct. 5, 6 (gage height, 0.57 ft).
1952-54: Maximum discharge, that of Sept. 12, 1954; minimum, 0.25 cfs Sept. 6, 1953 (gage height, 0.53 ft).

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

Rating tables, water year 1953-54, except periods of ice effect or leaves on control (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 27				Nov. 28 to Sept. 30			
0.54	0.3	1.00	8.5	0.70	2.6	2.5	207
.57	.4	1.3	28	.80	4.4	3.0	322
.60	.6	1.6	61	.90	7.1	4.0	603
.65	1.2	2.0	117	1.00	11	5.0	958
.70	1.8	2.5	207	1.3	34	6.0	1,390
.80	3.1	3.0	322	1.6	65	7.0	1,900
.90	5.2	3.4	424	2.0	118	8.0	2,450

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	38	128	15	21	324	132	72	65	133	20	48
2	.5	27	93	13	20	324	115	63	73	115	20	55
3	.5	20	67	13	*19	*342	108	64	91	86	16	43
4	.4	15	54	13	25	401	86	93	85	62	16	32
5	.3	12	73	*14	78	390	71	192	75	44	17	21
6	.3	9.5	112	23	78	322	66	259	77	34	16	16
7	.4	9.5	245	39	70	246	71	314	72	24	13	12
8	.4	18	240	36	58	184	97	290	62	19	12	10
9	.4	25	168	26	49	135	114	297	52	15	9.6	28
10	.4	24	160	21	44	112	112	395	41	13	31	100
11	.4	20	142	19	42	94	111	393	32	10	144	500
12	.4	16	120	19	41	82	*139	340	28	14	158	1,920
13	.5	13	96	18	36	69	143	280	26	15	141	1,420
14	.5	11	90	18	27	62	133	220	*34	13	110	1,040
15	.5	10	94	18	24	*54	128	165	50	12	71	802
16	.4	9.5	90	18	24	49	112	128	61	10	49	600
17	.5	8.1	68	17	40	45	205	112	53	8.8	37	438
18	.5	7.8	48	17	56	42	545	100	43	7.4	25	322
19	.4	7.0	44	17	55	39	705	80	32	5.9	17	246
20	.4	6.4	43	18	56	188	606	65	24	*5.4	14	232
21	.4	6.1	41	20	64	393	464	56	19	5.7	12	213
22	*.4	5.8	44	26	200	320	357	64	*16	6.2	9.1	176
23	*.4	12	62	22	330	259	283	90	17	7.7	7.7	141
24	.4	77	80	18	300	201	222	103	73	11	6.5	105
25	.6	178	50	16	260	156	169	107	85	20	*5.7	77
26	1.3	385	36	15	255	158	133	112	67	31	5.2	64
27	2.2	406	32	17	250	218	107	87	97	29	4.4	54
28	11	327	18	*19	260	201	94	67	130	23	4.2	46
29	51	250	18	*27	-	186	90	56	133	19	3.8	39
30	64	176	18	28	-------	180	81	69	135	17	3.4	*33
31	54	-------	17	25	-------	149	-------	77	-------	17	7.1	-------
Total	194.3	2,129.7	2,591	623	2,782	5,925	5,799	4,810	1,848	833.1	1,005.7	8,833
Mean	6.27	71.0	83.6	20.1	99.4	191	193	155	61.6	26.9	32.4	294
Cfsm	0.172	1.95	2.30	0.552	2.73	5.25	5.30	4.26	1.69	0.739	0.890	8.08
In.	0.20	2.18	2.65	0.64	2.84	6.05	5.91	4.91	1.89	0.85	1.03	9.02

Calendar year 1953: Max 975 Min 0.3 Mean 87.5 Cfsm 2.40 In. 32.68
Water year 1953-54: Max 1,920 Min 0.3 Mean 102 Cfsm 2.80 In. 38.17

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by leaves on control Oct. 1-23 and by ice Dec. 8-16, Jan. 7, 15, Jan. 28 to Feb. 17, Feb. 26-28. No gage-height record Dec. 17 to Jan. 4, Jan. 8-14, 16-27, Feb. 22-25; discharge estimated on basis of records for nearby stations.

Reservoirs in Androscoggin River basin

Kennebago Lake on Kennebago River, at Kennebago, 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.

Rangeley Lake on Rangeley Stream, at Oquossoc, 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.

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

Upper and Lower Richardson Lakes on Rapid River, at Middle Dam, 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.

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.

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

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

Lake Auburn on outlet stream to Androscoggin River, at East Auburn, used for storing water supply of Auburn and Lewiston, has usable capacity of 580,000,000 cu ft between gage heights 54.7 and 60.7 ft. Gage-height record furnished by Auburn Water District.

Pennesseewassee Lake on short outlet stream to Little Androscoggin River, at Norway, 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.

Thompson Lake on short outlet stream to Little Androscoggin River, at Oxford, 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.

Monthly gage height and contents, water year October 1953 to September 1954

Date	Kennebago Lake†			Rangeley Lake†		
	Gage height (feet)	Contents (millions of cubic feet)	Change in contents during month (m.c.f.)	Gage height (feet)	Contents (millions of cubic feet)	Change in contents during month (m.c.f.)
Sept.30	77.1	355	-	1.92	643	-
Oct. 31	77.8	427	+72	0.75	251	-392
Nov. 30	81.1	790	+363	1.17	392	+141
Dec. 31	80.6	733	-57	1.00	335	-57
Calendar year 1953	-	-	+156	-	-	+154
Jan. 31	79.6	621	-112	0.50	167	-168
Feb. 28	78.7	523	-98	0.54	181	+14
Mar. 31	78.9	545	+22	0.54	181	0
Apr. 30	80.9	767	+222	3.75	1,256	+1,075
May 31	81.7	859	+92	4.04	1,353	+97
June 30	80.7	744	-115	4.08	1,366	+13
July 31	81.7	859	+115	4.04	1,353	-13
Aug. 31	81.1	790	-69	3.92	1,313	-40
Sept.30	81.5	836	+46	4.00	1,339	+26
Water year 1953-54	-	-	+481	-	-	+696

Date	Mooselookmeguntic Lake†			Upper and Lower Richardson Lake†		
Sept.30	12.95	3,076	-	12.15	2,594	-
Oct. 31	11.1	1,831	-1,245	10.45	1,983	-611
Nov. 30	10.2	1,233	-598	10.15	1,881	-102
Dec. 31	10.65	1,532	+299	12.35	2,668	+787
Calendar year 1953	-	-	+1,532	-	-	+1,557
Jan. 31	9.85	1,000	-532	11.4	2,321	-347
Feb. 28	9.3	634	-366	10.1	1,864	-457
Mar. 31	8.9	372	-262	8.4	1,320	-544
Apr. 30	17.7	6,367	+5,995	14.0	3,270	+1,950
May 31	20.05	8,046	+1,679	20.4	5,652	+2,382
June 30	20.25	8,190	+144	20.4	5,652	0
July 31	19.55	7,688	-502	19.2	5,200	-452
Aug. 31	19.3	7,509	-179	18.3	4,862	-338
Sept.30	19.5	7,652	+143	19.25	5,218	+356
Water year 1953-54	-	-	+4,576	-	-	+2,624

† Gage height and contents at 7 a.m. on first day of following month.

Reservoirs in Androscoggin River basin--Continued

Monthly gage height and contents, water year October 1953 to September 1954

Date	Umbagog Lake†			Aziscohos Lake†		
	Gage height (feet)	Contents (millions of cubic feet)	Change in contents during month (m.c.f.)	Gage height (feet)	Contents (millions of cubic feet)	Change in contents during month (m.c.f.)
Sept.30	10.45	1,364	-	521.75	5,752	-
Oct. 31	11.0	1,560	+196	518.1	4,786	-966
Nov. 30	11.6	1,776	+216	517.3	4,585	-201
Dec. 31	13.0	2,300	+524	520.65	5,456	+871
Calendar year 1953	-	-	+952	-	-	+1,878
Jan. 31	10.8	1,488	-812	518.1	4,786	-670
Feb. 28	10.85	1,506	+18	515.5	4,135	-651
Mar. 31	9.0	910	-596	516.2	4,310	+175
Apr. 30	12.9	2,262	+1,352	530.75	8,305	+3,995
May 31	14.95	3,060	+798	535.75	9,826	+1,521
June 30	15.05	3,100	+40	536.05	9,918	+92
July 31	14.15	2,748	-352	535.6	9,779	-139
Aug. 31	12.45	2,091	-657	535.1	9,624	-155
Sept.30	13.9	2,651	+560	535.7	9,810	+186
Water year 1953-54	-	-	+1,287	-	-	+4,058

Date	Gulf Island Pond‡			Lake Auburn†		
Sept.30	60.72	2,311	-	58.75	358	-
Oct. 31	61.64	2,436	+125	58.6	342	-16
Nov. 30	62.02	2,489	+53	58.75	358	+16
Dec. 31	61.16	2,370	-119	59.4	430	+72
Calendar year 1953	-	-	+89	-	-	+195
Jan. 31	62.01	2,487	+117	59.45	436	+6
Feb. 28	61.34	2,395	-92	60.15	514	+78
Mar. 31	61.26	2,384	-11	60.7	580	+66
Apr. 30	61.81	2,459	+75	60.75	586	+6
May 31	62.04	2,492	+33	60.55	562	-24
June 30	62.11	2,501	+9	60.2	520	-42
July 31	61.94	2,478	-23	59.6	452	-68
Aug. 31	61.91	2,473	-5	59.2	408	-44
Sept.30	62.02	2,489	+16	60.3	532	+124
Water year 1953-54	-	-	+178	-	-	+174

Date	Pennesseewassee Lake††			Thompson Lake††		
Sept.30	98.0	93	-	96.2	1,495	-
Oct. 31	97.75	84	-9	95.85	1,428	-67
Nov. 30	98.25	104	+20	95.85	1,428	0
Dec. 31	98.1	98	-6	96.6	1,571	+143
Calendar year 1953	-	-	-4	-	-	+293
Jan. 31	95.55	13	-85	96.5	1,552	-19
Feb. 28	97.3	66	+53	97.4	1,723	+171
Mar. 31	97.2	63	-3	97.75	1,790	+67
Apr. 30	98.5	116	+53	98.65	1,960	+170
May 31	98.5	116	0	99.7	2,161	+201
June 30	98.55	118	+2	99.35	2,094	-67
July 31	98.45	113	-5	98.4	1,913	-181
Aug. 31	98.45	113	0	97.4	1,723	-190
Sept.30	98.5	116	+3	98.4	1,913	+190
Water year 1953-54	-	-	+23	-	-	+418

† Gage height and contents at 7 a.m. on first day of following month.
‡ Gage height and contents at 12 p.m.
†† Gage height and contents as of last day of each month determined by interpolation.

Royal River at Yarmouth, Maine

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

Drainage area.--142 sq mi.

Records available.--October 1949 to September 1954.

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

Average discharge.--5 years, 328 cfs.

Extremes.--Maximum discharge during year, 7,960 cfs Sept. 12 (gage height, 7.12 ft); minimum, 10 cfs Oct. 1 (gage height, 0.75 ft).
1949-54: Maximum discharge, that of Sept. 12, 1954; 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 of ice effect or debris on control, which are fair. Some diurnal fluctuation at low flow caused by mill above station.

Rating table, water year 1953-54, 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	5.5	2,970
2.0	385	7.0	7,680

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	148	180	94	98	896	380	227	285	436	152	540
2	38	114	155	82	103	1,190	354	214	276	319	110	330
3	37	92	134	82	103	1,270	349	258	380	245	82	188
4	39	80	120	82	127	1,750	276	465	349	168	98	130
5	38	73	200	85	209	1,190	231	1,010	323	130	98	102
6	38	66	309	109	209	656	236	*1,090	309	128	80	87
7	53	78	1,230	184	176	408	295	1,080	267	114	70	78
8	64	171	1,340	150	*148	333	436	698	285	102	68	85
9	51	167	615	100	120	319	461	1,580	285	92	62	124
10	47	120	610	82	109	314	364	2,900	231	90	250	460
11	44	106	698	82	103	319	354	1,780	192	90	545	1,730
12	45	92	436	85	100	272	544	1,050	200	100	340	7,160
13	44	85	375	87	96	231	474	728	205	98	196	4,170
14	44	75	343	92	86	209	375	518	236	87	128	1,780
15	44	73	448	99	75	192	343	402	343	90	98	1,280
16	43	67	499	99	78	176	354	369	425	82	85	758
17	41	67	285	99	130	171	1,130	448	304	75	87	538
18	41	66	214	100	130	159	3,190	391	222	68	80	436
19	41	64	170	110	144	163	2,710	323	176	68	68	430
20	41	63	127	118	163	1,230	1,150	295	144	*75	64	1,030
21	41	58	124	122	192	1,740	663	276	127	82	62	700
22	40	58	171	134	1,150	650	474	385	114	128	58	492
23	40	124	249	148	1,570	448	402	474	148	102	53	396
24	44	442	210	112	1,040	402	375	431	442	90	53	280
25	53	620	167	87	965	391	349	448	295	85	*55	267
26	77	1,890	148	78	1,280	650	304	486	192	98	53	267
27	84	1,190	134	88	1,190	1,070	276	343	420	87	49	249
28	171	465	109	100	1,120	635	285	258	583	90	49	218
29	309	290	112	100	-	531	314	227	656	90	47	188
30	309	218	112	90	------	590	267	338	677	87	45	176
31	227	...	112	90	------	414	------	369	...	102	148	...
Total	2,259	7,222	10,136	3,170	11,014	18,969	17,715	19,861	9,091	3,698	3,433	24,669
Mean	72.9	241	327	102	393	612	590	641	303	119	111	822
Cfsm	0.513	1.70	2.30	0.718	2.77	4.31	4.15	4.51	2.13	0.838	0.782	5.79
In.	0.59	1.90	2.65	0.83	2.88	4.97	4.63	5.20	2.38	0.97	0.90	6.46

Calendar year 1953: Max 4,280 Min 27 Mean 352 Cfsm 2.48 In. 33.67
Water year 1953-54: Max 7,160 Min 31 Mean 360 Cfsm 2.54 In. 34.36

Peak discharge (base, 1,500 cfs).--Nov. 26 (4 p.m.) 1,980 cfs (3.74 ft); Dec. 7 (3 p.m.) 1,620 cfs (3.43 ft); Feb. 22 (10 p.m.) 1,720 cfs (3.52 ft); Mar. 4 (11 a.m.) 1,850 cfs (3.63 ft); Mar. 20 (4 p.m.) 2,040 cfs (3.79 ft); Apr. 18 (9 p.m.) 3,680 cfs (4.96 ft); May 10 (6 to 7 a.m.) 3,150 cfs (4.62 ft); Sept. 12 (2 p.m.) 7,960 cfs (7.12 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by debris on control July 3 to Sept. 10, and by ice Dec. 19, 24, Jan. 1, 8, 9, 15-22, 27-31, Feb. 12-14.

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 1954.

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.--67 years, 662 cfs (unadjusted).

Remarks.--Discharge computed from Allen meter records for each of 3 pairs of water wheels and from records of openings of 2 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 completely regulated by Crystal, Highland, Long, and Pleasant Lakes, Brandy, Thomas, and Panther Ponds, Sebago Lake (surface area, 45.6 sq mi), and by several smaller ponds, which have a combined usable capacity of 13,535,000,000 cu ft.

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

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

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	756	674	603	559	589	503	455	676	833	981	841	902
2	762	674	591	537	589	478	448	683	932	1,010	627	846
3	765	673	592	582	587	473	419	602	1,310	1,160	838	846
4	750	573	592	581	590	419	475	638	1,680	334	835	846
5	749	511	590	585	570	348	518	584	1,680	0	840	869
6	748	443	591	581	583	441	513	621	1,680	0	835	0
7	749	507	592	573	589	529	523	619	1,680	0	838	189
8	756	654	484	558	581	547	469	638	1,300	0	823	811
9	761	581	515	0	568	554	486	598	1,070	156	799	839
10	782	607	582	308	571	563	478	431	1,120	470	834	845
11	742	664	554	626	593	526	504	732	1,120	94	834	836
12	745	667	576	514	582	466	502	983	1,120	841	831	670
13	719	664	576	590	573	478	469	1,110	1,020	836	830	0
14	755	666	547	574	577	479	508	938	952	840	830	0
15	758	665	559	561	588	464	534	839	888	838	827	198
16	762	659	578	536	588	471	575	839	899	827	836	655
17	743	646	569	584	595	492	555	836	956	836	828	1,040
18	754	603	573	563	528	484	462	933	954	838	844	1,270
19	747	605	554	563	577	489	445	1,000	889	892	833	1,400
20	750	605	590	543	585	504	492	885	829	825	836	1,450
21	750	604	563	568	594	338	467	837	836	841	832	2,100
22	748	600	586	558	616	293	449	930	833	811	833	2,440
23	713	600	552	579	476	406	505	1,270	836	843	790	2,730
24	742	602	569	580	472	424	524	1,550	830	837	833	2,440
25	683	602	379	582	544	461	500	1,580	834	836	814	1,900
26	676	393	0	574	518	494	510	1,520	835	834	814	1,370
27	679	486	544	580	478	411	582	1,580	833	839	837	1,120
28	677	553	576	586	497	402	650	1,490	723	881	811	1,120
29	661	587	557	590	-	397	624	1,080	918	833	832	1,120
30	674	570	564	589	-------	427	639	823	984	834	809	1,110
31	675	-------	562	589	-------	382	-------	837	-------	838	836	-------
Total	22,731	17,918	16,860	16,895	15,798	14,143	15,280	28,682	31,374	21,005	25,476	31,962
Mean	733	597	544	545	564	456	509	925	1,046	678	822	1,065
(†)	-691	-302	+214	-239	+95	+1,139	+1,837	+1,559	-174	-229	-516	+691
Adjusted for change in reservoir contents												
Mean	42.0	295	758	306	659	1,595	2,346	2,484	872	449	306	1,756
Cfsm	0.096	0.677	1.74	0.702	1.51	3.66	5.38	5.70	2.00	1.03	0.702	4.03
In.	0.11	0.76	2.01	0.81	1.57	4.22	6.00	6.57	2.23	1.19	0.81	4.50

	Observed						Adjusted					
Calendar year 1953:	Max	3,420	Min	0	Mean	912	Mean	932	Cfsm	2.14	In.	29.01
Water year 1953-54:	Max	2,730	Min	0	Mean	707	Mean	988	Cfsm	2.27	In.	30.78

† Change in contents in Sebago Lake, Brandy Pond (controls also Long Lake), Panther Pond (controls also Rattlesnake Pond), Highland Lake, Pleasant Lake (controls also Parker Pond), Crystal Lake, Thomas Pond, and several smaller ponds, diversion by Portland Water District, and leakage past gaging station, equivalent in cubic feet per second.

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 1954.

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.--31 years (1903-9, 1929-54), 933 cfs.

Extremes.--Maximum discharge during year, 24,900 cfs May 9 (gage height, 12.55 ft); minimum, 123 cfs Oct. 5 (gage height, 2.08 ft).
1903-9, 1929-54: Maximum discharge, 43,900 cfs Mar. 27, 1953 (gage height, 17.20 ft), from rating curve extended above 11,000 cfs on basis of slope-area determination of peak flow; minimum, 40 cfs Mar. 16, 1932 (gage height, 1.61 ft).

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

Revisions (water years).--WSP 756: Drainage area. WSP 1301: 1903-9.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 26				Nov. 27 to Sept. 30			
2.0	103	4.0	1,140	2.4	195	5.0	2,200
2.4	218	5.0	2,330	3.0	420	6.0	3,840
3.0	465	6.0	3,970	3.5	685	8.0	8,500
3.5	752	7.5	7,370	4.0	1,050	10.0	15,000

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	145	534	785	370	230	862	586	3,460	1,490	1,110	771	5,160
2	136	430	704	365	240	1,240	542	3,770	2,120	1,030	655	1,470
3	131	374	655	375	255	1,430	575	3,180	2,540	820	481	930
4	128	*344	631	400	275	2,030	501	4,080	1,960	704	471	730
5	126	311	985	385	285	1,420	527	4,050	1,930	667	443	603
6	136	288	970	365	270	1,150	586	3,550	2,430	855	471	521
7	256	288	4,880	320	260	1,000	1,290	3,130	2,170	667	448	471
8	323	365	2,930	255	265	922	2,870	2,600	2,160	586	394	580
9	235	369	1,780	235	270	841	3,710	12,400	*1,720	527	360	1,100
10	212	331	2,440	230	260	806	2,240	10,500	1,420	501	394	1,330
11	215	323	2,290	225	*255	737	1,780	6,550	1,290	466	511	4,430
12	218	308	1,550	220	220	685	4,280	4,750	1,100	506	416	9,880
13	215	292	1,300	220	220	635	*3,280	3,520	978	491	394	3,020
14	199	284	1,150	220	230	615	2,600	2,880	978	452	398	2,670
15	186	277	1,030	230	240	590	2,230	2,600	1,500	476	336	2,070
16	174	266	890	245	260	570	2,490	3,080	1,550	434	309	1,540
17	165	277	770	245	375	*564	4,000	3,080	1,130	376	368	1,550
18	159	277	705	235	420	521	9,960	2,420	954	368	344	1,430
19	153	304	685	240	420	527	6,640	2,030	848	368	294	1,310
20	150	311	680	250	415	564	5,130	1,780	771	368	280	2,540
21	150	296	685	260	420	619	7,870	1,880	724	415	266	1,600
22	148	284	700	315	1,340	548	8,840	5,180	655	631	248	1,400
23	148	1,430	750	285	2,060	511	9,450	3,300	771	461	231	1,220
24	145	1,500	575	280	1,420	511	6,110	2,560	771	457	225	1,080
25	148	2,190	620	270	1,130	516	4,770	2,140	631	416	225	962
26	208	6,990	610	265	970	564	4,180	1,860	564	438	221	1,030
27	252	2,210	535	260	906	711	3,270	1,570	1,040	471	205	914
28	300	1,430	515	255	848	597	3,130	1,380	1,430	416	198	820
29	721	1,080	495	250	-	631	2,850	1,360	1,610	*457	198	750
30	1,110	883	455	240	-------	861	2,990	2,640	1,480	448	195	704
31	752	---	430	240	-------	597	-------	1,850	-------	591	2,600	-----
Total	7,744	24,846	34,180	8,550	14,759	24,175	109,277	109,130	40,715	16,973	13,350	53,815
Mean	250	828	1,103	276	527	780	3,643	3,520	1,357	548	431	1,794
Cfsm	0.648	2.15	2.86	0.715	1.37	2.02	9.44	9.12	3.52	1.42	1.12	4.65
In.	0.75	2.40	3.30	0.82	1.43	2.33	10.53	10.51	3.93	1.64	1.29	5.19

Calendar year 1953: Max 33,700 Min 103 Mean 1,200 Cfsm 3.11 In. 42.23
Water year 1953-54: Max 12,400 Min 126 Mean 1,253 Cfsm 3.25 In. 44.12

Peak discharge (base, 8,700 cfs).--Nov. 26 (4:30 a.m.) 12,600 cfs (9.25 ft); Apr. 18 (8:30 a.m.) 12,500 cfs (9.28 ft); Apr. 23 (1 to 2 a.m.) 11,600 cfs (9.02 ft); May 9 (9 a.m.) 24,900 cfs (12.55 ft); Sept. 1 (12:15 a.m.) 13,100 cfs (9.46 ft); Sept. 12 (2 a.m.) 18,400 cfs (10.90 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 15-22, Dec. 25 to Feb. 23, Mar. 13-16.

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 1954.

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

Average discharge.--12 years, 741 cfs.

Extremes.--Maximum discharge during year, 6,700 cfs May 12 (gage height, 9.58 ft); minimum, 44 cfs Aug. 11; minimum daily, 170 cfs Oct. 25-27.
1942-54: 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. Flow regulated by Ossipee and Silver Lakes and Pine River Pond (combined capacity, 1,430,000,000 cu ft).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.0	160	5.0	1,340
2.5	266	7.0	2,900
3.0	420	9.0	5,600
4.0	840	9.6	6,740

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	173	183	503	420	346	862	894	*1,760	1,350	786	259	539
2	171	185	425	503	349	903	880	1,660	1,700	628	261	*423
3	*171	185	264	579	378	990	872	1,310	*2,370	531	287	346
4	171	187	264	555	420	1,180	840	1,370	2,320	531	420	349
5	171	187	*470	539	388	1,330	732	1,730	2,170	527	420	352
6	173	185	620	531	375	1,390	638	2,040	2,070	527	416	349
7	175	185	872	523	382	1,340	669	2,400	1,990	527	413	349
8	177	185	1,180	519	362	1,270	*808	2,230	1,880	527	479	349
9	177	187	1,230	507	349	1,190	1,200	2,600	1,660	523	527	352
10	177	187	1,500	503	336	1,130	1,480	*4,440	1,390	519	611	450
11	177	187	1,680	551	324	1,060	1,600	6,070	1,120	382	479	924
12	177	187	1,590	718	312	1,000	1,870	6,600	795	309	426	1,880
13	175	187	1,490	696	287	940	2,220	*5,870	624	312	346	2,680
14	175	187	1,380	674	284	903	2,370	4,990	786	312	346	2,640
15	175	187	1,260	642	279	872	2,370	4,220	786	312	343	2,420
16	175	187	1,060	607	287	836	2,360	3,710	790	312	340	2,140
17	175	187	795	583	321	808	2,520	3,500	795	309	336	1,680
18	173	185	511	539	336	772	3,300	3,230	790	309	336	1,390
19	173	185	503	487	336	732	4,540	2,910	790	309	333	1,310
20	173	185	503	438	336	736	4,760	2,590	714	309	330	1,330
21	173	185	507	413	346	746	4,570	2,280	543	312	327	1,200
22	171	185	507	392	388	746	4,330	2,420	539	312	324	1,060
23	171	185	527	378	527	746	4,060	2,680	620	312	321	1,070
24	171	187	507	362	*687	732	3,710	2,760	786	312	318	1,080
25	170	193	487	346	777	728	3,320	2,670	620	312	315	1,080
26	170	203	491	330	818	759	2,940	2,500	527	312	312	1,060
27	170	289	475	330	840	777	2,630	2,240	527	312	309	1,060
28	171	499	455	333	854	804	2,330	1,780	*527	312	306	1,040
29	175	503	452	340	-	826	2,070	1,350	660	312	304	1,030
30	179	503	444	340	-------	858	1,850	1,280	777	312	298	1,010
31	181	-------	441	346	-------	885	--------	1,380	--------	*268	409	-------
Total	5,386	6,652	23,393	15,024	12,024	28,851	68,733	88,570	33,016	12,189	11,251	32,942
Mean	174	222	755	485	429	931	2,291	2,857	1,101	393	363	1,098
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 11,400 Min 135 Mean 912 Cfsm 2.76 In. 37.52
Water year 1953-54: Max 6,600 Min 170 Mean 926 Cfsm 2.81 In. 38.10

* Discharge measurement made on this day.

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 1954.

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.--38 years, 880 cfs.

Extremes.--Maximum discharge during year, 7,940 cfs May 11 (gage height, 9.74 ft); minimum, 47 cfs Oct. 11 (gage height, 0.74 ft); minimum daily, 172 cfs Oct. 11.
1916-54: 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 or no gage-height record, 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 tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 12				Apr. 13 to Sept. 30			
1.4	171	3.0	880	2.0	338	6.0	3,100
1.6	228	4.0	1,540	3.0	810	8.0	5,500
2.0	370	5.1	2,440	4.0	1,430	10.0	8,300
				5.0	2,190		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	180	225	564	565	410	1,180	1,330	1,930	1,680	1,000	491	1,340
2	184	222	553	590	435	1,320	1,330	1,860	1,890	920	423	832
3	182	228	406	640	460	1,500	1,310	1,670	2,580	690	386	555
4	178	228	336	630	500	1,680	1,280	1,640	2,540	658	487	509
5	196	205	410	600	495	1,610	1,210	2,230	2,470	653	518	487
6	182	204	794	590	485	1,530	1,280	2,370	2,390	679	495	470
7	225	231	1,110	590	470	1,460	1,420	2,680	2,240	638	474	457
8	194	268	1,520	585	460	1,390	1,750	2,500	2,140	593	482	461
9	200	272	1,420	580	460	1,330	2,100	4,970	1,920	588	569	545
10	192	261	1,630	590	*465	1,270	2,280	6,370	1,650	574	669	618
11	172	244	1,960	700	460	1,220	2,400	7,600	1,400	560	932	1,910
12	220	251	1,810	545	440	1,180	2,420	7,740	1,150	584	608	4,300
13	186	235	1,710	760	425	1,140	2,450	6,970	782	461	522	*3,480
14	184	228	1,590	740	405	1,100	2,560	5,810	938	440	448	3,360
15	192	207	1,530	715	400	1,080	2,580	4,810	1,020	470	436	2,970
16	182	228	1,330	685	400	*1,020	2,600	4,270	1,010	415	444	2,560
17	180	216	1,050	640	460	992	3,250	3,980	938	382	448	2,210
18	182	231	755	620	480	980	5,180	3,540	898	386	444	1,700
19	186	204	680	600	485	980	5,290	3,180	882	403	423	1,630
20	186	213	650	570	500	970	*5,420	2,840	870	390	415	1,960
21	180	213	640	540	640	990	5,010	2,770	706	419	382	1,720
22	179	198	649	500	770	1,010	4,720	3,400	653	*504	390	1,410
23	187	261	676	470	840	1,080	4,370	3,310	706	453	398	1,350
24	194	296	654	445	910	1,100	3,980	3,400	956	419	378	1,300
25	180	307	650	425	960	1,090	3,530	3,170	854	419	382	1,280
26	201	574	610	405	1,000	1,120	3,140	2,870	653	427	342	1,290
27	198	410	595	400	1,040	1,140	2,760	2,530	722	419	*346	1,250
28	261	548	570	405	1,100	1,200	2,610	2,210	706	440	338	1,220
29	336	590	558	410	-	1,250	2,440	1,750	838	440	338	1,180
30	325	579	590	405	------	1,290	2,050	1,770	1,150	432	354	1,140
31	275	--	560	400	------	1,310	------	1,700	------	419	630	---- --
Total	6,299	8,577	28,560	17,340	16,355	37,512	84,050	107,840	39,332	16,275	14,392	45,494
Mean	203	286	921	559	584	1,210	2,802	3,479	1,311	525	464	1,516
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 13,500 Min 146 Mean 1,138 Cfsm 2.51 In. 34.10
Water year 1953-54: Max 7,740 Min 172 Mean 1,156 Cfsm 2.55 In. 34.64

* Discharge measurement made on this day.

Note.--No gage-height record Mar. 18 to Apr. 12; discharge estimated on basis of records for nearby stations and weather records. Stage-discharge relation affected by ice Dec. 18-21, 25-28, Dec. 31 to Mar. 12.

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 1954.

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 downstream at different datum.

Average discharge.--38 years, 2,708 cfs.

Extremes.--Maximum discharge during year, 22,800 cfs May 12 (gage height, 13.36 ft); minimum, 220 cfs Oct. 25 (gage height, 1.30 ft).
1916-54: Maximum discharge, 45,000 cfs Mar. 21, 22, 1936 (gage height, 21.90 ft, from floodmarks); minimum, 90 cfs Oct. 1, 1921 (gage height, 0.08 ft).

Remarks.--Records excellent except 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 tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 23				Apr. 24 to Sept. 30			
1.8	401	5.0	3,350	2.6	630	7.0	7,000
2.5	765	7.0	7,000	3.0	860	9.0	11,700
3.0	1,120	9.0	11,700	4.0	1,800	11.0	16,600
4.0	2,050	11.0	16,600	5.0	3,230	13.3	22,600

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	528	1,260	3,170	1,760	1,300	3,700	3,310	8,510	5,700	3,310	1,520	3,100
2	504	1,220	3,040	1,740	1,330	3,850	3,240	8,020	5,910	3,250	1,450	3,420
3	485	1,180	2,690	1,730	1,250	4,220	3,210	7,490	6,580	2,940	1,460	3,120
4	435	1,120	2,450	1,730	1,250	4,810	3,060	7,460	6,500	2,790	1,660	2,820
5	475	1,020	2,420	1,740	1,260	5,080	2,960	8,300	6,540	2,620	1,600	2,840
6	480	958	2,720	1,740	1,240	4,980	2,820	8,760	6,580	2,590	1,460	2,590
7	579	923	3,500	*1,740	1,200	4,770	3,100	9,360	6,430	2,360	1,370	2,200
8	590	937	4,180	1,670	1,130	4,670	3,720	9,260	6,260	2,290	1,310	2,120
9	579	972	4,400	1,560	1,140	4,450	4,490	12,600	5,970	2,120	1,350	2,190
10	574	937	4,900	1,510	*995	4,250	5,060	15,600	5,460	2,000	1,630	2,360
11	504	916	5,360	1,530	965	3,990	5,610	20,000	5,030	1,870	2,120	5,860
12	644	909	5,250	1,560	960	3,770	6,250	22,600	4,570	1,970	1,680	9,240
13	639	882	5,190	1,590	960	3,530	*6,710	21,200	3,940	1,750	1,550	7,990
14	628	850	5,040	1,580	990	3,320	7,150	18,100	3,870	1,630	1,410	8,510
15	542	723	4,790	1,550	1,030	3,180	7,510	15,200	3,870	1,620	1,310	8,880
16	574	862	4,350	1,510	1,020	3,100	7,760	13,500	3,840	1,450	1,250	8,640
17	440	650	3,910	1,500	1,130	*2,930	9,130	12,300	3,760	1,320	1,240	8,060
18	520	791	3,380	1,530	1,250	2,830	12,200	11,000	3,650	1,220	1,140	7,110
19	579	741	3,210	1,630	1,310	2,720	12,900	10,100	3,470	1,120	1,120	6,520
20	504	784	3,000	1,450	1,340	2,860	*15,100	9,260	3,090	1,140	1,100	6,730
21	532	784	2,830	1,440	1,420	2,930	15,700	8,610	2,830	1,190	1,030	6,260
22	553	695	2,720	1,480	2,050	2,870	15,600	9,280	2,560	*1,280	1,050	5,700
23	494	930	2,690	1,520	2,540	2,800	15,700	9,060	2,560	1,270	940	5,500
24	485	980	2,520	1,580	2,990	2,760	16,200	9,310	2,770	1,330	873	5,120
25	465	1,960	2,340	1,380	4,070	2,780	16,100	9,180	2,590	1,300	860	4,910
26	558	2,340	2,230	1,300	4,120	2,900	14,600	8,680	2,290	1,280	*829	4,680
27	590	3,070	2,150	1,280	3,930	3,140	12,900	7,990	2,300	1,350	829	4,370
28	830	3,400	2,050	1,280	3,800	3,170	11,700	7,200	2,160	1,470	817	4,040
29	1,040	3,560	1,960	1,270	-	3,290	10,600	6,370	2,640	1,330	675	3,730
30	1,020	3,480	1,840	1,270	------	3,410	9,360	6,200	3,410	1,370	635	3,580
31	1,040	...	1,800	1,290	------	3,350	------	5,890	------	1,370	1,520	...
Total	18,410	39,834	102,080	47,440	47,970	110,410	263,750	336,390	127,130	55,900	38,788	152,190
Mean	594	1,328	3,293	1,530	1,713	3,562	8,792	10,850	4,238	1,803	1,251	5,073
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 41,800 Min 340 Mean 3,509 Cfsm 2.70 In. 36.70
Water year 1953-54: Max 22,600 Min 435 Mean 3,672 Cfsm 2.83 In. 38.41

Peak discharge (base, 6,200 cfs).--Apr. 24 (10:30 to 12 p.m.) 16,400 cfs (10.90 ft); May 12 (11 a.m.) 22,800 cfs (13.36 ft); June 3 (10:30 a.m.) 6,680 cfs (6.85 ft); Sept. 11 (5 p.m.) 12,100 cfs (9.18 ft); Sept. 15 (12 m.) 8,980 cfs (7.85 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 19, 20, Dec. 26 to Mar. 28.

Little Ossipee River near South Limington, Maine

Location.--Lat 43°41'15", long 70°40'05", on right bank just upstream from highway bridg 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 1954.

Gage.--Water-stage recorder. Altitude of gage is 260 ft (from topographic map).

Average discharge.--14 years, 293 cfs.

Extremes.--Maximum discharge during year, 5,300 cfs May 10 (gage height, 6.78 ft); minimum, 4.7 cfs Nov. 7 (gage height, 1.23 ft).
1940-54: Maximum discharge, that of May 10, 1954; minimum, that of Nov. 7, 1953. 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 or those below 10 cfs which are fair. Flow regulated by Little Ossipee Lake, Ledgemere, and Balch Ponds (combined capacity, 581,000,000 cu ft).

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.2	3.6	2.5	279
1.3	7.3	3.0	520
1.4	12	3.5	845
1.5	20	4.0	1,310
1.6	29	5.0	2,450
1.8	58	7.0	5,700
2.0	106		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	14	156	126	215	898	588	525	610	630	336	95
2	17	8.9	79	126	215	1,140	582	397	488	548	336	91
3	38	7.3	209	126	217	1,130	576	392	488	478	336	48
4	39	6.6	235	184	213	1,150	565	530	430	378	340	41
5	38	5.8	275	251	220	1,160	526	948	255	327	300	33
6	39	5.1	279	255	240	1,100	488	1,010	255	300	224	29
7	55	6.2	460	313	245	1,070	488	966	255	178	195	22
8	67	9.9	655	363	265	905	420	875	255	181	206	12
9	58	9.4	600	296	*279	542	313	1,690	255	184	208	14
10	52	9.4	570	209	279	531	313	4,880	*255	170	350	24
11	48	8.9	582	202	280	435	318	4,130	271	167	548	91
12	48	8.9	554	206	275	309	445	3,320	279	198	504	4,24
13	48	7.8	499	202	275	305	*559	2,380	279	213	416	3,88
14	48	6.2	467	200	265	305	526	1,750	279	235	354	2,40
15	47	5.8	560	198	260	305	488	1,290	296	217	305	1,70
16	45	5.4	435	195	255	*309	483	1,020	318	195	288	1,34
17	76	5.8	331	196	251	309	505	760	327	170	279	965
18	45	5.4	275	196	263	309	1,980	580	309	154	271	714
19	39	5.8	271	196	265	309	2,980	785	288	148	271	707
20	39	28.0	267	195	267	350	*1,930	749	267	141	192	80
21	41	56	267	192	267	590	1,240	714	255	*154	76	890
22	42	71	263	192	292	852	624	1,160	198	178	76	830
23	42	154	263	192	378	808	460	1,490	73	184	73	707
24	45	220	263	192	462	800	78	1,470	210	178	73	618
25	50	209	259	192	483	694	67	1,330	327	167	69	582
26	60	480	259	192	600	594	146	840	296	161	58	57
27	67	565	259	195	700	594	315	354	271	164	53	54
28	100	457	305	196	721	594	436	390	190	247	39	50
29	184	382	387	198	-	600	575	509	255	354	38	22
30	232	305	382	200	-------	600	668	625	594	345	38	3
31	156	--- ---	320	210	-------	594	-------	728	-------	313	144	-------
Total	1,933	3,069.6	10,986	6,386	8,947	20,191	19,682	38,587	9,128	7,657	6,994	27,29
Mean	62.4	102	354	206	320	651	656	1,245	304	247	226	91
Cfsm	-	-	-	-	-	-	-	-	-	-	-	
In.	-	-	-	-	-	-	-	-	-	-	-	

Calendar year 1953: Max 4,400 Min 5.1 Mean 394 Cfsm - In. -
Water year 1953-54: Max 4,880 Min 5.1 Mean 441 Cfsm - In. -

Peak discharge (base, 1,000 cfs).--Mar. 5 (3:30 a.m.) 1,180 cfs (3,87 ft); Apr. 19 (4 to 5 a.m.) 3,270 cfs (5.56 ft); May 10 (2:30 p.m.) 5,300 cfs (6.78 ft); May 23 (3 p.m.) 1,500 cfs (4.19 ft); Sept. 1 (9 p.m.) 1,360 cfs (4.05 ft); Sept. 12 (7 to 8 p.m.) 4,840 cfs (6.52 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Jan. 14, 17-19, 22-24, Jan. 28 to Feb. 2, Feb. 6 8, 11-14, 19.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 170 ft (from topographic map).

Average discharge.--15 years, 181 cfs (unadjusted).

Extremes.--Maximum discharge during year, 2,830 cfs Sept. 12 (gage height, 5.69 ft); minimum, 5.4 cfs Oct. 10, 11 (gage height, 0.40 ft).
1939-54: Maximum discharge, that of Sept. 12, 1954; minimum, 1.1 cfs Aug. 22, 1941; minimum gage height, 0.29 ft Nov. 15, 16, 1947.

Remarks.--Records good except those for period of no gage-height record, which are fair. Flow regulated by Square Pond and Mousam and Estes Lakes (combined capacity, about 700,000,000 cu ft) and by powerplants above station.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.4	5.4	1.5	182
.5	10	2.0	356
.6	16	3.0	874
.7	24	4.0	1,500
.8	34	5.1	2,330
1.0	62		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	76	10	144	68	148	427	305	263	275	260	79	390
2	64	42	210	77	130	468	275	270	182	215	102	240
3	*6.8	42	110	85	122	500	246	309	260	179	102	180
4	8.2	43	104	126	138	612	242	450	305	92	86	127
5	53	41	148	118	168	515	270	575	246	140	84	120
6	50	43	176	136	92	365	240	560	259	198	73	110
7	49	8.6	356	168	94	330	240	565	285	200	34	116
8	50	11	360	144	164	365	235	472	280	190	40	114
9	49	37	*273	94	136	290	215	1,600	245	50	73	104
10	6.3	38	320	94	130	275	165	2,120	225	56	174	108
11	6.9	8.2	339	150	122	260	216	1,800	210	72	210	815
12	51	37	263	138	120	235	313	1,400	171	100	172	2,310
13	51	40	233	128	42	171	246	1,070	171	120	146	1,100
14	50	8.2	305	122	44	216	219	874	184	120	92	800
15	49	9.5	352	124	110	260	210	718	196	110	94	615
16	51	44	301	59	112	214	207	775	198	43	122	472
17	9.2	44	236	48	200	200	375	839	174	47	110	545
18	11	40	196	106	210	196	1,020	724	164	50	74	490
19	49	40	143	122	215	188	897	628	108	52	75	445
20	50	39	139	120	174	480	623	560	101	54	75	530
21	51	8.2	165	150	216	645	*490	628	140	83	32	476
22	51	9.1	168	68	580	495	418	915	112	87	37	415
23	50	43	196	75	580	378	365	880	132	81	78	330
24	9.7	43	168	59	436	326	301	828	152	42	77	340
25	9.8	96	122	120	409	309	317	712	124	64	72	400
26	51	352	130	116	445	422	309	601	83	104	*73	350
27	49	295	132	180	418	432	277	520	113	91	75	220
28	52	210	140	210	427	391	339	505	130	110	33	170
29	52	149	130	182	-	422	360	472	230	110	28	250
30	50	154	122	105	-	374	309	436	325	106	66	250
31	7.7	-	118	88	-	326	-	378	-	60	154	-
Total	1,223.6	1,983.8	6,298	3,580	6,182	11,087	10,244	23,447	5,780	3,286	2,742	12,932
Mean	39.5	66.1	203	115	221	358	341	756	193	106	88.5	431
(†)	-19.1	+73.3	+45.6	+26.0	+46.8	+10.9	+16.0	+6.2	-25.9	-18.4	-14.8	+20.7
Adjusted for change in reservoir contents												
Mean	20.4	139	249	141	268	369	357	762	167	87.6	73.7	452
Cfsm	0.194	1.32	2.37	1.34	2.55	3.51	3.40	7.26	1.59	0.834	0.702	4.30
In.	0.22	1.47	2.73	1.54	2.66	4.05	3.79	8.37	1.77	0.96	0.81	4.80

	Observed			Adjusted			
Calendar year 1953:	Max 1,760	Min 6.3	Mean 246	Mean 249	Cfsm 2.37	In. 32.10	
Water year 1953-54:	Max 2,310	Min 6.3	Mean 243	Mean 257	Cfsm 2.45	In. 33.17	

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Square Pond and Mousam and Estes Lakes.
Note.--No gage-height record July 4-20; discharge estimated on basis of weather records and records from powerplant upstream.

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 1954.

Gage.--Water-stage recorder. Datum of gage is 179.60 ft above mean sea level, datum of 1929.

Average discharge.--25 years (1929-54), 239 cfs (unadjusted).

Extremes.--Maximum discharge during year, 4,940 cfs May 9 (gage height, 11.45 ft); minimum, 16 cfs Oct. 19 (gage height, 1.22 ft).
1928-54: 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 fragmentary or no gage-height record, which are fair. Flow partly regulated by powerplants above station and by Great East and Lovell Lakes, and Horn, Wilsons 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.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	43	97	245	180	390	380	400	320	430	61	300
2	56	*56	114	215	280	525	370	440	390	430	68	188
3	48	72	110	114	305	500	330	440	360	420	114	170
4	32	74	108	190	310	800	355	743	340	100	116	130
5	54	72	106	188	320	720	325	923	300	350	110	79
6	88	68	122	*210	250	650	315	899	144	330	108	77
7	77	31	295	225	122	600	320	917	230	310	88	156
8	66	68	260	205	176	540	320	748	300	300	46	162
9	79	83	*182	116	*275	500	315	2,740	290	300	97	162
10	23	68	410	88	270	485	205	*4,430	240	52	140	158
11	31	63	435	156	260	470	176	4,040	210	90	130	655
12	72	72	295	196	265	440	310	3,130	170	220	114	2,310
13	63	95	235	215	270	350	320	2,240	150	190	114	2,480
14	52	36	425	230	61	365	315	1,230	230	176	100	1,680
15	61	23	490	225	150	340	315	820	330	160	57	1,050
16	57	68	420	158	200	*330	310	660	320	140	97	535
17	37	74	350	83	205	320	540	570	320	45	108	455
18	18	77	315	156	245	320	1,640	490	330	76	136	430
19	57	72	260	220	265	310	2,240	440	340	106	130	420
20	50	79	140	215	180	715	1,610	400	180	118	136	510
21	50	25	250	230	162	590	1,020	360	250	*116	97	440
22	59	57	290	235	525	385	677	310	350	111	49	470
23	65	108	310	162	465	345	606	280	360	114	132	440
24	48	114	310	68	375	330	537	340	360	106	140	400
25	21	156	300	148	410	330	475	440	380	42	132	380
26	54	220	280	196	450	490	422	430	400	97	*130	350
27	56	138	150	270	445	410	337	430	170	114	136	330
28	110	52	230	345	440	295	436	430	300	116	95	310
29	86	83	255	320	-	380	552	410	430	114	59	295
30	108	116	250	210	--------	410	436	154	440	116	132	290
31	48	--------	260	100	--------	385	--------	220	--------	95	265	--------
Total	1,772	2,363	8,054	5,934	7,861	14,020	16,509	30,504	8,934	5,484	3,437	15,812
Mean	57.2	78.8	260	191	281	452	550	984	298	177	111	527
(†)	-11	+36	+50	-59	+82	+114	+53	-7	+7	-45	-49	+56
Adjusted for change in reservoir contents												
Mean	46.2	115	310	132	363	566	603	977	305	132	62.0	583
Cfsm	0.314	0.782	2.11	0.898	2.47	3.85	4.10	6.65	2.07	0.898	0.422	3.97
In.	0.36	0.87	2.43	1.04	2.57	4.44	4.57	7.67	2.31	1.04	0.49	4.43

	Observed			Adjusted		
Calendar year 1953:	Max 3,420	Min 13	Mean 343	Mean 336	Cfsm 2.29	In. 31.05
Water year 1953-54:	Max 4,430	Min 18	Mean 331	Mean 349	Cfsm 2.37	In. 32.22

* Discharge measurement made on this day.
† Change in contents in Great East and Lovell Lakes and Horn, Wilsons and Milton Ponds (controls also Northeast and Town House Ponds), equivalent in cubic feet per second.
Note.--Fragmentary or no gage-height record Dec. 18 to Jan. 4, May 15 to June 9, June 12 to July 21; discharge estimated on basis of recorded range in stage and weather records.

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 1954 (monthly discharge only for some periods, published in WSP 1301).

Gage.--Water-stage recorder and concrete control. Altitude of gage is 70 ft (from topographic map).

Average discharge.--20 years, 19.4 cfs.

Extremes.--Maximum discharge during year, 862 cfs Sept. 11 (gage height, 5.47 ft); minimum, 0.51 cfs Oct. 1-3.
1934-54: Maximum discharge, that of Sept. 11, 1954; 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, no gage-height record, or backwater from debris, which are fair.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.05	0.51	0.7	18
.1	.94	1.0	36
.15	1.5	1.5	76
.2	2.25	2.0	141
.3	4.1	3.0	315
.5	9.5	4.0	537

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.54	4.7	12	8.9	11	50	29	25	25	14	9.7	42
2	.51	3.3	12	8.2	11	*65	27	23	23	12	6.0	*22
3	.54	2.8	10	8.8	12	55	25	30	24	8.6	5.0	15
4	.58	2.4	9.8	13	16	75	21	88	21	6.7	6.0	12
5	.79	2.1	24	11	22	52	19	92	20	6.3	4.6	9.0
6	.94	1.95	21	9.4	21	41	20	69	22	7.4	3.7	7.4
7	1.25	7.7	47	9.0	17	33	21	57	19	5.8	3.2	6.0
8	.84	14	36	7.8	15	32	21	47	16	5.0	2.6	5.8
9	.75	8.5	27	6.8	14	28	19	*516	14	*4.6	2.6	5.5
10	.75	6.2	43	7.2	13	28	17	314	13	a4.4	20	5.3
11	.75	5.0	42	7.4	11	25	19	265	12	a4.1	16	288
12	1.1	4.4	32	7.6	9.6	*22	25	144	13	a3.8	10	*370
13	.89	4.0	28	7.2	a8.0	20	21	93	11	a3.6	7.4	130
14	.84	3.8	50	7.0	a7.5	20	19	69	11	a3.4	5.5	85
15	.84	3.7	61	7.0	7.8	20	*18	55	14	a3.3	4.3	64
16	.84	3.6	44	7.6	8.5	19	19	172	15	a4.5	3.9	51
17	.89	3.4	29	7.4	25	19	64	154	12	a3.9	3.2	61
18	.84	3.3	23	7.2	24	19	201	85	10	a3.4	2.8	53
19	.89	3.1	19	7.2	21	21	114	61	8.9	a3.0	2.5	46
20	.99	3.0	17	9.4	24	114	67	48	7.7	a2.7	2.6	50
21	*.99	*2.9	18	15	27	97	50	68	6.8	a2.5	2.4	42
22	.99	2.8	23	16	80	60	41	99	6.0	*2.6	2.25	40
23	1.1	15	24	13	62	46	36	89	11	3.5	1.95	34
24	1.15	18	17	11	44	37	34	76	18	3.2	1.8	27
25	1.35	31	16	9.5	54	37	30	61	12	2.8	1.8	23
26	2.25	47	15	9.6	59	65	25	47	8.9	2.6	1.65	21
27	1.6	28	13	26	85	51	24	*37	8.2	4.7	1.7	19
28	9.1	20	12	21	63	41	41	32	7.7	8.5	1.65	17
29	9.2	16	*12	19	-	38	37	34	12	6.0	1.65	*15
30	15	13	12	13	-------	35	30	40	16	4.9	1.65	13
31	8.6	------	11	12	-------	31	-------	32	-------	5.6	45	------
Total	67.69	282.65	759.8	330.2	772.4	1,296	1,134	3,022	418.2	157.4	185.10	1,579.0
Mean	2.18	9.42	24.5	10.7	27.6	41.8	37.8	97.5	13.9	5.08	5.97	52.6
Cfsm	0.180	0.779	2.02	0.884	2.28	3.45	3.12	8.06	1.15	0.420	0.493	4.35
In.	0.21	0.87	2.34	1.01	2.37	3.98	3.49	9.29	1.29	0.48	0.57	4.85

Calendar year 1953: Max 413 Min 0.51 Mean 28.3 Cfsm 2.34 In. 31.71
Water year 1953-54: Max 516 Min 0.51 Mean 27.4 Cfsm 2.26 In. 30.75

Peak discharge (base, 170 cfs).--Mar. 20 (12 m.) 187 cfs (2.29 ft); Apr. 18 (6:30 to 7:30 a.m.) 240 cfs (2.60 ft); May 9 (1 p.m.) 778 cfs (4.86 ft); May 16 (1:30 p.m.) 240 cfs (2.60 ft); Sept. 11 (5:30 p.m.) 862 cfs (5.47 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge esimated on basis of weather records, recorded range in stage when available, and records for Lamprey River near Newmarket.

Note.--Stage-discharge relation affected by ice Dec. 17, Jan. 6-21, Feb. 1, 2, 11-22, Mar. 3, 5, 6. Backwater from debris Oct. 1-20, Sept. 11-13.

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 area.--183 sq mi.

Records available.--July 1934 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 40 ft (from topographic map).

Average discharge.--20 years, 281 cfs.

Extremes.--Maximum discharge during year, 4,070 cfs May 11 (gage height, 11.43 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, 23 cfs Aug. 30.
1934-54: Maximum discharge, 5,490 cfs Mar. 20, 1936 (gage height, 14.88 ft), from rating curve extended above 3,100 cfs as explained above; minimum daily, about 1 cfs Oct. 21, 1935.

Remarks.--Records excellent except those below 150 cfs, which are good, and those for periods of ice effect or backwater from tree, 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 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.8	22	5.0	980
1.1	46	7.0	1,850
1.5	101	9.0	2,860
2.0	183	11.0	3,880
3.0	382	11.5	4,100

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	98	72	203	130	181	694	353	387	467	231	107	317
2	106	64	185	131	176	*691	368	337	401	237	86	344
3	90	52	166	140	164	658	387	335	406	215	74	320
4	68	44	151	150	193	802	356	693	375	188	80	255
5	66	37	219	150	235	739	331	880	358	168	82	197
6	68	33	253	140	242	658	324	892	360	163	70	152
7	71	51	402	135	228	524	326	840	326	149	59	119
8	68	122	452	115	207	444	326	682	298	141	52	96
9	66	106	475	94	190	392	322	*2,080	268	*127	56	*82
10	62	100	507	105	176	368	326	3,280	286	120	164	74
11	50	86	507	110	166	340	342	3,990	307	169	200	929
12	50	71	516	105	140	313	380	3,720	290	156	183	2,590
13	50	62	486	110	110	290	382	2,830	274	146	180	*2,710
14	48	53	499	105	107	276	377	1,880	262	136	174	2,260
15	46	49	649	110	101	270	*351	1,170	270	131	159	1,340
16	46	45	646	110	106	259	349	1,460	288	114	147	886
17	45	49	586	105	177	253	552	1,930	268	109	135	772
18	45	71	440	100	255	282	1,330	2,110	251	103	125	688
19	44	71	335	105	282	300	1,360	1,690	226	98	117	649
20	*43	68	300	110	290	658	1,310	1,170	207	92	111	643
21	42	*56	290	160	296	840	1,010	1,030	190	89	103	572
22	42	37	292	180	534	784	691	1,380	174	*86	92	541
23	44	63	305	175	631	679	532	1,540	186	80	78	470
24	44	133	260	170	691	524	478	1,560	266	77	55	404
25	27	177	240	165	682	441	424	1,290	248	68	43	346
26	24	392	239	160	676	555	384	1,040	217	63	35	309
27	29	360	215	230	861	549	342	830	195	58	32	288
28	42	344	188	270	781	532	408	670	178	59	29	401
29	82	278	*193	260	-	478	444	583	188	62	24	*389
30	109	231	185	230	------	421	436	601	215	61	23	356
31	94	---	169	200	------	382	------	535	------	62	146	----
Total	1,809	3,377	10,553	4,560	8,878	15,396	15,301	43,415	8,245	3,758	3,021	19,499
Mean	58.4	113	340	147	317	497	510	1,400	275	121	97.5	650
Cfsm	0.319	0.617	1.86	0.803	1.73	2.72	2.79	7.65	1.50	0.661	0.533	3.55
In.	0.37	0.69	2.14	0.93	1.80	3.13	3.11	8.82	1.68	0.76	0.61	3.96

Calendar year 1953: Max 3,060 Min 9.4 Mean 383 Cfsm 2.09 In. 28.43
Water year 1953-54: Max 3,990 Min 23 Mean 378 Cfsm 2.07 In. 28.00

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 18, 19, 24, 25, Jan. 3-31, Feb. 12, 13. Backwater from tree Aug. 31 to Sept. 11. Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 615 ft (from topographic map).

Average discharge.--15 years, 524 cfs.

Extremes.--Maximum discharge during year, 19,500 cfs Sept. 11 (gage height, 11.40 ft), from rating curve extended above 9,300 cfs by logarithmic plotting; minimum daily, 60 cfs Oct. 4, 5.

1939-54: Maximum discharge, 22,800 cfs Nov. 26, 1950 (gage height, 12.05 ft), from rating curve extended above 9,300 cfs by logarithmic plotting; minimum daily, 42 cfs Feb. 11, 1948.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Some diurnal fluctuation caused by powerplant above station.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.1	48	4.0	815
2.4	96	5.0	1,710
2.7	171	6.0	2,850
3.0	269	7.0	4,550
3.5	498	8.0	6,800

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66	195	288	110	*130	436	*201	2,150	759	467	895	1,990
2	64	168	*262	140	130	815	186	2,160	1,210	406	*478	*794
3	61	146	231	186	130	766	189	1,950	1,280	324	320	514
4	60	136	227	174	130	1,220	171	2,900	962	284	307	401
5	60	123	995	151	135	636	174	2,130	1,090	269	299	328
6	66	103	609	149	130	493	201	1,560	1,870	307	372	292
7	200	116	4,200	*149	125	426	713	1,380	1,720	252	315	266
8	150	130	1,660	120	120	377	1,700	1,200	1,970	227	258	478
9	110	128	938	95	120	332	1,640	5,710	1,240	204	224	1,180
10	100	114	2,050	125	120	315	922	3,490	946	192	201	938
11	98	109	1,410	140	120	280	2,010	3,070	890	183	198	6,520
12	128	107	875	135	115	235	3,080	2,220	724	224	192	4,630
13	138	103	689	120	110	230	1,640	1,720	604	180	211	1,720
14	110	98	587	110	105	240	1,140	1,420	552	174	201	2,520
15	95	92	581	120	100	230	1,080	1,320	623	177	160	1,530
16	85	103	462	115	150	210	1,240	1,460	610	157	168	1,080
17	80	98	328	110	310	205	2,440	1,330	477	155	348	1,030
18	75	98	300	105	330	195	4,420	1,100	401	128	214	852
19	72	107	290	110	210	192	2,660	914	354	118	168	1,070
20	71	118	363	110	195	218	2,780	801	311	128	157	1,850
21	70	120	354	150	200	238	4,850	1,040	296	218	143	978
22	68	109	303	220	2,300	208	5,460	2,190	262	256	126	946
23	67	813	332	175	1,360	189	5,480	1,500	402	223	118	801
24	66	592	200	155	745	192	3,200	1,090	396	372	114	662
25	69	1,570	241	135	*550	195	2,450	922	277	231	116	587
26	75	2,340	258	130	467	231	2,150	766	252	208	111	630
27	90	798	211	160	401	273	*1,630	*649	469	204	105	*530
28	*284	514	177	155	368	210	1,700	569	903	183	116	467
29	399	401	218	130	-	230	1,520	610	*852	255	92	411
30	458	328	192	140	------	225	1,760	2,020	598	382	85	377
31	288	-- --	165	135	------	200	-------	1,000	--------	560	3,380	- -
Total	3,823	9,977	19,996	4,259	9,406	10,442	58,787	52,341	23,300	7,648	10,192	36,372
Mean	123	333	645	137	336	337	1,960	1,688	777	247	329	1,212
Cfsm	0.637	1.73	3.34	0.710	1.74	1.75	10.2	8.75	4.03	1.28	1.70	6.28
In.	0.74	1.92	3.85	0.82	1.81	2.01	11.33	10.09	4.49	1.47	1.96	7.01

Calendar year 1953: Max 13,700 Min 48 Mean 549 Cfsm 2.84 In. 38.62
Water year 1953-54: Max 6,520 Min 60 Mean 675 Cfsm 3.50 In. 47.50

Peak discharge (base, 7,100 cfs).--Nov. 25 (10 p.m.) 7,190 cfs (8.15 ft); Apr. 22 (8 p.m.) 7,730 cfs (8.35 ft); May 9 (4:30 p.m.) 13,600 cfs (10.09 ft); Aug. 31 (6 p.m.) 15,900 cfs (10.67 ft); Sept. 11 (8 p.m.) 19,500 cfs (11.40 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 3-8, 8-11, 14-27, Jan. 30 to Feb. 16; discharge estimated on basis of 1 discharge measurement, weather records, and records for Ammonoosuc River at Bethlehem Junction. Stage-discharge relation affected by ice Dec. 18, 19, 24, Dec. 31 to Jan. 2, Jan. 8 to Feb. 22, Feb. 25, Mar. 11-18, 28-31.

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 1954 (monthly discharge only for some periods, 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.--26 years, 259 cfs.

Extremes.--Maximum discharge during year, 9,660 cfs Sept. 11 (gage height, 10.22 ft), from rating curve extended above 2,900 cfs on basis of slope-area determinations at gage heights 13.03, 14.49, and 15.50 ft; minimum, 19 cfs Oct. 1, 2, 3-5.

1928-54: Maximum discharge, 21,400 cfs June 15, 1942 (gage height, 15.50 ft), from rating curve extended above 3,800 cfs as explained above; 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 table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from tree roots Apr. 20, May 10, 11, June 2)

2.3	19	3.5	395
2.5	46	4.0	720
2.8	112	5.0	1,620
3.1	212	7.0	3,900

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	107	*133	62	80	380	220	622	506	232	231	*590
2	20	86	118	82	76	1,000	205	531	*1,390	186	*124	208
3	20	*75	104	91	74	877	248	517	862	142	86	130
4	19	64	102	86	72	1,510	208	1,160	594	118	89	96
5	19	57	196	82	74	700	197	1,020	630	243	82	77
6	24	51	220	*79	70	460	244	671	1,060	434	71	68
7	80	51	1,720	77	68	365	668	587	783	197	62	60
8	82	53	818	58	66	325	1,450	480	594	136	60	79
9	57	53	444	60	66	274	1,340	2,150	439	107	57	280
10	48	51	714	64	64	256	862	1,660	349	*94	53	285
11	44	50	566	66	62	228	1,320	1,800	310	82	53	3,000
12	43	48	370	64	58	190	1,970	1,060	270	75	55	2,500
13	44	46	296	64	56	180	1,330	755	232	71	55	657
14	40	44	261	64	55	179	995	594	216	64	53	798
15	37	43	270	64	55	168	1,050	480	236	60	46	538
16	34	42	224	62	60	150	1,210	601	228	55	43	370
17	32	42	140	60	130	140	2,040	566	186	50	53	524
18	31	40	130	60	220	135	3,820	428	158	48	50	412
19	30	40	125	60	200	130	2,170	359	136	55	42	511
20	28	40	150	60	170	331	1,800	320	118	53	40	1,000
21	28	38	155	68	180	370	2,350	417	107	83	37	474
22	30	38	162	80	720	252	2,100	1,060	96	99	34	434
23	28	115	200	89	860	220	1,890	776	261	96	31	334
24	27	189	165	76	520	212	1,160	566	240	99	28	265
25	28	353	160	70	410	216	870	510	158	79	28	228
26	34	996	150	66	*340	246	706	400	130	66	27	236
27	40	354	115	80	310	310	573	325	162	64	26	*208
28	87	240	98	100	300	248	886	283	236	60	25	182
29	182	186	121	*88	-	265	*814	314	292	79	25	155
30	263	152	109	90	-------	245	706	1,370	274	77	25	142
31	158	...	92	88	-------	*245	-------	650	-------	113	445	-
Total	1,658	3,744	8,628	2,260	5,416	10,807	35,402	23,032	11,253	3,417	2,136	14,841
Mean	53.5	125	278	72.9	193	349	1,180	743	375	110	68.9	495
Cfsm	0.374	0.874	1.94	0.510	1.35	2.44	8.25	5.20	2.62	0.769	0.482	3.46
In.	0.43	0.97	2.24	0.59	1.41	2.81	9.21	5.99	2.93	0.89	0.56	3.86

Calendar year 1953: Max 11,100 Min 16 Mean 308 Cfsm 2.15 In. 29.24
Water year 1953-54: Max 3,820 Min 19 Mean 336 Cfsm 2.35 In. 31.89

Peak discharge (base, 3,600 cfs).--Apr. 18 (4:30 to 5 a.m.) 5,160 cfs (7.85 ft); May 9 (5:30 to 6 p.m.) 4,460 cfs (7.39 ft); Sept. 11 (10 p.m.) 9,660 cfs (10.22 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 17-21, 23-28, 31, Jan. 1, Jan. 8 to Mar. 2, Mar. 5-7, 13, 16-19, 30, 31 (no gage-height record Jan. 30 to Feb. 4).

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 1954. 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.--51 years, 1,368 cfs.

Extremes.--Maximum discharge during year, 29,100 cfs Sept. 12; maximum gage height, 15.43 ft Sept. 12; minimum discharge, 125 cfs Oct. 5; minimum daily, 127 cfs Oct. 5.
1903-54: Maximum discharge, 65,400 cfs Mar. 19, 1936 (gage height, 29.0 ft, from floodmarks), from rating curve extended above 33,000 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 periods of ice effect, which are fair. Some diurnal fluctuation caused by powerplants above station.

Revisions (water years).--WSP 471: 1912-13, calendar years. WSP 726: Drainage area. WSP 1231: 1904-11, 1913-14, 1915-16(M), 1917-18, 1919(M), 1920-25, 1926-27(M), 1929-31(M). See also Records available.

Rating tables, water year 1953-54, 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 Nov. 26, Dec. 7, 8, Apr. 11, 12, 17-19, May 9, 10, Aug. 31, Sept. 1, 11, 12)

Oct. 1 to Nov. 25		Nov. 26 to May 9			May 10 to Sept. 30			
0.2	110	0.5	223	3.0	2,990	0.4	182	3.0	2,990
.5	187	.8	390	7.0	8,700	.7	325	7.0	8,700
.9	362	1.2	735	11.0	16,400	1.3	805	12.0	18,600
1.2	590	2.0	1,650			2.0	1,590		
2.0	1,590								

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	136	424	*816	330	350	2,000	862	4,050	2,260	1,170	1,690	6,680
2	131	324	714	360	360	3,200	746	4,230	5,220	980	1,060	2,080
3	131	285	612	440	350	3,500	898	3,740	4,790	814	697	1,280
4	129	262	576	480	360	5,830	700	5,940	3,240	679	652	960
5	127	242	1,350	410	380	3,120	680	6,340	3,060	1,110	591	769
6	141	222	1,590	400	360	2,150	886	4,110	5,110	1,960	600	670
7	222	215	8,530	410	340	1,730	2,080	3,540	4,260	1,000	574	582
8	335	226	5,190	360	320	1,550	4,750	3,000	4,020	751	492	751
9	246	234	2,750	250	330	1,320	5,320	11,300	2,990	625	439	1,590
10	215	226	4,120	270	320	1,230	3,340	12,400	2,300	574	404	2,120
11	212	212	4,020	320	310	1,090	4,710	10,700	2,110	524	397	7,590
12	215	212	2,390	340	290	934	9,400	6,700	1,800	566	384	*18,100
13	218	208	1,900	330	250	886	5,630	4,750	1,500	540	377	5,280
14	204	204	1,640	310	280	874	4,090	3,750	1,360	476	384	5,340
15	194	198	1,650	320	300	838	4,010	3,240	1,450	460	344	4,140
16	181	194	1,420	330	320	680	4,730	3,580	1,470	425	320	2,860
17	172	194	930	330	550	650	7,350	3,580	1,170	377	444	2,980
18	166	190	760	310	900	620	15,700	2,810	1,000	358	418	2,570
19	154	190	1,000	320	850	603	10,000	2,320	890	358	332	2,350
20	157	194	1,150	320	800	946	7,980	2,040	769	351	308	5,510
21	154	198	1,130	350	800	1,220	11,800	2,290	715	390	292	3,090
22	152	198	958	470	2,500	946	12,200	5,970	661	616	270	2,610
23	149	711	1,040	490	5,200	792	12,100	4,350	834	468	256	2,210
24	149	1,590	900	400	3,200	781	7,550	3,230	1,040	600	242	1,790
25	147	1,240	850	340	2,500	804	5,620	2,780	760	540	242	1,500
26	157	6,870	850	330	2,100	1,000	4,760	2,250	643	492	232	1,620
27	178	2,430	720	400	1,700	1,290	3,850	*1,830	843	524	219	1,380
28	204	1,540	580	520	1,700	1,010	4,360	1,590	1,420	*446	215	1,200
29	*827	1,190	*680	*450	-	1,060	*4,240	1,540	1,770	516	219	*1,050
30	970	*946	570	410	------	*1,040	3,960	5,210	*1,450	548	*202	950
31	702	--	480	400	------	922	------	3,280	------	881	3,170	------
Total	7,475	21,569	51,866	11,500	28,020	44,616	164,302	136,440	60,905	20,119	16,466	91,602
Mean	241	719	1,673	371	1,001	1,439	5,477	4,401	2,030	649	531	3,053
Cfsm	0.387	1.16	2.69	0.596	1.61	2.31	8.81	7.08	3.26	1.04	0.854	4.91
In.	0.45	1.29	3.10	0.69	1.68	2.67	9.82	8.16	3.64	1.20	0.98	5.48

Calendar year 1953: Max 37,000 Min 123 Mean 1,552 Cfsm 2.50 In. 33.87
Water year 1953-54: Max 18,100 Min 127 Mean 1,794 Cfsm 2.88 In. 39.16

Peak discharge (base, 12,600 cfs).--Apr. 18 (5:30 a.m.) 18,500 cfs; Apr. 21 (10:30 p.m.) 14,300 cfs; May 9 (9:30 p.m.) 22,800 cfs; Aug. 31 (11 p.m.) 15,100 cfs; Sept. 12 (2:30 a.m.) 29,100 cfs.
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 17-21, Dec. 23 to Mar. 2, Mar. 7, 16-18, Apr. 4, 5.

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 1954.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 545 ft (from topographic map).

Average discharge.--15 years, 92.9 cfs.

Extremes --Maximum discharge during year, 450 cfs May 10 (gage height, 11.78 ft); minimum daily, 63 cfs Nov. 6, 7.
1939-54: 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 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

10.3	57	11.0	204
10.4	73	11.5	349
10.7	135	11.9	497

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	68	67	70	92	71	73	73	84	226	253	73	68
2	68	68	70	92	71	75	73	82	322	*189	73	68
3	68	68	70	92	71	75	73	84	398	102	81	68
4	68	65	70	92	71	77	73	115	398	102	88	68
5	68	65	70	92	71	75	73	135	402	102	88	68
6	68	63	70	92	71	75	73	135	398	98	88	68
7	68	63	73	92	71	75	73	135	395	94	88	68
8	67	65	73	90	71	73	75	135	391	94	88	68
9	67	68	73	90	71	70	75	226	388	94	88	68
10	67	70	73	90	71	70	75	360	384	94	88	68
11	67	70	73	90	71	70	77	395	380	94	88	73
12	67	70	73	90	71	70	75	395	377	94	88	70
13	67	71	73	88	70	70	70	398	370	94	88	84
14	70	71	88	88	70	70	70	*395	370	94	88	94
15	70	71	94	88	70	70	70	374	366	94	88	94
16	71	71	92	88	70	70	71	363	366	94	86	92
17	71	71	92	88	71	70	73	391	217	94	84	109
18	71	71	92	88	71	70	75	398	135	94	84	128
19	71	71	92	88	71	70	102	395	135	96	84	128
20	71	71	92	88	71	71	117	391	135	96	84	128
21	70	71	92	88	71	71	120	391	135	96	84	128
22	70	71	92	88	73	71	120	406	117	96	84	128
23	70	71	92	88	73	71	120	398	107	81	75	128
24	70	71	92	88	73	71	120	398	107	71	70	128
25	70	71	92	90	*73	71	120	391	107	71	70	128
26	70	73	92	77	73	73	120	384	107	73	70	128
27	70	71	92	71	73	73	*120	384	107	73	70	128
28	70	71	92	71	73	73	98	325	107	73	70	128
29	70	71	*92	71	-	73	81	222	117	73	70	128
30	70	70	92	71	------	73	82	229	188	73	70	*128
31	68	-- --	92	71	------	73	-------	224	-------	*73	71	---- -
Total	2,141	2,081	2,585	2,672	1,998	2,232	2,637	9,138	7,752	3,019	2,509	2,960
Mean	69.1	69.4	83.4	86.2	71.4	72.0	87.9	295	258	97.4	80.9	98.7
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 478 Min 18 Mean 116 Cfsm - In. -
Water year 1953-54: Max 406 Min 63 Mean 114 Cfsm - In. -

* Discharge measurement made on this day.

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 1954.

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.--36 years, 143 cfs.

Extremes.--Maximum discharge during year, 1,750 cfs May 11 (gage height, 6.55 ft), from rating curve extended above 790 cfs by logarithmic plotting; minimum daily, 10 cfs Oct. 2-5, Aug. 27-30.

1918-54: 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 determination of peak flow; minimum daily, 2.7 cfs Aug. 2, 1933.

Remarks.--Records excellent except those for periods of ice effect, which are good. 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: 1919-33 (maximum only, 1920-21, 1932-33), 1941-43.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.9	8.1	3.5	207
2.0	12	4.0	380
2.2	22	5.0	860
2.5	43	6.0	1,420
3.0	96	6.2	1,540

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	69	86	b55	73	266	*201	290	238	106	33	226
2	10	55	80	b55	68	b500	174	247	*372	83	29	100
3	10	48	*73	62	65	b580	181	257	443	64	27	62
4	10	42	68	63	64	b740	b155	616	376	50	31	46
5	10	37	113	59	67	560	b145	745	398	47	29	37
6	14	33	151	60	65	367	164	575	484	55	25	31
7	41	32	679	62	63	250	308	389	384	51	22	27
8	46	35	640	45	61	221	551	304	280	*41	21	*25
9	30	39	466	47	59	b180	595	972	218	34	20	32
10	25	38	425	48	57	168	502	1,160	176	31	22	36
11	21	36	430	47	55	147	492	1,510	144	30	25	533
12	22	33	293	50	b49	b130	690	1,110	121	28	22	*830
13	21	31	224	49	b47	119	645	740	110	29	19	565
14	20	30	189	48	46	111	497	488	101	28	17	273
15	18	29	194	49	46	104	384	342	119	34	16	189
16	17	28	174	50	48	b93	389	528	144	31	16	144
17	16	27	b125	50	70	b91	596	805	115	26	16	215
18	16	27	b98	48	87	b88	1,360	420	95	24	14	207
19	15	26	b86	47	103	b86	1,120	304	80	23	14	197
20	14	34	95	47	110	207	795	254	70	21	14	276
21	14	31	108	54	115	346	595	322	62	32	13	210
22	14	27	123	68	b300	244	443	570	55	29	13	164
23	15	52	144	68	551	194	351	565	65	27	12	129
24	14	98	113	58	461	174	300	416	70	26	12	99
25	16	203	113	51	330	176	260	330	58	24	11	88
26	27	484	103	50	*276	233	229	263	51	40	11	96
27	*34	308	87	72	260	308	221	215	51	*34	10	91
28	42	194	75	103	254	244	432	184	64	29	10	79
29	74	133	81	104	-	250	515	196	87	30	10	68
30	135	99	78	99	------	257	*394	376	115	32	10	*62
31	99	----	70	82	-------	227	-------	327	-------	32	247	----
Total	871	2,358	5,784	1,850	3,850	7,661	13,684	15,620	5,146	1,171	791	5,137
Mean	28.1	78.6	187	59.7	138	247	456	504	172	37.8	25.5	171
Cfsm	0.328	0.916	2.18	0.696	1.61	2.88	5.31	5.87	2.00	0.441	0.297	1.99
In.	0.38	1.02	2.51	0.80	1.67	3.32	5.93	6.77	2.23	0.51	0.34	2.23

Calendar year 1953: Max 3,580 Min 10 Mean 192 Cfsm 2.24 In. 30.45
Water year 1953-54: Max 1,510 Min 10 Mean 175 Cfsm 2.04 In. 27.71

Peak discharge (base, 1,150 cfs).--Apr. 18 (4:30 a.m.) 1,530 cfs (6.19 ft); May 11 (4 a.m.) 1,750 cfs (6.55 ft); Sept. 11 (5:30 p.m.) 1,360 cfs (5.90 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

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.--November 1937 to September 1954 (month-end contents only for some periods, determined from gage at Lakeport, published in WSP 1301).

Gage.--Water-stage recorder. Datum of gage is 500.02 ft above mean sea level, datum of 1929.

Extremes.--Maximum daily gage height during year, 5.86 ft May 22, 23; minimum daily, 2.04 ft Feb. 16.
1937-54: Maximum daily gage height, that of 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 between elevations 494.55 ft (bottom of flume at Lakeport) and 504.22 ft (top of flashboards at outlet in Lakeport). 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. 112), and other lakes. Contents given herein are computed from gage height at 12 p.m. on last day of month, eliminating the effect of seiche and wind action.

Correction.--Daily gage heights were erroneously published in WSP 1271 as being midnight readings instead of mean daily gage heights.

Mean gage height, in feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.63	2.41	2.34	2.67	2.43	2.44	3.61	4.72	5.44	4.37	4.14	3.83
2	2.62	2.40	2.31	2.69	2.42	2.50	3.63	4.69	5.42	4.35	4.12	3.84
3	2.61	2.38	2.30	2.69	2.40	2.59	3.64	4.68	5.36	4.30	4.13	3.83
4	2.59	2.33	2.31	2.66	2.39	2.69	3.65	4.74	5.33	4.31	4.10	3.80
5	2.58	2.31	2.33	2.70	2.35	2.74	3.67	4.77	5.28	4.30	4.07	3.81
6	2.61	2.31	2.37	2.72	2.33	2.78	3.68	4.79	5.20	4.30	4.06	3.76
7	2.60	2.35	2.47	2.66	2.30	2.81	3.71	4.79	5.15	4.27	4.04	3.74
8	2.56	2.28	2.51	2.64	2.27	2.83	3.74	4.79	5.10	4.24	4.01	3.71
9	2.56	2.25	2.54	2.69	2.24	2.87	3.77	5.07	5.02	4.23	4.01	3.73
10	2.55	2.25	2.59	2.68	2.20	2.88	3.80	5.36	4.96	4.21	4.02	3.72
11	2.54	2.24	2.62	2.67	2.18	2.89	3.85	5.57	4.89	4.20	4.00	3.83
12	2.51	2.23	2.66	2.68	2.13	2.90	3.92	5.68	4.82	4.18	3.98	4.03
13	2.49	2.20	2.68	2.65	2.10	2.92	3.97	5.73	4.76	4.17	3.95	4.09
14	2.46	2.19	2.75	2.65	2.09	2.96	4.03	5.74	4.69	4.16	3.95	4.13
15	2.45	2.17	2.73	2.63	2.06	2.98	4.07	5.73	4.63	4.16	3.94	4.16
16	2.43	2.16	2.75	2.64	2.04	2.98	4.14	5.82	4.54	4.13	3.91	4.19
17	2.42	2.14	2.73	2.61	2.11	2.99	4.26	5.84	4.46	4.11	3.85	4.22
18	2.41	2.13	2.72	2.61	2.10	2.99	4.55	5.84	4.37	4.11	3.85	4.20
19	2.39	2.13	2.72	2.58	2.09	3.02	4.69	5.81	4.33	4.10	3.85	4.21
20	2.38	2.12	2.73	2.58	2.06	3.14	4.75	5.78	4.31	4.09	3.83	4.22
21	2.38	2.11	2.73	2.56	2.05	3.19	4.78	5.79	4.28	4.12	3.82	4.21
22	2.35	2.11	2.74	2.55	2.09	3.21	4.77	5.86	4.27	4.12	3.79	4.21
23	2.34	2.18	2.71	2.55	2.13	3.23	4.77	5.86	4.29	4.10	3.77	4.17
24	2.32	2.19	2.72	2.52	2.15	3.25	4.76	5.84	4.28	4.09	3.74	4.13
25	2.33	2.26	2.72	2.49	2.22	3.30	4.75	5.79	4.27	4.10	3.73	4.13
26	2.31	2.34	2.72	2.47	2.29	3.37	4.72	5.72	4.27	4.12	3.70	4.12
27	2.30	2.34	2.70	2.52	2.35	3.41	4.71	5.67	4.27	4.12	3.68	4.08
28	2.38	2.35	2.71	2.51	2.40	3.45	4.75	5.63	4.28	4.11	3.64	4.05
29	2.43	2.33	2.71	2.48	-	3.48	4.75	5.59	4.32	4.11	3.62	4.04
30	2.44	2.34	2.70	2.46	-------	3.55	4.74	5.55	4.38	4.11	3.60	4.03
31	2.43	-------	2.68	2.45	-------	3.58	-------	5.48	-------	4.12	3.71	-------

Monthly gage height and contents, water year October 1953 to September 1954

Date	Gage height (feet)†	Contents (millions of cubic feet)	Change in contents during month (millions of cubic feet)
Sept. 30	2.66	15,180	-
Oct. 31	2.42	14,700	-480
Nov. 30	2.34	14,540	-160
Dec. 31	2.68	15,210	+670
Calendar year 1953	-	-	+70
Jan. 31	2.44	14,740	-470
Feb. 28	2.42	14,700	-40
Mar. 31	3.60	17,040	+2,340
Apr. 30	4.73	19,310	+2,270
May 31	5.46	20,790	+1,480
June 30	4.37	18,580	-2,210
July 31	4.13	18,100	-480
Aug. 31	3.82	17,480	-620
Sept. 30	4.02	17,880	+400
Water year 1953-54	-	-	+2,700

† Gage height at 12 p.m.

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 1954.

Gage.--Water-stage recorder, Keeler deflection meter, and measuring flume. Datum of gage is 500.55 ft above mean sea level, datum of 1929. Prior to January 1912, 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.--21 years, 535 cfs (adjusted for storage).

Extremes.--Maximum daily discharge during year, 2,520 cfs June 2, 8; minimum daily, 150 cfs Oct. 21.
1933-54: Maximum daily discharge, 2,890 cfs Mar. 31, 1936; minimum daily, 20 cfs Dec. 6-19, 1941, Dec. 22, 1941, to Jan. 19, 1942.

Remarks.--Records good except those for periods of no deflection record, which are fair. Flow completely regulated by Winnipesaukee (see preceding page), Wentworth, Merrymeeting (see p. 112), 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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	185	230	275	225	805	275	250	*1,390	2,490	515	240	350
2	175	310	*275	225	855	265	250	1,400	2,520	515	285	*360
3	*220	290	270	225	980	275	225	1,410	2,510	550	260	320
4	265	290	270	305	980	290	240	1,390	*2,510	540	260	210
5	255	295	*195	280	975	290	280	1,400	2,320	540	255	745
6	215	285	210	280	920	235	245	1,400	2,300	540	255	960
7	215	180	295	280	885	225	245	1,410	2,450	540	235	970
8	210	210	280	*345	985	280	*240	1,390	2,520	440	245	930
9	210	270	280	455	965	200	*245	1,690	2,480	*245	295	925
10	210	280	285	445	965	210	215	2,080	2,490	240	275	660
11	245	275	285	575	950	235	240	*2,190	2,460	235	270	180
12	245	275	230	545	945	225	270	2,190	2,320	180	255	205
13	240	275	230	550	885	205	235	2,190	2,230	230	260	280
14	215	180	305	*550	850	215	185	*2,190	2,190	240	230	260
15	215	200	290	540	920	245	240	2,190	2,170	245	230	260
16	210	285	295	470	925	235	245	2,230	2,150	245	270	260
17	200	260	290	470	925	155	170	2,300	2,160	215	335	*715
18	255	200	290	580	920	235	305	2,310	1,630	240	460	960
19	245	265	230	500	940	235	550	2,330	650	280	450	1,030
20	220	265	265	495	875	205	1,070	2,300	685	260	*430	1,020
21	150	300	280	495	870	230	1,410	2,290	640	250	375	970
22	245	200	280	480	790	275	1,390	2,310	430	260	345	960
23	285	280	270	545	335	250	1,400	2,340	385	255	415	960
24	195	265	235	755	*280	250	1,350	2,450	265	230	380	960
25	220	260	225	835	265	255	1,430	2,400	225	230	380	925
26	300	190	225	810	250	255	1,430	2,400	235	285	395	975
27	275	285	270	805	*245	*220	1,460	2,450	235	*260	385	985
28	280	190	290	*815	225	230	*1,440	*2,400	235	260	330	945
29	*265	205	280	810	-	275	1,410	2,360	220	260	345	660
30	280	295	280	765	--------	250	1,410	2,290	350	260	440	460
31	*190	--------	235	*725	--------	250	--------	2,270	--------	235	455	--------
Total	7,135	7,590	8,215	16,180	21,710	7,475	20,075	63,340	46,455	9,820	10,040	20,400
Mean	230	253	265	522	775	241	669	2,043	1,548	317	324	680
(†)	-480	-160	+670	-470	-40	+2,340	+2,270	+1,480	-2,210	-480	-620	+400

Adjusted for change in contents in Lake Winnipesaukee

Mean	50.9	191	515	346	759	1,115	1,545	2,596	696	138	92.4	834
Cfsm	0.140	0.526	1.42	0.953	2.09	3.07	4.26	7.15	1.92	0.380	0.255	2.30
In.	0.16	0.59	1.64	1.10	2.18	3.54	4.75	8.24	2.14	0.44	0.29	2.56

	Observed						Adjusted					
Calendar year 1953:	Max	2,500	Min	150	Mean	716	Mean	719	Cfsm	1.98	In.	26.87
Water year 1953-54:	Max	2,520	Min	150	Mean	653	Mean	739	Cfsm	2.04	In.	27.63

* Discharge measurement made on this day.
† Change in contents in Lake Winnipesaukee, in millions of cubic feet.
Note.--No deflection record Jan. 9-12, July 18-20, July 25 to Aug. 6, Aug, 28, 31, Sept. 5-16; discharge estimated on basis of gage-height and powerplant records, 2 discharge measurements, and records of gate operation.

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 1954.

Gage.--Water-stage recorder. Datum of gage is 441.87 ft above mean sea level, unadjusted.

Average discharge.--17 years, 702 cfs.

Extremes.--Maximum discharge during year, 3,700 cfs May 11 (gage height, 7.91 ft); minimum daily, 227 cfs Aug. 13.
1937-54: Maximum discharge, 3,810 cfs Sept. 21, 1938 (gage height, 7.90 ft), from rating curve extended above 2,100 cfs on basis of computation of peak flow over dam; maximum gage height, 7.93 ft Mar. 27, 1953; minimum daily discharge, 48 cfs Aug. 31, 1941.

Remarks.--Records excellent except those for periods of ice effect, which are good. Flow regulated by powerplants and by Winnipesaukee (see p. 84), Winnisquam, Merrymeeting (see p. 112), and other lakes above station.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

3.0	217	5.0	1,190
3.5	405	6.0	1,900
4.0	630	8.0	3,800

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*237	407	306	b435	974	690	499	1,680	2,590	605	280	1,050
2	241	298	298	b430	1,000	740	490	1,660	2,620	566	273	740
3	244	287	*298	429	1,000	b880	490	1,650	2,670	544	276	558
4	244	283	287	425	1,000	b1,190	468	1,790	2,650	535	276	389
5	248	283	345	397	b995	1,030	463	1,880	2,650	553	276	295
6	248	287	357	325	b990	938	463	1,830	2,620	566	276	660
7	258	287	476	b300	b985	818	476	1,760	2,520	600	273	956
8	255	276	512	b280	b985	b630	486	1,710	2,480	576	273	974
9	237	280	454	b410	986	610	490	2,360	2,440	553	276	992
10	237	280	517	b550	986	600	468	3,200	2,420	373	306	986
11	234	280	535	b550	980	508	486	*3,610	2,400	302	287	1,080
12	234	280	490	544	b940	490	544	3,420	2,380	287	280	1,260
13	234	280	472	b550	b925	481	522	3,120	2,340	283	227	1,070
14	234	283	481	b550	b980	486	499	2,900	2,280	283	287	808
15	234	283	544	544	980	476	490	2,710	2,280	283	276	610
16	234	280	580	548	980	454	499	2,920	2,260	283	273	522
17	234	280	544	b530	1,020	b440	590	3,130	2,220	280	273	594
18	234	280	522	b580	1,020	b435	1,210	2,940	2,160	276	352	992
19	234	283	499	562	1,020	441	1,510	2,810	1,940	287	409	1,030
20	237	280	481	553	1,020	600	1,640	2,730	1,460	283	413	1,060
21	237	280	468	553	1,040	b675	1,600	2,770	1,240	283	421	1,040
22	237	280	454	b560	1,270	b550	1,600	3,110	938	287	417	1,040
23	234	306	b465	b560	*1,280	499	1,600	3,090	*450	283	413	1,030
24	234	310	468	571	926	490	1,600	2,970	329	287	413	1,020
25	237	332	463	750	720	490	1,560	2,870	314	283	413	1,000
26	241	405	454	802	755	b520	1,480	*2,800	306	280	409	1,010
27	237	345	b435	1,020	725	b580	1,510	2,720	302	*280	413	1,000
28	329	325	445	*1,040	710	530	*1,660	2,680	310	280	413	1,000
29	498	314	437	b1,020	-	*517	1,690	2,630	386	276	413	*998
30	*538	310	*437	879	------	530	1,640	2,680	670	276	413	842
31	535	-- --	437	b800	-------	504	-------	2,640	-------	280	*601	- -
Total	8,349	8,984	13,961	18,047	27,192	18,822	28,723	80,770	52,625	11,413	10,601	26,606
Mean	269	299	450	582	971	607	957	2,605	1,754	368	342	887
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 3,510 Min 138 Mean 913 Cfsm - In. -
Water year 1953-54: Max 3,610 Min 227 Mean 839 Cfsm - In. -

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

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 1954.

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.--49 years (1905-54), 2,801 cfs.

Extremes.--Maximum discharge during year, 20,000 cfs May 11 (gage height, 15.18 ft); minimum daily, 258 cfs Oct. 24.
1903-54: 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 determination and computation of flow over dam at gage height 29.5 ft, and velocity-area study; minimum daily, 225 cfs Oct. 23, 1948.

Remarks.--Records excellent except those for periods of ice effect, 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 84,112 for description and monthly change in contents of many of these reservoirs.

Revisions (water years).--WSP 401: 1913 calendar year. 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 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

3.0	250	5.0	1,680
3.5	489	7.0	4,270
4.0	800	10.0	10,000
4.5	1,180	15.0	19,600

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*571	1,240	1,760	1,120	1,900	3,300	2,230	7,040	6,540	2,750	1,950	8,420
2	547	975	1,520	1,040	1,940	4,440	2,150	7,040	8,060	2,300	2,140	5,140
3	512	859	*1,360	1,070	1,880	6,500	2,100	6,780	9,830	2,110	1,610	2,850
4	554	828	1,330	1,390	1,910	8,240	2,030	8,420	8,860	1,600	1,370	1,930
5	626	792	1,280	1,290	1,810	7,380	1,860	10,900	8,040	1,610	1,280	1,460
6	642	774	2,220	1,280	1,680	5,000	1,970	9,520	9,280	2,610	1,260	1,660
7	982	515	5,970	1,100	1,740	3,950	2,080	7,860	9,300	2,500	972	2,020
8	793	704	9,510	990	2,010	3,460	5,120	6,680	8,380	1,940	1,040	2,070
9	733	974	5,520	750	1,900	3,010	7,500	10,600	7,600	1,580	1,190	2,290
10	720	882	4,750	1,200	1,910	2,780	6,360	19,200	6,260	989	1,270	3,400
11	695	718	6,220	1,300	1,810	2,560	5,600	17,400	5,670	978	1,200	5,620
12	808	754	4,370	1,350	1,750	2,230	9,750	*15,300	5,480	1,220	976	*14,900
13	692	719	3,550	1,250	1,200	2,130	10,300	15,800	4,930	1,430	886	13,300
14	666	516	3,050	1,300	1,900	1,890	7,960	13,500	4,680	1,150	714	9,370
15	657	680	3,010	1,200	1,800	1,830	6,700	8,860	4,460	1,110	951	6,920
16	698	816	2,940	1,000	1,740	2,030	6,480	9,260	4,710	1,100	947	4,820
17	499	772	2,640	1,200	2,120	1,750	8,200	10,100	4,510	560	1,000	4,290
18	559	736	2,100	1,400	2,150	1,720	15,000	8,560	3,860	928	1,080	4,650
19	661	722	1,370	1,350	2,120	1,790	17,500	8,220	3,530	982	1,130	4,020
20	651	674	1,550	1,250	2,290	2,090	14,800	8,240	2,940	1,050	1,160	6,400
21	680	460	1,930	1,250	2,230	2,690	13,600	6,680	2,590	1,000	679	6,520
22	667	700	2,020	1,400	3,570	2,440	14,900	8,430	2,220	1,160	884	5,000
23	644	1,190	2,160	1,300	*7,200	2,340	15,200	10,300	1,670	1,220	1,030	4,460
24	258	2,050	2,010	1,450	5,980	2,230	14,000	8,880	1,650	906	933	3,860
25	678	2,140	1,640	1,650	4,410	1,920	10,600	7,980	*1,870	1,300	960	3,440
26	760	6,260	1,430	1,800	3,790	2,570	8,500	*7,080	1,380	1,080	906	3,270
27	668	5,010	1,740	2,000	3,440	2,450	7,500	6,580	1,240	1,260	884	3,410
28	1,050	2,940	1,680	1,950	3,310	2,620	*7,400	5,370	1,790	*1,340	621	2,940
29	1,420	2,120	1,450	1,850	-	*2,290	7,940	5,310	2,670	1,130	820	*2,800
30	*2,040	1,890	*1,470	1,600	------	2,590	7,180	7,820	3,060	922	886	2,570
31	1,790	- - -	1,460	1,800	------	2,630	------	8,060	------	1,140	*2,620	- - -
Total	23,921	40,410	85,010	41,880	71,490	94,830	242,510	291,770	147,060	42,955	35,349	143,800
Mean	772	1,347	2,742	1,351	2,553	3,059	8,084	9,412	4,902	1,386	1,140	4,793
Cfsm	0.512	0.894	1.82	0.896	1.69	2.03	5.36	6.25	3.25	0.920	0.756	3.18
In.	0.59	1.00	2.10	1.03	1.76	2.34	5.98	7.20	3.63	1.06	0.87	3.55

Calendar year 1953: Max 20,900 Min 258 Mean 3,352 Cfsm 2.22 In. 30.19
Water year 1953-54: Max 19,200 Min 258 Mean 3,455 Cfsm 2.29 In. 31.11

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Jan. 1, 2, Jan. 6 to Feb. 1, Feb. 6, 7, 12-15. Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 740 ft (from topographic map).

Average discharge.--9 years, 121 cfs.

Extremes.--Maximum discharge during year, 1,780 cfs Sept. 11 (gage height, 5.32 ft); minimum daily, 3.5 cfs Oct. 17.

1945-54: 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 or no gage-height record, which are fair. Flow regulated by mill and reservoirs above station.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.7	2.1	1.7	73
.8	4.0	2.0	129
.9	6.3	2.5	258
1.0	9.5	3.0	440
1.2	20	4.0	900
1.4	36		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.1	53	41	58	105	189	151	105	142	166	80	510
2	7.8	38	37	67	110	388	149	100	130	128	150	226
3	8.4	51	35	69	115	320	130	157	139	103	130	139
4	8.4	62	33	99	116	*468	99	309	140	70	80	65
5	8.1	38	137	*70	112	326	120	319	161	52	54	48
6	9.9	38	142	106	67	239	138	258	133	55	60	42
7	33	22	398	119	42	192	111	210	150	57	19	98
8	7.2	60	240	94	105	199	103	194	129	57	17	119
9	15	52	150	42	98	174	125	400	113	48	60	92
10	8.4	44	321	60	100	167	78	458	96	26	80	149
11	9.1	37	349	70	110	158	91	461	114	24	110	792
12	17	34	255	105	110	141	148	380	65	53	100	713
13	15	32	199	100	94	110	116	285	43	78	90	354
14	6.6	26	211	105	50	129	98	230	98	76	35	252
15	16	24	299	90	94	135	113	191	169	91	16	160
16	*13	30	249	40	79	132	99	633	*166	81	58	140
17	3.5	38	182	55	152	139	251	560	124	51	45	270
18	3.6	29	158	90	128	126	750	374	104	13	55	210
19	6.4	26	92	110	135	117	507	289	58	66	40	190
20	13	*19	116	105	114	266	*342	224	58	106	50	250
21	11	10	122	120	132	246	233	280	89	109	19	190
22	12	19	132	130	416	194	184	543	68	77	17	160
23	7.0	48	149	60	295	167	169	464	101	29	50	140
24	6.3	65	120	45	196	160	152	384	95	17	40	130
25	14	118	97	100	203	165	129	*296	95	35	45	120
26	30	231	100	102	224	236	158	233	41	69	*30	95
27	34	143	91	183	210	213	145	176	36	52	46	120
28	78	76	111	*199	176	172	189	169	81	75	20	110
29	121	58	84	190	-	174	178	144	149	48	11	100
30	184	60	83	130	-------	169	155	151	187	*86	26	95
31	85	----	97	85	-------	156	-------	116	-------	35	613	----
Total	799.8	1,581	4,830	2,998	3,888	6,167	5,411	9,093	3,274	2,033	2,246	6,079
Mean	25.8	52.7	156	96.7	139	199	180	293	109	65.6	72.5	203
Cfsm	0.379	0.774	2.29	1.42	2.04	2.92	2.64	4.30	1.60	0.963	1.06	2.98
In.	0.44	0.86	2.64	1.64	2.12	3.37	2.96	4.97	1.79	1.11	1.23	3.32

Calendar year 1953: Max 1,150 Min 0.8 Mean 142 Cfsm 2.09 In. 28.28
Water year 1953-54: Max 792 Min 3.5 Mean 133 Cfsm 1.95 In. 26.45

Peak discharge (base, 700 cfs).--Apr. 18 (3 a.m.) 972 cfs (4.12 ft); May 16 (12:30 to 3 p.m.) 906 cfs (4.01 ft); Aug. 31 (4:30 to 5 p.m.) 1,540 cfs (5.00 ft); Sept. 11 (6:30 p.m.) 1,780 cfs (5.32 ft).

* Discharge measurement made on this day.

Note.--No gage-height record July 31 to Aug. 26, Sept. 15-30; discharge estimated on basis of weather records, recorded range in stage, and records for Contoocook River near Henniker and Nubanusit Brook near Peterboro. Stage-discharge relation affected by ice Dec. 19, Jan. 8-25, Jan. 30 to Feb. 3, Feb. 6-8, 11-15, 19, Mar. 15.

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 mi.

Records available.--October 1920 to September 1931, July 1945 to September 1954 (monthly discharge only for some periods, 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.--20 years, 83.8 cfs.

Extremes.--Maximum discharge during year, 487 cfs Apr. 20 (gage height, 3.84 ft); minimum daily, 5.4 cfs June 27, July 18.
1920-31, 1945-54: Maximum discharge, 1,130 cfs Apr. 11, 1931 (gage height, 5.59 ft, site and datum then in used), 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 good. Flow regulated by mills, Nubanusit Lake, Edward MacDowell Reservoir since March 1950 (see p. 112), and other reservoirs above station.

Revisions (water years).--WSP 561: 1921(M). WSP 1051: Drainage area.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.7	4.2	1.5	49
.8	5.9	2.0	105
.9	9.2	2.5	182
1.0	14	3.0	281
1.2	25	4.0	535

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	11	72	32	b70	193	104	144	137	93	51	135
2	22	36	71	42	72	221	96	136	122	68	76	165
3	6.8	24	71	43	74	237	82	142	119	56	66	115
4	5.6	25	69	47	72	*241	74	172	106	60	44	61
5	6.4	24	35	64	73	243	86	210	115	54	44	39
6	7.4	29	27	69	b39	189	80	217	134	47	44	28
7	7.8	12	175	70	b11	168	79	196	144	38	8.8	57
8	6.8	18	219	43	b64	196	79	170	122	*32	8.8	64
9	25	58	219	b10	78	191	76	184	101	28	46	64
10	10	36	237	10	78	170	58	242	85	26	50	65
11	10	34	233	59	77	151	66	303	66	25	58	93
12	*10	34	195	71	b75	116	97	385	53	58	69	116
13	10	33	157	69	b38	85	101	440	42	61	67	219
14	12	11	198	b74	13	80	91	334	66	58	22	281
15	23	10	229	45	62	87	81	182	74	64	8.1	279
16	*22	36	217	b10	79	88	69	168	93	66	44	264
17	9.2	*37	196	b10	82	80	121	306	97	25	42	254
18	9.2	34	172	b60	81	73	93	432	86	5.4	44	195
19	9.6	33	120	73	82	76	298	346	52	43	40	162
20	22	35	81	71	65	89	*468	195	41	44	40	167
21	9.6	10	86	78	85	154	460	202	61	44	8.4	157
22	10	10	87	71	180	174	435	191	68	45	9.2	146
23	9.6	50	100	b26	227	151	292	292	73	45	43	130
24	9.2	35	91	b14	217	124	167	428	72	9.1	40	109
25	11	59	81	33	206	109	137	400	69	26	40	88
26	10	100	78	58	204	124	136	*254	26	55	*40	80
27	21	131	69	83	195	136	126	180	5.4	51	42	84
28	40	112	79	*b100	163	125	138	170	57	50	17	71
29	41	87	72	595	-	132	160	152	74	*47	7.8	64
30	58	87	*67	b58	------	124	155	146	79	43	41	64
31	38	...	36	b50	-------	112	-------	140	-------	16	96	...
Total	514.2	1,251	3,839	1,638	2,762	4,439	4,505	7,459	2,439.4	1,382.5	1,257.1	3,816
Mean	16.6	41.7	124	52.8	98.6	143	150	241	81.3	44.6	40.6	127
Cfsm	0.354	0.889	2.64	1.13	2.10	3.05	3.20	5.14	1.73	0.951	0.866	2.71
In.	0.41	0.99	3.04	1.30	2.19	3.52	3.57	5.91	1.93	1.10	1.00	3.03

Calendar year 1953: Max 538 Min 1.8 Mean 98.5 Cfsm 2.10 In. 28.48
Water year 1953-54: Max 468 Min 5.4 Mean 96.7 Cfsm 2.06 In. 27.99

* 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.

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 1954.

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.--30 years, 100 cfs.

Extremes.--Maximum discharge during year, 576 cfs Apr. 20 (gage height, 3.99 ft); minimum, 0.7 cfs Oct. 4, 5.
1924-54: 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 determinations at gage heights 8.4 and 9.3 ft; minimum, 0.3 cfs Sept. 18, 1948.

Remarks.--Records good except those for periods of ice effect or shifting control, 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, 1941(M), 1944, 1946(M).

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

-0.1	0.6	1.0	30
0.0	1.2	1.5	67
.1	2.1	2.0	123
.2	3.4	3.0	304
.4	7.2	4.0	580
.6	13		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	78	46	78	75	200	158	175	157	130	9.2	70
2	.8	59	45	80	72	290	150	163	149	136	9.4	78
3	.8	47	40	81	70	300	148	165	160	99	*9.7	59
4	.7	43	*66	*76	71	436	137	237	154	69	12	48
5	.7	58	142	72	72	*444	127	*308	*142	58	12	41
6	1.1	71	192	67	68	410	124	306	146	61	10	34
7	2.8	78	344	66	64	347	*133	278	109	56	8.7	27
8	2.3	92	402	50	60	293	148	253	79	46	7.2	25
9	1.8	90	368	56	58	243	149	354	58	46	6.4	*23
10	1.6	85	410	54	57	207	143	410	46	38	7.2	21
11	19	78	459	52	56	180	143	476	33	29	8.2	89
12	33	72	430	53	53	158	163	488	19	22	8.2	315
13	38	67	371	50	50	144	209	453	15	16	8.0	363
14	39	62	315	48	48	136	182	381	15	12	7.2	284
15	37	60	306	49	47	130	154	313	32	14	6.6	214
16	34	56	274	51	50	122	146	347	56	13	6.4	163
17	32	52	230	50	75	113	214	391	69	*12	5.7	165
18	30	39	200	48	88	106	503	363	65	10	5.3	171
19	28	36	185	47	90	102	509	315	57	9.2	4.9	168
20	27	36	165	46	94	170	562	267	49	8.2	4.6	187
21	25	22	155	62	100	211	442	263	41	8.2	3.9	187
22	24	12	146	70	240	185	342	373	35	8.2	3.6	166
23	22	18	146	62	280	162	286	402	30	8.0	3.0	137
24	22	34	145	55	270	148	199	368	26	7.7	2.7	111
25	23	69	140	51	230	144	149	319	23	7.4	2.3	91
26	*30	185	125	*50	220	171	150	272	20	7.4	2.1	77
27	27	157	115	75	210	192	154	224	26	7.0	1.9	65
28	29	98	105	105	205	180	189	194	38	6.4	1.8	57
29	40	69	98	92	-	173	192	170	58	6.2	1.7	52
30	78	53	95	86	-------	178	189	176	98	6.2	1.7	45
31	96	--- ---	90	80	-------	165	-------	170	-------	6.6	26	------
Total	746.4	1,976	6,350	1,962	3,073	6,440	6,494	9,374	2,005	963.7	207.6	3,533
Mean	24.1	65.9	205	63.3	110	208	216	302	66.8	31.1	6.70	118
Cfsm	0.440	1.20	3.74	1.16	2.01	3.80	3.94	5.51	1.22	0.568	0.122	2.15
In.	0.51	1.34	4.31	1.33	2.09	4.37	4.41	6.36	1.36	0.65	0.14	2.40

Calendar year 1953: Max 1,120 Min 0.6 Mean 126 Cfsm 2.30 In. 31.31
Water year 1953-54: Max 562 Min 0.7 Mean 118 Cfsm 2.15 In. 29.27

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 17-20, 24-28, Jan. 1 to Mar. 3. Shifting-control method used Oct. 1-11. Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

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 1954 (monthly discharge only for some periods, published in WSP 1301).

Gage.--Water-stage recorder. Altitude of gage is 595 ft (from topographic map).

Average discharge.--9 years, 96.9 cfs.

Extremes.--Maximum discharge during year, 1,220 cfs Apr. 18 (gage height, 5.09 ft); minimum, 1.6 cfs Oct. 5.
1945-54: Maximum discharge, 2,070 cfs Nov. 26, 1950 (gage height, 6.59 ft), from rating curve extended above 1,200 cfs by logarithmic plotting; minimum, 1.1 cfs Oct. 3, 1948.

Remarks.--Records good except those for period of ice effect and those below 5 cfs, which are fair.

Revisions (water years).--WSP 1231: 1948.

Rating table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.0	1.2	1.7	19
1.1	2.0	1.9	34
1.2	3.1	2.2	72
1.3	4.7	2.5	137
1.4	6.8	3.0	308
1.5	9.9	4.0	705
1.6	14	5.0	1,180

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.9	32	51	48	60	215	152	140	96	91	14	157
2	1.8	23	47	44	57	460	134	116	106	88	12	67
3	1.8	18	42	43	54	424	140	121	177	50	*12	38
4	1.8	14	*40	*42	53	*596	116	293	143	34	20	32
5	1.6	12	94	40	53	393	100	*390	*161	30	18	25
6	2.1	11	124	39	48	264	98	271	193	46	14	18
7	8.9	12	451	38	44	197	*124	207	143	36	11	14
8	9.9	23	412	32	42	167	164	180	109	27	8.8	12
9	5.8	27	271	27	41	134	161	596	87	22	7.9	*11
10	4.7	26	345	30	40	121	127	636	74	18	10	10
11	4.0	23	401	30	38	109	121	624	64	15	12	179
12	4.0	20	264	31	37	93	193	460	56	13	10	544
13	3.8	18	214	30	34	87	164	330	48	16	8.8	242
14	3.8	17	187	28	33	80	134	242	43	14	7.6	149
15	3.5	16	210	30	32	79	116	193	113	22	11	93
16	3.4	15	187	31	36	74	114	394	137	*20	7.1	75
17	3.5	14	135	30	80	70	336	452	93	15	8.2	200
18	3.2	13	130	29	105	68	1,050	297	69	12	5.8	197
19	3.2	13	115	28	115	64	600	218	54	10	5.0	146
20	3.2	12	100	28	125	277	378	170	44	9.2	5.4	177
21	3.8	12	90	37	160	345	267	200	36	9.9	5.4	134
22	3.7	11	88	60	250	221	207	476	31	10	4.5	107
23	3.2	31	105	50	400	167	177	436	26	8.8	4.0	80
24	3.1	57	100	40	320	146	161	304	27	8.5	3.5	62
25	4.9	105	90	37	255	137	177	235	23	7.9	3.5	50
26	*14	297	76	*36	240	228	149	187	19	8.2	3.1	43
27	13	176	66	60	230	275	124	140	21	12	3.0	41
28	16	107	62	140	220	204	224	116	24	9.6	2.7	*36
29	34	77	57	105	-	193	242	109	44	8.8	2.5	31
30	63	58	53	80	-------	204	184	155	109	9.9	2.6	29
31	49	--- ---	51	66	-------	170	-------	132	-------	11	85	-------
Total	283.6	1,290	4,658	1,389	3,202	6,262	6,434	8,820	2,370	672.8	328.4	2,999
Mean	9.15	43.0	150	44.8	114	202	214	285	79.0	21.7	10.6	100
Cfsm	0.165	0.776	2.71	0.809	2.06	3.65	3.86	5.14	1.43	0.392	0.191	1.81
In.	0.19	0.87	3.13	0.93	2.15	4.20	4.32	5.92	1.59	0.45	0.22	2.01

Calendar year 1953: Max 1,430 Min 1.6 Mean 116 Cfsm 2.09 In. 28.34
Water year 1953-54: Max 1,050 Min 1.6 Mean 106 Cfsm 1.91 In. 25.98

Peak discharge (base, 910 cfs).--Apr. 18 (10 a.m.) 1,220 cfs (5.09 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 17 to Mar. 1.

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 1954.

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.--15 years, 626 cfs.

Extremes.--Maximum discharge during year, 3,600 cfs Apr. 19 (gage height, 9.94 ft); minimum daily, 55 cfs Oct. 19.
1939-54: Maximum discharge, 8,710 cfs June 26, 1944 (gage height, 13.13 ft); minimum daily, 19 cfs Oct. 29, 1940.
Maximum discharge known, 22,200 cfs Sept. 21, 1938 (gage height, 21.3 ft, from floodmarks), from rating curve extended above 7,500 cfs on basis of computation 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. 112) since March 1950, Highland Lake, Jackman Reservoir, and other reservoirs above station.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

4.3	48	7.0	750
4.5	67	8.0	1,350
5.0	135	9.0	2,270
5.5	254	10.0	3,690
6.0	371		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	71	374	450	368	550	1,230	944	994	955	855	238	1,410
2	71	244	362	428	510	1,670	906	723	933	790	296	1,570
3	70	198	335	436	480	2,060	870	840	1,030	492	434	1,050
4	67	194	*321	*454	450	*2,320	687	1,400	810	304	*402	639
5	59	209	408	441	430	2,270	674	*2,080	*835	306	393	329
6	209	226	656	440	415	1,680	732	1,810	960	496	321	258
7	145	210	1,380	430	371	1,330	*736	1,500	860	509	274	276
8	91	194	2,010	360	402	1,190	770	1,330	755	424	204	401
9	82	258	1,580	380	377	1,200	750	2,150	639	368	112	*442
10	71	292	1,560	280	370	1,130	664	3,140	539	234	268	441
11	80	288	2,010	330	360	1,060	562	3,100	492	190	386	902
12	68	257	1,780	340	355	988	796	2,880	418	203	347	2,370
13	121	243	1,440	330	350	922	880	2,350	365	203	312	2,840
14	90	200	1,290	320	330	602	810	2,080	371	216	232	1,730
15	130	163	1,440	330	350	710	741	1,680	498	*251	184	1,220
16	112	164	1,540	310	330	710	714	2,060	723	292	207	1,030
17	67	235	1,310	270	370	714	1,100	3,140	669	258	277	1,260
18	61	204	1,050	310	500	710	3,140	2,680	539	222	271	1,330
19	55	172	940	310	600	682	3,450	2,190	450	156	290	1,140
20	62	154	610	305	660	1,180	2,700	1,750	371	220	312	1,290
21	156	147	696	330	696	1,580	2,260	1,520	326	244	207	1,240
22	137	135	885	390	1,330	1,400	1,900	2,320	312	246	161	1,100
23	220	173	950	370	2,060	1,160	1,610	2,910	284	268	206	1,010
24	166	359	916	350	1,680	1,020	1,420	2,400	321	279	293	885
25	83	466	594	330	1,410	955	1,210	2,160	306	216	300	770
26	*79	1,110	639	310	1,420	1,290	1,060	1,850	295	112	300	678
27	98	1,150	514	500	1,380	1,500	875	1,460	251	222	298	639
28	133	790	558	780	1,240	1,050	1,120	1,190	192	227	274	*626
29	156	535	598	750	-	1,010	1,410	1,080	450	225	130	594
30	241	484	594	700	-------	1,080	1,240	1,140	855	239	144	578
31	424	-- --	498	620	-------	1,020	-------	1,080	-------	229	713	---- --
Total	3,675	9,828	29,914	12,602	19,776	37,423	36,731	58,987	16,804	9,496	8,784	30,048
Mean	119	328	965	407	706	1,207	1,224	1,903	560	306	283	1,002
Cfsm	0.323	0.891	2.62	1.11	1.92	3.28	3.33	5.17	1.52	0.832	0.769	2.72
In.	0.37	0.99	3.02	1.27	2.00	3.78	3.71	5.96	1.70	0.96	0.89	3.04

Calendar year 1953: Max 5,540 Min 37 Mean 784 Cfsm 2.13 In. 28.90
Water year 1953-54: Max 3,450 Min 55 Mean 751 Cfsm 2.04 In. 27.69

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 18, 19, Jan. 6 to Feb. 5, Feb. 10-20. Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

Warner River at Davisville, N. H.

Location.--Lat 43°15'05", long 71°43'50", on left bank 60 ft downstream from highway bridge in 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 1954.

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.--15 years, 235 cfs.

Extremes.--Maximum discharge during year, 1,990 cfs May 11 (gage height, 7.61 ft); minimum, 8.8 cfs Oct. 5.

1939-54: Maximum discharge, 4,510 cfs Mar. 27, 1953 (gage height, 9.88 ft), from rating curve extended above 2,800 cfs by logarithmic plotting; 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 excellent except those for periods of ice effect or no gage-height record, which are good. Prior to 1948, slight diurnal fluctuation at low flow caused by mill above station.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 11				May 12 to Sept. 30	
3.2	8.8	5.0	333	3.25	16
3.3	13	6.0	780	3.3	18
3.6	33	7.0	1,460	3.6	38
4.0	81	7.5	1,890	4.0	83
4.5	178			4.5	178

Note.--Same as preceding table above 4.5 ft.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	89	153	b140	171	590	457	504	357	243	36	402
2	*12	67	138	b130	162	791	*423	440	326	196	34	206
3	11	54	126	128	153	931	415	423	394	153	33	132
4	10	46	117	124	147	*1,120	394	*742	*365	119	42	95
5	9.2	44	158	119	149	981	345	1,120	390	106	44	70
6	9.6	38	*198	117	147	791	326	877	466	*115	36	57
7	22	35	413	b115	138	644	337	735	449	101	34	49
8	27	46	680	b100	132	563	398	630	394	86	31	*50
9	22	59	550	80	128	483	419	1,060	333	86	28	52
10	18	70	545	89	123	432	402	1,820	279	72	30	56
11	17	75	666	89	119	386	381	1,860	243	63	35	220
12	17	77	590	91	111	337	444	1,690	211	56	36	974
13	16	73	509	89	95	300	461	1,310	186	52	33	720
14	17	70	453	a86	91	279	428	994	169	51	30	527
15	16	66	453	a88	89	262	390	780	242	55	27	407
16	16	67	449	a91	99	240	357	948	318	54	25	314
17	16	64	b375	a91	188	231	476	1,260	286	46	22	461
18	18	62	b320	a86	269	220	1,500	962	231	42	21	572
19	16	58	b265	a82	279	211	1,470	760	190	39	21	504
20	17	55	240	a82	289	375	1,130	635	160	39	21	532
21	17	53	234	a100	318	653	883	576	138	40	20	496
22	20	50	240	a125	502	a550	720	883	123	40	19	423
23	26	74	269	a125	b860	a460	617	1,010	112	41	18	345
24	27	136	b255	a110	b740	a400	550	847	106	41	17	272
25	26	159	b255	a98	685	a400	487	735	90	38	18	231
26	43	365	b215	*97	b660	a500	436	640	80	36	18	223
27	*47	357	198	164	b630	612	390	540	75	36	16	198
28	54	256	b170	314	608	545	504	461	76	34	16	*173
29	81	209	169	b270	-	504	653	415	104	*36	16	155
30	123	173	160	225	-------	518	586	428	238	39	16	140
31	115	---	b150	198	-------	487	-------	419	-------	39	149	-----
Total	899.8	3,047	9,713	3,843	8,082	15,796	16,779	26,504	7,131	2,194	942	9,056
Mean	29.0	102	313	124	289	510	559	855	238	70.8	30.4	302
Cfsm	0.199	0.699	2.14	0.849	1.98	3.49	3.83	5.86	1.63	0.485	0.208	2.07
In.	0.23	0.78	2.47	0.98	2.06	4.02	4.27	6.75	1.82	0.56	0.24	2.31

Calendar year 1953: Max 3,980 Min 8.4 Mean 303 Cfsm 2.08 In. 28.20
Water year 1953-54: Max 1,860 Min 9.2 Mean 285 Cfsm 1.95 In. 26.49

Peak discharge (base, 1,200 cfs).--Mar. 4 (11 a.m. to 2:30 p.m.) 1,220 cfs (6.68 ft); Apr. 18 (3:30 to 4:30 p.m.) 1,900 cfs (7.51 ft); May 5 (2 to 2:30 a.m.) 1,200 cfs (6.65 ft); May 11 (3:30 p.m.) 1,990 cfs (7.61 ft); May 17 (12:30 a.m.) 1,410 cfs (6.93 ft).

* 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 Smith River near Bristol.

b Stage-discharge relation affected by ice.

Blackwater River near Webster, N. H.

Location.--Lat 43°17'50", long 71°41'40", on left bank 0.2 mile west of Dingit 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 1954. Published as "near Contoocook" 1918-20, 1927-35. Records published for both sites October 1934 to September 1935.

Gage.--Water-stage recorder. Altitude of gage is 430 ft (from topographic map). Prior to Oct. 1, 1934, chain gage at site 5 miles downstream at different datum. Both gages in operation Oct. 1, 1934, to Sept. 30, 1935.

Average discharge.--29 years (1918-20, 1927-54), 216 cfs (adjusted to present site).

Extremes.--Maximum discharge during year, 2,100 cfs May 14 (gage height, 6.85 ft); minimum, 22 cfs Oct. 5, 6, 23-25, Apr. 8; minimum daily, 22 cfs Oct. 24.
1918-20, 1927-54: 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 determinations 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 below 50 cfs and those for periods of ice effect or no gage-height record, which are good. High flow regulated by Blackwater Reservoir since 1941 (see p. 112). Some regulation at low flow 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 1953-54, except periods 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	790
3.0	135	6.0	1,420
3.5	241	7.0	2,230

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	116	141	92	140	420	340	515	423	218	54	329
2	*36	90	123	99	125	515	*305	416	331	198	60	371
3	32	76	110	116	115	740	291	371	355	146	60	243
4	28	62	102	120	110	929	278	*515	*378	112	59	144
5	23	54	112	104	115	a1,000	243	757	391	92	59	102
6	24	48	*144	110	110	a840	232	947	448	92	53	81
7	33	44	308	108	105	a550	255	790	480	92	47	68
8	38	43	550	82	105	a400	243	554	426	84	42	*130
9	42	43	740	68	100	340	470	651	337	76	40	54
10	42	47	574	80	95	302	624	73	278	68	42	58
11	40	48	518	90	92	283	462	89	241	61	43	106
12	35	46	574	90	90	255	470	190	216	58	43	98
13	32	42	473	86	83	232	570	685	192	56	42	494
14	32	41	365	84	80	218	546	1,540	176	*55	39	1,320
15	31	40	331	82	80	209	439	2,030	205	55	36	734
16	30	38	313	85	83	194	378	1,330	258	52	34	278
17	29	38	265	85	105	183	435	1,610	263	49	34	313
18	28	38	190	82	150	176	838	1,800	223	47	32	362
19	27	37	165	81	205	170	1,170	1,610	183	45	30	375
20	24	37	187	81	205	251	1,250	826	152	45	29	391
21	24	40	196	86	215	416	1,180	470	135	46	29	416
22	24	40	189	94	305	473	888	566	118	47	28	387
23	23	46	211	97	480	381	515	757	106	48	28	302
24	22	70	190	100	620	313	448	851	100	48	30	246
25	25	105	200	93	610	294	407	685	97	45	31	205
26	32	271	200	87	510	331	349	540	95	42	31	187
27	35	419	170	105	450	416	311	456	88	43	30	176
28	51	381	137	160	425	448	384	387	82	46	28	162
29	75	241	156	195	-	400	526	328	104	*48	27	146
30	110	172	141	180	------	394	608	352	183	50	26	132
31	133	---	132	160	------	387	------	448	------	51	82	------
Total	1,200	2,813	8,207	3,182	5,908	12,460	15,455	23,139	7,064	2,215	1,228	8,410
Mean	38.7	93.8	265	103	211	402	515	746	235	71.5	39.6	280
Cfsm	0.300	0.727	2.05	0.798	1.64	3.12	3.99	5.78	1.82	0.554	0.307	2.17
In.	0.35	0.81	2.37	0.92	1.70	3.59	4.46	6.67	2.04	0.64	0.35	2.42

Calendar year 1953: Max 2,290 Min 18 Mean 274 Cfsm 2.12 In. 28.82
Water year 1953-54: Max 2,030 Min 22 Mean 250 Cfsm 1.94 In. 26.32

* Discharge measurement made on this day.
a No gage-height record; discharge estimated from gage-height graph constructed on basis of normal recession pattern.
Note.--Stage-discharge relation affected by ice Dec. 17-19, 24-27, Jan. 1, Jan. 8 to Mar. 1.

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 1954 (monthly discharge only for some periods, published in WSP 1301).

Gage.--Water-stage recorder. Datum of gage is 273.09 ft above mean sea level, datum of 1929.

Average discharge.--26 years, 1,260 cfs.

Extremes.--Maximum discharge during year, 6,880 cfs Apr. 19 (gage height, 5.38 ft); minimum, 70 cfs Oct. 2; minimum daily, 106 cfs Oct. 4.
1928-54: 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 mills and by Nubanusit Lake, Edward MacDowell Reservoir since March 1950, Highland Lake, Jackman Reservoir, Blackwater Reservoir since 1941 (see p. 112), and other reservoirs above station.

Revisions (water years).--WSP 756: 1933(M), drainage area. WSP 1231: 1929, 1931.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.4	95	3.0	1,540
1.6	159	4.0	3,400
1.8	252	5.0	5,820
2.1	450	5.5	7,240
2.5	840		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a135	768	924	800	1,000	2,680	2,160	2,460	2,140	1,660	406	2,410
2	*a140	*a600	828	750	950	*3,320	1,980	2,100	1,930	1,490	377	2,520
3	137	458	710	720	*900	4,160	1,900	1,860	2,180	1,180	517	1,950
4	106	384	660	732	860	4,860	1,800	*2,760	*2,000	792	593	1,270
5	112	364	780	840	820	4,830	1,490	4,370	1,980	670	575	840
6	160	357	*1,100	*768	780	4,070	*1,490	4,250	2,230	804	522	557
7	326	364	1,920	800	740	3,150	1,570	3,730	2,190	*876	428	*506
8	284	357	3,440	680	740	2,650	1,620	3,080	1,930	768	384	522
9	185	384	3,400	600	720	2,410	1,830	4,060	1,660	660	344	620
10	189	450	3,130	540	700	2,230	1,960	6,310	1,370	584	293	640
11	176	490	3,440	530	680	2,090	1,780	6,150	1,210	450	413	1,350
12	168	435	3,470	590	650	1,910	1,800	5,790	1,060	428	506	*4,070
13	180	435	3,000	580	620	1,740	2,180	5,030	936	421	450	4,320
14	185	364	2,570	570	600	1,510	2,140	4,880	852	384	399	4,000
15	176	337	2,520	580	590	1,310	1,900	4,880	1,070	428	331	3,270
16	202	331	2,700	580	580	1,370	1,730	5,260	1,460	458	311	2,100
17	168	344	2,390	540	670	1,340	2,140	6,230	1,490	435	305	2,320
18	159	370	1,860	540	1,100	1,310	5,340	6,200	1,250	406	364	2,720
19	155	351	1,550	560	1,300	1,280	6,740	5,320	1,030	377	370	2,550
20	152	318	1,350	550	1,400	1,900	5,900	4,230	876	344	377	2,540
21	126	282	1,270	600	1,510	3,210	4,980	3,210	756	370	364	2,590
22	152	232	1,510	680	2,180	2,920	4,210	4,070	680	406	282	2,360
23	232	373	1,640	700	3,800	2,500	3,360	5,060	650	392	258	2,050
24	a280	514	1,600	640	3,770	2,160	2,920	4,800	640	421	299	1,730
25	a270	776	1,300	600	3,360	2,020	2,550	4,230	602	421	357	1,480
26	264	1,670	1,150	580	3,170	2,390	2,270	3,640	557	357	377	1,340
27	247	2,230	1,150	700	3,110	2,920	1,960	3,060	548	276	377	1,250
28	294	1,900	960	1,400	3,020	2,680	2,190	2,540	539	331	357	1,170
29	474	1,340	1,050	1,450	-	2,280	2,980	2,250	697	*311	318	1,100
30	584	1,030	1,050	1,250	-------	2,360	2,940	2,230	1,480	377	242	1,030
31	670	-----	900	1,100	-------	2,280	-------	2,300	--------	392	797	-------
Total	7,088	18,608	55,322	22,550	40,320	77,840	79,810	126,340	37,993	17,669	12,293	57,175
Mean	229	620	1,785	727	1,440	2,511	2,660	4,075	1,266	570	397	1,906
Cfsm	0.299	0.809	2.33	0.949	1.88	3.28	3.47	5.32	1.65	0.744	0.518	2.49
In.	0.34	0.90	2.69	1.09	1.96	3.78	3.87	6.13	1.84	0.86	0.60	2.78

Calendar year 1953: Max 10,900 Min 106 Mean 1,572 Cfsm 2.05 In. 27.85
Water year 1953-54: Max 6,740 Min 106 Mean 1,515 Cfsm 1.98 In. 26.84

* 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 station near Henniker.
Note.--Stage-discharge relation affected by ice Dec. 19, 20, Dec. 24 to Jan. 3, Jan. 5, Jan. 7 to Feb. 19.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 290 ft (from topographic map).

Extremes.--Maximum discharge during year, 2,330 cfs May 10 (gage height, 12.27 ft); minimum, 4.4 cfs Oct. 4, 5.
1951-54: Maximum discharge, 2,380 cfs (revised) Apr. 6, 1952 (gage height, 12.35 ft); minimum, that of Oct. 4, 5, 1953.
Revisions.--The maximum discharge for the water year 1952 has been revised to 2,380 cfs Apr. 6, 1952 (gage height, 12.35 ft), superseding figure published in WSP 1231.

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

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 10				May 11 to Sept. 30	
4.09	4.4	6.0	158	4.2	6.5
4.1	4.6	7.0	317	4.6	24
4.2	7.7	8.0	535	5.0	52
4.5	22	9.0	825	5.5	99
5.0	54	11.0	1,650		
5.5	99	11.5	1,900		

Note.--Same as preceding table above 5.5 ft.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*4.6	34	69	53	74	321	189	194	155	178	28	195
2	4.6	28	67	55	71	*388	175	176	146	122	22	83
3	4.6	*23	58	59	66	379	171	*192	206	93	20	*54
4	4.4	21	54	64	71	473	146	394	169	71	27	42
5	4.4	19	102	60	82	356	133	517	169	59	25	32
6	4.8	17	134	59	78	275	*132	386	*158	71	20	26
7	12	19	*299	55	72	230	139	317	138	59	17	22
8	15	28	308	45	68	202	145	263	118	48	15	20
9	11	30	204	42	66	173	143	928	104	40	14	20
10	9.7	27	233	46	64	165	127	1,890	95	34	21	20
11	8.1	24	287	46	60	150	146	*1,660	85	32	25	149
12	8.5	22	207	48	54	132	280	1,120	77	29	20	*632
13	9.3	21	189	48	49	122	219	630	71	26	17	281
14	7.7	19	182	46	46	118	183	459	66	25	15	219
15	7.7	19	242	50	46	118	164	360	*75	26	13	173
16	7.7	19	212	50	52	110	154	762	81	27	13	126
17	7.4	17	160	48	116	107	280	935	68	a23	12	192
18	6.7	16	125	47	141	104	990	540	58	a21	11	188
19	6.7	15	105	47	140	100	753	388	51	a19	11	153
20	6.7	15	100	49	144	331	452	313	46	a19	10	216
21	6.7	15	109	57	166	476	339	349	42	a20	9.7	168
22	6.7	15	117	65	430	297	277	701	39	a20	9.4	155
23	6.7	30	133	58	510	232	242	558	38	a21	9.0	138
24	6.7	68	115	53	340	204	218	445	56	a21	8.7	108
25	9.0	81	96	50	335	186	192	352	46	a19	8.7	91
26	21	284	92	49	440	263	172	287	39	a18	8.3	96
27	17	153	82	82	370	306	158	234	37	a18	7.9	90
28	34	110	70	130	360	237	266	202	42	a17	7.6	78
29	67	94	77	100	-	221	297	190	64	a18	7.2	68
30	59	77	74	90	------	229	230	234	174	*18	7.2	61
31	45	---	66	82	------	198	------	188	------	19	74	-----
Total	430.4	1,360	4,368	1,833	4,511	7,203	7,512	16,164	2,713	1,231	513.7	3,896
Mean	13.9	45.3	141	59.1	161	232	250	521	90.4	39.7	16.6	130
Cfsm	0.181	0.590	1.84	0.770	2.10	3.02	3.26	6.78	1.18	0.517	0.216	1.69
In.	0.21	0.66	2.12	0.89	2.18	3.49	3.64	7.83	1.31	0.60	0.25	1.89

Calendar year 1953 : Max 1,520 Min 4.4 Mean 144 Cfsm 1.88 In. 25.46
Water year 1953-54 : Max 1,890 Min 4.4 Mean 142 Cfsm 1.85 In. 25.07

Peak discharge (base, 700 cfs).--Apr. 18 (7 p.m.) 1,250 cfs (10.11 ft); May 10 (4 to 5 a.m.) 2,330 cfs (12.27 ft); May 17 (1 a.m.) 1,190 cfs (9.94 ft); May 22 (10:30 to 11:30 a.m.) 752 cfs (8.79 ft); Sept. 12 (9 a.m.) 762 cfs (8.82 ft).

* 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 Warner River at Davisville, Blackwater River near Webster, and Suncook River at North Chichester.

Note.--Stage-discharge relation affected by ice Dec. 17-20, 24-28, Dec. 31 to Jan. 3, Jan. 7 to Feb. 7, Feb. 12-15, 22-28, Mar. 7.

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 November 1927, November 1928 to September 1954.

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.--33 years (1918-20, 1921-27, 1929-54), 242 cfs.

Extremes.--Maximum discharge during year, 4,720 cfs May 10 (gage height, 11.88 ft); minimum, 4.1 cfs Oct. 19; minimum daily, 4.4 cfs Oct. 19.
1918-54: 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 determinations of peak flow; minimum, 0.4 cfs Sept. 4, 1926; minimum daily, 1.4 cfs Sept. 4, 1926.

Remarks.--Records good except those for periods 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), 1941-42(M), 1946-48(M).

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.38	4.4	3.4	114	7.0	1,210
2.4	5.0	3.7	197	8.0	1,570
2.5	8.2	4.0	310	9.0	2,020
2.6	13	4.5	540	10.0	2,700
2.8	26	5.0	700	12.0	4,890
3.1	60	6.0	950		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*16	62	104	140	155	*636	391	540	396	368	51	425
2	13	*51	97	120	*145	790	319	500	342	270	54	228
3	14	38	145	124	140	842	*290	*522	*310	188	47	*152
4	6.4	33	214	136	145	998	255	940	262	136	52	114
5	5.5	31	356	133	150	848	236	1,180	232	114	47	89
6	13	27	410	125	145	657	*247	965	222	121	43	74
7	19	33	*713	125	140	522	266	808	200	101	37	69
8	16	57	700	110	135	464	290	698	169	80	34	57
9	14	66	536	86	130	400	350	2,520	149	66	39	55
10	14	50	627	95	125	378	386	3,930	133	57	51	54
11	6.1	43	722	95	120	355	489	3,480	128	51	54	575
12	5.8	38	604	105	100	319	740	*2,460	124	51	50	2,250
13	9.1	34	544	98	90	290	654	1,740	114	43	51	1,420
14	16	30	536	98	105	282	552	1,250	116	40	40	960
15	14	27	624	100	120	290	486	930	126	51	36	800
16	13	32	584	105	135	262	445	1,440	136	44	44	648
17	12	31	470	100	200	251	691	1,750	124	38	42	718
18	5.5	30	420	96	240	240	1,910	1,260	108	33	38	700
19	4.4	28	380	98	260	225	1,830	895	*93	40	37	627
20	9.3	25	350	105	290	695	1,040	712	79	36	36	740
21	15	23	320	130	350	955	768	768	77	36	34	648
22	16	15	337	170	940	700	639	1,390	68	40	30	548
23	14	50	391	165	900	522	572	1,320	62	38	36	396
24	14	99	340	145	615	435	540	1,130	68	38	31	274
25	11	150	235	140	602	400	464	898	70	34	30	211
26	14	560	200	135	762	568	391	722	63	42	33	200
27	10	364	195	210	762	685	364	594	57	37	29	182
28	54	211	190	300	708	576	582	513	72	38	24	152
29	77	155	180	250	-	495	710	468	132	39	25	128
30	108	128	175	210	-------	508	636	490	367	*38	33	114
31	82	---	160	180	-------	450	-------	468	-------	43	210	-------
Total	641.1	2,521	11,859	4,229	8,709	16,038	17,333	37,299	4,599	2,351	1,398	13,608
Mean	20.7	84.0	383	136	311	517	578	1,203	153	75.8	45.1	454
Cfsm	0.132	0.535	2.44	0.866	1.98	3.29	3.68	7.66	0.975	0.483	0.287	2.89
In.	0.15	0.60	2.81	1.00	2.06	3.80	4.11	8.84	1.09	0.56	0.33	3.22

Calendar year 1953: Max 4,840 Min 4.4 Mean 348 Cfsm 2.22 In. 30.04
Water year 1953-54: Max 3,930 Min 4.4 Mean 330 Cfsm 2.10 In. 28.57

Peak discharge (base, 1,500 cfs).--Apr. 18 (4 p.m.) 2,170 cfs (9.25 ft); May 10 (2 a.m.) 4,720 cfs (11.88 ft); May 16 (10 to 11 p.m.) 1,920 cfs (8.81 ft); Sept. 12 (8 a.m.) 2,500 cfs (9.74 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 17-21, Dec. 24 to Jan. 2, Jan. 6 to Feb. 23.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 310 ft (from topographic map).

Average discharge.--14 years, 165 cfs.

Extremes.--Maximum discharge during year, 3,080 cfs Sept. 12 (gage height, 8.57 ft); minimum, 6.2 cfs Oct. 4, 5.
1940-54: 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 periods of ice effect or no gage-height record, which are fair. Some regulation at low flow by mill above station.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.9	5.5	4.5	247
3.0	9.1	5.0	425
3.2	19	6.0	950
3.4	34	7.0	1,640
3.7	68	7.5	2,050
4.0	119		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.2	102	117	95	100	*338	229	226	*189	355	226	1,110
2	6.9	88	108	75	*90	640	217	197	173	226	101	350
3	6.5	59	98	90	84	560	209	214	226	154	67	195
4	6.5	50	93	100	105	926	186	541	195	119	104	163
5	6.5	41	195	90	115	540	*168	615	229	117	83	127
6	7.5	37	241	82	105	393	168	413	209	214	60	100
7	14	39	640	74	95	330	181	324	173	136	43	*83
8	22	72	582	64	90	293	184	282	152	104	34	86
9	17	72	355	58	88	257	171	927	132	83	34	85
10	14	60	420	64	86	247	156	1,160	117	68	92	90
11	12	52	520	66	84	232	152	1,040	108	60	97	1,060
12	12	45	348	72	72	200	176	728	93	54	66	2,030
13	12	42	316	70	64	197	158	510	86	49	49	*714
14	11	39	334	68	58	195	145	397	82	42	38	429
15	*11	36	515	74	60	186	136	330	166	58	32	310
16	11	36	405	76	90	170	136	1,340	209	63	28	260
17	11	38	306	70	180	165	358	1,220	147	47	25	470
18	10	36	230	60	280	165	1,450	645	*110	41	23	425
19	10	*33	200	64	250	161	755	453	88	36	21	344
20	9.5	32	170	70	230	564	449	366	76	32	20	425
21	9.1	*30	160	86	220	635	344	512	66	32	19	348
22	8.7	31	190	185	500	385	289	1,300	56	33	18	320
23	9.1	72	230	150	620	293	257	950	53	31	17	253
24	9.5	130	190	105	380	260	266	615	83	28	16	192
25	13	*171	160	92	430	250	238	474	68	26	15	163
26	39	525	125	90	500	429	*211	378	53	*26	15	154
27	33	316	125	170	453	409	195	310	202	28	14	140
28	73	200	125	300	389	306	334	276	186	29	18	127
29	154	161	130	200	-	276	370	253	409	28	27	113
30	229	136	125	140	------	266	282	276	585	28	14	104
31	163	--	105	115	------	238	--------	235	- ----	47	647	-
Total	958.0	2,781	7,858	3,115	5,818	10,506	8,570	17,507	4,721	2,394	2,063	10,770
Mean	30.9	92.7	253	100	208	339	286	565	157	77.2	66.5	359
Cfsm	0.297	0.891	2.43	0.962	2.00	3.26	2.75	5.43	1.51	0.742	0.639	3.45
In.	0.34	0.99	2.81	1.11	2.08	3.76	3.06	6.26	1.69	0.86	0.74	3.85

Calendar year 1953: Max 2,520 Min 6.5 Mean 213 Cfsm 2.05 In. 27.81
Water year 1953-54: Max 2,030 Min 6.5 Mean 211 Cfsm 2.03 In. 27.55

Peak discharge (base, 1,000 cfs).--Mar. 4 (8 a.m.) 1,050 cfs (6.17 ft); Apr. 18 (10 to 10:30 a.m.) 1,780 cfs (7.18 ft); May 9 (7 to 9 p.m.) 1,400 cfs (6.68 ft); May 16 (5:30 p.m.) 2,030 cfs (7.48 ft); May 22 (5:30 to 6:30 p.m.) 1,440 cfs (6.75 ft); Aug. 31 (11 p.m.) 2,010 cfs (7.46 ft); Sept. 12 (1 a.m.) 3,080 cfs (8.57 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 18 to Feb. 26, Mar. 7, 12, 16-18 (no gage-height record Dec. 19, 20, Jan. 14-25, Feb. 13-23; discharge estimated on basis of weather records, recorded range in stage when available, and records for Warner River at Davisville, Souhegan River at Merrimack, and other stations on nearby streams).

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 1954.

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.--15 years, 310 cfs.

Extremes.--Maximum discharge during year, 4,280 cfs Sept. 12 (gage height, 9.13 ft); minimum daily, 7.0 cfs Aug. 29.

1939-54: Maximum discharge, 6,760 cfs June 15, 1942 (gage height, 10.79 ft), from rating curve extended above 4,400 cfs on basis of computations of flow over dam at gage heights 16.03 and 17.52 ft; minimum daily, 5.8 cfs Oct. 15, 1950.

Maximum discharge known, 21,900 cfs Sept. 21, 1938 (gage height, 17.52 ft, from floodmarks), 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 tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 16				May 17 to Sept. 30			
2.8	7.1	3.5	61	2.8	5.6	4.5	296
3.0	15	4.0	153	2.9	8.7	5.0	513
3.2	28	4.5	296	3.1	18	6.0	1,150
				3.3	34	7.0	1,960
Note.--Same as following table above 4.5 ft.				3.6	70	8.0	2,940
				4.0	149	9.0	4,110

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	118	278	125	b280	746	369	522	461	821	325	1,680
2	11	237	108	224	342	1,040	373	249	421	594	157	881
3	11	209	151	133	242	1,080	510	467	391	295	120	743
4	9.8	180	184	268	250	1,520	474	599	372	129	97	183
5	11	142	292	*247	332	1,120	466	1,160	464	180	124	53
6	36	143	517	232	145	821	520	854	240	415	131	166
7	12	109	738	182	b43	735	275	727	411	222	30	165
8	11	89	923	b205	b285	642	260	627	362	218	29	165
9	11	184	759	b190	205	735	*190	1,350	270	341	137	137
10	11	198	600	b40	218	494	244	2,280	213	8.7	160	*255
11	11	152	663	b190	198	484	113	2,000	184	7.6	158	1,180
12	44	203	565	186	b185	465	448	1,520	201	76	102	3,510
13	12	140	508	b155	b75	341	318	1,080	40	133	95	*1,560
14	95	8.0	539	b195	b47	183	293	840	238	110	8.0	986
15	142	7.7	840	156	251	457	240	771	222	113	52	812
16	188	59	693	176	286	369	214	2,020	371	136	81	730
17	174	79	463	b70	408	395	417	2,400	339	54	73	639
18	9.8	30	382	b195	452	328	1,830	1,360	*219	7.3	53	795
19	67	68	369	b200	375	283	1,340	944	246	72	38	691
20	101	46	251	185	473	560	951	802	9.0	69	39	737
21	137	29	369	223	461	972	795	814	126	76	8.7	789
22	96	48	361	b220	b680	814	627	1,940	146	118	9.0	599
23	89	87	444	b235	1,130	765	632	1,740	168	75	38	508
24	11	296	386	b175	783	741	415	1,190	136	9.0	69	469
25	65	372	369	215	828	729	211	930	133	7.6	71	313
26	190	643	369	227	972	717	380	802	49	66	37	229
27	200	765	305	253	916	723	351	712	297	34	9.0	333
28	271	334	271	b470	808	675	662	516	310	66	8.0	290
29	335	246	280	b415	-	490	638	501	549	69	7.0	315
30	382	261	282	369	------	350	489	427	993	31	11	286
31	377	-- --	258	b285	------	377	--- ---	416	------	64	581	. .
Total	3,131.6	5,482.7	13,517	6,641	11,670	20,151	15,045	32,560	8,581.0	4,617.2	2,857.7	20,199
Mean	101	183	436	214	417	650	502	1,050	286	149	92.2	673
Cfsm	0.500	0.906	2.16	1.06	2.06	3.22	2.49	5.20	1.42	0.738	0.456	3.33
In.	0.58	1.01	2.49	1.22	2.15	3.71	2.77	5.99	1.58	0.85	0.53	3.72

Calendar year 1953: Max 4,280 Min 7.7 Mean 400 Cfsm 1.98 In. 26.93
Water year 1953-54: Max 3,510 Min 7.0 Mean 396 Cfsm 1.96 In. 26.60

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

Merrimack River near Goffs Falls, below Manchester, N. H.

Location.--Lat 42°56'55", long 71°27'45", on right bank 0.8 mile downstream from Bowman Brook, 1.3 miles north of Goff Falls, Hillsboro County, and 2.3 miles downstream from Piscataquog River.

Drainage area.--3,092 sq mi.

Records available.--October 1936 to September 1954 (monthly discharge only for some periods, published in WSP 1301).

Gage.--Water-stage recorder. Altitude of gage is 105 ft (from topographic map).

Average discharge.--18 years, 5,389 cfs.

Extremes.--Maximum discharge during year, 38,600 cfs May 11 (gage height, 12.46 ft); minimum daily, 367 cfs Oct. 4.
1936-54: 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, 154 cfs Sept. 5, 1949.
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 excellent except those for periods of ice effect, which are 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 page 112 for description and monthly change in contents of many of these reservoirs.

Revisions (water years).--WSP 1231: 1937. WSP 1271: 1937(M,m).

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.8	367	4.0	2,360
2.0	454	5.0	4,780
2.5	725	6.0	8,200
3.0	1,110	9.0	22,000
3.5	1,630	13.0	41,200

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	897	1,900	3,710	2,640	b3,800	9,170	6,520	11,800	11,300	6,900	2,710	9,560
2	904	2,380	3,210	2,770	b3,750	9,630	6,010	10,900	10,200	6,040	2,930	11,900
3	820	1,770	2,840	1,940	3,440	13,400	5,750	10,800	13,000	4,540	3,020	7,900
4	367	1,510	2,640	3,000	3,780	15,800	5,180	12,100	13,200	3,970	2,250	5,160
5	884	1,480	3,040	3,100	3,990	*17,300	*5,210	17,700	12,100	3,100	2,170	3,460
6	1,090	1,730	3,940	3,010	3,600	13,800	4,520	*18,700	*11,600	3,770	2,210	2,220
7	1,020	1,240	7,130	2,740	2,820	10,800	4,700	16,000	13,300	3,800	1,830	2,700
8	1,390	1,070	13,800	b2,400	b3,500	8,720	5,190	13,600	12,200	4,060	844	3,050
9	912	1,712	13,500	b2,000	3,450	8,090	8,920	16,500	10,900	3,140	2,320	3,130
10	1,280	1,750	10,800	1,330	3,370	6,900	10,100	32,500	9,590	2,510	2,430	*4,050
11	688	1,640	11,400	2,510	3,190	6,210	8,840	38,100	8,320	1,220	1,960	6,780
12	1,140	1,790	11,500	b2,800	b3,200	6,040	10,300	32,000	7,590	1,930	1,780	21,800
13	1,100	1,520	9,380	2,680	b2,700	5,500	14,200	27,000	6,960	2,380	1,710	23,500
14	990	1,290	8,360	2,530	1,980	4,720	12,900	25,400	6,680	2,090	1,360	20,900
15	1,020	536	8,400	2,480	b2,900	4,820	10,700	20,100	6,240	2,120	796	15,100
16	1,180	1,560	8,320	2,690	2,990	4,570	9,710	20,500	7,030	1,950	1,700	11,400
17	1,190	1,450	7,300	1,860	3,780	4,310	10,900	25,100	7,160	1,720	1,700	9,290
18	504	1,290	5,750	b2,600	3,990	4,350	20,300	22,000	6,500	704	1,620	9,930
19	1,000	1,230	4,720	b2,550	b4,400	4,070	28,800	18,300	*5,720	1,850	1,680	9,590
20	1,030	1,240	4,200	2,590	4,960	5,110	27,200	17,000	4,990	1,780	1,750	9,550
21	1,220	1,210	4,150	2,730	5,190	9,460	22,300	14,600	4,250	1,660	1,330	12,200
22	1,020	*478	4,760	b3,000	7,370	8,600	21,200	16,600	3,380	1,820	630	10,600
23	1,320	1,840	5,000	3,190	12,300	7,670	21,000	20,300	3,810	2,060	1,540	9,000
24	771	3,700	4,810	2,650	14,400	6,860	20,100	19,600	3,070	1,760	1,700	7,970
25	*422	3,670	4,400	3,040	12,400	6,380	17,000	17,000	2,820	1,020	1,510	6,410
26	1,490	6,250	4,550	3,280	11,600	6,760	13,600	14,900	2,940	2,230	1,430	5,720
27	1,400	10,300	3,690	3,650	10,700	8,120	11,800	13,000	1,610	1,670	1,120	5,590
28	2,200	7,270	*3,910	4,650	9,930	7,670	11,600	11,200	3,070	1,790	1,230	5,170
29	3,340	5,440	3,430	4,850	-	7,120	13,000	9,710	4,110	1,800	765	5,230
30	3,460	4,130	3,360	4,190	-------	6,550	12,700	10,200	5,330	1,800	1,210	4,800
31	2,920	...	3,440	3,240	------	6,690	--------	12,600	-------	1,710	3,600	...
Total	38,969	74,374	189,440	88,690	153,480	245,190	380,250	565,810	218,970	78,894	54,835	263,660
Mean	1,257	2,479	6,111	2,861	5,481	7,909	12,680	18,250	7,299	2,545	1,769	8,789
Cfsm	0.407	0.802	1.98	0.925	1.77	2.56	4.10	5.90	2.36	0.823	0.572	2.84
In.	0.47	0.89	2.28	1.07	1.85	2.95	4.57	6.81	2.63	0.95	0.66	3.17

Calendar year 1953: Max 46,000 Min 312 Mean 6,460 Cfsm 2.09 In. 28.34
Water year 1953-54: Max 38,100 Min 367 Mean 6,445 Cfsm 2.08 In. 28.30

Peak discharge (base, 22,000 cfs).--Apr. 19 (9 a.m.) 29,700 cfs (10.59 ft); May 11 (3 to 4 p.m.) 38,600 cfs (12.46 ft); May 17 (1:30 p.m.) 25,800 cfs (9.78 ft); Sept. 13 (3 to 4 a.m.) 26,300 cfs (9.89 ft).

* 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.

Clark 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 1954.

Gage.--Water-stage recorder and concrete control. Datum of gage is 252.60 ft above mean sea level (city of Manchester benchmark).

Average discharge.--16 years, 40.4 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 602 cfs Sept. 12 (gage height, 2.55 ft); minimum, 0.8 cfs Aug. 29-31.
1938-54: Maximum discharge, that of Sept. 12, 1954; no flow Oct. 5-8, 1939, Dec. 4, 1941.

Remarks.--Records good. Flow regulated by Tower Hill Pond (see p. 112). Some diurnal fluctuation prior to 1951 by mill above station.

Revisions (water years).--WSP 891: 1939. WSP 921: Drainage area. WSP 1301: 1939(M).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.1	0.2	0.9	40
.2	.9	1.2	84
.3	2.4	1.5	150
.4	4.9	2.0	315
.5	8.7	2.5	570
.7	21		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	32	19	31	20	57	62	60	*68	33	16	63
2	18	28	16	30	18	*59	57	54	62	32	19	68
3	21	25	14	30	16	63	*56	54	68	28	19	60
4	23	23	15	33	18	72	53	85	68	20	18	62
5	24	26	25	34	21	68	48	135	65	16	16	54
6	25	33	34	35	23	56	44	138	60	16	12	44
7	26	29	52	35	23	48	43	128	56	15	8.7	35
8	25	31	62	32	21	41	43	112	50	14	6.7	31
9	25	31	54	30	19	37	36	235	44	12	5.2	27
10	25	29	56	27	17	40	34	455	39	10	9.8	*23
11	25	25	60	26	16	44	34	482	36	9.2	14	102
12	25	23	56	27	15	45	38	405	33	8.3	14	558
13	24	22	52	26	14	45	40	299	31	7.5	12	*460
14	24	20	59	26	11	46	36	216	29	7.1	9.2	320
15	*23	19	84	26	8.7	46	26	165	33	7.5	7.1	247
16	23	18	82	26	8.7	46	23	251	*35	6.3	5.5	193
17	22	14	68	26	14	45	36	382	31	5.5	4.9	170
18	22	12	54	25	22	43	141	311	21	5.2	3.7	155
19	22	19	46	26	29	43	202	236	16	5.2	3.0	135
20	35	*17	41	26	33	66	172	181	12	5.5	2.6	123
21	31	16	40	28	34	103	145	162	10	5.5	2.2	112
22	27	15	43	31	61	105	116	216	8.3	4.9	1.8	99
23	25	17	46	32	74	95	95	230	8.7	4.6	1.7	88
24	22	24	44	32	60	84	86	216	12	4.0	1.4	76
25	23	24	40	*29	59	79	77	187	15	3.7	1.2	62
26	25	35	38	20	68	88	*68	158	14	3.7	1.1	57
27	23	37	36	23	74	94	59	125	14	3.5	1.0	53
28	28	36	*35	30	68	86	65	103	15	3.5	.9	49
29	34	34	35	32	-	77	74	90	19	3.2	.9	44
30	37	26	34	29	-------	74	69	88	26	*3.0	.8	40
31	36	-------	34	25	-------	66	-------	81	-------	5.0	18	-------
Total	785	740	1,374	888	865.4	1,961	2,078	6,040	999.0	307.9	237.4	3,610
Mean	25.3	24.7	44.3	28.6	30.9	63.3	69.3	195	33.3	9.93	7.66	120
(†)	-468	-208	+234	-41	+501	+310	+20	0	0	-47	-20	+40

Adjusted for change in contents in Tower Hill Pond

Mean	1.97	13.9	56.0	26.6	58.6	78.7	70.3	195	33.0	7.59	6.66	122
Cfsm	0.071	0.500	2.01	0.957	2.11	2.83	2.53	7.01	1.20	0.273	0.240	4.39
In.	0.08	0.56	2.32	1.10	2.19	3.27	2.82	8.08	1.34	0.31	0.28	4.91

	Observed			Adjusted			
Calendar year 1953:	Max 445	Min 0.2	Mean 52.8	Mean 55.1	Cfsm 1.98	In. 26.91	
Water year 1953-54:	Max 558	Min 0.8	Mean 54.5	Mean 55.8	Cfsm 2.01	In. 27.26	

* Discharge measurement made on this day.
† Change in contents in Tower Hill Pond, in millions of gallons.

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 1954.

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.--45 years, 285 cfs.

Extremes.--Maximum discharge during year, 4,410 cfs Sept. 12 (gage height, 8.62 ft); minimum, 20 cfs Oct. 2-4.
1909-54: 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, which are fair. Some diurnal fluctuation caused by mill above station.

Revisions (water years).--WSP 431: 1909-13 calendar years, 1914. 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), 1949(M).

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 4				Mar. 5 to Sept. 30			
2.0	18	3.5	325	2.3	36	5.0	1,080
2.1	24	4.0	535	2.6	78	6.0	1,810
2.3	42	5.0	1,080	3.0	167	8.0	3,670
2.7	104	6.0	1,840	3.5	325	8.5	4,270
3.1	195			4.0	535		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	170	225	160	160	490	345	357	361	454	346	2,090
2	20	106	207	125	150	*846	333	294	337	337	258	780
3	20	106	178	145	145	867	313	268	385	245	187	433
4	20	93	158	165	180	1,330	232	732	353	177	190	317
5	22	90	272	170	200	945	217	1,040	357	129	177	242
6	24	81	413	175	190	620	272	675	309	165	160	162
7	34	90	795	160	170	465	279	535	294	195	138	141
8	46	112	959	110	140	463	245	458	286	136	116	177
9	42	142	544	105	160	421	236	1,030	262	129	86	170
10	40	124	592	100	155	397	242	1,870	242	105	165	187
11	33	102	840	105	150	369	203	1,510	200	92	245	639
12	32	91	548	130	135	329	206	1,130	177	86	187	3,710
13	34	83	417	125	105	313	226	784	132	98	143	1,780
14	37	72	470	115	95	276	212	625	138	88	125	884
15	34	69	978	130	100	254	200	535	212	75	88	660
16	34	58	774	135	145	286	*212	1,380	361	68	75	530
17	33	81	520	115	330	286	357	2,500	286	66	75	872
18	34	80	370	100	480	262	1,710	1,180	236	60	73	823
19	23	67	320	105	420	242	1,600	796	203	54	66	610
20	*24	*55	270	115	380	551	828	645	160	64	63	665
21	32	52	262	150	320	834	610	768	118	84	63	566
22	33	42	311	310	560	576	508	2,230	120	86	57	481
23	28	63	385	250	800	458	429	1,930	118	82	50	421
24	22	209	320	190	526	389	441	1,120	*136	86	46	345
25	27	214	260	*155	522	361	385	862	132	73	48	309
26	28	848	210	155	691	580	306	*691	118	66	*50	232
27	58	530	205	230	635	580	309	562	86	118	49	214
28	61	341	205	520	540	445	417	504	88	109	46	206
29	116	255	215	330	-	405	535	463	177	88	42	190
30	259	213	215	250	------	393	433	486	490	*84	39	167
31	280	--	175	200	------	369	---	433	-- --	90	299	- -
Total	1,553	4,639	12,613	5,330	8,584	15,402	12,841	28,393	6,874	3,789	3,752	19,003
Mean	50.1	155	407	172	307	497	428	916	229	122	121	633
Cfsm	0.293	0.906	2.38	1.01	1.80	2.91	2.50	5.36	1.34	0.713	0.708	3.70
In.	0.34	1.01	2.74	1.16	1.87	3.35	2.79	6.18	1.49	0.82	0.82	4.13

Calendar year 1953: Max 3,310 Min 20 Mean 371 Cfsm 2.17 In. 29.44
Water year 1953-54: Max 3,710 Min 20 Mean 336 Cfsm 1.96 In. 26.70

Peak discharge (base, 2,250 cfs).--Apr. 18 (9 to 10 p.m.) 2,380 cfs (6.71 ft); May 17 (3 to 4:30 a.m.) 3,070 cfs (7.42 ft); May 22 (10 to 11 p.m.) 2,530 cfs (6.88 ft); Sept. 1 (9 a.m.) 2,520 cfs (6.87 ft); Sept. 12 (12 m.) 4,410 cfs (8.62 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 17-20, Dec. 24 to Feb. 23, Mar. 7.

North Nashua River near Leominster, Mass.

Location.--Lat 42°30'06", long 71°43'23", on right bank 1 1/8 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 1954.

Gage.--Water-stage recorder. Datum of gage is 270.04 ft above mean sea level, datum of 1929.

Average discharge.--19 years, 192 cfs.

Extremes.--Maximum discharge during year, 5,800 cfs Sept. 11 (gage height, 9.60 ft), from rating curve extended above 2,300 cfs by logarithmic plotting; minimum, 20 cfs Aug. 26; minimum daily, 31 cfs Oct. 18.
1935-54: Maximum discharge, 16,300 cfs Mar. 18, 1936 (gage height, 20.53 ft, from floodmarks), by computation of flow over dam; minimum, 11 cfs Aug. 29, 1948; minimum daily, 22 cfs Sept. 27, 1936.

Remarks.--Records excellent except those for periods of shifting control or backwater from debris, 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 1953-54, except periods of shifting control or backwater from debris (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 18				Apr. 19 to Sept. 30			
1.4	31	5.0	910	1.5	39	4.0	470
2.0	90	6.0	1,590	2.0	90	5.0	1,010
3.0	221	7.0	2,510	2.5	150	6.0	1,780
4.0	447			3.0	221	7.0	2,830
				3.5	319		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	45	83	106	93	130	267	202	216	267	172	109	532
2	44	78	103	96	125	432	180	198	219	135	*77	221
3	42	78	89	96	120	413	179	244	199	99	93	184
4	32	77	82	141	145	670	142	464	183	77	90	147
5	40	68	260	124	137	416	166	395	163	91	78	103
6	57	65	194	125	119	326	162	323	158	109	71	99
7	81	129	490	120	107	269	246	285	163	78	60	142
8	57	140	306	96	117	263	219	271	133	79	50	137
9	50	115	215	84	114	236	187	*629	125	68	78	109
10	45	96	319	83	106	236	164	*670	115	58	166	117
11	34	86	277	96	101	*224	167	610	119	52	115	1,980
12	37	82	200	112	94	189	236	438	101	56	90	*2,300
13	51	78	192	96	84	190	199	353	98	58	75	700
14	*45	72	394	88	84	216	171	311	107	62	64	462
15	46	62	519	89	98	236	154	259	293	66	56	353
16	46	63	350	86	158	208	173	976	248	67	63	323
17	44	68	257	83	277	190	542	660	168	65	66	398
18	31	*61	196	89	259	167	2,030	402	144	61	63	351
19	34	60	159	94	223	127	*925	332	115	62	63	328
20	47	60	150	89	199	384	550	*298	98	65	62	389
21	45	56	166	311	177	348	392	761	98	79	54	313
22	46	45	191	261	394	300	328	1,340	84	70	50	292
23	47	148	193	153	313	251	302	782	106	68	55	257
24	44	137	150	126	253	221	288	510	109	68	58	207
25	85	289	132	130	328	230	255	386	*96	62	*57	183
26	83	386	127	125	323	428	246	330	90	63	56	177
27	60	208	123	236	321	328	231	288	72	80	55	184
28	152	126	*127	248	260	257	336	257	79	70	50	162
29	192	108	133	*158	-	255	317	228	172	66	41	154
30	216	106	118	133	-------	231	267	410	235	75	46	153
31	105	-- -	113	123	-------	207	--------	319	--- ----	86	1,120	--
Total	1,983	3,230	6,431	3,984	5,175	8,715	9,956	13,945	4,357	2,367	3,231	11,457
Mean	64.0	108	207	129	185	281	332	450	145	76.4	104	382
Cfsm	0.598	1.01	1.93	1.21	1.73	2.63	3.10	4.21	1.36	0.714	0.972	3.57
In.	0.69	1.12	2.24	1.38	1.80	3.03	3.46	4.85	1.51	0.82	1.12	3.98

Calendar year 1953: Max 2,460 Min 28 Mean 257 Cfsm 2.40 In. 32.59
Water year 1953-54: Max 2,300 Min 31 Mean 205 Cfsm 1.92 In. 26.00

Peak discharge (base, 1,000 cfs).--Apr. 18 (9 a.m.) 2,750 cfs (6.93 ft); May 16 (4 p.m.) 1,320 cfs (5.51 ft); May 22 (12 m.) 1,500 cfs (5.72 ft); Aug. 31 (4 p.m.) 2,460 cfs (7.19 ft); Sept. 11 (10 p.m.) 5,800 cfs (9.60 ft).
* Discharge measurement made on this day.
Note.--Backwater from debris May 16-19, 21-26, 30, 31, Aug. 31, Sept. 1, 11-13. Shifting-control method used Apr. 18, Sept. 14-23.

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 1954.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 505 ft (from topographic map).

Average discharge.--8 years, 3.56 cfs.

Extremes.--Maximum discharge during year, 395 cfs Sept. 11 (gage height, 4.58 ft), from rating curve extended above 56 cfs; minimum, 0.04 cfs Aug. 22, 23, 25-30.
1946-54: Maximum discharge, that of Sept. 11, 1954; minimum, 0.01 cfs several days in August and September 1949, Aug. 16-19, Sept. 10, Oct. 1-10, 1950.

Remarks.--Records good except those for periods of ice effect or no gage-height record and those below 0.2 cfs, which are fair. Flow regulated by reservoir since 1949.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 15, 16, 18-30)

Oct. 1 to Mar. 10				Mar. 11 to Sept. 30					
2.2	0.94	2.7	4.2	1.80	0.04	2.3	1.35	2.9	11.0
2.3	1.35	2.8	6.6	1.85	.08	2.4	1.8	3.0	15.0
2.4	1.75	2.9	10.1	1.9	.14	2.5	2.4	3.1	20
2.5	2.1	3.0	14.5	2.0	.32	2.6	3.4	3.3	38
2.6	2.8			2.1	.59	2.7	5.3	3.6	84
				2.2	.94	2.8	7.8		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a5.8	2.7	2.35	2.25	2.2	5.0	2.6	2.6	2.2	1.5	0.30	4.5
2	a5.6	2.25	2.25	2.2	2.25	8.8	2.5	2.6	2.0	1.07	*.20	1.95
3	a5.4	2.0	2.15	2.2	2.25	7.3	2.4	3.2	1.95	.65	.30	1.5
4	a5.2	1.75	2.0	3.7	2.9	11.7	2.1	9.0	1.8	.50	.65	3.9
5	a5.2	1.55	7.0	2.9	3.1	6.6	2.1	5.3	1.95	.59	.40	2.6
6	a5.6	1.4	3.8	2.8	2.6	5.5	2.25	3.6	2.0	1.6	.26	2.1
7	a6.0	3.4	11.4	2.7	2.25	5.0	4.3	3.0	1.75	.94	.18	3.4
8	a5.5	3.6	5.5	2.15	2.15	4.8	2.9	3.4	1.5	.82	.12	3.6
9	a5.0	2.4	4.2	1.95	2.15	4.4	2.5	9.8	1.35	.62	.34	2.7
10	4.8	2.0	8.1	2.0	2.05	4.4	2.2	9.4	1.3	.45	2.7	2.4
11	4.8	1.85	5.6	2.0	2.0	*4.3	2.35	7.0	1.16	.28	1.95	71
12	4.6	1.75	4.4	2.05	b1.85	3.7	3.0	4.5	1.02	.24	.94	34
13	4.4	1.6	4.6	2.0	b1.45	3.7	2.5	3.6	1.16	.18	.59	18.8
14	*3.9	1.45	13.1	1.9	b1.45	4.5	2.2	3.1	1.16	.15	.37	14.2
15	3.2	1.45	11.7	1.95	2.0	4.1	2.1	2.9	2.45	.11	.26	10.4
16	2.7	1.3	7.3	1.95	3.8	2.9	2.45	13.1	2.35	.08	.24	9.4
17	2.15	1.3	5.5	1.95	7.6	2.6	12.8	6.4	1.65	.07	.18	13.0
18	1.85	*1.16	4.4	1.8	6.0	2.3	25	3.7	1.3	.07	.12	9.4
19	1.6	1.16	3.6	1.8	4.6	2.15	*7.0	3.2	.98	.07	.11	8.4
20	1.45	1.11	3.5	1.95	3.9	8.6	4.9	*3.0	.76	.06	.10	8.8
21	1.3	1.07	3.6	7.9	4.0	5.5	4.1	14.6	.59	.10	.08	7.0
22	1.16	1.02	4.6	b5.2	9.5	3.4	3.6	14.4	.48	.10	.07	7.0
23	1.02	3.2	*4.4	b3.2	5.5	2.9	3.4	7.2	.63	.07	.06	5.1
24	.98	2.8	3.5	2.8	4.4	2.6	3.6	5.3	.94	.08	.06	4.3
25	2.05	8.2	3.1	2.6	8.4	3.7	3.1	4.3	.65	.10	.06	3.7
26	2.0	7.7	3.0	2.7	7.0	8.2	2.9	3.6	.53	.15	.04	3.7
27	1.45	3.5	2.8	5.1	6.6	4.3	2.7	3.0	.45	.32	.05	3.2
28	4.6	3.0	2.6	b4.4	5.2	3.2	5.4	2.8	*.43	.24	.04	2.9
29	6.3	2.7	3.0	b3.1	-	3.0	4.1	2.6	1.8	.22	.04	2.6
30	7.2	2.35	2.8	b2.6	------	2.8	3.1	3.4	2.35	.35	.04	2.7
31	3.6	---	*2.6	2.5	-------	2.6	-------	2.6	--- ----	.30	22	---
Total	116.41	72.72	148.45	86.30	109.15	144.55	126.15	166.2	40.64	12.08	32.85	268.25
Mean	3.76	2.42	4.79	2.78	3.90	4.66	4.20	5.36	1.35	0.390	1.06	8.94
Cfsm	1.65	1.06	2.10	1.22	1.71	2.04	1.84	2.35	0.592	0.171	0.465	3.92
In.	1.90	1.19	2.42	1.41	1.78	2.36	2.06	2.71	0.66	0.20	0.54	4.38

Calendar year 1953: Max 36 Min 0.02 Mean 4.61 Cfsm 2.02 In. 27.45
Water year 1953-54: Max 71 Min 0.04 Mean 3.63 Cfsm 1.59 In. 21.61

Peak discharge (base, 45 cfs).--Apr. 18 (4:30 to 5 p.m.) 47 cfs (3.37 ft); Aug. 31 (1:30 p.m.) 98 cfs (3.67 ft); Sept. 11 (3 p.m.) 395 cfs (4.58 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records, reservoir records, and records for Ware River near Barre.

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.

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 1954.

Average discharge.--58 years, 185 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 1953 to September 1954

Month	Runoff (millions of gallons)	Discharge per square mile		Runoff (inches)	Rainfall (inches)
		Millions of gallons per day	Cubic feet per second		
October	1,100.0	0.330	0.510	0.59	6.09
November	1,644.7	.509	.788	.88	4.21
December	4,655.7	1.395	2.16	2.49	5.03
Calendar year 1953	64,548.1	1.642	2.54	34.51	55.11
January	3,202.2	.959	1.48	1.71	2.58
February	3,833.8	1.271	1.97	2.05	2.72
March	5,884.5	1.763	2.73	3.14	3.60
April	6,561.0	2.031	3.14	3.51	4.70
May	8,306.3	2.488	3.85	4.44	6.18
June	2,484.1	.769	1.19	1.33	3.26
July	1,343.7	.402	.622	.72	3.51
August	2,251.5	.674	1.04	1.20	7.49
September	9,581.7	2.966	4.59	5.12	7.59
Water year 1953-54	50,849.2	1.294	2.00	27.18	56.96

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 1954.

Gage.--Water-stage recorder. Datum of gage is 244.27 ft above mean sea level, datum of 1929.

Average discharge.--5 years, 119 cfs.

Extremes.--Maximum discharge during year, 2,470 cfs Sept. 12 (gage height, 6.99 ft); minimum daily, 6.1 cfs Oct. 20.
1949-54: Maximum discharge, that of Sept. 12, 1954; minimum daily, 4.3 cfs Aug. 14, 1950.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are good. 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 table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.5	5.3	3.5	234
1.7	11	4.0	362
1.9	20	5.0	760
2.1	32	6.0	1,440
2.5	68	6.5	1,920
3.0	138		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.7	43	59	45	b85	162	114	127	186	153	58	696
2	7.7	42	53	62	76	227	108	104	146	106	80	267
3	8.1	33	54	51	73	269	104	135	136	82	46	135
4	11	25	52	83	76	356	86	319	128	42	46	101
5	11	24	70	80	87	310	97	403	125	49	50	72
6	19	23	141	73	82	200	92	259	120	86	46	64
7	20	28	210	77	65	150	106	190	122	77	28	64
8	19	36	288	62	73	153	107	164	101	56	16	61
9	16	58	166	54	62	132	99	322	94	45	23	68
10	16	38	155	42	64	*128	89	580	90	48	70	58
11	11	32	216	58	57	124	67	491	67	26	103	229
12	11	32	155	55	b56	108	107	378	64	31	66	*1,870
13	13	31	119	b57	b54	104	*100	267	58	32	48	649
14	13	28	153	b50	30	97	88	210	*73	30	42	336
15	13	17	362	48	55	120	83	181	133	29	22	241
16	*11	23	281	44	57	106	79	742	219	28	36	184
17	6.4	*29	175	b42	128	100	152	892	145	27	31	284
18	6.6	31	124	b52	177	96	619	438	104	14	23	342
19	6.4	20	106	50	150	89	623	281	74	21	22	241
20	6.1	20	92	56	128	170	301	225	54	a27	22	241
21	6.4	23	108	70	110	328	210	316	74	a30	22	204
22	6.6	15	104	b127	205	212	171	970	49	a23	12	169
23	6.9	24	118	b89	250	152	150	816	42	*a20	16	141
24	6.9	61	100	72	164	130	150	*456	58	20	*20	118
25	9.3	76	73	74	169	124	128	336	61	13	20	101
26	10	212	92	66	248	210	133	269	50	24	20	88
27	10	158	69	110	214	214	118	216	41	48	20	100
28	35	99	*a83	b180	181	148	152	186	59	41	20	83
29	51	69	76	b115	-	145	202	171	64	33	13	69
30	92	73	74	b110	------	132	157	241	176	30	27	*68
31	93	----	73	b100	------	119	------	262	------	30	86	----
Total	560.1	1,423	4,001	2,254	3,176	5,115	4,792	10,647	2,913	1,321	1,154	7,344
Mean	18.1	47.4	129	72.7	113	165	160	343	97.1	42.6	37.2	245
Cfsm	0.288	0.755	2.05	1.16	1.80	2.63	2.55	5.46	1.55	0.678	0.592	3.90
In.	0.33	0.84	2.37	1.33	1.88	3.03	2.84	6.31	1.73	0.78	0.68	4.35

Calendar year 1953: Max 1,300 Min 5.3 Mean 138 Cfsm 2.20 In. 29.84
Water year 1953-54: Max 1,870 Min 6.1 Mean 122 Cfsm 1.94 In. 26.47

Peak discharge (base, 700 cfs).--Apr. 18 (11 to 12 p.m.) 894 cfs (5.24 ft); May 17 (4 to 6 a.m.) 1,100 cfs (5.56 ft); May 22 (7 to 9 p.m.) 1,140 cfs (5.61 ft); Sept. 1 (10 to 11 a.m.) 859 cfs (5.18 ft); Sept. 12 (7 a.m.) 2,470 cfs (6.99 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of 2 discharge measurements, weather records, and recorded range in stage.

b Stage-discharge relation affected by ice.

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 1954.

Gage.--Water-stage recorder. Datum of gage is 169.04 ft above mean sea level, datum of 1929.

Average discharge.--19 years, 527 cfs (adjusted for wastage into Nashua River).

Extremes.--Maximum discharge during year, 4,860 cfs Sept. 13 (gage height, 9.85 ft); minimum daily, 6.1 cfs Jan. 1.
1935-54: 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 excellent except those for periods of backwater from aquatic vegetation, which are fair. Figures of 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.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	124	39	571	6.1	247	811	651	294	1,120	750	52	1,600
2	127	669	362	6.4	354	980	543	460	990	584	419	1,900
3	69	388	354	108	521	870	174	923	945	128	366	1,170
4	15	291	350	*730	566	1,120	10	1,000	714	11	366	657
5	80	287	127	584	431	1,410	558	1,200	192	21	284	302
6	121	291	181	423	548	1,130	674	1,230	161	584	269	418
7	114	105	959	369	177	575	664	1,040	821	674	81	669
8	189	85	1,060	369	263	955	660	529	692	435	12	501
9	196	593	1,040	126	369	975	642	1,010	674	325	203	407
10	67	489	990	7.7	369	850	207	1,920	477	70	351	530
11	14	350	865	275	369	651	7.3	1,990	407	11	366	1,030
12	*149	324	227	377	369	579	502	1,790	167	201	355	*3,250
13	193	279	251	373	365	485	678	1,420	10	204	355	4,760
14	121	159	904	373	130	164	664	1,140	558	176	92	*3,800
15	129	8.6	1,080	480	260	471	646	650	*687	182	45	2,430
16	120	198	1,230	140	369	678	*415	1,180	700	190	338	1,590
17	73	*268	1,050	7.7	477	669	127	2,400	895	65	276	1,450
18	58	268	1,000	274	840	660	1,310	2,170	895	11	154	1,160
19	280	298	303	373	935	588	2,590	1,540	175	150	135	1,080
20	217	358	46	369	628	146	2,370	1,210	7.7	182	141	1,370
21	203	122	803	570	153	659	1,640	1,260	276	179	148	1,230
22	203	9.4	830	682	457	1,160	1,210	2,060	358	175	48	1,110
23	322	273	610	215	940	985	1,020	2,870	362	232	112	1,020
24	133	723	359	162	980	945	580	2,660	365	94	*151	950
25	13	714	6.4	695	950	682	682	1,900	373	*9.8	151	251
26	356	367	158	574	935	795	997	1,480	141	273	151	322
27	328	714	357	501	930	915	890	1,170	245	225	151	923
28	354	588	811	602	274	*283	750	1,020	559	*225	141	790
29	381	402	810	620	-	862	915	527	584	221	54	431
30	831	617	419	457	-	960	970	782	705	225	124	358
31	368	-	207	132	-	741	-	940	-	100	360	-
Total	5,948	10,277.0	18,320.4	10,980.9	14,206	23,754	23,746.3	41,765	15,255.7	6,911.8	6,251	37,459
Mean	192	343	591	354	507	766	792	1,347	509	223	202	1,249
(†)	7.8	62.2	6.9	6.3	7.0	7.4	7.3	4.2	9.3	6.5	8.1	35.9

Adjusted for wastage (figures represent net discharge from net drainage area)

Mean	184	280	584	348	500	759	784	1,343	499	216	194	1,213
Cfsm	0.582	0.886	1.85	1.10	1.58	2.40	2.48	4.25	1.58	0.684	0.614	3.84
In.	0.67	0.99	2.13	1.27	1.65	2.77	2.77	4.90	1.76	0.79	0.71	4.28

	Observed	Adjusted
Calendar year 1953:	Max 4,040 Min 6.4 Mean 783	Mean 677 Cfsm 2.14 In. 29.09
Water year 1953-54:	Max 4,760 Min 6.1 Mean 589	Mean 575 Cfsm 1.82 In. 24.69

* 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.

Note.--Backwater from aquatic vegetation Oct. 1 to Dec. 7, Dec. 12-14, 19-21, 24-26, Dec. 31 to Jan. 3, Jan. 9-11, 16-18, 23, 24, 31, Feb. 1, 7, 8, 14, 15, 21, 22, 28, Mar. 7, 14, 15, 20, 21, 28, Apr. 3, 4, 10-12, 17, 24, May 1, 8, 29, June 5, 6, 12-14, June 19 to Sept. 1, Sept. 3-11, 16-30.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 145 ft (from topographic map).

Average discharge.--13 years, 166 cfs.

Extremes.--Maximum discharge during year, 2,040 cfs Sept. 13 (gage height, 6.47 ft); minimum daily, 0.8 cfs Oct. 4.
1941-54: Maximum discharge, that of Sept. 13, 1954; minimum daily, that of Oct. 4, 1953.

Remarks.--Records good. Flow regulated by mills above station.

Revisions (water years).--WSP 1231: 1945-46.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 16				Nov. 17 to Sept. 11				Sept. 11-30	
1.36	0.8	1.7	17	1.5	4.2	3.0	249	2.8	204
1.4	1.4	1.9	38	1.6	8.7	3.5	412	3.0	260
1.5	4.2	2.1	65	1.8	23	4.0	610	4.0	610
1.6	9.1	2.4	116	2.1	58	5.0	1,060	5.0	1,090
				2.5	129			6.0	1,700
								6.5	2,060

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	71	159	131	133	278	214	284	294	115	57	390
2	20	64	137	129	127	278	204	255	252	109	58	431
3	1.1	59	119	123	123	290	187	249	220	90	72	359
4	.8	55	105	162	146	369	178	312	202	80	92	281
5	24	51	148	185	190	390	175	390	195	75	90	217
6	24	52	197	185	192	356	173	383	195	85	73	164
7	9.3	54	278	185	175	306	175	345	185	80	53	140
8	1.1	61	322	157	157	275	195	303	168	78	60	157
9	22	67	300	140	144	252	187	420	159	68	88	185
10	*1.1	61	303	119	135	*238	173	*550	150	61	125	183
11	1.0	55	287	117	127	227	195	582	142	60	164	475
12	23	54	264	119	117	214	162	534	131	62	164	*1,550
13	24	52	269	117	92	200	*155	470	135	62	142	1,970
14	26	50	322	105	82	210	144	398	140	66	113	1,520
15	11	50	470	115	83	244	133	342	185	64	96	1,040
16	4.8	51	502	115	103	249	137	427	220	49	72	786
17	1.1	*53	456	113	173	236	291	514	207	8.2	65	722
18	*1.2	48	362	107	244	214	722	502	*175	8.2	55	722
19	26	35	272	103	252	197	910	*442	146	28	52	682
20	24	35	241	107	222	249	816	376	127	29	52	632
21	24	20	222	155	204	319	634	464	113	30	37	570
22	10	20	*227	222	264	326	506	710	94	28	32	520
23	10	65	244	210	322	287	416	793	100	29	46	458
24	9.9	168	233	180	322	249	383	748	137	18	*41	401
25	3.3	197	207	159	319	233	362	638	135	40	34	354
26	23	294	187	150	329	287	335	530	117	51	35	319
27	23	319	178	183	329	309	306	435	105	47	39	293
28	26	281	168	217	306	297	312	373	96	*50	10	*266
29	39	238	162	195	-	269	339	326	98	49	25	237
30	86	192	162	*178	------	244	326	329	111	56	39	223
31	103		155	155	------	225	--------	322	- ----	41	146	--- -
Total	625.7	2,872	7,660	4,638	5,412	8,317	9,409	13,746	4,734	1,716.4	2,227	16,247
Mean	20.2	95.7	247	150	193	268	314	443	158	55.4	71.8	542
Cfsm	0.174	0.825	2.13	1.29	1.66	2.31	2.71	3.82	1.36	0.478	0.619	4.67
In.	0.20	0.92	2.46	1.49	1.74	2.67	3.02	4.41	1.52	0.55	0.71	5.21

Calendar year 1953: Max 1,100 Min 0.8 Mean 232 Cfsm 2.00 In. 27.12
Water year 1953-54: Max 1,970 Min 0.8 Mean 213 Cfsm 1.84 In. 24.90

* Discharge measurement made on this day.

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 1881.

Records available.--January 1875 to September 1954.

Average discharge.--79 years, 111 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 1953 to September 1954

Month	Runoff (millions of gallons)	Discharge per square mile		Runoff (inches)	Rainfall (inches)
		Millions of gallons per day	Cubic feet per second		
October	470.3	0.202	0.312	0.36	5.54
November	1,341.9	.595	.920	1.03	5.76
December	4,016.9	1.723	2.67	3.07	4.90
Calendar year 1953	32,401.9	1.180	1.83	24.78	54.42
January	2,279.4	.978	1.51	1.74	2.76
February	3,024.1	1.436	2.22	2.31	2.78
March	3,674.3	1.576	2.44	2.81	3.82
April	4,502.9	1.996	3.09	3.45	4.92
May	6,061.7	2.600	4.02	4.64	6.85
June	1,214.6	.538	.832	.93	3.04
July	-250.3	-.107	-.165	-.19	2.07
August	431.6	.185	.286	.33	6.69
September	6,693.3	2.967	4.59	5.12	10.27
Water year 1953-54	33,460.7	1.219	1.89	25.60	59.40

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

Lake Cochituate Outlet at Cochituate, Mass.

Location.--Lat 42°18'45", long 71°23'15", at outlet three-eighths of a mile north of Cochituate railroad station, Middlesex County, and 1¼ miles upstream from Sudbury River.

Drainage area.--17.40 sq mi since 1937.

Records available.--January 1863 to September 1954.

Average discharge.--91 years, 25.5 cfs (adjusted to present drainage area).

Remarks.--Records adjusted for change in reservoir contents, diversions, and wastage. Entire flow available, if needed, for use of Boston metropolitan district; no diversion for water supply since 1931.

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

Monthly discharge and rainfall, water year October 1953 to September 1954

Month	Runoff (millions of gallons)	Discharge per square mile		Runoff (inches)	Rainfall (inches)
		Millions of gallons per day	Cubic feet per second		
October	252.9	0.469	0.725	0.84	5.59
November	732.8	1.404	2.17	2.42	7.91
December	1,829.2	3.391	5.25	6.05	5.52
Calendar year 1953	12,859.0	2.025	3.13	42.52	61.47
January	1,536.4	2.848	4.41	5.08	3.06
February	874.8	1.796	2.78	2.89	3.51
March	1,139.5	2.113	3.27	3.77	4.25
April	1,153.4	2.210	3.42	3.81	5.76
May	1,802.0	3.341	5.17	5.96	8.44
June	443.7	.850	1.32	1.47	3.25
July	204.3	.379	.586	.68	2.82
August	965.5	1.790	2.77	3.19	7.15
September	2,827.2	5.416	8.38	9.35	11.70
Water year 1953-54	13,761.7	2.167	3.35	45.51	68.96

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 1954 (monthly discharge only for some periods, published in WSP 1301).

Gage.--Water-stage recorder. Datum of gage is 67.41 ft above mean sea level, datum of 1929.

Average discharge.--18 years, 446 cfs (adjusted to net drainage area).

Extremes.--Maximum discharge during year, 3,340 cfs Sept. 15 (gage height, 8.05 ft); minimum, 26 cfs Oct. 17; minimum daily, 73 cfs Oct. 3, 17.
1936-54: Maximum discharge, 3,790 cfs July 29, 1938 (gage height, 8.11 ft); minimum, 7.0 cfs July 12, Dec. 10, 1949; minimum daily, 13 cfs Aug. 28, 1949.

Remarks.--Records excellent except those for periods of ice effect or backwater from debris and 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 1953-54, except periods of ice effect or backwater from debris and aquatic vegetation (gage height, in feet, and discharge, in cubic feet per second)

3.9	62	6.0	1,100
4.2	120	7.0	2,040
4.5	204	8.0	3,270
5.0	430		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	100	402	805	690	*b640	1,080	920	1,180	1,390	414	192	408
2	98	414	763	657	618	1,060	890	1,140	1,300	397	210	515
3	73	402	*716	650	587	1,060	826	1,120	1,190	380	*197	618
4	107	402	683	*696	612	1,100	798	1,120	1,100	365	240	650
5	126	375	683	690	657	1,120	798	1,140	1,030	360	261	670
6	110	350	709	722	670	1,120	777	1,170	1,000	365	265	644
7	105	365	819	728	696	1,110	742	1,180	965	350	255	650
8	110	446	861	683	696	1,090	728	1,160	882	330	259	638
9	108	463	882	b610	670	*1,060	709	1,390	826	316	291	624
10	95	452	920	b555	650	1,000	690	1,560	770	297	340	631
11	122	424	928	b550	618	965	676	*1,710	728	284	375	1,060
12	139	419	912	545	b540	928	*670	1,770	676	287	408	1,870
13	138	408	912	b545	b495	875	650	1,760	638	261	419	2,430
14	124	350	995	b550	474	861	624	1,710	612	251	419	*3,060
15	119	345	1,120	551	474	882	581	1,590	638	237	414	3,270
16	110	345	1,200	557	497	875	545	1,700	670	228	408	3,270
17	73	311	1,240	b575	557	868	644	1,800	676	189	370	3,120
18	100	297	1,250	b570	644	861	1,060	1,820	683	201	350	2,940
19	140	297	1,190	551	709	847	1,340	1,790	644	215	335	2,800
20	114	275	1,140	533	716	875	1,590	1,730	612	177	316	2,670
21	107	239	1,100	587	742	935	1,720	1,730	605	172	288	2,510
22	*105	251	1,060	638	819	995	1,730	1,810	563	169	275	2,360
23	109	345	1,020	b645	890	1,020	1,670	1,940	551	166	273	2,170
24	109	436	980	650	950	1,010	1,580	2,060	515	146	260	2,000
25	153	563	942	657	995	995	1,500	2,080	491	167	239	1,840
26	198	702	905	638	1,030	988	1,430	2,030	458	192	229	1,710
27	187	777	854	676	1,050	988	1,350	1,910	441	165	227	1,580
28	237	826	833	b695	1,070	1,010	1,300	*1,790	430	175	194	1,470
29	287	854	791	b670	-	1,020	1,260	1,660	419	184	208	1,370
30	336	847	756	b670	-------	980	1,240	1,550	419	187	222	1,260
31	365	-------	722	676	-------	950	-------	1,460	-------	172	295	-------
Total	4,404	13,382	28,691	19,410	19,766	30,528	31,038	49,560	21,922	7,797	9,034	50,808
Mean	142	446	926	626	706	985	1,035	1,599	731	252	291	1,694
(†)	97.2	189	334	276	231	292	300	403	176	101	158	573

Adjusted for wastage and diversion (figures represent net discharge from net drainage area)

Mean	44.8	258	592	350	475	692	735	1,196	555	150	133	1,121
Cfsm	0.144	0.827	1.90	1.12	1.52	2.22	2.36	3.83	1.78	0.481	0.426	3.59
In.	0.17	0.92	2.19	1.29	1.59	2.56	2.63	4.42	1.98	0.55	0.49	4.01

	Observed			Adjusted			
Calendar year 1953:	Max 2,850	Min 52	Mean 801	Mean 551	Cfsm 1.77	In. 23.98
Water year 1953-54:	Max 3,270	Min 73	Mean 784	Mean 524	Cfsm 1.68	In. 22.80

* 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.
b Stage-discharge relation affected by ice.
Note.--Backwater from debris and aquatic vegetation Oct. 1 to Jan. 2, May 30 to Sept. 11.

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 1954.
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 locks and canals) was indicative of flow including that of Concord River.
Average discharge.--31 years, 7,209 cfs (adjusted for wastage into Merrimack River).
Extremes.--Maximum discharge during year, 47,900 cfs May 11 (gage height, 51.70 ft); minimum daily, 436 cfs Oct. 4.
1923-54: 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 84, 112 for description and monthly change in contents of many of these reservoirs.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

41.2	383	43.0	4,270
41.5	698	44.0	7,820
42.0	1,520	47.0	21,400
42.5	2,740	52.0	49,800

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,540	3,820	6,230	4,720	*6,370	13,000	9,800	15,500	16,000	9,380	2,370	11,500
2	1,510	4,450	5,550	4,080	5,770	13,100	9,120	14,300	14,300	8,790	5,060	16,600
3	814	3,790	*4,730	4,010	5,430	16,500	8,180	14,100	15,600	6,340	*4,690	12,500
4	436	3,110	4,920	4,850	5,400	19,800	7,660	15,500	16,600	5,400	4,580	8,420
5	1,640	2,480	3,360	5,260	5,740	22,600	7,980	21,200	15,100	4,820	3,560	6,160
6	1,650	1,870	5,100	5,470	5,430	19,400	7,120	23,900	14,000	4,990	3,490	4,330
7	1,630	1,210	9,460	5,290	5,120	15,500	7,040	21,200	15,400	5,600	1,500	4,970
8	1,620	1,340	15,900	4,660	5,880	13,100	7,780	18,100	15,300	5,600	1,670	4,850
9	1,570	3,530	17,700	2,970	5,340	12,000	9,800	19,400	13,800	4,920	3,750	5,120
10	759	3,230	14,700	a2,900	5,150	11,400	12,100	36,800	12,400	3,920	3,450	5,090
11	465	2,490	14,700	a4,800	4,910	9,500	11,300	*47,400	11,000	2,850	4,380	10,200
12	775	2,950	14,700	a4,500	b5,000	9,040	11,200	43,700	9,800	4,110	3,890	32,000
13	2,110	3,190	12,800	a5,100	b3,800	8,420	a15,500	36,200	8,660	3,170	3,700	40,800
14	1,980	1,570	12,200	4,210	3,640	7,620	a14,500	32,600	8,960	2,900	1,750	35,700
15	1,870	1,240	12,600	3,580	4,370	7,420	a12,500	27,600	8,260	2,930	1,460	*27,100
16	1,770	2,690	13,200	3,180	4,500	7,460	a12,000	26,200	9,330	2,940	3,290	21,000
17	653	2,370	12,100	3,860	4,690	7,270	a13,500	36,200	9,920	1,280	3,230	17,800
18	604	2,370	10,300	4,530	6,370	7,380	a25,000	33,400	9,460	948	2,990	17,400
19	1,650	2,280	8,020	3,920	7,230	6,440	a39,000	27,100	7,980	2,990	2,480	17,000
20	1,840	1,900	7,270	4,240	7,500	7,460	a38,000	23,600	7,040	2,860	2,350	16,000
21	1,840	981	7,270	4,390	7,940	11,700	a30,000	21,600	6,190	2,820	1,200	18,000
22	1,830	764	7,380	4,530	10,300	13,600	a27,500	23,800	5,320	2,360	889	16,900
23	1,360	3,350	8,100	4,300	14,300	11,800	*25,900	29,900	4,830	2,340	2,500	14,800
24	963	4,470	7,340	4,620	17,800	10,900	24,900	29,900	4,980	1,120	2,390	13,300
25	948	5,510	6,620	5,500	16,500	10,100	22,300	25,400	4,750	1,240	2,770	11,900
26	2,220	7,930	6,740	4,850	15,600	10,100	18,500	22,000	2,730	3,280	3,010	9,540
27	2,600	12,400	5,570	5,700	14,800	11,400	16,200	19,200	3,420	3,400	2,490	9,800
28	3,120	11,100	6,810	6,620	14,200	11,500	15,200	16,900	4,760	2,940	1,040	9,250
29	4,560	8,180	6,300	7,080	-	10,900	16,500	14,600	4,720	2,740	570	8,540
30	4,510	6,960	6,160	b6,200	-------	10,000	16,900	14,200	6,700	2,790	2,020	7,660
31	4,630	-------	4,720	b5,600	-------	9,920	-------	16,300	-------	1,090	2,610	-------
Total	55,467	113,525	278,550	145,520	219,080	356,330	492,980	767,800	287,310	112,858	85,129	434,230
Mean	1,789	3,784	8,985	4,694	7,824	11,490	16,430	24,770	9,577	3,641	2,746	14,470
(†)	106	252	342	283	239	301	309	409	187	109	168	610

Adjusted for wastage (figures represent net discharge from net drainage area)

Mean	1,683	3,532	8,643	4,411	7,585	11,190	16,120	24,360	9,390	3,532	2,579	13,860
Cfsm	0.380	0.798	1.95	0.997	1.71	2.53	3.64	5.51	2.12	0.798	0.583	3.13
In.	0.44	0.89	2.25	1.15	1.79	2.92	4.07	6.35	2.37	0.92	0.67	3.50

	Observed			Adjusted			
Calendar year 1953:	Max 55,100	Min 383	Mean 9,460	Mean 9,102	Cfsm 2.06	In. 27.93	
Water year 1953-54:	Max 47,400	Min 436	Mean 9,175	Mean 8,899	Cfsm 2.01	In. 27.32	

* 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, records for other stations on Merrimack River, and records for Concord River below River Meadow Brook, at Lowell.
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

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.

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.

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.

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. Beery Co.

Lake Winnipesaukee on Winnipesaukee River (see p. 84).

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.

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.

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.

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 1953 to September 1954

Date	Newfound Lake	Franklin Falls Reservoir	Merrymeeting Lake	Lake Wentworth	Edward MacDowell Reservoir	Blackwater Reservoir	Tower Hill Pond	Massabesic Lake
Sept.30, 1953..	863	135	186	424	10.8	0.3	136.0	333
Oct. 31.....	800	130	164	344	14.4	.7	73.4	387
Nov. 30.....	936	152	146	315	17.9	1.0	45.6	463
Dec. 31.....	1,323	139	175	355	17.0	.8	76.9	448
Jan. 31, 1954..	1,028	130	137	355	17.9	1.0	71.4	402
Feb. 28.....	951	165	148	467	34.5	4.1	138.4	553
Mar. 31.....	1,293	158	228	705	20.5	3.7	179.8	727
Apr. 30.....	1,647	251	322	1,020	25.8	9.3	182.5	770
May 31.....	1,741	216	358	1,034	24.5	5.9	182.5	817
June 30.....	1,582	154	360	961	19.9	1.2	182.5	697
July 31.....	1,443	153	317	845	16.7	.4	176.2	575
Aug. 31.....	1,246	240	284	771	27.1	.9	173.5	567
Sept.30.....	1,528	162	322	905	14.4	1.0	178.9	513

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 1954.

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.--9 years, 34.2 cfs.

Extremes.--Maximum discharge during year, 246 cfs May 11 (gage height, 4.16 ft); minimum daily, 0.26 cfs Oct. 8, 9.
1945-54: Maximum discharge, 352 cfs Mar. 23, 1948 (gage height, 4.81 ft); minimum daily, 0.12 cfs July 30, 1952.

Remarks.--Records excellent. Diurnal fluctuation caused by mill above station. Some regulation at low flow by ponds above station.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.17	0.26	2.1	32
1.2	.41	2.5	61
1.3	1.26	3.0	107
1.4	2.47	3.5	163
1.5	4.4	4.0	225
1.6	7.3	4.2	251
1.8	15		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.30	7.0	46	28	28	*86	51	64	77	17	3.0	7.3
2	.30	7.0	*43	26	25	82	*48	59	*70	*15	2.6	*9.5
3	.30	7.0	40	27	25	77	46	58	64	14	3.5	12
4	.36	6.3	37	30	36	80	42	63	59	12	*3.2	13
5	.78	5.2	42	29	39	71	40	72	56	12	3.3	12
6	.41	6.3	42	31	44	*61	38	80	53	12	3.3	11
7	.51	8.4	49	32	40	55	36	80	51	13	3.3	12
8	.26	11	50	29	37	55	33	77	48	12	3.2	13
9	.26	15	51	27	36	55	30	141	45	12	3.4	13
10	.36	16	54	24	35	53	29	212	42	10	4.9	13
11	.77	17	53	24	33	51	30	242	39	9.0	4.9	47
12	1.35	19	52	24	31	50	31	238	36	8.0	5.8	*112
13	1.35	15	52	23	30	47	31	220	34	7.0	6.6	157
14	1.35	15	58	23	24	47	31	199	31	7.0	6.6	158
15	1.45	14	67	22	24	47	30	177	31	6.6	6.0	151
16	1.6	12	74	21	25	47	30	208	30	5.7	5.7	144
17	1.7	12	69	21	31	47	40	*229	29	4.9	5.2	138
18	1.45	11	59	21	36	45	86	217	28	4.6	4.9	128
19	1.6	9.7	53	21	44	43	129	194	26	4.4	4.6	117
20	1.6	9.0	50	21	42	51	130	173	24	4.2	4.6	107
21	1.35	8.7	49	26	42	59	118	174	23	3.9	4.2	97
22	1.35	8.0	49	26	53	64	108	194	21	3.7	3.9	86
23	1.6	14	49	25	65	62	99	197	20	3.7	3.9	76
24	1.8	18	45	25	65	57	94	183	19	3.5	3.7	67
25	2.25	29	41	*25	67	53	89	168	18	3.3	3.6	59
26	1.45	40	39	25	70	55	82	151	17	3.2	3.5	52
27	1.45	50	37	34	82	54	75	136	21	3.2	3.3	47
28	2.6	54	35	37	89	52	74	119	19	3.1	3.2	42
29	3.4	52	*33	38	-	62	73	104	19	3.0	3.0	*38
30	4.5	49	32	34	-------	66	69	96	18	2.8	2.8	36
31	5.2	----	31	31	-------	56	-------	86	-------	3.1	6.8	----
Total	45.01	545.6	1,481	830	1,198	1,790	1,842	4,611	1,068	226.9	130.5	1,974.8
Mean	1.45	18.2	47.8	26.8	42.8	57.7	61.4	149	35.6	7.32	4.21	65.8
Cfsm	0.067	0.843	2.21	1.24	1.98	2.67	2.84	6.90	1.65	0.339	0.195	3.05
In.	0.08	0.94	2.55	1.43	2.06	3.08	3.17	7.94	1.84	0.39	0.22	3.40

Calendar year 1953: Max 253 Min 0.26 Mean 42.4 Cfsm 1.96 In. 26.68
Water year 1953-54: Max 242 Min 0.26 Mean 43.1 Cfsm 2.00 In. 27.10

* Discharge measurement made on this day.

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 1954.
Gage.--Water-stage recorder and concrete control. Altitude of gage is 45 ft (from topographic map).
Average discharge.--16 years, 66.1 cfs (adjusted for diversions).
Extremes.--Maximum discharge during year, 530 cfs May 16, 17 (gage height, 5.265 ft); maximum gage height, 5.54 ft Sept. 12; minimum discharge, 0.4 cfs Oct. 2.
1938-54: Maximum discharge, 646 cfs Mar. 21, 1948 (gage height, 5.895 ft); minimum, 0.25 cfs Sept. 19, 1953.
Remarks.--Records excellent except those for periods of backwater from bridge construction, which are good, and those for periods of no gage-height record, which are fair. Water diverted above station for municipal supplies of Reading, Lynn, and Peabody. Regulation at low flow by mill above station.
Revisions (water years).--WSP 1301: 1942(M).

Rating tables, water year 1953-54, except periods of backwater from bridge construction (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Aug. 31				Sept. 1-30	
0.1	0.4	1.0	59	0.7	19
.2	1.5	1.5	105	1.0	40
.3	3.6	2.0	139	1.5	79
.4	7.3	3.0	226	2.0	103
.5	12	4.0	342	3.0	167
.7	27	5.5	572	4.0	257
				5.5	439

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*0.5	11	92	a54	44	160	92	115	159	*29	6.8	38
2	*.55	14	84	a53	42	140	*82	109	*140	27	6.2	30
3	.55	3.5	*75	a58	*40	131	90	110	129	23	9.5	*26
4	.7	*4.0	69	a64	54	150	85	129	117	20	*18	26
5	.85	3.0	81	a68	69	139	75	*148	110	19	15	27
6	.85	1.6	88	*a73	69	*124	77	144	100	27	13	26
7	.95	3.7	104	77	66	114	74	141	102	27	12	27
8	1.0	21	109	66	61	106	75	136	98	25	11	25
9	1.1	19	105	70	58	*101	71	365	88	22	16	21
10	1.35	16	112	64	57	96	66	*500	86	20	32	20
11	1.2	13	119	60	54	92	66	455	78	18	35	137
12	1.2	11	115	57	52	86	66	416	75	15	31	*431
13	1.2	9.8	119	49	45	81	64	379	71	13	29	a419
14	1.1	13	137	32	38	81	61	334	67	12	27	a395
15	1.05	6.2	174	32	23	90	60	287	71	10	25	*382
16	.95	4.4	178	31	36	97	57	438	75	9.3	22	362
17	.85	2.9	149	29	47	96	86	510	72	8.2	18	*347
18	.95	1.75	131	19	64	93	222	428	69	7.1	14	316
19	1.05	1.25	122	26	65	92	259	382	66	6.4	12	275
20	1.05	.95	107	27	66	105	269	348	61	5.6	10	243
21	1.05	1.8	99	39	69	119	270	380	57	5.5	9.0	213
22	1.0	9.5	102	45	96	115	252	455	49	5.3	8.0	189
23	1.2	12	104	44	119	111	226	419	46	6.2	7.1	*167
24	1.35	43	89	40	129	109	205	374	38	6.6	6.6	146
25	1.65	56	81	37	140	107	182	339	31	6.8	5.8	131
26	2.15	90	75	40	162	118	157	304	22	6.4	5.3	120
27	1.6	86	69	49	187	115	138	265	22	6.2	5.1	109
28	2.8	93	61	54	181	108	138	232	21	6.0	4.2	103
29	5.5	98	59	53	-	101	136	206	22	6.2	4.0	95
30	11	96	57	48	-------	96	124	202	25	6.6	4.1	88
31	12	-------	a56	45	-------	97	-------	185	-------	6.2	17	-------
Total	60.30	737.80	3,122	1,503	2,133	3,370	3,835	9,235	2,167	411.6	438.7	4,934
Mean	1.95	24.6	101	48.5	76.2	109	128	298	72.2	13.3	14.2	164
(†)	63.6	393.5	482.8	370.4	317.5	215.4	30.7	31.2	34.8	41.4	35.1	29.2
Adjusted for diversions												
Mean	5.12	44.9	125	67.0	93.7	119	129	299	74.0	15.3	15.9	166
Cfsm	0.118	1.03	2.88	1.54	2.16	2.74	2.97	6.89	1.71	0.353	0.366	3.82
In.	0.14	1.15	3.32	1.78	2.25	3.17	3.33	7.95	1.90	0.41	0.42	4.27

	Observed			Adjusted			
Calendar year 1953:	Max 422	Min 0.3	Mean 76.8	Mean 87.3	Cfsm 2.01	In. 27.31
Water year 1953-54:	Max 510	Min 0.5	Mean 87.5	Mean 96.2	Cfsm 2.22	In. 30.09

* Discharge measurement made on this day.
† Diversions for municipal supplies of Reading, Lynn, and Peabody, in millions of gallons; records furnished by municipalities.
a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, and records for Ipswich River near Ipswich.
Note.--Backwater from bridge construction Mar. 1-11, Mar. 16 to Apr. 2, Apr. 26 to May 8, June 1-9.

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 1954. 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.--24 years, 195 cfs (adjusted for diversions).

Extremes.--Maximum discharge during year, 1,410 cfs May 11, 12 (gage height, 5.91 ft); minimum, 2.8 cfs Oct. 4, 5.
1930-54: Maximum discharge, 2,610 cfs Mar. 15, 1936 (gage height, 7.70 ft); minimum, 1.4 cfs Aug. 9, 1934.

Remarks.--Records excellent. Diversions above station for municipal supplies of Reading, Lynn, Peabody, Danvers, Salem, and Beverly.

Revisions.--WSP 781: Drainage area.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from rocks Aug. 30 to Sept. 2)

Oct. 1 to May 11				May 12 to Sept. 30			
2.38	2.9	3.3	64	2.7	13	4.0	245
2.4	3.2	3.6	121	2.8	18	4.5	470
2.5	5.2	4.0	240	3.0	33	5.0	780
2.6	7.8	4.5	470	3.3	69	6.0	1,460
2.8	16	5.0	780	3.6	126		
3.0	30	6.0	1,460				

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.6	57	256	160	171	*426	268	370	488	83	24	66
2	3.6	47	*233	166	160	442	260	347	442	*79	23	77
3	3.0	39	222	168	*149	442	248	338	410	74	31	*79
4	2.9	*33	205	177	166	442	240	347	380	66	*55	80
5	2.9	24	212	183	186	426	230	*385	356	63	62	79
6	2.9	21	219	*190	210	405	222	420	338	79	56	72
7	4.4	43	248	199	235	385	219	442	316	89	48	69
8	5.0	74	264	185	226	365	212	437	304	91	41	66
9	5.8	82	280	175	219	342	208	622	288	87	39	65
10	5.2	78	300	180	208	320	205	*983	276	77	70	63
11	4.8	72	308	168	205	304	205	1,340	270	65	96	136
12	4.8	61	308	160	196	288	199	1,380	262	55	102	264
13	4.6	49	316	157	174	276	193	1,260	256	50	102	*605
14	4.6	41	329	160	154	272	190	1,070	245	48	94	906
15	5.8	37	360	160	146	272	*180	906	238	40	82	*990
16	6.6	35	365	149	149	268	177	1,020	228	35	68	927
17	9.6	30	375	138	168	268	212	1,240	220	31	55	857
18	11	26	360	134	193	264	360	1,290	217	29	44	787
19	7.2	25	320	128	216	260	590	*1,210	204	25	38	715
20	4.8	22	300	121	230	280	708	1,070	a188	24	33	670
21	*4.8	22	300	134	236	308	663	1,000	a173	25	30	614
22	4.4	22	300	141	272	320	590	1,070	a159	33	25	560
23	4.4	45	300	146	300	329	542	1,100	a146	30	23	506
24	5.0	90	284	146	296	324	518	1,090	a131	33	21	454
25	8.5	128	268	146	300	312	506	1,000	126	34	18	410
26	13	166	256	146	320	316	482	892	115	31	17	370
27	13	199	244	160	370	312	454	774	108	30	17	342
28	19	248	230	166	410	308	432	689	100	28	15	316
29	46	276	219	174	-	300	415	620	93	25	15	292
30	60	276	205	177	-------	288	395	566	87	24	15	270
31	63	-------	193	174	-------	280	-------	530	-------	24	41	-------
Total	345.2	2,368	8,579	4,968	6,265	10,144	10,323	25,808	7,164	1,507	1,400	11,707
Mean	11.1	78.9	277	160	224	327	344	833	239	48.6	45.2	390
(†)	111.9	554.0	743.5	412.6	530.2	267.9	71.5	75.0	141.2	100.2	89.8	77.8
Adjusted for diversions												
Mean	16.7	108	314	181	253	341	348	836	246	53.6	49.6	394
Cfsm	0.135	0.871	2.53	1.46	2.04	2.75	2.81	6.74	1.98	0.432	0.400	3.18
In.	0.16	0.97	2.92	1.68	2.13	3.17	3.13	7.78	2.21	0.50	0.46	3.55

	Observed			Adjusted		
Calendar year 1953:	Max 1,280	Min 2.4	Mean 227	Mean 243	Cfsm 1.96	In. 26.66
Water year 1953-54:	Max 1,380	Min 2.9	Mean 248	Mean 262	Cfsm 2.11	In. 28.66

* Discharge measurement made on this day.
† Diversions for municipal supplies of Reading, Lynn, Peabody, Danvers, Salem, and Beverly, in millions of gallons. Records furnished by various municipalities.
a No gage-height record; discharge estimated on basis of record for adjacent days, weather records, and records for station at South Middleton.

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 1954.

Gage.--Water-stage recorder and concrete control. Datum of gage is at mean sea level, datum of 1929.

Average discharge.--15 years, 25.6 cfs.

Extremes.--Maximum discharge during year, 482 cfs Sept. 12 (gage height, 13.66 ft); minimum, 0.45 cfs Oct. 24, 25; minimum daily, 0.55 cfs Oct. 2-4, 8-22, 24.
1939-54: Maximum discharge, that of Sept. 12, 1954; 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. 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 mills above station.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from debris Sept. 11-14)

Oct. 1 to Feb. 26				Feb. 27 to Sept. 30			
10.23	0.55	10.7	11	10.25	0.65	10.9	20
10.25	.65	10.9	22	10.3	1.05	11.2	45
10.3	1.05	11.2	47	10.4	2.3	11.5	83
10.35	1.6	11.5	85	10.5	4.1	12.0	184
10.4	2.4	11.8	139	10.6	6.8	12.5	326
10.5	4.6			10.7	10	13.0	522

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	11	25	27	24	57	32	43	60	9.4	3.7	24
2	.55	14	23	27	*24	53	30	38	53	8.6	2.2	23
3	.55	5.9	20	28	23	56	32	41	49	7.2	16	18
4	.55	3.7	18	47	62	71	29	59	46	6.3	12	14
5	.65	2.4	49	42	53	64	26	65	42	11	10	9.1
6	.65	1.25	46	*46	47	53	25	58	39	18	7.7	6.8
7	.9	23	78	43	38	47	28	49	36	*15	5.4	7.2
8	.55	13	61	35	33	43	27	53	33	12	4.5	15
9	.55	17	62	30	30	40	26	263	31	8.8	9.0	25
10	.55	15	74	26	28	36	22	276	29	6.9	22	17
11	.55	12	57	23	26	34	22	199	24	5.7	19	204
12	.55	9.2	54	24	22	*33	22	152	18	5.2	16	*456
13	.55	7.2	59	22	18	31	20	122	18	5.0	11	289
14	*.55	6.4	118	21	16	42	*19	103	17	4.5	7.7	*166
15	.55	5.9	135	22	16	45	18	92	31	4.4	6.0	139
16	.55	5.8	103	22	18	43	21	351	32	3.7	5.1	114
17	.55	5.6	80	21	38	38	74	*320	29	3.2	4.3	*114
18	.55	5.3	61	20	42	35	170	*225	24	3.3	2.9	103
19	.55	5.6	57	19	42	31	150	*168	19	2.9	2.6	93
20	.55	5.6	50	19	37	59	103	*135	17	2.6	2.4	83
21	.55	4.8	52	48	33	55	82	189	15	7.7	2.2	72
22	.55	3.7	54	43	54	55	69	*220	12	5.5	2.0	63
23	.65	39	51	37	54	46	64	184	11	5.9	1.85	49
24	.55	*34	46	33	50	40	61	150	10	5.4	1.95	42
25	1.65	77	42	28	64	42	54	126	9.1	4.4	1.85	36
26	.65	79	40	29	71	53	49	*103	11	4.3	1.85	35
27	.6	54	36	36	76	51	46	86	10	4.0	1.6	36
28	3.1	38	33	40	66	44	55	*75	11	3.3	1.2	36
29	15	32	33	36	-	38	54	65	11	3.0	1.05	30
30	11	28	32	33	-------	35	50	75	9.6	3.6	1.0	27
31	2.5	...	32	28	-------	32	-------	71	-------	3.9	46	...
Total	48.40	564.35	1,681	955	1,105	1,402	1,480	4,156	756.7	194.7	232.05	2,346.1
Mean	1.56	18.8	54.2	30.8	39.5	45.2	49.3	134	25.2	6.28	7.49	78.2
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 225 Min 0.55 Mean 36.1 Cfsm - In. -
Water year 1953-54: Max 456 Min 0.55 Mean 40.9 Cfsm - In. -

Peak discharge (base, 170 cfs).--Apr. 18 (8:30 to 12 p.m.) 179 cfs (11.98 ft); May 9 (3 to 4 p.m.) 300 cfs (12.42 ft); May 16 (5 a.m.) 412 cfs (12.74 ft); May 21 (1 p.m.) 236 cfs (12.20 ft); Sept. 12 (9 to 10 a.m.) 482 cfs (13.66 ft).
* Discharge measurement made on this day.

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 Noanet Brook, and 1.3 miles northeast of Dover.

Drainage area.--184 sq mi.

Records available.--October 1937 to September 1954.

Gage.--Water-stage recorder and concrete control. Datum of gage is 89.76 ft above mean sea level, datum of 1929.

Average discharge.--17 years, 284 cfs (adjusted for diversions).

Extremes.--Maximum discharge during year, 1,240 cfs Sept. 17 (gage height, 5.39 ft); minimum, 13 cfs Oct. 21.

1937-54: Maximum discharge, 3,110 cfs July 27, 1938 (gage height, 9.00 ft); minimum, 0.5 cfs Oct. 24, 1952.

Maximum discharge known, 3,170 cfs in March 1936, by computation of flow over dam at site a quarter of a mile above station.

Remarks.--Records excellent except those for periods of ice effect, which are good. Diversion above station for municipal supply of Wellesley and Needham. Occasional diversion since 1951 from Sudbury River basin to Charles River; none during year.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Aug. 31				Sept. 1-30	
0.5	14	1.0	124	1.0	124
.6	24	1.5	293	1.5	273
.7	40	2.0	425	2.0	394
.8	63	4.0	1,020	4.0	885
				5.5	1,270

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	198	523	b290	*b300	*613	*447	529	*503	*138	71	198
2	18	184	464	*b255	281	607	425	503	456	135	63	240
3	18	160	405	266	269	583	392	489	411	124	82	256
4	19	135	347	323	323	625	362	503	362	111	91	260
5	21	117	384	339	367	601	344	506	328	108	94	245
6	20	98	373	357	b390	604	326	520	303	108	98	206
7	31	174	492	365	b390	598	318	529	278	94	94	198
8	22	202	509	b325	370	580	310	534	256	91	88	179
9	20	226	546	b290	347	554	287	787	233	85	91	166
10	19	226	583	b240	323	523	293	826	223	77	111	149
11	22	212	578	284	b305	487	284	886	216	74	111	480
12	28	184	569	287	b255	453	272	*925	206	69	121	892
13	31	164	580	b270	b220	419	263	931	202	63	117	*922
14	24	142	637	b265	223	419	253	904	198	54	108	1,070
15	22	124	685	260	209	431	243	853	243	52	101	*1,170
16	18	124	694	250	223	436	240	949	260	49	88	1,190
17	16	111	715	b245	287	442	342	910	272	47	74	1,220
18	16	104	718	b235	344	442	613	874	266	45	63	1,160
19	23	98	685	226	370	431	691	844	243	42	58	1,090
20	17	98	640	230	373	481	814	805	220	40	54	1,040
21	18	98	595	298	365	489	880	847	192	47	49	985
22	19	88	569	336	450	495	*880	874	164	58	49	928
23	20	178	543	344	478	512	838	865	149	74	47	848
24	20	287	503	344	512	515	787	871	206	94	45	775
25	51	393	475	331	578	515	721	868	164	91	40	708
26	58	512	445	328	607	540	661	838	149	91	38	645
27	56	549	411	352	625	512	619	784	138	88	40	584
28	91	580	375	b360	619	506	604	727	131	*85	38	521
29	156	583	352	b360	-	498	575	667	128	80	36	468
30	*195	*560	334	b350	-------	484	*552	619	135	83	*38	*416
31	206	-------	318	b325	-------	467	-------	554	-------	77	139	-------
Total	1,315	6,909	16,047	9,330	10,403	15,862	14,636	23,121	7,235	2,474	2,337	19,207
Mean	42.4	230	518	301	372	512	488	746	241	79.8	75.4	640
(†)	92.1	77.4	80.9	79.1	72.5	80.3	78.8	83.8	90.1	118.6	97.5	74.2
Adjusted for diversion												
Mean	47.0	234	522	305	376	516	492	750	246	85.7	80.3	644
Cfsm	0.255	1.27	2.84	1.66	2.04	2.80	2.67	4.08	1.34	0.466	0.436	3.50
In.	0.29	1.42	3.27	1.91	2.13	3.23	2.98	4.70	1.49	0.54	0.50	3.91

	Observed			Adjusted		
Calendar year 1953:	Max 1,410	Min 11	Mean 361	Mean 366	Cfsm 1.99	In. 26.98
Water year 1953-54:	Max 1,220	Min 16	Mean 353	Mean 357	Cfsm 1.94	In. 26.37

* Discharge measurement made on this day.

† Diversions for municipal supply of Wellesley and Needham, in millions of gallons; records furnished by municipalities and Water Division of Metropolitan District Commission.

b Stage-discharge relation affected by ice.

Mother Brook at Dedham, Mass.

Location.--Lat 42°15'19", long 71°09'58", on right bank at upstream side of East Street Bridge, at Dedham, Norfolk County, 0.4 mile downstream from point of diversion from Charles River.

Records available.--October 1931 to September 1954.

Gage.--Float gage read twice daily. Datum of gage is 0.03 ft below mean sea level, datum of 1929. Prior to Dec. 9, 1931, water-stage recorder at same site and datum.

Average discharge.--23 years, 84.4 cfs.

Extremes.--Maximum discharge during year, 354 cfs Sept. 18 (gage height, 89.77 ft, from graph based on gage readings); minimum, 0.1 cfs Oct. 4.
1931-54: Maximum discharge, 909 cfs July 28, 29, 1938 (gage height, 91.84 ft, from graph based on gage readings); no flow at times.

Remarks.--Records good. 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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	51	166	97	92	190	148	176	195	38	19	36
2	.3	50	159	88	85	194	141	169	180	38	16	44
3	.2	*48	147	85	80	192	140	163	164	36	20	50
4	.1	47	134	95	92	200	129	164	149	33	26	57
5	.2	39	134	97	100	196	118	164	133	30	25	60
6	.2	32	130	100	107	193	111	162	119	33	25	59
7	.5	42	145	105	109	190	107	160	107	29	25	54
8	.6	54	154	104	108	*187	102	164	98	27	25	54
9	.4	59	160	100	106	181	96	213	85	24	26	*50
10	.3	62	170	82	100	176	90	269	77	21	32	46
11	.3	63	176	79	95	166	88	283	71	18	32	80
12	.4	60	176	77	86	160	86	292	66	16	33	196
13	.4	56	186	77	77	147	81	*295	63	14	33	238
14	.4	50	200	73	67	147	76	295	60	13	32	263
15	.3	45	219	72	*64	147	*73	289	70	11	30	292
16	.4	39	222	71	65	145	70	326	73	8.8	27	318
17	.4	34	226	70	76	140	83	342	75	7.5	23	*350
18	.3	29	225	*70	88	139	129	320	76	5.6	17	354
19	.3	24	220	66	95	134	168	304	74	5.0	14	346
20	.2	22	212	65	99	147	196	289	69	5.0	12	335
21	.2	21	204	78	100	152	226	293	*64	5.0	9.5	321
22	.3	20	198	90	117	154	247	303	58	7.2	7.8	305
23	.4	38	190	96	127	154	256	297	54	9.5	6.5	*286
24	.6	63	173	96	135	155	255	296	65	16	5.8	265
25	2.8	85	164	95	154	156	246	292	62	18	5.2	244
26	8.0	122	154	94	168	167	232	286	*56	19	*4.8	229
27	7.4	*142	143	97	184	168	213	*272	52	*20	4.4	211
28	9.7	155	134	100	188	162	207	259	46	*19	4.2	190
29	30	166	123	104	-	161	197	245	44	19	3.6	171
30	45	168	116	102	------	158	186	232	39	19	3.3	154
31	51	-- ---	107	100	-------	152	--------	216	--------	19	16	- -----
Total	162.0	1,886	5,267	2,725	2,964	5,110	4,497	7,828	2,544	583.6	563.1	5,659
Mean	5.23	62.9	170	87.9	106	165	150	253	84.8	18.8	18.2	189
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 472 Min 0 Mean 111 Cfsm - In. -
Water year 1953-54: Max 354 Min .1 Mean 109 Cfsm - In. -

* Discharge measurement made on this day.

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 1954.
Gage.--Water-stage recorder and concrete control. Datum of gage is 20.02 ft above mean sea level, datum of 1929. Prior to July 9, 1904, at dam 700 ft upstream and from 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.--23 years (1931-54), 361 cfs (adjusted for diversions, wastage, and leakage).
Extremes.--Maximum discharge during year, 1,550 cfs Sept. 22 (gage height, 4.44 ft); minimum, 9.7 cfs Oct. 27; minimum daily, 17 cfs Oct. 21, 22.
1931-54: Maximum discharge, 2,540 cfs Mar. 19, 1936 (gage height, 4.79 ft); minimum, 0.1 cfs Oct. 1, 12, 1943; minimum daily, 0.2 cfs Oct. 4, 1943.
Remarks.--Records excellent except those for periods of no gage-height record or backwater from aquatic vegetation and/or debris, which are good. 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, Dedham, and Newton, all above station. No diversion during year from Lake Cochituate or Sudbury River basin. Low flow completely regulated by Boston Edison Co. powerplant above station.
Revisions (water years).--WSP 781: 1933(M). WSP 851: Drainage area. WSP 971: 1942.

Rating table, water year 1953-54, except period of backwater from aquatic vegetation and/or debris (gage height, in feet, and discharge, in cubic feet per second)

0.6	15	2.0	367
.8	37	3.0	895
1.1	89	4.0	1,600
1.5	191		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	182	486	a300	294	500	393	515	585	143	77	154
2	22	174	432	a280	*276	520	380	491	540	133	71	151
3	23	165	424	a260	258	505	363	478	482	123	81	176
4	23	154	428	a300	304	540	347	525	460	118	107	191
5	22	146	432	a320	283	555	339	520	419	121	100	200
6	23	133	419	*a330	297	540	327	505	371	125	87	206
7	31	157	500	323	305	525	367	491	335	118	79	*219
8	27	135	486	301	320	520	351	491	312	109	77	203
9	34	249	482	294	312	505	290	812	286	102	91	191
10	30	200	491	280	286	478	280	988	183	93	111	179
11	25	154	520	258	283	464	272	988	188	85	104	697
12	25	213	515	252	255	450	266	947	213	81	98	934
13	24	191	525	245	235	424	*252	*914	219	77	98	981
14	25	140	606	235	225	424	242	862	206	75	96	*928
15	24	143	694	242	216	419	238	836	276	55	96	934
16	*23	157	677	238	222	401	255	1,120	280	55	96	947
17	22	135	655	232	203	401	335	1,160	252	52	87	1,020
18	20	133	628	213	276	393	535	1,080	245	52	77	1,010
19	20	128	606	222	301	393	590	967	235	52	69	981
20	18	83	595	222	290	437	611	888	229	48	60	954
21	17	27	580	269	297	442	628	967	210	56	57	914
22	17	66	575	280	371	437	704	1,020	194	54	52	1,020
23	18	277	555	283	367	433	688	981	188	60	49	862
24	20	*269	520	290	367	428	710	940	248	69	48	818
25	40	262	486	297	401	414	694	882	206	73	43	758
26	103	371	464	294	464	442	650	830	185	81	42	710
27	68	506	437	308	486	432	616	788	174	83	40	*607
28	107	482	248	312	482	432	611	746	162	*83	38	*565
29	154	464	a240	294	-	393	580	699	159	81	37	500
30	194	510	a320	312	---	331	555	682	151	79	37	464
31	191	---	a310	305	---	384	---	638	---	73	152	---
Total	1,415	6,406	15,336	8,591	8,676	13,962	13,469	24,751	8,193	2,609	2,357	18,474
Mean	45.6	214	495	277	310	450	449	798	273	84.2	76.0	616
(†)	396.1	1,453.6	3,245.9	2,034.9	2,163.0	2,911.5	2,350.8	4,471.6	1,364.0	593.1	539.3	3,495.5

Adjusted ror diversions, wastage, and leakage

Mean	65.4	288	657	379	429	596	570	1,022	343	114	103	796
Cfsm	0.288	1.27	2.89	1.67	1.89	2.63	2.51	4.50	1.51	0.502	0.454	3.51
In.	0.33	1.42	3.34	1.92	1.97	3.03	2.80	5.19	1.69	0.58	0.52	3.91

	Observed			Adjusted			
Calendar year 1953:	Max 1,300	Min 7.6	Mean 334	Mean 453	Cfsm 2.00	In. 27.07
Water year 1953-54:	Max 1,160	Min 17	Mean 340	Mean 446	Cfsm 1.96	In. 26.70

* Discharge measurement made on this day.
† Diversion to Mother Brook, diversions for municipal supply of Wellesley, Needham, Dedham, and Newton, wastage from Stony Brook Reservoir, and wastage and leakage from Norumbega Reservoir, in millions of gallons. Records furnished by Water Division of Metropolitan District Commission and by municipalities.
a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, and records for station at Charles River Village.
Note.--Backwater from aquatic vegetation and/or debris May 24 to Sept. 30.

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 1954 (monthly discharge only for some periods, published in WSP 1301).

Gage.--Water-stage recorder. Datum of gage is 44.04 ft above mean sea level, unadjusted.

Average discharge.--15 years, 46.0 cfs.

Extremes.--Maximum discharge during year, 430 cfs May 9 (gage height, 10.90 ft, from floodmarks); minimum daily, 5.0 cfs Aug. 29.

1939-54: Maximum discharge, that of May 9, 1954; minimum daily, 2.3 cfs Oct. 23, 1949.

Maximum stage known, 11.05 ft July 24, 1938, from floodmarks.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by mills and reservoirs above station. Several diversions above station for municipal and industrial use.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from trees Aug. 31 to Sept. 30)

6.6	2.6	8.0	95
6.7	5.3	9.0	177
6.8	9.3	10.0	288
7.0	19	10.5	360
7.5	52		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	51	69	72	47	93	71	81	75	25	12	72
2	12	44	67	71	48	92	63	73	53	25	13	55
3	7.9	42	62	74	49	88	60	73	50	22	23	44
4	5.3	28	57	102	75	106	56	88	45	20	25	37
5	9.9	21	90	105	*82	99	54	90	43	20	23	29
6	13	17	91	101	72	89	55	85	40	21	20	28
7	14	66	161	93	64	79	52	76	40	21	14	22
8	11	61	147	82	56	*75	51	89	42	20	13	24
9	11	59	129	74	51	75	48	*325	36	18	20	25
10	7.5	50	125	71	49	79	48	336	37	15	28	40
11	10	45	116	71	48	75	49	257	37	14	28	179
12	15	39	109	70	46	71	44	192	35	13	25	*294
13	14	29	123	67	39	73	47	166	35	13	20	228
14	13	26	180	62	32	92	47	146	42	*11	18	166
15	12	24	182	64	33	102	*37	131	77	11	14	122
16	*11	24	152	65	46	94	38	235	66	10	14	*112
17	7.8	22	133	64	54	88	101	217	54	7.7	14	170
18	8.9	21	125	62	65	82	240	182	45	6.4	12	144
19	14	14	125	50	71	73	215	150	39	7.6	12	124
20	11	18	120	52	62	126	163	133	36	7.6	12	106
21	12	17	115	76	60	132	130	166	33	14	12	100
22	13	13	120	82	114	116	117	195	32	25	9.7	79
23	14	87	120	74	120	103	106	179	34	30	11	71
24	13	83	115	68	103	92	118	152	38	29	15	66
25	27	152	105	62	114	93	105	127	*36	27	14	54
26	33	169	98	54	118	118	90	120	34	25	*14	54
27	26	*130	92	62	115	106	90	*105	34	22	14	51
28	51	109	*87	72	105	99	98	97	31	18	8.4	50
29	109	86	84	62	-	91	90	92	29	17	5.0	45
30	86	65	77	55	--------	80	88	93	25	14	11	40
31	65	--------	65	52	--------	72	--------	85	--------	11	77	--------
Total	668.3	1,592	3,441	2,191	1,938	2,853	2,571	4,536	1,253	540.3	551.1	2,631
Mean	21.6	53.1	111	70.7	69.2	92.0	85.7	146	41.8	17.4	17.8	87.7
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1953: Max 352 Min 3.9 Mean 67.3 Cfsm - In. -
Water year 1953-54: Max 336 Min 5.0 Mean 67.9 Cfsm - In. -

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 18-27, Jan. 14-22, June 1-24; discharge estimated on basis of weather records, recorded range in stage, and records for East Branch Neponset River at Canton and Wading River near Norton.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 85 ft (from topographic map).

Extremes.--Maximum discharge during year, 398 cfs Apr. 18 (gage height, 4.13 ft); minimum daily, 5.0 cfs Oct. 18.
1952-54: Maximum discharge, that of Apr. 18, 1954; minimum daily, 3.7 cfs Sept. 7, 1953.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by ponds above station.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 7				Dec. 8 to Sept. 30			
0.9	4.0	2.0	79	1.0	6.2	2.0	73
1.0	6.2	3.0	213	1.1	9.3	3.0	207
1.2	14	3.5	290	1.3	19	4.0	375
1.5	33			1.5	32		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.0	52	90	57	48	75	60	68	58	24	15	36
2	6.5	37	87	52	47	75	60	60	40	24	14	38
3	6.8	30	80	52	50	76	58	68	45	23	15	28
4	7.4	27	75	89	82	99	54	116	45	23	27	24
5	12	25	106	84	90	97	52	65	43	22	27	19
6	15	23	115	73	71	86	51	59	42	22	22	17
7	16	73	238	68	61	78	52	66	41	21	19	17
8	15	95	225	58	55	75	51	67	39	20	17	17
9	15	67	182	51	53	*71	50	*238	34	19	15	20
10	10	58	163	50	52	68	48	244	37	17	20	19
11	6.5	50	164	48	51	63	45	192	37	15	32	149
12	10	38	136	50	48	59	45	169	36	13	24	290
13	11	33	153	52	45	56	44	173	36	11	18	187
14	11	31	195	48	40	70	43	138	*36	11	16	112
15	11	30	224	49	*42	95	*42	139	45	11	14	81
16	8.0	*29	174	50	48	80	40	251	80	11	13	78
17	6.0	28	142	49	59	70	77	218	50	11	12	172
18	5.0	27	117	46	80	62	247	206	40	11	11	153
19	8.4	27	114	44	63	58	160	166	17	11	11	116
20	7.0	26	108	45	56	86	58	138	18	11	11	*109
21	7.4	25	106	74	53	110	41	195	31	11	11	104
22	*8.0	25	109	86	83	88	45	248	31	13	9.7	92
23	8.6	90	109	64	92	74	70	213	32	*23	10	78
24	7.0	*137	102	54	74	67	94	157	46	25	*9.8	43
25	20	*165	89	50	60	65	91	149	40	21	9.3	52
26	30	232	81	52	100	88	80	122	34	21	13	77
27	25	160	52	61	94	82	75	*109	30	24	13	66
28	60	118	*84	71	82	71	89	101	28	21	7.4	38
29	120	103	69	61	-	69	86	96	27	19	7.0	36
30	110	84	66	55	-------	66	80	92	26	17	14	40
31	76	---	62	53	-------	63	-------	86	-------	16	18	------
Total	666.6	1,945	3,797	1,796	1,799	2,342	2,088	4,409	1,144	542	475.2	2,286
Mean	21.5	64.8	122	57.9	64.2	75.5	69.6	142	38.1	17.5	15.3	76.2
Cfsm	0.805	2.43	4.57	2.17	2.40	2.83	2.61	5.32	1.43	0.655	0.573	2.85
In.	0.93	2.71	5.29	2.50	2.51	3.26	2.91	6.14	1.59	0.75	0.66	3.18

Calendar year 1953 : Max 338 Min 3.7 Mean 69.5 Cfsm 2.60 In. 35.33
Water year 1953-54 : Max 290 Min 5.0 Mean 63.8 Cfsm 2.39 In. 32.43

* Discharge measurement made on this day.
Note.--No gage-height record Oct. 17-31, Nov. 9-15, 20-23, Feb. 13, 14, Apr. 19-21; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage when available, and records for Neponset River at Norwood and Wading River near Norton.

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 1954.

Gage.--Water-stage recorder. Concrete control since Sept. 16, 1942. Altitude of gage is 15 ft (from topographic map).

Average discharge.--14 years, 13.1 cfs.

Extremes.--Maximum discharge during year, 269 cfs Sept. 12 (gage height, 5.80 ft), from rating curve extended above 210 cfs; minimum, 0.20 cfs July 21.
1940-54: Maximum discharge, that of Sept. 12, 1954; minimum, 0.03 cfs Sept. 23, 24, Oct. 3, 4, 1950.

Remarks.--Records good.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 12)

3.06	0.24	3.5	12
3.10	.47	3.7	23
3.15	.98	4.0	48
3.2	1.75	4.5	101
3.3	4.1	5.0	161
3.4	7.4	5.6	229

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.55	25	23	12	16	22	12	16	8.4	2.45	0.31	*12
2	.45	18	20	11	14	20	11	15	7.8	2.35	.34	15
3	.40	14	18	12	14	18	11	15	7.2	2.15	2.45	13
4	.32	11	16	23	26	22	9.9	22	6.9	1.95	4.5	9.4
5	.29	9.4	24	28	32	21	9.2	23	6.5	1.7	3.4	6.9
6	.29	8.8	36	28	*25	18	9.0	19	6.4	*1.65	3.6	5.5
7	.47	28	54	25	19	15	9.0	16	5.7	1.5	3.0	4.7
8	.51	37	58	18	15	14	9.0	17	5.2	1.45	2.45	6.4
9	.40	33	41	14	14	13	9.0	127	4.9	1.20	3.9	6.2
10	.37	23	*36	14	13	12	8.6	*122	4.6	.98	*36	5.6
11	.34	17	36	12	12	11	8.2	61	4.2	.85	*64	87
12	*.34	14	31	12	11	11	8.6	37	4.1	.74	33	224
13	.32	12	38	12	8.6	9.9	8.2	26	4.0	.64	14	92
14	.29	11	75	12	8.2	16	8.0	21	4.0	.55	9.2	44
15	.29	10	117	12	8.6	27	7.6	20	4.4	.47	6.9	26
16	.29	9.2	69	12	10	27	9.0	60	5.0	.37	5.7	20
17	.29	8.6	40	12	16	20	26	*61	4.6	.32	4.4	24
18	.29	8.4	27	11	25	16	84	38	3.8	.29	3.4	31
19	.29	8.2	20	10	24	*13	66	25	3.2	.26	3.0	27
20	.34	7.8	19	12	19	27	*37	20	3.0	.24	*2.8	23
21	.37	7.4	19	27	16	44	23	30	2.8	.36	2.6	20
22	.40	7.2	20	36	20	34	18	36	2.6	.64	2.35	18
23	.55	28	19	28	23	23	21	29	3.0	.85	1.95	16
24	.69	97	17	20	20	18	28	22	3.8	.80	1.75	14
25	4.3	96	16	17	24	16	28	18	3.2	.69	1.6	12
26	5.4	125	15	16	35	20	22	15	3.0	.59	1.5	11
27	3.8	78	14	18	36	22	17	14	3.0	*.51	1.25	*11
28	9.8	44	13	29	28	19	19	12	3.4	.44	1.12	9.6
29	32	31	13	30	-	16	23	11	2.8	.40	.98	9.2
30	54	25	13	20	------	14	21	10	2.6	.34	.74	8.8
31	41	------	*12	18	------	13	------	9.2	------	.29	8.8	------
Total	159.44	850.2	969	563	532.6	591.9	580.3	967.2	134.1	28.02	230.99	812.5
Mean	5.14	28.3	31.3	18.2	19.0	19.1	19.3	31.2	4.47	0.904	7.45	27.1
Cfsm	0.598	3.29	3.64	2.12	2.21	2.22	2.24	3.63	0.520	0.105	0.866	3.15
In.	0.69	3.68	4.19	2.43	2.30	2.56	2.51	4.18	0.58	0.12	1.00	3.51

Calendar year 1953: Max 184 Min 0.10 Mean 20.6 Cfsm 2.40 In. 32.49
Water year 1953-54: Max 224 Min 0.24 Mean 17.6 Cfsm 2.05 In. 27.75

Peak discharge (base, 120 cfs).--Nov. 26 (8 to 9 a.m.) 136 cfs (4.80 ft); Dec. 15 (4 a.m.) 132 cfs (4.77 ft); May 9 (7:30 p.m.) 184 cfs (5.18 ft); Sept. 12 (4 to 5 a.m.) 269 cfs (5.80 ft).
* Discharge measurement made on this day.

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 1954.
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.--25 years, 456 cfs (adjusted for diversions).
Extremes.--Maximum discharge during year, 3,040 cfs May 18 (gage height, 10.42 ft); minimum, 53 cfs July 18; minimum daily, 56 cfs July 18.
1929-54: Maximum discharge, 3,080 cfs Dec. 8, 1945 (gage height, 11.57 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), 1931, 1933(M), 1935(M).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 10)

Oct. 1 to May 10		May 11 to July 22				July 23 to Sept. 30	
7.0	1,620	3.2	53	5.0	700	3.4	58
10.0	2,610	3.4	81	7.0	1,620	3.6	97
		3.7	144	11.0	3,270	4.0	216
Note.--Same as following table below 7.0 ft.		4.0	238			5.0	650
						8.0	2,060

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	114	690	1,280	473	530	845	535	605	645	174	80	322
2	99	580	1,090	446	486	785	510	540	585	168	84	262
3	94	482	949	442	478	745	525	505	510	160	101	223
4	94	392	840	540	675	805	464	530	505	152	171	203
5	97	339	904	600	859	800	428	600	468	134	146	174
6	99	304	1,050	610	*805	710	410	575	432	125	140	155
7	114	575	1,330	660	710	645	396	540	406	197	135	143
8	130	931	1,650	590	625	605	388	525	378	220	126	161
9	127	895	1,620	486	565	*560	388	1,200	352	144	146	161
10	122	750	1,500	473	515	530	361	2,000	325	137	477	155
11	103	640	1,420	396	482	491	343	*2,190	321	130	680	576
12	*91	555	1,260	388	437	460	347	*2,020	317	125	675	1,640
13	86	482	1,260	424	352	424	312	1,690	295	110	546	1,840
14	80	419	1,410	428	343	491	300	1,360	282	103	385	1,640
15	83	378	1,770	437	334	750	270	1,120	295	101	305	1,300
16	78	352	1,810	437	370	745	*254	2,120	347	83	278	1,000
17	69	317	1,610	446	446	685	498	2,910	339	57	244	1,030
18	75	300	1,330	432	615	620	1,210	*2,970	291	56	220	1,180
19	86	282	1,110	424	640	560	1,500	2,600	254	69	190	1,080
20	94	266	926	419	600	690	1,440	2,110	238	78	*155	950
21	88	254	830	660	555	976	1,240	1,750	224	88	123	850
22	83	254	770	864	630	944	1,030	1,800	193	110	110	760
23	105	585	765	780	755	840	859	1,780	186	120	107	715
24	144	1,520	740	705	715	745	859	1,620	234	126	95	*610
25	185	*1,810	675	650	735	670	825	1,430	234	126	95	505
26	317	2,300	630	630	877	750	735	1,270	193	123	89	487
27	304	2,410	595	675	962	780	650	1,100	216	*91	86	460
28	343	2,210	550	785	931	720	670	936	*213	84	74	424
29	720	1,870	491	700	-	660	700	864	174	110	62	406
30	972	1,540	*510	690	--------	615	665	770	174	105	63	372
31	850	--------	496	610	--------	570	--------	700	--------	86	146	--------
Total	6,046	24,682	33,171	17,300	17,027	21,216	19,112	42,730	9,626	3,692	6,334	19,784
Mean	195	823	1,070	558	608	684	637	1,378	321	119	204	659
(†)	525.5	473.8	520.6	490.2	458.2	509.3	467.2	469.2	528.6	468.7	494.8	468.4
Adjusted for diversions												
Mean	221	847	1,096	583	633	710	661	1,402	348	142	229	684
Cfsm	0.850	3.26	4.22	2.24	2.43	2.73	2.54	5.39	1.34	0.546	0.881	2.63
In.	0.98	3.64	4.86	2.58	2.54	3.15	2.84	6.22	1.49	0.63	1.02	2.93

	Observed			Adjusted			
Calendar year 1953:	Max 2,410	Min 52	Mean 642	Mean 670	Cfsm 2.58	In. 34.98
Water year 1953-54:	Max 2,970	Min 56	Mean 605	Mean 630	Cfsm 2.42	In. 32.88

* Discharge measurement made on this day.
† Diversions 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, in millions of gallons. Records furnished by various municipalities.

Wading River at West Mansfield, Mass.

Location.--Lat 42°00'00", long 71°15'38", on right bank 200 ft downstream from Balcolm 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 1954.

Gage.--Water-stage recorder and concrete control. Datum of gage is 120.85 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 188 cfs May 9, 10 (gage height, 4.89 ft); maximum gage height, 4.92 ft May 12; minimum daily discharge, 2.3 cfs Oct. 16, 17.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by Lake Mirimichi. Diversion above station for municipal supply of Attleboro.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Jan. 29, 30; shifting-control method used May 9-12; backwater from debris Aug. 31 to Sept. 3, Sept. 11-30)

2.5	2.0	3.5	42
2.6	3.1	4.0	73
2.8	6.8	4.5	111
3.0	13	5.0	180
3.2	22	5.1	195

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.4	11	65	41	34	64	53	71	50	9.8	7.9	24
2	3.3	12	59	37	32	62	50	68	41	9.8	6.6	22
3	3.0	10	51	36	32	62	48	67	36	9.2	8.3	18
4	2.7	9.2	45	47	41	66	44	71	34	8.4	12	14
5	2.8	8.4	57	50	46	70	37	73	31	7.3	14	13
6	3.4	8.2	73	48	45	64	36	86	29	6.6	16	12
7	3.5	18	100	48	42	58	39	59	27	6.2	14	11
8	3.3	13	98	44	40	56	42	59	26	6.2	12	12
9	3.0	11	91	37	38	57	37	140	24	6.4	9.8	11
10	2.9	10	96	36	36	57	32	186	24	*6.2	12	11
11	2.8	11	90	37	34	53	30	182	23	6.0	13	40
12	2.7	12	82	36	31	49	30	171	22	5.5	12	101
13	2.6	13	90	35	26	*45	30	152	22	5.1	11	116
14	2.5	12	103	35	25	51	28	*130	22	4.9	9.0	103
15	2.4	11	115	32	*26	62	27	110	24	4.7	7.9	95
16	2.3	*12	106	31	30	61	27	122	27	4.5	7.1	80
17	2.3	10	102	28	35	56	55	*130	26	4.5	6.4	80
18	2.4	9.5	96	26	43	52	111	114	22	3.7	5.3	74
19	2.5	9.0	93	28	43	48	123	104	20	4.2	4.9	65
20	2.7	8.4	87	30	41	60	*122	97	19	4.5	5.3	*61
21	2.8	8.2	72	37	40	72	*114	100	17	5.9	5.3	58
22	*2.8	8.4	70	43	58	71	101	108	15	11	4.9	53
23	2.9	20	68	40	64	69	93	105	13	*19	4.4	46
24	3.0	34	65	36	68	66	95	98	14	20	*4.4	39
25	5.0	51	60	37	66	63	89	90	14	18	5.3	33
26	7.0	79	56	36	71	68	81	82	16	16	5.8	31
27	7.0	79	54	40	70	69	71	72	15	15	5.3	30
28	10	71	*51	45	62	65	76	65	12	13	4.7	28
29	19	68	49	43	-	62	81	60	12	13	4.4	26
30	12	67	48	38	--------	60	76	57	11	11	4.2	23
31	11	--------	45	36	--------	55	--------	53	--------	9.2	17	--------
Total	139.0	704.3	2,337	1,173	1,219	1,875	1,878	3,062	688	274.8	260.2	1,330
Mean	4.48	23.5	75.4	37.8	43.5	60.5	62.6	98.8	22.9	8.86	8.39	44.3
(†)	23.0	21.7	22.4	22.4	20.0	22.8	21.9	22.7	22.0	22.2	22.8	20.5
					Adjusted for diversion							
Mean	5.63	24.6	76.5	39.0	44.6	61.6	63.7	99.9	24.1	9.97	9.53	45.4
Cfsm	0.293	1.28	3.98	2.03	2.32	3.21	3.32	5.20	1.26	0.519	0.496	2.36
In.	0.34	1.43	4.59	2.34	2.42	3.70	3.70	6.00	1.40	0.60	0.57	2.64

	Observed	Adjusted
Calendar year 1953:	Max - Min - Mean -	Mean - Cfsm - In. -
Water year 1953-54:	Max 186 Min 2.3 Mean 40.9	Mean 42.1 Cfsm 2.19 In. 29.73

* Discharge measurement made on this day.

† Diversion for municipal supply of Attleboro, in millions of gallons. Records furnished by city of Attleboro.

Note.--No gage-height record Oct. 1-29, Jan. 9-24, Feb. 11-14, Feb. 20 to Mar. 8, Mar. 12; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage when available, and records for station near Norton.

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.
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.
Records available.--June 1925 to September 1954.
Average discharge.--29 years, 70.4 cfs (adjusted for diversion).
Extremes.--Maximum discharge during year, 698 cfs May 10 (gage height, 9.09 ft); minimum, 2.1 cfs Oct. 19; minimum daily, 2.2 cfs Oct. 12.
1925-54: Maximum discharge, 1,030 cfs Mar. 12, 13, 1936 (gage height, 10.01 ft), from rating curve extended above 500 cfs; minimum, 0.3 cfs Sept. 10, 1926.
Remarks.--Records excellent except those for periods of backwater from aquatic vegetation, which are good. 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).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Jan. 18)

Oct. 1 to May 8				May 9 to Sept. 11				Sept. 12-30	
4.5	1.7	5.5	40	4.8	6.9	6.5	140	5.6	49
4.6	3.0	6.0	86	5.1	17	7.0	220	6.0	85
4.7	4.7	6.5	140	5.4	34	8.0	428	7.0	197
4.9	9.3	7.0	214	6.0	86	9.0	675	8.0	344
5.2	20	8.0	390						

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.9	27	135	79	*71	*118	*93	136	*90	*25	14	75
2	7.4	17	128	*73	77	113	87	120	74	30	14	53
3	5.8	23	109	73	75	110	86	124	69	21	16	33
4	4.0	22	103	113	107	132	75	148	59	14	23	42
5	5.8	15	136	112	116	139	74	153	57	13	26	28
6	7.4	14	133	114	109	128	69	138	52	13	22	17
7	7.6	55	288	108	90	101	71	123	52	11	27	23
8	7.1	48	328	94	92	94	74	116	54	12	21	41
9	6.9	49	257	78	86	93	78	*456	43	11	23	26
10	5.2	41	227	75	82	94	69	*672	44	10	47	18
11	2.6	30	214	81	78	93	60	535	45	9.9	36	140
12	2.2	44	189	76	72	86	57	404	40	7.8	35	*302
13	3.2	28	198	75	53	78	60	347	34	9.8	28	*287
14	5.6	35	252	75	52	84	59	282	41	11	24	222
15	5.6	27	323	70	54	114	55	233	58	12	16	171
16	5.8	27	288	67	61	115	59	302	57	11	17	158
17	4.4	26	232	60	76	109	135	318	45	9.1	20	179
18	2.5	30	188	54	96	93	374	280	46	7.7	16	171
19	2.8	24	176	59	94	88	382	222	40	9.1	16	163
20	5.8	27	151	67	86	114	277	200	30	9.6	16	154
21	5.8	23	140	88	77	143	229	237	32	12	15	130
22	5.8	18	140	101	110	143	201	260	33	19	13	121
23	6.0	83	140	93	128	132	184	226	32	22	14	97
24	4.9	132	126	83	133	114	208	202	26	28	14	93
25	5.9	185	115	85	128	108	189	176	29	37	13	81
26	15	274	102	86	141	128	165	136	28	40	12	76
27	15	235	102	98	139	127	143	124	21	26	12	75
28	15	198	103	110	114	112	157	111	23	*20	12	71
29	68	151	99	86	-	106	161	99	28	22	10	55
30	*53	*140	96	93	--------	102	*153	88	24	23	*11	*64
31	51	--------	93	82	--------	101	--------	81	--------	18	27	--------
Total	351.0	2,048	5,311	2,608	2,597	3,412	4,084	7,049	1,306	524.0	610	3,176
Mean	11.3	68.3	171	84.1	92.8	110	136	227	43.5	16.9	19.7	106
(†)	23.0	21.7	22.4	22.4	20.0	22.8	21.9	22.7	22.0	22.2	22.8	20.5

Adjusted for diversion

Mean	12.5	69.4	172	85.2	93.9	111	137	229	44.7	18.0	20.8	107
Cfsm	0.295	1.64	4.06	2.01	2.21	2.62	3.23	5.40	1.05	0.425	0.491	2.52
In.	0.34	1.83	4.69	2.32	2.30	3.02	3.61	6.21	1.18	0.49	0.57	2.81

	Observed			Adjusted			
Calendar year 1953:	Max 428	Min 1.3	Mean 98.2	Mean 99.3	Cfsm 2.34	In. 31.79	
Water year 1953-54:	Max 672	Min 2.2	Mean 90.6	Mean 91.7	Cfsm 2.16	In. 29.37	

Peak discharge (base, 280 cfs).--Nov. 26 (11 a.m. to 12 m.) 293 cfs (7.48 ft); Dec. 7 (5:30 p.m.) 355 cfs (7.82 ft); Dec. 15 (3 p.m.) 338 cfs (7.73 ft); Apr. 18 (2 p.m.) 422 cfs (8.16 ft); May 10 (1:30 p.m.) 698 cfs (9.09 ft); May 17 (12 m.) 343 cfs (7.62 ft); May 21 (6 p.m.) 290 cfs (7.36 ft); Sept. 12 (3 p.m.) 342 cfs (7.99 ft).
* Discharge measurement made on this day.
† Diversion for municipal supply of Attleboro, in millions of gallons. Records furnished by city of Attleboro.
Note.--Backwater from aquatic vegetation Oct. 1 to Nov. 21, Aug. 3 to Sept. 11.

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 1954. 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.--31 years, 51.7 cfs (adjusted for diversion).

Extremes.--Maximum discharge during year, 1,530 cfs Sept. 12 (gage height, 6.74 ft), from rating curve extended above 1,200 cfs; minimum, 5.2 cfs July 20.
1923-54: Maximum discharge, 2,520 cfs Mar. 18, 1936 (gage height, 8.58 ft, from floodmarks), from rating curve extended above 550 cfs; minimum, 0.2 cfs May 17, 1940.

Remarks.--Records excellent. City of Worcester diverts flow from about 7.0 sq mi of drainage area above station. Flow regulated by reservoirs above station.

Revisions (water years).--WSP 1301: 1927(M).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.1	4.8	3.2	86
2.2	6.8	3.5	155
2.3	9.4	4.0	300
2.5	16	5.0	680
2.7	26	6.0	1,160
2.9	42		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	34	30	27	28	63	60	51	42	21	13	225
2	16	29	25	25	28	79	52	48	40	19	12	93
3	12	27	22	24	*28	79	42	57	40	17	30	49
4	9.4	24	*22	32	38	112	32	100	38	15	38	38
5	8.9	22	44	30	40	92	32	123	34	17	25	29
6	9.1	20	54	31	36	68	34	96	32	22	19	26
7	12	38	108	30	32	56	36	78	28	18	16	28
8	8.9	40	107	27	30	51	34	68	24	17	12	34
9	8.4	31	69	24	29	48	30	108	22	14	17	38
10	8.1	23	76	23	27	45	30	150	20	13	48	46
11	7.8	21	92	23	26	*42	28	142	20	12	54	*363
12	8.1	18	71	21	24	38	29	125	19	11	40	1,100
13	*13	17	66	*19	21	38	28	84	21	7.3	26	436
14	18	14	106	17	19	45	26	69	20	7.3	22	258
15	13	12	192	20	20	48	26	63	28	23	18	165
16	14	11	130	19	26	48	28	92	28	20	16	155
17	18	11	83	19	39	47	92	125	26	11	13	252
18	16	11	63	20	45	44	309	107	22	8.1	11	252
19	15	11	52	22	38	40	*258	90	19	6.4	11	195
20	15	13	48	24	32	81	175	72	17	5.6	10	160
21	15	20	48	52	31	114	123	110	15	7.6	9.4	*123
22	14	19	54	57	64	92	99	219	14	7.8	8.9	118
23	13	33	53	42	81	78	88	189	17	6.2	11	103
24	12	38	44	36	62	69	86	*152	17	7.6	12	74
25	16	57	38	32	71	71	76	118	15	10	12	60
26	12	105	32	32	88	116	68	96	15	*8.1	12	58
27	14	76	30	40	71	105	56	72	15	10	*12	52
28	38	51	30	46	66	86	63	62	12	17	12	47
29	40	38	30	38	-	76	69	54	*18	19	12	53
30	48	31	30	34	-------	69	*60	52	19	18	12	49
31	46	-------	29	31	-------	64	-------	47	-------	14	128	-------
Total	517.7	895	1,878	917	1,140	2,104	2,169	3,019	697	410.0	692.3	4,678
Mean	16.7	29.8	60.6	29.6	40.7	67.9	72.3	97.4	23.2	13.2	22.3	156
(†)	102.6	88.3	177.2	174.5	143.5	165.9	143.0	139.5	164.7	138.2	129.9	174.5

Adjusted for diversion

Mean	21.8	34.4	69.4	38.3	48.6	76.2	79.7	104	31.7	20.1	28.8	165
Cfsm	0.696	1.10	2.22	1.22	1.55	2.43	2.55	3.32	1.01	0.642	0.920	5.27
In.	0.80	1.23	2.56	1.41	1.62	2.80	2.84	3.84	1.13	0.74	1.06	5.88

	Observed			Adjusted			
Calendar year 1953:	Max 412	Min 7.1	Mean 63.4	Mean 71.1	Cfsm 2.27	In. 30.86
Water year 1953-54:	Max 1,100	Min 5.6	Mean 52.4	Mean 59.8	Cfsm 1.91	In. 25.91

Peak discharge (base, 250 cfs).--Apr. 18 (4 to 5 p.m.) 365 cfs (4.20 ft); Sept. 1 (2 a.m.) 285 cfs (3.95 ft); Sept. 12 (3 a.m.) 1,530 cfs (6.74 ft); Sept. 17 (8 to 12 p.m.) 276 cfs (3.92 ft).

* Discharge measurement made on this day.

† Diversion for municipal supply of Worcester, in millions of gallons. Records furnished by city of Worcester.

Note.--Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

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 Bummet Brook.

Drainage area.--25.5 sq mi.

Records available.--October 1939 to September 1954.

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.--15 years, 38.9 cfs.

Extremes.--Maximum discharge during year, 340 cfs Sept. 12 (gage height, 3.50 ft); minimum daily, 1.4 cfs Oct. 1-3, 5.
1939-54: Maximum discharge, that of Sept. 12, 1954; maximum gage height, 3.53 ft Mar. 17, 1953 (backwater from debris); minimum daily discharge, 0.3 cfs Oct. 14-17, 1942.

Remarks.--Records excellent except those for periods of shifting control or backwater from debris, which are good, and those for periods of no gage-height record, which are fair. Some regulation by Lake Quinsigamond and ponds above station.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 2				Feb. 3 to Sept. 13				Sept. 14-30			
0.5	1.0	1.2	16	1.0	8.8	2.5	160	1.4	26	2.5	150
.6	1.5	1.5	32	1.3	22	3.0	250	1.6	39	3.0	240
.7	2.5	1.8	59	1.6	42	3.5	340	2.0	79	3.5	334
.8	4.0	2.2	109	2.0	82						
1.0	8.7										

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	19	35	39	38	63	69	66	50	26	19	82
2	1.4	18	37	34	38	68	63	62	51	25	18	76
3	1.4	14	32	31	*36	67	59	64	55	25	24	69
4	1.5	12	30	34	40	80	50	77	50	22	34	60
5	1.4	10	41	37	42	71	46	80	50	21	30	52
6	1.5	9.0	44	39	42	75	52	76	50	22	26	48
7	3.2	13	69	38	39	76	55	72	46	20	25	60
8	4.6	23	*49	*29	*37	69	53	71	45	19	22	70
9	3.8	24	52	31	37	63	50	91	42	19	34	60
10	3.4	25	69	36	36	63	42	91	40	18	48	50
11	3.7	25	60	34	34	56	45	94	39	16	49	120
12	3.4	24	55	34	34	50	*46	85	38	14	42	270
13	3.1	22	71	38	30	53	42	86	38	12	38	280
14	2.6	20	92	37	28	61	36	82	35	12	34	300
15	2.4	19	103	37	28	64	39	80	39	12	30	260
16	2.2	17	91	36	30	59	40	86	42	12	28	230
17	2.4	16	91	35	36	49	66	81	39	11	26	190
18	2.8	14	85	31	41	42	106	77	36	10	23	210
19	2.6	14	76	30	42	35	112	78	34	9.5	*20	180
20	2.4	13	69	30	42	62	112	78	32	8.8	20	150
21	*2.4	12	68	38	41	72	108	102	28	9.5	20	120
22	2.4	12	70	44	54	62	102	135	*26	12	18	*98
23	2.5	24	68	43	50	59	95	128	29	12	15	39
24	2.8	31	60	41	48	*62	92	*186	34	13	14	106
25	4.7	34	54	38	64	62	85	227	30	22	13	151
26	8.1	45	51	38	69	78	76	192	28	*23	13	35
27	7.2	43	51	41	67	66	71	106	28	23	*13	106
28	12	43	47	46	66	50	78	41	25	22	12	166
29	25	39	45	44	-	44	76	53	26	21	12	134
30	27	33	44	42	-------	57	70	59	28	21	11	123
31	23	-- --	44	42	-------	68	-------	55	-------	20	20	- - -
Total	168.3	667.0	1,853	1,147	1,189	1,906	2,036	2,861	1,133	532.8	751	3,895
Mean	5.43	22.2	59.8	37.0	42.5	61.5	67.9	92.3	37.8	17.2	24.2	130
Cfsm	0.213	0.871	2.35	1.45	1.67	2.41	2.66	3.62	1.48	0.675	0.949	5.10
In.	0.25	0.97	2.70	1.67	1.73	2.78	2.97	4.17	1.65	0.78	1.10	5.68

Calendar year 1953: Max 311 Min 1.1 Mean 53.9 Cfsm 2.11 In. 28.70
Water year 1953-54: Max 300 Min 1.4 Mean 49.7 Cfsm 1.95 In. 26.45

* Discharge measurement made on this day.

Note.--No gage-height record Aug. 10, Aug. 31 to Sept. 21; discharge estimated on basis of weather records, recorded range in stage, and records for stations on nearby streams. Backwater from debris Oct. 6-21, Oct. 29 to Dec. 8, June 4-22, Aug. 22-27. Shifting-control method used Jan. 13 to Feb. 2. Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

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 1954 (monthly discharge only for some periods, published in WSP 1301).

Gage.--Water-stage recorder. Altitude of gage is 260 ft (from topographic map).

Average discharge.--15 years, 220 cfs (adjusted for diversion).

Extremes.--Maximum discharge during year, 4,510 cfs Sept. 12 (gage height, 11.36 ft), from rating curve extended above 3,300 cfs on basis of computation of flow over dam at gage height 13.7 ft; minimum daily, 59 cfs Oct. 18.
1939-54: Maximum discharge, that of Sept. 12, 1954; minimum daily, 2 cfs Aug. 29, 1941, Sept. 5, 1942.
Maximum discharge known, 7,510 cfs Mar. 19, 1936 (gage height, 13.7 ft, from floodmarks), by computation of flow over dam 800 ft above station.

Remarks.--Records good. 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).

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	103	176	237	216	224	365	332	351	314	178	115	1,150
2	96	141	232	203	224	479	316	322	312	173	103	565
3	89	141	213	200	232	443	291	390	309	157	230	376
4	79	131	200	278	316	647	253	547	288	145	274	304
5	94	117	424	256	324	495	242	520	280	141	188	234
6	113	120	358	261	278	402	248	469	280	193	150	198
7	122	227	709	253	253	360	306	418	259	150	126	280
8	113	240	*541	*219	*240	344	267	399	253	145	103	319
9	89	178	416	190	237	336	242	626	261	126	160	309
10	84	164	534	190	229	322	221	641	251	120	416	291
11	72	145	498	203	216	*299	216	632	206	108	367	1,760
12	84	141	411	208	206	280	*242	539	153	108	272	*3,680
13	84	136	430	203	176	256	226	476	193	113	186	*1,940
14	82	122	751	203	164	324	206	438	198	101	148	1,340
15	82	103	906	198	180	365	200	402	288	113	129	1,070
16	94	110	650	190	216	339	219	522	272	*115	136	911
17	61	122	503	186	297	301	652	514	234	101	145	1,340
18	59	115	426	186	334	278	1,380	474	213	96	117	1,130
19	72	115	367	196	293	253	1,090	436	188	89	*110	962
20	72	108	339	198	264	502	785	418	173	101	108	890
21	*77	103	336	419	248	490	620	760	173	126	79	743
22	70	86	390	388	476	426	536	1,040	173	120	75	*687
23	77	386	374	301	438	386	490	869	*214	110	82	570
24	77	308	336	256	376	*346	482	*715	242	103	98	430
25	140	454	293	242	472	358	436	674	198	216	129	495
26	161	632	275	245	487	584	406	593	173	158	98	450
27	82	411	259	291	418	490	381	506	164	184	94	418
28	261	319	256	339	376	416	440	381	157	122	72	453
29	309	267	267	283	-	379	423	326	213	120	68	438
30	341	240	256	251	--------	348	390	379	186	141	63	430
31	224	--------	245	234	--------	334	--------	339	--------	115	954	--------
Total	3,563	6,038	12,432	7,486	8,194	11,947	12,538	16,116	6,818	4,088	5,395	24,163
Mean	115	201	401	241	293	385	418	520	227	132	174	805
(†)	555.7	476.8	32.6	297.6	268.8	573.8	230.2	214.4	227.8	531.7	545.4	181.0

Adjusted for diversion

Mean	67.2	177	399	227	278	357	406	509	216	105	147	796
Cfsm	0.627	1.27	2.87	1.63	2.00	2.57	2.92	3.66	1.55	0.755	1.06	5.73
In.	0.72	1.42	3.31	1.88	2.08	2.96	3.26	4.22	1.73	0.87	1.22	6.39

	Observed			Adjusted			
Calendar year 1953:	Max 1,600	Min 59	Mean 349	Mean 331	Cfsm 2.38	In. 32.33	
Water year 1953-54:	Max 3,680	Min 59	Mean 325	Mean 308	Cfsm 2.22	In. 30.06	

* Discharge measurement made on this day.
† Diversion from Nashua River basin to Blackstone River basin for municipal supply of Worcester, in millions of gallons. Records furnished by city of Worcester.
Note.--Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

Branch River at Forestdale, R. I.

Location.--Lat 41°59'47", long 71°33'47", on left bank 20 ft upstream from abandoned bridge, 600 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 1954. 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.--14 years, 153 cfs.

Extremes.--Maximum discharge during year, 3,080 cfs Sept. 12 (gage height, 9.12 ft), from rating curve extended above 2,100 cfs on basis of computation of flow over dam 600 ft above station at gage height 10.52 ft; minimum daily, 17 cfs June 27.
1940-54: Maximum discharge, that of Sept. 12, 1954; minimum daily, 5.2 cfs Oct. 7, 1948.
Discharge of flood in March 1936 was about 5,800 cfs, by computation of flow over dam 1 mile above station.

Remarks.--Records excellent except those for periods of no gage-height record, which are fair. Flow regulated by mills and reservoirs above station.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.8	12	3.5	328
1.9	18	4.0	490
2.0	26	5.0	870
2.3	55	7.0	1,800
2.6	100	9.0	3,000
3.0	189		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	72	222	40	170	307	196	210	207	25	21	700
2	31	124	*204	70	180	322	196	228	196	21	21	410
3	30	97	199	120	190	322	89	341	194	20	20	238
4	31	100	192	180	240	456	56	525	187	19	20	96
5	30	95	159	*195	280	410	200	483	84	22	34	33
6	31	82	129	169	210	264	194	378	22	21	47	62
7	33	29	543	184	170	275	187	325	86	21	39	155
8	30	23	508	182	180	309	179	222	87	20	34	184
9	31	20	350	55	190	252	157	480	95	20	99	172
10	30	18	347	130	*194	*236	27	*570	109	20	147	165
11	30	48	353	140	192	212	21	443	81	20	120	583
12	31	101	257	160	184	194	115	381	21	*21	170	2,450
13	31	87	337	160	90	103	165	325	24	21	69	*1,050
14	31	75	480	150	45	192	160	289	92	21	19	638
15	31	18	612	150	110	368	156	205	92	21	18	483
16	29	18	401	90	130	278	70	307	89	21	52	410
17	29	64	307	35	27	233	120	359	94	20	26	550
18	30	23	232	80	142	209	1,310	263	106	23	26	483
19	31	119	190	140	194	202	990	233	80	*143	26	426
20	29	179	170	170	92	243	*626	217	22	140	26	443
21	31	85	230	220	90	466	446	299	87	55	26	328
22	31	22	240	290	397	370	359	532	23	38	27	295
23	32	118	250	200	397	272	322	446	18	21	28	241
24	32	179	222	150	281	244	328	413	82	26	29	214
25	43	204	130	180	281	233	325	325	86	21	*28	118
26	36	285	150	180	362	319	326	*264	30	22	29	179
27	34	281	170	200	273	248	258	219	17	20	26	235
28	*48	228	170	230	272	233	310	209	74	21	21	196
29	59	209	160	220	-	266	375	91	63	23	20	*189
30	151	255	160	160	-------	212	322	80	25	23	21	189
31	93	-------	100	120	-------	196	-------	131	-------	22	195	-------
Total	1,197	3,258	8,174	4,750	5,563	8,446	8,585	9,793	2,473	952	1,484	11,915
Mean	38.6	109	264	153	199	272	286	316	82.4	30.7	47.9	397
Cfsm	0.414	1.17	2.83	1.64	2.13	2.92	3.07	3.39	0.883	0.329	0.513	4.26
In.	0.48	1.30	3.26	1.89	2.22	3.37	3.42	3.90	0.99	0.38	0.59	4.75

Calendar year 1953: Max 1,200 Min 16 Mean 201 Cfsm 2.15 In. 29.21
Water year 1953-54: Max 2,450 Min 17 Mean 182 Cfsm 1.95 In. 26.55

Peak discharge(base, 880 cfs).--Apr. 18 (2 to 4 p.m.) 1,530 cfs (6.46 ft); Sept. 1 (6:30 a.m.) 914 cfs (5.11 ft); Sept. 12 (5 a.m.) 3,080 cfs (9.12 ft).
* Discharge measurement made on this day.
Note.--No gage-height record Dec. 18 to Jan. 5, Jan. 9 to Feb. 9, Feb. 13-16; discharge estimated on basis of 1 discharge measurement, recorded range in stage, weather records, mill operation records, and records for Blackstone River at Woonsocket. Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

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 1954.
Gage.--Water-stage recorder. Datum of gage is 107.42 ft above mean sea level, datum of 1929.
Average discharge.--25 years, 690 cfs (adjusted for diversion).
Extremes.--Maximum discharge during year, 9,400 cfs Sept. 12 (gage height, 10.6 ft, from floodmarks); minimum daily, 84 cfs Oct. 3.
1929-54: Maximum discharge, 15,100 cfs July 24, 1938 (gage height, 14.43 ft); minimum daily, 21 cfs Aug. 11, 1934, flow diverted around station in Hamlet Trench not included.
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 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from aquatic vegetation Oct. 1 to Nov. 13, June 8 to Sept. 1)

Oct. 1 to Sept. 11				Sept. 12-30	
1.2	71	3.0	660	3.0	660
1.5	130	5.0	2,130	4.0	1,350
2.0	252	7.0	4,020	5.0	2,300
2.5	418			10.0	8,540

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	133	409	717	485	647	1,080	867	998	871	303	173	2,230
2	132	402	*693	495	630	1,150	827	970	781	278	169	1,790
3	84	309	645	523	641	1,270	681	1,240	780	250	210	1,100
4	107	278	581	711	821	1,560	608	1,600	739	236	279	741
5	167	270	652	*743	979	1,580	705	1,740	576	215	363	541
6	140	245	902	717	754	1,220	681	1,550	541	214	283	444
7	182	236	1,580	736	693	1,120	711	1,310	505	224	232	531
8	165	357	1,870	635	687	1,080	736	1,210	509	224	195	667
9	174	341	1,470	472	657	958	699	1,760	522	*206	258	655
10	100	286	1,310	463	*635	902	517	21,70	448	196	409	639
11	131	223	1,390	503	603	833	503	1,980	457	176	480	2,300
12	133	352	1,120	593	563	762	543	1,780	353	183	517	a8,530
13	192	300	1,140	619	435	652	625	1,540	306	161	388	*6,870
14	143	290	1,600	566	336	827	588	1,330	413	159	249	3,840
15	145	185	2,360	568	394	1,160	548	1,160	490	160	261	*2,750
16	179	243	2,050	463	472	1,100	513	1,450	567	161	236	2,220
17	85	272	1,620	434	548	944	1,020	1,640	508	142	228	2,680
18	90	271	1,260	434	769	833	3,750	1,370	452	146	185	2,860
19	161	300	930	565	795	769	3,620	1,280	409	*238	193	2,490
20	133	371	951	608	647	986	*2,560	1,130	275	279	151	2,340
21	128	218	1,000	837	578	1,550	1,940	1,420	361	205	181	2,040
22	199	171	972	1,160	1,200	1,360	1,630	2,400	284	219	167	1,840
23	193	484	1,080	845	1,440	1,130	1,440	2,330	261	185	160	1,610
24	85	948	937	762	1,220	1,020	1,430	2,000	351	167	171	1,380
25	156	1,050	814	736	1,200	*972	1,400	1,650	359	169	*165	1,100
26	265	1,410	775	687	1,400	1,240	1,330	*1,530	265	241	188	1,050
27	255	1,370	723	749	1,220	1,290	1,120	1,320	233	221	183	1,130
28	*243	951	723	888	1,120	1,180	1,290	1,130	291	224	160	1,030
29	439	860	668	847	-	1,110	1,410	817	314	218	153	*1,080
30	685	801	647	645	-------	972	1,330	700	375	162	158	935
31	553	-------	572	657	-------	909	-------	828	-------	186	771	-------
Total	5,977	14,203	33,752	20,146	22,084	33,519	35,622	45,333	13,596	6,348	7,916	59,413
Mean	193	473	1,089	650	789	1,081	1,187	1,462	453	205	255	1,980
(†)	555.7	476.8	32.6	297.6	268.8	573.8	230.2	214.4	227.8	531.7	545.4	181.0
Adjusted for diversion												
Mean	165	449	1,087	635	774	1,053	1,176	1,452	441	178	228	1,971
Cfsm	0.397	1.08	2.61	1.53	1.86	2.53	2.83	3.49	1.06	0.428	0.548	4.74
In.	0.46	1.20	3.01	1.76	1.94	2.92	3.15	4.02	1.18	0.49	0.63	5.29

	Observed			Adjusted				
Calendar year 1953:	Max 4,720	Min 50	Mean 887	Mean 869	Cfsm 2.09	In. 28.37		
Water year 1953-54:	Max 8,530	Min 84	Mean 816	Mean 799	Cfsm 1.92	In. 26.05		

Peak discharge (base, 3,400 cfs).--Apr. 18 (7:30 p.m.) 4,520 cfs (7.44 ft); Sept. 12 (5 p.m.) 9,400 cfs (10.6 ft).
* Discharge measurement made on this day.
† Diversion, in millions of gallons, from Nashua River basin for municipal supply of Worcester, Mass. Records furnished by city of Worcester.
a No gage-height record; discharge estimated on basis of floodmarks and records for stations on nearby streams.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 95 ft (from topographic map).

Average discharge.--13 years, 65.2 cfs.

Extremes.--Maximum discharge during year, 1,100 cfs Sept. 11 (gage height, 7.03 ft), from rating curve extended above 450 cfs; minimum daily, 11 cfs Oct. 12, 18.
1941-54: Maximum discharge, that of Sept. 11, 1954; 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 backwater from debris, 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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	21	57	34	96	124	94	117	98	42	15	64
2	18	38	54	55	86	120	90	113	79	41	30	67
3	14	35	51	57	85	122	71	158	69	24	44	62
4	13	36	49	102	109	174	75	196	59	14	40	56
5	19	30	51	70	92	150	96	188	45	12	40	22
6	17	21	36	68	67	124	77	166	54	19	40	18
7	20	26	184	68	72	113	75	144	73	35	32	52
8	17	22	103	63	96	121	70	141	*51	*38	18	46
9	17	40	81	47	77	101	59	*303	50	35	38	55
10	14	38	*82	55	*72	97	49	288	48	21	59	55
11	12	21	81	90	72	*89	59	257	47	16	47	465
12	11	39	61	68	72	84	86	218	36	40	43	249
13	20	41	67	68	53	67	69	185	18	39	45	106
14	26	34	182	63	55	105	57	163	58	39	22	185
15	*37	21	159	62	84	127	55	147	56	38	17	193
16	34	39	106	51	74	107	60	215	55	38	31	173
17	13	37	91	48	80	100	121	199	56	32	40	218
18	11	39	78	80	80	95	328	*168	53	16	38	200
19	18	36	60	61	75	87	286	147	42	*38	39	167
20	15	39	62	69	57	145	233	131	17	42	40	164
21	18	21	95	107	69	161	183	179	55	52	37	132
22	23	20	76	98	138	157	155	203	59	18	23	115
23	27	67	71	67	96	133	*145	190	48	32	34	103
24	22	69	68	67	86	121	172	174	45	37	38	89
25	25	108	43	96	113	118	153	149	44	20	*39	74
26	27	104	62	77	121	134	140	134	35	38	40	69
27	26	89	63	86	123	116	125	118	17	42	40	*79
28	36	50	84	93	115	108	157	106	40	43	35	75
29	52	28	*66	80	-	117	151	82	47	42	22	*66
30	53	65	63	62	------	98	135	87	43	40	33	59
31	34	---	60	70	-------	102	-------	82	-------	18	89	---
Total	708	1,274	2,446	2,182	2,415	3,617	3,626	5,148	1,497	1,001	1,148	3,478
Mean	22.8	42.5	78.9	70.4	86.2	117	121	166	49.9	32.3	37.0	116
Cfsm	0.595	1.11	2.06	1.84	2.25	3.05	3.16	4.33	1.30	0.843	0.966	3.03
In.	0.69	1.24	2.38	2.12	2.35	3.51	3.52	5.00	1.45	0.97	1.11	3.38

Calendar year 1953: Max 564 Min 8.9 Mean 92.5 Cfsm 2.42 In. 32.77
Water year 1953-54: Max 465 Min 11 Mean 78.2 Cfsm 2.04 In. 27.72

* Discharge measurement made on this day.
Note.--Backwater from debris Sept. 11-30. Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

South Branch Pawtuxet River at Washington, R. I.

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

Drainage area.--63.8 sq mi.

Records available.--October 1940 to September 1954.

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

Average discharge.--14 years, 122 cfs (adjusted for storage and diversion).

Extremes.--Maximum discharge during year, 1,320 cfs Sept. 12 (gage height, 4.11 ft); minimum daily, 13 cfs Aug. 29.
1940-54: Maximum discharge, that of Sept. 12, 1954; 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. 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 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 12-14)

1.3	12	2.1	224
1.4	20	2.5	515
1.5	33	2.9	815
1.7	69	3.4	1,210
1.9	131		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66	34	*160	148	188	237	169	173	215	73	17	240
2	62	89	165	114	178	250	165	178	156	70	58	277
3	20	81	160	88	173	231	101	237	135	19	66	219
4	20	77	147	183	173	257	96	257	131	16	65	165
5	72	79	129	178	183	257	192	264	128	15	63	124
6	66	78	189	178	137	156	183	244	124	15	65	100
7	67	35	429	*169	94	148	135	219	80	14	21	93
8	67	36	530	156	193	231	135	156	116	14	17	85
9	65	94	418	105	173	209	135	318	*123	15	66	77
10	19	88	350	86	160	188	60	*492	110	30	133	72
11	15	85	320	160	160	178	77	425	105	61	173	241
12	19	82	264	152	156	*169	152	328	104	73	198	*1,180
13	67	81	257	135	44	58	152	283	29	70	156	760
14	65	23	320	131	20	94	*131	250	103	69	96	440
15	65	26	485	128	127	232	124	178	110	*70	80	320
16	64	90	425	139	156	237	124	219	107	63	99	257
17	16	80	328	165	165	193	163	270	101	15	*79	250
18	19	63	277	169	*165	169	684	244	103	19	61	257
19	68	72	237	169	160	148	688	231	23	75	56	257
20	64	104	214	169	58	138	462	*198	22	71	55	244
21	61	27	209	183	65	277	342	219	95	73	18	219
22	59	20	204	183	247	328	283	231	84	70	18	198
23	60	73	204	113	264	264	257	244	70	80	54	169
24	16	82	188	34	237	219	257	283	68	20	51	148
25	30	114	131	164	231	193	283	244	67	16	54	135
26	82	119	148	173	244	224	298	209	19	81	54	135
27	*73	121	165	173	165	173	257	183	18	91	54	148
28	80	44	193	178	160	178	244	169	74	72	15	*139
29	97	36	178	173	-	231	250	77	82	72	13	128
30	99	120	169	66	--------	198	237	106	73	64	50	120
31	38	--------	160	100	--------	178	--------	128	--------	20	112	--------
Total	1,681	2,153	7,753	4,462	4,476	6,243	6,836	7,257	2,775	1,526	2,117	7,197
Mean	54.2	71.8	250	144	160	201	228	234	92.5	49.2	68.3	240
(†)	+1.35	+70.8	+1.84	+2.06	+6.57	-6.32	+3.47	-0.71	-15.2	+2.10	+19.5	-2.03
Adjusted for diversion and change in reservoir contents												
Mean	55.6	143	252	146	166	195	231	233	77.3	51.3	87.8	238
Cfsm	0.871	2.24	3.95	2.29	2.60	3.06	3.62	3.65	1.21	0.804	1.38	3.73
In.	1.00	2.49	4.55	2.64	2.72	3.52	4.05	4.22	1.35	0.93	1.59	4.16

	Observed			Adjusted		
Calendar year 1953:	Max 815	Min 13	Mean 162	Mean 167	Cfsm 2.62	In. 35.58
Water year 1953-54:	Max 1,180	Min 13	Mean 149	Mean 156	Cfsm 2.45	In. 33.22

* 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.

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 1954.

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

Average discharge.--14 years (1940-54), 378 cfs (adjusted for storage and diversion).

Extremes.--Maximum discharge during year, 2,010 cfs Sept. 13 (gage height, 8.85 ft), from rating curve extended above 1,800 cfs; minimum daily, 60 cfs July 6.
1939-54: Maximum discharge, 2,150 cfs Jan. 15, 1940, Feb. 8, 1941, from rating curve extended above 800 cfs; maximum gage height, that of Sept. 13, 1954; minimum daily discharge, 22 cfs Sept. 4, 1944.

Remarks.--Records excellent except those for periods of no gage-height record or backwater from aquatic vegetation, which are good. Flow regulated by powerplants, and by Scituate, Flat River, and other reservoirs (combined usable capacity, about 5 1/3 billion cubic feet). 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.

Rating table, water year 1953-54, except periods of backwater from aquatic vegetation (gage height, in feet, and discharge, in cubic feet per second)

3.5	50	5.0	640
3.7	95	6.0	1,060
4.0	193	7.0	1,410
4.5	394	8.5	1,990

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	193	138	405	257	434	501	426	585	385	189	72	848
2	191	258	440	268	431	570	492	369	351	181	122	735
3	144	267	410	215	429	538	404	572	290	105	191	724
4	82	259	390	592	567	668	308	815	264	64	187	332
5	134	248	399	566	503	586	416	810	175	62	169	253
6	219	247	390	548	293	336	512	749	193	60	169	215
7	238	225	1,170	515	215	268	476	692	295	96	113	272
8	234	142	1,270	469	439	475	441	514	240	*108	78	271
9	222	251	1,070	253	437	482	452	1,040	231	100	173	332
10	147	271	962	197	408	*452	227	1,190	243	86	741	221
11	85	165	875	460	392	427	146	1,090	234	64	439	834
12	75	250	560	470	384	405	380	953	154	104	404	1,910
13	110	256	690	425	a220	226	403	835	101	157	342	1,910
14	206	154	1,020	410	a135	205	386	762	197	155	205	1,420
15	213	75	1,210	396	a350	535	371	625	230	162	165	1,050
16	217	188	1,080	228	a450	522	385	794	241	161	*239	895
17	137	*240	a920	250	a470	460	525	861	230	106	216	935
18	72	232	a720	435	*a460	419	1,270	753	237	70	191	1,010
19	108	233	420	427	402	395	1,420	627	122	137	187	1,030
20	203	210	446	446	226	411	1,150	521	66	166	176	1,070
21	197	139	637	622	125	470	967	600	138	189	126	947
22	192	66	543	574	597	667	*856	724	207	176	88	631
23	194	557	542	293	606	587	801	735	193	173	119	546
24	141	767	447	179	528	505	828	815	186	115	214	485
25	107	659	264	387	567	*478	677	728	166	75	205	267
26	230	809	292	457	588	538	738	665	107	179	211	249
27	*245	558	304	471	326	310	624	618	64	274	211	454
28	291	294	521	508	280	300	644	592	105	237	127	419
29	439	208	458	455	-	492	790	255	200	*235	88	370
30	422	351	433	243	--------	470	745	202	206	217	134	391
31	199	--------	423	168	--------	429	--------	238	--------	118	596	--------
Total	5,887	8,717	19,711	12,184	11,262	14,127	18,260	21,329	6,051	4,321	6,698	20,926
Mean	190	291	636	393	402	456	609	688	202	139	216	698
(†)	-17.5	+155	+300	+90.3	+140	+171	+126	+30.3	-24.2	-30.8	+36.8	+188

Adjusted for diversion and change in reservoir contents

Mean	172	445	936	483	542	627	735	718	178	109	253	886
Cfsm	0.860	2.22	4.68	2.42	2.71	3.14	3.68	3.59	0.890	0.545	1.26	4.43
In.	0.99	2.48	5.39	2.79	2.82	3.62	4.10	4.14	0.99	0.63	1.46	4.94

	Observed	Adjusted
Calendar year 1953:	Max 1,730 Min 66 Mean 481	Mean 580 Cfsm 2.90 In. 39.31
Water year 1953-54:	Max 1,910 Min 60 Mean 410	Mean 506 Cfsm 2.53 In. 34.35

* 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 and Flat River Reservoirs, equivalent in cubic feet per second. Records furnished by Providence Water Supply Board and Quidnick Reservoir Co.

a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage, and records for South Branch Pawtuxet River at Washington.

Note.--Backwater from aquatic vegetation Oct. 1 to Dec. 16, Dec. 19 to Feb. 12, Feb. 19 to Mar. 6, June 1 to Sept. 30.

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 1954.

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

Average discharge.--14 years, 40.9 cfs (unadjusted).

Extremes.--Maximum discharge during year, 450 cfs Sept. 12 (gage height, 2.63 ft); maximum gage height, 6.78 ft Aug. 31 (backwater from hurricane tidal wave); minimum discharge, 2.2 cfs Oct. 21, 22.

1940-54: Maximum discharge, that of Sept. 12, 1954; maximum gage height, that of Aug. 31, 1954; no flow Oct. 24-26, 1947 (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. Diversions above station for supply of East Greenwich, North Kingstown, Warwick, and United States Naval Establishments.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 18				Feb. 19 to Sept. 30			
1.05	1.0	1.3	29	1.1	3.4	1.8	152
1.1	3.4	1.5	73	1.2	13	2.1	262
1.2	13	2.0	228	1.3	28	2.5	403
				1.5	67		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.2	21	*41	54	46	56	55	67	48	22	11	97
2	4.5	15	37	53	46	66	53	64	47	21	10	58
3	4.8	12	34	55	49	65	51	72	44	18	16	38
4	5.2	10	34	*84	89	86	48	97	46	18	22	28
5	4.8	9.6	76	78	78	74	47	91	44	17	18	22
6	4.1	9.0	84	78	65	62	49	77	41	16	14	19
7	6.6	24	191	72	54	56	49	67	38	16	12	17
8	6.1	26	167	60	48	54	47	74	36	15	11	18
9	4.8	18	112	51	47	53	45	*281	34	14	19	18
10	5.6	15	106	53	45	52	43	232	33	14	208	18
11	4.5	13	97	49	44	51	42	159	*31	12	170	141
12	4.8	11	84	51	41	48	44	119	32	11	78	*378
13	3.8	11	109	47	33	47	42	102	34	9.0	47	216
14	3.8	11	160	47	32	66	40	91	29	9.0	31	128
15	3.4	11	204	49	37	*89	39	89	34	*9.9	24	91
16	3.4	9.6	141	48	42	69	43	136	36	9.6	21	77
17	3.8	9.6	106	47	57	58	121	119	34	9.0	*19	91
18	4.5	9.0	89	42	71	52	232	97	30	9.0	16	91
19	4.5	9.0	78	43	*56	48	154	84	27	9.0	15	79
20	3.8	8.5	78	45	48	110	102	*79	24	9.0	15	72
21	2.5	9.6	81	89	46	126	81	102	22	12	14	67
22	2.8	9.6	81	89	86	89	*72	119	20	16	14	62
23	2.8	64	81	62	81	72	72	102	21	16	13	56
24	3.8	151	71	54	63	64	105	86	19	13	12	52
25	12	126	66	50	72	*63	91	77	19	16	12	49
26	18	167	65	53	81	97	77	72	18	24	12	48
27	*12	100	63	60	69	84	69	65	18	37	11	47
28	16	71	61	81	61	67	84	62	18	20	11	*45
29	46	53	65	65	-	63	94	59	20	15	11	44
30	47	44	61	54	------	60	77	56	21	14	11	41
31	33	------	59	54	------	58	------	52	------	11	53	------
Total	287.9	1,057.5	2,782	1,817	1,587	2,105	2,168	3,049	918	461.5	951	2,208
Mean	9.29	35.2	89.7	58.6	56.7	67.9	72.3	98.4	30.6	14.9	30.7	73.6
(†)	102.9	94.2	97.3	98.1	89.6	96.1	91.8	93.3	115.3	119.2	105.0	95.1

Calendar year 1953: Max 326 Min 2.5 Mean 63.6
Water year 1953-54: Max 378 Min 2.5 Mean 53.1

Peak discharge (base, 190 cfs).--Dec. 8 (2 to 4 p.m.) 235 cfs (2.04 ft); Dec. 15 (12:30 a.m.) 228 cfs (2.025 ft); Apr. 18 (9 to 10 a.m.) 251 cfs (2.07 ft); May 9 (2 to 4 p.m.) 319 cfs (2.265 ft); Aug. 10 (2 to 3 p.m.) 298 cfs (2.22 ft); Sept. 12 (2 to 3 a.m.) 450 cfs (2.63 ft).

* Discharge measurement made on this day.

† Diversions, in millions of gallons, for supply of East Greenwich, North Kingstown, Warwick, and U. S. Naval Establishments. Diversion for calendar year 1953 was 1,241.6 and for water year 1954 was 1,197.7 millions of gallons. Records furnished by United States Navy and Kent County Water Authority.

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 1954 (monthly discharge only for some periods, 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.--14 years, 177 cfs.

Extremes.--Maximum discharge during year, 882 cfs Sept. 13, 14 (gage height, 6.23 ft); minimum, 26 cfs Oct. 3; minimum daily, 36 cfs Oct. 3.
1940-54: Maximum discharge, 1,040 cfs Mar. 17, 1953 (gage height, 5.83 ft); maximum gage height, that of 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 periods of no gage-height record or shifting control, which are good. Flow regulated by powerplant and mills above station.

Revisions (water years).--WSP 1051: Drainage area. WSP 1201: 1948.

Rating table, water year 1953-54, except period of shifting control (gage height, in feet, and discharge, in cubic feet per second)

1.8	30	4.0	506
2.1	66	5.0	765
2.5	139	5.4	885
3.0	265		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51	141	275	250	213	255	239	294	221	108	68	221
2	51	131	255	240	208	255	231	281	210	108	79	247
3	36	110	236	230	208	255	223	275	206	105	74	257
4	46	99	223	240	244	278	213	291	200	99	80	218
5	59	89	265	240	257	273	208	298	198	99	84	186
6	48	87	288	240	260	265	203	296	190	103	92	151
7	41	118	*402	230	247	255	203	286	183	99	85	144
8	55	141	458	220	229	242	203	281	170	90	82	128
9	52	144	492	210	216	231	200	409	165	89	91	134
10	41	133	484	200	208	223	196	520	161	90	298	122
11	47	112	439	190	*203	216	190	*590	158	85	427	351
12	47	118	402	190	193	*210	190	585	151	76	460	756
13	55	97	422	190	168	203	*188	501	153	66	376	*864
14	48	90	*489	188	168	221	186	439	156	74	265	849
15	48	92	592	190	176	247	180	397	153	77	196	*750
16	47	103	608	193	183	252	183	402	161	76	163	648
17	37	92	578	190	206	247	255	390	161	72	139	575
18	47	87	520	183	226	231	409	381	153	71	122	523
19	55	85	460	180	229	216	508	358	139	80	116	484
20	48	85	400	183	223	255	520	334	137	71	112	460
21	45	77	385	226	210	294	456	331	137	69	101	429
22	45	77	370	249	236	316	386	331	126	*72	103	402
23	46	142	360	234	255	314	343	328	122	80	*105	365
24	42	229	345	229	257	288	353	331	118	79	90	334
25	59	296	330	221	273	270	351	316	114	82	90	308
26	*77	390	310	216	278	288	343	296	108	85	90	288
27	79	402	290	223	273	286	328	278	108	79	89	278
28	94	372	280	260	265	286	321	262	112	77	87	262
29	126	331	280	242	-	275	316	249	108	77	85	255
30	149	296	270	242	-------	262	304	239	108	76	87	244
31	144	----	260	231	-------	249	-------	229	-------	62	146	------
Total	1,865	4,766	11,768	6,750	6,312	7,958	8,429	10,778	4,585	2,576	4,482	11,233
Mean	60.2	159	380	218	225	257	281	348	153	83.1	145	374
Cfsm	0.602	1.59	3.80	2.18	2.25	2.57	2.81	3.48	1.53	0.831	1.45	3.74
In.	0.69	1.77	4.38	2.51	2.35	2.96	3.13	4.01	1.71	0.96	1.67	4.18

Calendar year 1953: Max 1,030 Min 36 Mean 274 Cfsm 2.74 In. 37.15
Water year 1953-54: Max 864 Min 36 Mean 223 Cfsm 2.23 In. 30.32

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 18 to Jan. 11; discharge estimated on basis of weather records, recorded range in stage, and records for Pawcatuck River at Westerly and Wood River at Hope Valley. Shifting-control method used Sept. 11-26.

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 1954. Records of daily mean 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.--13 years, 142 cfs.

Extremes.--Maximum discharge during year, 1,470 cfs Sept. 12 (gage height, 7.45 ft); minimum, 32 cfs Oct. 20, 21; minimum daily, 33 cfs Oct. 18, 21.
1941-54: Maximum discharge, that of Sept. 12, 1954; minimum, 4.4 cfs Oct. 18, 1941; minimum daily, 10 cfs Oct. 13, 1941.
Flood in March 1936 reached a discharge of 1,540 cfs, by computation of peak flow over dam a quarter of a mile upstream from station.

Remarks.--Records excellent. 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 tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Sept. 11				Sept. 12-30			
1.9	32	4.0	444	2.6	154	5.0	698
2.2	70	5.0	624	3.0	260	6.0	966
2.5	128	6.0	885	4.0	488	7.0	1,290
3.0	252						

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	96	228	186	146	196	208	241	138	96	44	441
2	39	*80	213	178	144	220	201	230	133	86	43	294
3	38	72	194	176	149	223	196	237	136	76	50	204
4	38	66	184	196	232	272	184	274	126	70	67	165
5	38	62	260	196	232	267	176	270	121	66	64	136
6	36	63	289	191	201	243	176	243	112	64	53	116
7	42	162	*540	184	181	225	178	225	105	60	47	101
8	41	211	631	168	159	213	173	230	101	60	42	116
9	40	157	479	159	151	201	170	379	94	57	57	112
10	39	126	412	159	146	196	159	374	*88	53	438	101
11	38	110	364	159	141	188	154	314	90	51	379	568
12	38	96	320	157	131	181	159	280	92	48	232	1,260
13	38	88	372	146	112	165	149	250	90	46	149	810
14	36	81	452	133	114	198	*141	234	88	44	119	590
15	36	78	575	149	119	243	138	228	92	48	107	439
16	36	75	471	146	126	216	144	256	114	44	101	371
17	35	70	394	144	159	194	291	252	107	42	84	373
18	33	69	326	123	*198	178	646	228	92	41	69	352
19	34	66	287	133	173	168	596	213	83	41	64	339
20	34	64	267	136	157	294	490	*204	78	41	64	317
21	33	62	259	213	144	415	408	223	73	46	63	275
22	36	63	259	228	241	332	340	243	69	60	60	270
23	35	202	259	188	256	284	297	225	67	70	*57	252
24	35	468	241	178	223	248	378	211	66	60	53	229
25	51	415	228	168	237	237	347	198	62	60	51	208
26	81	530	220	162	250	287	301	186	60	66	50	192
27	66	463	213	173	225	274	270	168	70	56	50	189
28	74	359	204	216	206	248	274	157	70	50	48	181
29	180	278	211	179	--	237	282	154	88	51	44	168
30	188	239	204	178	------	225	259	162	94	51	42	173
31	131	-- --	196	168	------	213	------	151	------	46	245	------
Total	1,660	4,971	9,752	5,270	4,953	7,281	7,885	7,240	2,799	1,750	3,036	9,342
Mean	53.5	166	315	170	177	235	263	234	93.3	56.5	97.9	311
Cfsm	0.739	2.29	4.35	2.35	2.44	3.25	3.63	3.23	1.29	0.780	1.35	4.30
In.	0.85	2.55	5.01	2.71	2.54	3.74	4.05	3.72	1.44	0.90	1.56	4.80

Calendar year 1953: Max 1,040 Min 25 Mean 201 Cfsm 2.78 In. 37.59
Water year 1953-54: Max 1,260 Min 33 Mean 181 Cfsm 2.50 In. 33.87

Peak discharge (base, 550 cfs).--Nov. 26 (3 p.m.) 559 cfs (4.67 ft); Dec. 8 (1 to 2 a.m.) 726 cfs (5.43 ft); Dec. 15 (8 a.m.) 622 cfs (4.99 ft); Apr. 18 (7 to 8 p.m.) 716 cfs (5.39 ft); Sept. 12 (6 a.m.) 1,470 cfs (7.45 ft).
* Discharge measurement made on this day.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is at mean sea level (from topographic map).

Average discharge.--14 years, 527 cfs (adjusted for diversion).

Extremes.--Maximum discharge during year, 3,340 cfs Sept. 12 (gage height, 8.92 ft); maximum gage height, 12.16 ft Aug. 31 (backwater from tide); minimum daily discharge, 94 cfs Oct. 17.

1940-54: Maximum discharge, 3,510 cfs Mar. 16, 1953 (gage height, 8.83 ft); maximum gage height, that of Aug. 31, 1954; 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 above station. Maximum discharge known, which occurred in November 1927, was possibly more than twice that of March 1936. Maximum stage known, 15.0 ft Sept. 21, 1938 (due to hurricane tidal wave), from information by local residents.

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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	137	452	980	740	642	796	726	894	579	308	132	1,310
2	140	*378	954	705	593	831	698	845	551	302	184	1,200
3	113	327	876	684	593	859	663	838	530	255	210	936
4	102	295	781	705	768	929	635	922	509	271	214	712
5	143	275	908	726	866	964	614	943	474	255	210	600
6	168	265	1,090	726	817	908	600	901	481	266	228	509
7	151	440	*1,540	719	754	845	593	845	481	255	201	453
8	137	564	1,810	670	698	789	586	*810	446	232	197	453
9	110	585	1,760	614	642	740	572	1,070	425	210	298	425
10	110	498	1,670	600	593	705	558	1,310	386	168	1,410	399
11	107	414	1,560	586	*586	670	537	1,350	380	180	1,640	1,310
12	125	378	1,410	551	537	635	551	1,310	348	228	1,430	3,150
13	151	349	1,430	540	453	607	537	1,220	360	176	1,150	*2,760
14	137	310	1,690	540	432	663	509	1,120	373	168	845	2,520
15	128	295	2,060	530	467	*810	481	1,010	354	197	649	2,260
16	102	290	2,000	516	474	824	495	1,050	*386	168	551	2,020
17	94	290	1,840	515	565	768	775	1,060	412	132	432	1,870
18	107	275	1,640	500	691	705	1,680	992	392	128	366	1,710
19	128	265	1,450	488	691	656	1,870	915	319	193	319	1,550
20	128	270	1,280	495	649	838	1,730	859	314	172	308	1,460
21	122	255	1,220	635	607	1,140	1,580	887	325	164	286	1,360
22	113	233	1,180	803	747	1,180	1,400	950	292	*164	241	1,240
23	104	469	1,150	740	880	1,080	1,240	936	286	164	*266	1,110
24	113	1,110	1,090	684	866	978	1,240	894	250	146	255	1,010
25	151	1,370	1,010	656	887	887	1,240	845	246	197	236	915
26	192	1,610	957	628	971	936	1,180	789	232	266	210	838
27	224	1,560	894	642	922	964	1,080	726	223	223	197	803
28	270	1,410	866	775	852	915	1,020	677	246	201	201	740
29	440	1,230	845	782	-	866	1,010	*621	266	241	164	705
30	564	1,080	824	698	-------	824	957	614	292	218	210	663
31	557	-------	789	684	-------	775	-------	600	-------	150	656	------
Total	5,368	17,542	39,554	19,877	19,243	26,087	27,357	28,803	11,158	6,398	13,896	36,991
Mean	173	585	1,276	641	687	842	912	929	372	206	448	1,233
(†)	46.3	42.2	43.6	45.7	43.1	47.5	46.8	49.3	56.3	66.1	61.3	51.9
Adjusted for diversion												
Mean	175	587	1,278	643	690	844	914	932	375	210	451	1,236
Cfsm	0.593	1.99	4.33	2.18	2.34	2.86	3.10	3.16	1.27	0.712	1.53	4.19
In.	0.69	2.22	5.00	2.51	2.43	3.30	3.46	3.64	1.42	0.82	1.76	4.67

	Observed			Adjusted		
Calendar year 1953:	Max 3,250	Min 90	Mean 783	Mean 786	Cfsm 2.66	In. 36.17
Water year 1953-54:	Max 3,150	Min 94	Mean 691	Mean 694	Cfsm 2.35	In. 31.92

* Discharge measurement made on this day.

† Diversion for municipal supply of Westerly, in millions of gallons. Records furnished by Westerly Board of Water Commissioners.

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 highway 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 1954.

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 and Pohegnut 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.--8 years, 25.4 cfs.

Extremes.--1946-54: Maximum discharge, 464 cfs or 300 mgd 1 a.m. Sept. 12, 1954 (gage height, 5.1 ft, from floodmarks), uncorrected for storage and diversion.

Remarks.--Records adjusted for change in contents in Groton and Pohegnut 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 1953 to September 1954

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	135.8	4.38	6.78	0.306	0.473	0.55
November	388.1	12.9	20.0	.902	1.40	1.56
December	1,016.5	32.8	50.7	2.29	3.54	4.08
Calendar year 1953	8,142.2	22.3	34.5	1.56	2.41	32.75
January	499.3	16.1	24.9	1.13	1.75	2.02
February	570.7	20.4	31.6	1.43	2.21	2.30
March	850.8	27.4	42.4	1.92	2.97	3.42
April	868.3	28.9	44.7	2.02	3.13	3.49
May	815.3	26.3	40.7	1.84	2.85	3.29
June	188.1	6.27	9.70	0.438	0.678	0.76
July	106.2	3.43	5.31	0.240	0.371	0.43
August	300.5	9.69	15.0	0.678	1.05	1.21
September	1,218.5	40.6	62.8	2.84	4.39	4.90
Water year 1953-54	6,958.1	19.1	29.6	1.34	2.07	28.01

Willimantic River near South Coventry, Conn.

Location.--Lat 41°45'02", long 72°15'58", on left bank 700 ft upstream from highway bridge, 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 1954.

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.--23 years, 209 cfs.

Extremes.--Maximum discharge during year, 3,100 cfs Sept. 12 (gage height, 9.37 ft); minimum, 3.9 cfs Oct. 18 (gage height, 1.68 ft); minimum daily, 3.9 cfs Oct. 18.
1931-54: Maximum discharge, 15,500 cfs Sept. 21, 1938 (gage height, 18.08 ft, from floodmarks), by computation of flow over dam at Eagleville, 3 miles upstream from station, prior to its failure, adjusted for flow from intervening area; 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 or no gage-height record, 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 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Sept. 11				Sept. 12-30	
1.6	2.5	3.0	113	3.2	150
1.7	4.3	4.0	315	4.0	335
1.9	9.6	5.0	610	6.0	1,010
2.2	23	7.0	1,370	8.0	1,940
2.5	46			9.0	2,720

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	132	125	153	b175	249	243	263	194	97	28	550
2	41	92	113	148	181	*395	232	239	177	81	25	297
3	8.4	118	102	148	181	384	216	276	179	69	92	172
4	6.4	70	91	170	245	*680	191	395	161	55	290	130
5	32	61	257	174	252	500	*202	380	152	50	153	94
6	33	62	302	185	208	365	214	312	125	46	99	73
7	33	98	581	185	166	302	234	272	120	53	65	68
8	31	135	470	b135	153	295	239	260	125	49	49	123
9	33	120	315	116	168	272	216	470	110	46	53	150
10	8.0	96	440	b105	157	263	187	455	105	42	164	107
11	4.5	82	470	116	150	247	172	485	125	36	172	1,010
12	34	70	340	161	b120	228	218	440	127	33	122	2,280
13	27	62	365	148	b88	202	212	352	108	34	91	346
14	21	52	614	b125	b80	283	193	302	103	24	85	510
15	28	42	*715	b145	113	395	181	280	132	33	54	390
16	24	a45	485	b130	174	328	183	352	249	39	53	360
17	6.0	*a50	365	b110	224	267	527	380	214	33	54	525
18	3.9	42	283	b105	241	237	1,300	305	*152	25	42	435
19	11	45	239	b135	206	216	925	263	107	25	40	360
20	24	39	228	b140	176	526	560	241	84	28	62	375
21	21	35	234	305	166	545	425	290	73	36	49	318
22	16	28	281	352	491	395	352	352	74	39	36	*348
23	12	185	315	b240	440	312	352	340	81	45	31	282
24	a6	267	254	183	308	278	410	292	94	42	35	231
25	a6.5	281	208	177	340	274	352	256	85	24	34	189
26	a45	485	193	191	352	425	328	230	72	28	35	189
27	a45	298	181	247	300	380	300	200	59	42	37	250
28	60	194	181	340	260	308	340	181	53	43	42	222
29	120	155	206	254	-	288	380	166	68	84	33	185
30	298	137	202	b205	-------	267	315	226	90	63	26	164
31	208	-------	187	b175	-------	249	-------	239	-------	48	350	-------
Total	1,257.7	3,578	9,342	5,503	6,115	10,355	10,199	9,474	3,598	1,592	2,481	11,333
Mean	40.6	119	301	178	218	334	340	306	120	44.9	80.0	378
Cfsm	0.336	0.983	2.49	1.47	1.80	2.76	2.81	2.53	0.992	0.371	0.661	3.12
In.	0.39	1.10	2.87	1.70	1.87	3.18	3.14	2.92	1.11	0.43	0.76	3.48

Calendar year 1953: Max 2,010 Min 3.9 Mean 280 Cfsm 2.31 In. 31.39
Water year 1953-54: Max 2,280 Min 3.9 Mean 204 Cfsm 1.69 In. 22.95

Peak discharge (base, 1,100 cfs).--Apr. 18 (2 p.m.) 1,470 cfs (7.21 ft); Sept. 12 (3 a.m.) 3,100 cfs (9.37 ft).

* Discharge measurement made on this day.

a No gage-height record: discharge estimated on basis of recorded range in stage, weather records, pattern of regulation and records for nearby streams.

b Stage-discharge relation affected by ice.

Hop River near Columbia, Conn.

Location.--Lat 41°43'39", long 72°18'10", on right bank 1,500 ft downstream from abandoned mill and 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 1954.

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.--22 years, 127 cfs.

Extremes.--Maximum discharge during year, 2,810 cfs Sept. 11 (gage height, 11.43 ft); minimum, 2.9 cfs Oct. 3-5 (gage height, 2.55 ft).
1932-54: 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 above station; minimum, 2.4 cfs Aug. 19, 1939 (gage height, 2.55 ft); minimum daily, 2.6 cfs Aug. 28, 1949; minimum gage height, 2.49 ft Aug. 3, 1936.

Remarks.--Records excellent except those for periods of ice effect, which are good. Infrequent regulation at low water.

Revisions (water years).--WSP 781: 1933(M), drainage area. WSP 1111: 1947(m). WSP 1301: 1935-36(M).

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.1	71	73	73	90	143	116	155	70	39	13	253
2	3.9	58	70	77	96	242	109	146	66	33	12	115
3	3.2	49	62	73	95	216	104	163	65	26	24	84
4	2.9	44	56	76	160	462	88	294	58	24	72	71
5	3.2	39	182	70	162	277	82	246	58	22	50	57
6	4.3	37	163	84	132	208	92	192	52	19	41	45
7	7.9	52	433	89	109	172	106	165	48	17	34	39
8	10	83	294	65	92	156	98	186	43	16	27	58
9	9.5	69	201	65	90	140	99	434	39	14	25	54
10	9.0	59	320	62	84	134	95	346	36	13	54	50
11	8.4	52	294	60	77	121	93	367	38	12	51	819
12	8.4	47	201	65	58	109	100	294	35	11	43	1,460
13	7.9	43	255	66	60	104	92	227	37	11	35	494
14	7.9	40	479	63	63	162	86	187	36	10	28	314
15	7.4	38	508	70	68	216	82	166	*44	10	24	227
16	7.9	34	286	70	82	160	92	227	76	9.5	21	198
17	8.4	21	216	65	110	136	386	194	69	7.9	18	284
18	7.4	18	150	60	130	121	1,100	158	51	9.0	15	227
19	6.9	17	130	65	106	108	585	138	42	9.0	14	174
20	6.5	15	125	66	94	374	378	127	34	8.4	26	168
21	6.9	15	122	200	98	335	284	165	29	8.4	25	*140
22	7.4	15	*151	230	366	224	227	218	25	9.0	19	182
23	9.0	101	168	150	277	182	218	189	26	9.0	15	137
24	11	137	129	120	208	158	314	158	28	10	13	104
25	17	154	110	105	233	153	227	140	24	9.5	13	89
26	23	255	103	100	224	250	194	122	22	9.0	13	88
27	17	150	99	110	195	189	176	101	20	9.0	12	113
28	29	113	92	160	164	157	216	91	18	9.5	12	95
29	60	94	116	130	-	143	213	85	22	28	11	78
30	109	83	106	110	------	133	178	84	27	25	10	69
31	88	---	92	95	------	*122	------	76	------	18	170	---
Total	513.4	2,003	5,786	2,894	3,723	5,807	6,230	5,841	1,238	465.2	940	6,286
Mean	16.6	66.8	187	93.4	133	187	208	188	41.3	15.0	30.3	210
Cfsm	0.218	0.877	2.45	1.23	1.75	2.45	2.73	2.47	0.542	0.197	0.398	2.76
In.	0.25	0.98	2.82	1.42	1.82	2.82	3.05	2.85	0.60	0.23	0.46	3.08

Calendar year 1953: Max 1,650 Min 2.9 Mean 171 Cfsm 2.24 In. 30.48
Water year 1953-54: Max 1,460 Min 2.9 Mean 114 Cfsm 1.50 In. 20.38

Peak discharge (base, 900 cfs).--Apr. 18 (12 m.) 1,340 cfs (8.81 ft); Sept. 11 (11 p.m.) 2,810 cfs (11.43 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 18, 19, 25, 26, Jan. 1, 2, 8-31, Feb. 1, 6-8, 12-14.

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 miles 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 1954.

Gage.--Water-stage recorder. Datum of gage is 552.92 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 570 cfs Sept. 11 (gage height, 5.89 ft); minimum, 0.02 cfs Oct. 1-3 (gage height, 1.18 ft).
1950-54: Maximum discharge, that of Sept. 11, 1954; minimum, 0.01 cfs Aug. 30 to Sept. 12, Sept. 18-21, 1953; minimum gage height, 1.17 ft Sept. 4-12, 1953.

Remarks.--Records good.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.18	0.02	1.8	5.1
1.2	.04	2.0	10
1.25	.15	2.5	28
1.3	.3	3.0	58
1.4	.7	3.5	103
1.5	1.4	4.2	190
1.6	2.3		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.02	4.1	7.3	b5.1	b5.8	11	6.6	8.1	2.8	2.0	0.5	16
2	.02	2.9	7.3	4.8	5.8	22	6.4	9.2	3.1	1.4	.4	4.3
3	.02	2.2	6.0	5.1	6.6	26	6.2	12	3.1	1.0	3.0	2.8
4	.03	1.9	5.1	8.6	13	49	b4.8	26	2.5	.9	4.0	3.3
5	.04	1.6	32	b6.9	12	b18	4.6	16	2.4	.7	2.1	2.2
6	.08	1.4	18	7.3	b8.4	b12	5.8	12	2.3	.65	1.5	1.7
7	.2	13	80	b6.9	b6.4	b10	7.3	9.2	1.9	.6	.9	1.4
8	.1	12	27	b4.8	b5.1	9.2	6.2	12	1.7	.6	.6	1.8
9	.06	5.5	16	b3.8	4.6	8.4	5.3	33	1.4	.45	1.1	2.2
10	.04	3.8	40	b3.5	4.3	8.1	4.6	19	1.3	.4	4.6	1.8
11	.03	3.0	26	b3.3	b4.1	7.3	4.6	22	1.4	.4	2.7	189
12	.04	2.7	16	b3.5	b3.5	b6.0	6.4	14	1.3	.35	1.4	69
13	*.04	2.2	25	b3.4	b2.7	6.0	5.1	11	1.5	.3	1.0	20
14	.04	2.0	*76	b3.5	2.2	15	4.3	8.9	1.4	.25	.7	11
15	.04	1.9	45	b3.5	3.3	16	4.1	8.1	2.8	.3	.6	6.6
16	.04	1.8	23	b3.5	6.6	b10	5.1	23	3.3	.25	.6	10
17	.04	*1.6	b14	b3.3	13	7.8	88	14	1.9	.2	.5	27
18	.04	1.5	b10	b3.5	12	6.9	109	9.2	1.3	.2	.4	14
19	.04	1.4	8.1	b3.4	b7.8	6.2	32	7.3	1.0	.2	.4	10
20	.04	1.3	7.3	b3.4	b6.6	44	18	8.1	.75	.2	.6	*11
21	.06	1.3	7.6	b28	8.6	22	13	21	*.65	.4	.5	7.3
22	.08	1.3	14	b30	44	13	11	25	.6	.7	.4	10
23	.1	35	13	b21	20	11	12	14	1.9	.9	.35	5.5
24	.15	23	b8.6	12	13	9.2	16	11	2.0	.6	.3	4.0
25	2.5	68	b7.1	6.9	27	12	11	9.2	1.2	.5	.25	3.5
26	1.1	55	6.6	7.1	20	24	9.5	7.3	.9	.5	.65	4.1
27	.55	20	6.0	14	15	13	8.4	5.3	.9	.6	.6	6.0
28	13	12	b5.3	18	12	10	20	4.6	.85	.65	.45	4.1
29	14	9.2	6.9	b10	-	8.9	14	4.3	1.4	.9	.4	3.1
30	23	6.9	6.6	b7.3	-------	7.8	10	4.9	2.1	.85	.3	2.9
31	8.3	-------	b5.8	b6.2	-------	*7.1	-------	3.5	-------	.6	49	-------
Total	63.84	299.5	576.6	251.6	293.4	436.9	459.3	392.2	51.65	18.55	80.80	455.6
Mean	2.06	9.98	18.6	8.12	10.5	14.1	15.3	12.7	1.72	0.598	2.61	15.2
Cfsm	0.505	2.45	4.56	1.99	2.57	3.46	3.75	3.11	0.422	0.147	0.640	3.73
In.	0.58	2.73	5.26	2.29	2.68	3.99	4.18	3.58	0.47	0.17	0.74	4.16

Calendar year 1953: Max 140 Min 0.01 Mean 117 Cfsm 2.87 In. 38.80
Water year 1953-54: Max 189 Min 0.02 Mean 9.26 Cfsm 2.27 In. 30.82

Peak discharge (base, 120 cfs).--Nov. 25 (8 p.m.) 168 cfs (4.14 ft); Dec. 14 (3:30 p.m.) 141 cfs (3.94 ft); Apr. 18 (3 a.m.) 199 cfs (4.26 ft); Aug. 31 (11:30 a.m.) 151 cfs (3.93 ft); Sept. 11 (4 p.m.) 570 cfs (5.89 ft).

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

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 1954.
Gage.--Water-stage recorder. Datum of gage is 335.57 ft above mean sea level, datum of 1929.
Average discharge.--14 years, 48.6 cfs.
Extremes.--Maximum discharge during year, 3,250 cfs Sept. 11 (gage height, 9.20 ft), from rating curve extended above 900 cfs on basis of contracted-opening determination at gage height 10.41 ft for flood of Aug. 19, 1955; minimum, 0.7 cfs Oct. 21; minimum gage height, 1.37 ft July 18.
1940-54: Maximum discharge, that of Sept. 11, 1954; minimum, 0.45 cfs Sept. 3, 4, 1953; minimum gage height, 0.99 ft Aug. 26-29, 1949.
Flood in September 1938 reached a stage of about 14.5 ft, from floodmarks.
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)
921, 1301	1941	Feb. 8, 1941	1,090	7.00
1201	1951	Feb. 7, 1951	1,610	7.79
1231	1952	Dec. 21, 1951	1,190	7.15
1271	1953	Mar. 16, 1953	990	6.82

Remarks.--Records excellent except those for periods of ice effect or backwater from leaves on control, which are good.

Rating tables, water year 1953-54, except periods of ice effect or backwater from leaves on control (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 17, Sept. 20-30				Apr. 18 to Sept. 19			
1.3	0.3	1.8	15	1.38	2.0	2.5	78
1.4	1.4	2.0	27	1.4	2.4	3.0	143
1.5	3.4	2.5	69	1.5	5.0	4.0	298
1.6	6.4	3.0	125	1.6	8.5	5.0	474
1.7	10	4.1	289	1.8	18	6.0	690
				2.0	32	7.0	1,090

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.3	25	38	b36	37	62	50	64	28	25	5.0	132
2	1.3	16	36	b34	40	107	47	57	30	17	3.6	52
3	2.5	12	32	36	41	104	44	68	29	14	32	32
4	2.5	10	29	44	68	205	39	144	25	12	35	40
5	1.8	8.6	99	b39	65	105	38	108	24	11	16	26
6	2.1	7.4	72	47	b50	79	44	79	22	9.4	15	18
7	5.5	39	*250	b47	b40	b69	50	65	20	8.2	9.4	16
8	3.9	48	121	b36	b33	64	44	76	17	7.4	6.8	39
9	3.2	29	82	26	b30	59	40	158	16	6.4	10	62
10	2.7	21	175	b24	b28	59	36	116	15	5.4	52	38
11	2.3	16	128	b23	b26	56	36	135	31	4.7	24	1,040
12	2.1	13	90	b29	b23	51	43	97	20	4.1	14	525
13	1.8	12	123	b26	20	49	36	80	20	3.6	10	*191
14	1.6	11	*277	b25	18	82	33	69	17	3.1	7.8	122
15	1.4	10	235	b28	27	90	31	63	23	3.6	6.4	86
16	1.3	9.4	128	b29	42	67	36	112	48	3.1	6.0	100
17	1.1	9.0	b90	b27	59	57	280	88	28	2.8	5.0	170
18	1.0	8.6	b70	b25	59	51	*473	65	20	2.6	4.1	111
19	.9	8.2	b60	b26	46	47	208	58	16	2.6	3.8	89
20	.8	7.8	b55	b28	40	210	133	55	13	2.8	11	80
21	.7	7.4	57	b97	47	133	*105	75	10	3.3	7.4	67
22	.8	7.4	82	90	186	88	86	88	*9.0	*3.6	5.0	86
23	1.1	125	77	60	103	72	92	67	12	3.1	4.1	59
24	1.8	102	b58	50	72	63	121	57	16	3.6	3.4	49
25	13	167	b51	46	103	70	89	52	11	3.1	3.6	44
26	13	173	48	47	91	119	76	45	10	3.1	3.6	46
27	6.7	86	44	75	77	81	69	38	17	2.8	4.7	64
28	48	61	b42	b90	64	66	110	36	11	10	3.8	53
29	63	48	48	b60	-	60	94	33	20	17	3.1	48
30	96	40	45	b50	-------	56	74	47	27	10	2.6	45
31	46	---	41	b42	-------	*50	-------	36	-------	7.4	251	-------
Total	331.2	1,137.8	2,783	1,342	1,535	2,531	2,657	2,331	605.0	215.8	569.2	3,530
Mean	10.7	37.9	89.8	43.3	54.8	81.6	88.6	75.2	20.2	6.96	18.4	118
Cfsm	0.368	1.30	3.09	1.49	1.88	2.80	3.04	2.58	0.694	0.239	0.632	4.05
In.	0.42	1.45	3.56	1.72	1.96	3.23	3.39	2.97	0.77	0.28	0.73	4.52

Calendar year 1953: Max 650 Min 0.45 Mean 69.2 Cfsm 2.38 In. 32.24
Water year 1953-54: Max 1,040 Min 0.7 Mean 53.6 Cfsm 1.84 In. 25.00

Peak discharge (base, 400 cfs).--Dec. 14 (4 p.m.) 479 cfs (5.22 ft); Apr. 18 (5 a.m.) 630 cfs (5.78 ft); Aug. 31 (2 p.m.) 620 cfs (5.77 ft); Sept. 11 (6 p.m.) 3,250 cfs (9.20 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--Backwater from leaves on control Oct. 7-23.

Mansfield Hollow Reservoir at Mansfield Hollow, Conn.

Location.--Lat 41°45'22", long 72°10'57", on Natchaug River at Mansfield Hollow, 0.2 mile downstream from Mount Hope River and 3½ miles northeast of Willimantic, Windham County.

Drainage area.--159 sq mi.

Records available.--March 1952 to September 1954.

Gage.--Water-stage recorder. Datum of gage is at mean sea level, datum of 1929 (levels by Corps of Engineers).

Remarks.--Reservoir completed in March 1952 for flood control, has usable capacity of 2,260,000,000 cu ft.

Cooperation.--Records furnished by Corps of Engineers.

Monthly elevation and contents, water year October 1953 to September 1954

Date	Elevation (feet)†	Contents (millions of cubic feet)	Change in contents during month (millions of cubic feet)
Sept.30	198.1	0	-
Oct. 31	200.4	1.5	+1.5
Nov. 30	200.3	1.3	-.2
Dec. 21	200.2	1.2	-.1
Calendar year 1953	-	-	+.3
Jan. 31	200.4	1.5	+.3
Feb. 28	201.1	2.7	+1.2
Mar. 31	200.7	1.9	-0.8
Apr. 30	210.5	101.6	+99.7
May 31	200.2	1.2	-100.4
June 30	199.7	.6	-.6
July 31	199.4	.3	-.3
Aug. 31	206.8	43.9	+43.6
Sept.30	200.1	1.0	-42.9
Water year 1954	-	-	+1.0

† Elevation at 12 p.m.

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 & 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 1954.
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.--24 years, 299 cfs (adjusted for storage).
Extremes.--Maximum discharge during year, 2,150 cfs Sept. 15 (gage height, 6.7 ft, from floodmarks); minimum, 5.9 cfs Aug. 25, 27, 28, 30 (gage height, 2.03 ft); minimum daily, 5.9 cfs Aug. 25, 28.
1930-54: Maximum discharge, 32,000 cfs Sept. 21, 1938 (gage height, 16.39 ft, from floodmarks), by computation of peak flow over dam 2 miles above station; minimum, about 0.3 cfs Aug. 6, 1937; minimum daily, 2.3 cfs Sept. 11, 12, 1943.
Remarks.--Records excellent except those for periods of no gage-height record, which are poor. City of Willimantic diverts an average of about 1,000,000 gal of water a day for municipal supply from reservoir 2 miles upstream. Operation of water wheels at this location cause diurnal fluctuation at low flow. Since March 1952, flow regulated by Mansfield Hollow Reservoir (see preceding page).
Revisions (water years).--WSP 1301: 1934-35(M), 1937(M).

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 20 to Sept. 30)

Oct. 1 to Feb. 12				Feb. 13 to Sept. 30			
2.0	3.5	2.6	84	2.0	4.0	3.0	212
2.1	9.0	3.0	197	2.1	10	5.0	1,130
2.2	17	5.0	1,070	2.2	19	6.6	1,970
2.4	45	5.6	1,370	2.6	91		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	191	214	a240	b200	398	326	470	191	a180	13	481
2	6.6	122	197	a220	218	574	312	418	184	113	45	959
3	6.6	99	178	a230	222	596	294	422	199	90	83	577
4	7.8	82	165	a250	310	980	282	555	174	78	162	206
5	27	76	326	a260	374	955	*250	856	160	69	152	199
6	7.8	72	511	a270	302	672	254	655	147	70	109	164
7	26	135	810	274	243	502	290	536	139	74	93	145
8	28	298	1,040	b165	187	452	290	575	124	33	73	171
9	32	200	722	165	204	407	270	880	116	75	73	225
10	43	150	632	b155	187	380	239	1,250	102	13	98	191
11	26	122	835	b145	175	362	223	1,200	113	75	173	311
12	9.0	101	655	159	b145	326	242	832	130	19	a110	147
13	35	89	632	b160	b135	304	234	594	121	18	a80	1,180
14	7.8	80	835	b155	128	371	212	489	119	51	a60	a1,960
15	32	85	*1,370	175	142	618	198	437	*a140	15	a10	a1,960
16	9.8	*72	1,170	178	202	492	205	555	a210	59	a80	a1,830
17	21	69	812	165	286	402	742	655	a300	10	9.3	959
18	23	67	a600	b155	394	348	1,680	513	a150	39	19	856
19	15	63	a430	156	317	308	1,580	418	a120	36	36	641
20	9.0	60	a410	159	262	917	880	369	a85	8.6	68	*565
21	27	63	a400	291	246	1,030	737	393	a70	50	68	513
22	9.0	60	a440	511	618	762	679	579	a60	25	8.6	502
23	31	146	a530	b335	855	546	579	532	a70	54	74	460
24	24	655	400	282	605	448	660	418	a85	35	15	341
25	30	511	a320	236	538	407	674	355	a105	26	5.9	282
26	78	995	a300	225	650	614	598	307	a75	8.6	54	273
27	80	812	290	306	551	618	464	261	a100	68	7.3	286
28	101	475	a260	b480	456	474	460	233	a80	11	5.9	286
29	278	326	a310	b310	-	412	551	217	a90	82	66	236
30	378	251	a300	b270	---	376	589	241	a130	87	6.6	210
31	374	---	a260	b230	---	344	---	245	---	88	132	---
Total	1,816.4	6,527	16,354	7,312	9,152	16,395	14,974	16,460	3,889	1,660.2	1,989.6	17,116
Mean	58.6	218	528	236	327	529	499	531	130	53.6	64.2	571
(†)	+0.6	-0.1	0	+0.1	+0.5	-0.3	+38.5	-37.5	-0.2	-0.1	+16.3	-16.6

Adjusted for change in contents in Mansfield Hollow Reservoir

Mean	59.2	218	528	236	327	529	538	494	130	53.5	80.5	554
Cfsm	0.350	1.29	3.12	1.40	1.93	3.13	3.18	2.92	0.769	0.317	0.476	3.28
In.	0.40	1.44	3.60	1.61	2.01	3.61	3.55	3.37	0.86	0.37	0.55	3.66

	Observed			Adjusted	
Calendar year 1953:	Max 2,460	Min 5.0	Mean 409	Mean 409	Cfsm 2.42 In. 32.87
Water year 1953-54:	Max 1,960	Min 5.9	Mean 311	Mean 311	Cfsm 1.84 In. 25.03

* Discharge measurement made on this day.
† Change in contents in Mansfield Hollow Reservoir, equivalent in cubic feet per second furnished by Corps of Engineers.
a No gage-height record; discharge estimated on basis of recorded range in stage, weather records, engineers' notes, and records for Mount Hope River near Warrenville, Shetucket River near Willimantic and Mansfield Hollow Reservoir.
b Stage-discharge relation affected by ice.

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 & Hartford Railroad bridge, 500 ft downstream from Potash Brook, 1.3 miles downstream from confluence of Willimantic and Natchaug Rivers, and 1½ miles southeast of Willimantic, Windham County.
Drainage area.--401 sq mi.
Records available.--April 1904 to December 1905 (monthly discharge only in WSP 1301); October 1919 to September 1921 and September 1928 to September 1933 (published as "at South Windham"), October 1933 to September 1954.
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 about same site at different 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.--29 years (1905, 1919-21, 1928-54), 696 cfs(adjusted for storage).
Extremes.--Maximum discharge during year, 5,280 cfs Sept. 12 (gage height, 8.53 ft); minimum, 27 cfs Oct. 4, 5 (gage height, 1.37 ft); minimum daily, 27 cfs Oct. 4.
1904-5, 1919-21, 1928-54: 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. 143).
Revisions (water years).--WSP 781: 1934(m). WSP 801: 1935. WSP 1201: 1905(M), 1920-21, 1931-32, 1934-35(M), 1937(M).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Jan. 18, 23, 29-31, Feb. 1, 13, 14)

Oct. 1 to Apr. 17				Apr. 18 to Sept. 30			
1.3	19	3.0	495	1.5	54	4.0	1,060
1.4	30	4.0	1,020	1.7	90	5.0	1,720
1.6	59	5.0	1,670	2.0	159	6.0	2,490
2.0	145	6.0	2,470	2.5	318	8.0	4,550
2.5	301	7.0	3,430	3.0	520		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	59	453	449	474	520	845	735	970	497	281	100	1,480
2	46	330	419	495	554	1,260	705	880	466	259	105	1,480
3	39	284	379	500	558	1,260	675	910	474	221	182	882
4	27	232	345	544	790	*2,210	600	1,300	424	188	558	440
5	48	214	756	536	900	1,890	*580	1,650	392	174	397	386
6	55	204	1,110	576	720	1,320	610	1,240	362	*175	282	340
7	74	308	1,890	625	600	1,050	685	1,060	341	165	219	286
8	74	567	2,050	419	495	990	685	1,030	321	141	176	366
9	81	454	1,390	422	526	872	635	1,860	288	156	182	*445
10	79	361	1,390	382	482	845	562	2,090	275	105	336	381
11	50	292	1,780	365	453	790	526	2,090	295	143	436	1,600
12	43	268	1,320	389	356	730	595	1,680	329	104	321	4,550
13	76	233	1,360	438	275	675	580	1,270	300	86	261	3,180
14	43	207	1,950	402	320	830	522	1,060	288	110	199	3,430
15	74	200	3,030	420	357	1,360	495	940	326	90	174	3,130
16	48	*183	2,210	425	482	1,080	507	1,180	575	126	179	2,760
17	53	185	1,560	397	655	872	1,820	1,300	545	80	121	1,790
18	43	156	1,050	350	818	762	4,430	1,060	*376	102	112	1,540
19	33	151	845	386	680	695	3,860	880	307	93	121	1,210
20	33	142	790	393	585	1,500	2,090	795	251	68	154	1,120
21	65	140	*818	769	549	2,130	1,580	910	208	114	181	1,000
22	42	131	900	1,200	1,470	1,530	1,370	1,240	201	110	100	1,030
23	60	392	1,080	850	1,700	1,140	1,240	1,150	231	141	139	910
24	51	1,200	872	665	1,200	990	1,540	940	282	116	102	715
25	77	1,040	685	580	1,170	900	1,370	795	252	90	79	600
26	150	1,850	670	567	1,320	1,360	1,210	730	210	72	129	575
27	165	1,360	615	762	1,140	1,320	1,060	620	189	144	79	670
28	218	872	567	1,140	960	1,050	1,090	560	183	90	90	635
29	487	635	675	790	-	900	1,240	520	191	202	136	535
30	818	511	660	660	--------	845	1,180	580	233	209	71	474
31	762	--------	600	570	--------	790	--------	620	--------	187	549	--------
Total	3,973	13,555	34,215	17,491	20,635	34,791	34,777	33,910	9,612	4,342	6,270	37,940
Mean	128	452	1,104	564	737	1,122	1,159	1,094	320	140	202	1,265
(†)	+0.6	-0.1	0	+0.1	+0.5	-0.3	+38.5	-37.5	-0.2	-0.1	+16.3	-16.6
Adjusted for change in reservoir contents												
Mean	129	452	1,104	564	738	1,122	1,198	1,056	320	140	218	1,248
Cfsm	0.322	1.13	2.75	1.41	1.84	2.80	2.99	2.63	0.798	0.349	0.544	3.11
In.	0.37	1.26	3.17	1.63	1.92	3.23	3.34	3.03	0.89	0.40	0.63	3.47

	Observed			Adjusted		
Calendar year 1953:	Max 6,060	Min 27	Mean 941	Mean 941	Cfsm 2.35	In. 31.86
Water year 1953-54:	Max 4,550	Min 27	Mean 689	Mean 689	Cfsm 1.72	In. 23.34

* Discharge measurement made on this day.
† Change in contents in Mansfield Hollow Reservoir, equivalent in cubic feet per second; furnished by Corps of Engineers.

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 1954.

Gage.--Water-stage recorder. Datum of gage is 221.19 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 935 cfs Sept. 12 (gage height, 5.31 ft); minimum, 6.9 cfs Oct. 2-5 (gage height, 1.04 ft).
1951-54: Maximum discharge, that of Sept. 12, 1954; minimum, 6.6 cfs Sept. 10, 11, 1953 (gage height, 1.03 ft).

Remarks.--Records good.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 18

1.0	5.6	2.5	156
1.1	8.8	3.0	255
1.4	23	4.0	515
1.7	46	5.0	830
2.0	78		

Apr. 19 to Sept. 30

1.1	6.0	2.0	72
1.4	18	2.5	156
1.7	39		

Note.--Same as preceding table above 2.5 ft.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.2	22	38	42	41	68	58	67	37	34	12	110
2	6.9	18	36	41	42	115	56	63	36	28	12	37
3	6.9	15	32	41	46	99	54	76	39	23	18	24
4	6.9	14	30	49	82	211	49	136	34	21	28	22
5	6.9	13	85	47	77	131	*47	120	34	20	17	19
6	7.5	12	74	50	62	94	49	86	31	18	13	16
7	8.5	39	306	51	52	79	54	72	30	16	12	15
8	10	48	161	42	47	74	53	75	28	17	11	20
9	9.0	28	93	36	42	67	56	160	27	16	16	20
10	8.6	22	110	34	40	65	48	134	26	14	40	17
11	8.4	18	101	31	38	60	46	115	27	14	25	292
12	8.4	17	77	30	34	55	51	91	30	13	18	608
13	8.0	16	112	29	31	53	47	75	28	13	14	174
14	8.0	14	219	28	28	86	44	67	27	12	12	97
15	8.0	14	254	31	31	114	42	62	31	15	11	71
16	7.8	*14	133	37	37	84	49	118	48	13	11	64
17	10	13	93	38	56	74	333	102	*37	12	10	111
18	8.8	13	70	36	68	65	*680	78	30	12	9.4	91
19	8.8	13	62	35	52	58	288	64	26	12	8.7	69
20	8.5	12	58	36	45	196	156	58	23	12	9.4	67
21	8.8	12	58	90	47	169	113	85	22	14	10	56
22	8.8	12	*67	104	164	106	92	109	21	14	9.4	55
23	9.6	78	72	80	113	85	94	82	36	14	8.7	46
24	10	101	59	53	77	76	156	68	54	11	8.4	38
25	17	148	51	46	121	75	109	60	30	13	8.1	34
26	22	261	50	46	117	120	88	55	24	12	8.1	34
27	14	90	48	68	89	90	78	48	25	14	8.4	35
28	31	62	44	96	74	76	99	44	23	12	7.8	32
29	54	49	55	62	-	69	99	43	25	23	7.5	28
30	51	42	52	48	-------	64	79	44	27	16	7.5	26
31	31	-- --	48	42	-------	60	-------	40	-------	13	133	--
Total	420.3	1,230	2,748	1,499	1,753	2,838	3,267	2,497	916	491	524.4	2,328
Mean	13.6	41.0	88.6	48.4	62.6	91.5	109	80.5	30.5	15.8	16.9	77.6
Cfsm	0.456	1.38	2.97	1.62	2.10	3.07	3.66	2.70	1.02	0.530	0.567	2.60
In.	0.52	1.54	3.43	1.87	2.19	354	4.08	3.12	1.14	0.61	0.65	2.91

Calendar year 1953: Max 652 Min 6.9 Mean 76.5 Cfsm 2.57 In. 34.87
Water year 1953-54: Max 680 Min 6.9 Mean 56.2 Cfsm 1.89 In. 25.60

Peak discharge (base, 400 cfs).--Apr. 18 (9:30 a.m.) 795 cfs (4.91 ft); Sept. 12 (4:30 a.m.) 935 cfs (5.31 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 18, 19, Jan. 1, 2, 8-18, 21-23, 29-31, Feb. 1, 8, 13, 14.

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 1954.

Gage.--Water-stage recorder. Datum of gage is 537.66 ft above mean sea level, unadjusted (levels by Corps of Engineers).

Average discharge.--15 years, 155 cfs.

Extremes.--Maximum discharge during year, 1,250 cfs Sept. 12 (gage height, 6.60 ft); minimum daily, 9.0 cfs July 17.
1939-54: Maximum discharge, 1,500 cfs Mar. 22, 1948 (gage height, 6.93 ft); minimum daily, 2.2 cfs June 26, 1949.

Remarks.--Records excellent except those for periods of ice effect, which are good. Flow regulated by mills and reservoirs above station.

Rating tables, water year 1953-54, 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	14	3.5	170	1.9	8.0	2.5	47	5.0	560
2.3	26	4.0	266	2.0	12	3.0	100	6.0	950
2.5	41	5.0	560	2.1	17	3.5	170	6.5	1,200
3.0	96	5.5	740	2.2	23	4.0	266		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	123	119	103	b150	205	257	246	160	99	35	303
2	15	107	128	107	144	259	236	222	145	81	63	264
3	14	97	*119	117	142	268	189	226	133	49	79	209
4	15	90	92	136	156	386	173	319	115	49	109	149
5	22	64	134	139	165	386	165	346	107	58	104	111
6	35	38	178	142	156	343	162	324	121	102	91	89
7	37	60	319	145	146	295	180	285	120	108	44	121
8	26	78	327	b125	b135	268	187	257	113	102	50	182
9	16	95	290	b120	132	242	180	316	104	74	79	214
10	17	88	319	b110	121	228	164	340	100	52	101	174
11	18	56	311	b105	120	214	157	351	85	49	128	533
12	20	55	308	b80	109	200	170	340	75	52	122	*1,080
13	21	28	306	b130	106	182	170	308	87	52	106	980
14	21	41	370	b115	b97	205	160	273	98	75	49	788
15	*36	35	500	95	102	240	150	244	113	53	61	630
16	44	31	503	103	128	236	146	293	132	48	89	503
17	21	31	418	b115	*180	220	271	313	131	9.0	56	536
18	20	30	308	b115	205	200	651	295	105	14	70	493
19	21	29	246	b115	180	182	764	264	72	51	70	452
20	21	28	216	116	159	286	668	242	61	*40	70	427
21	21	27	209	192	167	351	*533	253	98	29	52	391
22	27	27	216	218	300	340	427	313	85	47	45	357
23	21	72	224	b190	332	*306	360	313	81	29	46	*313
24	18	120	192	189	283	264	327	295	85	36	66	255
25	25	168	170	165	255	248	298	*264	76	43	46	238
26	53	226	156	154	248	335	273	230	68	70	61	213
27	68	203	156	175	228	338	248	200	42	55	52	209
28	78	165	159	211	214	316	268	180	87	53	13	192
29	75	136	152	b190	-	285	283	167	95	51	27	178
30	154	124	150	b190	------	255	271	182	93	49	57	173
31	140	---	130	b165	-------	240	-------	175	-------	26	*196	---
Total	1,135	2,472	7,425	4,372	4,860	8,323	8,488	8,376	2,987	1,705.0	2,237	10,757
Mean	36.6	82.4	240	141	174	268	283	270	99.6	55.0	72.2	359
Cfsm	0.390	0.878	2.56	1.50	1.86	2.86	3.02	2.88	1.06	0.586	0.770	3.83
In.	0.45	0.98	2.94	1.73	1.93	3.30	3.37	3.32	1.18	0.68	0.89	4.26

Calendar year 1953 : Max 1,180 Min 12 Mean 216 Cfsm 2.30 In. 31.23
Water year 1953-54 : Max 1,080 Min 9.0 Mean 173 Cfsm 1.84 In. 25.03

* 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.

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 highway bridge on State Highway 197, 0.25 mile downstream from Massachusetts-Connecticut State line and 7.8 miles upstream from French River.

Drainage area.--157 sq mi.

Records available.--September 1931 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 341.52 ft above mean sea level, datum of 1929.

Average discharge.--23 years, 270 cfs.

Extremes.--Maximum discharge during year, 5,990 cfs Sept. 11 (gage height, 9.22 ft); minimum, about 3 cfs July 18; minimum daily, 4 cfs July 18.
1931-54: Maximum discharge, 14,100 cfs Sept. 21, 1938 (gage height, 16.21 ft, from floodmark), by computation of flow through bridge opening and over roadway 500 ft downstream; minimum, about 1 cfs Sept. 9, 1943, July 12, 1949, Sept. 17, 18, 1950, July 9, 1951; minimum daily, 2 cfs Aug. 21, 28, Sept. 4, 1932; minimum gage height, 1.74 ft Aug. 12, 1940.

Remarks.--Records good except those for periods of backwater from ice or aquatic vegetation, which are fair. Flow regulated by mills upstream.

Revisions (water years).--WSP 851: 1936(M). WSP 1201: 1939-43, 1947, 1949.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	164	*247	b191	*330	*410	*387	392	*304	*138	40	605
2	23	159	250	b200	240	*470	359	355	235	139	46	440
3	23	155	248	210	232	509	308	406	232	75	159	324
4	34	82	233	*291	276	767	283	575	164	53	189	253
5	16	121	359	224	255	671	328	605	175	76	182	194
6	27	92	420	245	233	570	271	531	204	170	113	161
7	35	92	848	236	245	498	292	460	225	145	86	191
8	30	144	725	210	279	460	298	440	186	132	58	268
9	67	181	593	b200	213	406	255	617	174	117	125	304
10	26	155	743	b170	201	387	242	*617	158	91	178	291
11	29	121	701	b250	b192	368	256	593	150	39	213	2,270
12	14	87	617	b220	b180	328	330	548	121	74	188	2,800
13	*28	96	623	b200	b136	268	248	492	129	96	157	1,590
14	30	58	874	b230	178	359	264	440	195	67	90	1,200
15	30	79	1,010	b200	221	440	242	392	184	73	66	978
16	68	101	860	b180	204	392	215	520	218	71	134	828
17	28	*79	713	b150	280	359	580	548	211	50	106	*1,010
18	50	80	536	b190	350	328	1,400	482	180	4	85	848
19	10	60	455	b180	319	275	1,240	425	102	14	91	791
20	28	83	392	b175	342	857	1,010	406	105	*64	*90	767
21	31	62	*410	361	272	647	*803	450	*160	46	62	683
22	34	74	392	400	605	575	653	548	130	54	53	593
23	47	236	425	350	593	492	570	531	132	41	102	548
24	39	270	342	320	492	425	536	482	123	57	70	487
25	72	461	312	300	504	415	487	435	123	36	69	375
26	64	677	287	280	492	605	450	377	80	70	73	348
27	74	498	275	320	435	570	406	342	63	82	68	410
28	143	387	314	380	401	514	460	300	131	72	57	322
29	129	308	282	*360	-	476	470	234	131	77	40	309
30	208	316	255	333	------	420	430	304	153	60	60	292
31	160	----	216	287	------	*387	------	287	------	45	544	------
Total	1,619	5,478	14,957	7,843	8,700	14,648	14,073	14,134	4,878	2,328	3,594	20,480
Mean	52.2	183	482	253	311	473	469	456	163	75.1	116	683
Cfsm	0.332	1.17	3.07	1.61	1.98	3.01	2.99	2.90	1.04	0.478	0.739	4.35
In.	0.38	1.29	3.54	1.86	2.06	3.47	3.34	3.34	1.16	0.55	0.85	4.85

Calendar year 1953: Max 2,110 Min 6 Mean 363 Cfsm 2.31 In. 31.38
Water year 1953-54: Max 2,800 Min 4 Mean 309 Cfsm 1.97 In. 26.69

Peak discharge (base, 1,000 cfs).--Dec. 14 (4:30 p.m.) 1,170 cfs (4.44 ft); Apr. 18 (6 a.m.) 1,460 cfs (4.90 ft); Aug. 31 (4 p.m.) 1,240 cfs (4.80 ft); Sept. 11 (7 p.m.) 5,990 cfs (9.22 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--Backwater from aquatic vegetation Oct. 1 to Dec. 7, June 11 to Sept. 11.

Little River at Buffumville, Mass.

Location.--Lat 42°06'57", long 71°53'26", on left bank 0.6 mile upstream from Boston & Albany Railroad bridge, 0.6 mile upstream from mouth, 0.8 mile east of Buffumville, Worcester County, and 1.5 miles west of Oxford.

Drainage area.--27.7 sq mi.

Records available.--July 1939 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 457.00 ft above mean sea level, unadjusted (levels by Corps of Engineers).

Average discharge.--15 years, 44.8 cfs.

Extremes.--Maximum discharge during year, 1,220 cfs Sept. 12 (gage height, 7.33 ft); minimum, 0.7 cfs Oct. 1; minimum daily, 0.8 cfs Oct. 1.
1939-54: Maximum discharge, that of Sept. 12, 1954; minimum, 0.5 cfs Nov. 28, 29, 1949, July 30, 1950; minimum daily, 0.5 cfs Nov. 28, 1949.

Remarks.--Records good except those for period of no gage-height record, which are fair. Flow regulated by mill above station.

Revisions (water years).--WSP 1201: 1940, 1948.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 14				Dec. 15 to Sept. 30			
1.95	0.8	2.8	30	2.0	1.0	3.5	108
2.0	1.3	3.0	49	2.2	3.7	4.0	197
2.2	4.3	3.5	108	2.4	7.6	4.5	305
2.4	8.6	3.8	158	2.6	14	5.0	422
2.6	16			2.8	23	6.0	710
				3.0	38	7.0	1,090
				3.2	61		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	1.2	53	32	46	82	58	64	45	30	1.0	240
2	.9	1.1	53	24	47	88	57	56	37	30	8.0	*183
3	1.0	1.1	40	35	46	91	44	85	39	1.4	13	106
4	1.1	1.7	1.8	45	49	135	43	125	45	1.3	29	71
5	1.3	2.0	7.4	43	49	130	48	147	34	2.0	21	44
6	1.5	2.6	64	46	45	102	45	122	2.4	11	17	41
7	1.7	3.1	126	48	32	83	53	96	30	11	1.4	52
8	2.0	12	*142	47	*32	75	57	76	28	15	1.3	57
9	2.4	38	116	43	36	63	57	122	28	18	2.0	56
10	2.0	43	128	43	35	63	43	145	34	2.0	45	67
11	2.1	11	137	43	35	54	27	126	25	7.9	35	403
12	2.2	26	116	33	35	52	56	108	1.9	19	30	*1,030
13	2.9	20	104	17	28	45	54	90	2.9	*17	30	458
14	6.8	1.2	146	22	24	53	49	77	34	18	2.0	244
15	1.7	1.1	223	*29	11	79	47	56	41	12	2.5	168
16	1.8	15	181	28	23	75	39	80	33	4.8	30	142
17	2.6	1.3	128	20	45	63	72	94	10	1.0	25	215
18	3.0	22	96	24	47	53	366	80	19	1.0	25	230
19	34	20	74	36	54	45	*307	63	5.5	9.1	20	179
20	20	15	61	45	54	93	197	61	16	*24	2.0	168
21	1.2	1.2	72	48	49	144	137	74	21	15	1.0	*140
22	1.3	1.0	74	48	104	123	108	111	21	16	1.0	128
23	1.2	37	82	44	126	96	94	111	26	17	1.0	111
24	1.8	38	72	46	104	*75	85	99	36	1.0	1.0	94
25	3.0	63	60	44	104	72	83	*79	27	1.3	1.0	80
26	2.4	135	56	42	114	111	82	66	1.5	23	1.0	63
27	2.2	120	51	47	105	118	64	58	1.3	12	1.0	82
28	36	69	51	52	85	104	74	56	1.4	8.0	1.0	67
29	61	52	51	58	-	90	82	16	11	10	1.0	63
30	39	54	53	48	-------	69	72	44	22	8.0	1.0	61
31	1.4	--- ---	51	45	-------	56	-------	42	-------	1.0	100	. .
Total	242.3	808.6	2,670.2	1,226	1,564	2,582	2,600	2,629	678.9	347.8	450.2	5,043
Mean	7.82	27.0	86.1	39.5	55.9	83.3	86.7	84.8	22.6	11.2	14.5	168
Cfsm	0.282	0.975	3.11	1.43	2.02	3.01	3.13	3.06	0.816	0.404	0.523	6.06
In.	0.33	1.09	3.59	1.65	2.10	3.47	3.49	3.53	0.91	0.47	0.60	6.77

Calendar year 1953: Max 457 Min 0.7 Mean 65.5 Cfsm 2.36 In. 32.09
Water year 1953-54: Max 1,030 Min 0.8 Mean 57.1 Cfsm 2.06 In. 28.00

* Discharge measurement made on this day.

Note.--No gage-height record July 21 to Sept. 1; discharge estimated on basis of weather records, recorded range in stage, mill records, and records for French River at Webster and Ware River near Barre.

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 1954.

Gage.--Water-stage recorder. Datum of gage is 406.74 ft above mean sea level, datum of 1929.

Average discharge.--5 years (1949-54), 159 cfs.

Extremes.--Maximum discharge during year, 2,320 cfs Sept. 12 (gage height, 11.64 ft); minimum daily, 4.1 cfs Oct. 4.
1948-54: Maximum discharge, that of Sept. 12, 1954; minimum daily, 2.9 cfs Sept. 30, 1951.
Maximum discharge known, 4,700 cfs Mar. 19, 1936, by computation of flow over dam about half a mile upstream.

Remarks.--Records good. Flow regulated by mills and by Lake Chaubunagungamaug (estimated usable capacity, 207,000,000 cu ft) and smaller reservoirs above station.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from tree Sept. 1, 2)

3.86	4.1	6.0	315
3.9	5.7	7.0	571
4.1	16	9.0	1,230
4.5	47	11.0	2,030
5.0	107		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	53	135	113	124	286	180	209	138	78	32	489
2	41	70	123	94	125	300	172	184	130	85	27	*462
3	4.9	57	*117	99	121	313	151	218	132	60	58	324
4	4.1	56	98	126	140	382	138	328	123	45	88	220
5	40	42	78	132	150	416	138	403	120	40	73	140
6	34	46	138	161	138	360	138	377	85	45	61	112
7	40	30	286	166	130	302	146	302	99	47	49	114
8	37	32	360	154	120	266	157	255	102	53	34	152
9	34	44	335	140	127	232	198	293	97	60	43	153
10	6.7	83	315	138	119	195	187	358	100	60	117	162
11	5.3	44	346	142	110	184	125	367	100	50	121	563
12	35	79	322	144	106	167	156	335	62	79	112	*2,000
13	37	84	286	133	81	146	146	302	60	74	109	1,570
14	36	42	324	114	79	153	138	266	87	66	104	870
15	36	36	494	*118	97	195	130	227	94	66	69	597
16	36	63	500	115	87	202	127	236	109	60	84	478
17	5.7	62	374	81	*104	187	228	282	100	22	91	534
18	4.9	60	280	97	146	165	694	275	86	32	98	612
19	34	69	209	93	152	140	*933	234	50	75	91	542
20	*27	48	176	98	142	208	690	204	48	*48	78	492
21	38	24	172	138	142	315	522	236	77	39	37	451
22	34	26	184	163	246	342	394	322	80	57	39	413
23	35	77	196	150	317	*291	311	360	78	62	78	*367
24	7.1	76	185	138	311	241	278	348	83	68	68	326
25	20	169	159	138	328	214	271	*297	91	54	66	284
26	48	302	146	127	353	275	248	255	67	45	51	253
27	54	335	138	138	346	322	218	214	56	41	50	262
28	66	241	138	155	313	308	225	180	66	39	22	260
29	71	155	139	156	-	273	250	130	61	30	27	239
30	103	133	141	140	------	234	239	150	71	25	73	223
31	75	---	133	126	------	202	------	144	------	32	152	----
Total	1,087.7	2,638	7,027	4,027	4,754	7,816	7,928	8,291	2,652	1,637	2,202	13,664
Mean	35.1	87.9	227	130	170	252	264	267	88.4	52.8	71.0	455
Cfsm	0.411	1.03	2.66	1.52	1.99	2.95	3.09	3.13	1.04	0.619	0.832	5.33
In.	0.47	1.15	3.06	1.76	2.07	3.41	3.46	3.61	1.16	0.71	0.96	5.96

Calendar year 1953: Max 1,180 Min 4.1 Mean 196 Cfsm 2.30 In. 31.13
Water year 1953-54: Max 2,000 Min 4.1 Mean 175 Cfsm 2.05 In. 27.78

* Discharge measurement made on this day.

Quinebaug River at Putnam, Conn.

Location.--Lat 41°54'34", long 71°54'48", on left bank at Putnam, Windham County, 0.15 mile downstream from Little River, 0.3 mile upstream from New York, New Haven & Hartford Railroad bridge, 2.8 miles downstream from French River, and at mi 35.7.

Drainage area.--331 sq mi.

Records available.--October 1929 to September 1954. Monthly discharge only for some periods, published in WSP 1301.

Gage.--Water-stage recorder. Datum of gage is 216.76 ft above mean sea level, datum of 1929.

Average discharge.--25 years, 558 cfs.

Extremes.--Maximum discharge during year, 8,990 cfs Sept. 12 (gage height, 12.77 ft); minimum, 10 cfs Oct. 24 (gage height, 1.59 ft); minimum daily, 30 cfs Oct. 11.
1929-54: Maximum discharge, 20,900 cfs Sept. 21, 1938 (gage height, 19.45 ft, from floodmarks), by computation of peak flow over dam 1 mile upstream and over dam on Little River 2 miles upstream from its mouth; minimum, 8.0 cfs Aug. 9, 1953 (gage height, 1.54 ft); minimum daily, 11 cfs Oct. 5, 12, 1930.

Remarks.--Records excellent. City of Putnam diverts an average of less than 1 mgd from Little River for municipal supply. Large diurnal fluctuation, particularly during low flow, caused by many dams and reservoirs above station, largest of which is Lake Chaubunagungamaug with an estimated usable capacity of 207,000,000 cu ft.

Revisions (water years).--WSP 781: Drainage area, 1934(M). WSP 1301: 1931-32(M), 1935(M).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.7	18	4.0	690
1.9	38	5.0	1,230
2.1	66	8.0	3,390
2.5	146	12.1	8,010
3.0	291		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	71	280	560	367	606	981	737	848	532	289	55	1,470
2	56	297	456	449	490	1,020	741	684	468	258	115	1,290
3	32	240	479	358	472	1,060	598	894	420	188	145	958
4	38	245	494	574	615	1,530	530	1,120	372	125	379	645
5	73	174	582	492	654	1,470	641	1,320	274	141	380	496
6	35	152	701	541	540	1,290	562	1,230	346	292	314	412
7	91	250	1,420	551	509	1,090	565	1,050	393	252	221	445
8	79	283	1,500	495	561	1,040	*594	924	327	248	86	550
9	53	331	1,320	324	460	895	579	1,160	297	234	198	607
10	81	259	1,410	364	437	818	536	1,320	288	146	345	602
11	30	259	1,410	479	411	728	464	1,290	300	79	433	2,260
12	43	203	1,260	470	371	717	610	1,180	217	134	417	3,010
13	63	222	1,260	425	244	578	532	1,060	182	182	387	5,240
14	72	124	1,640	391	290	659	518	946	289	166	240	3,030
15	64	120	2,130	408	396	968	501	830	310	167	142	2,060
16	67	192	1,920	343	390	834	390	824	382	141	219	1,710
17	74	160	*1,500	372	529	740	1,050	1,060	384	50	239	2,060
18	39	144	1,200	450	673	705	2,940	964	330	56	193	1,920
19	78	127	896	393	669	617	3,130	867	235	120	216	1,780
20	43	162	746	390	577	956	2,340	768	104	125	255	1,650
21	42	95	849	611	512	1,320	1,850	840	*215	106	176	1,500
22	55	72	930	740	1,100	1,290	1,500	1,010	235	115	41	1,380
23	64	373	872	677	1,320	1,100	1,230	1,060	249	129	119	1,260
24	63	564	791	578	1,150	958	1,150	1,080	271	65	179	1,080
25	94	769	595	635	1,150	836	1,060	945	270	94	128	865
26	148	1,470	595	538	1,200	1,150	1,020	815	179	129	142	840
27	111	1,290	568	600	1,090	1,150	896	699	137	185	175	915
28	308	958	648	706	993	1,060	949	631	160	144	137	790
29	368	678	590	648	-	1,030	1,020	477	261	182	31	725
30	412	658	553	586	------	909	953	502	274	187	99	690
31	391	-- --	502	519	------	801	------	467	------	104	870	- - -
Total	3,238	11,151	30,377	15,474	18,409	30,300	30,186	28,845	8,701	4,833	7,076	47,240
Mean	104	372	980	499	657	977	1,006	930	290	156	228	1,575
Cfsm	0.314	1.12	2.96	1.51	1.98	2.95	3.04	2.81	0.876	0.471	0.689	4.76
In.	0.36	1.25	3.41	1.74	2.06	3.40	3.39	3.24	0.98	0.54	0.79	5.31

Calendar year 1953: Max 4,540 Min 12 Mean 763 Cfsm 2.31 In. 31.28
Water year 1953-54: Max 8,010 Min 30 Mean 646 Cfsm 1.95 In. 26.47

Peak discharge (base, 2,000 cfs).--Dec. 14 (9:30 p.m.) 2,200 cfs (6.48 ft); Apr. 19 (1 a.m.) 3,390 cfs (7.97 ft); Sept. 12 (3 a.m.) 8,990 cfs (12.77 ft).
* Discharge measurement made on this day.

Five Mile River at Killingly, Conn.

Location.--Lat 41°50'14", long 71°53'09" at upstream left abutment of New York, New Haven & 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.--November 1937 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 222.22 ft above mean sea level, datum of 1929.

Average discharge.--17 years, 103 cfs.

Extremes.--Maximum discharge during year, 845 cfs Sept. 12 (gage height, 5.06 ft); minimum, 7.4 cfs Oct. 20 (gage height, 0.76 ft); minimum daily, 7.7 cfs Oct. 10, 11, 20.
1937-54: Maximum discharge, 2,480 cfs (corrected) July 24, 1938 (gage height, 8.52 ft); minimum, 3.8 cfs Aug. 24, 1941 (gage height, 0.44 ft); minimum daily, 5.6 cfs Aug. 13, 1939, Aug. 24, 1941, Nov. 24, 1949, Nov. 15, 1952.
Peak discharge of Mar. 12, 1936, 1,600 cfs, by computation of flow over dam at Danielson.
Correction.--The maximum discharge for the water year 1938 has been corrected to 2,480 cfs July 24, 1938 (gage height, 8.52 ft), superseding figure appearing in WSP 1201, 1231, and 1271.

Remarks.--Records excellent. Flow regulated by dams and reservoirs upstream.

Revisions (water years).--WSP 921: 1938-40. WSP 951: 1938-41.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Jan. 12-14, 17, 18)

0.7	5.7	2.3	237
.8	8.5	3.0	395
1.0	18	4.0	582
1.3	42	5.0	820
1.7	98		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	26	62	105	63	152	*149	184	77	57	30	253
2	29	31	62	100	64	176	132	179	74	46	49	164
3	8.3	29	61	102	70	174	98	171	71	37	39	94
4	8.3	31	60	112	101	241	86	172	65	38	50	72
5	32	30	95	111	113	226	81	168	49	32	49	65
6	19	27	102	109	96	197	86	154	54	38	45	58
7	36	29	227	102	80	179	90	149	64	34	14	53
8	24	51	215	101	72	170	86	170	63	33	30	54
9	32	43	153	90	71	155	86	242	63	26	50	63
10	7.7	32	156	91	71	148	84	248	60	11	54	66
11	7.7	36	153	87	68	139	78	221	58	18	60	321
12	19	33	138	81	72	127	80	202	51	41	45	795
13	19	35	156	81	56	123	78	189	49	35	39	648
14	19	21	213	81	57	145	74	178	56	40	14	521
15	32	18	286	96	62	175	75	167	50	48	30	413
16	18	26	267	93	66	158	76	174	61	45	50	353
17	7.9	33	229	88	87	146	259	146	*65	16	39	353
18	7.9	30	193	79	102	136	541	130	61	26	32	331
19	31	23	170	84	94	126	502	121	45	41	31	298
20	7.7	30	156	86	88	192	413	118	45	36	34	272
21	31	7.9	*149	125	88	184	342	134	*53	32	11	254
22	23	8.8	155	128	189	138	298	160	38	38	27	254
23	7.9	66	157	100	204	122	269	160	38	33	41	250
24	7.9	113	142	96	173	109	298	154	49	23	41	232
25	10	121	134	89	193	123	298	144	49	31	34	221
26	37	192	121	86	210	184	255	135	30	45	32	200
27	29	128	117	86	194	184	233	114	41	42	37	168
28	39	81	111	104	170	172	240	90	47	36	9.3	144
29	63	61	115	82	-	165	230	83	35	38	23	135
30	61	61	113	75	------	162	200	84	54	44	43	129
31	36	-- -	109	69	------	153	--------	81	--------	18	153	-- - -
Total	748.3	1,453.7	4,577	2,919	2,974	4,981	5,817	4,822	1,615	1,078	1,235.3	7,234
Mean	24.1	48.5	148	94.2	106	161	194	156	53.8	34.8	39.8	241
Cfsm	0.414	0.833	2.54	1.62	1.82	2.77	3.33	2.68	0.924	0.598	0.684	4.14
In.	0.48	0.93	2.93	1.87	1.90	3.19	3.72	3.09	1.03	0.69	0.79	4.62

Calendar year 1953: Max 541 Min 6 Mean 126 Cfsm 2.16 In. 29.33
Water year 1953-54: Max 795 Min 7.7 Mean 108 Cfsm 1.86 In. 25.24

* Discharge measurement made on this day.

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 1954.

Gage.--Water-stage recorder. Datum of gage is 196.64 ft above mean sea level, datum of 1929.

Average discharge.--22 years, 160 cfs.

Extremes.--Maximum discharge during year, 1,820 cfs Sept. 11 (gage height, 5.63 ft); minimum, 4.5 cfs Nov. 6, 21, 22 (gage height, 0.74 ft); minimum daily, 8.0 cfs Oct. 10. 1932-54: 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 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Jan. 13, 14, 17-19)

0.8	5.8	2.5	262
.9	9.0	3.0	435
1.1	18	4.0	875
1.3	32	5.0	1,410
1.5	54	6.0	2,110
2.0	137		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	82	197	101	109	191	151	225	*134	35	13	419
2	12	96	160	181	102	303	181	201	104	54	45	360
3	11	42	152	79	132	319	153	225	83	16	47	196
4	9.0	56	134	171	304	495	112	300	80	21	59	124
5	10	41	271	147	326	415	184	310	86	22	61	90
6	10	23	326	183	250	314	120	268	32	61	38	68
7	10	96	*1,020	144	194	256	145	239	105	54	11	75
8	9.0	165	898	135	198	225	*137	198	86	53	19	84
9	25	141	596	75	134	214	144	378	54	19	112	68
10	8.0	111	487	114	138	181	145	407	65	18	175	59
11	12	84	427	132	130	179	118	353	69	13	176	882
12	29	74	357	106	145	172	124	287	66	39	139	1,470
13	23	86	443	110	52	154	108	250	31	29	113	970
14	23	16	650	120	86	211	136	217	86	15	24	538
15	24	12	762	142	117	306	93	211	75	25	41	333
16	*12	85	596	64	117	253	170	228	93	36	54	268
17	9.6	63	415	104	169	211	450	228	77	12	57	315
18	8.6	61	319	130	220	186	1,170	198	63	12	29	296
19	22	70	259	87	181	201	945	186	10	44	26	271
20	20	51	236	107	160	472	578	156	14	56	50	245
21	21	12	225	306	154	587	399	217	64	17	14	201
22	14	10	242	326	475	455	319	230	50	40	12	186
23	9.2	250	248	227	455	319	300	240	52	43	25	174
24	13	403	177	186	360	262	427	192	41	16	37	136
25	26	588	208	178	403	230	384	197	43	12	33	128
26	57	785	130	153	388	326	313	150	13	42	24	128
27	56	574	163	182	319	303	268	112	27	56	48	128
28	62	343	196	236	265	256	287	158	68	29	14	145
29	110	242	149	200	-	198	296	112	60	48	12	85
30	169	183	159	139	------	201	262	88	68	51	13	108
31	83	-- --	177	158	-------	212	-------	116	--------	14	324	--- -
Total	925.4	4,845	10,779	4,723	6,085	8,607	8,619	6,879	1,899	1,002	1,845	8,550
Mean	29.9	162	348	152	217	278	287	222	63.3	32.3	59.5	285
Cfsm	0.358	1.94	4.17	1.82	2.60	3.33	3.44	2.66	0.758	0.387	0.713	3.41
In.	0.41	2.16	4.81	2.10	2.71	3.84	3.84	3.07	0.85	0.45	0.82	3.80

Calendar year 1953: Max 1,320 Min 5.2 Mean 215 Cfsm 2.57 In. 34.96
Water year 1953-54: Max 1,470 Min 8.0 Mean 177 Cfsm 2.12 In. 28.86

Peak discharge (base, 800 cfs).--Nov. 25 (11 p.m.) 920 cfs (4.12 ft); Dec. 7 (11 a.m.) 1,120 cfs (4.51 ft); Dec. 14 (8 p.m.) 852 cfs (3.93 ft); Mar. 20 (3 p.m.) 875 cfs (3.98 ft); Apr. 18 (7 a.m.) 1,230 cfs (4.72 ft); Sept. 11 (6:30 p.m.) 1,820 cfs (5.63 ft).
* Discharge measurement made on this day.

Quinebaug River at Jewett City, Conn.

Location.--Lat 41°35'52", long 71°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 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 1954.

Gage.--Water-stage recorder. Datum of gage is 63.07 ft above mean sea level, datum of 1929.

Average discharge.--36 years, 1,230 cfs.

Extremes.--Maximum discharge during year, 12,600 cfs Sept. 12 (gage height, 16.41 ft); minimum, 22 cfs Oct. 23 (gage height, 3.53 ft); minimum daily, 27 cfs Oct. 11.
1918-54: Maximum discharge, 29,200 cfs Mar. 19, 1936 (gage height, 24.0 ft, from floodmarks), by computation of peak flow over three nearby dams; minimum daily, 18 cfs Aug. 28, Dec. 11, 1949.

Remarks.--Records excellent except those for period of no gage-height record, which are fair. Flow regulated by many ponds and reservoirs above station, the largest of which are Lake Chaubunagungamaug and Pachaug Pond.

Revisions (water years).--WSP 781: Drainage area. WSP 1301: 1919-26(M).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

3.5	19	6.0	860
3.8	52	8.0	2,200
4.2	124	12.0	6,330
4.6	230	15.3	10,800
5.0	370		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	349	694	1,370	1,130	1,130	2,120	1,680	2,000	1,090	585	198	*3,300
2	51	698	1,190	1,010	1,190	2,280	1,580	1,780	1,060	668	479	2,610
3	37	659	1,100	1,070	1,130	2,360	1,470	1,890	922	543	479	1,920
4	34	443	1,040	1,160	1,370	3,260	1,280	2,200	868	402	501	1,470
5	215	576	1,370	1,280	1,680	3,260	1,340	2,520	683	278	492	980
6	223	262	1,720	1,250	1,610	2,700	1,340	2,440	495	398	517	832
7	208	374	3,790	1,220	1,310	2,360	*1,280	2,160	827	446	417	920
8	176	778	*4,500	1,070	1,280	2,200	1,310	1,920	732	468	245	860
9	98	832	3,460	920	1,190	1,960	1,280	2,440	674	434	535	920
10	32	805	2,970	805	1,130	1,780	1,250	2,880	620	406	902	890
11	27	672	3,060	832	1,040	1,680	1,190	2,700	535	271	999	2,260
12	108	691	2,700	980	920	1,540	1,160	2,400	615	251	920	10,400
13	21	363	2,790	980	643	1,440	1,280	2,200	426	351	757	10,700
14	265	318	3,460	890	526	1,540	1,220	1,960	525	352	603	6,820
15	206	299	5,050	860	980	2,160	1,100	1,780	691	356	292	4,500
16	169	578	4,390	950	965	2,040	1,010	1,960	*778	318	562	3,460
17	38	444	3,560	778	1,070	1,780	2,250	2,160	778	132	492	3,460
18	35	362	2,700	890	1,440	1,640	6,550	1,960	695	266	498	3,660
19	202	334	2,200	920	1,400	1,500	7,060	1,750	565	199	477	3,260
20	206	358	1,890	950	1,310	2,330	5,380	1,580	362	404	121	2,970
21	228	105	1,820	1,280	1,250	3,360	4,060	1,680	382	473	311	2,700
22	204	279	1,890	1,780	2,310	3,060	3,260	2,040	545	393	181	2,440
23	126	803	1,890	1,500	3,060	2,520	2,790	2,080	540	410	435	2,200
24	31	1,820	1,750	1,400	2,610	2,200	3,060	2,080	539	132	293	1,960
25	48	2,040	1,540	1,400	2,520	1,960	2,740	1,860	480	165	301	1,680
26	284	3,860	1,400	1,280	2,880	2,360	2,520	1,680	406	416	484	1,540
27	385	3,260	1,310	1,400	2,520	2,520	2,200	1,440	386	309	160	1,500
28	426	2,360	1,400	1,610	2,280	2,280	2,280	1,340	432	514	200	1,470
29	814	1,820	1,370	1,440	-	2,200	2,440	1,160	553	464	180	1,310
30	908	1,470	1,310	1,250	------	1,960	2,200	1,010	613	264	400	1,250
31	753	.. ..	1,220	1,250	-------	1,820	-------	1,100	--------	268	1,600	.. .
Total	7,096	28,357	71,210	35,535	42,744	68,170	69,560	60,190	18,817	11,336	15,031	84,242
Mean	229	945	2,297	1,146	1,527	2,199	2,319	1,942	627	366	485	2,808
Cfsm	0.322	1.33	3.23	1.61	2.15	3.09	3.26	2.73	0.882	0.515	0.682	3.95
In.	0.37	1.48	3.72	1.86	2.24	3.56	3.64	3.15	0.98	0.59	0.79	4.41

Calendar year 1953: Max 9,320 Min 27 Mean 1,656 Cfsm 2.33 In. 31.63
Water year 1953-54: Max 10,700 Min 27 Mean 1,404 Cfsm 1.97 In. 26.79

Peak discharge (base, 4,500 cfs).--Dec. 7 (11 p.m.) 4,940 cfs (10.76 ft); Dec. 15 (8 a.m.) 5,270 cfs (11.14 ft); Apr. 18 (12 p.m.) 7,690 cfs (13.10 ft); Sept. 12 (11 p.m.) 12,600 cfs (16.41 ft).
* Discharge measurement made on this day.
Note.--No gage-height record Aug. 27 to Sept. 1; discharge estimated on basis of recorded range in stage, weather records, and preceding pattern of regulation.

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 1954.

Gage.--Water-stage recorder. Datum of gage is 94.46 ft above mean sea level, datum of 1929.

Average discharge.--24 years, 157 cfs.

Extremes.--Maximum discharge during year, 2,920 cfs Sept. 11 (gage height, 8.70 ft); minimum, 7.4 cfs Oct. 3-5 (gage height, 0.88 ft); minimum daily, 7.4 cfs Oct. 3, 4.
1930-54: Maximum discharge, 13,500 cfs Sept. 21, 1938 (gage height, 14.66 ft, from floodmark), by computation of flow over 2 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 except those for periods of ice effect, which are good. Low flow completely regulated by mills upstream.

Revisions (water years).--WSP 781: Drainage area. WSP 1051: 1931-36. WSP 1301: 1934(M).

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.8	4.8	2.5	169
1.0	12	3.0	263
1.3	30	5.0	795
1.6	55	7.0	1,710
2.0	98	9.0	3,200

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.0	51	67	103	b103	186	169	231	64	30	21	384
2	8.0	34	66	96	104	294	163	204	58	30	18	217
3	7.4	29	59	88	122	305	148	233	54	25	31	98
4	7.4	26	56	110	195	545	128	349	50	22	73	58
5	8.8	22	193	97	195	408	127	362	50	20	58	44
6	11	18	217	128	161	284	131	284	42	18	30	35
7	12	106	834	152	127	223	*140	225	47	16	23	29
8	12	158	495	98	112	193	138	229	52	14	19	37
9	12	125	284	79	104	177	141	432	58	14	27	50
10	12	94	284	84	98	171	127	408	35	13	172	44
11	12	78	263	b77	94	158	118	338	32	12	119	1,150
12	12	70	223	b70	b80	140	134	274	37	12	60	1,900
13	12	63	305	b67	b66	135	121	227	35	12	34	732
14	13	54	590	b65	61	220	106	197	36	12	26	420
15	14	51	695	b70	69	316	103	178	75	12	22	284
16	15	34	*432	b70	97	253	120	284	96	11	20	227
17	15	26	294	b68	154	191	820	263	58	11	17	294
18	15	19	204	b70	212	164	1,830	210	43	11	15	274
19	15	18	158	b75	169	144	960	167	32	11	13	233
20	15	22	141	88	134	663	532	147	26	11	13	214
21	15	18	146	266	127	635	395	183	26	13	13	*184
22	16	18	169	294	440	408	316	231	*53	13	13	161
23	16	209	190	b220	408	305	332	195	55	15	12	135
24	16	294	156	155	284	249	532	171	56	17	12	112
25	21	330	127	127	316	237	420	148	39	13	12	98
26	18	384	120	128	316	360	327	130	32	12	12	101
27	19	229	116	191	259	305	284	107	25	12	12	104
28	27	132	106	284	208	249	327	91	26	12	12	98
29	61	99	142	204	-	212	338	94	53	16	12	90
30	125	75	137	148	------	191	284	86	30	25	12	86
31	94	-- ---	119	128	-------	174	--------	75	--------	32	273	- -
Total	664.6	2,886	7,388	3,900	4,815	8,495	9,811	6,753	1,375	497	1,206	7,891
Mean	21.4	96.2	238	126	172	274	327	218	45.8	16.0	38.9	263
Cfsm	0.242	1.09	2.69	1.42	1.94	3.09	3.69	2.46	0.517	0.181	0.439	2.97
In.	0.28	1.22	3.10	1.64	2.02	3.56	4.12	2.84	0.58	0.21	0.51	3.31

Calendar year 1953: Max 1,780 Min 7.0 Mean 226 Cfsm 2.55 In. 34.69
Water year 1953-54: Max 1,900 Min 7.4 Mean 153 Cfsm 1.73 In. 23.39

Peak discharge (base, 1,000 cfs).--Dec. 7 (8:30 a.m.) 1,200 cfs (6.05 ft); Apr. 18 (6 to 8 a.m.) 2,140 cfs (7.73 ft); Sept. 11 (7:30 p.m.) 2,920 cfs (8.70 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

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 1954.

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.--37 years, 196 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 980 cfs June 7, 8 (gage height, 3.66 ft); minimum daily, 11 cfs Feb. 25 to Mar. 16, Mar. 21-30.
1917-54: 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. 233).

Revisions (water years).--WSP 756: Drainage area. WSP 1001: 1931-39. WSP 1231: 1918-23(M), 1925-26.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.44	11	2.5	221
1.5	16	3.0	440
1.7	38	3.5	830
2.0	87	4.0	1,330

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	193	17	199	452	368	11	b12	17	79	238	221	19
2	193	81	196	446	373	11	b12	17	18	238	113	19
3	193	202	196	446	373	11	b185	17	18	212	20	20
4	193	199	196	429	373	b11	476	19	*18	249	20	20
5	193	199	196	373	373	b11	408	21	18	249	21	269
6	193	199	196	368	373	11	295	20	264	160	20	668
7	193	206	83	368	373	11	97	429	740	18	19	749
8	193	206	16	368	373	11	12	704	640	18	19	296
9	193	206	16	368	373	11	12	570	500	*18	98	20
10	193	209	16	368	373	11	12	704	634	18	215	20
11	193	209	16	368	373	11	12	785	722	169	215	21
12	193	202	16	363	373	b11	12	785	621	221	126	22
13	193	199	16	368	373	b11	12	626	305	218	19	26
14	193	199	16	368	373	11	12	452	279	218	20	63
15	193	199	16	368	373	11	12	419	313	218	20	621
16	193	206	128	368	373	b11	12	419	276	218	175	447
17	193	202	196	368	232	b325	13	314	242	224	291	594
18	196	202	273	363	145	857	13	182	206	215	181	594
19	193	199	458	368	145	866	13	132	116	215	96	445
20	193	199	458	368	145	303	14	91	52	215	98	19
21	193	199	452	249	142	11	15	18	52	215	180	375
22	193	199	452	148	142	b11	16	161	138	85	264	*594
23	*193	104	458	148	142	b11	16	335	224	19	264	594
24	196	16	458	148	75	b11	16	261	224	19	246	594
25	202	16	458	148	11	b11	16	209	224	19	313	586
26	202	16	458	148	11	11	16	209	224	91	349	437
27	199	16	458	148	11	b11	16	126	224	218	349	215
28	199	16	458	223	11	b11	16	98	104	218	349	242
29	199	16	458	373	-	b11	17	98	18	221	349	252
30	85	85	452	373	--------	b11	17	162	120	228	349	173
31	17	--------	452	373	--------	b12	--------	167	--------	224	242	--------
Total	5,741	4,423	7,917	10,135	7,175	2,649	1,807	8,567	7,613	5,106	5,261	9,014
Mean	185	147	255	327	256	85.5	60.2	276	254	165	170	300
(†)	-358	-128	-128	-732	-491	-10	+1,894	+643	+118	-244	+32	+199
Adjusted for change in reservoir contents												
Mean	51.5	98.1	208	53.6	53.3	81.7	791	516	299	73.6	182	377
Cfsm	0.620	1.18	2.51	0.646	0.642	0.984	9.53	6.22	3.60	0.887	2.19	4.54
In.	0.72	1.32	2.88	0.75	0.67	1.13	10.63	7.17	4.02	1.02	2.52	5.07

	Observed	Adjusted
Calendar year 1953:	Max 642 Min 11 Mean 171	Mean 174 Cfsm 2.10 In. 28.53
Water year 1953-54:	Max 866 Min 11 Mean 207	Mean 232 Cfsm 2.80 In. 37.90

* Discharge measurement made on this day.
† Change in contents, in millions of cubic feet, in First Connecticut and Second Connecticut Lakes.
b Stage-discharge relation affected by ice.
Note.--Discharge for period Jan. 7 to Feb. 17 computed from once-daily tape-gage readings and records of gate operation at First Connecticut Lake.

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 1954.

Gage.--Water-stage recorder. Datum of gage is 880.17 ft above mean sea level, datum of 1929.

Average discharge.--24 years, 1,568 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 20,400 cfs Apr. 23 (gage height, 12.27 ft); minimum daily, 454 cfs July 10, 11.
1930-54: 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, 112 cfs Aug. 28, 1948.

Remarks.--Records excellent except those for periods of ice effect, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes and Lake Francis (see p. 233).

Revisions (water years).--WSP 781: 1934(M). WSP 891: Drainage area.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 23				Apr. 24 to Sept. 30			
3.5	444	7.0	5,850	3.4	401	4.5	1,530
4.0	890	9.0	10,600	3.9	810	5.0	2,270
5.0	2,270	12.0	19,500				
6.0	3,980						

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

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	498	671	760	1,100	960	1,700	582	3,520	1,030	1,780	3,210	5,360
2	491	527	868	1,200	960	2,500	550	3,800	1,010	1,480	3,050	2,460
3	484	608	813	1,250	980	3,500	519	3,600	1,540	1,260	1,390	1,490
4	478	760	791	1,150	980	3,300	540	3,430	*1,450	1,100	1,020	1,480
5	484	710	1,600	1,100	980	2,700	930	3,600	1,590	1,060	1,370	1,020
6	498	617	2,400	1,050	960	2,300	1,140	3,310	4,260	1,080	1,450	1,600
7	680	617	3,230	1,050	940	2,100	2,560	3,070	7,850	704	1,080	2,220
8	868	626	4,180	1,050	940	1,900	4,050	2,430	9,380	503	850	5,670
9	813	635	2,350	1,000	960	1,750	5,930	3,840	6,200	*489	647	2,460
10	835	617	2,700	1,000	940	1,950	5,410	5,030	4,090	454	850	1,640
11	868	550	3,640	1,000	920	1,900	4,840	3,890	3,460	454	1,190	2,600
12	857	543	2,320	970	900	1,850	6,090	5,590	3,230	810	2,290	7,380
13	857	599	1,790	950	880	1,800	*5,670	4,750	2,620	800	2,260	4,100
14	760	599	1,460	950	900	1,800	3,980	4,300	1,960	732	1,860	4,670
15	680	590	*1,390	950	920	1,750	3,110	3,180	2,970	707	1,130	5,220
16	653	590	1,140	950	1,000	1,700	3,640	2,750	2,330	692	1,010	4,100
17	574	*608	1,100	950	1,100	1,650	5,090	2,480	1,740	674	1,500	4,450
18	574	590	1,150	950	900	1,600	6,550	2,060	1,400	647	1,270	4,460
19	574	590	1,400	950	800	1,650	7,380	1,680	1,120	674	810	3,980
20	566	599	1,700	970	850	1,750	7,480	1,570	910	674	692	4,450
21	558	590	1,700	1,100	860	1,400	9,420	1,340	770	976	596	2,920
22	550	590	1,700	860	1,300	857	12,200	2,140	680	1,150	720	3,640
23	543	950	2,000	620	2,800	653	18,200	2,490	900	683	760	3,570
24	535	1,150	1,800	600	2,400	590	13,500	2,080	932	730	*750	3,260
25	527	835	1,600	620	2,200	582	7,450	1,720	880	548	790	2,460
26	574	2,300	1,500	620	1,900	566	5,490	1,460	921	526	932	2,400
27	590	1,720	1,400	620	1,700	630	*4,160	1,080	3,220	1,090	943	2,080
28	626	1,110	1,350	600	1,550	570	3,870	965	3,360	932	932	1,940
29	750	791	1,400	720	-	570	3,760	1,020	2,690	880	910	1,610
30	1,240	626	1,350	*920	--------	610	3,580	1,670	2,000	910	910	1,400
31	1,110	--------	1,300	1,000	--------	580	--------	1,350	--------	1,320	2,940	--------
Total	20,695	22,908	53,882	28,820	33,480	48,758	157,671	85,195	76,493	26,519	39,912	96,090
Mean	668	764	1,738	930	1,196	1,573	5,256	2,748	2,550	855	1,287	3,203
(†)	-685	-242	-105	-1,363	-933	-1,176	+4,251	+1,895	+183	-465	-87	+394
Adjusted for change in reservoir contents												
Mean	412	670	1,699	421	810	1,134	6,896	3,456	2,620	682	1,255	3,355
Cfsm	0.516	0.839	2.13	0.527	1.01	1.42	8.63	4.33	3.28	0.854	1.57	4.20
In.	0.59	0.94	2.45	0.61	1.06	1.64	9.63	4.99	3.66	0.98	1.81	4.68

	Observed						Adjusted					
Calendar year 1953:	Max	15,500	Min	236	Mean	1,344	Mean	1,353	Cfsm	1.69	In.	22.98
Water year 1953-54:	Max	18,200	Min	454	Mean	1,892	Mean	1,944	Cfsm	2.43	In.	33.04

Peak discharge (base, 10,000 cfs).--Apr. 23 (9:30 to 10:30 p.m.) 20,400 cfs (12.27 ft).
* Discharge measurement made on this day.
† Change in contents, in millions of cubic feet, in First Connecticut and Second Connecticut Lakes and Lake Francis.
Note.--Stage-discharge relation affected by ice Dec. 16 to Mar. 21, Mar. 27-31, Apr. 4, 5.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 920 ft (from topographic map).

Average discharge.--14 years, 477 cfs (adjusted for diversion).

Extremes.--Maximum discharge during year, 8,880 cfs Apr. 23 (gage height, 9.01 ft), from rating curve extended above 5,800 cfs by logarithmic plotting; minimum, 46 cfs Oct. 6.
1940-54: Maximum discharge, 9,950 cfs Mar. 27, 1953 (gage height, 9.44 ft), from rating curve extended above 5,800 cfs by logarithmic plotting; minimum, 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 table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.6	38	5.0	1,350
2.8	75	6.0	2,520
3.0	125	7.0	4,250
3.5	305	8.0	6,400
4.0	565	9.0	8,850

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	77	181	181	150	150	330	220	2,110	430	1,480	535	1,760
2	63	146	165	170	150	370	220	2,460	505	952	553	1,100
3	55	122	137	180	150	410	210	2,370	784	711	360	565
4	50	112	152	170	150	450	200	2,340	664	571	346	505
5	48	98	364	160	150	420	210	2,340	795	517	461	410
6	52	82	529	150	145	390	220	2,110	*1,700	651	535	336
7	121	87	1,100	140	140	360	800	1,860	2,200	511	405	359
8	178	98	1,370	130	140	350	1,700	1,470	2,170	425	323	1,570
9	134	109	725	130	135	320	2,500	2,260	1,460	365	276	1,540
10	117	106	885	140	135	300	2,200	3,230	1,000	336	251	1,450
11	114	101	1,260	140	130	290	1,920	2,490	888	305	323	2,380
12	112	96	760	135	125	290	2,490	2,320	746	350	445	6,540
13	109	91	565	130	125	280	*2,350	1,780	613	314	430	3,570
14	96	91	466	125	120	260	1,680	1,400	619	280	341	2,630
15	82	91	450	130	120	260	1,300	1,150	944	280	271	2,370
16	75	89	410	130	170	260	1,450	1,120	768	284	259	1,550
17	69	89	330	130	270	250	2,170	968	577	220	425	1,260
18	65	89	280	125	350	240	3,480	904	466	202	328	1,230
19	63	89	260	125	370	230	3,700	739	400	232	255	1,210
20	61	89	280	*130	350	260	3,180	711	355	247	236	2,000
21	80	*86	300	190	330	270	4,560	664	328	387	210	1,700
22	80	86	290	240	420	250	6,330	1,280	314	746	185	1,210
23	77	152	310	230	600	230	8,350	1,320	494	461	172	1,020
24	75	280	210	200	*620	220	5,960	1,000	529	430	165	840
25	*73	228	230	180	540	220	3,620	808	385	336	165	711
26	91	740	250	160	470	210	2,970	651	323	341	*158	711
27	120	555	220	170	410	240	2,340	571	1,260	415	146	677
28	125	336	200	175	350	220	2,100	523	1,940	355	137	613
29	196	255	220	165	-	230	2,040	494	2,380	314	128	529
30	292	210	200	155	--------	220	2,010	571	2,220	346	125	478
31	276	--------	160	155	--------	220	--------	547	--------	420	591	--------
Total	3,226	4,984	13,259	4,840	7,315	8,850	72,480	44,561	28,257	13,784	9,540	42,824
Mean	104	166	428	156	261	285	2,416	1,437	942	445	308	1,427
(†)	56.9	51.1	62.2	52.7	52.6	50.2	48.9	52.9	50.3	50.7	44.7	36.9
Adjusted for diversion												
Mean	107	169	431	159	264	288	2,419	1,440	944	447	310	1,429
Cfsm	0.461	0.728	1.86	0.685	1.14	1.24	10.4	6.21	4.07	1.93	1.34	6.16
In.	0.53	0.81	2.14	0.79	1.19	1.43	11.63	7.16	4.54	2.22	1.54	6.87

		Observed				Adjusted				
Calendar year 1953:	Max	8,200	Min	46	Mean	449	Mean	452	Cfsm	1.95	In.	26.41
Water year 1953-54:	Max	8,350	Min	48	Mean	696	Mean	698	Cfsm	3.01	In.	40.85

Peak discharge (base, 2,900 cfs).--Apr. 23 (1 to 2 p.m.) 8,880 cfs (9.01 ft); May 10 (7:30 to 8 a.m.) 3,460 cfs (6.59 ft); Sept. 12 (9 a.m.) 7,850 cfs (8.60 ft).

* Discharge measurement made on this day.

† Diversion, in millions of gallons, for municipal supply of Berlin. Records furnished by city of Berlin.

Note.--Stage-discharge relation affected by ice Nov. 6, 7, Dec. 15 to Apr. 10.

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 1954. 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.--27 years, 2,904 cfs (adjusted to drainage area at present site and for storage).
Extremes.--Maximum discharge during year, 34,100 cfs Apr. 24 (gage height, 22.25 ft); minimum daily, 488 cfs Nov. 16.
1927-54: Maximum discharge, 48,300 cfs Mar. 20, 1936 (gage height, 25.6 ft); minimum daily, 115 cfs Oct. 3, 1937.
Remarks.--Records good. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes and Lake Francis (see p. 233), 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).

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

7.1	480	16.0	15,100
8.0	1,140	18.0	20,500
10.0	3,230	20.0	26,500
12.0	6,300	22.0	33,200
14.0	10,300		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	666	1,110	1,570	1,600	1,400	3,140	1,720	8,070	2,670	6,440	2,900	9,380
2	638	1,030	1,290	1,000	1,350	4,130	1,590	*8,290	2,360	4,780	5,170	8,670
3	860	1,190	1,240	1,200	1,350	5,550	1,510	9,170	3,000	3,610	4,040	4,820
4	580	1,000	1,240	1,700	1,300	6,300	1,000	9,190	3,480	2,940	2,670	3,410
5	548	1,010	1,680	1,800	1,400	5,840	1,100	9,520	3,360	2,620	2,300	2,870
6	694	996	2,880	1,700	1,400	4,560	1,950	8,900	5,900	3,080	2,590	2,370
7	820	1,080	5,110	1,500	1,150	3,830	3,590	7,930	9,420	2,970	2,610	2,640
8	1,190	753	7,990	1,500	1,200	3,460	8,960	6,790	*11,700	2,200	2,140	5,930
9	1,360	743	6,250	1,300	1,400	3,000	12,200	6,750	12,400	1,560	2,030	8,250
10	1,350	956	4,610	850	1,300	2,800	12,400	11,800	9,780	1,540	1,760	6,250
11	828	964	6,190	1,000	1,300	2,850	11,000	11,500	6,940	1,060	1,460	5,690
12	1,170	868	5,720	1,450	1,300	2,800	*12,800	10,400	5,750	*1,160	2,030	16,300
13	1,490	884	4,030	1,350	1,350	2,700	12,700	10,600	4,900	1,690	3,260	16,100
14	1,020	1,030	3,280	1,350	1,000	2,600	10,900	9,020	4,190	1,680	3,280	12,700
15	996	971	2,870	1,250	1,250	2,500	8,650	7,430	4,600	1,700	2,420	11,500
16	988	488	2,730	1,200	1,200	2,500	8,250	6,050	5,270	1,680	2,020	9,960
17	1,060	908	1,900	1,200	1,500	2,400	10,600	5,550	4,130	1,460	2,210	8,090
18	745	908	1,050	1,250	1,800	2,300	15,400	4,820	3,200	729	2,520	7,950
19	739	813	1,450	*1,300	1,750	2,300	17,800	4,130	2,620	1,200	2,280	7,520
20	868	876	1,350	1,300	1,500	2,490	16,700	3,620	2,140	1,710	2,120	10,000
21	820	860	2,050	1,350	1,200	2,840	17,400	3,410	2,040	1,700	1,340	9,100
22	820	*666	2,450	1,500	1,950	2,530	20,800	4,000	1,630	2,220	632	7,070
23	778	955	2,600	1,900	4,000	1,980	26,700	5,670	1,760	2,650	1,080	6,750
24	750	1,760	2,700	1,150	*5,050	1,450	33,100	5,330	1,850	2,330	1,670	6,140
25	*652	2,140	2,250	1,050	4,600	1,090	25,800	4,370	2,030	2,000	1,310	5,290
26	700	2,180	2,150	1,250	4,000	1,480	18,100	3,700	1,860	1,500	*1,280	4,460
27	884	3,770	2,250	1,100	3,500	1,810	12,800	3,130	3,760	1,940	1,280	4,380
28	1,140	2,840	2,050	1,050	3,100	1,630	9,980	2,580	8,980	2,060	1,430	3,970
29	1,240	1,980	1,800	1,000	-	1,740	9,320	2,230	9,920	2,130	1,230	3,530
30	1,490	1,500	2,000	1,000	-------	1,670	8,530	2,560	8,810	1,860	970	3,100
31	2,000	-------	2,100	1,000	-------	1,530	-------	3,160	-------	2,020	2,010	-------
Total	29,884	37,229	88,830	40,150	54,600	87,800	353,350	199,670	150,450	68,219	66,042	214,190
Mean	964	1,241	2,865	1,295	1,950	2,832	11,780	6,441	5,015	2,201	2,130	7,140
(†)	-685	-242	-105	-1,363	-933	-1,176	+4,251	+1,895	+183	-465	-87	+394

Adjusted for change in reservoir contents

Mean	708	1,148	2,826	786	1,564	2,393	13,420	7,148	5,086	2,027	2,098	7,292
Cfsm	0.468	0.758	1.87	0.519	1.03	1.58	8.86	4.72	3.36	1.34	1.39	4.82
In.	0.54	0.85	2.15	0.60	1.08	1.82	9.89	5.44	3.75	1.54	1.60	5.37

	Observed			Adjusted			
Calendar year 1953:	Max 33,500	Min 366	Mean 2,599	Mean 2,607	Cfsm 1.72	In. 23.38	
Water year 1953-54:	Max 33,100	Min 488	Mean 3,809	Mean 3,862	Cfsm 2.55	In. 34.63	

Peak discharge (base, 16,500 cfs).--Apr. 24 (8:30 to 11 a.m.) 34,100 cfs (22.25 ft); Sept. 13 (9 a.m.) 17,500 cfs (16.94 ft).
* Discharge measurement made on this day.
† Change in contents, in millions of cubic feet, in First Connecticut and Second Connecticut Lakes and Lake Francis.
Note.--Stage-discharge relation affected by ice Dec. 16 to Feb. 28, Mar. 9-19, Apr. 4, 5.

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 1954. 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.--12 years, 101 cfs.

Extremes.--Maximum discharge during year, about 2,000 cfs Apr. 23 (occured during period of no gage-height record); minimum, 20 cfs Oct. 3, 4.
1939-45, 1948-54: Maximum discharge, 2,180 cfs May 28, 1940 (gage height, 6.21 ft); 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 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 30				May 1 to Sept. 30			
0.7	16	2.0	179	0.9	24	2.5	300
.9	27	3.0	470	1.2	45	3.0	470
1.2	53	4.0	900	1.5	81	3.5	660
1.5	90	5.0	1,430	2.0	174		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	47	47	32	28	85	*54	315	123	95	242	262
2	21	40	45	33	28	135	53	327	160	78	131	121
3	20	38	41	35	28	135	52	330	203	66	74	87
4	20	35	42	33	29	160	50	449	161	57	62	95
5	23	32	178	30	29	115	55	368	*170	59	74	71
6	26	30	121	31	29	90	100	286	360	70	87	60
7	63	30	380	29	28	80	420	254	450	59	62	103
8	61	31	198	27	27	72	560	220	433	53	50	278
9	45	31	121	26	26	70	470	624	246	49	43	148
10	41	30	245	28	25	66	420	536	181	*47	*40	107
11	38	30	198	28	25	60	500	572	154	*43	66	312
12	38	29	128	27	24	58	600	548	130	46	119	368
13	36	28	105	25	23	56	450	368	119	45	83	189
14	33	27	93	24	23	54	370	278	130	42	57	407
15	31	28	94	25	23	53	400	233	325	40	45	228
16	30	28	68	24	31	52	460	208	183	37	73	159
17	28	27	*53	23	47	51	600	196	132	36	126	167
18	27	27	46	23	44	50	700	181	109	34	63	146
19	26	*26	42	24	41	50	600	170	94	35	49	253
20	26	26	49	25	39	72	660	163	86	34	46	334
21	26	26	55	47	51	80	820	161	80	50	39	198
22	26	25	62	42	140	63	1,000	300	74	50	35	201
23	25	90	71	36	120	57	1,300	233	77	55	31	170
24	25	68	60	32	96	56	840	185	71	57	31	138
25	25	104	53	31	85	52	540	165	61	44	33	125
26	25	207	49	*30	78	60	450	142	60	44	34	123
27	25	96	46	31	74	60	370	127	213	49	29	134
28	39	69	43	31	*71	56	450	119	150	44	27	123
29	51	58	45	30	-	61	380	138	146	43	26	107
30	84	51	40	29	-------	61	340	236	123	98	27	102
31	57	---	36	29	-------	57	-------	152	-------	78	277	----
Total	1,063	1,414	2,854	920	1,312	2,227	14,064	8,584	5,004	1,637	2,181	5,316
Mean	34.3	47.1	92.1	29.7	46.9	71.8	469	277	167	52.8	70.4	177
Cfsm	0.638	0.875	1.71	0.552	0.872	1.33	8.72	5.15	3.10	0.981	1.31	3.29
In.	0.73	0.98	1.97	0.64	0.91	1.54	9.72	5.93	3.46	1.13	1.51	3.67

Calendar year 1953: Max 1,140 Min 13 Mean 91.6 Cfsm 1.70 In. 23.12
Water year 1953-54: Max 1,300 Min 20 Mean 128 Cfsm 2.38 In. 32.19

Peak discharge (base, 800 cfs).--Apr. 18 (time unknown) about 1,000 cfs; Apr. 23 (time unknown) about 2,000 cfs; May 9 (5:30 to 6 p.m.) 1,150 cfs (4.50 ft); Aug. 31 (6:30 to 7:30 p.m.) 815 cfs (3.83 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 19 to Jan. 25, Apr. 2-30; discharge estimated on basis of weather records, recorded range in stage when available, and records for Passumpsic River at Passumpsic and Moose River at Victory. Stage-discharge relation affected by ice Nov. 6, Dec. 3, Dec. 16 to Apr. 1.

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 sq mi, approximately.

Records available.--January 1947 to September 1954.

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.--7 years, 141 cfs.

Extremes.--Maximum discharge during year, 2,860 cfs Apr. 23 (gage height, 10.53 ft), from rating curve extended above 1,600 cfs by logarithmic plotting; minimum, 11 cfs Aug. 30. 1947-54: 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 periods of ice effect or no gage-height record, which are fair.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.7	9.8	5.0	225
3.0	20	6.0	443
3.5	50	7.0	765
4.0	92	9.0	1,750
4.5	150	10.5	2,840

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	54	65	39	33	135	69	491	84	190	135	563
2	12	43	59	40	32	205	65	456	105	130	96	252
3	12	38	44	41	32	255	62	448	182	100	56	106
4	12	33	48	40	32	265	60	545	154	74	46	86
5	12	29	203	38	32	220	64	639	154	80	46	64
6	18	24	214	36	31	175	94	435	287	92	56	50
7	71	24	474	36	31	145	280	326	470	74	44	94
8	86	25	681	34	30	125	650	261	*527	62	38	582
9	57	26	328	31	30	107	700	406	366	50	31	469
10	52	26	321	32	29	100	700	1,090	200	*44	26	226
11	46	24	497	31	28	92	980	770	156	40	29	284
12	39	23	289	30	28	84	1,000	737	123	41	*56	849
13	36	22	194	28	27	79	860	611	103	38	56	570
14	31	22	155	27	26	75	660	391	104	36	42	569
15	27	22	155	28	26	74	700	285	305	34	30	608
16	25	21	125	28	33	67	800	244	219	28	29	308
17	22	20	72	27	47	64	900	220	137	24	134	271
18	21	20	58	26	50	62	1,700	183	97	23	62	248
19	20	*20	47	27	53	58	1,300	162	78	20	38	258
20	19	19	60	28	52	65	1,050	151	65	20	33	744
21	18	19	68	45	50	79	1,700	144	58	25	28	604
22	18	19	74	54	100	73	1,900	326	48	48	22	386
23	17	107	80	44	210	64	2,500	344	56	63	17	331
24	*16	163	65	38	180	63	1,600	225	65	79	15	239
25	16	105	54	36	150	60	900	180	44	47	16	184
26	16	430	56	*36	130	70	700	150	58	39	16	166
27	17	257	52	37	120	83	560	125	600	56	16	170
28	25	132	48	36	125	72	560	109	520	42	14	162
29	64	96	50	35	-	76	540	109	400	39	12	130
30	105	76	47	34	------	75	*527	130	280	79	12	110
31	81	---	43	34	------	73	------	102	------	132	124	---
Total	1,023	1,939	4,726	1,076	1,747	3,240	24,181	10,795	6,045	1,849	1,375	9,683
Mean	33.0	64.6	152	34.7	63.4	105	806	348	202	59.6	44.4	323
Cfsm	0.440	0.861	2.03	0.463	0.832	1.40	10.7	4.64	2.69	0.795	0.592	4.31
In.	0.51	0.96	2.34	0.53	0.87	1.61	11.99	5.35	3.00	0.92	0.68	4.80

Calendar year 1953: Max 2,540 Min 5.3 Mean 137 Cfsm 1.83 In. 24.71
Water year 1953-54: Max 2,500 Min 12 Mean 185 Cfsm 2.47 In. 33.56

Peak discharge (base, 1,000 cfs).--Apr. 11 or 12 (time unknown) about 1,500 cfs; Apr. 18 (time unknown) about 1,900 cfs; Apr. 23 (time unknown) 2,860 cfs (10.53 ft); May 10 (8 a.m.) 1,280 cfs (8.14 ft); Sept. 12 (2 to 3 p.m.) 1,020 cfs (7.60 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 18 to Jan. 26, Jan. 30 to Feb. 27, Apr. 3-29, June 22 to July 9; discharge estimated on basis of weather records, recorded range in stage, 1 discharge measurement, and records for Moose River at St. Johnsbury and Ammonoosuc River stations at Bethlehem Junction, N. H., and near Bath, N. H. Stage-discharge relation affected by ice Dec. 4, Dec. 16 to Mar. 11, Mar. 16-19, 23, 25, 28.

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.--126 sq mi.

Records available.--August 1928 to September 1954.

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.--26 years, 223 cfs.

Extremes.--Maximum discharge during year, 4,140 cfs Apr. 24 (gage height, 4.23 ft), from rating curve extended above 1,600 cfs; maximum gage height, 4.42 ft Feb. 23 (ice jam); minimum discharge, 18 cfs Oct. 3, 4, Aug. 29, 30.
1928-54: 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.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Slight diurnal fluctuation caused by powerplant above station.

Revisions (water years).--WSP 801: Drainage area. WSP 1231: 1929-30, 1931-34(M), 1941(M), 1946(M).

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 21				Feb. 22 to Sept. 30			
1.5	14	3.1	230	1.6	19	3.5	460
1.7	25	3.4	400	2.0	45	3.6	580
2.0	45	3.6	600	2.5	95	3.7	840
2.4	84	3.7	840	2.9	156	4.2	3,950
2.9	164			3.2	265		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	89	102	54	47	280	*137	*670	140	310	188	598
2	19	70	92	56	46	560	120	670	164	206	146	461
3	19	60	74	58	46	552	110	704	280	146	92	157
4	18	54	78	55	46	580	108	964	275	116	77	105
5	19	49	236	51	46	428	112	1,090	265	111	72	88
6	23	41	330	49	45	334	187	738	480	133	76	75
7	85	40	682	48	44	280	500	552	700	111	68	150
8	132	42	810	47	43	229	979	444	770	90	58	600
9	92	42	523	44	43	202	1,210	987	616	75	50	690
10	71	41	505	45	41	178	1,210	1,410	348	*68	42	355
11	68	39	672	45	40	156	1,410	1,530	295	62	41	450
12	61	39	467	44	39	140	1,600	1,280	224	61	*59	940
13	56	37	308	41	37	130	1,530	1,210	184	58	74	980
14	50	36	252	38	37	136	1,150	772	178	55	67	800
15	44	35	257	40	37	130	1,150	490	476	57	50	840
16	41	35	200	40	44	114	1,280	420	452	48	43	500
17	37	35	125	39	68	110	1,410	380	270	41	126	430
18	35	35	*94	37	70	107	2,400	310	178	36	103	380
19	34	34	76	38	72	101	2,340	275	140	35	63	390
20	33	*33	92	40	74	170	1,850	256	117	35	50	860
21	32	32	110	60	70	178	2,820	272	103	50	45	910
22	31	33	120	77	170	145	3,180	594	90	69	36	600
23	*30	99	130	73	350	133	3,560	598	90	69	30	510
24	30	242	100	60	420	140	3,180	412	101	106	26	350
25	29	199	83	*51	310	132	1,720	328	84	76	25	285
26	29	522	86	50	250	171	1,210	265	72	66	26	247
27	30	408	78	52	*220	173	902	213	579	74	24	252
28	42	198	70	51	230	164	902	184	738	67	23	242
29	80	145	74	49	-	180	840	181	538	63	20	191
30	129	118	65	49	-------	145	806	209	510	92	19	159
31	130	---	60	48	-------	145	-------	170	-------	186	116	-----
Total	1,551	2,882	6,951	1,529	2,985	6,623	39,913	18,558	9,457	2,772	1,935	13,595
Mean	50.0	96.1	224	49.3	107	214	1,330	599	315	89.4	62.4	453
Cfsm	0.397	0.763	1.78	0.391	0.849	1.70	10.6	4.75	2.50	0.710	0.495	3.60
In.	0.46	0.85	2.05	0.45	0.88	1.95	11.78	5.48	2.79	0.82	0.57	4.01

Calendar year 1953: Max 3,460 Min 7.3 Mean 214 Cfsm 1.70 In. 23.06
Water year 1953-54: Max 3,560 Min 18 Mean 298 Cfsm 2.37 In. 32.09

Peak discharge (base, 1,700 cfs).--Apr. 11 (2:30 p.m.) 2,280 cfs (3.93 ft); Apr. 19 (12:30 to 1:30 a.m.) 2,880 cfs (4.03 ft); Apr. 24 (1:30 to 3 a.m., 8 a.m.) 4,140 cfs (4.23 ft); May 11 (1:30 to 2 p.m.) 1,850 cfs (3.86 ft).

* Discharge measurement made on this day.

Note.--No gage-height record June 5-8, Sept. 4-7, 9, 11-24; discharge estimated on basis of weather records and records for station at Victory. Stage-discharge relation affected by ice Nov. 6, Dec. 3, 4, Dec. 17 to Mar. 2, Mar. 22, 24, 29, 30, Apr. 1-4.

Passumpsic River at Passumpsic, Vt.

Location.--Lat 44°21'55", long 72°02'20", on right bank 0.7 mile upstream from Waterandrick Brook and 1 mile downstream from dam and village of Passumpsic, Caledonia County.

Drainage area.--436 sq mi.

Records available.--October 1928 to September 1954 (monthly discharge only for some periods published in WSP 1301).

Gage.--Water-stage recorder. Altitude of gage is 490 ft (from topographic map).

Average discharge.--26 years, 733 cfs.

Extremes.--Maximum discharge during year, 10,900 cfs Apr. 23 (gage height, 15.74 ft); minimum daily, 93 cfs Oct. 4.
1928-54: 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, 13 cfs Sept. 12, 1948.
Maximum stage known, about 31.5 ft in November 1927, from information by local resident.

Remarks.--Records excellent except those below 200 cfs, which are good, and those for period of ice effect, 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), 1944(M).

Rating table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.7	87	6.0	2,580
2.1	160	10.0	5,730
2.5	291	15.0	10,200
3.0	535		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	134	299	329	250	220	1,100	557	*1,970	669	765	830	1,610
2	142	254	316	270	230	2,700	473	1,930	765	584	711	900
3	116	229	298	275	230	2,400	470	1,990	1,110	465	445	470
4	93	230	254	280	230	3,000	379	3,040	977	380	359	390
5	151	203	931	240	230	1,780	418	2,950	*1,030	374	308	326
6	130	187	970	250	220	1,310	654	2,100	1,530	496	330	298
7	369	169	2,180	230	210	1,030	2,240	1,730	2,010	391	325	245
8	527	178	1,900	220	210	979	3,600	1,450	2,090	330	254	1,340
9	350	210	1,150	210	200	753	3,660	2,880	1,500	294	263	1,240
10	271	183	1,350	220	200	699	2,730	4,370	1,030	265	209	772
11	265	160	1,630	220	195	590	3,450	4,250	900	244	215	1,020
12	237	187	1,110	210	190	513	4,170	3,710	759	269	*294	2,510
13	212	164	830	200	180	491	3,530	2,730	657	262	333	1,540
14	219	152	711	190	180	524	2,640	1,990	663	233	304	2,100
15	188	155	795	200	180	502	*2,850	1,560	1,360	260	230	1,730
16	185	184	652	190	220	402	3,510	1,380	1,280	223	211	1,100
17	178	165	450	185	350	436	4,070	1,290	817	190	551	1,090
18	148	166	400	180	370	423	5,200	1,140	640	172	429	1,030
19	175	148	380	190	330	382	4,910	1,050	540	202	255	1,380
20	165	*162	410	200	320	716	4,550	1,000	470	180	242	2,990
21	156	141	470	310	320	914	6,370	1,080	445	250	219	1,840
22	154	156	500	360	1,200	606	7,160	2,390	371	366	177	1,410
23	151	422	560	285	1,900	502	9,680	1,960	465	358	166	1,260
24	*150	717	490	255	1,400	546	6,000	1,370	450	486	149	984
25	127	623	440	245	1,100	540	3,770	1,220	380	338	152	765
26	152	1,750	405	240	900	669	3,030	1,010	300	291	158	723
27	155	968	390	*250	840	759	2,450	844	1,610	352	165	784
28	180	590	340	250	820	596	3,020	765	1,400	300	151	772
29	342	450	350	240	-	717	2,700	753	1,140	281	124	618
30	472	389	320	235	-------	581	2,200	1,040	1,050	468	147	540
31	450	-------	290	230	-------	625	-------	844	-------	669	390	-------
Total	6,744	9,991	21,601	7,310	13,175	27,685	100,341	57,786	28,408	10,738	9,096	33,777
Mean	218	333	697	236	471	893	3,345	1,864	947	346	293	1,126
Cfsm	0.500	0.764	1.60	0.541	1.08	2.05	7.67	4.28	2.17	0.794	0.672	2.58
In.	0.58	0.85	1.84	0.62	1.12	2.36	8.56	4.93	2.42	0.92	0.78	2.88

Calendar year 1953: Max 8,350 Min 67 Mean 711 Cfsm 1.63 In. 22.17
Water year 1953-54: Max 9,680 Min 93 Mean 895 Cfsm 2.05 In. 27.86

Peak discharge (base, 5,000 cfs).--Apr. 23 (12:30 p.m.) 10,900 cfs (15.74 ft); May 10 (12:30 to 1:30 a.m.) 5,140 cfs (9.26 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 17 to Mar. 4.

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 1954.

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.--15 years, 213 cfs.

Extremes.--Maximum discharge during year, 9,240 cfs Sept. 11 (gage height, 10.62 ft), from rating curve extended above 4,100 cfs by logarithmic plotting; minimum, 34 cfs Oct. 4, 5.

1939-54: Maximum discharge, 10,500 cfs Mar. 27, 1953 (gage height, 11.22 ft), from rating curve extended above 4,100 cfs by logarithmic plotting; minimum, 16 cfs Nov. 14, 1952 (caused by anchor ice upstream).

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

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.0	30	4.0	765
1.1	38	5.0	1,310
1.5	78	6.0	2,110
2.0	150	7.0	3,220
2.5	262	8.0	4,530
3.0	404		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	82	128	53	*58	235	94	689	244	317	426	952
2	36	71	117	66	58	445	85	*892	337	241	306	389
3	35	67	106	83	57	351	84	818	398	196	196	265
4	34	63	103	77	58	536	80	940	317	168	203	214
5	34	58	324	68	58	260	84	749	323	172	246	181
6	38	51	229	68	56	190	95	617	669	210	320	159
7	97	56	1,290	*70	55	165	638	528	535	164	241	147
8	80	66	544	52	54	145	1,710	438	*745	147	224	236
9	65	63	314	48	54	130	1,020	2,930	441	128	170	682
10	67	58	508	a56	53	127	477	1,420	339	117	150	473
11	72	55	401	a64	51	110	1,050	955	328	109	155	3,250
12	70	53	267	a60	49	100	1,340	900	270	111	174	2,250
13	69	52	226	a54	48	89	629	669	234	*104	219	729
14	57	50	194	a50	47	106	438	532	226	103	168	1,110
15	52	49	203	a54	46	102	461	480	484	178	133	665
16	49	49	155	a52	70	90	490	521	364	114	135	477
17	47	49	110	a48	170	89	*1,060	480	246	96	265	429
18	45	49	100	a46	145	88	1,580	401	198	85	154	365
19	44	51	96	*46	100	84	1,060	345	170	86	127	408
20	43	*52	*120	47	90	117	1,380	325	152	93	122	558
21	43	52	125	105	105	148	1,920	356	140	141	109	337
22	42	50	120	115	1,100	109	2,200	807	131	164	98	306
23	41	229	135	85	*550	93	1,980	591	257	270	89	306
24	40	198	75	74	320	94	1,070	451	203	304	85	284
25	41	532	96	65	259	86	875	377	140	178	91	252
26	55	970	105	61	215	106	757	323	127	142	*88	249
27	*53	320	86	66	181	123	560	276	349	142	80	234
28	75	212	80	62	166	97	591	246	833	147	74	219
29	114	170	94	57	-	119	521	252	662	187	70	194
30	145	142	82	*61	-------	110	570	461	454	280	69	181
31	104	-------	73	61	-------	100	-------	300	-------	262	1,400	-------
Total	1,824	4,019	6,606	1,974	4,273	4,744	24,899	20,089	10,316	5,156	6,387	16,501
Mean	58.8	134	213	63.7	153	153	830	647	344	166	206	550
Cfsm	0.671	1.53	2.43	0.727	1.75	1.75	9.47	7.39	3.93	1.89	2.35	6.28
In.	0.77	1.71	2.80	0.84	1.81	2.01	10.57	8.52	4.38	2.19	2.71	7.01

Calendar year 1953: Max 6,300 Min 29 Mean 230 Cfsm 2.63 In. 35.65
Water year 1953-54: Max 3,250 Min 34 Mean 293 Cfsm 3.34 In. 45.32

Peak discharge (base, 2,700 cfs).--Nov. 25 (11 p.m.) 2,930 cfs (6.76 ft); Apr. 8 (7 p.m.) 2,920 cfs (6.75 ft); Apr. 22 (8 p.m.) 3,040 cfs (6.85 ft); May 9 (6 p.m.) 7,320 cfs (9.64 ft); Aug. 31 (6:30 p.m.) 4,830 cfs (8.20 ft); Sept. 11 (8 p.m.) 9,240 cfs (10.62 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 Ammonoosuc River near Bath and Pemigewasset River at Woodstock.

Note.--Stage-discharge relation affected by ice Dec. 16, Dec. 18 to Jan. 3, Jan. 19-31, Feb. 13-23, 26, Mar. 1, 5-9, 11-13, 17-19, 23, 25, 28, Mar. 30 to Apr. 4.

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 1954.

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.--19 years, 682 cfs.

Extremes.--Maximum discharge during year, 16,600 cfs Sept. 12 (gage height, 12.22 ft); minimum daily, 83 cfs Oct. 4.
1935-54: Maximum discharge, 27,900 cfs Mar. 18, 1936 (gage height, 15.40 ft), from rating curve extended above 13,000 cfs; minimum daily, 48 cfs Sept. 3, 1939.

Remarks.--Records excellent except those for period of ice effect, which are fair. Diurnal fluctuation at low flow caused by small powerplants above station.

Revisions.--WSP 871: Drainage area.

Rating tables, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 8				Apr. 9 to Sept. 30			
1.5	78	4.0	1,120	1.7	100	5.0	1,900
1.6	92	5.0	2,000	2.0	155	6.0	3,100
2.0	168	6.0	3,100	2.5	290	8.0	6,300
2.5	310	8.0	6,300	3.0	485	10.0	10,700
3.0	525			4.0	1,060		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	92	275	356	200	180	*1,330	570	1,920	788	1,140	1,070	3,470
2	98	256	306	180	170	2,430	490	2,080	984	806	932	1,140
3	87	210	282	235	165	1,960	515	*2,120	1,130	620	575	707
4	83	182	269	220	165	3,280	422	2,900	951	503	498	540
5	92	166	662	200	175	1,560	*430	3,340	984	611	530	454
6	99	150	819	200	175	1,060	575	2,420	2,110	1,080	641	424
7	191	150	2,570	200	165	849	2,100	2,190	1,820	641	585	353
8	275	141	2,050	160	160	771	5,000	1,900	1,990	512	490	503
9	214	170	1,060	150	155	658	4,040	4,120	1,360	420	408	1,400
10	173	160	1,220	160	155	615	1,960	5,050	990	380	360	1,560
11	163	155	1,460	190	150	525	3,170	4,140	977	332	350	3,310
12	190	131	907	180	140	439	5,320	2,920	824	*408	420	8,770
13	190	140	735	165	140	422	2,590	2,250	674	368	388	2,310
14	168	147	630	150	130	430	1,840	1,650	625	311	404	3,090
15	143	122	686	160	135	430	1,910	1,420	836	386	311	2,110
16	145	145	600	155	200	372	2,130	1,390	990	360	290	1,400
17	141	133	350	145	500	348	3,360	1,330	668	278	580	1,290
18	105	129	280	140	540	352	6,030	1,120	521	250	449	1,170
19	123	129	270	135	440	325	4,920	951	440	222	314	1,360
20	122	128	350	145	420	959	3,990	866	384	311	281	2,460
21	130	137	350	200	450	1,160	4,780	1,030	356	360	242	1,330
22	105	*127	340	320	2,600	686	4,900	2,560	314	535	216	1,160
23	103	317	370	240	2,500	560	5,080	2,080	671	550	200	1,080
24	116	686	300	205	1,480	565	3,460	1,470	724	854	186	964
25	92	639	280	180	1,190	520	2,560	1,200	458	580	180	830
26	*108	2,800	310	170	1,080	647	2,230	990	364	420	190	806
27	120	1,110	260	180	992	795	1,780	818	792	432	*178	729
28	246	664	235	*190	959	605	2,680	702	2,060	372	198	712
29	462	495	270	165	-	680	2,420	718	3,010	508	114	580
30	570	422	260	185	-------	630	1,980	1,600	1,710	535	151	535
31	417	-------	225	185	-------	615	-------	1,070	-------	788	981	-------
Total	5,363	10,616	19,062	5,690	15,691	26,578	83,232	60,315	30,505	15,883	12,712	46,547
Mean	173	354	615	184	560	857	2,774	1,946	1,017	512	410	1,552
Cfsm	0.438	0.896	1.56	0.466	1.42	2.17	7.02	4.93	2.57	1.30	1.04	3.93
In.	0.50	1.00	1.79	0.54	1.48	2.50	7.84	5.68	2.87	1.50	1.20	4.38

Calendar year 1953: Max 14,800 Min 61 Mean 712 Cfsm 1.80 In. 24.47
Water year 1953-54: Max 8,770 Min 83 Mean 910 Cfsm 2.30 In. 31.28

Peak discharge (base, 6,500 cfs).--Apr. 8 (9:30 to 10:30 p.m.) 7,480 cfs (8.60 ft); Apr. 12 (3:30 a.m.) 7,300 cfs (8.52 ft); Apr. 18 (9:30 to 11 p.m.) 6,520 cfs (8.12 ft); May 9 (11:30 to 12 p.m.) 8,840 cfs (9.22 ft); Sept. 12 (2:30 a.m.) 16,600 cfs (12.22 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 16 to Feb. 23.

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 1954 (monthly discharge only for some periods, published in WSP 1301).

Gage.--Water-stage recorder. Datum of gage is 399.75 ft above mean sea level, datum of 1929.

Average discharge.--5 years, 5,036 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 48,200 cfs Apr. 24 (gage height, 14.67 ft); minimum daily, 382 cfs Oct. 4.
1949-54: Maximum discharge, 54,000 cfs Mar. 27, 1953 (gage height, 15.96 ft); minimum daily, 344 cfs Sept. 21, 1952.

Remarks.--Records good except those for periods of ice effect, which are fair. Flow regulated by powerplants, by First Connecticut and Second Connecticut Lakes, Lake Francis, Comerford Station Pond (see p. 233), and other reservoirs (combined usable capacity, about 9¾ billion cubic feet).

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.0	340	5.0	6,650
1.4	600	7.0	14,200
2.0	1,270	11.0	31,700
3.0	2,740	15.0	49,700
4.0	4,400		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,340	1,480	2,620	2,000	1,800	6,500	3,670	13,600	5,400	11,900	4,700	14,000
2	1,230	1,550	2,340	1,550	2,200	11,000	*3,780	13,300	5,900	8,900	6,950	12,300
3	834	2,000	2,300	1,420	2,600	12,700	3,000	14,200	6,160	5,260	7,530	9,130
4	382	2,220	2,470	2,000	2,600	15,200	2,300	16,900	7,190	2,470	4,300	5,160
5	784	2,290	3,120	2,590	2,600	12,500	3,640	17,300	6,150	2,840	3,040	3,580
6	1,240	2,340	4,860	2,890	1,500	8,160	3,810	14,800	8,790	5,550	3,660	2,200
7	1,840	1,420	9,890	2,550	670	5,230	8,630	13,700	13,900	4,780	3,330	4,020
8	2,050	536	13,700	2,400	1,800	6,050	18,200	12,300	18,000	3,760	3,100	5,660
9	1,940	1,110	12,400	1,800	2,400	5,900	20,900	16,100	16,200	3,310	3,510	11,800
10	1,240	1,750	9,910	1,400	2,550	6,150	19,100	21,900	14,200	2,230	2,590	10,700
11	506	1,510	10,800	2,200	2,500	6,220	20,700	22,700	12,400	1,920	2,540	10,600
12	1,560	1,580	9,460	2,500	2,800	5,680	23,900	18,800	9,000	2,360	3,040	26,500
13	2,020	1,720	4,740	2,300	2,100	3,410	21,400	17,500	5,290	*2,540	3,890	21,200
14	2,230	880	5,030	2,200	600	2,740	18,600	14,800	5,600	2,480	4,100	19,500
15	2,230	414	5,300	2,300	1,800	4,160	16,300	13,000	7,650	2,940	3,170	17,000
16	2,110	1,060	5,000	1,600	2,500	5,200	16,600	9,320	9,760	2,620	2,820	14,300
17	1,130	1,480	4,340	1,150	4,400	4,170	20,400	8,650	7,460	1,930	3,280	13,000
18	457	1,490	2,640	950	4,200	3,790	28,300	8,790	5,420	1,160	3,490	12,200
19	1,170	1,510	2,460	2,100	2,840	2,980	31,500	7,920	3,140	1,780	3,930	9,640
20	1,610	1,380	1,730	2,300	2,650	4,730	28,600	6,920	2,740	2,360	4,190	16,700
21	1,810	923	2,700	2,600	1,780	4,800	30,400	7,600	2,590	2,680	2,180	15,800
22	1,900	506	4,070	3,300	6,800	4,500	34,700	10,200	3,550	3,570	1,810	12,600
23	1,690	*1,780	4,440	1,400	9,920	4,010	42,600	10,000	3,710	3,830	1,930	10,000
24	848	3,010	4,190	750	8,540	3,360	*47,500	10,200	3,840	3,910	1,980	10,200
25	414	4,020	3,400	1,500	9,040	4,350	39,400	8,370	3,150	3,540	1,940	7,780
26	924	8,960	2,550	2,400	7,040	3,670	27,100	7,670	2,600	3,360	2,350	4,160
27	1,490	6,830	2,100	2,400	7,160	3,550	20,000	6,420	3,830	3,170	2,160	5,700
28	1,880	5,880	3,400	2,200	4,360	2,830	17,800	6,300	12,400	3,410	1,860	*6,890
29	2,540	2,890	4,190	2,200	-	3,440	16,000	3,610	15,100	3,300	854	6,680
30	3,040	2,760	3,840	1,400	-------	4,050	14,400	4,620	13,600	3,200	1,160	5,200
31	2,620	-------	2,920	720	-------	4,210	-------	4,780	-------	3,570	3,830	-------
Total	47,059	67,279	152,910	61,070	101,750	175,240	603,230	362,270	232,720	110,630	99,214	324,200
Mean	1,518	2,243	4,933	1,970	3,634	5,653	20,110	11,690	7,757	3,569	3,200	10,810
(†)	-567	-261	-213	-1,241	-928	-1,457	+4,231	+2,186	+216	-493	-195	+350

Adjusted for change in reservoir contents

Mean	1,308	2,142	4,853	1,507	3,250	5,109	21,740	12,500	7,841	3,385	3,128	10,940
Cfsm	0.494	0.810	1.84	0.570	1.23	1.93	8.22	4.73	2.97	1.28	1.18	4.14
In.	0.57	0.90	2.12	0.66	1.28	2.23	9.17	5.45	3.31	1.48	1.36	4.62

	Observed			Adjusted			
Calendar year 1953:	Max 50,600	Min 382	Mean 4,622	Mean 4,629	Cfsm 1.75	In. 23.76	
Water year 1953-54:	Max 47,500	Min 382	Mean 6,404	Mean 6,456	Cfsm 2.44	In. 33.15	

Peak discharge (base, 23,000 cfs).--Apr. 12 (1 a.m.) 26,500 cfs (9.84 ft); Apr. 24 (9 to 10 a.m.) 48,200 cfs (14.67 ft); May 9 (10:30 p.m.) 27,300 cfs (10.02 ft); Sept. 12 (4:30 a.m.) 30,900 cfs (10.82 ft).

* Discharge measurement made on this day.

† Change in contents, in millions of cubic feet, in First Connecticut and Second Connecticut Lakes, Lake Francis, and Comerford Station Pond.

Note.--Stage-discharge relation affected by ice Dec. 25-28, Jan. 1, 2, 4, Jan. 7 to Feb. 18, Feb. 22.

Wells River at Wells River, Vt.

Location.--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 1954.

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.--14 years, 144 cfs.

Extremes.--Maximum discharge during year, 1,370 cfs Apr. 11 (gage height, 4.96 ft); minimum, 7.7 cfs Oct. 2; minimum daily, 14 cfs Oct. 3.
1940-54: 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 excellent except those for periods 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), 1944-49(P), 1950.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 11				Apr. 12 to Sept. 30			
1.3	14	3.0	311	1.4	18	2.3	122
1.5	24	3.5	517	1.7	39	2.6	194
1.7	41	4.0	780	2.0	71	3.0	311
2.0	77	5.0	1,400	Note.--Same as preceding table above 3.0 ft.			
2.5	175						

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	53	79	50	45	*250	144	342	144	92	107	217
2	19	50	74	55	46	480	133	305	236	79	84	82
3	14	45	65	60	45	390	135	*299	242	66	60	56
4	18	41	59	55	46	517	120	577	208	70	60	44
5	22	39	159	50	46	332	121	590	242	81	58	38
6	21	33	142	50	45	245	*161	420	254	105	58	37
7	103	29	306	48	42	200	428	346	*248	71	48	36
8	95	34	259	44	41	177	738	299	205	58	46	63
9	60	36	182	40	41	157	810	744	158	50	43	123
10	48	34	225	45	40	150	546	804	133	47	40	99
11	44	30	217	47	37	139	816	774	146	43	40	200
12	45	33	166	43	36	122	1,080	551	124	*43	48	375
13	41	33	142	40	34	114	774	424	112	42	43	149
14	37	29	131	38	39	113	630	336	107	38	39	244
15	35	30	150	40	43	110	670	287	118	48	35	181
16	34	30	130	37	56	101	816	266	110	40	36	120
17	29	30	80	35	150	97	1,050	251	92	35	71	131
18	30	30	70	35	170	94	1,250	219	79	33	45	122
19	33	30	75	35	115	90	1,100	200	72	36	35	151
20	29	30	85	40	105	139	1,010	197	67	41	34	342
21	28	*29	85	66	110	180	1,190	217	65	66	33	191
22	27	29	90	78	350	142	1,190	546	58	68	30	158
23	27	100	100	60	450	127	1,130	437	67	83	31	151
24	*23	112	85	48	360	131	804	311	88	84	28	129
25	26	152	80	46	260	129	585	266	64	64	28	102
26	31	408	84	45	245	183	476	222	59	53	30	100
27	28	212	76	*50	225	202	411	184	104	47	*28	94
28	36	148	66	50	195	164	726	161	118	43	23	81
29	63	113	70	49	-	187	546	183	110	60	25	72
30	93	90	65	47	-------	185	407	272	114	75	29	66
31	67	-------	58	46	-------	166	-------	181	-------	74	134	-------
Total	1,227	2,092	3,655	1,472	3,417	5,813	19,997	11,191	3,944	1,835	1,449	3,954
Mean	39.6	69.7	118	47.5	122	188	667	361	131	59.2	46.7	132
Cfsm	0.402	0.708	1.20	0.483	1.24	1.91	6.78	3.67	1.33	0.602	0.475	1.34
In.	0.46	0.79	1.38	0.56	1.29	2.20	7.56	4.23	1.49	0.69	0.55	1.49

Calendar year 1953: Max 1,600 Min 8.3 Mean 153 Cfsm 1.55 In. 21.14
Water year 1953-54: Max 1,250 Min 14 Mean 165 Cfsm 1.68 In. 22.69

Peak discharge (base, 980 cfs).--Apr. 8 (12 p.m.) 1,140 cfs (4.60 ft); Apr. 11 (10:30 to 12 p.m.) 1,370 cfs (4.96 ft); Apr. 18 (12 p.m.) 1,340 cfs (4.90 ft); Apr.22 (12:30 to 1:30 a.m.) 1,320 cfs (4.88 ft); May 9 (7:30 p.m.) 1,260 cfs (4.79 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 16 to Mar. 3, Mar. 6, 7, Apr. 4 (no gage-height record Dec. 24-30).

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 435 ft (from topographic map).

Average discharge.--14 years, 202 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 1,540 cfs Apr. 19 (gage height, 6.86 ft); minimum not determined (occurred during period of indefinite stage-discharge relation); minimum daily, 9.5 cfs Oct. 1-4.

1940-54: 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 determination 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, no gage-height record, indefinite stage-discharge relation, or shifting control, which are fair. Flow regulated by Union Village Reservoir (see p. 233) since October 1949. Some regulation by Lake Fairlee.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.5	40	66	70	70	417	270	571	289	205	190	218
2	9.5	35	64	105	66	892	247	428	613	170	130	119
3	9.5	30	62	90	62	1,010	279	483	444	142	85	90
4	9.5	26	60	80	65	1,000	232	919	413	115	100	75
5	*10	24	70	70	70	626	224	800	428	127	91	66
6	11	23	90	66	66	428	289	583	417	144	80	58
7	34	24	*375	64	62	366	625	495	432	105	70	54
8	29	30	244	62	58	337	934	479	343	88	60	123
9	26	29	184	*60	55	292	1,040	1,040	286	77	55	140
10	24	28	208	65	52	282	918	1,120	255	72	52	136
11	25	26	248	62	49	261	951	1,280	244	64	58	167
12	26	25	214	64	43	191	1,160	934	213	58	70	374
13	26	25	176	62	45	190	956	676	192	51	63	503
14	23	25	148	58	46	198	820	551	185	45	52	327
15	21	24	155	60	*52	198	885	475	218	45	45	235
16	19	24	155	62	62	185	934	503	202	42	36	188
17	18	23	130	64	300	176	1,140	440	170	40	39	327
18	17	23	100	52	460	170	1,130	374	146	37	34	238
19	16	23	110	58	420	*161	1,380	337	127	41	31	295
20	15	22	130	64	320	270	*1,340	317	113	39	*29	463
21	15	22	135	78	300	380	1,190	426	97	94	27	282
22	14	22	144	105	500	252	1,130	685	85	*92	25	292
23	14	58	198	110	750	232	860	507	183	70	24	221
24	*14	80	150	96	499	232	319	425	208	72	22	185
25	14	70	115	80	452	244	142	384	140	63	21	167
26	13	200	114	70	343	255	576	324	127	57	20	167
27	13	120	105	84	297	350	855	279	247	55	19	155
28	17	100	96	96	304	301	1,150	*261	235	54	18	132
29	27	90	97	88	-	324	1,060	307	258	80	18	115
30	60	72	96	82	---------	314	790	563	232	78	19	107
31	47	---------	86	75	---------	280	---------	340	---------	128	125	---------
Total	626.0	1,363	4,325	2,302	5,868	10,814	23,826	17,306	7,542	2,550	1,708	6,019
Mean	20.2	45.4	140	74.3	210	349	794	558	251	82.3	55.1	201
(†)	+0.4	+1.8	-0.5	+1.4	+14.1	-12.0	+12.0	-14.4	-0.7	-0.2	+2.6	-3.5

Adjusted in change in reservoir contents

Mean	20.3	46.1	139	74.8	215	344	799	553	251	82.2	56.1	199
Cfsm	0.156	0.355	1.07	0.575	1.65	2.65	6.15	4.25	1.93	0.632	0.432	1.53
In.	0.18	0.40	1.24	0.66	1.73	3.05	6.86	4.90	2.18	0.73	0.50	1.71

	Observed			Adjusted		
Calendar year 1953:	Max 1,790	Min 7.6	Mean 204	Mean 203	Cfsm 1.56	In. 21.25
Water year 1953-54:	Max 1,380	Min 9.5	Mean 231	Mean 231	Cfsm 1.78	In. 24.12

* Discharge measurement made on this day.

† Change in contents in Union Village Reservoir, in millions of cubic feet.

Note.--No gage-height record Aug. 2-19; discharge estimated on basis of recorded range in stage, weather records, and records for White River at West Hartford and Ottauquechee River at North Hartland. Stage-discharge relation affected by ice Dec. 16-21, 24, 25, 27, 28, Dec. 31 to Feb. 23, Mar. 31. Stage-discharge relation indefinite Oct. 1 to Dec. 7; discharge estimated on basis of 4 discharge measurements, weather records, Union Village Reservoir records, and records for stations mentioned above. Shifting-control method used June 18-23, 25-27, June 30 to Aug. 1, Aug. 20 to Sept. 19, Sept. 21-30.

White River near Bethel, Vt.

Location.--Lat 43°48'45", long 72°39'25", on right bank a third of a mile upstream from Locust Creek and 1⅝ miles southwest of Bethel, Windsor County.

Drainage area.--241 sq mi.

Records available.--June 1931 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 550 ft (from topographic map). Prior to Oct. 1, 1940, at datum 2.00 ft higher.

Average discharge.--23 years, 494 cfs.

Extremes.--Maximum discharge during year, 7,830 cfs Apr. 11 (gage height, 6.67 ft), from rating curve extended above 4,200 cfs on basis of slope-area determination at gage height 11.46 ft; maximum gage height, 10.51 ft Feb. 22 (ice jam); minimum discharge, 34 cfs Oct. 4.

1931-54: Maximum discharge, 32,200 cfs Sept. 21, 1938 (gage height, 11.46 ft, present datum), from rating curve extended as explained above; maximum gage height, 13.20 ft Mar. 9, 1942 (ice jam); minimum discharge, 28 cfs Aug. 3, 1933, Aug. 22, 1934.

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

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

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	27	3.0	875
1.4	71	3.5	1,390
1.7	127	4.0	2,060
2.1	264	5.0	3,680
2.5	477	5.6	4,900

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	138	195	120	200	953	590	984	512	*286	402	898
2	*35	116	178	180	200	2,060	561	875	1,460	244	244	386
3	35	101	145	230	210	1,390	553	839	1,380	206	181	252
4	34	91	*140	210	210	1,230	460	1,520	1,000	181	213	195
5	35	84	670	*190	200	860	465	1,310	884	189	213	162
6	44	76	539	175	190	740	624	1,020	794	277	178	141
7	122	82	2,640	170	180	670	2,580	866	1,020	199	149	125
8	120	118	1,150	160	190	613	4,800	990	1,080	172	133	311
9	96	118	708	115	200	546	2,980	2,200	776	149	120	244
10	87	107	1,550	120	*190	525	1,890	1,680	636	138	114	202
11	92	103	1,130	160	180	445	3,700	1,810	532	127	144	374
12	94	100	742	150	160	425	3,760	1,670	446	123	224	679
13	94	98	590	140	140	380	2,240	1,290	386	116	195	380
14	82	96	505	125	160	392	1,980	1,030	358	109	155	946
15	74	92	498	140	200	364	2,100	866	579	105	125	676
16	68	91	403	135	275	315	2,070	776	471	98	116	538
17	64	91	240	125	1,000	*305	3,220	692	380	91	141	1,100
18	60	89	205	105	850	290	2,810	590	318	87	114	726
19	56	89	220	115	690	280	2,540	525	277	84	*100	767
20	54	85	318	150	590	697	2,580	491	244	84	98	1,180
21	*53	84	333	710	800	929	2,650	850	220	233	89	668
22	53	82	364	400	1,800	620	2,190	1,440	217	216	81	605
23	53	217	540	320	1,490	546	2,310	1,010	353	152	76	*532
24	52	295	300	270	1,030	546	1,600	803	256	152	71	427
25	50	261	310	250	920	553	1,250	*717	206	138	70	369
26	56	668	300	225	812	676	*1,010	605	202	118	66	348
27	56	380	265	250	734	717	*956	518	370	105	64	338
28	67	295	225	300	692	636	1,920	484	484	103	60	290
29	103	248	250	240	-	839	1,490	458	386	162	59	256
30	242	213	240	220	-------	830	1,160	1,020	328	178	68	236
31	188	-------	190	205	-------	640	-------	620	-------	238	668	-------
Total	2,354	4,708	16,083	6,405	14,493	21,012	59,039	30,529	16,555	4,860	4,731	14,351
Mean	75.9	157	519	207	518	678	1,968	985	552	157	153	478
Cfsm	0.315	0.651	2.15	0.859	2.15	2.81	8.17	4.09	2.29	0.651	0.635	1.98
In.	0.36	0.73	2.48	0.99	2.24	3.24	9.11	4.71	2.55	0.75	0.73	2.21

Calendar year 1953: Max 11,300 Min 30 Mean 497 Cfsm 2.06 In. 27.98
Water year 1953-54: Max 4,800 Min 34 Mean 535 Cfsm 2.22 In. 30.10

Peak discharge (base, 5,600 cfs).--Apr. 8 (4:30 to 5:30 p.m.) 7,100 cfs (6.43 ft); Apr. 11 (9:30 p.m.) 7,830 cfs (6.67 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 3-5, 17-19, Dec. 23 to Feb. 24, Mar. 5-7, 11-13, 16-19, 22, 31, Apr. 1, 4, 5.

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 1954.

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.--15 years, 48.1 cfs.

Extremes.--Maximum discharge during year, 534 cfs Apr. 8 (gage height, 3.61 ft); minimum, 2.8 cfs Oct. 4.

1939-54: 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 excellent except those below 10 cfs and those for periods of backwater from debris, which are good, and those for periods of ice effect, which are fair.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 3				Dec. 4 to Apr. 7				Apr. 8 to Sept. 30			
0.2	1.8	0.5	8.0	0.5	9.6	1.5	65	0.4	6.9	2.0	129
.3	3.2	.7	16	.7	16	2.0	121	.7	16	2.5	212
.4	5.2			.9	24	2.5	207	.9	24	3.0	330
				1.1	35	3.0	330	1.1	35	3.5	490
								1.5	68		

Note.--Same as following table above 0.7 ft.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.1	8.0	10	10	17	89	60	97	*57	32	39	38
2	2.9	6.9	11	14	16	220	57	90	133	28	26	21
3	2.9	6.4	9.8	14	16	128	60	103	104	26	20	16
4	2.9	5.8	*9.6	14	17	116	52	160	89	23	24	14
5	2.9	5.5	32	*14	18	72	55	120	84	35	26	12
6	4.2	5.0	23	13	16	64	90	101	75	35	21	11
7	18	5.8	74	14	15	60	276	90	78	26	17	14
8	12	8.7	40	12	14	56	341	112	68	23	17	42
9	8.0	8.0	30	12	15	54	265	238	58	21	15	28
10	6.6	7.2	48	12	*15	53	210	173	53	20	14	21
11	5.8	6.9	39	11	14	50	250	175	52	19	18	46
12	6.1	6.6	32	11	13	46	255	139	45	18	16	45
13	5.8	6.4	28	11	17	42	210	119	42	17	14	28
14	5.0	6.1	26	10	16	43	197	103	48	16	12	44
15	4.8	5.8	30	10	16	41	204	92	61	17	11	32
16	4.6	6.1	24	10	35	38	220	89	53	15	11	30
17	4.4	5.8	18	10	65	*37	303	79	43	14	12	39
18	4.2	5.8	17	10	50	34	268	69	37	13	9.6	33
19	4.0	5.8	18	10	36	37	264	65	34	16	*8.9	74
20	4.0	5.8	20	11	35	59	245	63	32	14	9.1	86
21	*3.8	5.5	24	45	35	74	242	87	31	40	8.2	49
22	4.0	5.5	30	26	135	53	208	116	28	26	7.7	49
23	4.0	13	38	19	113	47	193	85	28	21	8.0	*43
24	4.0	13	21	17	72	50	146	71	34	21	8.5	39
25	4.0	19	24	16	61	52	125	64	26	19	9.1	36
26	4.0	33	22	15	54	96	108	57	32	16	9.1	36
27	4.2	17	18	20	53	85	*106	51	62	15	10	34
28	6.1	14	17	18	54	75	193	47	48	17	9.6	31
29	9.8	12	19	15	-	95	136	55	39	21	9.3	29
30	17	11	18	18	-------	68	111	131	*36	27	14	28
31	10	-------	15	17	-------	65	-------	64	-------	30	54	-------
Total	183.1	271.4	785.4	459	1,033	2,099	5,450	3,105	1,610	681	488.1	1,048
Mean	5.91	9.05	25.3	14.8	36.9	67.7	182	100	53.7	22.0	15.7	34.9
Cfsm	0.194	0.297	0.830	0.485	1.21	2.22	5.97	3.28	1.76	0.721	0.515	1.14
In.	0.22	0.33	0.96	0.56	1.26	2.56	6.65	3.79	1.96	0.83	0.60	1.28

Calendar year 1953: Max 608 Min 1.5 Mean 48.4 Cfsm 1.59 In. 21.53
Water year 1953-54: Max 341 Min 2.9 Mean 47.2 Cfsm 1.55 In. 21.00

Peak discharge (base, 350 cfs).--Apr. 8 (8 to 9 p.m.) 534 cfs (3.61 ft); Apr. 17 (6 to 8 p.m.) 354 cfs (3.08 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 16-18, 23, 24, Dec. 27 to Feb. 22, Mar. 5-8, 11-13, 16-19, 28, Mar. 30 to Apr. 5. Backwater from debris Oct. 14-21, July 30 to Aug. 19, Aug. 26 to Sept. 23, Sept. 28-30.

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 1954 (monthly discharge only for some periods, 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.--39 years, 1,204 cfs.

Extremes.--Maximum discharge during year, 13,300 cfs Apr. 8, 12 (gage height, 11.34 ft); maximum gage height, 12.65 ft Feb. 22 (ice jam); minimum discharge, 81 cfs Oct. 5 (gage height, 2.58 ft); minimum daily, 87 cfs Oct. 5.
1915-54: 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 determination of peak flow; minimum observed, about 35 cfs Aug. 4, 1918 (gage height, 2.22 ft); minimum daily, 64 cfs Aug. 4, 1918.

Remarks.--Records excellent except those for periods of ice effect, 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), 1928. WSP 1301: 1916-27(M), 1929(M).

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.6	85	5.0	1,380
3.0	190	6.0	2,510
3.5	375	8.0	5,760
4.0	620	9.0	7,300
4.5	940	10.0	9,600

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	89	278	*358	320	450	2,600	1,650	2,640	1,500	*870	863	1,990
2	*89	242	337	285	450	5,900	1,530	2,360	3,210	740	632	*828
3	98	212	309	446	470	4,410	1,600	2,340	3,300	614	459	533
4	96	187	282	469	470	4,830	1,300	4,180	2,520	538	455	418
5	87	172	691	*427	450	2,700	1,350	3,770	2,360	592	483	333
6	100	163	988	401	430	2,380	1,740	2,870	2,070	800	423	305
7	166	160	3,770	401	400	2,060	5,640	2,470	2,270	609	375	282
8	282	175	2,380	362	420	1,900	9,400	2,380	2,370	507	329	635
9	222	232	1,400	270	*420	1,690	7,840	5,860	1,900	459	317	668
10	*181	216	1,980	270	430	1,590	5,190	5,100	1,610	423	293	533
11	160	200	2,150	350	410	1,440	6,440	5,310	1,440	379	293	766
12	181	200	1,400	370	390	1,300	8,900	4,180	1,260	379	375	1,690
13	172	190	1,120	330	350	1,200	5,840	3,480	1,130	358	379	933
14	169	187	964	290	340	1,240	5,150	2,890	1,050	333	333	1,360
15	157	169	980	320	400	1,120	5,380	2,500	1,420	321	286	1,370
16	143	169	842	320	580	964	5,620	2,360	1,400	301	260	988
17	135	178	500	290	2,500	*940	7,440	2,130	1,120	282	260	1,880
18	127	178	420	250	2,100	912	7,540	1,830	948	256	274	1,450
19	122	169	470	250	1,700	877	6,800	1,670	835	263	*239	1,320
20	127	163	609	300	1,500	1,740	6,500	1,560	746	249	222	2,740
21	*122	163	740	800	1,800	2,520	6,640	2,140	692	455	216	1,600
22	117	149	828	1,500	3,900	1,720	5,860	4,020	626	662	190	1,370
23	107	203	1,170	700	3,900	1,460	5,680	2,870	917	455	184	*1,190
24	107	490	760	600	2,750	1,450	4,360	2,270	1,040	405	184	1,040
25	110	466	670	550	2,460	1,540	3,380	*2,030	734	392	166	891
26	112	1,090	730	520	2,120	1,870	2,840	1,780	656	329	160	863
27	132	746	620	540	1,930	2,270	2,610	1,530	1,040	301	154	800
28	135	543	480	650	1,930	1,810	*4,870	1,380	1,240	286	152	740
29	184	459	632	530	-	2,190	4,190	1,390	1,070	371	140	662
30	308	396	530	490	------	2,190	3,150	2,760	988	384	146	609
31	379	---	---	460	460	-------	1,750	-------	1,830	-------	533	577	-----
Total	4,716	8,545	29,550	14,061	35,450	62,563	146,430	85,880	43,462	13,846	9,819	30,787
Mean	152	285	953	454	1,266	2,018	4,881	2,770	1,449	447	317	1,026
Cfsm	0.220	0.413	1.38	0.658	1.83	2.92	7.07	4.01	2.10	0.648	0.459	1.49
In.	0.25	0.46	1.59	0.76	1.91	3.37	7.89	4.63	2.34	0.75	0.53	1.66

Calendar year 1953: Max 20,600 Min 68 Mean 1,236 Cfsm 1.79 In. 24.32
Water year 1953-54: Max 9,400 Min 87 Mean 1,329 Cfsm 1.93 In. 26.14

Peak discharge (base, 11,600 cfs).--Apr. 8 (8:30 to 9 p.m.) 13,300 cfs (11.34 ft); Apr. 12 (1 a.m.) 13,300 cfs (11.34 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 17-19, 24-28, Dec. 30 to Jan. 2, Jan. 9 to Feb. 24, Mar. 1, 2, 5, 12, 13, Mar. 31 to Apr. 4.

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 1954.
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.--43 years, 7,232 cfs (adjusted for storage).
Extremes.--Maximum discharge during year, 50,700 cfs Apr. 24 (gage height, 19.89 ft); minimum daily, 247 cfs Oct. 4.
1911-54: 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, 115 cfs Aug. 2, 1953.
Remarks.--Records good except those below 2,000 cfs, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Comerford Station Pond, Union Village Reservoir (see p. 233), and other reservoirs (combined usable capacity, about 12¼ 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 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.8	221	6.0	3,730
3.1	365	8.0	8,180
3.5	630	12.0	20,000
4.0	1,040	16.0	34,300
5.0	2,160	20.0	51,200

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,230	938	2,950	1,600	3,000	10,300	6,640	19,500	6,200	14,800	5,630	14,400
2	1,530	2,110	3,120	1,750	2,600	17,600	6,380	18,000	12,500	9,750	7,970	12,600
3	284	2,250	2,660	1,700	3,200	19,200	6,520	18,200	12,400	8,130	8,640	10,600
4	247	2,690	2,860	3,000	2,700	22,600	4,900	22,900	12,100	5,460	6,450	8,210
5	2,200	2,440	5,160	3,100	2,200	19,400	5,800	25,800	12,100	4,060	4,550	3,880
6	1,300	3,260	5,110	3,000	1,900	14,900	6,000	22,500	12,300	5,440	3,810	1,940
7	1,800	1,280	13,800	3,100	800	11,100	14,500	19,200	17,600	5,700	4,190	5,010
8	2,130	647	16,200	3,000	3,200	8,750	28,000	16,900	19,700	5,140	2,840	7,630
9	2,480	2,100	16,100	1,900	2,800	10,200	32,600	22,400	20,000	5,100	4,410	10,800
10	*1,190	2,400	14,200	1,300	2,500	8,690	28,200	30,800	18,400	4,090	4,080	12,700
11	728	1,190	12,600	3,000	2,600	9,530	28,700	35,100	15,300	1,650	3,540	13,900
12	2,020	2,100	13,000	2,900	3,100	7,890	37,200	31,800	13,900	3,930	3,470	24,400
13	2,040	1,490	8,880	2,900	*2,500	6,930	32,900	26,700	9,200	3,370	3,600	26,000
14	2,310	761	7,060	2,400	1,300	4,960	29,400	22,800	6,880	3,370	4,620	23,300
15	2,220	360	7,070	2,500	3,000	4,840	26,600	18,600	9,760	3,440	4,230	21,700
16	1,910	1,650	6,790	1,400	3,100	6,380	25,200	15,900	11,800	3,540	3,270	17,100
17	897	2,080	5,000	1,500	7,600	6,140	29,800	12,600	10,900	1,980	3,550	15,900
18	428	1,830	3,200	2,500	7,800	5,900	39,100	12,600	8,360	1,220	4,710	14,000
19	1,730	1,840	1,950	2,400	6,500	*5,600	43,300	11,900	6,520	2,940	4,730	14,200
20	1,890	1,810	2,100	3,500	5,500	6,460	*43,800	11,400	4,730	3,020	*4,970	19,500
21	2,330	959	5,300	4,200	4,700	10,400	42,100	13,000	4,320	3,370	1,900	18,600
22	2,150	714	5,200	5,000	11,500	7,140	42,100	18,100	4,510	3,780	672	16,300
23	1,580	2,670	6,000	1,550	16,000	7,040	45,000	15,000	4,640	4,980	2,880	11,900
24	*1,160	3,360	5,100	700	13,300	6,230	49,400	15,200	5,040	3,890	2,730	*11,500
25	557	5,050	3,900	3,400	12,600	6,300	49,700	13,800	5,280	4,740	2,700	10,500
26	1,380	9,810	4,200	3,300	11,600	6,910	42,900	12,300	3,510	*4,200	2,260	7,200
27	1,540	9,230	2,150	3,700	11,100	7,580	33,500	12,000	4,260	4,300	2,270	8,700
28	2,410	7,300	5,100	3,500	9,340	6,600	29,500	*9,700	13,200	4,110	908	8,200
29	2,880	3,330	5,200	2,700	-	6,400	26,400	6,600	17,700	4,260	888	8,800
30	4,130	3,370	4,100	1,150	--------	7,170	21,900	11,600	17,200	3,820	2,570	7,400
31	2,920	--------	4,000	1,100	--------	7,350	--------	9,200	--------	3,750	5,730	--------
Total	53,601	81,019	200,060	78,750	158,040	286,490	858,040	552,100	320,310	141,330	118,768	386,870
Mean	1,729	2,701	6,454	2,540	5,644	9,242	28,600	17,810	10,680	4,559	3,831	12,900
(†)	-567	-259	-213	-1,240	-914	-1,469	+4,243	+2,172	+215	-493	-192	+346

Adjusted for change in reservoir contents

Mean	1,517	2,601	6,374	2,077	5,266	8,693	30,240	18,620	10,760	4,375	3,760	13,030
Cfsm	0.371	0.636	1.56	0.508	1.29	2.12	7.39	4.55	2.63	1.07	0.919	3.18
In.	0.43	0.71	1.80	0.59	1.34	2.45	8.24	5.25	2.93	1.23	1.06	3.55

	Observed			Adjusted				
Calendar year 1953:	Max 65,700	Min 115	Mean 6,847	Mean 6,853	Cfsm 1.67	In. 22.72		
Water year 1953-54:	Max 49,700	Min 247	Mean 8,864	Mean 8,916	Cfsm 2.18	In. 29.58		

Peak discharge (base, 34,000 cfs).--Apr. 12 (6:30 a.m.) 38,900 cfs (17.15 ft); Apr. 24 (11 p.m.) 50,700 cfs (19.89 ft); May 11 (9 to 11 a.m.) 35,500 cfs (16.30 ft).
* Discharge measurement made on this day.
† Change in contents in First Connecticut and Second Connecticut Lakes, Lake Francis, Comerford Station Pond, and Union Village Reservoir, in millions of cubic feet.
Note.--No gage-height record Dec. 17 to Jan. 9, Mar. 28, 29, Apr. 4-8, Sept. 24-30; discharge estimated on basis of 1 discharge measurement, recorded range in stage when available, weather records, powerplant records, and records for White River at West Hartford. Doubtful or no gage-height record May 21 to June 3; discharge estimated on basis of 1 discharge measurement, twice-daily wire-weight-gage readings, weather records, powerplant records, and records for White River at West Hartford. Stage-discharge relation affected by ice Jan. 10 to Feb. 22 and at times during period of no gage-height record Dec. 17 to Jan. 9.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 835 ft (from topographic map).

Average discharge.--15 years, 123 cfs.

Extremes.--Maximum discharge during year, 1,570 cfs Apr. 18 (gage height, 5.89 ft); minimum, 5.7 cfs Oct. 4, 5.

1939-54: 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 determination 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 table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.5	5.3	2.5	205
.7	10	3.0	320
.9	17	4.0	635
1.2	33	5.0	1,070
1.5	57	6.0	1,640
2.0	117		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.8	42	59	35	47	190	111	246	271	91	87	266
2	6.1	34	54	42	45	420	104	213	512	83	52	89
3	6.1	29	48	47	42	408	116	213	610	62	35	58
4	5.9	25	46	*44	43	604	99	417	381	50	37	45
5	5.9	28	78	40	45	390	104	516	359	58	35	36
6	8.3	20	82	37	43	248	130	344	663	246	29	32
7	47	20	561	36	40	195	323	273	462	118	25	27
8	38	26	500	28	*40	162	540	230	315	80	22	29
9	23	29	228	29	38	138	551	570	235	61	20	74
10	18	26	281	31	36	128	364	834	193	53	19	88
11	16	24	262	31	35	114	478	1,020	164	46	28	354
12	16	22	176	30	33	101	852	666	140	40	31	1,250
13	17	22	145	31	31	89	593	432	118	35	26	462
14	15	20	128	31	29	88	444	308	104	32	21	278
15	14	20	130	31	28	*84	414	244	128	40	18	230
16	13	20	107	30	35	78	450	350	126	31	*18	168
17	12	19	64	29	70	78	629	339	98	26	20	216
18	11	18	61	29	110	72	1,440	235	82	22	17	181
19	*11	17	58	30	100	67	*1,190	195	71	26	15	159
20	11	17	70	31	85	165	742	174	61	24	15	*276
21	10	17	74	42	90	218	660	212	54	28	14	181
22	10	16	85	60	350	135	586	441	47	39	15	161
23	10	37	106	47	393	*110	512	420	101	*28	12	130
24	10	70	84	37	271	107	432	*285	115	35	11	109
25	10	87	80	34	230	107	320	266	72	31	11	103
26	20	322	74	32	180	129	262	199	58	26	10	128
27	22	141	57	50	160	153	239	159	79	23	9.3	110
28	32	95	49	80	150	124	449	138	106	22	9.0	90
29	67	77	58	64	-	137	459	159	100	30	8.8	75
30	114	*65	54	55	-----	126	315	829	110	29	9.0	64
31	60	-----	46	50	-----	137	-----	532	-----	29	101	-----
Total	666.1	1,405	3,905	1,223	2,799	5,302	13,908	11,459	5,935	1,544	780.1	5,469
Mean	21.5	46.8	126	39.5	100	171	464	370	198	49.8	25.2	182
Cfsm	0.267	0.581	1.57	0.491	1.24	2.12	5.76	4.60	2.46	0.619	0.313	2.26
In.	0.31	0.65	1.80	0.57	1.29	2.45	6.43	5.29	2.74	0.71	0.36	2.53

Calendar year 1953: Max 3,190 Min 3.4 Mean 144 Cfsm 1.79 In. 24.37
Water year 1953-54: Max 1,440 Min 5.9 Mean 149 Cfsm 1.85 In. 25.13

Peak discharge (base, 950 cfs).--Apr. 18 (8 p.m.) 1,570 cfs (5.89 ft); May 11 (10 a.m.) 1,110 cfs (5.08 ft); May 30 (3 p.m.) 1,020 cfs (4.90 ft); Sept. 12 (5:30 a.m.) 1,540 cfs (5.84 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 17-21, 24-28, Dec. 30 to Feb. 1, Feb. 16-22, Feb. 25 to Mar. 1.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 740 ft (from topographic map).

Average discharge.--31 years, 218 cfs (adjusted for storage since October 1928).

Extremes.--Maximum discharge during year, 2,030 cfs Apr. 19 (gage height, 4.48 ft); minimum daily, 15 cfs Sept. 5.
1923-54: Maximum discharge, 5,840 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 no gage-height record, which are good. Flow regulated by Mascoma and Crystal Lakes and Goose and Grafton Ponds (see p. 233).

Revisions (water years).--WSP 726: Drainage area. WSP 801: 1925(M).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 18				Apr. 19 to Sept. 30			
0.5	32	2.0	348	0.15	15	2.0	402
1.0	93	3.0	770	.2	19	3.0	890
1.5	198	4.0	1,520	.5	43	4.0	1,590
				1.0	110	4.5	2,050
				1.5	239		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	85	51	96	135	96	325	245	417	*962	154	85	108
2	79	94	90	135	94	462	253	356	878	*133	129	110
3	45	93	79	130	94	707	259	294	932	78	131	99
4	52	93	72	*129	93	981	247	474	950	78	131	51
5	85	92	38	129	93	908	239	824	830	96	129	*15
6	111	89	46	127	92	788	233	884	704	*151	116	43
7	110	44	89	127	92	642	247	720	770	154	72	118
8	96	48	100	125	*92	540	299	635	770	156	81	118
9	88	79	120	123	92	419	417	660	530	154	127	118
10	48	79	131	92	92	309	524	1,110	281	124	123	105
11	52	79	135	119	92	289	566	1,720	263	108	123	64
12	80	78	140	118	92	293	550	1,760	266	174	123	117
13	80	74	145	116	*92	277	484	1,220	263	172	105	692
14	80	41	150	114	92	262	549	677	263	169	66	633
15	80	45	190	110	92	*265	574	464	263	169	78	313
16	75	76	210	*104	92	277	680	590	260	147	*118	260
17	46	76	175	108	92	277	770	590	248	85	116	257
18	50	75	151	106	93	262	1,390	538	202	96	114	211
19	*80	75	150	105	93	277	2,010	352	159	148	112	135
20	80	71	150	104	93	280	*1,800	306	156	131	98	*313
21	80	39	150	102	96	296	1,210	382	156	131	60	316
22	79	43	150	100	102	299	846	1,000	156	129	71	306
23	73	74	150	100	110	280	742	933	156	118	108	281
24	45	75	147	99	125	265	753	*574	156	73	108	242
25	51	76	145	98	159	256	714	524	156	84	106	185
26	78	80	145	96	198	250	635	422	154	131	108	185
27	78	78	145	98	217	247	425	316	154	131	94	185
28	78	48	140	96	233	245	589	316	154	131	57	182
29	78	54	140	96	-	245	830	367	154	129	63	182
30	74	*82	140	96	--------	253	628	992	154	117	105	177
31	45	--------	138	96	--------	247	--------	1,280	--------	72	105	--------
Total	2,261	2,101	4,047	3,433	3,093	11,723	19,708	21,697	11,500	3,923	3,162	6,121
Mean	72.9	70.0	131	111	110	378	657	700	383	127	102	204
(†)	-136.9	+41.8	+272.5	-119.5	+206.0	-95.0	+528.2	+88.6	-39.5	-146.6	-193.1	+197.9
Adjusted for change in reservoir contents												
Mean	21.8	86.2	232	66.1	196	343	861	733	368	71.8	29.9	280
Cfsm	0.142	0.563	1.52	0.432	1.28	2.24	5.63	4.79	2.41	0.469	0.195	1.83
In.	0.16	0.63	1.75	0.50	1.33	2.58	6.28	5.52	2.68	0.54	0.23	2.04

	Observed			Adjusted		
Calendar year 1953:	Max 4,400	Min 38	Mean 262	Mean 260	Cfsm 1.70	In. 23.04
Water year 1953-54:	Max 2,010	Min 15	Mean 254	Mean 273	Cfsm 1.78	In. 24.24

* Discharge measurement made on this day.
† Change in contents in Mascoma and Crystal Lakes and Goose and Grafton Ponds, in millions of cubic feet.
Note.--No gage-height record Dec. 9, 11-17, 19-23, 25-30, Jan. 1-3, Aug. 30 to Sept. 1; discharge estimated on basis of records of gate operations and pond elevations at Mascoma Lake.

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, 1 mile upstream from mouth.

Drainage area.--221 sq mi.

Records available.--October 1930 to September 1954.

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.--24 years, 401 cfs.

Extremes.--Maximum discharge during year, 5,080 cfs Apr. 12 (gage height, 7.95 ft); minimum, 4.5 cfs Oct. 19; minimum daily, 5.3 cfs Oct. 18.

1930-54: 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 flow over dam).

Remarks.--Records excellent except those for periods of ice effect, which are fair. Flow regulated by powerplants above station. Small seasonal storage in reservoir at Plymouth.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.0	4.5	3.0	262
1.1	6.5	3.5	447
1.3	12	4.0	685
1.5	21	4.5	970
1.8	41	5.0	1,360
2.2	82	6.0	2,420
2.5	130	6.7	3,280

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	48	113	121	135	210	978	535	822	689	394	123	546
2	40	85	115	180	205	1,950	512	756	1,790	345	126	235
3	38	71	104	160	200	1,450	620	812	1,160	292	112	123
4	12	70	101	170	190	1,800	470	1,520	958	259	124	147
5	22	61	167	*155	185	928	485	1,240	922	231	153	42
6	77	56	246	140	180	778	600	946	784	264	138	83
7	*65	57	*1,110	140	175	685	1,470	812	778	216	106	105
8	103	67	752	135	170	630	2,490	799	751	199	82	82
9	85	74	447	125	*175	565	2,270	1,830	635	175	106	110
10	57	72	562	140	170	530	1,460	1,460	545	163	100	120
11	14	69	610	150	160	477	1,870	1,890	494	142	80	228
12	71	68	435	145	155	426	3,230	1,320	418	150	89	426
13	66	61	341	135	140	406	1,880	1,080	386	138	94	223
14	52	62	337	130	180	398	1,610	898	360	126	62	209
15	52	61	345	125	180	386	1,530	784	922	125	71	259
16	47	65	280	120	250	334	1,570	817	729	120	105	208
17	10	56	160	115	880	*334	2,290	707	545	98	78	504
18	5.3	61	190	105	650	323	2,840	610	447	92	74	398
19	42	59	180	110	500	316	2,120	545	379	117	71	330
20	53	55	210	120	440	631	1,750	512	330	100	76	499
21	52	52	270	250	480	886	1,680	1,080	206	102	29	334
22	51	56	310	390	1,450	590	1,400	1,860	269	*103	63	298
23	*51	88	370	230	1,390	504	1,330	1,180	584	157	90	*253
24	26	175	260	190	868	512	1,100	904	688	140	77	216
25	6.3	161	240	190	784	530	892	790	414	121	80	188
26	56	371	250	180	696	687	778	675	367	128	77	191
27	57	240	230	390	685	729	*751	585	402	109	75	199
28	69	178	205	410	696	605	1,720	*530	460	100	24	175
29	102	151	210	260	-	670	1,320	683	468	102	18	156
30	164	136	190	230	-------	685	970	1,570	426	105	102	149
31	154	-------	160	230	-------	570	-------	756	--------	100	304	--------
Total	1,747.6	2,951	9,508	5,685	12,444	21,293	43,543	30,773	18,406	5,013	2,909	7,036
Mean	56.4	98.4	307	183	444	687	1,451	993	614	162	93.8	235
Cfsm	0.255	0.445	1.39	0.828	2.01	3.11	6.57	4.49	2.78	0.733	0.424	1.06
In.	0.29	0.50	1.60	0.96	2.09	3.58	7.33	5.18	3.10	0.84	0.49	1.18

Calendar year 1953: Max 7,970 Min 5.3 Mean 441 Cfsm 2.00 In. 27.07
Water year 1953-54: Max 3,230 Min 5.3 Mean 442 Cfsm 2.00 In. 27.14

Peak discharge (base, 5,500 cfs).--No peak above base.
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 15 to Feb. 17, Feb. 19-22, Mar. 31, Apr. 4, 5.

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 1954. 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.--26 years, 399 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 4,770 cfs Apr. 18 (gage height, 6.06 ft); minimum daily, 44 cfs Oct. 18.
1928-54: 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. 12, 1936 (ice jam); minimum daily discharge, 30 cfs Sept. 26, 1948.

Remarks.--Records excellent except those for periods of ice effect, which are fair. Flow regulated by mills above station and by Sunapee Lake (see p. 233).

Revisions (water years).--WSP 711: 1930(M). WSP 756: Drainage area.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.0	38	3.0	885
1.2	71	4.0	1,750
1.5	140	5.0	3,020
2.0	310	6.0	4,660
2.5	565		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	162	195	115	250	922	547	836	782	302	120	407
2	57	140	184	145	240	1,530	541	737	982	240	118	206
3	56	118	166	170	220	1,440	613	815	952	199	108	146
4	50	106	154	170	215	2,380	490	1,830	808	168	120	130
5	58	99	222	150	210	1,370	451	*1,940	857	165	135	100
6	76	88	290	145	190	1,040	484	1,340	908	209	120	106
7	115	94	2,530	135	180	829	788	1,060	836	184	104	99
8	120	126	1,440	115	175	724	1,140	938	756	160	97	94
9	101	138	871	100	170	637	1,110	1,760	631	140	97	99
10	80	125	*1,240	120	165	601	850	2,190	*547	125	92	106
11	75	120	1,150	125	160	541	890	3,010	484	122	104	934
12	84	115	776	150	155	478	1,460	2,300	410	125	104	2,120
13	*82	108	625	125	145	451	1,100	1,680	358	120	97	796
14	82	99	536	120	150	436	900	1,300	344	108	90	541
15	73	101	553	125	160	420	763	1,080	744	*115	86	*376
16	75	108	475	120	180	376	756	1,360	704	115	86	310
17	67	*101	300	115	570	376	1,790	1,400	518	86	86	848
18	44	97	250	*115	520	362	4,230	1,110	415	94	82	625
19	64	97	230	120	420	349	2,800	968	306	104	82	495
20	65	92	285	125	380	848	2,020	857	255	97	79	704
21	63	88	319	180	480	1,080	1,520	1,030	233	94	79	484
22	63	90	340	250	*1,800	698	1,230	2,300	199	117	65	391
23	62	147	426	210	1,590	577	1,110	1,960	240	115	71	327
24	62	230	300	180	1,050	536	990	1,440	252	110	75	259
25	67	317	280	165	1,000	536	843	1,190	206	106	71	230
26	122	842	270	155	908	750	750	1,000	180	106	71	226
27	108	468	240	450	922	864	718	836	196	94	69	219
28	115	327	205	500	850	*661	1,360	704	237	97	69	193
29	174	257	220	400	-	704	1,350	661	252	99	66	174
30	349	223	200	320	--------	737	1,030	1,220	336	106	71	*154
31	233	--------	170	290	--------	607	--------	930	--------	106	216	--------
Total	2,900	5,223	15,442	5,685	13,455	23,860	34,654	41,782	14,928	4,126	2,930	11,899
Mean	93.5	174	498	183	481	770	1,155	1,348	498	133	94.5	397
(†)	-38	+21	+139	+24	+83	+29	+212	+36	-78	-136	-90	+100

Adjusted for change in reservoir contents

Mean	79.4	182	550	192	515	781	1,237	1,361	468	82.3	60.9	435
Cfsm	0.295	0.677	2.04	0.714	1.91	2.90	4.60	5.06	1.74	0.306	0.226	1.62
In.	0.34	0.76	2.36	0.82	1.99	3.35	5.13	5.83	1.94	0.35	0.26	1.80

	Observed			Adjusted		
Calendar year 1953:	Max 6,860	Min 44	Mean 516	Mean 517	Cfsm 1.92	In. 26.13
Water year 1953-54:	Max 4,230	Min 44	Mean 485	Mean 494	Cfsm 1.84	In. 24.93

Peak discharge (base, 3,000 cfs).--Dec. 7 (12:30 p.m.) 3,090 cfs (5.05 ft); Apr. 18 (8:30 a.m.) 4,770 cfs (6.06 ft); May 11 (3:30 p.m.) 3,430 cfs (5.28 ft); Sept. 12 (1:30 a.m.) 3,260 cfs (5.17 ft).

* Discharge measurement made on this day.
† Change in contents in Sunapee Lake, in millions of cubic feet.
Note.--Stage-discharge relation affected by ice Dec. 16-20, Dec. 24 to Feb. 24.

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 1954 (monthly discharge only for some periods, 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.--25 years, 283 cfs.

Extremes.--Maximum discharge during year, 3,940 cfs Mar. 4 (gage height, 9.00 ft); minimum, 14 cfs Oct. 1; minimum daily, 23 cfs Oct. 5.
1929-54: 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 excellent except those for period of ice effect, which are fair. Flow regulated by mills above station.

Revisions (water years).--WSP 756: Drainage area. WSP 781: 1931(M), 1934(M).

Rating tables, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 3				Mar. 4 to Sept. 30			
1.8	18	4.0	510	1.9	26	4.0	535
2.1	45	5.0	970	2.2	57	6.0	1,560
2.5	98	6.0	1,540	2.5	100	8.0	3,040
3.0	195			3.0	205		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	79	108	83	150	622	369	547	425	338	109	409
2	39	73	106	105	145	1,470	355	488	667	302	88	228
3	38	65	98	115	140	1,210	428	572	718	203	73	161
4	31	54	97	105	135	2,000	330	1,210	527	192	107	121
5	23	52	157	98	130	845	314	*918	511	167	187	95
6	33	49	169	94	125	599	397	674	439	228	112	91
7	57	54	1,420	94	120	499	890	547	394	161	95	82
8	68	54	591	88	120	436	1,300	604	358	147	102	70
9	38	61	410	83	120	397	1,230	1,400	327	128	68	76
10	35	56	*535	92	115	386	908	1,040	*281	111	67	*68
11	33	53	454	100	110	338	1,080	1,360	242	106	107	364
12	26	53	353	94	105	302	1,710	935	227	85	67	498
13	*53	53	308	91	95	278	1,150	718	152	78	64	239
14	54	44	210	88	105	272	945	591	150	75	58	229
15	59	52	220	84	120	265	795	519	736	*80	61	210
16	62	49	170	80	180	241	880	555	642	71	52	194
17	59	*45	120	76	570	237	1,760	488	450	53	62	725
18	54	41	130	*71	450	231	2,330	422	308	60	33	467
19	55	41	140	75	360	222	1,440	376	250	64	56	411
20	54	30	160	84	320	696	1,090	326	170	50	38	453
21	58	33	180	135	330	746	940	797	150	58	36	305
22	46	32	220	185	970	439	775	1,470	175	48	48	296
23	30	70	250	145	1,050	372	718	835	1,020	47	30	305
24	24	104	185	135	650	383	633	651	1,010	50	45	220
25	25	130	170	130	550	390	543	571	495	59	32	168
26	35	316	180	125	500	582	478	484	383	69	34	177
27	33	137	155	275	510	570	470	418	376	55	26	162
28	40	106	145	290	490	*439	1,280	358	503	61	30	156
29	76	106	135	210	-	456	900	380	428	60	35	123
30	197	92	120	190	------	453	678	678	383	67	38	*121
31	116	...	115	170	------	394	------	456	------	67	296	------
Total	1,580	2,184	7,811	3,790	8,765	16,770	27,116	21,388	12,897	3,340	2,256	7,224
Mean	51.0	72.8	252	122	313	541	904	690	430	108	72.8	241
Cfsm	0.323	0.461	1.59	0.772	1.98	3.42	5.72	4.37	2.72	0.684	0.461	1.53
In.	0.37	0.51	1.84	0.89	2.06	3.95	6.38	5.03	3.04	0.79	0.53	1.70

Calendar year 1953: Max 5,020 Min 15 Mean 319 Cfsm 2.02 In. 27.42
Water year 1953-54: Max 2,330 Min 23 Mean 315 Cfsm 1.99 In. 27.09

Peak discharge (base, 3,600 cfs).--Mar. 4 (12:30 a.m.) 3,940 cfs (9.00 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 15 to Feb. 28.

Williams River at Brockway Mills, Vt.

Location.--Lat 43°12'30", long 72°31'05", on left bank 25 ft upstream from highway bridge at Brockway 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 1954.

Gage.--Water-stage recorder. Altitude of gage is 430 ft (from topographic map).

Average discharge.--14 years, 167 cfs.

Extremes.--Maximum discharge during year, 2,150 cfs Apr. 17 (gage height, 6.94 ft); minimum, 6.9 cfs Oct. 4, 5.
1940-54: 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 determination 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 ice effect or no gage-height record, which are fair.

Revisions (water years).--WSP 1031: 1943-44(P). WSP 1301: 1941-42(M), 1946(M).

Rating table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.8	5.2	2.0	113
1.0	10	2.5	224
1.2	18	3.0	362
1.4	32	4.0	700
1.7	65	6.0	1,610

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.1	40	44	49	95	492	239	286	212	108	35	141
2	7.1	31	41	64	90	1,020	232	262	321	97	38	56
3	7.1	27	36	66	86	667	278	354	262	81	29	38
4	6.9	23	37	60	82	1,030	200	841	214	66	47	32
5	6.9	21	80	56	78	468	191	530	239	61	60	26
6	13	19	83	53	76	347	229	383	193	79	37	23
7	59	21	961	52	76	292	560	*312	170	57	30	19
8	32	27	302	45	74	257	600	375	*146	49	26	21
9	21	28	195	49	74	232	436	758	123	42	24	*24
10	16	25	*420	54	72	236	318	534	111	38	24	24
11	15	23	274	51	70	212	389	675	100	35	24	280
12	15	22	193	50	66	178	504	442	85	32	22	228
13	*15	21	168	46	60	156	335	347	79	30	21	92
14	14	20	154	43	64	159	289	292	79	29	17	78
15	13	19	184	44	74	150	262	252	564	*56	15	69
16	13	19	148	44	100	135	316	308	304	37	15	172
17	12	*19	84	*44	430	131	941	246	198	30	14	464
18	11	18	87	44	330	123	1,260	202	146	27	12	214
19	11	18	92	43	290	120	676	179	117	26	12	207
20	11	18	100	48	270	840	490	163	97	23	12	257
21	11	17	115	78	330	493	395	623	84	23	12	144
22	11	17	140	135	1,000	286	332	1,100	78	34	11	141
23	11	63	160	100	584	239	335	540	294	42	10	*106
24	11	69	110	90	404	236	303	389	229	35	10	85
25	13	83	100	80	359	264	259	320	137	34	10	79
26	31	177	105	74	332	541	232	265	117	29	9.8	89
27	24	87	84	230	398	387	251	224	121	26	9.5	82
28	26	65	86	180	367	289	824	205	135	23	9.3	71
29	56	55	80	130	-	*329	482	217	127	26	9.3	58
30	144	46	74	115	-------	303	344	410	121	32	11	55
31	60	---	65	105	-------	252	-------	236	--------	30	218	------
Total	705.1	1,138	4,802	2,322	6,331	10,664	12,502	12,270	5,203	1,337	833.9	3,375
Mean	22.7	37.9	155	74.9	226	344	417	396	173	43.1	26.9	112
Cfsm	0.220	0.368	1.50	0.727	2.19	3.34	4.05	3.84	1.68	0.418	0.261	1.09
In.	0.25	0.41	1.73	0.84	2.29	3.85	4.51	4.43	1.88	0.48	0.30	1.22

Calendar year 1953: Max 2,480 Min 6.2 Mean 198 Cfsm 1.92 In. 26.13
Water year 1953-54: Max 1,260 Min 6.9 Mean 168 Cfsm 1.63 In. 22.19

Peak discharge (base, 2,600 cfs).--No peak above base.
* Discharge measurement made on this day.
Note.--No gage-height record Jan. 14-16, Jan. 19 to Feb. 22; discharge estimated on basis of recorded range in stage, weather records, and records for Saxtons River at Saxtons River, Black River at North Springfield, and Cold River near Drewsville, N. H. Stage-discharge relation affected by ice Dec. 17 to Feb. 22.

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 Bundy Brook, and 3.9 miles upstream from mouth.

Drainage area.--72.2 sq mi.

Records available.--June 1940 to September 1954.

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

Average discharge.--14 years, 119 cfs.

Extremes.--Maximum discharge during year, 2,290 cfs Mar. 3 (gage height, 7.74 ft); minimum, 4.4 cfs Oct. 4, 5; minimum daily, 4.6 cfs Oct. 4, 5.
1940-54: Maximum discharge, 5,430 cfs June 1, 1952 (gage height, 11.37 ft), from rating curve extended above 1,800 cfs on basis of slope-area determinations at gage heights 10.51 and 11.37 ft; minimum, 1.9 cfs June 25, 1949; minimum daily, 3.0 cfs Aug. 28, 1949.
Flood in September 1938 reached a stage of 17.9 ft, from floodmarks.

Remarks.--Records excellent except those for period of ice effect, which are fair. Occasional diurnal fluctuation at low flow caused by sawmill above station; more frequent prior to 1946.

Revisions (water years).--WSP 1301: 1946(M), 1948-49(M).

Rating tables, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from debris June 8-14)

Oct. 1 to Feb. 16

2.09	4.6	3.5	170
2.2	7.7	4.0	299
2.4	16	5.0	620
2.7	40	6.0	1,100
3.0	78		

Feb. 17 to Sept. 30

2.7	40	4.0	276
3.0	76	5.0	620
3.5	160		

Note.--Same as preceding table below 2.7 ft and above 5.0 ft.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.1	28	30	40	68	306	164	184	114	71	28	97
2	4.8	21	29	49	63	743	152	164	152	59	20	39
3	4.8	18	25	47	60	639	187	274	130	49	19	29
4	4.6	16	26	44	58	810	141	724	113	40	35	34
5	4.6	14	55	41	55	316	128	410	121	37	29	24
6	9.7	13	57	38	54	230	141	282	103	50	23	18
7	38	15	806	38	53	189	258	*230	93	40	18	16
8	20	18	254	34	52	170	290	286	*80	32	16	16
9	13	18	152	35	52	152	225	552	*71	26	15	18
10	9.8	17	*289	39	51	152	174	400	66	23	15	18
11	8.8	16	202	36	49	136	193	502	63	21	16	382
12	*9.4	15	144	36	46	114	232	328	46	20	14	243
13	9.4	14	124	34	43	106	178	258	41	16	13	*95
14	8.8	13	119	32	45	108	158	216	46	21	12	71
15	8.0	13	146	33	53	103	147	184	368	49	11	57
16	7.4	*13	115	33	70	95	166	240	191	*27	11	106
17	6.8	12	74	*34	300	92	632	189	123	21	9.4	266
18	6.8	12	63	32	230	90	1,020	154	95	18	8.8	147
19	6.5	11	65	32	205	87	480	136	79	16	8.4	149
20	6.5	11	72	34	190	428	325	127	71	16	8.8	204
21	6.5	11	82	55	*220	306	258	346	64	16	8.4	116
22	6.5	11	95	95	800	191	218	773	53	22	8.0	103
23	6.2	45	115	72	418	162	211	376	66	36	7.4	80
24	6.2	49	78	62	271	154	195	263	75	38	6.8	67
25	10	62	72	56	253	173	168	211	56	31	6.8	62
26	29	119	75	53	232	319	149	174	55	28	6.5	70
27	18	60	60	160	263	258	168	139	125	25	6.5	67
28	21	44	62	130	242	198	484	127	87	20	6.2	56
29	48	36	58	92	-	*216	304	136	86	20	5.9	*48
30	104	31	54	82	-------	202	220	232	82	23	7.4	44
31	41	---	50	75	-------	174	-------	141	-------	24	143	-------
Total	489.2	776	3,648	1,673	4,496	7,419	7,766	8,758	2,915	935	543.3	2,742
Mean	15.8	25.9	118	54.0	161	239	259	283	97.2	30.2	17.5	91.4
Cfsm	0.219	0.359	1.63	0.748	2.23	3.31	3.59	3.92	1.35	0.418	0.242	1.27
In.	0.25	0.40	1.88	0.86	2.32	3.82	4.00	4.51	1.50	0.48	0.28	1.41

Calendar year 1953: Max 1,690 Min 3.2 Mean 139 Cfsm 1.93 In. 26.06
Water year 1953-54: Max 1,020 Min 4.6 Mean 116 Cfsm 1.61 In. 21.71

Peak discharge (base, 1,750 cfs).--Mar. 3 (10:30 p.m.) 2,290 cfs (7.74 ft); Apr. 17 (11:30 p.m.) 1,920 cfs (7.25 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 17 to Feb. 22.

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 1954.

Gage.--Water-stage recorder. Datum of gage is 218.63 ft above mean sea level, datum of 1929.

Average discharge.--12 years, 9,547 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 57,600 cfs Apr. 18 (gage height, 21.98 ft); minimum daily, 171 cfs Oct. 4.
1942-54: Maximum discharge, 97,000 cfs Mar. 27, 1953 (gage height, 30.37 ft); minimum daily, 115 cfs Aug. 31, 1952.
Maximum stage known, 43.8 ft Mar. 19, 1936, from floodmarks.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are good. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Comerford Station Pond (see p. 233), and other reservoirs (combined usable capacity, about 14½ billion cubic feet).

Rating table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

3.9	164	7.0	4,230
4.0	206	10.0	11,700
4.5	488	15.0	28,500
5.0	930	20.0	48,700
5.5	1,510	22.0	57,700
6.0	2,270		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,380	943	4,090	2,440	4,300	15,000	9,900	24,400	12,000	17,400	3,540	a16,000
2	1,330	3,010	3,670	2,550	4,600	26,000	9,970	22,400	16,500	14,300	7,460	a15,000
3	399	2,570	3,660	1,920	4,700	28,100	9,930	22,100	18,600	11,400	9,140	a12,000
4	171	3,200	3,710	3,930	3,700	36,000	8,230	29,100	16,500	5,560	8,670	a10,000
5	2,810	3,130	5,030	4,380	4,800	28,200	7,390	34,200	16,800	4,250	5,970	a6,000
6	2,110	2,900	5,360	4,220	1,500	22,300	8,520	29,700	16,100	7,820	5,830	a2,600
7	2,090	1,850	19,900	3,080	2,700	16,600	15,200	25,400	20,100	7,520	3,950	a3,600
8	2,160	570	22,600	4,200	4,300	12,900	28,700	21,700	22,400	6,580	2,470	a7,200
9	3,080	2,630	19,300	3,000	3,500	13,200	40,100	30,000	*23,400	5,540	5,570	9,870
10	1,110	3,180	19,900	950	4,600	12,200	34,000	37,500	21,800	4,220	4,320	13,000
11	587	1,970	16,600	3,700	3,900	11,900	32,200	45,000	18,400	1,910	4,430	17,500
12	1,690	3,140	16,300	3,000	4,000	11,900	44,300	42,500	16,000	4,010	4,220	27,400
13	3,000	1,490	13,000	4,700	2,000	10,100	40,600	35,100	12,600	4,500	4,240	28,800
14	2,540	552	9,590	2,700	1,700	8,700	35,500	29,700	8,180	a4,200	4,970	26,500
15	2,350	452	9,030	2,600	3,500	7,370	32,100	24,600	13,100	a4,300	3,100	*25,100
16	2,080	*2,140	9,940	2,700	4,500	7,230	29,900	22,200	15,000	*4,360	4,440	20,600
17	1,570	2,390	6,680	2,100	9,200	7,150	36,400	18,200	14,000	2,970	4,570	20,000
18	198	2,370	6,170	3,100	10,000	7,590	56,100	16,500	11,800	666	4,800	18,100
19	2,350	2,440	2,470	3,500	11,000	7,420	55,700	15,200	9,070	3,350	4,370	16,200
20	2,950	2,650	2,340	4,600	9,000	10,100	53,900	14,300	5,690	3,200	5,570	21,400
21	2,290	1,140	6,160	4,600	*6,320	16,400	50,000	16,800	5,810	3,290	2,020	22,300
22	2,000	931	7,150	3,600	16,200	12,300	47,900	28,800	5,580	5,020	618	20,000
23	2,440	5,010	7,020	4,500	25,600	11,700	49,000	24,500	7,160	5,220	2,960	15,100
24	1,170	3,280	8,070	1,400	21,400	9,790	53,300	21,300	7,890	4,340	3,350	12,600
25	766	5,720	5,140	4,600	18,300	8,800	55,700	19,400	8,050	3,880	3,750	12,600
26	1,980	9,900	5,340	4,600	17,400	9,600	50,900	15,800	5,490	5,540	2,980	10,000
27	1,850	11,500	5,170	7,000	16,000	12,400	40,700	15,200	5,100	4,670	2,740	7,360
28	2,780	9,030	5,860	7,600	15,400	11,400	38,000	13,200	11,200	4,940	716	9,170
29	3,310	5,500	5,790	5,200	-	9,030	35,600	11,300	19,400	5,140	536	9,720
30	5,670	3,840	6,370	1,200	--------	11,200	28,400	16,100	19,900	5,000	2,400	8,890
31	3,510	--------	4,800	2,100	--------	10,900	--------	15,900	--------	4,600	a3,900	--------
Total	64,721	99,428	266,210	109,770	234,120	423,480	1,038,140	738,100	403,620	169,698	127,600	444,610
Mean	2,088	3,314	8,587	3,541	8,361	13,660	34,600	23,810	13,450	5,474	4,116	14,820
(†)	-742	-196	+198	-1,335	-625	-1,535	+4,983	+2,297	+97	-776	-475	+644

Adjusted for change in reservoir contents

Mean	1,811	3,239	8,661	3,043	8,103	13,090	36,530	24,670	13,490	5,184	3,939	15,070
Cfsm	0.330	0.590	1.58	0.554	1.48	2.38	6.65	4.49	2.46	0.944	0.717	2.74
In.	0.38	0.66	1.82	0.64	1.54	2.75	7.42	5.18	2.74	1.09	0.83	3.06

	Observed			Adjusted				
Calendar year 1953:	Max 88,300	Min 164	Mean 9,440	Mean 9,447	Cfsm 1.72	In. 23.35
Water year 1953-54:	Max 56,100	Min 171	Mean 11,290	Mean 11,370	Cfsm 2.07	In. 28.11

Peak discharge (base, 44,000 cfs).--Apr. 12 (12:30 to 1:30 p.m.) 47,500 cfs (19.73 ft); Apr. 18 (9:30 to 10:30 a.m.) 57,600 cfs (21.98 ft); May 11 (3 to 4 p.m.) 47,900 cfs (19.82 ft).

* Discharge measurement made on this day.

† Change in contents in First Connecticut and Second Connecticut Lakes, Lake Francis, Comerford Station Pond, Union Village Reservoir, 4 reservoirs in Mascoma River basin, and Sunapee Lake, in millions of cubic feet.

a No gage-height record; discharge estimated on basis of recorded range in stage, powerplant records, and records for Saxtons River at Saxtons River, Vt.

Note.--Stage-discharge relation affected by ice Jan. 8 to Feb. 20.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 375 ft (from topographic map).

Average discharge.--14 years, 117 cfs.

Extremes.--Maximum discharge during year, 2,270 cfs Apr. 18 (gage height, 7.19 ft), from rating curve extended above 1,200 cfs by logarithmic plotting; minimum, 5.6 cfs Aug. 28, 29.

1940-54: 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; more frequent prior to 1945.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 21				Feb. 22 to Sept. 30			
1.4	6.0	3.5	154	1.4	5.1	3.5	155
1.6	11	4.0	254	1.6	8.8	4.0	248
1.8	18	4.5	395	1.9	18	4.5	395
2.1	26	5.0	577	2.2	30	5.0	605
2.5	49	6.0	1,140	2.6	55	6.0	1,220
3.0	95			3.0	91	7.0	2,060

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.4	30	50	33	76	277	167	191	123	63	23	78
2	6.0	23	46	40	70	459	150	167	135	50	16	34
3	6.0	20	40	50	65	461	170	202	150	40	14	22
4	6.0	18	38	50	64	813	128	*602	131	32	24	19
5	6.2	16	85	46	63	381	114	507	152	31	21	14
6	9.2	14	90	43	58	260	119	337	150	57	17	12
7	16	17	1,100	40	54	208	170	258	119	38	13	10
8	17	29	408	30	52	180	210	252	*101	28	11	11
9	13	28	244	27	51	150	186	503	85	25	11	13
10	11	27	536	36	50	142	146	491	74	22	11	15
11	11	25	*418	36	47	121	177	680	65	19	12	723
12	*11	22	275	36	45	106	277	463	54	19	11	584
13	10	21	228	36	41	93	206	334	46	17	9.8	244
14	9.8	20	219	36	42	95	172	260	44	16	8.8	141
15	9.6	19	257	35	44	93	154	216	132	39	8.4	95
16	9.3	*18	186	34	52	82	169	384	127	26	8.4	111
17	9.0	18	115	*34	210	83	683	330	82	*19	8.0	301
18	8.8	18	88	33	170	80	1,590	225	61	16	7.3	196
19	8.5	17	80	34	135	77	750	186	50	15	7.1	168
20	8.3	16	100	36	145	399	479	162	43	13	7.3	218
21	8.0	16	107	55	250	356	357	242	38	14	7.1	140
22	7.8	16	118	80	*1,080	218	293	578	37	15	6.7	123
23	7.8	56	139	65	634	177	258	487	37	12	8.4	92
24	7.4	68	90	56	388	160	242	327	42	13	7.5	76
25	9.2	139	88	50	381	167	204	258	36	12	*6.4	68
26	18	264	88	47	337	207	197	208	33	13	5.9	71
27	20	124	72	140	307	*265	187	165	43	13	5.9	67
28	24	86	63	150	267	202	395	149	44	12	5.6	56
29	43	69	69	120	-	225	318	154	61	12	5.6	*47
30	85	56	62	100	-------	214	233	234	80	14	6.1	42
31	43	---	50	84	-------	179	-------	166	-------	16	60	-------
Total	465.3	1,310	5,549	1,692	5,178	6,930	8,901	9,718	2,375	731	374.3	3,791
Mean	15.0	43.7	179	54.6	185	224	297	313	79.2	23.6	12.1	126
Cfsm	0.181	0.528	2.16	0.660	2.24	2.71	3.59	3.78	0.958	0.285	0.146	1.52
In.	0.21	0.59	2.50	0.76	2.33	3.12	4.00	4.37	1.07	0.33	0.17	1.70

Calendar year 1953: Max 1,240 Min 5.7 Mean 142 Cfsm 1.72 In. 23.39
Water year 1953-54: Max 1,590 Min 5.6 Mean 129 Cfsm 1.56 In. 21.15

Peak discharge (base, 1,000 cfs).--Dec. 7 (6 a.m.) 1,860 cfs (6.93 ft); Feb. 22 (5 to 6 a.m.) about 1,200 cfs; Mar. 4 (12 to 12:30 a.m.) 1,180 cfs (5.95 ft); Apr. 18 (12:30 a.m.) 2,270 cfs (7.19 ft); Sept. 11 (5 p.m.) 2,020 cfs (6.96 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Jan. 18 to Feb. 4, Feb. 6, 13, 15, 17-20; discharge estimated on basis of weather records and records for Otter Brook near Keene and Saxtons River at Saxtons River, Vt. Stage-discharge relation affected by ice Dec. 27, Dec. 30 to Jan. 3, Jan. 6-8, 12-14, 17, Feb. 12-16, 21, 22, and at times during periods of no gage-height record.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 640 ft (from topographic map).

Average discharge.--8 years, 368 cfs.

Extremes.--Maximum discharge during year, 4,460 cfs Dec. 7 (gage height, 8.75 ft); minimum, 11 cfs Oct. 2-5, Aug. 29.
1946-54: Maximum discharge, 29,500 cfs Dec. 31, 1948 (gage height, 14.87 ft), from rating curve extended above 9,800 cfs by logarithmic plotting and verified by slope-area determination of peak flow; minimum, 5.0 cfs Aug. 28, 1949.

Remarks.--Records good except those for periods of ice effect, which are fair. Diurnal fluctuation caused by mill above station.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

3.6	9.3	5.0	245
3.7	13	5.5	460
3.9	25	6.0	750
4.1	45	7.0	1,680
4.4	90	8.0	3,060
4.7	154		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	107	92	95	140	834	415	505	262	253	118	929
2	11	88	87	85	130	2,500	384	433	774	221	107	278
3	11	72	71	105	125	1,530	485	664	584	173	73	162
4	11	54	85	100	120	2,240	348	1,820	406	132	156	190
5	11	48	272	95	115	916	315	1,180	550	117	216	122
6	16	40	271	90	110	590	394	708	415	147	140	90
7	100	45	2,740	85	105	456	1,910	*573	379	113	87	75
8	106	57	884	75	100	410	2,490	688	300	87	73	78
9	61	68	*468	76	105	352	1,690	1,800	228	72	66	82
10	44	62	1,530	80	105	366	1,010	1,430	190	62	58	87
11	36	60	904	77	100	320	1,500	2,030	*176	55	57	611
12	36	58	500	74	95	265	2,360	1,100	140	49	58	*928
13	42	*57	388	71	90	218	1,200	764	122	44	58	329
14	38	60	330	67	100	225	998	555	115	43	52	322
15	32	57	379	64	120	215	868	451	1,250	113	41	299
16	*29	58	250	64	190	185	972	442	717	80	36	562
17	26	58	170	64	880	185	2,380	384	406	*53	32	1,870
18	24	53	140	63	668	165	2,470	296	256	45	29	764
19	24	53	150	62	535	170	1,450	249	187	37	26	629
20	22	53	170	67	490	1,320	1,060	225	147	34	25	910
21	21	49	190	150	485	1,490	860	823	124	32	24	438
22	20	46	220	240	1,150	667	668	2,160	120	35	22	392
23	19	141	280	140	*1,070	475	694	1,040	1,310	35	20	296
24	19	222	210	125	668	442	650	644	672	43	19	218
25	22	158	190	115	572	470	485	540	343	52	18	193
26	41	450	170	110	550	868	410	410	260	45	16	205
27	53	214	150	260	614	776	448	308	442	41	13	202
28	53	147	140	400	560	550	1,840	268	505	35	12	168
29	152	117	155	220	-	650	1,120	330	379	34	11	*135
30	414	100	140	170	-------	*662	668	554	300	61	15	120
31	179	...	125	150	-------	480	-------	343	-------	75	873	-------
Total	1,685	2,852	11,851	3,639	10,092	20,992	32,542	23,717	12,059	2,418	2,551	11,684
Mean	54.4	95.1	382	117	360	677	1,085	765	402	78.0	82.3	389
Cfsm	0.304	0.531	2.13	0.654	2.01	3.78	6.06	4.27	2.25	0.436	0.460	2.17
In.	0.35	0.59	2.46	0.76	2.10	4.36	6.76	4.93	2.51	0.50	0.53	2.43

Calendar year 1953: Max 6,500 Min 5.1 Mean 399 Cfsm 2.23 In. 30.27
Water year 1953-54: Max 2,740 Min 11 Mean 373 Cfsm 2.08 In. 28.28

Peak discharge (base, 4,500 cfs).--No peak above base.
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 16 to Feb. 17, Feb. 22, Mar. 11, 12, 15-19, Apr. 5.

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 1954.

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.--30 years, 615 cfs.

Extremes.--Maximum discharge during year, 7,890 cfs Dec. 7 (gage height, 9.33 ft); minimum, 25 cfs Oct. 3-5.

1919-23, 1928-54: 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 determination at gage height 19.3 ft and slope-area determinations 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.

Revisions (water years).--WSP 756: Drainage area. WSP 1231: 1920-21(M), 1922-23, 1929-31(M).

Rating tables, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 1				Mar. 2 to Sept. 30			
3.8	21	5.0	475	3.8	21	5.0	495
3.9	29	5.5	840	3.9	29	5.5	875
4.0	42	6.0	1,330	4.0	42	6.0	1,370
4.1	61	7.0	2,550	4.1	62	7.0	2,710
4.4	166	8.0	4,370	4.4	170	8.0	4,550
4.7	301	9.0	6,920	4.7	314	9.0	6,920

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	200	158	160	250	1,370	790	911	488	400	205	1,650
2	26	146	146	145	230	4,710	695	766	939	348	179	519
3	26	131	120	180	220	2,710	866	1,030	893	288	134	283
4	25	96	127	180	210	4,300	642	2,920	621	224	195	353
5	25	83	308	160	205	1,770	572	2,120	782	192	283	238
6	30	73	437	150	200	1,160	642	1,290	635	228	233	170
7	106	67	4,900	150	180	902	2,400	665	579	201	154	130
8	174	83	1,600	130	175	807	3,690	*1,120	469	158	112	138
9	*110	106	*832	135	180	665	2,710	3,170	376	126	101	138
10	73	102	2,450	140	180	665	1,560	2,460	314	108	88	134
11	58	99	1,670	135	175	607	1,810	3,340	*283	94	88	1,040
12	56	96	903	125	170	502	3,720	1,920	252	84	84	1,900
13	56	*86	680	120	150	456	1,850	1,360	210	78	81	688
14	58	89	575	115	170	443	1,520	1,040	201	72	78	502
15	52	89	638	110	190	424	1,320	832	1,510	196	65	523
16	48	86	500	110	300	353	1,370	816	1,200	170	60	534
17	44	92	300	110	1,500	364	3,360	702	688	108	51	*2,860
18	42	86	240	105	1,300	348	4,720	565	462	*84	45	1,280
19	40	86	260	*105	1,050	336	2,500	482	336	72	42	892
20	38	83	290	105	980	1,930	1,840	436	267	62	40	1,530
21	37	76	320	200	970	2,600	1,460	1,210	224	60	40	774
22	36	73	380	420	1,900	1,230	1,180	4,220	188	60	37	635
23	36	155	500	260	*2,120	902	1,110	2,000	1,200	60	34	509
24	34	377	380	210	1,410	807	1,140	1,250	985	65	33	388
25	37	244	330	200	1,190	858	858	1,100	495	81	33	325
26	61	665	310	190	1,150	1,510	726	824	370	78	31	342
27	89	389	280	380	1,330	1,480	695	635	630	75	30	320
28	86	258	250	700	1,100	1,040	2,620	544	665	62	28	*288
29	193	208	270	400	-	1,160	1,950	558	579	60	27	233
30	639	174	240	310	-------	*1,280	1,200	914	456	75	28	183
31	342	----	210	270	-------	902	-------	658	-------	116	1,070	-------
Total	2,704	4,598	20,604	6,210	19,185	38,591	51,516	41,858	17,297	4,085	3,709	19,499
Mean	87.2	153	665	200	685	1,245	1,717	1,350	577	132	120	650
Cfsm	0.283	0.497	2.16	0.649	2.22	4.04	5.57	4.38	1.87	0.429	0.390	2.11
In.	0.33	0.56	2.49	0.75	2.32	4.66	6.22	5.05	2.09	0.49	0.45	2.35

Calendar year 1953: Max 11,900 Min 18 Mean 706 Cfsm 2.29 In. 31.12
Water year 1953-54: Max 4,900 Min 25 Mean 630 Cfsm 2.05 In. 27.76

Peak discharge (base, 8,800 cfs).--No peak above base.
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 16 to Feb. 22.

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, and 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 1954.

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.--10 years (1944-54), 11,000 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 65,000 cfs Apr. 18 (gage height, 199.50 ft); minimum daily, 332 cfs Nov. 22.
1936, 1938, 1944-54: Maximum discharge, 176,000 cfs Mar. 19, 20, 1936 (gage height, 128.8 ft, datum then in use), from rating curve extended above 69,000 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, Comerford Station Pond (see p. 233), and other reservoirs (combined usable capacity, about 15 billion cubic feet).

Revisions.--WSP 1031: Drainage area.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,930	659	5,210	3,110	5,000	16,800	13,600	28,000	16,100	17,400	3,310	15,500
2	1,790	3,070	4,750	2,070	5,400	28,800	12,900	*24,600	14,700	16,000	8,230	15,600
3	492	3,350	4,200	1,990	6,600	32,200	11,300	23,000	19,000	12,800	11,200	13,900
4	478	3,500	3,820	4,790	4,900	40,900	9,290	29,200	17,300	5,700	10,500	11,000
5	3,550	3,340	5,540	5,490	5,400	34,000	8,720	39,000	*17,600	5,910	6,080	3,780
6	2,720	3,310	6,160	5,360	2,100	27,200	9,900	34,600	17,600	8,120	5,530	1,970
7	2,580	1,680	23,900	3,850	2,600	21,400	14,400	29,500	19,500	9,370	2,750	5,410
8	2,370	967	25,600	4,700	6,000	17,200	28,700	25,100	21,900	6,490	2,360	7,900
9	*2,260	2,980	*19,200	3,150	4,500	15,400	40,300	30,000	24,200	6,000	7,160	11,400
10	1,010	3,410	23,700	1,100	5,000	13,300	37,800	40,500	22,100	2,340	5,540	11,700
11	809	2,240	19,000	4,600	5,100	12,100	34,100	49,700	19,600	1,420	4,490	19,900
12	1,370	*3,400	18,000	3,600	5,100	12,200	44,800	49,100	17,100	4,870	6,140	29,400
13	2,290	1,990	15,500	4,500	1,800	12,200	45,800	40,400	15,900	4,270	4,580	30,000
14	3,050	808	13,900	2,900	1,520	10,700	39,100	33,900	11,200	4,590	3,740	27,100
15	2,830	689	12,600	3,600	4,500	8,660	34,800	28,800	12,500	4,640	1,910	25,100
16	2,520	2,940	12,600	2,700	5,400	8,380	32,100	24,700	15,300	4,790	5,250	20,800
17	1,390	2,660	8,290	2,200	9,500	8,840	38,300	22,300	16,000	2,210	4,500	21,600
18	617	2,900	7,610	4,200	*13,000	7,860	60,200	18,500	15,700	1,120	4,380	20,200
19	2,850	2,930	1,210	3,800	12,500	7,650	63,400	17,900	10,000	3,860	4,530	16,900
20	2,840	3,770	1,940	4,600	12,000	12,900	60,400	15,100	5,040	3,500	5,960	21,000
21	2,850	1,590	7,420	6,400	9,860	20,500	58,000	15,500	5,820	4,010	2,190	23,200
22	2,160	332	10,300	6,600	19,100	15,100	55,800	30,200	7,550	5,120	827	21,100
23	2,710	5,250	10,200	3,000	27,000	14,000	54,700	31,100	6,820	5,210	3,440	16,300
24	1,260	5,100	9,840	2,400	23,800	13,200	54,300	23,600	7,150	5,970	3,320	13,900
25	863	7,400	4,240	6,200	20,900	11,500	54,500	21,300	7,950	2,380	*4,160	13,800
26	2,710	12,300	5,320	5,200	19,800	13,400	55,000	18,400	6,330	6,240	2,930	11,400
27	2,490	12,600	5,260	7,000	18,700	14,000	47,400	17,200	4,770	4,820	3,290	9,230
28	3,300	11,500	6,800	11,500	17,700	13,600	41,500	16,400	11,600	5,980	1,530	*10,100
29	3,940	4,450	7,470	8,000	-	11,500	41,200	15,100	18,200	5,480	821	10,200
30	7,410	5,000	7,440	2,100	-------	13,200	33,500	14,200	19,700	5,410	3,090	8,920
31	4,810	-------	6,060	2,500	-------	13,700	-------	16,800	-------	4,550	7,580	-------
Total	74,249	116,115	313,080	133,210	274,780	502,390	1,135,810	823,700	424,230	180,570	141,318	468,310
Mean	2,395	3,870	10,100	4,297	9,814	16,210	37,860	26,570	14,140	5,825	4,559	15,610
(†)	-742	-196	+198	-1,335	-625	-1,535	+4,983	+2,297	+97	-776	-475	+644
Adjusted for change in reservoir contents												
Mean	2,118	3,795	10,170	3,799	9,555	15,630	39,780	27,430	14,180	5,535	4,381	15,860
Cfsm	0.338	0.606	1.62	0.606	1.52	2.49	6.35	4.38	2.26	0.883	0.699	2.53
In.	0.39	0.68	1.87	0.70	1.59	2.88	7.08	5.05	2.52	1.02	0.81	2.82

	Observed			Adjusted			
Calendar year 1953:	Max 95,600	Min 289	Mean 10,750	Mean 10,750	Cfsm 1.72	In. 23.30
Water year 1953-54:	Max 63,400	Min 332	Mean 12,570	Mean 12,650	Cfsm 2.02	In. 27.41

Peak discharge (base, 50,000 cfs).--Apr. 12 (9 to 10:30 p.m.) 50,000 cfs (195.76 ft); Apr. 18 (4:30 to 6 p.m.) 65,000 cfs (199.50 ft); May 11 (9:30 to 10 p.m.) 52,800 cfs (196.44 ft).

* Discharge measurement made on this day.

† Change in contents in First Connecticut and Second Connecticut Lakes, Lake Francis, Comerford Station Pond, Union Village Reservoir, 4 reservoirs in Mascoma River basin, and Sunapee Lake, in millions of cubic feet.

Note.--Stage-discharge relation affected by ice Jan. 11 to Feb. 13, Feb. 15-20.

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 1954.

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.--32 years, 126 cfs.

Extremes.--Maximum discharge during year, 1,420 cfs Apr. 18 (gage height, 6.82 ft); minimum, 6.1 cfs Oct. 24, 25.

1922-54: 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 and slope-area determination at gage height 11.24 ft; maximum gage height, 12.80 ft Mar. 19, 1936, in gage well and in river; minimum discharge, about 1 cfs Oct. 6, 1922, July 10, 1923, Nov. 14, 1952.

Remarks.--Records good except those for periods of ice effect 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), 1941(M).

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 18

1.5	6.4	3.0	147
1.6	10	4.0	355
1.8	22	5.0	665
2.0	36	7.0	1,510
2.5	82		

Apr. 19 to Sept. 30

1.47	7.6	1.6	12
1.5	8.5	1.8	22

Note.--Same as preceding table above 1.8 ft.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.6	36	60	48	62	262	176	206	146	82	19	51
2	7.3	28	58	45	58	382	157	174	132	71	17	30
3	6.4	23	54	40	55	429	152	187	155	58	17	24
4	6.4	21	55	41	54	738	129	*449	142	44	20	26
5	6.6	19	138	42	54	570	110	525	180	40	20	20
6	9.4	16	198	42	49	390	*105	395	224	44	17	17
7	19	20	910	38	47	280	128	308	*187	38	15	15
8	15	31	798	35	45	204	179	256	152	33	13	14
9	11	34	516	31	43	158	228	411	121	28	13	14
10	9.4	32	631	32	41	140	216	556	101	25	14	13
11	9.0	29	*654	32	39	121	214	714	86	22	14	192
12	9.9	27	441	31	37	104	298	640	73	21	13	471
13	9.4	26	345	30	35	93	287	447	64	19	13	392
14	*8.5	23	291	30	35	89	240	340	57	19	11	287
15	8.0	23	289	29	42	86	196	250	118	34	11	176
16	7.6	22	246	*30	54	79	177	357	140	*29	11	121
17	7.3	22	179	30	105	74	419	423	110	23	10	158
18	7.3	*21	130	29	140	72	1,330	352	86	20	9.9	189
19	7.0	21	105	28	128	70	1,000	271	67	19	9.6	183
20	7.0	20	105	33	141	238	609	212	53	18	9.9	232
21	7.0	20	105	45	185	328	405	210	44	19	9.9	194
22	6.6	19	104	70	680	226	322	426	38	18	9.2	158
23	6.6	55	124	60	612	179	275	468	35	18	8.9	125
24	6.4	99	120	50	432	153	252	385	31	17	8.5	93
25	9.0	132	115	46	372	147	216	305	27	16	8.5	75
26	18	322	85	44	342	238	185	238	26	15	8.2	66
27	18	179	67	110	312	278	167	176	55	15	*8.2	58
28	22	103	64	120	275	220	260	141	58	14	7.9	51
29	34	77	61	95	-	210	305	128	73	14	7.6	45
30	70	65	58	80	-------	220	254	214	94	15	7.9	40
31	57	-------	52	70	-------	194	-------	189	-------	17	35	-------
Total	433.7	1,565	7,158	1,486	4,474	6,972	8,991	10,353	2,875	865	397.2	3,530
Mean	14.0	52.2	231	47.9	160	225	300	334	95.8	27.9	12.8	118
Cfsm	0.197	0.734	3.25	0.674	2.25	3.16	4.22	4.70	1.35	0.392	0.180	1.66
In.	0.23	0.82	3.74	0.78	2.34	3.65	4.70	5.42	1.50	0.45	0.21	1.85

Calendar year 1953: Max 1,480 Min 3.6 Mean 153 Cfsm 2.15 In. 29.31
Water year 1953-54: Max 1,330 Min 6.4 Mean 135 Cfsm 1.90 In. 25.69

Peak discharge (base, 1,000 cfs).--Dec. 7 (2:30 p.m.) 1,180 cfs (6.34 ft); Apr. 18 (9 a.m. to 12 m.) 1,420 cfs (6.82 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Jan. 10-15, 18-20, Jan. 23 to Feb. 8, Mar. 5-7; discharge estimated on basis of weather records and records for Ashuelot River at Hinsdale, South Branch Ashuelot River at Webb, near Marlboro, and Otter Brook near Keene. Stage-discharge relation affected by ice Dec. 3, 18-20, Dec. 24 to Feb. 18, Feb. 21, 22, Mar. 16-19.

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 1954.

Gage.--Water-stage recorder and concrete control. Datum of gage is 480.00 ft above mean sea level, datum of 1929 (Corps of Engineers benchmark).

Average discharge.--9 years, 175 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 820 cfs Dec. 9, 14 (gage height, 8.17 ft); minimum daily, 2.8 cfs Oct. 5.
1945-54: Maximum discharge, 1,090 cfs Mar. 31, Apr. 9, 1950 (gage height, 8.94 ft); minimum daily, 0.8 cfs Dec. 4-7, 1948.

Remarks.--Records excellent. Flow regulated by Surry Mountain Reservoir (see p. 233).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

3.9	1.9	5.5	86
4.0	3.0	6.0	155
4.2	6.3	6.5	257
4.4	11	7.0	402
4.7	21	8.0	760
5.0	40	8.5	935

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.1	52	84	77	134	587	242	276	193	131	38	78
2	6.1	38	66	64	108	552	216	234	182	111	26	51
3	4.5	31	55	65	101	485	214	250	205	91	24	34
4	3.6	26	56	66	101	337	185	*373	189	72	38	43
5	2.8	23	59	66	101	686	168	613	191	64	33	31
6	12	21	128	68	83	725	161	609	278	70	28	25
7	24	23	127	68	74	694	180	583	*197	60	22	23
8	20	39	492	60	74	594	223	466	225	52	19	22
9	15	45	714	56	74	337	262	408	160	44	18	20
10	13	40	295	55	74	207	254	609	138	38	19	19
11	12	37	*537	55	74	184	252	341	121	33	20	34
12	14	34	778	55	74	160	321	536	103	*35	18	118
13	13	25	753	56	53	145	335	606	92	30	17	468
14	*12	31	788	56	41	143	298	602	83	28	15	650
15	12	31	704	56	58	138	242	602	132	59	14	613
16	11	28	609	*56	76	125	223	583	161	48	14	468
17	11	27	571	56	123	120	299	587	189	37	13	164
18	11	*25	529	56	184	115	43	598	170	31	13	249
19	10	24	410	56	205	111	412	388	101	28	12	254
20	10	23	216	56	*223	291	683	203	83	26	13	343
21	10	22	225	60	225	412	725	247	70	28	12	268
22	9.8	21	189	81	256	380	722	420	59	26	11	223
23	7.6	52	173	99	567	262	722	571	53	24	11	180
24	5.8	93	171	106	708	214	718	594	50	25	10	143
25	8.9	141	155	91	700	205	722	590	42	22	11	117
26	22	321	146	72	728	306	704	563	42	21	10	103
27	23	315	132	105	725	*356	704	421	98	22	9.8	94
28	30	176	103	180	668	329	668	218	96	20	9.4	82
29	48	115	96	189	-	287	575	176	117	20	8.6	70
30	86	96	98	157	---------	292	350	279	136	22	9.4	63
31	81	---------	98	142	---------	262	---------	250	---------	24	47	---------
Total	558.2	1,975	9,557	2,485	6,612	10,041	11,823	13,796	3,956	1,342	563.2	5,050
Mean	18.0	65.8	308	80.2	236	324	394	445	132	43.3	18.2	168
(†)	+0.2	+5.8	+25.8	+3.2	+20.2	-52.7	+0.7	-1.7	+3.9	-5.3	+0.7	-0.6

Adjusted for change in contents in Surry Mountain Reservoir

Mean	18.1	68.1	318	81.4	244	304	394	444	133	41.3	18.4	168
Cfsm	0.179	0.674	3.15	0.806	2.42	3.01	3.90	4.40	1.32	0.409	0.182	1.66
In.	0.21	0.75	3.63	0.93	2.52	3.47	4.36	5.07	1.47	0.47	0.21	1.86

	Observed			Adjusted			
Calendar year 1953:	Max 865	Min 2.8	Mean 207	Mean 207	Cfsm 2.05	In. 27.84
Water year 1953-54:	Max 788	Min 2.8	Mean 186	Mean 186	Cfsm 1.84	In. 24.95

* Discharge measurement made on this day.
† Change in contents in Surry Mountain Reservoir, in millions of cubic feet.

Otter Brook near Keene, N. H.

Location.--Lat 42°57'55", long 72°14'00", on left bank 10 ft downstream from bridge near State Highway 9, 3½ miles northeast of Keene, Cheshire County, and 3½ miles upstream from Minnewawa Brook.

Drainage area.--42.3 sq mi.

Records available.--October 1923 to September 1954.

Gage.--Water-stage recorder. Concrete control since Nov. 17, 1936. Datum of gage is 716.11 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--31 years, 71.2 cfs.

Extremes.--Maximum discharge during year, 1,070 cfs Apr. 18 (gage height, 5.52 ft); minimum, 1.1 cfs Oct. 4, 5.
1923-54: Maximum discharge, 6,130 cfs Sept. 21, 1938 (gage height, 7.93 ft), from rating curve extended above 1,300 cfs on basis of surface-float measurements and slope-area and contracted-opening determinations at gage heights 7.10 and 7.93 ft; minimum, that of Oct. 4, 5, 1953.

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

Revisions (water years).--WSP 871: Drainage area. WSP 1231: 1924(M), 1928, 1930(M), 1933-34(M), 1941-42(M), 1947(M).

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.85	1.0	3.2	62
1.9	1.3	3.5	119
2.0	1.9	3.8	192
2.1	2.8	4.2	365
2.3	6.0	4.5	515
2.6	14	5.0	785
2.8	22	5.5	1,060
3.0	37		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.2	21	38	33	45	149	104	104	95	76	50	59
2	1.2	16	36	37	42	248	95	91	112	59	22	42
3	1.2	13	35	40	39	238	89	*108	130	45	22	30
4	1.2	11	34	40	39	405	78	252	112	35	32	25
5	1.1	10	90	36	37	240	75	252	121	48	28	22
6	1.7	9.0	130	33	35	175	73	181	*124	48	22	20
7	6.5	11	550	31	34	145	88	151	104	34	18	20
8	4.2	16	300	27	32	121	97	144	91	29	15	20
9	2.4	17	180	23	30	106	93	265	78	24	14	20
10	1.8	16	300	28	30	97	82	292	65	21	16	17
11	1.7	15	250	27	28	89	91	350	56	19	17	250
12	2.1	13	*210	26	26	78	121	274	47	*20	14	306
13	2.1	13	187	26	24	75	108	199	41	16	12	158
14	*2.1	12	168	24	26	73	95	160	37	14	10	117
15	1.8	12	184	25	30	70	91	140	114	35	8.9	88
16	1.7	11	151	25	37	63	88	240	93	22	8.7	84
17	1.6	11	115	25	78	59	247	248	70	19	7.3	126
18	1.6	*11	85	24	76	55	820	178	55	16	6.2	101
19	1.6	11	65	25	71	53	390	144	44	14	6.0	99
20	1.6	10	59	26	72	168	244	124	36	13	6.2	142
21	1.6	9.8	56	40	93	173	189	144	31	15	5.8	115
22	1.6	9.8	64	55	335	135	165	265	25	14	4.9	124
23	1.5	41	88	48	278	110	151	252	22	13	4.4	99
24	1.4	47	82	41	185	97	149	189	21	13	*4.1	82
25	1.9	98	63	37	181	101	128	156	17	12	4.1	73
26	7.0	168	56	35	176	*156	115	133	17	11	4.1	70
27	8.0	100	51	84	170	147	106	115	43	11	3.7	63
28	9.0	60	49	78	156	124	149	99	48	9.8	3.7	59
29	15	45	52	60	-	121	144	89	75	9.5	3.4	53
30	40	40	46	55	-------	121	119	154	95	9.8	3.3	52
31	31	--- ---	40	50	-------	110	-------	124	-------	24	61	-------
Total	158.4	877.6	3,814	1,164	2,405	4,102	4,585	5,617	2,019	749.1	437.8	2,536
Mean	5.11	29.3	123	37.5	85.9	132	153	181	67.3	24.2	14.1	84.5
Cfsm	0.121	0.693	2.91	0.887	2.03	3.12	3.62	4.28	1.59	0.572	0.333	2.00
In.	0.14	0.77	3.35	1.02	2.11	3.61	4.03	4.94	1.78	0.66	0.38	2.23

Calendar year 1953: Max 724 Min 1.1 Mean 78.8 Cfsm 1.86 In. 25.27
Water year 1953-54: Max 820 Min 1.1 Mean 78.0 Cfsm 1.84 In. 25.02

Peak discharge (base, 600 cfs).--Dec. 7 (time unknown) 614 cfs (4.69 ft); Apr. 18 (2:30 a.m.) 1,070 cfs (5.52 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 25 to Nov. 17, Nov. 27 to Dec. 11, Dec. 20, Dec. 24 to Jan. 15, Feb. 6, 9-11; discharge estimated on basis of weather records, recorded range in stage when available, and records for Ashuelot River near Gilsum and Cold River at Drewsville. Stage-discharge relation affected by ice Dec. 17 to Jan. 16, Jan. 21 to Feb. 22, Feb. 24, Mar. 5-7, 12, 16-19, 22, Apr. 4, 5.

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 and Maine Railroad, and 2½ miles south of Marlboro, Cheshire County.

Drainage area.--36.0 sq mi.

Records available.--October 1920 to September 1954 (monthly discharge only for some periods, 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.--34 years, 59.5 cfs.

Extremes.--Maximum discharge during year, 806 cfs Apr. 18 (gage height, 5.37 ft); minimum, 2.4 cfs Oct. 1, 2; minimum daily, 2.4 cfs Oct. 1, 2.
1920-54: 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 determinations 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, 1941(M).

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.7	2.2	3.8	86
1.8	3.6	4.1	149
2.1	10	4.5	300
2.5	23	5.0	555
3.0	42	5.5	920
3.5	61		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	18	22	25	33	101	65	69	53	71	88	*152
2	2.4	12	21	27	31	188	55	62	49	51	44	53
3	2.9	10	18	25	30	166	67	*81	44	25	28	34
4	3.8	9.2	17	26	31	315	52	189	39	17	40	34
5	2.9	8.2	75	25	27	180	58	190	49	15	34	20
6	3.0	7.5	77	25	29	115	47	118	*53	23	25	14
7	4.4	8.0	351	23	26	90	69	89	49	18	17	15
8	4.6	15	208	19	24	89	68	84	40	13	13	32
9	4.9	15	99	21	23	72	61	241	30	10	12	23
10	4.6	15	252	20	22	67	51	215	26	8.7	32	17
11	4.4	13	254	18	21	66	54	227	22	7.5	32	250
12	4.2	11	*120	19	19	55	89	171	20	*7.3	23	426
13	3.6	11	109	19	20	49	68	116	20	6.8	15	144
14	3.3	10	121	18	18	55	58	89	19	12	12	85
15	*3.3	9.2	190	19	23	61	51	76	100	12	9.0	62
16	3.0	8.4	127	19	45	50	50	211	91	9.0	8.7	64
17	3.0	8.4	83	19	90	49	215	197	56	5.5	9.4	130
18	3.0	8.4	63	18	75	48	660	116	41	5.1	9.2	87
19	2.9	* 8.2	53	19	58	38	380	94	33	5.1	9.0	70
20	2.7	8.0	48	20	*56	161	190	80	17	5.5	10	101
21	2.7	11	46	35	82	168	136	105	14	6.6	13	65
22	2.7	7.5	54	42	404	97	105	283	13	7.0	a10	72
23	2.7	44	73	35	226	76	95	222	12	8.0	a8.0	56
24	2.9	58	64	31	120	64	109	144	23	9.4	a6.5	44
25	3.8	105	47	28	136	68	95	114	18	28	a6.5	40
26	5.7	202	43	28	136	*155	89	92	14	24	a6.0	29
27	8.7	87	38	60	130	116	74	78	14	17	a5.5	30
28	14	55	36	56	105	84	107	60	19	13	4.7	25
29	31	32	35	46	-	80	98	54	58	12	4.2	20
30	53	25	35	40	-------	79	78	76	96	12	4.0	20
31	33	--- ---	30	36	-------	66	-------	60	-------	18	71	-------
Total	228.5	840.0	2,809	861	2,040	3,088	3,374	4,003	1,132	482.5	809.7	2,214
Mean	7.37	28.0	90.6	27.8	72.9	99.0	112	129	37.7	15.6	19.7	73.8
Cfsm	0.205	0.778	2.52	0.772	2.02	2.75	3.11	3.58	1.05	0.433	0.547	2.05
In.	0.24	0.87	2.90	0.89	2.11	3.17	3.49	4.14	1.17	0.50	0.63	2.29

Calendar year 1953: Max 680 Min 2.4 Mean 75.9 Cfsm 2.11 In. 28.61
Water year 1953-54: Max 660 Min 2.4 Mean 59.3 Cfsm 1.65 In. 22.40

Peak discharge (base, 550 cfs).--Apr. 18 (4:30 a.m.) 806 cfs (5.37 ft); Sept. 11 (10 p.m.) 667 cfs (5.18 ft).

* 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 Otter Brook near Keene and Ashuelot River near Gilsum.

Note.--Stage-discharge relation affected by ice Dec. 17-20, Dec. 23 to Feb. 21, Feb. 24, Mar. 5-7, 11, 16-18.

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 1954.
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.--44 years, 657 cfs.
Extremes.--Maximum discharge during year, 3,470 cfs Apr. 19 (gage height, 6.83 ft); minimum, 50 cfs Oct. 25; minimum daily, 60 cfs Oct. 5.
1907-11, 1914-54: Maximum discharge, 18,500 cfs (revised) Mar. 29, 1920 (gage height, 10.1 ft, from graph based on gage readings), from rating curve extended above 8,000 cfs; 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 for the water year 1920 has been revised to 18,500 cfs Mar. 29, 1920 (gage height, 10.1 ft, from graph based on gage readings), superseding figure published in WSP 756.
Remarks.--Records excellent except those for periods of ice effect, which are good. Flow regulated by mills above station. High flow affected by Surry Mountain Reservoir since 1942 (see p. 233).
Revisions (water years).--WSP 661: Drainage area. WSP 781: 1907-11 calendar years, 1914-34. WSP 1301: 1907-19(M), 1921-33(M), 1941(M).

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.9	54	5.0	1,070
3.2	103	6.0	2,170
3.6	212	7.0	3,790
4.0	390		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	69	326	396	b400	b510	1,540	982	1,130	862	557	265	427
2	69	234	357	b355	493	1,670	945	*930	798	487	352	445
3	67	193	312	352	457	1,830	900	900	952	390	256	288
4	63	169	284	352	445	2,180	798	1,460	885	280	276	226
5	60	149	395	374	451	2,130	728	2,000	*855	241	280	184
6	70	134	674	379	440	1,910	714	1,920	900	256	241	172
7	121	126	1,570	390	384	1,670	721	1,650	878	264	202	158
8	142	144	2,090	316	362	1,500	777	1,470	756	230	158	177
9	117	174	1,800	280	352	1,330	819	1,650	694	202	152	193
10	99	183	1,860	264	352	1,080	798	1,910	596	180	174	193
11	81	177	*2,160	b280	335	938	756	2,090	531	155	196	590
12	80	160	2,030	302	307	833	855	1,990	463	142	196	2,200
13	85	139	1,870	302	268	777	930	1,830	384	158	166	1,840
14	83	134	1,810	284	248	721	892	1,620	357	144	144	1,410
15	*72	114	2,040	*293	260	714	819	1,460	622	160	114	1,210
16	70	119	2,010	312	312	680	742	1,480	1,050	230	114	1,090
17	67	117	1,630	268	570	680	1,060	1,830	900	186	110	1,080
18	63	112	1,270	237	791	661	2,900	1,780	735	*147	108	*915
19	63	*108	1,100	256	*885	622	3,200	1,530	570	134	103	885
20	63	103	952	276	900	953	2,370	1,200	401	139	103	960
21	66	101	833	352	960	1,560	1,960	1,080	330	139	105	1,020
22	77	97	826	481	1,810	1,430	1,770	1,700	312	126	93	885
23	72	142	840	469	2,340	1,200	1,610	2,050	288	142	93	791
24	67	376	770	401	2,050	990	1,590	1,920	284	152	81	661
25	64	475	668	368	1,850	922	1,540	1,710	268	166	85	544
26	95	977	628	357	1,840	1,230	1,440	1,530	241	196	85	469
27	121	1,130	590	481	1,790	1,430	1,400	1,360	212	186	81	423
28	152	878	512	784	1,670	1,250	1,470	1,150	264	174	81	374
29	358	590	505	791	-	1,110	1,600	930	335	139	75	335
30	518	445	481	700	-------	1,070	1,440	930	493	158	72	297
31	505	-------	463	b575	-------	*1,030	-------	1,010	-------	158	104	-------
Total	3,699	8,326	33,726	12,031	23,432	37,641	38,526	47,200	17,216	6,418	4,665	20,442
Mean	119	278	1,088	388	837	1,214	1,284	1,523	574	207	150	681
(†)	+0.2	+5.8	+25.8	+3.2	+20.2	-52.7	+0.7	-1.7	+3.9	-5.3	+0.7	-0.6

Adjusted for change in contents in Surry Mountain Reservoir

Mean	119	280	1,098	389	845	1,195	1,284	1,522	575	205	151	681
Cfsm	0.283	0.667	2.61	0.926	2.01	2.85	3.06	3.62	1.37	0.488	0.360	1.62
In.	0.33	0.74	2.01	1.07	2.10	3.28	3.41	4.18	1.53	0.56	0.41	1.81

	Observed			Adjusted			
Calendar year 1953:	Max 4,020	Min 29	Mean 802	Mean 802	Cfsm 1.91	In. 25.91	
Water year 1953-54:	Max 3,200	Min 60	Mean 694	Mean 694	Cfsm 1.65	In. 22.43	

Peak discharge (base, 3,000 cfs).--Apr. 19 (7 a.m.) 3,470 cfs (6.83 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
† Change in contents in Surry Mountain Reservoir, in millions of cubic feet.

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 2¼ miles northwest of Winchendon, Worcester County.

Drainage area.--18.2 sq mi.

Records available.--May 1916 to September 1954. 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, at site 450 ft downstream at same datum.

Average discharge.--38 years, 30.0 cfs.

Extremes.--Maximum discharge during year, 256 cfs Apr. 18 (gage height, 8.79 ft); minimum, 0.6 cfs Oct. 4.
1916-54: 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 good except those for periods of ice effect, no gage-height record, or backwater from stone dam, which are 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).

Rating tables, water year 1953-54, except periods of ice effect or backwater from stone dam (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 18				Apr. 19 to Sept. 30			
4.9	0.6	6.5	45	5.1	2.8	6.5	47
5.0	1.6	7.0	72	5.3	5.8	7.0	78
5.3	5.8	8.0	157	5.6	12	8.0	164
5.6	12	8.5	217	6.0	24	9.0	291
6.0	24						

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	5.4	20	b20	b30	65	40	41	28	22	7.9	*22
2	.9	4.7	20	12	25	73	37	37	27	19	5.1	18
3	.8	4.4	19	11	23	89	36	51	24	12	8.3	17
4	.7	3.8	18	21	22	107	31	72	25	11	8.1	15
5	.7	4.4	35	20	20	*103	30	86	23	12	9.3	16
6	1.0	7.2	50	19	15	82	29	77	22	18	7.2	16
7	1.5	7.3	72	17	b17	67	30	66	30	18	4.2	22
8	1.4	5.8	94	15	23	56	31	54	25	18	4.2	20
9	1.0	7.9	75	11	21	45	30	69	22	16	9.0	17
10	.9	16	105	10	22	42	24	85	*21	9.2	12	17
11	.9	15	115	20	18	40	29	91	15	7.9	7.3	49
12	1.0	16	94	18	b15	35	40	86	9.8	15	6.4	118
13	*.9	13	80	16	b9.8	30	31	73	10	14	6.4	119
14	.9	7.4	90	b13	9.4	35	34	57	18	13	5.0	93
15	1.0	5.9	100	b16	19	33	31	48	28	12	5.9	63
16	1.0	14	90	10	19	31	32	71	28	11	13	56
17	1.0	13	75	b10	22	27	52	96	34	6.6	9.8	60
18	1.1	14	60	b13	21	25	189	89	30	5.9	10	72
19	1.0	12	45	17	22	25	235	70	16	11	8.8	63
20	1.2	*12	36	17	21	40	168	54	14	11	4.5	53
21	1.3	4.4	38	21	31	70	115	50	20	12	4.5	53
22	1.3	4.5	42	b20	71	67	*90	82	17	10	4.4	52
23	1.2	18	42	b12	85	54	76	98	18	9.4	8.9	44
24	1.3	20	40	11	73	46	67	*91	16	6.6	10	38
25	1.8	23	38	22	70	45	60	73	15	7.5	8.9	30
26	1.9	20	35	20	71	61	55	53	9.6	10	5.3	27
27	1.5	19	32	31	71	63	46	46	8.6	11	4.2	28
28	5.7	18	32	35	70	56	50	40	13	12	3.8	22
29	4.1	20	34	33	-	50	54	31	18	*12	3.7	18
30	6.1	23	*29	29	-------	48	48	30	21	11	8.7	18
31	5.6	-------	26	27	-------	43	-------	28	-------	8.1	21	-------
Total	51.6	359.1	1,681	567	936.2	1,653	1,820	1,995	606.0	372.2	235.8	1,256
Mean	1.66	12.0	54.2	18.3	33.4	53.3	60.7	64.4	20.2	12.0	7.61	41.9
Cfsm	0.091	0.659	2.98	1.01	1.84	2.93	3.34	3.54	1.11	0.659	0.418	2.30
In.	0.11	0.73	3.43	1.16	1.91	3.38	3.72	4.08	1.24	0.76	0.48	2.57

Calendar year 1953: Max 335 Min 0.5 Mean 35.1 Cfsm 1.93 In. 26.16
Water year 1953-54: Max 235 Min 0.7 Mean 31.6 Cfsm 1.74 In. 23.57

Peak discharge (base, 150 cfs).--Apr. 18 (11 to 12 p.m.) 256 cfs (8.79 ft).
* Discharge measurement made on this day
b Stage-discharge relation affected by ice.
Note.--No gage-height record Dec. 2-30, Jan. 2-5, 8-13, 24-28; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage when available, and records for Millers River near Winchendon, Priest Brook near Winchendon, and Ware River near Barre. Backwater from stone dam Oct. 1-8.

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 1954.

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.--38 years, 142 cfs.

Extremes.--Maximum discharge during year, 961 cfs Apr. 19 (gage height, 7.56 ft); minimum daily, 7.4 cfs Oct. 1.
1916-54: 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 or no gage-height record, which are fair. Flow regulated by powerplant and by Lake Monomonac and other reservoirs.

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 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from grass May 9-28, Sept. 1, 2, 11-22)

3.6	7.0	4.5	139
3.7	12	5.0	311
3.8	19	6.0	524
4.0	39	7.0	780
4.2	70	7.5	940

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.4	85	64	b115	80	219	160	174	164	158	70	409
2	41	41	74	111	110	273	155	160	121	151	68	287
3	17	29	115	113	66	458	145	230	130	139	65	200
4	13	29	99	112	45	520	140	300	120	82	72	161
5	11	70	58	77	115	464	130	360	105	36	65	145
6	11	92	155	38	26	416	120	330	135	72	53	86
7	12	21	363	33	32	397	135	280	150	103	43	48
8	9.2	34	370	43	45	346	130	230	135	67	36	51
9	9.2	95	414	29	62	294	120	343	*115	62	40	128
10	12	110	485	30	45	242	55	426	47	31	58	127
11	14	31	494	b45	33	*224	90	448	59	26	60	308
12	13	72	430	b55	52	214	130	426	35	52	52	671
13	*13	106	388	b48	23	188	145	378	71	68	28	*665
14	26	23	434	b37	21	198	145	274	111	62	22	558
15	99	21	487	b52	38	200	135	253	140	54	24	384
16	112	24	412	32	70	188	127	424	171	56	32	*354
17	14	26	306	23	206	180	222	470	167	29	30	393
18	11	47	b260	b32	183	174	757	470	155	20	30	384
19	10	*24	b210	*b45	177	144	858	400	100	33	27	362
20	9.2	31	194	b56	170	154	706	320	42	56	21	267
21	9.2	20	190	b72	188	210	*496	260	39	55	19	247
22	8.2	17	188	b62	360	227	354	420	55	49	18	328
23	7.8	55	*193	30	370	176	331	490	110	*46	21	219
24	7.8	81	179	50	258	163	341	440	135	32	22	200
25	9.1	190	170	86	242	170	294	*350	103	30	20	205
26	9.2	216	167	78	228	190	236	285	35	51	16	191
27	7.8	184	143	75	198	210	222	240	28	45	*14	177
28	14	167	130	170	238	200	284	209	48	49	12	166
29	74	145	157	166	-	180	281	188	100	49	11	162
30	131	120	141	50	-------	170	226	194	148	50	15	157
31	99	-------	151	60	-------	160	-------	194	-------	50	142	-------
Total	841.1	2,206	7,621	2,025	3,681	7,549	7,670	9,966	3,074	1,863	1,206	8,040
Mean	27.1	73.5	246	65.3	131	244	256	321	102	60.1	38.9	268
Cfsm	0.327	0.886	2.96	0.787	1.58	2.94	3.08	3.87	1.23	0.724	0.469	3.23
In.	0.38	0.99	3.41	0.91	1.65	3.38	3.44	4.47	1.38	0.83	0.54	3.60

Calendar year 1953: Max 1,410 Min 5.6 Mean 194 Cfsm 2.34 In. 31.74
Water year 1953-54: Max 858 Min 7.4 Mean 153 Cfsm 1.84 In. 24.98

Peak discharge (base, 690 cfs).--Apr. 19 (2 p.m.) 961 cfs (7.56 ft); Sept. 11 (11:30 p.m.) 763 cfs (7.23 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Jan. 30 to Feb. 16, Mar. 26 to Apr. 12, May 2-8, 19-24, June 3-8; discharge estimated on basis of weather records, recorded range in stage when available, powerplant records, and records for Millers River at South Royalston, Priest Brook near Winchendon, and Tarbell Brook near Winchendon. Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

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 1954.

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.--38 years, 33.3 cfs.

Extremes.--Maximum discharge during year, 325 cfs Apr. 18 (gage height, 4.86 ft); minimum, 0.4 cfs Oct. 3, 4, Aug. 27-31.
1916-54: Maximum discharge, 3,000 cfs Sept. 21, 1938 (gage height, 9.90 ft), from rating curve extended above 330 cfs on basis of contracted-opening determinations at gage heights 8.4 and 9.90 ft; minimum, 0.08 cfs several times in September 1929.

Remarks.--Records good. Flow regulated by ponds and mill above station.

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 table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from beaver dam Oct. 1-8)

2.1	0.3	2.7	15
2.15	.6	3.0	34
2.2	1.1	3.5	86
2.3	2.3	4.0	159
2.4	4.2	5.0	358
2.5	6.8		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	11	17	17	24	73	43	44	26	38	7.9	73
2	.5	9.3	16	17	24	88	39	39	20	35	6.5	40
3	.4	7.4	15	18	24	91	37	40	28	27	6.4	30
4	.4	15	14	18	23	121	32	80	26	18	9.7	31
5	.5	7.1	33	17	23	*121	30	110	28	15	7.7	22
6	1.1	3.5	58	17	15	94	29	94	31	15	5.4	15
7	5.4	4.9	101	17	15	66	31	78	32	16	3.4	13
8	3.8	6.6	126	15	16	56	28	64	28	15	3.0	17
9	2.6	7.4	102	14	17	49	30	79	*22	14	5.0	16
10	2.0	7.1	125	14	15	44	28	102	19	12	15	14
11	1.7	7.4	149	14	15	43	28	113	16	6.5	18	50
12	1.3	7.4	124	14	15	35	36	109	14	4.6	16	171
13	*1.1	7.4	105	13	13	29	40	90	13	5.9	14	*143
14	.8	7.1	75	13	14	28	36	65	12	6.2	9.3	110
15	.9	7.1	106	12	13	31	33	55	27	4.6	6.5	76
16	1.1	6.5	96	12	16	29	32	68	49	4.4	6.2	45
17	.8	5.6	75	12	24	28	60	91	60	4.0	5.4	49
18	.7	*5.2	56	12	31	26	272	87	39	3.8	9.7	64
19	.8	4.4	42	12	34	25	278	74	20	2.6	8.5	64
20	.7	4.4	34	17	35	43	188	61	17	2.6	8.1	59
21	.6	3.6	36	27	41	80	123	51	14	3.2	6.9	54
22	.6	3.6	40	28	92	75	*95	86	9.3	3.0	2.6	52
23	.8	10	40	24	130	64	62	106	9.3	*2.8	1.3	48
24	.9	17	34	15	106	53	58	106	11	5.9	1.0	42
25	2.2	25	32	15	92	46	58	*89	8.1	11	.7	35
26	4.2	68	30	23	82	64	52	68	7.1	8.6	.5	28
27	3.4	56	28	36	85	72	47	53	7.4	6.1	*.4	25
28	6.9	38	28	*43	80	64	49	44	8.1	10	.4	20
29	16	24	30	31	-	58	58	36	19	*6.7	.4	14
30	24	16	*23	24	-------	53	52	33	35	7.1	.4	16
31	19	-------	20	24	-------	48	-------	30	-------	6.4	20	-------
Total	105.7	403.0	1,810	585	1,114	1,797	1,984	2,245	655.3	321.0	206.3	1,436
Mean	3.41	13.4	58.4	18.9	39.8	58.0	66.1	72.4	21.8	10.4	6.65	47.9
Cfsm	0.176	0.691	3.01	0.974	2.05	2.99	3.41	3.73	1.12	0.536	0.343	2.47
In.	0.20	0.77	3.47	1.12	2.14	3.44	3.80	4.30	1.26	0.62	0.40	2.75

Calendar year 1953: Max 429 Min 0.1 Mean 41.9 Cfsm 2.16 In. 29.34
Water year 1953-54: Max 278 Min 0.4 Mean 34.7 Cfsm 1.79 In. 24.27

Peak discharge (base, 150 cfs).--Dec. 11 (1:30 to 2 a.m.) 161 cfs (4.01 ft); Apr. 18 (12 p.m.) 325 cfs (4.86 ft); Sept. 12 (6 to 7 a.m.) 191 cfs (4.19 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.

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 1954.

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.--15 years, 311 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 1,370 cfs Apr. 20 (gage height, 6.60 ft); minimum daily, 31 cfs Oct. 1.
1939-54: Maximum discharge, 4,400 cfs Apr. 13, 1940 (gage height, 8.40 ft); minimum daily, 16 cfs Sept. 25, 1939.
Maximum stage known, 15.9 ft Sept. 21 or 22, 1938, from floodmarks.

Remarks.--Records excellent except those for periods of ice effect, which are fair. Flow regulated by Lake Monomonac and other reservoirs, by mills and powerplants, and at high flow by Birch Hill Reservoir since 1941 (see p. 233).

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

3.6	26	5.0	325
3.8	42	5.5	570
4.1	76	6.0	880
4.5	147	7.0	1,790

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	312	215	268	200	560	445	455	*435	390	216	576
2	34	177	196	265	230	576	430	385	330	356	233	758
3	60	116	236	233	200	691	410	312	320	294	186	643
4	38	107	219	240	175	738	385	525	289	216	212	515
5	35	106	268	202	240	940	348	655	252	120	*193	400
6	41	152	420	158	175	880	338	685	272	*134	155	294
7	*68	104	*667	158	135	778	375	625	302	196	127	171
8	66	140	824	155	150	637	352	550	272	148	104	180
9	53	190	845	135	165	520	343	608	244	134	101	222
10	47	219	888	125	145	485	289	758	155	113	146	260
11	46	*143	948	145	135	455	226	831	145	86	199	195
12	45	124	955	*155	135	420	356	845	129	83	186	310
13	42	196	902	145	115	370	410	817	118	106	147	946
14	42	115	859	135	100	375	380	733	208	107	114	1,310
15	91	97	910	140	*115	390	334	608	228	105	97	1,220
16	150	93	925	125	160	366	307	649	390	103	91	1,090
17	67	91	859	110	330	352	406	797	380	89	90	992
18	41	101	715	115	370	330	470	845	334	66	84	880
19	38	98	592	135	360	298	803	817	244	60	84	790
20	38	85	490	160	350	412	1,300	727	138	85	80	721
21	37	85	440	220	380	560	1,320	631	118	99	71	625
22	35	71	435	270	614	*631	1,250	771	114	99	66	*603
23	34	131	455	220	764	545	1,140	880	150	92	60	560
24	39	252	420	200	733	455	1,050	902	264	97	58	450
25	45	406	390	220	649	410	910	866	219	120	59	420
26	78	592	370	230	614	525	764	771	138	116	55	380
27	71	592	343	250	555	540	586	649	109	125	50	348
28	93	495	260	350	586	555	*560	540	104	127	48	307
29	199	410	334	370	-	500	592	445	181	123	45	284
30	390	320	294	210	-------	470	560	450	343	127	49	268
31	366	-------	298	180	-------	460	-------	480	-------	127	133	-------
Total	2,460	6,120	16,972	6,024	8,880	16,224	17,439	20,612	6,925	4,243	3,539	16,718
Mean	79.4	204	547	194	317	523	581	665	231	137	114	557
(†)	+2.6	-0.3	0	-0.3	+5.0	-2.6	+2.1	-1.8	-0.9	-2.8	+16.2	-15.2
Adjusted for change in contents in Birch Hill Reservoir												
Mean	80.3	204	547	194	319	522	582	664	230	136	120	551
Cfsm	0.429	1.09	2.93	1.04	1.71	2.79	3.11	3.55	1.23	0.727	0.642	2.95
In.	0.50	1.22	3.38	1.20	1.78	3.22	3.47	4.10	1.38	0.84	0.74	3.29

	Observed						Adjusted					
Calendar year 1953:	Max	1,760	Min	22	Mean	410	Mean	410	Cfsm	2.19	In.	29.75
Water year 1953-54:	Max	1,320	Min	31	Mean	346	Mean	346	Cfsm	1.85	In.	25.12

* Discharge measurement made on this day.
† Change in contents in Birch Hill Reservoir, in millions of cubic feet.
Note.--Stage-discharge relation affected by ice Dec. 24, 25, Jan. 2, Jan. 8 to Feb. 21. Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

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 1954 (monthly discharge only for some periods, 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 benchmark). Prior to Oct. 26, 1948, staff gage at site 0.2 mile upstream at datum 14.40 ft higher.

Average discharge.--39 years, 84.6 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 457 cfs Apr. 20 (gage height, 4.56 ft); minimum, 0.4 cfs Sept. 12; minimum daily, 0.9 cfs Oct. 3, 4.

1915-54: 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 determination of peak flow by computation of flow over dam and contracted-opening determination; minimum, 0.03 cfs Jan. 4, Mar. 3, 1949; minimum daily, 0.2 cfs Mar. 29, 1953.

Remarks.--Records excellent except those for periods of no gage-height record, which are good. Flow regulated by Tully Reservoir since 1948 (see p. 233).

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 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.4	0.9	3.1	55
2.45	1.7	3.5	119
2.5	2.8	4.0	248
2.6	6.5	4.5	430
2.7	12	5.0	700
2.9	29		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.1	39	61	a37	45	155	106	111	*72	78	24	81
2	1.1	27	51	a52	65	155	100	100	65	65	20	72
3	.9	22	42	a52	59	182	97	95	84	48	16	51
4	.9	18	37	a40	54	181	87	142	80	35	24	41
5	1.1	15	75	a29	54	266	80	205	86	26	23	33
6	1.8	13	128	a56	54	269	78	222	98	*25	*20	24
7	*8.0	15	*95	a56	54	194	84	208	87	22	15	20
8	9.4	26	72	a39	44	113	87	168	72	20	11	25
9	6.5	27	138	a31	39	115	84	181	59	16	12	25
10	4.8	25	211	a34	41	115	76	222	48	13	26	20
11	4.1	*23	281	a34	41	156	75	231	41	11	35	18
12	3.4	20	310	a34	30	197	98	234	34	9.4	29	64
13	3.1	17	294	a34	22	170	100	225	30	8.3	22	221
14	2.8	16	217	33	29	153	89	197	29	7.4	16	272
15	2.8	14	211	33	41	119	80	155	58	6.5	13	211
16	2.6	14	216	34	*41	82	75	153	95	6.0	12	129
17	2.6	13	216	34	63	76	113	191	84	4.8	9.9	113
18	2.4	12	142	33	90	72	50	194	68	3.8	7.8	128
19	2.4	11	104	33	90	68	150	165	54	3.8	7.0	111
20	2.4	10	104	33	92	108	403	130	40	3.8	6.5	100
21	2.1	10	104	33	124	153	439	123	29	3.8	6.0	95
22	2.1	9.9	104	68	197	*163	390	181	23	4.1	5.2	*90
23	2.4	23	92	63	272	163	328	225	20	4.1	4.4	89
24	2.6	59	74	51	284	175	284	234	28	7.6	3.8	76
25	5.1	72	75	51	216	139	236	219	25	20	3.4	62
26	16	146	75	49	222	155	175	199	20	22	3.4	52
27	14	155	75	49	234	181	128	153	17	21	3.1	48
28	19	119	74	125	187	170	*126	115	16	18	2.8	40
29	46	90	61	100	-	146	143	100	40	16	2.6	34
30	76	70	59	101	-------	128	132	92	78	20	2.6	28
31	66	-------	55	61	-------	115	-------	84	-------	20	17	-------
Total	315.5	1,130.9	3,853	1,512	2,784	4,634	4,493	5,254	1,580	569.4	403.5	2,373
Mean	10.2	37.7	124	48.8	99.4	149	150	169	52.7	18.4	13.0	79.1
(†)	+0.2	+0.1	+22.7	0	-1.0	-21.6	0	-0.1	0	-0.2	+0.2	-0.1

Adjusted for change in contents in Tully Reservoir

Mean	10.2	37.7	133	48.8	99.0	141	150	169	52.7	18.3	13.1	79.1
Cfsm	0.202	0.748	2.64	0.968	1.96	2.80	2.98	3.35	1.05	0.363	0.260	1.57
In.	0.23	0.84	3.04	1.12	2.05	3.23	3.32	3.88	1.17	0.42	0.30	1.75

	Observed			Adjusted				
Calendar year 1953:	Max 475	Min 0.2	Mean 97.4	Mean 97.4	Cfsm 1.93	In. 26.23		
Water year 1953-54:	Max 439	Min 0.9	Mean 79.2	Mean 79.2	Cfsm 1.57	In. 21.35		

* Discharge measurement made on this day.

† Change in contents in Tully Reservoir, in millions of cubic feet.

a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, and records of pond elevations and gate operations at Tully Reservoir.

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 1909 to August 1910, June 1916 to September 1954. Published as "at Wendell" 1909-10.

Gage.--Staff gage read twice daily except during period Jan. 9 to Mar. 31 and on Aug. 17, when it was read once daily. 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.--38 years (1916-54), 21.1 cfs.

Extremes.--Maximum discharge during year, 253 cfs Apr. 18 (gage height, 3.58 ft, from graph based on gage readings); minimum discharge, 1.0 cfs Oct. 1-5, Aug. 24-30.
1916-54: Maximum discharge, 1,540 cfs Mar. 19, 1936 (gage height, 6.30 ft, from floodmarks), from rating curve extended above 280 cfs on basis of slope-area determinations 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 tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 22

1.0	1.0	1.5	7.8
1.1	1.6	1.8	20
1.2	2.4	2.2	46
1.3	3.8	2.6	84

Feb. 23 to Sept. 30

0.97	1.0	1.6	10
1.0	1.1	1.8	18
1.1	1.7	2.1	36
1.2	2.4	2.5	72
1.3	3.6	3.0	138
1.4	5.1	3.5	235
1.5	7.6		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	12	9.6	b11	14	33	24	20	14	5.6	2.6	12
2	1.0	7.1	9.6	b11	14	45	22	18	*14	4.8	2.0	4.7
3	1.0	5.1	8.5	11	13	40	21	22	34	3.6	2.2	3.4
4	1.0	4.5	8.2	12	14	b70	b19	52	30	2.8	3.1	4.5
5	1.2	3.6	25	12	15	51	18	70	27	4.0	2.6	2.8
6	2.7	3.4	28	12	14	40	18	45	24	6.0	2.8	2.4
7	*6.9	8.2	57	b11	b13	34	22	33	19	*4.2	2.3	2.8
8	3.3	7.1	61	b9.5	11	28	21	35	14	4.2	2.0	4.8
9	2.2	*6.1	41	b9.0	9.9	25	19	54	11	2.8	2.5	4.0
10	1.8	5.1	54	b9.0	9.6	25	16	62	9.8	2.4	4.4	3.1
11	1.6	4.9	84	b9.0	b9.4	23	19	62	9.0	2.2	4.4	45
12	1.7	4.4	50	b8.9	b9.4	20	26	50	8.0	2.0	3.0	86
13	1.6	3.9	39	b8.9	b8.0	19	21	38	9.3	1.8	2.4	26
14	1.4	3.8	44	*8.9	6.8	20	19	30	8.3	1.8	2.0	13
15	1.4	3.4	82	b8.0	7.1	20	17	26	12	2.1	1.8	8.5
16	1.4	3.4	58	b8.0	9.6	21	20	34	18	1.8	1.8	9.1
17	1.3	3.3	44	7.8	b25	20	62	40	12	1.7	*1.4	17
18	1.3	3.3	b35	7.8	b27	15	226	31	11	1.5	1.2	15
19	1.3	3.3	b28	7.4	b26	19	122	22	6.6	1.6	1.3	12
20	1.3	3.2	24	7.6	25	48	61	19	5.0	1.5	1.4	16
21	1.4	3.2	21	b14	b30	46	43	33	4.4	1.7	1.2	14
22	1.3	3.4	26	b19	b84	40	35	71	3.9	1.6	1.1	14
23	1.3	18	28	b16	b70	*31	31	70	3.9	1.4	1.1	12
24	1.4	21	b23	b11	44	26	30	47	5.6	2.0	1.0	8.0
25	1.8	20	b20	10	*42	24	38	36	4.2	4.1	1.0	*6.3
26	4.9	42	18	10	44	54	23	28	3.4	2.6	1.0	5.6
27	3.4	30	17	b20	40	50	22	22	3.3	2.1	1.0	5.6
28	7.2	18	16	b30	36	38	25	18	3.1	1.8	1.0	4.6
29	15	12	14	b20	-	33	*32	16	5.3	1.8	1.0	4.2
30	49	9.6	14	b16	------	28	26	24	8.0	2.8	1.1	3.8
31	32	-- --	13	b15	-------	25	--------	20	--------	2.8	14	--- ---
Total	155.1	276.3	999.9	370.8	670.8	1,011	1,088	1,148	341.1	83.1	71.7	370.2
Mean	5.00	9.21	32.3	12.0	24.0	32.6	36.3	37.0	11.4	2.68	2.31	12.3
Cfsm	0.407	0.749	2.63	0.976	1.95	2.65	2.95	3.01	0.927	0.218	0.188	1.00
In.	0.47	0.84	3.02	1.12	2.03	3.06	3.29	3.47	1.03	0.25	0.22	1.12

Calendar year 1953: Max 313 Min 0.7 Mean 27.0 Cfsm 2.20 In. 29.86
Water year 1953-54: Max 226 Min 1.0 Mean 18.0 Cfsm 1.46 In. 19.92

Peak discharge (base, 160 cfs).--Apr. 18 (6 a.m.) 253 cfs (3.58 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

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 1954.

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.--40 years, 631 cfs.

Extremes.--Maximum discharge during year, 2,590 cfs Apr. 18 (gage height, 5.60 ft); minimum daily, 43 cfs Oct. 24.
1914-54: 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 determinations; 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 or no gage-height record, which are fair. Flow regulated by powerplants, Lake Monomonac and other reservoirs, and at high flow by Birch Hill and Tully Reservoirs (see p. 233).

Revisions (water years).--WSP 641: 1920(M). WSP 756: Drainage area. WSP 781: 1928(M), 1933(M). WSP 1301: 1915(M), 1939(M), 1941(M).

Rating table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.6	36	3.5	705
1.9	72	4.0	1,040
2.2	126	5.0	1,870
2.5	199	5.5	2,450
3.0	396		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	72	486	480	444	430	1,080	868	928	757	588	283	698
2	67	355	401	456	470	1,190	848	790	*646	627	321	935
3	44	253	396	480	440	1,310	802	705	679	485	295	835
4	75	201	401	474	420	1,500	679	1,140	634	362	295	679
5	*92	185	648	428	480	1,660	672	1,360	660	295	287	510
6	102	205	809	391	420	1,540	698	1,320	608	287	253	407
7	126	226	1,460	380	365	1,360	770	1,230	666	275	199	312
8	130	220	*1,510	310	350	1,170	757	1,140	582	*291	183	287
9	112	263	1,320	295	340	1,000	718	1,320	510	239	177	287
10	79	303	1,780	280	335	935	620	1,480	423	214	208	409
11	62	276	1,900	300	310	887	516	1,610	352	180	*279	1,030
12	110	208	1,740	330	290	900	698	1,570	325	165	291	907
13	81	232	1,600	310	260	842	816	1,480	275	167	249	1,080
14	85	229	1,710	300	235	776	764	1,340	350	183	196	1,700
15	81	167	1,900	290	270	796	698	1,140	480	183	167	1,610
16	134	177	1,700	285	350	731	666	1,170	705	139	172	1,450
17	330	165	1,510	255	640	679	1,060	1,400	686	49	153	1,360
18	106	161	1,300	270	750	646	2,130	1,410	614	130	144	1,240
19	102	176	1,020	285	730	608	1,470	1,300	498	130	135	1,120
20	77	*156	828	330	720	970	2,170	1,210	329	108	135	1,070
21	78	141	848	430	800	1,180	2,300	1,200	271	146	118	a960
22	76	135	848	560	1,500	1,180	2,130	1,620	236	153	112	a920
23	72	255	900	530	1,600	*1,110	1,950	1,610	235	148	116	a860
24	43	420	783	430	1,480	963	1,770	1,560	358	133	94	a670
25	59	658	686	440	1,420	949	1,460	1,530	347	180	97	614
26	161	1,070	672	450	1,250	1,180	1,340	1,400	283	196	96	562
27	174	1,030	634	600	1,230	1,180	1,120	1,180	211	199	91	*516
28	231	880	562	800	1,160	1,060	1,060	1,020	205	196	69	468
29	311	718	594	840	-	1,000	*1,110	874	280	199	75	423
30	880	588	556	510	-------	963	1,060	776	484	243	97	396
31	679	-------	549	450	-------	907	-------	790	-------	220	342	-------
Total	4,831	10,539	32,045	12,933	19,045	32,252	33,720	38,603	13,689	7,110	5,729	24,315
Mean	156	351	1,034	417	680	1,040	1,124	1,245	456	229	185	810
(†)	+2.8	-0.2	+22.7	-0.3	+4.0	-24.2	+2.1	-1.9	-0.9	-3.0	+16.4	-15.3

Adjusted for change in contents in Birch Hill and Tully Reservoirs

Mean	157	351	1,042	417	682	1,031	1,125	1,245	456	228	191	805
Cfsm	0.419	0.936	2.78	1.11	1.82	2.75	3.00	3.32	1.22	0.608	0.509	2.15
In.	0.48	1.04	3.20	1.28	1.89	3.17	3.35	3.83	1.36	0.70	0.59	2.39

	Observed			Adjusted		
Calendar year 1953:	Max 3,370	Min 30	Mean 809	Mean 809	Cfsm 2.16	In. 29.27
Water year 1953-54:	Max 2,300	Min 43	Mean 643	Mean 643	Cfsm 1.71	In. 23.28

* Discharge measurement made on this day.
† Change in contents in Birch Hill and Tully Reservoirs, in millions of cubic feet.
a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, and records for other stations in Millers River basin.
Note.--Stage-discharge relation affected by ice Jan. 7 to Feb. 21.

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 1954.

Average discharge.--39 years, 11,920 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 since 1940, Comerford Station Pond since 1930 (see p. 233), and other reservoirs (combined usable capacity, about 19½ 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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,500	917	5,890	3,350	7,340	19,200	14,900	33,000	17,600	19,600	4,170	14,900
2	1,720	4,770	5,740	3,280	6,750	32,200	14,900	29,100	15,600	16,900	8,800	16,800
3	257	3,350	5,530	2,170	7,590	37,000	14,400	26,400	20,100	15,200	11,000	15,300
4	138	4,770	5,360	5,200	6,800	45,800	10,200	32,100	18,600	7,520	11,700	13,700
5	3,980	4,390	6,800	6,820	6,330	43,200	10,600	40,400	18,900	6,940	7,230	4,670
6	3,260	4,320	6,800	6,190	3,330	31,600	10,800	38,400	18,000	9,500	6,960	2,640
7	3,210	1,560	24,500	5,140	3,330	25,500	14,300	33,200	19,500	10,200	3,150	7,440
8	3,410	158	32,200	5,430	7,070	21,000	30,400	29,400	23,800	6,850	2,830	8,010
9	3,340	4,060	23,600	3,600	5,890	17,200	40,400	32,000	24,300	6,440	7,490	11,600
10	138	3,990	28,600	237	5,750	16,900	43,900	43,300	23,200	3,700	6,360	12,000
11	138	2,590	24,300	6,120	6,160	13,700	37,300	54,600	21,300	1,000	5,230	19,700
12	1,600	4,150	21,000	4,930	6,220	13,700	46,600	58,000	17,300	6,020	6,410	33,000
13	2,360	3,400	19,900	4,520	2,180	14,000	51,800	48,000	17,400	5,130	6,570	34,000
14	3,420	1,330	17,100	4,560	982	11,500	42,500	38,900	14,600	5,310	4,230	31,700
15	4,300	138	16,200	4,700	6,350	10,700	37,000	33,100	12,700	5,340	1,290	30,200
16	2,750	4,060	16,000	3,770	6,570	10,400	33,500	30,500	15,500	5,740	5,500	25,700
17	712	3,410	12,900	2,430	10,500	9,720	39,900	27,600	16,600	3,130	5,580	24,600
18	873	3,360	11,800	5,100	14,400	9,770	64,400	22,800	17,100	594	5,120	23,400
19	4,050	3,080	2,790	5,240	14,100	8,610	72,500	19,500	14,400	4,320	5,870	18,900
20	2,870	3,840	3,660	5,740	14,400	13,200	68,400	18,000	6,450	4,490	6,030	22,600
21	3,300	1,760	10,200	7,520	11,700	22,900	64,700	16,800	6,660	4,070	2,480	25,300
22	2,580	138	11,200	6,730	19,700	17,800	58,300	31,800	7,280	5,730	754	23,400
23	2,760	5,840	11,400	4,760	31,800	15,500	56,800	37,800	7,680	5,680	3,490	19,000
24	903	6,290	11,400	2,780	28,400	15,200	59,800	29,600	7,470	7,060	3,860	14,900
25	602	9,380	6,340	6,900	25,000	14,800	64,300	26,400	9,640	1,970	4,550	14,900
26	3,900	11,900	6,960	7,860	23,800	14,900	64,000	22,200	8,140	7,620	4,000	13,900
27	3,310	14,800	6,190	7,760	21,300	15,200	51,100	19,300	4,220	5,550	4,180	9,110
28	3,220	14,800	7,940	11,800	19,900	15,800	44,500	18,100	11,800	5,790	1,210	10,500
29	4,560	5,210	9,160	10,300	-	14,400	45,400	17,000	16,800	6,200	724	10,300
30	8,560	5,730	8,480	2,500	--------	14,300	38,900	15,300	20,400	6,490	3,970	10,400
31	7,540	--------	7,050	3,710	--------	14,900	--------	18,100	--------	5,630	7,560	--------
Total	85,261	137,491	386,990	161,147	323,622	580,600	‡1,246.5	940,700	453,040	205,714	158,298	522,570
Mean	2,750	4,583	12,480	5,198	11,560	18,730	41,550	30,350	15,100	6,636	5,106	17,420
(†)	-739	-190	+247	-1,332	-601	-1,613	+4,986	+2,293	+100	-784	-458	+628

Adjusted for change in reservoir contents

Mean	2,474	4,510	12,580	4,701	11,310	18,130	43,470	31,200	15,140	6,343	4,935	17,660
Cfsm	0.345	0.630	1.76	0.656	1.58	2.53	6.07	4.36	2.11	0.886	0.689	2.47
In.	0.40	0.70	2.02	0.76	1.64	2.92	6.77	5.02	2.36	1.02	0.79	2.75

	Observed			Adjusted		
Calendar year 1953:	Max 111,000	Min 138	Mean 13,050	Mean 13,060	Cfsm 1.82	In. 24.74
Water year 1953-54:	Max 72,500	Min 138	Mean 14,250	Mean 14,330	Cfsm 2.00	In. 27.15

† Change in contents in First Connecticut and Second Connecticut Lakes, Lake Francis, Comerford Station Pond, Union Village Reservoir, 4 reservoirs in Mascoma River basin, Sunapee Lake, and Surry Mountain, Birch Hill, and Tully Reservoirs, in millions of cubic feet.
‡ Expressed in thousands.

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 1913 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 517.36 ft above mean sea level, datum of 1929.

Average discharge.--41 years, 896 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 6,240 cfs May 10 (gage height, 6.55 ft); minimum daily, 43 cfs Aug. 8.
1913-54: 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 determinations 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. 233), and by several powerplants above station.

Revisions (water years).--WSP 781: 1915(M). WSP 1301: 1918(M).

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 6		Dec. 7 to Sept. 30			
1.3	30	1.3	30	3.0	910
1.6	100	1.6	100	4.0	1,980
2.0	235	2.0	235	6.0	5,210
2.5	495	2.5	500		
3.0	860				

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	380	64	490	1,000	900	1,320	1,680	954	1,080	95	49	2,120
2	324	288	420	1,030	1,040	3,170	1,320	529	1,150	87	386	824
3	143	340	626	694	884	2,560	939	1,070	*1,120	92	710	458
4	51	284	642	706	912	2,590	552	1,620	960	100	855	171
5	258	436	482	1,000	1,050	1,660	624	1,780	493	109	462	144
6	*512	504	594	1,010	336	1,490	942	1,380	192	142	332	60
7	524	338	3,670	1,000	185	1,120	1,110	1,320	604	112	67	430
8	435	276	*1,300	960	800	1,180	1,410	1,560	805	103	43	498
9	297	437	878	660	1,040	1,130	1,560	2,620	728	*100	494	272
10	106	*469	1,890	280	1,030	948	1,100	3,940	586	100	530	416
11	46	260	1,170	670	1,040	938	586	4,330	608	97	482	2,750
12	212	560	905	900	940	796	1,840	2,620	234	189	*452	1,720
13	414	586	429	870	500	343	1,590	1,800	142	598	302	1,000
14	426	434	989	900	410	444	1,470	1,140	524	449	75	810
15	372	262	966	900	702	752	1,020	1,140	898	528	53	845
16	278	508	1,110	420	1,180	751	1,160	547	671	428	488	684
17	148	562	1,070	220	*1,690	715	2,550	906	695	206	445	1,200
18	98	403	1,040	640	1,290	697	3,300	725	702	161	358	480
19	356	297	1,040	900	1,280	656	1,500	794	318	288	360	248
20	420	530	544	850	987	1,400	1,200	746	120	520	133	532
21	475	350	1,040	1,020	1,170	984	1,360	1,700	414	545	146	669
22	556	141	1,020	990	2,290	892	1,240	3,900	634	560	104	1,050
23	382	536	1,150	418	1,500	987	1,140	2,180	686	399	306	717
24	273	537	1,060	210	1,230	*1,060	1,240	1,590	669	79	441	541
25	273	608	1,050	700	1,320	1,340	790	1,520	826	60	547	176
26	412	312	1,050	1,050	1,340	2,140	848	1,460	412	86	618	*109
27	382	220	1,040	1,280	942	1,900	880	1,270	134	144	586	*522
28	314	388	1,040	1,070	652	1,800	1,150	870	92	212	268	675
29	362	212	1,040	1,000	-	1,720	1,420	496	97	178	86	684
30	354	574	1,040	800	-------	1,820	*1,280	660	100	258	366	760
31	138	-------	1,000	480	-------	1,780	-------	311	-------	72	944	-------
Total	9,721	11,716	31,785	24,628	28,640	41,083	38,801	47,478	16,694	7,097	11,488	21,565
Mean	314	391	1,025	794	1,023	1,325	1,293	1,532	556	229	371	719
(†)	-448	-331	+563	-972	+71	+682	+1,832	+445	-296	-299	-301	+414

Adjusted for change in reservoir contents

Mean	146	263	1,236	432	1,052	1,580	2,000	1,698	442	117	258	879
Cfsm	0.403	0.727	3.41	1.19	2.91	4.36	5.52	4.69	1.22	0.323	0.713	2.43
In.	0.47	0.81	3.93	1.37	3.03	5.03	6.16	5.41	1.36	0.37	0.82	2.71

	Observed				Adjusted			
Calendar year 1953:	Max 8,420	Min 26	Mean 990		Mean 1,009	Cfsm 2.79	In. 37.85	
Water year 1953-54:	Max 4,330	Min 43	Mean 796		Mean 840	Cfsm 2.32	In. 31.47	

* Discharge measurement made on this day.
† Change in contents in Somerset and Harriman Reservoirs, in millions of cubic feet.
Note.--Stage-discharge relation affected by ice Jan. 8-20, 22, 24, 25, Jan. 28 to Feb. 1, Feb. 7, 8, 12-14.

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 1954 (monthly discharge only for some periods, published in WSP 1301).

Gage.--Water-stage recorder. Datum of gage is 458.36 ft above mean sea level, datum of 1929.

Average discharge.--15 years, 178 cfs.

Extremes.--Maximum discharge during year, 3,180 cfs Sept. 11 (gage height, 6.54 ft); minimum, 6.4 cfs Oct. 3; minimum daily, 7.4 cfs Oct. 3, 4.
1939-54: Maximum discharge, 10,000 cfs Dec. 31, 1948 (gage height, 9.62 ft), from rating curve extended above 3,600 cfs on basis of computation of peak flow over dam; minimum daily, 5.1 cfs Oct. 3, 1948.

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 mill above station; prior to 1950, greater regulation by mill.

Revisions (water years).--WSP 1111: 1945(M).

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.45	6.4	3.0	230
1.5	8.2	3.5	393
1.6	13	4.0	635
1.8	26	5.0	1,310
2.0	44	5.5	1,780
2.5	117		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.2	39	37	43	89	371	206	*198	146	52	28	163
2	7.8	31	33	58	86	1,230	184	179	134	44	24	66
3	7.4	26	30	58	79	782	186	229	136	36	24	43
4	7.4	23	30	56	77	998	157	601	*136	a32	43	37
5	7.8	20	138	52	76	405	148	377	144	a32	44	31
6	*12	19	101	52	72	297	152	265	117	42	34	27
7	35	20	885	52	58	253	227	278	104	a34	25	32
8	26	30	*245	45	68	227	225	379	91	a30	22	45
9	22	33	142	47	66	206	186	680	79	a28	34	36
10	19	*27	496	47	64	198	155	775	73	*a26	39	31
11	16	28	267	47	62	179	209	754	77	a25	48	1,190
12	14	26	164	47	57	155	287	428	69	a24	34	467
13	12	26	172	*47	56	151	198	330	73	22	*34	168
14	12	23	164	47	61	164	172	271	66	22	30	123
15	11	23	214	46	61	172	164	233	119	36	24	96
16	10	24	153	45	99	146	193	250	137	26	28	143
17	9.9	22	88	44	375	137	863	216	94	22	23	270
18	9.9	21	77	40	293	130	1,360	179	70	20	19	166
19	9.4	21	79	41	265	123	496	164	59	20	18	151
20	9.4	18	91	44	278	692	354	155	51	18	16	210
21	9.4	19	96	110	330	427	290	622	45	25	18	128
22	9.4	19	108	117	1,100	250	250	1,180	41	24	16	149
23	9.4	62	134	76	513	211	236	486	38	20	14	108
24	9.4	68	80	80	316	*196	242	343	40	31	14	88
25	11	64	88	71	347	320	206	326	37	45	12	77
26	20	130	91	66	316	632	189	253	33	28	13	77
27	22	64	73	190	379	364	183	208	36	23	14	*70
28	28	48	68	210	316	262	428	189	38	20	12	63
29	54	41	72	120	-	259	316	179	49	20	12	54
30	167	36	65	110	-------	250	230	267	49	29	15	51
31	66	-------	59	100	-------	211	-------	184	-------	26	336	-------
Total	671.8	1,051	4,540	2,208	5,969	10,398	8,692	11,176	2,381	882	1,067	4,360
Mean	21.7	35.0	146	71.2	213	335	290	361	79.4	28.5	34.4	145
Cfsm	0.245	0.396	1.65	0.805	2.41	3.79	3.28	4.08	0.898	0.322	0.389	1.64
In.	0.28	0.44	1.91	0.93	2.51	4.37	3.66	4.70	1.00	0.37	0.45	1.83

Calendar year 1953: Max 3,000 Min 6.0 Mean 205 Cfsm 2.32 In. 31.54
Water year 1953-54: Max 1,360 Min 7.4 Mean 146 Cfsm 1.65 In. 22.45

Peak discharge (base, 1,880 cfs).--Dec. 7 (5 to 6 a.m.) 1,890 cfs (5.60 ft); Mar. 2 (3 a.m.) 2,490 cfs (6.07 ft); Mar. 3 (10:30 p.m.) 2,470 cfs (6.06 ft); Apr. 18 (1 a.m.) 3,040 cfs (6.45 ft); Sept. 11 (4 p.m.) 3,180 cfs (6.54 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, and records for North Branch Hoosic River at North Adams.

Note.--Stage-discharge relation affected by ice Dec. 17-19, 24, 25, 27, 28, Dec. 31 to Jan. 21, Jan. 24, 25, Jan. 27 to Feb. 1, Feb. 7, 8, 13, 14, 17, 19, 21, 22.

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 1954. 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.--14 years (1940-54), 1,287 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 13,400 cfs Sept. 11 (gage height, 7.80 ft); minimum daily, 46 cfs Oct. 4.
1940-54: 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 excellent except those for period of ice effect, which are good. Flow regulated by Somerset and Harriman Reservoirs (see p. 233), and by several powerplants above station.

Rating tables, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 17

1.4	35	2.5	595
1.5	56	3.0	1,100
1.7	116	4.0	2,570
1.9	201	5.0	4,650
2.1	310	6.0	7,370

Feb. 18 to Sept. 30

2.1	310	4.0	2,670
2.5	605	5.0	4,690
3.0	1,130	6.0	7,370

Note.--Same as preceding table below 2.1 ft.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	577	97	634	1,050	1,050	1,610	2,180	*1,470	1,240	191	108	2,530
2	406	346	477	1,160	1,290	5,300	1,700	956	1,510	196	218	1,270
3	80	392	720	913	1,100	3,670	1,310	1,480	1,520	158	864	456
4	46	340	746	820	1,200	5,170	812	2,850	*1,200	152	1,020	238
5	285	430	798	1,100	1,280	2,550	933	2,650	992	252	662	102
6	494	496	773	1,140	580	2,160	1,300	1,930	417	283	402	90
7	694	533	5,090	1,090	370	1,740	1,450	1,940	658	274	140	584
8	399	370	*1,670	950	760	1,640	2,010	2,300	1,020	160	68	604
9	268	539	1,140	800	1,340	1,600	2,000	3,770	1,100	188	499	293
10	174	420	2,670	500	1,200	1,400	1,560	5,640	604	*165	622	570
11	87	518	1,810	720	1,230	1,390	922	6,360	906	122	688	5,880
12	246	529	1,290	1,030	980	1,220	2,250	3,770	463	275	458	3,070
13	448	644	799	1,000	700	763	2,060	2,740	346	587	464	1,250
14	495	639	1,300	1,060	540	786	1,900	1,900	562	522	132	1,070
15	473	252	1,270	1,060	800	919	1,190	1,740	1,370	526	95	1,080
16	318	514	1,530	650	1,600	1,010	1,650	1,270	1,180	584	275	914
17	210	608	1,240	320	2,900	1,060	3,820	1,130	806	290	689	1,950
18	58	491	1,240	580	2,300	970	6,240	1,110	862	113	271	991
19	378	320	1,220	1,050	*1,790	966	2,710	1,170	671	324	358	409
20	470	518	862	1,040	1,610	2,940	1,910	1,130	200	548	*373	1,030
21	442	468	1,150	1,300	1,650	2,090	1,950	3,470	466	578	134	915
22	522	179	1,370	1,270	4,150	1,350	1,710	6,410	624	714	68	1,650
23	456	616	1,290	700	2,670	1,240	1,600	3,490	801	547	295	850
24	338	785	1,260	400	1,900	1,350	1,750	2,200	728	156	481	742
25	296	1,020	1,290	800	2,040	2,010	1,440	2,530	1,010	82	562	463
26	511	661	1,210	1,200	2,060	3,330	1,110	2,050	680	176	502	*294
27	484	248	1,220	1,800	1,870	2,640	1,230	1,710	204	200	796	606
28	484	464	1,190	1,600	1,290	2,430	1,980	1,500	173	194	416	860
29	476	324	1,230	1,300	-	2,240	2,160	908	177	237	114	842
30	782	539	1,200	1,050	-------	2,350	1,860	1,380	202	456	329	892
31	274	-------	1,070	700	-------	2,240	-------	724	-------	124	1,700	-------
Total	11,671	14,300	40,959	30,153	42,250	62,114	56,697	73,658	22,692	9,374	13,803	32,455
Mean	376	477	1,321	973	1,509	2,004	1,890	2,376	756	302	445	1,082
(†)	-448	-331	+563	-972	+71	+682	+1,832	+445	-296	-299	-301	+414
Adjusted for change in reservoir contents												
Mean	209	349	1,531	610	1,538	2,258	2,597	2,542	642	191	333	1,242
Cfsm	0.375	0.625	2.74	1.09	2.76	4.05	4.65	4.56	1.15	0.342	0.597	2.23
In.	0.43	0.70	3.16	1.26	2.87	4.67	5.19	5.25	1.28	0.39	0.69	2.48

	Observed			Adjusted			
Calendar year 1953:	Max 14,600	Min 46	Mean 1,424	Mean 1,443	Cfsm 2.59	In. 35.12	
Water year 1953-54:	Max 6,410	Min 46	Mean 1,124	Mean 1,167	Cfsm 2.09	In. 28.37	

* Discharge measurement made on this day.
† Change in contents in Somerset and Harriman Reservoirs, in millions of cubic feet.
Note.--Stage-discharge relation affected by ice Jan. 9 to Feb. 18.

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 1954. 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 Oct. 29, 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.--50 years, 13,770 cfs (adjusted for storage since October 1923).
Extremes.--Maximum discharge during year, 75,600 cfs Apr. 18 (gage height, 27.11 ft); minimum daily, 385 cfs Oct. 4.
1904-54: Maximum discharge, 236,000 cfs Mar. 19, 1936 (gage height, 49.2 ft, from floodmarks), from rating curve extended above 160,000 cfs; minimum daily, 325 cfs July 4, 1949.
Remarks.--Records good except those for periods of ice effect or no gage-height record and those below 1,500 cfs, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis since 1940, Comerford Station Pond since 1930 (see p. 233), and other reservoirs (combined usable capacity, about 27½ billion cubic feet).
Revisions (water years).--WSP 471: 1904-13 calendar years, 1914-17. 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: 1904-12(M), 1914-19(M), 1930-31(M), 1946(M).

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,140	1,460	6,660	5,000	8,400	21,700	17,500	35,000	20,000	21,400	4,240	17,800
2	2,580	4,850	6,670	5,030	8,100	34,700	17,200	30,000	18,200	18,400	8,830	19,800
3	734	3,950	6,490	3,820	8,800	39,500	16,400	28,200	*22,600	16,400	12,000	17,100
4	385	5,120	6,470	6,460	8,200	48,100	11,600	34,700	21,200	8,210	13,000	14,900
5	4,160	5,060	7,740	8,630	7,700	44,000	12,000	46,200	21,000	7,100	7,970	5,150
6	3,890	4,730	8,160	8,170	4,000	34,300	12,800	43,800	20,200	9,400	7,320	2,770
7	4,110	2,350	28,200	7,100	3,900	27,900	16,000	37,900	21,100	10,500	3,670	7,430
8	*4,100	775	33,500	6,800	8,000	22,700	29,600	33,100	25,700	7,260	3,160	8,520
9	3,710	4,540	*25,600	4,800	7,400	19,300	40,800	36,800	27,500	*6,740	7,650	12,200
10	603	4,520	28,900	1,000	7,000	19,000	43,800	48,400	25,700	4,010	7,160	12,700
11	440	3,370	27,200	7,400	7,500	15,400	37,300	60,200	23,600	1,420	5,900	26,300
12	1,860	*4,470	23,600	6,400	7,400	15,200	44,600	61,100	19,700	6,050	7,010	39,700
13	2,860	4,200	21,300	5,800	2,900	15,200	51,300	52,000	18,300	5,560	6,660	37,500
14	4,170	2,110	19,100	6,000	1,800	12,800	44,500	43,100	16,100	5,730	4,550	34,800
15	4,800	646	18,400	6,100	7,200	12,300	38,900	36,900	14,400	5,670	1,820	32,400
16	3,260	4,500	18,000	4,500	8,200	12,100	35,900	31,500	17,700	6,270	5,780	28,300
17	1,100	4,130	14,800	3,100	13,500	11,400	42,400	29,500	18,300	3,440	5,980	27,900
18	1,200	4,170	13,100	6,000	*17,000	11,400	69,200	25,100	18,700	1,090	5,470	26,500
19	4,110	3,620	4,500	6,500	16,000	10,000	73,000	22,100	16,100	4,490	6,110	21,200
20	3,730	4,170	5,190	7,000	16,500	16,100	68,800	20,800	7,050	4,970	6,200	24,600
21	3,900	2,810	10,900	9,000	13,500	25,000	65,200	21,000	6,550	4,820	2,770	27,900
22	3,160	630	13,400	8,200	24,400	20,700	61,000	40,700	8,210	6,590	*1,020	27,100
23	3,630	6,220	13,500	5,600	33,900	17,600	59,000	44,200	9,080	6,350	3,500	21,600
24	1,370	7,390	13,500	3,400	31,200	16,900	60,900	33,300	8,840	6,740	4,170	17,000
25	1,080	10,300	8,820	7,800	27,700	*17,100	63,400	30,100	10,800	2,570	4,820	*16,200
26	4,440	13,000	8,310	9,200	26,200	18,900	63,200	25,200	8,730	7,700	4,430	15,200
27	4,160	15,300	8,280	9,600	24,900	18,300	55,400	22,900	4,590	5,750	4,450	9,980
28	3,950	15,600	9,640	13,500	23,100	19,000	48,500	21,300	12,200	6,520	2,060	12,100
29	5,100	6,720	10,800	11,500	-	17,100	50,200	19,200	17,700	6,340	1,040	11,700
30	9,290	6,280	10,400	3,800	-------	17,100	*42,000	18,100	22,100	6,590	3,850	11,900
31	8,450	-------	8,450	4,500	-------	17,600	-------	20,100	-------	5,630	9,640	-------
Total	102,472	156,991	439,580	201,710	374,400	648,400	‡1,292.4	‡1,052.5	501,950	219,710	172,030	588,250
Mean	3,306	5,233	14,180	6,507	13,370	20,920	43,080	33,950	16,730	7,087	5,549	19,610
(†)	-1,187	-521	+810	-2,304	-530	-931	+6,818	+2,738	-196	-1,083	-759	+1,042

Adjusted for change in reservoir contents

Mean	2,862	5,032	14,480	5,647	13,150	20,570	45,710	34,970	16,660	6,683	5,266	20,010
Cfsm	0.364	0.640	1.84	0.718	1.67	2. 62	5.81	4.45	2.12	0.850	0.670	2.54
In.	0.42	0.71	2.12	0.83	1.74	3.02	6.48	5.13	2.36	0.98	0.77	2.84

	Observed			Adjusted			
Calendar year 1953:	Max 120,000	Min 384	Mean 14,500	Mean 14,520	Cfsm 1.85	In. 25.08
Water year 1953-54:	Max 73,000	Min 385	Mean 15,750	Mean 15,880	Cfsm 2.02	In. 27.40

Peak discharge (base, 61,000 cfs).--Apr. 18 (8 to 9 p.m.) 75,600 cfs (27.11 ft); Apr. 26 (2 to 3 a.m.) 64,700 cfs (24.75 ft); May 12 (4 a.m.) 63,100 cfs (24.41 ft).
* Discharge measurement made on this day.
† Change in contents in all reservoirs from First Connecticut and Second Connecticut Lakes to 2 reservoirs in Deerfield River basin listed on page , in millions of cubic feet.
‡ Expressed in thousands.
Note.--No gage-height record Oct. 4, 11, Jan. 14 to Feb. 16; 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. Stage-discharge relation affected by ice Dec. 19, Jan. 1, Jan. 7 to Feb. 21.

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 1954 (monthly discharge only for some periods, published in WSP 1301).

Gage.--Water-stage recorder and concrete control. Altitude of gage is 140 ft (from topographic map).

Average discharge.--16 years, 95.3 cfs.

Extremes.--Maximum discharge during year, 2,320 cfs Sept. 11 (gage height, 6.66 ft); minimum, 6.2 cfs Oct. 22, 23; minimum daily, 6.6 cfs Oct. 4, 23.
1938-54: Maximum discharge, 3,840 cfs Mar. 31, 1951 (gage height, 9.38 ft), from rating curve extended above 2,000 cfs on basis of computations of flow over dam at gage heights 7.58 and 9.38 ft; minimum, 2.2 cfs Oct. 1, 1950; minimum daily, 5.5 cfs Sept. 27-30, 1941, Sept. 10, 1944.

Remarks.--Records excellent except those for period of backwater from leaves, which are good, and those for periods of ice effect or no gage-height record, which are fair. Flow regulated by mill above station.

Revisions (water years).--WSP 921: 1940. WSP 1231: 1940-42(M), 1944-45(M), 1948(M), 1949.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 17				Apr. 18 to Sept. 30			
1.4	6.2	2.5	127	1.5	8.8	3.0	259
1.5	8.8	3.0	265	1.7	17	3.5	453
1.6	12	3.5	455	1.9	30	4.0	700
1.8	25	4.0	700	2.2	66	4.5	980
2.1	55			2.5	121		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.8	37	29	29	58	134	*110	102	79	39	22	117
2	7.3	33	30	34	60	310	106	100	74	36	19	51
3	7.0	20	29	31	47	273	102	141	72	25	23	28
4	6.6	19	27	36	50	472	87	436	66	23	25	23
5	7.5	14	107	35	50	215	85	249	82	23	25	19
6	13	12	80	34	41	170	95	172	66	28	*24	17
7	36	15	221	31	40	150	174	*159	57	25	20	28
8	22	30	112	23	40	129	123	197	52	22	17	48
9	13	29	78	21	41	114	98	300	44	19	19	32
10	9.7	24	225	33	39	119	87	501	43	17	23	26
11	10	22	134	34	39	110	110	608	*54	16	25	*918
12	13	20	95	32	30	96	155	279	55	16	21	323
13	10	19	98	26	31	95	106	215	73	19	19	121
14	8.8	14	204	27	32	122	93	183	73	18	17	89
15	11	15	249	30	40	143	85	162	231	15	13	75
16	8.8	19	143	29	66	98	112	162	219	12	14	104
17	9.4	16	96	25	200	89	535	137	102	12	16	162
18	7.6	16	67	22	158	84	802	113	68	11	15	108
19	12	16	64	26	125	78	280	102	53	11	14	76
20	9.2	15	73	26	121	356	209	96	44	10	12	96
21	8.8	14	75	56	141	195	164	530	40	15	12	65
22	6.8	*12	89	62	429	124	146	595	33	16	11	87
23	6.6	72	100	40	206	119	139	269	34	17	10	60
24	*7.8	58	76	41	145	119	139	212	35	15	12	49
25	18	55	70	38	170	183	123	186	30	16	12	40
26	55	88	66	39	158	358	110	159	27	18	10	44
27	29	45	58	140	*158	186	113	135	25	26	9.1	46
28	50	33	52	121	136	150	212	126	31	22	8.8	38
29	83	30	49	66	-	132	164	119	37	21	9.1	34
30	126	31	48	67	-------	123	121	132	41	36	9.1	47
31	55	-------	45	63	-------	112	-------	93	-------	26	212	-------
Total	675.7	843	2,889	1,317	2,851	5,158	4,985	6,970	1,940	625	698.1	2,971
Mean	21.8	28.1	93.2	42.5	102	166	166	225	64.7	20.2	22.5	99.0
Cfsm	0.413	0.532	1.77	0.805	1.93	3.14	3.14	4.26	1.23	0.383	0.426	1.88
In.	0.48	0.59	2.03	0.93	2.01	3.63	3.51	4.91	1.37	0.44	0.49	2.09

Calendar year 1953: Max 1,340 Min 5.8 Mean 124 Cfsm 2.35 In. 31.96
Water year 1953-54: Max 918 Min 6.6 Mean 87.5 Cfsm 1.66 In. 22.48

Peak discharge (base, 1,250 cfs).--Apr. 18 (2 a.m.) 1,620 cfs (5.51 ft); Sept. 11 (4:30 p.m.) 2,320 cfs (6.66 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 18-20, 24-28, Jan. 3-27, Jan. 29 to Feb. 8, Feb. 12-17 (no gage-height record Jan. 16-22). Backwater from leaves Oct. 8-24.

Ware River near Barre, Mass.

Location.--Lat 42°25'35", long 72°01'30", on left bank 1,100 ft downstream from bridge at Barre Falls, 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 1954.

Gage.--Water-stage recorder. Altitude of gage is 745 ft (from topographic map).

Average discharge.--8 years, 93.9 cfs.

Extremes.--Maximum discharge during year, 957 cfs Sept. 12 (gage height, 5.31 ft); minimum, 1.3 cfs Oct. 4.
1946-54: Maximum discharge, 1,450 cfs Mar. 23, 1948 (gage height, 5.93 ft), from rating curve extended above 870 cfs by logarithmic plotting; minimum, 1.1 cfs Sept. 6, 1953.

Remarks.--Records excellent except those for periods of ice effect, which are good. Some regulation by Long Pond and other small reservoirs.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 13				Jan. 14 to Sept. 30			
1.6	1.4	2.4	22	2.02	5.3	3.5	145
1.7	2.2	2.7	43	2.2	9.8	4.0	286
1.9	4.5	3.0	76	2.4	19	4.5	485
2.0	6.1	3.5	159	2.7	40	5.1	815
2.2	12	4.1	335	3.1	80		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.5	88	88	73	68	137	110	129	147	79	35	282
2	1.4	56	80	73	68	176	105	113	118	64	*30	303
3	1.4	40	71	79	64	207	99	110	104	49	29	227
4	6.5	33	*65	80	67	248	90	150	93	38	35	156
5	5.8	28	110	76	72	251	83	201	88	37	31	111
6	13	34	166	79	68	218	81	187	86	72	25	83
7	9.6	41	243	77	64	171	111	154	79	60	19	74
8	5.7	79	294	67	60	*141	133	135	70	47	16	104
9	4.3	76	264	62	56	123	125	179	63	35	19	105
10	3.9	74	258	58	54	116	108	251	58	29	55	92
11	3.7	62	279	56	51	110	102	270	54	23	76	182
12	3.5	49	258	56	46	98	123	254	49	20	68	770
13	*3.3	44	219	*55	48	92	127	218	49	18	54	*755
14	3.2	37	219	55	45	93	111	176	50	16	40	472
15	3.1	34	297	55	38	102	98	147	70	15	31	317
16	3.0	32	307	55	*53	98	93	184	90	13	27	242
17	3.0	41	264	54	85	90	156	245	81	11	23	215
18	3.0	34	210	52	105	84	444	230	67	9.8	19	207
19	2.8	29	185	50	103	79	575	184	56	9.2	16	187
20	2.8	28	144	58	98	137	431	150	48	8.7	16	179
21	2.8	25	132	92	98	218	*320	152	40	11	14	182
22	2.7	23	134	130	171	192	257	233	37	13	12	166
23	2.7	50	142	110	218	152	218	280	*40	11	10	139
24	3.2	89	130	94	173	127	198	254	48	11	9.0	113
25	6.1	94	130	84	163	116	176	*210	39	27	*8.1	96
26	15	178	109	79	184	168	150	168	34	34	7.6	93
27	10	210	100	93	179	207	137	139	34	28	7.0	90
28	17	178	93	115	156	173	145	118	29	37	6.3	83
29	47	134	96	80	-	147	159	106	54	34	5.7	73
30	110	103	93	68	-------	131	147	152	80	33	5.3	65
31	130	-------	85	66	-------	118	-------	176	-------	32	68	-------
Total	431.0	2,023	5,265	2,281	2,655	4,520	5,212	5,655	1,955	924.7	817.0	6,143
Mean	13.9	67.4	170	73.6	94.8	146	174	182	65.2	29.8	26.4	205
Cfsm	0.253	1.23	3.09	1.34	1.72	2.65	3.16	3.31	1.19	0.542	0.480	3.73
In.	0.29	1.37	3.56	1.54	1.80	3.06	3.52	3.82	1.32	0.63	0.55	4.15

Calendar year 1953: Max 556 Min 1.2 Mean 122 Cfsm 2.22 In. 30.13
Water year 1953-54: Max 770 Min 1.4 Mean 104 Cfsm 1.89 In. 25.61

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 18, 19, 24, 25, 28, Jan. 1, 2, 5, 7-25, Jan. 28 to Feb. 3, Feb. 7, 11-20.

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 1954.

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.--26 years, 165 cfs.

Extremes.--Maximum daily discharge during year, 1,210 cfs Sept. 12; minimum daily, 5.0 cfs Oct. 6.
1928-54: 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. Diversion Sept. 11-17, 1954, for flood-control purposes.

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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.3	140	134	119	b126	269	230	237	180	126	75	436
2	6.3	23	121	117	127	358	220	216	174	97	64	427
3	6.3	54	109	120	119	386	208	237	157	74	69	319
4	9.2	42	110	123	125	462	192	344	144	60	73	221
5	11	36	226	116	129	413	146	351	142	83	60	163
6	5.0	44	272	122	123	342	196	313	135	116	49	121
7	7.8	75	479	112	108	285	273	268	120	85	40	159
8	13	113	500	98	101	248	262	274	110	68	34	182
9	13	99	434	95	104	223	238	360	101	52	56	166
10	13	91	467	95	101	216	209	455	90	42	130	143
11	13	74	474	96	91	200	235	443	83	35	144	626
12	13	60	419	97	79	222	276	399	75	32	117	1,210
13	13	53	376	b92	b84	192	252	339	80	33	88	1,050
14	13	44	420	b92	b80	190	218	296	87	30	65	713
15	13	41	505	92	b76	214	200	262	141	28	53	501
16	13	39	495	92	107	225	219	378	154	24	48	374
17	12	46	388	92	176	184	507	396	131	22	41	340
18	12	38	308	b87	200	137	996	358	106	20	33	316
19	11	32	293	84	189	143	975	297	86	21	31	296
20	11	31	279	92	178	440	763	258	72	22	29	294
21	11	26	258	184	216	403	549	312	64	30	26	278
22	11	29	252	218	406	338	420	460	58	28	23	258
23	11	109	251	188	397	286	364	475	71	25	20	217
24	11	138	239	165	320	248	331	391	83	28	17	182
25	13	199	236	144	340	261	302	339	66	52	16	160
26	43	295	231	139	347	401	271	287	61	59	15	156
27	35	293	220	207	336	372	264	242	57	61	14	151
28	34	247	184	209	290	319	303	211	56	65	13	140
29	171	192	146	b126	-	278	294	222	110	58	12	136
30	197	152	140	b123	-------	253	269	304	139	59	99	130
31	203	-------	114	b125	-------	237	-------	239	-------	62	213	-----
Total	954.9	2,855	9,080	3,861	5,075	8,745	10,182	9,963	3,133	1,597	1,767	9,865
Mean	30.8	95.2	293	125	181	282	339	321	104	51.5	57.0	329
Cfsm	0.318	0.983	3.03	1.29	1.87	2.91	3.50	3.32	1.07	0.532	0.589	3.40
In.	0.37	1.10	3.49	1.48	1.95	3.36	3.91	3.83	1.20	0.61	0.68	3.79

Calendar year 1953: Max 1,270 Min 4.7 Mean 217 Cfsm 2.24 In. 30.38
Water year 1953-54: Max 1,210 Min 5.0 Mean 184 Cfsm 1.90 In. 25.77

b Stage-discharge relation affected by ice.

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 Brook, and 2½ miles southwest of Ware.
Drainage area.--199 sq mi.
Records available.--August 1912 to September 1954.
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.--42 years, 320 cfs (adjusted for diversion).
Extremes.--Maximum discharge during year, 2,410 cfs Sept. 12 (gage height, 5.42 ft); minimum, 11 cfs Oct. 2; minimum daily, 18 cfs Oct. 2, July 18.
1912-54: Maximum discharge, 22,700 cfs Sept. 21, 1938 (gage height, 18.2 ft, from floodmarks), by slope-area determination; 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, 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.
Revisions (water years).--WSP 661: Drainage area. WSP 1031: 1944. WSP 1301: 1914(M), 1943(M).

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from aquatic vegetation July 24 to Sept. 11; shifting-control method used Sept. 25, 26, 28-30)

1.6	16	3.0	463
1.7	24	3.5	755
1.8	34	4.0	1,140
2.0	65	5.0	2,030
2.2	113	5.5	2,480
2.5	226		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	248	214	195	360	*499	334	252	393	276	86	659
2	18	197	197	205	259	588	351	307	373	240	156	619
3	29	152	177	210	238	648	240	369	360	102	93	496
4	35	58	170	268	269	867	284	478	317	88	121	403
5	29	79	279	234	289	762	*354	489	193	124	118	279
6	28	85	458	235	170	612	293	453	252	333	102	210
7	58	48	892	237	220	520	384	381	345	225	49	261
8	56	116	970	200	280	489	394	274	227	147	56	507
9	41	177	748	175	190	423	363	542	201	161	108	375
10	28	158	839	175	187	393	230	*554	191	56	167	295
11	25	147	888	190	178	384	293	494	*201	61	249	706
12	23	129	729	190	170	359	438	458	121	125	259	2,100
13	27	121	654	200	125	235	403	408	118	66	*166	1,160
14	25	50	772	195	105	284	338	369	258	65	85	790
15	24	53	1,100	170	168	393	315	230	244	69	84	516
16	25	108	932	151	245	297	326	438	306	84	146	461
17	23	90	722	170	349	302	490	479	267	23	101	612
18	29	127	*537	180	453	266	1,580	398	229	18	62	582
19	34	76	415	162	413	261	1,050	366	119	78	60	612
20	34	94	418	166	321	439	678	320	104	51	85	654
21	34	34	392	330	345	594	532	347	219	47	29	559
22	32	41	368	460	658	468	473	427	107	68	34	520
23	32	121	435	410	742	393	433	463	112	81	96	460
24	31	*195	365	345	600	352	398	443	128	26	59	378
25	53	360	321	*306	576	354	398	395	154	52	65	275
26	89	582	307	280	618	515	433	351	85	134	33	279
27	*65	520	284	354	564	479	395	302	81	118	60	319
28	79	428	294	460	526	413	400	293	172	85	50	242
29	106	359	278	370	-	423	420	201	144	87	24	210
30	355	214	274	300	--------	393	391	509	284	127	44	214
31	279	--------	238	290	--------	342	--------	374	--------	47	216	--------
Total	1,766	5,147	15,667	7,813	9,618	13,747	13,409	12,164	6,305	3,264	3,063	15,753
Mean	57.0	172	505	252	344	443	447	392	210	105	98.8	525
(†)	0	0	0	0	0	1,693.8	3,970.0	3,763.3	0	0	0	1,693.8

Adjusted for diversion

Mean	57.0	172	505	252	344	528	652	580	210	105	98.8	612
Cfsm	0.286	0.864	2.54	1.27	1.73	2.65	3.28	2.91	1.06	0.528	0.496	3.08
In.	0.33	0.96	2.93	1.46	1.80	3.06	3.65	3.36	1.18	0.61	0.57	3.43

	Observed			Adjusted			
Calendar year 1953:	Max 2,270	Min 7.0	Mean 363	Mean 412	Cfsm 2.07	In. 28.09	
Water year 1953-54:	Max 2,100	Min 18	Mean 295	Mean 342	Cfsm 1.72	In. 23.34	

Peak discharge (base, 1,300 cfs).--Apr. 18 (1:30 to 2:30 p.m.) 1,770 cfs (4.71 ft); Sept. 12 (7 to 8 a.m.) 2,410 cfs (5.42 ft).
* Discharge measurement made on this day.
† Diversion, in millions of gallons, from 97 sq mi in Ware River basin for supply to Boston metropolitan district, furnished by Metropolitan District Commission.
Note.--Stage-discharge relation affected by ice Dec. 19, 24, Jan. 1, 2, 8-15, 17, 18, 21-24, Jan. 28 to Feb. 1, Feb. 7-9, 12-14.

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 1954 (monthly discharge only for some periods, published in WSP 1301).

Gage.--Water-stage recorder and concrete control. Altitude of gage is 725 ft (from topographic map).

Average discharge.--7 years, 6.34 cfs.

Extremes.--Maximum discharge during year, 107 cfs Sept. 11 (gage height, 2.48 ft), from rating curve extended above 42 cfs by logarithmic plotting; minimum, 0.02 cfs Oct. 1-4.
1947-54: Maximum discharge, 152 cfs Mar. 31, 1951 (gage height, 2.71 ft), from rating curve extended above 42 cfs by logarithmic plotting; maximum gage height, 2.94 ft Feb. 7, 1951 (backwater from ice); minimum discharge, 0.01 cfs Aug. 10-12, 21-29, 1949, Aug. 30 to Sept. 12, 1953.

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

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 17				Apr. 18 to Sept. 30			
0.35	0.02	1.0	2.6	0.49	0.12	1.2	4.7
.4	.05	1.2	4.8	.55	.21	1.4	9.0
.5	.16	1.4	9.0	.6	.32	1.6	17.1
.6	.39	1.6	17.1	.7	.63	1.8	29
.7	.76	1.8	29	.8	1.08	2.0	45
.8	1.25	2.0	45	1.0	2.5		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a0.02	2.25	3.3	4.6	4.7	9.0	7.8	7.0	4.2	2.6	2.25	2.8
2	a.02	1.75	3.3	4.6	4.9	16.0	8.0	6.8	*4.9	1.7	.49	1.09
3	a.02	1.5	2.9	4.7	4.8	16.6	7.6	11.5	4.1	1.08	1.85	.75
4	a.03	1.25	2.9	4.6	5.4	19.8	6.0	26	4.1	.83	1.35	.67
5	*.16	1.15	16.3	4.1	5.2	11.3	5.7	13.0	5.1	1.65	.56	.43
6	.52	1.05	6.7	4.5	4.6	9.3	7.4	10.0	4.1	1.75	.43	.37
7	2.6	2.5	*30	4.0	4.1	8.7	11.2	8.5	3.3	*.98	.25	2.15
8	.56	3.2	10.2	3.5	4.3	8.0	7.8	17.1	2.8	*1.02	.21	1.75
9	.31	*2.3	8.3	3.1	4.1	7.4	6.8	24	2.6	.59	1.3	.94
10	.26	1.8	34	3.7	3.8	7.3	6.1	15.3	2.4	.46	*3.6	.67
11	.22	1.6	13.9	3.4	3.7	6.6	12.0	16.3	4.7	.37	2.6	35
12	.20	1.45	11.4	*3.5	3.1	6.2	12.3	11.8	2.45	.31	1.07	8.3
13	.18	1.35	11.4	3.4	2.7	6.1	8.0	10.0	5.0	.30	.67	3.5
14	.16	1.3	28	3.4	2.9	7.1	7.1	9.0	3.6	.22	.37	4.9
15	.16	1.25	22	3.4	3.7	7.1	6.4	8.0	7.0	.19	.40	2.9
16	.16	1.25	13.0	3.2	8.5	6.2	8.1	16.0	5.0	.14	1.10	4.2
17	.16	1.20	10.4	3.0	13.2	5.9	38	9.4	3.0	.13	1.7	5.4
18	.16	1.15	9.0	2.9	9.0	5.5	43	7.8	2.3	.13	.96	3.6
19	.16	1.10	8.0	3.0	8.2	5.1	19.3	7.0	1.8	.16	1.55	4.1
20	.16	1.10	7.6	3.5	8.8	25	14.8	6.5	1.45	.12	2.0	4.3
21	.16	1.05	7.6	13.9	12.4	10.6	12.5	17.1	1.14	.81	1.3	3.1
22	.16	1.10	10.6	6.2	28	8.0	10.8	23	1.03	.40	1.03	*5.1
23	.21	9.6	8.5	4.3	12.2	*7.3	11.1	12.5	1.45	.21	.63	2.6
24	.43	4.3	6.6	4.1	9.4	6.8	10.4	9.7	1.45	.26	.52	1.95
25	4.0	13.5	6.4	3.8	*13.7	14.1	8.8	8.8	.88	.52	.63	1.95
26	2.2	8.6	6.1	4.3	10.8	18.5	8.2	7.2	1.21	.43	.59	1.95
27	.90	4.7	5.5	19.3	9.4	10.0	8.0	6.3	1.25	.33	.63	1.85
28	5.9	4.1	5.4	9.2	8.5	8.5	*15.9	6.0	1.06	.19	.46	1.5
29	8.4	3.5	5.9	6.0	-	8.3	*10.0	5.6	5.3	.58	.37	1.25
30	22	3.2	5.5	5.6	-------	7.8	8.0	7.6	3.9	2.8	.74	1.4
31	3.7	---	4.7	5.2	-------	7.3	-------	4.7	-------	1.10	17.1	-------
Total	54.28	85.15	325.4	156.0	214.1	301.4	347.1	349.5	92.57	22.36	48.71	110.47
Mean	1.75	2.84	10.5	5.03	7.65	9.72	11.6	11.3	3.09	0.721	1.57	3.68
Cfsm	0.516	0.838	3.10	1.48	2.26	2.87	3.42	3.33	0.912	0.213	0.463	1.09
In.	0.60	0.93	3.57	1.71	2.35	3.31	3.81	3.83	1.02	0.25	0.53	1.21

Calendar year 1953: Max 65 Min 0.01 Mean 8.22 Cfsm 2.42 In. 32.94
Water year 1953-54: Max 43 Min 0.02 Mean 5.77 Cfsm 1.70 In. 23.12

Peak discharge (base, 72 cfs).--Apr. 17 (10 to 11 p.m.) 90 cfs (2.38 ft); Sept. 11 (5:30 p.m.) 107 cfs (2.48 ft).

* 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 East Branch Swift River near Hardwick and Ware River near Barre.

Note.--Stage-discharge relation affected by ice Dec. 18, 20, 24, 28, Jan. 1, 5, 6, 8-17, 22, 23, 28, 29, Jan. 31 to Feb. 2, Feb. 4, 12, 13, Mar. 5-7, 12, 16, 17, 19, Apr. 4, 5.

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 1954. 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.--17 years, 70.0 cfs.

Extremes.--Maximum discharge during year, 666 cfs Apr. 18 (gage height, 20.68 ft); minimum, 0.1 cfs Oct. 4.
1937-54: Maximum discharge, 6,780 cfs Sept. 21, 1938, average of slope-area and contracted-opening determinations; maximum gage height, 22.49 ft June 25, 1944; no flow Aug. 7, 14-21, 1939, Aug. 26-28, 1949, Aug. 31 to Sept. 6, Sept. 9-12, 1953.

Remarks.--Records good.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

19.1	0	19.4	18
19.15	.4	19.5	36
19.2	1.6	19.6	67
19.25	3.8	20.0	239
19.3	7.2	20.6	610
19.35	12		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	74	57	44	61	121	96	99	61	48	14	94
2	.4	50	51	42	59	140	88	88	57	42	13	82
3	.3	34	45	45	57	159	94	88	54	32	16	56
4	.2	27	39	50	62	200	84	130	51	26	16	44
5	.5	23	92	46	62	186	73	155	51	26	16	33
6	1.6	22	138	54	59	142	78	136	45	35	15	28
7	4.7	32	272	51	53	117	126	109	40	30	13	43
8	4.1	33	304	42	48	101	132	105	36	27	12	62
9	3.8	38	205	40	46	92	115	153	31	23	15	51
10	3.8	35	219	38	44	88	94	186	29	19	23	35
11	3.8	32	250	42	40	82	99	175	29	15	30	135
12	3.8	29	190	39	36	75	132	155	24	12	29	398
13	3.6	26	155	38	32	71	126	123	30	9.3	25	244
14	3.0	24	181	36	30	76	107	107	30	7.6	22	148
15	3.0	22	293	36	31	84	92	94	39	7.2	18	105
16	3.2	20	239	40	43	75	86	119	45	5.7	16	84
17	3.2	18	168	39	90	67	161	148	42	4.4	16	84
18	3.2	20	119	35	117	64	587	128	34	3.6	13	84
19	4.1	23	94	34	109	59	475	105	31	3.2	11	80
20	5.0	19	84	36	97	133	288	88	27	3.6	11	90
21	5.7	17	84	59	96	210	210	94	23	7.2	9.3	84
22	6.4	15	92	99	184	168	166	153	19	7.2	7.6	78
23	7.6	33	101	94	210	130	146	181	24	6.0	6.0	67
24	8.4	64	90	78	157	107	140	148	31	5.7	4.7	57
25	15	103	76	64	138	101	126	121	29	7.2	4.7	50
26	19	200	71	54	146	168	113	103	27	7.2	4.7	44
27	19	170	64	91	140	181	103	86	24	6.8	3.8	42
28	31	119	61	146	130	144	113	73	22	6.0	3.2	39
29	63	86	64	117	-	123	128	71	30	6.0	2.8	35
30	131	65	61	92	-------	109	113	75	42	9.8	3.6	32
31	113	-------	54	73	-------	97	-------	67	--------	11	29	------
Total	474.8	1,473	4,013	1,794	2,377	3,670	4,491	3,663	1,057	459.7	423.4	2,508
Mean	15.3	49.1	129	57.9	84.9	118	150	118	35.2	14.8	13.7	83.6
Cfsm	0.350	1.12	2.95	1.32	1.94	2.70	3.43	2.70	0.805	0.339	0.314	1.91
In.	0.40	1.25	3.42	1.53	2.02	3.12	3.82	3.12	0.90	0.39	0.36	2.13

Calendar year 1953: Max 584 Min 0 Mean 88.4 Cfsm 2.02 In. 27.45
Water year 1953-54: Max 587 Min 0.2 Mean 72.3 Cfsm 1.65 In. 22.46

Peak discharge (base, 350 cfs).--Dec. 7 (10 p.m.) to Dec. 8 (2 a.m.) 350 cfs (20.20 ft); Apr. 18 (3:30 to 6 p.m.) 666 cfs (20.68 ft); Sept. 12 (8:30 a.m.) 434 cfs (20.34 ft).

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 1954.
Gage.--Water-stage recorder. Datum of gage is 365.18 ft above mean sea level, datum of 1929. Prior to Aug. 25, 1912, chain gage at site 400 ft upstream at same datum.
Average discharge.--42 years (1912-54), 305 cfs (adjusted for storage and diversions).
Extremes.--Maximum discharge during year, 176 cfs Aug. 31 (gage height, 2.96 ft); minimum daily, 28 cfs Oct. 31.
1910-54: 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 excellent except those for periods of ice effect or no gage-height record, which are good. Flow completely regulated since August 1939 by Quabbin Reservoir (see p. 233). Diversion from Ware River to Quabbin Reservoir since 1940 and from Quabbin Reservoir to Wachusett Reservoir since 1941 and 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 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.9	28
2.0	36
2.2	56
2.5	98
2.8	147

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	102	50	84	33	110	107	103	55	111	102	45	103
2	101	113	84	65	102	103	105	45	101	102	123	102
3	58	101	83	43	102	103	60	108	101	60	115	*103
4	45	102	83	111	104	105	48	105	101	47	102	59
5	114	100	53	99	104	103	112	102	57	50	103	44
6	101	101	44	100	59	59	103	101	44	116	102	42
7	102	58	101	100	44	46	106	*106	109	109	94	113
8	101	47	85	100	*112	109	104	61	100	87	127	103
9	101	112	97	56	a100	102	103	50	102	88	139	103
10	56	100	105	44	94	102	58	112	101	91	105	103
11	43	33	98	110	99	102	49	104	*101	125	104	69
12	43	112	57	100	a56	103	114	103	57	110	103	47
13	110	100	45	100	a43	60	103	105	45	104	102	112
14	101	57	117	100	43	47	102	103	109	105	55	106
15	100	44	102	100	110	113	102	58	103	106	44	105
16	100	109	101	56	100	104	104	48	102	105	112	108
17	56	100	100	44	103	104	69	112	102	96	103	*101
18	43	101	*103	117	101	103	57	102	100	120	103	60
19	109	100	57	72	101	104	50	101	56	133	101	46
20	98	100	45	99	56	64	113	101	44	101	111	111
21	99	57	113	b102	45	48	103	103	107	103	*99	102
22	99	45	107	101	48	114	104	61	102	112	125	104
23	99	114	103	b60	111	98	104	47	103	114	143	103
24	57	100	101	43	101	104	59	113	102	94	124	102
25	45	104	32	106	102	106	47	102	104	125	112	57
26	110	33	68	97	103	109	111	103	95	134	101	44
27	*100	111	45	99	*59	60	102	102	125	113	111	111
28	103	55	110	99	45	48	104	102	137	125	101	102
29	102	44	100	b100	-	118	102	58	104	125	127	101
30	69	99	99	55	--------	106	102	46	104	115	134	102
31	28	--------	99	42	--------	106	--------	45	--------	57	108	--------
Total	2,595	2,502	2,621	2,553	2,357	2,860	2,703	2,664	2,829	3,174	3,278	2,668
Mean	83.7	83.4	84.5	82.4	84.2	92.3	90.1	85.9	94.3	102	106	88.9
(†)	+97.7	+103	+413	+173	+298	+398	+547	+485	+80.6	-53.7	-31.3	+216

Adjusted for diversion and change in reservoir contents

Mean	181	186	498	256	382	490	637	570	175	48.7	74.4	304
Cfsm	0.962	0.989	2.65	1.36	2.03	2.61	3.39	3.03	0.931	0.259	0.396	1.62
In.	1.11	1.10	3.05	1.57	2.12	3.01	3.78	3.50	1.04	0.30	0.46	1.81

	Observed			Adjusted			
Calendar year 1953:	Max 1,680	Min 28	Mean 232	Mean 396	Cfsm 2.11	In. 28.58	
Water year 1953-54:	Max 143	Min 28	Mean 89.9	Mean 316	Cfsm 1.68	In. 22.85	

* Discharge measurement made on this day.
† Change in contents in Quabbin Reservoir (adjusted for diversion from Ware River), diversion to Wachusett Reservoir, and diversion to Chicopee Valley aqueduct, equivalent in cubic feet per second.
a No gage-height record; discharge estimated on basis of weather records, recorded range in stage when available, and typical regulation pattern.
b Stage-discharge relation affected by ice.

Quaboag River at West Brimfield, Mass.

Location.--Lat 42°10'31", long 72°15'46", on left bank 15 ft upstream from site of former highway bridge at West Brimfield, Hampden County, 0.4 mile upstream from Blodgett Mill Brook, and 3½ miles northeast of Palmer.

Drainage area.--151 sq mi.

Records available.--August 1909 to September 1954.

Gage.--Water-stage recorder. Concrete control since June 15, 1937. Datum of gage is 377.36 ft above mean sea level, datum of 1929. Prior to Aug. 19, 1912, staff gage on right bank at upstream side of former highway bridge, and Aug. 19, 1912, to May 30, 1923, water-stage recorder at downstream end of pier of bridge at same datum.

Average discharge.--42 years (1912-54), 239 cfs.

Extremes.--Maximum discharge during year, 1,280 cfs Sept. 11 (gage height, 5.00 ft); minimum daily, 12 cfs Oct. 3, 4.
1909-54: Maximum discharge, 8,470 cfs Sept. 21, 1938 (gage height, 11.8 ft, from floodmarks), from rating curve extended above 3,200 cfs on basis of slope-area determination of peak flow; minimum daily, 7.8 cfs Oct. 11, 19, 1930.

Remarks.--Records excellent except those for periods of ice effect, which are fair. Slight diurnal fluctuation at low flow caused by mill above station; regulation much greater prior to 1938.

Revisions (water years).--WSP 451: 1916. WSP 711: Drainage area. WSP 1301: 1918(M), 1941(M), 1946(M).

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.4	12	3.5	321
2.6	38	4.0	585
2.9	98	5.0	1,280
3.2	192		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	98	219	160	205	*403	393	435	293	112	43	240
2	13	89	188	200	200	440	367	408	261	106	41	231
3	12	82	178	190	190	450	307	429	235	96	48	235
4	12	67	167	178	200	509	307	509	227	93	59	244
5	14	65	243	160	195	488	*302	493	219	96	53	227
6	14	67	252	188	180	475	293	482	208	125	52	208
7	20	89	388	175	160	450	316	466	196	109	48	208
8	19	98	382	130	190	424	307	466	188	98	48	231
9	18	93	372	160	180	403	283	519	178	84	55	265
10	16	89	472	160	160	377	288	*530	167	80	128	240
11	18	89	435	160	150	352	283	525	156	73	174	624
12	19	86	456	160	120	326	298	514	144	69	134	768
13	19	82	466	150	135	307	274	504	137	63	120	854
14	18	77	585	145	130	321	270	477	*134	57	114	924
15	16	73	597	145	120	316	257	450	153	55	109	896
16	16	69	568	145	150	302	261	482	174	50	106	868
17	16	67	541	145	210	293	418	482	160	46	101	917
18	16	65	*505	140	235	279	801	461	150	45	91	847
19	16	63	450	135	252	279	820	440	134	48	89	801
20	16	61	425	140	252	388	840	414	120	45	86	775
21	16	57	398	230	257	403	814	429	106	46	82	716
22	16	55	393	300	336	393	749	466	98	45	75	678
23	15	90	362	*260	357	408	704	477	103	45	69	609
24	15	*114	331	240	362	393	671	466	98	41	65	563
25	27	178	340	230	398	403	609	445	86	63	63	519
26	35	252	300	220	414	504	558	408	80	55	*59	493
27	*28	252	265	250	414	472	519	382	75	46	57	450
28	41	252	250	270	403	482	525	346	71	43	55	419
29	69	244	248	200	-	461	504	321	93	41	52	382
30	150	235	235	240	-------	440	466	372	112	45	50	*352
31	117	-------	210	210	-------	414	-------	326	-------	43	195	-------
Total	850	3,298	11,221	5,816	6,555	12,355	13,804	13,924	4,556	2,063	2,521	15,784
Mean	27.4	110	362	188	234	399	460	449	152	66.5	81.3	526
Cfsm	0.181	0.728	2.40	1.25	1.55	2.64	3.05	2.97	1.01	0.440	0.538	3.48
In.	0.21	0.81	2.76	1.43	1.61	3.04	3.40	3.43	1.12	0.51	0.62	3.89

Calendar year 1953: Max 1,380 Min 12 Mean 325 Cfsm 2.15 In. 29.19
Water year 1953-54: Max 924 Min 12 Mean 254 Cfsm 1.68 In. 22.83

Peak discharge (base, 840 cfs).--Apr. 18 (2 to 4 a.m.) 847 cfs (4.41 ft); Sept. 11 (3:30 p.m.) 1,280 cfs (5.00 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 18-20, 25, 26, 28, Dec. 31 to Jan. 3, Jan. 5, Jan. 7 to Feb. 17, Mar. 6, 7.

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 1954. 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 1½ miles downstream at different datum.

Average discharge.--26 years, 1,085 cfs (adjusted to present drainage area and for storage and diversions).

Extremes.--Maximum discharge during year, 4,280 cfs Sept. 12 (gage height, 9.05 ft); minimum daily, 46 cfs Oct. 12.

1928-54: 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 except those for periods of ice effect, no gage-height record, or backwater from aquatic vegetation, which are good. 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 and, since 1950, for city of Chicopee. 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. 233), and by smaller reservoirs.

Revisions (water years).--WSP 711: Drainage area. WSP 1231: 1934, 1939(M).

Rating table, water year 1953-54, except periods of ice effect or backwater from aquatic vegetation (gage height, in feet, and discharge, in cubic feet per second)

3.4	39	5.5	760
3.6	61	6.0	1,130
4.0	129	8.0	3,050
4.5	266	9.0	4,220
5.0	475		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	153	516	702	643	838	1,370	1,130	1,180	1,060	740	251	1,460
2	175	602	627	558	870	1,410	1,120	922	954	648	412	1,280
3	270	462	610	620	808	*1,530	928	1,290	958	505	425	1,100
4	143	422	572	858	854	2,010	734	1,510	836	363	483	979
5	64	306	517	698	916	1,860	1,040	1,670	702	306	518	794
6	153	376	879	712	756	1,580	980	1,470	635	836	497	666
7	101	205	1,660	724	590	1,370	968	1,340	807	639	225	666
8	177	232	1,910	710	788	1,340	1,080	1,290	805	651	354	1,020
9	217	498	1,610	388	794	1,280	1,010	1,550	660	430	408	1,050
10	157	436	1,720	245	734	1,150	848	1,830	588	461	515	905
11	222	471	1,930	690	588	1,160	774	1,710	612	337	a650	1,360
12	46	324	1,610	610	591	1,020	1,240	*1,580	522	401	*a800	3,970
13	178	388	1,430	b520	334	929	1,130	1,500	491	457	644	3,080
14	170	294	1,830	b500	331	792	1,000	1,310	*497	338	509	2,340
15	154	252	2,380	b580	600	1,300	980	1,200	818	345	366	1,930
16	180	216	2,110	b450	671	1,120	906	1,220	759	372	407	1,870
17	154	264	1,800	b340	858	880	1,280	1,580	863	367	528	2,270
18	214	368	1,430	b500	1,000	921	3,370	1,350	666	258	405	2,080
19	118	336	1,120	b580	1,120	897	3,220	1,280	552	440	440	1,870
20	150	276	1,090	b600	1,780	1,020	2,320	1,170	452	365	368	1,920
21	187	258	*1,290	b640	875	1,610	1,960	1,140	572	312	352	1,820
22	169	142	1,150	1,310	1,420	1,460	1,710	1,340	564	356	364	1,720
23	194	*450	1,180	1,030	1,650	1,260	1,660	1,470	473	416	329	1,570
24	150	516	1,020	858	1,480	1,100	1,580	1,380	552	238	354	1,420
25	229	700	870	*945	1,410	1,140	1,480	1,300	564	349	380	1,200
26	*233	1,170	947	868	1,500	1,670	1,510	1,190	368	462	380	1,070
27	356	1,140	818	896	1,410	1,550	1,310	1,020	289	444	308	1,180
28	389	971	974	1,260	1,270	1,360	1,480	1,060	558	416	258	1,010
29	382	737	945	1,020	-	1,290	1,440	728	443	413	280	1,010
30	780	848	826	871	--------	1,320	1,370	1,220	550	425	304	895
31	846	--------	566	742	--------	1,150	--------	1,140	--------	358	484	--------
Total	7,111	14,176	38,123	21,966	26,836	39,849	41,558	40,940	19,170	13,448	12,998	45,485
Mean	229	473	1,230	709	958	1,285	1,385	1,321	639	434	419	1,516
(†)	+265	+300	+1,147	+471	+727	+1,298	+1,954	+1,807	+213	-152	-78.4	+809

Adjusted for diversion and change in reservoir contents

Mean	328	588	1,658	884	1,259	1,770	2,139	1,995	721	377	390	1,828
Cfsm	0.477	0.855	2.41	1.28	1.83	2.57	3.11	2.90	1.05	0.548	0.567	2.66
In.	0.55	0.95	2.78	1.48	1.91	2.97	3.47	3.34	1.17	0.63	0.65	2.97

	Observed			Adjusted			
Calendar year 1953:	Max 6,090	Min 37	Mean 1,216	Mean 1,433	Cfsm 2.08	In. 28.26
Water year 1953-54:	Max 3,970	Min 46	Mean 881	Mean 1,159	Cfsm 1.68	In. 22.87

* Discharge measurement made on this day.

† Change in contents in Quabbin Reservoir (adjusted for diversion from Ware River), diversion to Wachusett Reservoir and city of Chicopee, change in contents in Ludlow Reservoir, and diversion from Ludlow Reservoir, in millions of cubic feet.

a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage, and records for other stations in Chicopee River basin.

b Stage-discharge relation affected by ice.

Note.--Backwater from aquatic vegetation May 14 to Sept. 11.

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 1954.
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.--45 years, 322 cfs (adjusted for storage).
Extremes.--Maximum discharge during year, 3,330 cfs Apr. 20 (gage height, 5.97 ft); minimum, 8.0 cfs Mar. 4; minimum daily, 10 cfs Oct. 3, 4.
1909-54: 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 determinations 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 except those for periods of no gage-height record or shifting control, which are good. Flow regulated by Knightville Reservoir since 1941 (see p. 233).
Revisions (water years).--WSP 415: 1909-11 calendar years. WSP 1001: 1941-43. WSP 1231: 1910, 1912, 1913(M), calendar years, 1914-15, 1916-19(M), 1921-23(M), 1925-27(M), 1929-33(M), 1935(M), 1942(M).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.7	6.9	3.5	440
1.8	11	4.0	750
2.0	26	4.5	1,170
2.3	59	5.0	1,730
2.6	114	6.0	3,290
3.0	225		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a 11	88	52	92	261	680	362	362	284	124	56	925
2	a 11	64	58	61	196	*1,290	326	330	250	106	44	198
3	a10	52	59	65	190	1,330	317	390	236	84	43	116
4	10	44	59	70	148	1,180	257	863	222	73	76	110
5	12	38	192	72	128	1,960	250	743	269	67	69	84
6	18	35	275	155	133	1,050	*289	495	222	84	51	65
7	56	42	722	174	136	592	484	451	193	79	46	79
8	61	88	1,020	119	136	522	440	517	170	77	40	231
9	37	84	468	89	136	400	371	1,150	143	79	39	181
10	30	72	586	65	136	385	300	1,110	133	59	39	119
11	26	69	780	69	136	381	324	*2,070	126	50	56	169
12	24	64	470	72	136	290	686	1,900	116	46	52	590
13	22	61	313	77	128	296	430	1,090	166	43	45	1,820
14	19	56	339	86	124	339	348	624	184	40	42	2,560
15	18	52	528	84	119	400	317	522	*456	40	35	1,440
16	a16	50	554	82	162	400	358	490	1,090	39	35	*357
17	a16	58	222	82	452	304	1,040	440	489	35	35	715
18	a16	55	167	84	694	277	77	362	277	32	32	473
19	a16	52	151	125	598	265	882	326	199	33	*30	366
20	a16	47	159	176	456	621	2,900	300	167	31	29	425
21	a15	*44	173	167	562	1,160	1,760	777	136	44	31	292
22	a15	40	*181	253	1,140	630	565	1,870	116	67	27	376
23	a15	138	196	288	1,510	440	456	1,420	108	44	26	277
24	*15	209	261	261	684	381	462	701	104	37	22	212
25	27	153	236	222	604	388	395	659	91	37	21	178
26	93	304	206	129	743	1,030	362	512	82	40	20	184
27	66	183	193	124	802	878	317	400	80	43	21	167
28	69	99	161	200	743	544	685	357	84	36	21	143
29	150	89	159	273	-	473	637	334	112	39	19	128
30	273	73	159	367	-------	462	446	557	119	100	19	121
31	154	-------	154	395	-------	395	-------	371	-------	82	216	-------
Total	1,337	2,501	9,253	4,578	11,393	19,723	16,823	22,493	6,422	1,790	1,337	13,101
Mean	43.1	83.4	298	148	407	636	561	726	214	57.7	43.1	437
(†)	+0.2	+3.3	+19.7	-6.0	-10.3	-3.5	-2.9	+0.1	-0.4	-0.1	+27.0	-27.0

Adjusted for change in contents in Knightville Reservoir

Mean	43.2	84.6	306	145	403	635	560	726	214	57.7	53.2	426
Cfsm	0.267	0.522	1.89	0.895	2.49	3.92	3.46	4.48	1.32	0.356	0.328	2.63
In.	0.31	0.58	2.18	1.04	2.59	4.52	3.85	5.16	1.47	0.41	0.38	2.94

	Observed			Adjusted			
Calendar year 1953:	Max 4,150	Min 7.6	Mean 386	Mean 387	Cfsm 2.39	In. 32.40
Water year 1953-54:	Max 2,900	Min 10	Mean 303	Mean 303	Cfsm 1.87	In. 25.43

* Discharge measurement made on this day.
† Change in contents in Knightville Reservoir, in millions of cubic feet.
a No gage-height record; discharge estimated on basis of weather records and records for West Branch Westfield River at Huntington.
Note.--Shifting-control method used Oct. 4-15, Oct. 24 to Nov. 25, Feb. 22 to Sept. 13.

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 1954.

Gage.--Water-stage recorder and concrete control. Datum of gage is 641.40 ft above mean sea level, datum of 1929.

Average discharge.--9 years, 2.66 cfs.

Extremes.--Maximum discharge during year, 54 cfs Sept. 11 (gage height, 2.48 ft); minimum, 0.08 cfs Oct. 1-3.
1945-54: Maximum discharge, 187 cfs Dec. 31, 1948 (gage height, 3.09 ft), from rating curve extended above 25 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 table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.15	0.08	1.7	4.0
1.2	.14	1.8	6.6
1.3	.29	1.9	10.3
1.4	.53	2.1	20
1.5	1.02	2.2	27
1.6	2.1		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.08	0.46	0.72	1.23	1.6	5.5	3.2	3.4	1.99	1.19	0.55	2.1
2	.08	.36	.70	1.19	1.51	*9.7	2.9	3.2	1.93	.87	.34	.81
3	.08	.32	.68	1.14	1.45	10.8	2.8	4.1	1.87	.70	.67	.54
4	.10	.28	.72	1.14	1.45	12.3	2.4	8.2	1.69	.58	.90	.42
5	.17	.25	2.9	1.10	1.39	6.6	2.2	5.2	1.63	.51	1.41	.32
6	.33	.23	1.00	1.14	1.28	5.1	*2.7	4.6	1.45	.58	.38	.27
7	.82	1.07	6.5	1.02	1.19	4.4	4.1	5.0	1.28	.45	.29	1.45
8	.33	1.34	3.4	.95	1.14	4.0	3.3	6.4	1.10	.40	.25	1.38
9	.22	.74	2.2	a.95	1.10	3.7	2.8	8.1	.94	.32	.36	.87
10	.18	.62	7.2	a1.05	1.10	3.6	2.5	11.9	.87	.28	.45	.66
11	.16	.50	4.2	a1.1	1.10	3.2	3.4	*11.6	.81	.26	.72	25
12	.15	.42	3.1	a1.0	.95	2.8	4.0	7.5	.72	.24	.46	10.0
13	.13	.38	3.0	a.90	1.1	2.8	3.1	6.0	1.09	.22	.34	4.6
14	.12	.34	6.2	a.85	1.4	3.6	2.7	4.8	1.30	.21	.26	3.6
15	.12	.34	6.8	a.88	1.55	3.7	2.4	4.3	3.8	.27	.22	2.5
16	.12	.34	4.4	a.90	3.1	3.0	3.3	4.0	7.6	.22	.21	5.2
17	.11	.32	3.2	a.85	5.2	2.7	15.0	3.5	3.2	.20	.18	6.0
18	.11	.30	2.4	a.80	4.6	2.5	18.0	3.1	2.1	.18	.14	4.0
19	.11	.30	2.1	a.84	4.0	2.3	9.1	2.8	1.51	.19	*.18	3.8
20	.11	.29	1.9	a.86	4.0	8.9	6.9	2.6	1.19	.18	.21	3.6
21	.11	.28	1.99	a2.5	5.2	5.6	5.6	10.9	.94	1.22	.17	2.8
22	.10	*.28	*2.3	a2.1	9.7	4.2	4.7	12.4	.76	.62	.15	3.0
23	.10	2.2	2.4	1.3	6.4	3.7	4.4	7.0	.78	.36	.13	2.1
24	.10	1.36	2.0	1.15	4.7	3.4	4.2	5.7	.74	.29	.12	1.75
25	1.13	1.99	1.7	1.02	5.4	6.0	3.7	5.0	.62	.25	.12	1.57
26	1.07	2.3	1.57	1.23	4.8	9.0	3.4	4.1	.53	.64	.12	1.75
27	.40	1.19	1.39	3.9	4.6	5.6	3.4	3.5	.48	.68	.11	1.81
28	1.50	.90	1.28	3.1	4.2	4.5	5.8	3.1	.90	.42	.10	1.39
29	2.2	.78	1.28	2.5	-	4.1	4.8	2.9	1.51	.42	.10	*1.19
30	1.94	.70	1.28	1.9	------	3.8	3.9	3.2	1.19	1.54	.13	1.14
31	.75	------	1.23	1.7	------	3.4	------	2.4	------	.68	5.6	------
Total	13.03	21.18	81.74	42.29	85.21	154.5	140.7	170.5	46.52	15.17	15.37	95.62
Mean	0.420	0.706	2.64	1.36	3.04	4.98	4.69	5.50	1.55	0.489	0.496	3.19
Cfsm	0.256	0.430	1.61	0.829	1.85	3.04	2.86	3.35	0.945	0.298	0.302	1.95
In.	0.30	0.48	1.85	0.96	1.93	3.50	3.19	3.87	1.05	0.34	0.35	2.17

Calendar year 1953: Max 34 Min 0.04 Mean 3.13 Cfsm 1.91 In. 25.87
Water year 1953-54: Max 25 Min 0.08 Mean 2.42 Cfsm 1.48 In. 19.99

Peak discharge (base, 35 cfs).--Sept. 11 (1:30 p.m.) 54 cfs (2.48 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for West Branch Westfield River at Huntington and Mill River at Northampton.
Note.--Stage-discharge relation affected by ice Dec. 17-20, 24, 25, Jan. 8, 23, 24, Jan. 28 to Feb. 1, Feb. 12-15, 24, Mar. 5-7, 12, 16, Apr. 4.

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 1954.

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.--44 years, 104 cfs.

Extremes.--Maximum discharge during year, 3,560 cfs Sept. 11 (gage height, 6.30 ft), from rating curve extended above 2,600 cfs on basis of slope-area determination at gage height 8.65 ft and contracted-opening determinations at gage height 10.61 ft; minimum not determined (occurred during period of no gage-height record).

1910-54: 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 determinations 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 excellent except those for period of backwater from leaves, which are good, and those for periods of ice effect, no gage-height record, or shifting control, which are fair. Some diurnal fluctuation at low flow prior to 1948 by mill above station.

Revisions (water years).--WSP 415: 1910-12 calendar years. WSP 781: 1933(M), drainage area.

Rating tables, water year 1953-54, except periods of ice effect or shifting control (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 7		Dec. 8 to Sept. 30	
0.8	1.3	0.8	1.3
.9	4.0	.9	4.0
1.0	8.7	1.0	8.7
1.1	15	1.1	15
1.3	31	1.3	30
1.6	66	1.6	73
1.9	124	2.0	160
2.2	213	2.5	325
2.5	326	3.0	560
3.0	560	3.5	850
4.0	1,200	4.5	1,600

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.0	15	20	35	58	255	99	97	74	32	11	150
2	3.6	12	18	41	60	*752	92	92	63	28	8.2	55
3	3.6	9.2	17	41	50	526	88	110	56	21	8.7	29
4	3.6	8.2	18	39	52	669	74	276	53	18	15	24
5	4.4	7.1	87	35	47	263	71	184	68	16	12	19
6	7.6	6.6	73	36	42	178	*76	132	55	20	8.7	15
7	16	9.4	634	33	39	143	172	115	50	17	7.0	15
8	16	22	201	21	41	122	132	202	41	16	6.0	34
9	11	18	103	28	44	103	108	397	36	14	7.0	31
10	8.7	17	371	34	41	101	90	564	33	12	8.5	23
11	7.6	16	197	35	39	92	120	*616	31	12	12	1,360
12	7.1	15	112	33	30	80	227	290	28	10	10	522
13	6.1	15	110	29	37	77	135	203	36	9.8	9.0	181
14	5.6	14	160	27	39	90	108	160	42	8.7	8.2	115
15	4.8	13	230	30	41	110	95	132	*109	9.2	7.4	82
16	4.4	13	135	30	110	84	119	115	361	8.7	6.8	*155
17	4.4	15	84	27	250	75	762	99	131	7.1	6.4	267
18	4.0	15	66	23	190	69	970	86	76	6.1	6.0	140
19	3.6	14	58	26	160	64	329	76	55	8.6	*5.6	124
20	3.3	13	76	27	160	336	220	69	42	6.1	7.1	140
21	3.3	12	76	86	170	240	166	378	34	13	8.6	103
22	3.0	*10	*79	*90	540	140	140	581	29	13	7.0	129
23	3.0	40	100	66	343	112	124	253	27	9.2	5.8	99
24	*3.0	53	70	72	213	99	117	175	27	7.6	4.8	76
25	8.9	42	66	60	234	161	101	154	23	7.6	4.4	58
26	25	82	63	52	224	426	93	119	20	7.1	4.0	51
27	12	43	53	130	275	224	92	97	20	8.2	4.0	51
28	17	29	50	135	207	154	207	86	22	7.1	3.6	42
29	33	24	52	75	-	138	169	77	26	*6.9	3.6	*35
30	47	20	45	66	-------	129	119	160	25	20	4.0	32
31	24	-------	44	68	-------	108	-------	97	-------	15	200	-------
Total	308.6	622.5	3,468	1,530	3,736	6,122	5,415	6,192	1,693	393.0	420.4	4,157
Mean	9.95	20.8	112	49.4	133	197	180	200	56.4	12.7	13.6	139
Cfsm	0.189	0.395	2.13	0.939	2.53	3.75	3.42	3.80	1.07	0.241	0.259	2.64
In.	0.22	0.44	2.45	1.08	2.64	4.33	3.83	4.38	1.20	0.28	0.30	2.94

Calendar year 1953: Max 1,710 Min 1.3 Mean 125 Cfsm 2.38 In. 32.37
Water year 1953-54: Max 1,360 Min 3.0 Mean 93.3 Cfsm 1.77 In. 24.09

Peak discharge (base, 1,650 cfs).--Mar. 3 (10 p.m.) 1,760 cfs (4.69 ft); Apr. 17 (12 p.m.) 2,400 cfs (5.36 ft); Sept. 11 (3:45 p.m.) 3,560 cfs (6.30 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 1-4, 19-23, Aug. 7-10, 12-18, 21-23, 28, 29, Sept. 4-6, 25, 26; discharge estimated on basis of weather records, and records for West Branch Westfield River at Huntington. Stage-discharge relation affected by ice Dec. 3, 17-20, Dec. 23 to Feb. 22, Mar. 11, 12, 16-19. Backwater from leaves Oct. 11-18, Oct. 24 to Dec. 7. Shifting-control method used Aug. 5, 6, 11, 19, 20, 24-27, Aug. 30 to Sept. 1, Sept. 8-11, 13-24, 27-30.

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 1954.

Gage.--Water-stage recorder. Datum of gage is 388.60 ft above mean sea level, datum of 1929.

Average discharge.--19 years, 187 cfs.

Extremes.--Maximum discharge during year, 5,430 cfs Sept. 11 (gage height, 7.86 ft); minimum, 5.0 cfs Oct. 1-5.

1935-54: Maximum discharge, 21,800 cfs Sept. 21, 1938 (gage height, 15.5 ft, from floodmarks), from rating curve extended above 1,900 cfs on basis of computations of flow over dam at gage heights 11.93, 12.95, and 15.5 ft and slope-area determination at gage height 15.5 ft; minimum, 4.2 cfs Aug. 28, 29, 1949.

Remarks.--Records good except those for periods of ice effect, which are fair. Some diurnal fluctuation at low flow caused by mill above station.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 25-30)

Oct. 1 to Mar. 3				Mar. 4 to Sept. 30			
0.2	4.6	2.0	300	0.22	8.0	2.1	380
.5	22	2.5	580	.3	13	2.5	615
.9	51	3.0	930	.7	42	3.0	940
1.4	107	3.5	1,280	1.1	80	4.0	1,630
1.7	176			1.5	139	5.0	2,500
				1.8	232		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.8	40	51	69	116	385	186	192	135	55	26	240
2	5.0	33	49	81	118	*983	167	173	118	47	19	98
3	5.0	27	43	80	97	775	162	192	111	36	21	54
4	5.0	29	46	77	83	1,030	139	462	105	32	40	47
5	5.8	29	207	68	72	457	133	332	139	29	30	35
6	11	27	146	71	80	327	*144	236	111	40	24	28
7	40	38	1,070	65	80	272	334	202	98	36	19	30
8	28	64	413	40	81	246	254	347	84	31	16	63
9	17	51	230	35	82	214	210	628	71	27	19	54
10	13	48	703	67	79	206	170	739	64	23	23	40
11	12	49	404	68	78	183	264	*784	59	21	*31	2,160
12	11	48	246	64	59	156	478	474	55	19	26	895
13	10	48	238	56	59	152	282	354	70	18	21	342
14	9.4	46	363	53	59	176	225	282	82	17	19	214
15	9.4	42	490	57	72	217	202	236	314	24	15	149
16	8.9	42	285	58	195	164	250	210	*619	20	15	290
17	8.9	45	173	51	480	149	1,310	186	274	16	14	474
18	8.3	42	130	45	370	135	1,580	156	156	15	12	277
19	8.3	38	115	52	310	130	628	144	114	17	11	228
20	8.3	34	141	53	290	510	440	131	87	16	14	250
21	8.3	31	132	180	372	384	348	725	70	31	16	176
22	7.7	*28	*162	*190	888	241	287	1,080	59	36	13	228
23	7.7	83	210	135	514	199	264	532	52	23	11	173
24	*7.7	105	130	148	345	186	254	380	50	18	9.8	142
25	19	91	123	120	380	261	217	307	43	17	9.8	110
26	62	151	118	101	355	680	195	241	39	18	9.8	101
27	32	91	100	255	424	390	189	195	37	17	9.2	98
28	39	72	93	260	315	282	371	170	37	15	8.6	84
29	79	60	100	190	-	250	317	159	42	17	8.0	*69
30	109	53	96	146	-------	236	228	269	53	59	8.6	62
31	56	-------	85	125	-------	202	-------	176	-------	39	375	-------
Total	659.5	1,585	6,892	3,080	6,453	10,178	10,228	10,694	3,348	829	893.8	7,211
Mean	21.3	52.8	222	99.4	230	328	341	345	112	26.7	28.8	240
Cfsm	0.227	0.564	2.37	1.06	2.45	3.50	3.64	3.68	1.20	0.285	0.307	2.56
In.	0.26	0.63	2.74	1.22	2.56	4.04	4.06	4.24	1.33	0.33	0.35	2.86

Calendar year 1953: Max 2,240 Min 4.3 Mean 216 Cfsm 2.31 In. 31.34
Water year 1953-54: Max 2,160 Min 5.0 Mean 170 Cfsm 1.81 In. 24.62

Peak discharge (base, 2,150 cfs).--Mar. 3 (10:30 p.m.) 2,300 cfs (4.78 ft); Apr. 17 (11:45 p.m.) 3,590 cfs (6.19 ft); Sept. 11 (3:30 to 4 p.m.) 5,430 cfs (7.86 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 18, 19, 24, 27, Jan. 11-21, 23, 29, Feb. 12-20.

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 1954. 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.--44 years (1910-54), 89.6 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. No flow over spillway during year. Flow regulated by Borden Brook Reservoir since 1910 and Cobble Mountain Reservoir since August 1931 (see p. 233); discharge adjusted for effect of this regulation.

Cooperation.--Records furnished by Board of Water Commissioners, Springfield.

Revisions.--WSP 501: Drainage area.

Monthly discharge, in cubic feet per second, water year October 1953 to September 1954

Month	Mean	Per square mile	Runoff in inches
October	12.6	0.275	0.32
November	29.4	.642	.72
December	115	2.51	2.89
Calendar year 1953	111	2.42	33.04
January	43.6	.952	1.10
February	114	2.49	2.59
March	167	3.65	4.21
April	153	3.34	3.72
May	180	3.93	4.54
June	36.0	.786	.88
July	7.57	.165	.19
August	8.98	.196	.23
September	160	3.49	3.89
Water year 1953-54	85.2	1.86	25.28

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 1954.

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.--40 years, 939 cfs (adjusted for diversion and, since October 1931, for storage).

Extremes.--Maximum discharge during year, 11,900 cfs Sept. 11 (gage height, 13.46 ft); minimum, 71 cfs Oct. 5; minimum daily, 79 cfs Oct. 3, 5.
1914-54: Maximum discharge, 55,500 cfs Sept. 21, 22, 1938 (gage height, 29.40 ft, from floodmarks), from rating curve extended above 18,000 cfs on basis of computations of flow over dam at gage heights 27.20 and 29.40 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. 233).

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 table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.9	79	5.0	945
3.2	143	6.0	1,690
3.5	228	8.0	3,670
4.0	418	10.0	6,250
4.5	645		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	99	322	260	306	714	1,490	945	984	862	352	211	1,560
2	81	210	230	313	676	3,320	893	856	700	332	143	821
3	79	211	242	321	559	3,130	784	958	650	313	164	390
4	85	157	242	406	588	*3,920	672	1,880	630	202	212	266
5	79	194	468	294	524	3,300	772	1,880	672	200	209	268
6	112	146	772	517	474	2,220	736	1,280	589	238	183	186
7	159	225	2,250	532	387	1,420	*1,130	1,160	588	231	146	251
8	212	209	2,200	b500	488	1,240	1,220	1,200	514	219	133	368
9	166	329	1,310	b450	522	1,070	1,040	2,730	452	212	150	389
10	157	218	1,700	b350	518	997	838	2,890	*448	206	*189	348
11	158	228	1,880	b510	461	938	783	4,300	364	156	172	4,160
12	87	235	1,260	b530	593	893	1,670	*3,270	348	172	172	3,270
13	129	216	893	b580	b450	730	1,290	2,370	348	175	160	2,340
14	95	200	1,280	b560	b340	820	1,020	1,560	552	164	138	3,080
15	110	206	1,850	b510	480	1,070	886	1,300	849	159	143	2,350
16	112	209	1,480	b350	525	952	895	1,180	2,530	164	342	964
17	101	224	954	b250	1,610	862	3,000	1,110	1,440	132	211	2,000
18	105	203	631	b360	1,760	730	4,960	952	893	97	138	1,350
19	97	194	593	b520	1,570	689	2,300	844	640	166	129	1,020
20	112	216	532	501	1,220	1,580	3,620	772	448	176	156	1,180
21	97	177	*645	542	1,290	2,290	3,050	1,920	602	151	134	926
22	107	182	625	787	2,920	1,540	1,500	4,790	502	176	129	906
23	91	*297	780	738	3,100	1,090	1,260	3,060	523	180	151	868
24	93	627	692	613	1,750	958	1,210	1,910	435	176	114	650
25	151	572	590	620	1,510	1,000	1,050	1,620	309	173	110	550
26	*258	644	568	*524	1,630	2,690	1,020	1,350	294	128	91	470
27	282	601	541	844	1,740	2,090	964	1,110	257	156	89	575
28	355	376	611	1,070	1,590	1,430	1,440	978	226	136	114	479
29	349	315	569	880	-	1,220	1,610	900	303	143	89	405
30	585	287	529	718	-------	1,200	1,190	1,150	325	216	93	*521
31	458	-------	491	760	-------	1,040	-------	1,030	-------	287	716	-------
Total	5,161	8,430	27,668	16,756	29,989	47,919	43,748	53,294	18,293	5,988	5,331	32,911
Mean	166	281	893	541	1,071	1,546	1,458	1,719	610	193	172	1,097
(†)	+18.5	+47.9	+257.5	-181.5	+123.2	+419.9	+360.2	+486.3	+30.9	+11.8	+1.7	+362.3

Adjusted for diversion and change in reservoir contents

Mean	173	299	989	473	1,122	1,703	1,597	1,901	622	198	173	1,237
Cfsm	0.348	0.602	1.99	0.952	2.26	3.43	3.21	3.82	1.25	0.398	0.348	2.49
In.	0.40	0.67	2.29	1.10	2.35	3.95	3.59	4.41	1.40	0.46	0.40	2.78

	Observed			Adjusted		
Calendar year 1953:	Max 7,420	Min 70	Mean 1,123	Mean 1,174 Cfsm 2.36	In.	32.06
Water year 1953-54:	Max 4,960	Min 79	Mean 810	Mean 871 Cfsm 1.75	In.	23.80

* Discharge measurement made on this day.
† Diversion from Westfield Little River and change in contents in Knightville, Borden Brook, and Cobble Mountain Reservoirs, in millions of cubic feet.
b Stage-discharge relation affected by ice.

Connecticut River at Thompsonville, Conn.

Location.--Lat 41°59'14", long 72°36'21", on right bank just upstream from Enfield Dam and 1 mile downstream from Thompsonville, Hartford County.

Drainage area.--9,661 sq mi.

Records available.--July 1928 to September 1954.

Gage.--Water-stage recorder on river and on canal of Connecticut Light & Power Co. Datum of gage is 38.48 ft above mean sea level, datum of 1929.

Average discharge.--26 years, 16,410 cfs (adjusted for storage and diversion).

Extremes.--Maximum discharge during year, 83,500 cfs Apr. 19 (gage height, 6.00 ft); minimum daily, 1,120 cfs Oct. 4.
1928-54: 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 excellent except those below 4,000 cfs and those for periods of ice effect, which are good. 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 since 1940, Comerford Station Pond since 1930, Quabbin Reservoir since 1939 (see p. 233), and other reservoirs (combined usable capacity, about 88½ billion cubic feet.

Revisions (water years).--WSP 741: 1932: WSP 891: Drainage area.

Discnarge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,970	5,880	7,590	7,350	7,620	28,000	21,100	42,500	22,700	23,100	5,340	16,700
2	2,730	4,350	7,330	5,630	9,410	32,300	20,600	35,700	21,900	20,900	6,630	22,200
3	1,780	5,110	7,580	5,340	9,610	46,000	19,800	33,200	21,000	18,200	11,600	20,400
4	1,120	4,500	7,060	6,430	10,200	*53,100	17,200	34,100	24,700	14,600	14,300	18,100
5	2,720	5,070	7,670	8,010	9,610	57,600	14,600	46,100	22,800	9,000	11,900	13,300
6	4,500	5,360	10,600	9,250	8,590	46,900	13,900	50,300	22,600	8,510	8,430	6,680
7	4,360	4,090	18,100	8,750	4,990	38,300	*16,500	44,800	22,200	8,880	7,560	5,400
8	4,380	2,320	41,500	8,370	6,000	31,900	23,500	39,800	25,000	9,480	3,830	8,700
9	3,960	3,130	36,000	6,150	8,460	25,600	39,200	39,900	27,600	7,590	5,230	12,600
10	2,910	4,640	31,400	4,300	8,370	23,800	48,200	48,700	28,500	6,790	8,750	14,100
11	1,290	4,270	38,200	b4,200	8,100	20,600	44,500	63,100	26,600	3,430	8,450	20,800
12	1,950	4,680	30,000	7,000	b9,050	18,500	44,600	*68,500	22,800	3,460	7,410	48,900
13	2,570	4,340	28,100	7,000	b8,110	17,100	55,100	63,000	20,600	5,800	8,550	46,100
14	3,130	3,400	25,900	6,430	3,600	16,000	53,700	52,400	19,000	5,600	6,260	43,500
15	4,190	2,450	26,800	6,590	4,360	16,800	46,900	44,300	16,400	5,930	4,210	39,700
16	4,390	2,900	24,700	6,260	7,470	15,000	42,100	38,300	19,400	5,850	4,320	35,700
17	2,560	4,290	21,600	5,670	11,600	14,000	43,900	35,200	20,900	4,990	6,420	33,300
18	1,560	4,270	17,000	5,060	18,100	13,700	67,200	32,000	20,500	2,590	6,260	33,000
19	2,890	4,330	10,800	6,590	20,500	13,000	82,500	27,200	19,400	3,480	6,180	29,300
20	3,750	4,210	7,120	7,120	20,000	14,500	80,100	24,900	14,000	4,800	7,100	26,700
21	4,080	3,890	9,630	b7,690	19,400	26,300	75,100	23,900	9,220	5,070	5,020	30,800
22	4,020	2,480	14,400	b10,800	25,300	31,400	68,700	38,600	7,760	5,350	2,900	31,100
23	3,400	4,010	*15,700	b10,700	38,700	23,000	64,400	51,200	9,280	6,780	3,230	29,200
24	2,580	8,030	15,200	b9,090	39,700	21,400	63,200	44,500	9,880	6,440	3,760	22,900
25	2,380	9,670	14,600	6,930	35,000	20,500	65,400	36,300	10,800	5,760	4,970	19,000
26	3,310	13,800	9,880	8,510	33,000	24,800	67,400	32,200	10,400	5,360	5,400	18,300
27	4,990	16,200	10,800	11,200	31,400	25,300	64,400	27,600	7,230	6,770	*5,030	15,500
28	5,370	17,200	11,100	b15,600	29,800	23,400	55,600	25,500	8,390	6,360	3,950	*12,300
29	5,690	14,800	11,800	b16,700	-	23,000	54,500	23,600	14,100	6,940	2,140	13,800
30	8,200	7,090	12,300	12,200	-------	21,400	50,500	22,500	19,000	7,390	3,060	13,300
31	12,100	-------	11,600	b7,870	-------	21,100	-------	22,400	-------	6,940	7,640	-------
Total	115,830	180,760	542,060	248,790	446,050	804,300	‡1,424.4	‡1,212.3	544,660	242,140	195,830	701,380
Mean	3,736	6,025	17,490	8,025	15,930	25,950	47,480	39,110	18,160	7,811	6,317	23,380
(†)	-1,061	-315	+2,078	-2,151	+191	+638	+8,991	+4,889	-121	-1,403	-1,072	+2,059

Adjusted for change in contents and diversion

Mean	3,340	5,904	18,260	7,222	16,010	26,180	50,950	40,930	18,110	7,287	5,917	24,170
Cfsm	0.346	0.611	1.89	0.748	1.66	2.71	5.27	4.24	1.87	0.754	0.612	2.50
In.	0.40	0.68	2.18	0.86	1.73	3.12	5.88	4.88	2.09	0.87	0.71	2.79

	Observed			Adjusted			
Calendar year 1953:	Max 128,000	Min 1,060	Mean 18,530	Mean 18,760	Cfsm 1.94	In. 26.37	
Water year 1953-54:	Max 82,500	Min 1,120	Mean 18,240	Mean 18,650	Cfsm 1.93	In. 26.19	

* 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 and diversion from Chicopee River basin, in millions of cubic feet.
‡ Expressed in thousands.
b Stage-discharge relation affected by ice.

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, 0.5 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 1954.

Gage.--Water-stage recorder. Datum of gage is 26.23 ft above mean sea level, datum of 1929.

Average discharge.--26 years, 139 cfs.

Extremes.--Maximum discharge during year, 673 cfs Apr. 19 (gage height, 5.84 ft); minimum, 31 cfs Oct. 4, 5 (gage height, 0.68 ft); minimum daily, 31 cfs Oct. 4, 5.
1928-54: Maximum discharge, 7,360 cfs Sept. 21, 1938 (gage height, 16.08 ft, from floodmark), on basis of computation of peak flow over dams 7 and 9 miles above station, adjusted for flow from intervening area on basis of computation of peak flow over dam on Broad Brook; minimum, 10 cfs Aug. 13, 14, 1944; minimum daily, 16 cfs Aug. 13, 1944.

Remarks.--Records excellent. Flow regulated by mills and small reservoirs upstream. Records of water temperatures and suspended sediment loads for the water year 1954 are given in WSP 1350.

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.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.6	25	2.0	196
.7	32	3.0	345
1.0	68	5.5	627
1.5	138		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	132	80	103	125	150	144	166	166	104	48	178
2	32	96	76	99	107	172	135	150	132	92	47	161
3	35	76	73	98	108	200	130	150	112	76	80	122
4	31	67	68	102	156	327	122	202	103	70	113	80
5	31	62	131	100	166	307	120	216	100	67	86	64
6	37	57	161	100	144	239	124	209	98	67	64	58
7	53	70	256	103	124	178	128	172	95	65	54	58
8	52	99	248	92	109	161	144	166	89	61	50	75
9	50	106	209	67	104	150	135	327	82	57	50	93
10	43	85	223	86	102	144	124	378	76	49	76	83
11	43	75	231	90	100	137	117	420	76	49	96	301
12	44	67	223	93	91	129	130	389	76	52	95	524
13	46	62	202	89	71	122	138	314	80	43	70	599
14	43	54	311	82	76	150	128	239	85	42	54	356
15	42	55	389	85	83	196	115	196	89	39	50	196
16	44	57	378	88	99	184	113	202	150	*36	50	166
17	44	55	256	88	134	161	208	202	144	36	48	196
18	39	52	178	82	161	138	500	196	109	35	43	196
19	43	52	138	83	150	129	624	172	88	40	44	202
20	47	52	126	86	130	245	450	150	76	38	49	184
21	48	48	125	146	121	284	307	166	71	39	44	161
22	42	49	150	200	216	275	223	248	64	40	41	161
23	43	78	172	180	216	202	196	256	73	43	44	144
24	46	118	166	145	196	166	196	223	109	44	40	124
25	72	144	137	116	184	156	190	184	103	44	42	106
26	112	190	124	*111	184	216	178	156	78	41	43	102
27	96	178	117	150	178	231	*166	134	70	44	46	120
28	102	144	113	209	161	216	184	118	67	43	39	117
29	144	99	112	160	-	178	190	116	78	47	39	102
30	172	85	115	130	-------	161	190	156	92	55	42	93
31	150	-------	111	130	-------	150	-------	166	-------	54	95	-------
Total	1,860	2,564	5,399	3,493	3,796	5,854	5,849	6,539	2,831	1,612	1,782	5,122
Mean	60.0	85.5	174	113	136	189	195	211	94.4	52.0	57.5	171
Cfsm	0.610	0.869	1.77	1.15	1.38	1.92	1.98	2.14	0.959	0.528	0.584	1.74
In.	0.70	0.97	2.04	1.33	1.44	2.21	2.21	2.47	1.07	0.61	0.67	1.94

Calendar year 1953: Max 1,430 Min 31 Mean 198 Cfsm 2.01 In. 27.35
Water year 1953-54: Max 624 Min 31 Mean 128 Cfsm 1.30 In. 17.66

Peak discharge (base, 550 cfs).--Apr. 19 (3 p.m.) 673 cfs (5.84 ft); Sept. 13 (10 a.m.) 657 cfs (5.69 ft).
* Discharge measurement made on this day.

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 1954. 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.--41 years, 182 cfs (adjusted for storage).
Extremes.--Maximum discharge during year, 4,240 cfs Sept. 11 (gage height, 8.05 ft); minimum daily, 9.3 cfs Aug. 28.
1913-54: Maximum discharge, 18,500 cfs Sept. 21, 1938 (gage height, 12.94 ft), from rating curve extended above 1,400 cfs on basis of contracted-opening and slope-area determinations at gage heights 10.65 and 12.94 ft; minimum daily, 3.2 cfs Sept. 12, 1953.
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. 233).
Revisions (water years).--WSP 641: 1924(M). WSP 756: Drainage area. WSP 781: 1928(M). WSP 1231: 1914.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-22		Oct. 23 to Sept. 30			
2.6	24	2.25	8.5	4.5	420
2.9	49	2.4	16	5.0	640
3.2	88	2.6	28	5.5	910
		3.0	66	6.0	1,290
		3.5	142	7.0	2,440
		4.0	259		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	118	104	92	92	280	144	144	145	24	73	335
2	28	118	100	118	94	580	131	132	184	22	20	210
3	39	106	96	134	74	540	127	132	123	19	26	83
4	57	102	82	111	76	720	108	256	78	17	41	81
5	59	90	223	104	70	390	100	214	76	22	30	138
6	64	51	200	106	64	280	106	*169	70	43	24	129
7	86	127	621	100	58	230	212	142	67	26	19	142
8	66	88	460	88	62	200	193	248	58	21	15	150
9	33	104	320	95	66	190	177	373	51	18	14	144
10	30	104	741	125	60	175	146	409	*46	15	17	45
11	60	106	458	110	56	160	222	373	47	14	32	1,980
12	61	101	323	110	46	150	333	279	45	13	28	1,110
13	61	70	311	105	54	140	237	222	72	12	24	528
14	60	79	459	100	58	170	196	184	80	13	19	352
15	57	104	492	85	66	210	169	158	230	27	16	*276
16	33	114	339	90	160	160	220	144	235	18	16	378
17	42	108	246	105	370	140	878	125	187	14	16	886
18	61	102	180	100	290	125	1,130	109	94	12	*12	390
19	60	93	162	105	240	115	597	98	72	14	12	346
20	61	53	186	105	220	380	380	103	55	15	21	333
21	60	*60	169	190	289	320	281	455	43	19	16	279
22	57	78	*189	*150	558	220	235	768	35	17	12	293
23	*29	169	198	115	376	190	212	490	31	14	12	243
24	42	162	148	110	276	160	200	339	28	19	9.7	121
25	88	177	125	90	279	180	177	317	24	23	11	113
26	103	192	130	86	*262	410	160	212	22	17	10	196
27	82	123	135	210	281	300	156	175	21	14	10	189
28	119	109	134	210	235	220	217	154	20	14	9.3	175
29	171	116	136	150	-	200	205	146	23	19	102	160
30	172	104	134	120	-------	180	169	186	30	74	104	134
31	111	-------	114	105	-------	*160	-------	152	-------	56	351	-------
Total	2,104	3,228	7,715	3,624	4,832	7,875	7,818	7,408	2,292	665	1,122.0	9,939
Mean	67.9	108	249	117	173	254	261	239	76.4	21.5	36.2	331
(†)	-116	-95	+9	-48	+90	+174	+149	+88	-12	+8	-27	-69
Adjusted for change in contents in Otis Reservoir												
Mean	24.5	70.9	252	99.0	210	319	318	272	71.8	24.5	26.1	305
Cfsm	0.266	0.771	2.74	1.08	2.28	3.47	3.46	2.96	0.780	0.266	0.284	3.32
In.	0.31	0.86	3.16	1.24	2.37	4.00	3.86	3.41	0.87	0.31	0.33	3.69

	Observed			Adjusted			
Calendar year 1953:	Max 1,760	Min 3.2	Mean 200	Mean 204	Cfsm 2.22	In. 30.12	
Water year 1953-54:	Max 1,980	Min 9.3	Mean 161	Mean 165	Cfsm 1.79	In. 24.41	

Peak discharge (base, 1,400 cfs).--Mar. 3 or 4 (time unknown) 1,450 cfs (8.17 ft); Apr. 17 (11:30 p.m.) 1,910 cfs (6.59 ft); Sept. 11 (1:30 p.m.) 4,240 cfs (8.05 ft).
* Discharge measurement made on this day.
† Change in contents in Otis Reservoir, in millions of cubic feet.
Note.--No gage-height record Mar. 1-30; discharge estimated on basis of weather records, recorded range in stage, records of discharge from Otis Reservoir, and records for West Branch Farmington River at Riverton, Conn., and West Branch Westfield River at Huntington, Mass. Stage-discharge relation affected by ice Dec. 18, 25-27, Jan. 5, Jan. 7 to Feb. 20.

Still River at Robertsville, Conn.

Location.--Lat 41°58'04", long 73°02'03", 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 1954.

Gage.--Water-stage recorder. Datum of gage is 510.24 ft above mean sea level, datum of 1929.

Average discharge.--6 years, 183 cfs.

Extremes.--Maximum discharge during year, 2,610 cfs Sept. 11 (gage height, 5.79 ft); minimum, 8.2 cfs Aug. 18 (gage height, 0.47 ft); minimum daily, 8.8 cfs Aug. 17.
1948-54: Maximum discharge, 9,550 cfs Dec. 31, 1948 (gage height, 10.12 ft), from rating curve extended above 2,600 cfs on basis of slope-area determination at gage height 10.12 ft; minimum, 5.6 cfs Oct. 4, 5, 1950; minimum daily, 7.8 cfs Sept. 12, 1953; minimum gage height, 0.30 ft Aug. 28, 29, 1949.

Remarks.--Records good except those for periods of ice effect, which are poor. Ordinary flow regulated by powerplant above station.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 17				Apr. 18 to Sept. 30			
0.5	11	2.0	175	0.4	6.5	2.0	173
.7	20	2.5	310	.6	12	2.5	310
.9	31	3.0	520	.8	21	3.0	520
1.1	47	3.7	920	1.1	41	4.0	1,110
1.5	93			1.5	84		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	48	96	77	95	260	167	156	95	44	24	182
2	37	41	73	115	110	680	152	149	108	15	37	83
3	34	41	50	86	110	611	142	143	88	19	41	68
4	30	42	78	100	150	890	127	255	88	16	39	41
5	39	33	194	90	*110	480	133	243	74	20	51	32
6	38	35	153	100	105	334	134	207	57	76	19	39
7	65	55	517	88	100	286	214	183	65	49	14	34
8	40	60	303	70	90	255	199	259	65	38	13	44
9	42	79	205	80	95	240	175	393	59	36	38	52
10	25	53	513	70	110	226	141	466	48	14	14	27
11	23	77	369	70	115	212	154	*413	59	12	42	1,270
12	41	62	248	90	85	192	229	292	54	37	11	854
13	22	58	238	120	83	190	176	232	86	22	25	396
14	18	65	551	75	80	234	153	188	102	10	9.6	258
15	18	49	650	90	145	273	136	163	91	*44	9.6	176
16	22	72	413	100	222	216	156	142	86	14	36	190
17	22	65	272	75	456	197	680	155	77	11	8.8	305
18	18	93	208	100	385	168	1,090	131	67	10	23	217
19	18	77	173	90	282	159	560	112	51	23	15	161
20	19	67	168	80	231	528	381	113	28	37	26	170
21	19	59	157	200	256	409	300	413	45	14	13	147
22	18	31	171	150	605	292	258	680	44	40	11	161
23	18	128	182	110	393	232	233	438	42	11	17	127
24	13	128	136	85	*278	193	240	345	48	11	15	102
25	31	115	120	90	272	222	182	317	39	18	28	76
26	60	142	120	110	263	222	173	248	27	32	21	61
27	38	112	105	160	275	292	189	202	18	28	11	85
28	82	85	129	240	225	230	248	145	32	21	10	79
29	117	72	128	170	-	*222	235	119	31	54	15	69
30	125	56	122	100	-------	205	175	147	44	123	19	62
31	81	-------	116	90	-------	189	-------	129	-------	58	174	-------
Total	1,215	2,100	6,958	3,271	5,726	9,339	7,532	7,578	1,818	957	830.0	5,568
Mean	39.2	70.0	224	106	204	301	251	244	60.6	30.9	26.8	186
Cfsm	0.464	0.829	2.65	1.26	2.42	3.57	2.97	2.89	0.718	0.366	0.318	2.20
In.	0.53	0.92	3.06	1.45	2.52	4.12	3.31	3.33	0.80	0.42	0.37	2.46

Calendar year 1953: Max 1,860 Min 7.8 Mean 220 Cfsm 2.61 In. 35.31
Water year 1953-54: Max 1,270 Min 8.8 Mean 145 Cfsm 1.72 In. 23.29

Peak discharge (base, 1,300 cfs).--Mar. 3 (9:30 p.m.) 1,320 cfs (4.31 ft); Apr. 17 (12 p.m.) 1,620 cfs (4.71 ft); Sept. 11 (1:30 p.m.) 2,610 cfs (5.79 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 25, Jan. 1, 5, Jan. 7 to Feb. 15.

West Branch Farmington River at Riverton, Conn.

Location.--Lat 41°57'13", long 73°00'51", on right bank 0.4 mile downstream from Still River, 0.6 mile south of Riverton, Litchfield County, and 8.2 miles upstream from East Branch.

Drainage area.--216 sq mi.

Records available.--September 1929 to September 1954. Prior to October 1948, published as Farmington River at Riverton.

Gage.--Water-stage recorder. Datum of gage is 472.22 ft above mean sea level, datum of 1929.

Average discharge.--25 years (1929-54), 395 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 6,960 cfs Sept. 11 (gage height, 7.88 ft); minimum, 26 cfs Aug. 29 (gage height, 0.58 ft); minimum daily, 29 cfs Aug. 28.
1929-54: Maximum discharge, 37,100 cfs Sept. 21, 1938 (gage height, 17.95 ft, from floodmarks), from rating curve extended above 5,700 cfs on basis of velocity-area study and records for other stations on Farmington River; minimum, 15 cfs Aug. 22, 30, Sept. 6, 1953 (gage height, 0.42 ft); minimum daily, 17 cfs Aug. 22, 1953.

Remarks.--Records excellent except those for period of ice effect, which are good. Flow regulated by Otis Reservoir (see p. 233) and at low flow by plants upstream.

Revisions (water years).--WSP 781: Drainage area. WSP 1081: 1930-36. WSP 1301: 1935(M).

Rating table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.6	28	3.0	790
1.1	85	4.0	1,540
1.5	159	5.0	2,530
2.0	303	6.0	3,840
2.5	510		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	108	184	222	223	250	631	392	380	285	93	121	600
2	84	188	197	282	260	1,540	354	356	344	60	91	340
3	73	171	170	256	250	1,430	346	340	288	60	79	192
4	91	162	189	252	300	1,990	292	605	212	53	106	137
5	105	149	461	245	*260	1,100	286	575	200	54	99	180
6	110	111	414	241	230	772	294	460	168	145	66	186
7	159	131	1,300	230	210	634	503	400	171	104	53	187
8	127	164	930	210	200	565	467	593	158	76	45	217
9	98	201	616	220	240	515	432	1,000	142	75	63	227
10	70	182	1,490	230	240	480	351	1,100	125	46	47	118
11	83	201	1,040	210	230	448	427	*1,000	130	41	77	3,080
12	109	192	688	220	200	400	688	730	129	60	60	2,270
13	97	156	664	180	180	388	507	575	189	50	63	1,100
14	92	150	1,240	180	200	456	420	470	204	35	44	718
15	92	171	1,420	190	250	560	369	404	358	*77	38	530
16	76	202	930	180	450	444	428	367	368	52	61	599
17	67	195	646	160	1,150	400	1,680	348	330	39	36	1,100
18	89	217	481	*170	825	340	2,790	309	201	35	48	760
19	91	193	377	180	652	322	1,420	268	163	50	37	600
20	91	143	411	170	575	1,060	965	258	116	63	60	634
21	90	123	400	300	626	895	730	984	115	49	46	510
22	90	126	428	460	1,500	600	605	1,760	101	70	37	550
23	71	333	457	300	1,000	520	545	1,140	95	43	39	454
24	54	346	348	250	700	444	545	825	100	36	37	302
25	120	318	308	210	706	504	444	790	85	64	47	234
26	196	415	313	210	664	*1,100	420	575	71	66	43	291
27	141	281	302	350	730	766	420	466	59	58	32	326
28	218	223	328	500	585	590	560	378	70	49	29	296
29	305	220	311	350	-	530	560	336	70	91	88	267
30	356	191	300	300	--------	480	440	401	97	231	135	255
31	216	--------	290	280	--------	432	--------	352	--------	125	595	--------
Total	3,769	6,039	17,671	7,739	13,663	21,336	18,680	18,545	5,144	2,150	2,422	17,260
Mean	122	201	570	250	488	688	623	598	171	69.4	78.1	575
(†)	-43.3	-36.7	+3.4	-17.9	+37.2	+65.0	+57.5	+32.9	-4.6	+3.0	-10.1	-26.6

Adjusted for change in contents in Otis Reservoir

Mean	78.7	164	573	232	525	753	680	631	166	72.4	68.0	548
Cfsm	0.364	0.759	2.65	1.07	2.43	3.49	3.15	2.92	0.769	0.335	0.315	2.54
In.	0.42	0.85	3.06	1.23	2.53	4.02	3.51	3.37	0.86	0.39	0.36	2.83

	Observed			Adjusted		
Calendar year 1953:	Max 4,170	Min 17	Mean 499	Mean 503	Cfsm 2.33	In. 31.61
Water year 1953-54:	Max 3,080	Min 29	Mean 368	Mean 373	Cfsm 1.73	In. 23.43

Peak discharge (base, 3,100 cfs).--Mar. 3 (10 p.m.) 3,280 cfs (5.60 ft); Apr. 18 (1 a.m.) 4,290 cfs (6.30 ft); Sept. 11 (3:30 p.m.) 6,960 cfs (7.88 ft).

* Discharge measurement made on this day.

† Change in contents in Otis Reservoir, equivalent in cubic feet per second, furnished by the Collins Co.

Note.--Stage-discharge relation affected by ice Jan. 7 to Feb. 17.

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 1954.

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.--23 years, 8.02 cfs.

Extremes.--Maximum discharge during year, 183 cfs Sept. 11 (gage height, 3.65 ft); minimum, 0.30 cfs June 22 (gage height, 0.20 ft); minimum daily, 0.72 cfs Oct. 2.
1931-54: Maximum discharge, 676 cfs Sept. 21, 1938 (gage height, 7.24 ft), from rating curve extended above 100 cfs on basis of one current-meter measurement and form of theoretical rating; minimum, 0.13 cfs June 21, 1933; minimum daily, 0.64 cfs Sept. 23, 24, 27-29, 1941, Aug. 27, 28, 1949; minimum gage height, 0.03 ft Oct. 11, 13, 1943 (orifice plate removed).

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. Infrequent low-water regulation.

Revisions (water years).--WSP 1171: Drainage area. WSP 1301: 1933-45(M).

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.3	0.53	1.3	10.3
.7	1.85	1.7	29.0
1.0	3.11	2.4	74
1.1	4.55		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.75	2.10	2.67	b3.9	a5.2	9.88	6.30	8.00	4.55	2.76	1.47	6.57
2	.72	1.66	2.80	3.74	a6.0	26.4	6.03	7.71	4.13	2.46	1.26	3.60
3	2.23	1.47	2.71	3.74	a6.5	21.7	5.77	12.2	3.93	2.09	5.73	2.50
4	2.23	1.37	2.80	3.93	a6.2	30.1	5.26	24.8	4.78	2.09	3.67	2.17
5	1.06	1.29	15.2	3.57	a5.8	12.2	5.26	13.4	4.55	1.97	1.89	1.81
6	1.54	a1.3	6.57	3.74	5.26	9.27	6.57	9.93	3.93	1.77	1.58	1.62
7	2.82	a5.5	31.6	3.93	4.13	8.63	8.00	8.63	3.57	1.66	1.23	1.84
8	1.37	a4.6	9.60	b3.0	b3.4	8.00	6.57	15.1	3.02	1.58	1.23	3.23
9	1.13	a3.4	6.57	b2.6	3.93	7.71	5.77	22.7	2.84	1.54	1.80	2.+2
10	1.06	a3.1	29.2	b3.0	3.74	7.41	5.26	22.7	*2.84	1.26	2.50	2.01
11	1.02	2.93	11.5	b3.0	3.57	6.85	5.77	15.6	3.29	1.33	3.68	72
12	.99	2.93	8.00	b3.3	b3.0	6.57	7.13	11.5	3.20	1.33	2.38	19.9
13	.96	2.58	12.2	3.11	b2.5	6.30	5.77	9.60	5.94	1.23	2.42	8.00
14	.96	2.21	38.2	2.97	2.62	12.6	5.26	8.63	4.55	1.23	1.54	4.8
15	.96	2.05	26.1	3.20	5.39	11.5	5.02	7.71	10.3	*1.62	1.37	3.7
16	.93	1.93	11.5	3.57	12.2	8.00	8.00	7.71	10.3	1.29	1.58	5.02
17	.90	1.85	7.71	3.20	19.7	7.13	28.4	6.57	6.57	1.13	1.13	10.3
18	.90	1.74	b6.6	2.97	13.8	6.57	55	6.30	4.13	1.19	1.06	6.30
19	.90	1.62	b5.8	3.07	8.95	6.03	16.9	5.77	3.15	1.51	1.13	6.03
20	.90	1.58	5.26	3.29	7.13	32.9	11.5	5.77	2.76	1.44	1.33	7.71
21	.93	1.54	5.52	13.0	10.7	14.2	9.60	31.9	2.37	2.09	1.23	5.26
22	.99	1.62	8.63	b8.6	27.9	8.95	8.63	31.8	1.36	1.54	1.13	5.02
23	.90	12.3	7.71	b5.3	12.2	8.00	9.27	15.1	1.82	1.29	1.06	3.29
24	.90	6.03	5.77	b4.8	8.63	7.41	11.5	12.2	2.33	1.09	1.06	2.89
25	3.66	6.82	4.78	4.33	13.0	9.60	8.95	12.6	1.93	1.19	1.44	2.76
26	2.47	7.40	4.78	5.02	10.3	15.1	7.41	8.95	1.85	1.29	1.51	2.89
27	1.54	3.74	4.33	11.1	9.27	8.95	8.95	7.13	1.81	1.37	1.40	4.13
28	7.38	3.20	4.33	14.2	7.71	7.71	16.9	6.85	*1.85	1.70	1.19	3.11
29	6.32	2.80	5.77	57.7	-	7.41	12.2	6.57	2.81	2.65	1.13	2.67
30	3.79	2.50	5.26	b6.3	-------	7.13	8.95	6.30	3.74	3.65	1.19	2.46
31	2.25	-------	4.78	b5.5	-------	6.57	-------	5.02	-------	1.74	17.6	-------
Total	55.46	95.16	304.25	152.68	228.73	346.78	311.90	374.75	114.20	52.08	69.92	206.01
Mean	1.79	3.17	9.81	4.93	8.17	11.2	10.4	12.1	3.81	1.68	2.26	6.87
Cfsm	0.434	0.769	2.38	1.20	1.98	2.72	2.52	2.94	0.925	0.408	0.549	1.67
In.	0.50	0.86	2.74	1.38	2.06	3.14	2.81	3.39	1.03	0.47	0.63	1.86

Calendar year 1953: Max 140 Min 0.72 Mean 10.1 Cfsm 2.45 In. 33.36
Water year 1953-54: Max 72 Min 0.72 Mean 6.33 Cfsm 1.54 In. 20.87

Peak discharge (base, 140 cfs).--Sept. 11 (3:30 p.m.) 183 cfs (3.65 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 nearby stations.
b Stage-discharge relation affected by ice.

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 1954.
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.--13 years, 83.7 cfs (adjusted for storage and diversion).
Extremes.--Maximum discharge during year, 1,210 cfs Aug. 3 (gage height, 3.90 ft); minimum, 15 cfs Oct. 4, 5 (gage height, 0.77 ft).
1941-54: Maximum discharge, 3,260 cfs Dec. 31, 1948 (gage height, 6.70 ft), from rating curve extended above 1,100 cfs as explained below; 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, from rating curve extended above 1,100 cfs on basis of slope-area determination of peak flow and computation of peak flow over dam).
Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by Whigville Reservoir (see p. 234) and by mills upstream. Diversion for municipal supply of city of New Britain from Copper Mine Brook.
Revisions (water years).--WSP 971: 1941-42. WSP 1111: 1947.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.7	11	1.7	166
.8	17	2.1	320
1.0	35	2.5	545
1.3	75		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	26	35	37	45	85	64	74	50	31	21	69
2	19	25	38	35	47	146	60	69	50	28	23	42
3	17	24	36	33	50	178	62	75	48	24	240	32
4	16	23	35	35	72	220	52	152	50	24	70	27
5	19	23	120	33	63	112	52	104	47	24	46	25
6	30	23	67	35	51	88	63	82	41	23	36	23
7	34	85	208	30	45	80	70	75	41	23	31	61
8	21	59	89	27	43	80	63	121	41	23	28	55
9	20	42	64	25	45	74	59	160	39	22	54	35
10	19	37	186	26	43	75	50	152	39	21	51	31
11	18	33	93	28	41	70	54	126	45	21	47	492
12	19	31	72	30	35	66	69	99	39	22	33	168
13	19	30	97	27	32	63	56	84	68	23	29	80
14	19	29	303	25	32	110	51	75	56	*21	25	62
15	19	28	182	27	41	114	50	70	64	23	23	54
16	20	27	99	27	54	84	69	70	64	19	26	69
17	19	27	75	26	86	72	262	63	51	18	24	80
18	18	26	65	25	70	64	439	57	42	17	24	62
19	19	26	65	27	56	62	166	56	36	24	25	60
20	19	25	60	35	48	210	112	57	33	22	26	72
21	19	25	50	80	74	136	*93	260	32	34	24	83
22	19	25	80	55	160	97	84	216	31	22	22	80
23	19	140	70	41	89	80	88	126	45	20	23	55
24	19	80	55	40	70	77	106	104	33	36	24	48
25	53	90	50	*39	97	92	84	97	29	23	29	45
26	28	70	45	45	80	131	79	80	26	67	25	62
27	23	50	40	75	72	91	86	68	24	35	25	66
28	76	40	43	81	64	75	138	64	26	45	23	51
29	97	35	50	51	-	75	110	64	32	39	20	45
30	62	33	45	48	---	72	84	69	34	35	23	46
31	33	---	40	43	---	66	---	52	---	24	214	---
Total	851	1,237	2,557	1,191	1,705	3,045	2,875	3,021	1,256	833	1,334	2,180
Mean	27.5	41.2	82.5	38.4	60.9	98.2	95.8	97.5	41.9	26.9	43.0	72.7
(†)	+5.6	+7.7	+8.1	+8.1	+7.2	+8.4	+7.7	+7.6	+8.6	+7.6	+6.9	+6.7

Adjusted for diversion and change in reservoir contents

Mean	33.1	48.9	90.6	46.5	68.1	107	104	105	48.5	34.5	49.9	79.4
Cfsm	0.732	1.08	2.00	1.03	1.51	2.37	2.30	2.32	1.07	0.763	1.10	1.76
In.	0.84	1.20	2.31	1.19	1.57	2.73	2.57	2.68	1.19	0.88	1.27	1.96

	Observed			Adjusted			
Calendar year 1953:	Max 1,010	Min 16	Mean 109	Mean 116	Cfsm 2.57	In. 34.95	
Water year 1953-54:	Max 492	Min 16	Mean 60.5	Mean 67.9	Cfsm 1.50	In. 20.39	

Peak discharge (base, 660 cfs).--Apr. 17 (10:30 p.m.) 735 cfs (2.90 ft); Aug. 3 (12 m.) 1,210 cfs (3.90 ft); Sept. 7 (6:30 p.m.) 672 cfs (2.75 ft); Sept. 11 (1 p.m.) 928 cfs (3.33 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 and at Whites Bridge pumping plant, equivalent in cubic feet per second.
Note.--No gage-height record Oct. 1, Nov. 14 to Dec. 5, Dec. 17 to Jan. 21; discharge estimated on basis of recorded range in stage, weather records, and records for Burlington Brook near Burlington and Leadmine Brook near Thomaston.

Salmon Brook near Granby, Conn.

Location.--Lat 41°56'14", long 72°46'36", on left 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.--60.6 sq mi.

Records available.--July 1946 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 147.54 ft above mean sea level, datum of 1929.

Average discharge.--8 years, 123 cfs.

Extremes.--Maximum discharge during year, 1,260 cfs Sept. 11 (gage height, 7.52 ft); minimum, 14 cfs Oct. 2 (gage height, 1.54 ft).
1946-54: Maximum discharge, 3,400 cfs Dec. 31, 1948 (gage height, 13.55 ft); minimum, 10 cfs Aug. 26, 1949 (gage height, 1.42 ft).

Remarks.--Records good except those for periods of no gage-height record, which are fair. Some regulation at low flow.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.5	12	3.0	166
2.0	48	4.0	395
2.5	101	6.1	885

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	48	43	59	b70	a120	103	113	92	45	38	127
2	15	40	44	61	*68	a300	98	109	87	42	34	70
3	15	35	42	59	66	a230	93	109	86	38	38	47
4	16	32	40	57	80	458	84	251	83	37	52	38
5	16	31	117	54	87	222	83	190	83	36	39	33
6	20	29	90	55	a75	149	90	133	75	50	34	31
7	35	44	264	57	a65	131	116	130	70	42	31	29
8	26	66	138	b44	a55	125	103	177	65	38	29	34
9	21	50	91	b47	a52	116	96	355	62	34	31	36
10	19	43	256	48	a50	114	87	385	59	33	36	32
11	19	38	168	b50	a50	106	89	355	59	31	40	594
12	18	34	113	b51	a46	99	99	235	56	30	38	383
13	17	32	128	b52	a47	97	85	166	70	28	33	146
14	17	31	501	b51	a46	138	80	142	67	28	30	103
15	17	30	410	50	a73	166	77	129	102	31	28	80
16	18	28	238	50	a125	120	89	125	99	28	30	89
17	18	*28	131	b48	a220	105	313	119	87	26	28	156
18	17	26	b97	b50	a165	98	866	109	70	28	26	113
19	17	26	90	49	123	93	345	101	60	*28	28	94
20	17	25	89	48	104	389	210	97	53	34	38	104
21	17	25	85	90	114	272	154	504	48	32	32	87
22	18	25	104	b92	405	158	133	574	45	30	30	88
23	18	94	109	b78	220	129	127	325	46	28	28	73
24	19	90	84	69	a140	118	145	222	46	28	26	59
25	42	75	80	59	a160	133	121	188	42	34	26	55
26	60	104	80	64	a145	315	*115	149	39	31	27	55
27	36	69	75	115	a130	173	114	127	38	32	28	58
28	63	55	69	b150	a115	133	185	118	38	31	26	52
29	90	48	78	b96	-	122	171	111	43	46	26	48
30	114	44	75	b80	-------	114	129	114	50	66	26	46
31	66	-------	71	b75	-------	106	-------	102	-------	48	196	-------
Total	916	1,345	4,000	2,008	3,096	5,129	4,600	6,064	1,920	1,091	1,152	2,960
Mean	29.5	44.8	129	64.8	111	165	153	196	64.0	35.2	37.2	98.7
Cfsm	0.487	0.739	2.13	1.07	1.83	2.72	2.52	3.23	1.06	0.581	0.614	1.63
In.	0.56	0.82	2.46	1.23	1.91	3.14	2.81	3.72	1.18	0.67	0.71	1.82

Calendar year 1953: Max 1,330 Min 15 Mean 168 Cfsm 2.77 In. 37.55
Water year 1953-54: Max 866 Min 15 Mean 93.9 Cfsm 1.55 In. 21.03

Peak discharge (base, 1,000 cfs).--Apr. 18 (6 a.m.) 1,040 cfs (6.69 ft); May 21 (8 p.m.) 1,010 cfs (6.55 ft); Sept. 11 (6:30 p.m.) 1,260 cfs (7.52 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 nearby streams.
b Stage-discharge relation affected by ice.

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.--584 sq mi.
Records available.--August 1928 to September 1954. 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.--26 years (1928-54), 1,052 cfs (adjusted to present site; adjusted for storage and diversion).
Extremes.--Maximum discharge during year, 5,050 cfs Sept. 12 (gage height, 5.10 ft); minimum daily, 102 cfs July 11.
1928-54: Maximum discharge, 29,900 cfs Sept. 22, 1938, by computation of flow over Tariffville Dam; maximum gage height, 13.83 ft Jan. 1, 1949; minimum daily discharge, 5.1 cfs Mar. 5, 1944, Oct. 28, Nov. 11, 1945, and Feb. 22, 1947.
See WSP 891, page 80, for peak discharges for some outstanding floods.
Remarks.--Records excellent. Flow regulated by powerplant, by Otis, Barkhamsted, East Branch, Nepaug and Whigville Reservoirs, having a combined capacity of about 6,450,000,000 cu ft (see p. 233), and by diversions for domestic water supply from Barkhamsted, Nepaug and Whigville Reservoirs and Whites Bridge pumping plant.
Revisions (water years).--WSP 851: 1936. WSP 1171: Drainage area. WSP 1051: 1945(m). WSP 1301: 1928-36 (adjusted figures of monthly and yearly discharge and runoff).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 19				Nov. 19 to Dec. 15		Dec. 16 to Sept. 30	
1.2	160	3.0	1,840	1.2	167	1.0	92
1.5	340	4.0	3,220	1.5	350	1.5	350
2.0	740	5.0	4,870	2.0	740	2.0	740
2.5	1,250						
				Note.--Same as preceding table above 2.0 ft.		Note.--Same as preceding table above 2.0 ft.	

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	402	355	549	787	632	930	944	1,030	646	500	544	1,100
2	376	456	581	614	562	1,560	824	856	722	455	323	1,180
3	376	575	654	566	734	2,330	785	938	630	398	448	636
4	332	512	566	540	692	2,980	517	966	728	272	654	198
5	419	489	758	604	624	2,800	844	1,280	499	180	546	222
6	379	578	920	720	642	2,080	660	1,290	495	260	524	149
7	397	540	1,440	671	672	1,520	670	1,250	542	272	455	381
8	388	340	2,040	564	602	1,090	851	1,000	548	*344	206	788
9	436	512	1,820	549	506	1,260	970	1,770	516	178	399	560
10	414	668	1,440	236	528	1,050	960	1,900	471	370	339	550
11	182	601	1,970	536	558	883	917	2,190	446	102	366	1,450
12	326	732	2,040	404	500	861	598	1,860	437	182	436	4,260
13	456	739	1,170	534	414	856	867	1,480	376	174	356	3,650
14	323	430	1,510	526	398	1,140	960	1,280	482	189	296	1,680
15	438	226	2,710	540	446	982	950	1,260	706	146	374	1,330
16	460	470	2,570	586	492	1,220	830	918	774	*146	270	1,020
17	520	538	1,930	448	819	890	1,020	808	708	186	289	1,090
18	236	568	979	524	1,660	786	3,940	960	652	150	292	1,560
19	201	611	856	368	1,560	779	4,520	788	722	182	320	1,340
20	404	564	838	538	943	1,410	2,420	734	296	260	346	990
21	444	564	929	600	1,110	2,020	1,780	1,060	190	470	378	1,070
22	593	204	1,020	684	1,590	1,750	1,460	2,910	394	466	280	1,020
23	434	647	1,300	862	2,360	1,360	1,280	2,850	468	394	313	1,150
24	406	962	1,120	716	1,730	888	1,260	2,190	510	214	209	731
25	334	1,060	1,010	614	1,540	1,040	1,250	1,860	440	472	443	612
26	402	896	690	*518	1,080	1,170	*1,060	1,430	436	174	408	424
27	602	773	468	683	1,570	1,970	940	1,010	284	210	422	550
28	850	576	618	965	1,060	1,550	1,020	885	246	322	264	551
29	1,040	505	890	985	-	904	1,140	1,020	261	620	146	556
30	956	666	889	706	-------	976	1,270	822	465	420	182	470
31	1,190	-------	922	362	-------	973	-------	908	-------	662	1,160	-------
Total	14,716	17,357	37,197	18,550	26,024	42,008	37,507	41,503	15,090	9,370	11,988	31,268
Mean	475	579	1,200	598	929	1,355	1,250	1,339	503	302	387	1,042
(†)	-165	-80	+145	+23	+215	+344	+291	+281	-1	-34	-125	+147
Adjusted for diversion and change in reservoir contents												
Mean	310	499	1,345	621	1,144	1,699	1,541	1,620	502	268	262	1,189
Cfsm	0.531	0.854	2.30	1.06	1.96	2.91	2.64	2.77	0.860	0.459	0.449	2.04
In.	0.61	0.95	2.65	1.22	2.04	3.36	2.94	3.19	0.96	0.53	0.52	2.28

Observed

Calendar year 1953: Max 9,460 Min 72 Mean 1,400
Water year 1953-54: Max 4,520 Min 102 Mean 829

Adjusted

Calendar year 1953: Mean 1,444 Cfsm 2.47 In. 33.57
Water year 1953-54: Mean 915 Cfsm 1.57 In. 21.25

* Discharge measurement made on this day.
† Change in contents in Otis, Barkhamsted, East Branch, Nepaug and Whigville Reservoirs, and Whites Bridge pumping plant, equivalent in cubic feet per second; furnished by Collins Co., Water Bureau of Hartford Metropolitan District Commission, and Board of Water Commissioners of New Britain.

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 1954.

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.--18 years, 71.4 cfs.

Extremes.--Maximum discharge during year, 1,490 cfs Sept. 11; maximum gage height, 10.40 ft Sept. 11; minimum discharge, 14 cfs Oct 4 (gage height, 1.36 ft).
1936-54: Maximum discharge, 3,600 cfs Sept. 21, 1938 (gage height, 13.6 ft, adjusted; 13.78 ft, unadjusted), from rating curve extended above 1,200 cfs on basis of records for North Branch Park River and Park River at Hartford; minimum, 7.3 cfs Oct. 6, 1941 (gage height, 1.31 ft); minimum daily, 9.4 cfs Oct. 6, 1941.
Flood of Mar. 12, 1936, reached a stage of 12.1 ft, as determined by Hartford city engineers from floodmarks.

Remarks.--Records good. Some regulation by mills and reservoirs above station.

Revisions (water years).--WSP 1201: 1939-40(P), 1941(M), 1943-44(P), 1950.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second) (Shifting-control method used Oct. 30 to Dec. 4; backwater from unknown cause Apr. 2-7)

Oct. 1-29		Oct. 30 to June 13		June 13 to Sept. 30			
1.4	15	1.8	24	1.5	18	6.0	270
2.0	34	2.2	39	2.0	34	7.0	465
4.0	127	3.4	95	4.0	125	8.5	840
4.4	152						

Note.--Same as following table above 3.4 ft.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	35	45	53	b53	61	40	50	43	35	26	132
2	20	34	*44	51	48	109	*46	48	48	*34	20	49
3	18	34	42	50	60	126	42	63	41	32	338	*43
4	15	35	44	52	*77	*227	37	137	*30	31	218	38
5	24	32	190	*58	67	79	39	95	28	31	54	32
6	34	32	86	58	53	68	48	*76	26	30	38	21
7	67	96	240	58	46	59	46	70	26	30	26	42
8	24	63	110	51	43	70	39	108	46	34	23	76
9	*22	42	79	46	55	65	36	225	56	32	52	36
10	21	42	182	44	53	68	31	155	43	31	49	28
11	17	37	126	33	52	65	40	120	40	22	48	828
12	19	38	81	54	b46	56	49	88	32	21	29	490
13	30	*38	110	49	b46	60	44	77	65	22	26	119
14	32	33	401	50	38	107	43	72	37	22	22	73
15	33	29	284	62	39	93	43	91	54	27	29	65
16	25	32	120	52	53	68	58	100	44	22	32	98
17	22	37	95	b46	79	64	175	86	29	30	33	137
18	26	40	81	b35	72	62	383	54	27	29	*32	84
19	33	42	72	51	54	60	131	39	24	35	26	66
20	37	43	67	48	46	204	93	38	22	34	31	70
21	37	37	68	107	64	106	81	276	24	55	24	62
22	38	32	98	b91	196	76	74	205	34	34	28	95
23	42	112	84	b72	93	70	76	91	40	29	30	71
24	39	79	70	49	68	58	84	73	28	35	31	62
25	92	106	50	53	91	70	64	61	29	31	38	58
26	63	97	50	65	74	100	63	54	24	54	33	64
27	44	56	58	88	53	60	65	50	21	49	23	92
28	129	46	64	117	51	42	105	48	28	66	19	62
29	148	38	68	588		42	81	46	42	74	18	51
30	101	41	65	54		42	65	62	44	51	22	52
31	48		63	48		41		44		31	266	
Total	1,323	1,458	3,217	1,813	1,770	2,478	2,221	2,802	1,075	1,093	1,684	3,196
Mean	42.7	48.6	104	58.5	63.2	79.9	74.0	90.4	35.8	35.3	54.3	107
Cfsm	1.05	1.20	2.56	1.44	1.56	1.97	1.82	2.23	0.882	0.869	1.34	2.64
In.	1.21	1.34	2.95	1.66	1.62	2.27	2.03	2.57	0.98	1.00	1.54	2.94

Calendar year 1953: Max 1,170 Min 15 Mean 100 Cfsm 2.46 In. 33.49
Water year 1953-54: Max 828 Min 15 Mean 66.1 Cfsm 1.63 In. 22.11

Peak discharge (base, 550 cfs).--Dec. 14 (12 a.m.) 640 cfs (7.57 ft at 7 p.m.); Apr. 18 (2:30 a.m.) 590 cfs (7.32 ft at 5:30 a.m.); Aug. 3 (7 p.m.) 740 cfs (7.82 ft at 9:30 p.m.); Sept. 11 (5:30 p.m.) 1,490 cfs (10.40 ft at 8 p.m.).

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

North Branch Park River at Hartford, Conn.

Location.--Lat 41°47'03", long 72°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 1954.

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.--18 years, 36.5 cfs.

Extremes.--Maximum discharge during year, 872 cfs Sept. 11; maximum gage height, 6.14 ft Sept. 11; minimum discharge, 1.0 cfs July 19 (gage height, 0.96 ft).
1936-54: Maximum discharge, 3,000 cfs Jan. 25, 1938 (gage height, 11.6 ft), from rating curve extended above 1,600 cfs by logarithmic plotting; minimum, 0.04 cfs Sept. 24, 25, 1943 (gage height, 0.75 ft); minimum daily, 0.04 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. Some regulation by mills upstream and by storage and diversion at Hartford water-supply reservoirs above station.

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.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second) (Backwater from debris on control Oct. 2, Mar. 3, 11, 12, Aug. 5, 6, 13-18)

Oct. 1 to June 29

1.0	1.7	2.2	48
1.2	3.5	2.5	91
1.4	5.9	3.0	210
1.6	10	3.7	380
1.9	23		

Note.--Same as following table above 3.7 ft.

June 29 to Sept. 30

1.0	1.2	2.0	29
1.2	2.9	2.3	58
1.4	5.3	2.6	107
1.6	9.5	3.7	380
1.8	17	4.2	480

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.0	12	11	11	12	39	20	18	14	4.9	3.0	45
2	2.0	9.0	*12	12	13	95	*18	17	12	*4.5	2.4	*12
3	1.9	7.6	10	13	16	95	17	24	13	4.0	43	7.5
4	1.9	6.1	9.6	13	*36	214	15	102	11	3.4	32	6.1
5	1.9	5.3	107	*12	36	53	17	*54	13	3.8	8.7	4.7
6	2.5	5.1	46	13	22	35	22	29	11	3.4	5.3	3.8
7	5.9	21	147	11	18	29	32	22	*9.0	3.0	3.9	5.0
8	4.8	25	50	9	15	30	26	62	7.8	2.7	2.8	5.1
9	3.2	14	28	8	14	*26	21	182	6.7	2.4	3.2	6.3
10	2.6	11	138	8	14	26	16	126	6.4	2.1	7.0	4.9
11	2.3	9.0	60	8	14	22	18	101	7.1	1.8	7.7	477
12	*2.4	8.0	33	7.5	9.8	20	22	48	6.4	1.7	5.3	282
13	2.5	*7.1	64	7.5	8.2	20	19	31	15	1.8	3.8	46
14	2.5	7.4	320	7	7.1	65	17	25	12	2.4	2.7	21
15	2.5	6.6	142	7.5	10	68	16	20	16	3.3	2.4	14
16	2.3	6.3	50	9	23	33	21	30	13	1.8	2.4	17
17	2.2	6.1	26	8.5	63	24	163	23	10	1.4	2.4	57
18	2.2	5.9	18	7.5	70	21	445	17	7.8	1.1	*1.7	32
19	2.2	5.6	14	7	33	17	78	15	6.4	1.15	3.8	20
20	2.2	5.6	14	7	25	194	40	14	5.6	1.6	4.7	26
21	2.2	5.5	16	45	49	78	29	158	4.9	2.3	4.4	19
22	2.3	5.6	33	53	250	37	24	171	4.4	2.0	2.8	31
23	2.5	47	37	24	81	29	22	59	5.5	1.7	2.4	16
24	2.9	41	21	16	44	24	33	35	8.4	2.8	2.0	11
25	19	54	16	14	81	32	24	26	5.9	4.3	2.3	9.2
26	21	62	16	22	59	89	21	22	4.8	3.2	2.4	9.5
27	6.9	24	15	60	52	42	20	16	4.4	2.5	2.5	12
28	30	16	14	87	38	28	46	14	4.1	4.6	2.4	10
29	56	13	17	32	-	24	41	14	5.1	8.5	2.1	8.3
30	56	11	17	18	------	22	24	42	4.9	8.1	2.0	7.9
31	18	----	15	14	------	21	------	20	------	5.7	64	------
Total	268.8	462.8	1,516.6	571.5	1,113.1	1,552	1,327	1,537	255.6	97.95	237.5	1,226.3
Mean	8.67	15.4	48.9	18.4	39.8	50.1	44.2	49.6	8.52	3.16	7.66	40.9
Cfsm	0.343	0.609	1.93	0.727	1.57	1.98	1.75	1.96	0.337	0.125	0.303	1.62
In.	0.40	0.68	2.22	0.84	1.64	2.28	1.95	2.26	0.38	0.14	0.35	1.81

Calendar year 1953: Max 870 Min 1.3 Mean 51.2 Cfsm 2.02 In. 27.48
Water year 1953-54: Max 477 Min 1.1 Mean 27.9 Cfsm 1.10 In. 14.95

Peak discharge (base, 500 cfs).--Dec. 14 (4 p.m.) 594 cfs (4.73 ft at 4:30 p.m.); Apr. 18 (4 a.m.) 678 cfs (5.15 ft at 4:30 p.m.); Sept. 11 (7 p.m.) 872 cfs (6.14 ft at 8 p.m.)
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 17, 19, 24, 25, 28, 31, Jan. 1, 5, 7-21, Feb. 12, Mar. 6.

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 1954.

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.--18 years, 118 cfs.

Extremes.--Maximum discharge during year, 1,980 cfs Sept. 11 (gage height, 6.10 ft); minimum, 18 cfs Oct. 4; minimum gage height, 2.32 ft Oct. 12.
1936-54: Maximum discharge, 5,650 cfs Jan. 25, 1938 (gage height, 9.16 ft); 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.
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 Mar. 21, 1936 (backwater from Connecticut River).

Remarks.--Records good. Some regulation by mills above station and by storage and diversion at Hartford water-supply reservoirs on small headwater streams.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	55	62	70	65	101	65	72	60	42	32	263
2	24	46	*58	68	65	217	*65	65	60	*40	25	*73
3	22	46	55	65	78	235	62	90	52	38	332	51
4	19	42	55	68	*116	*526	55	263	49	38	388	47
5	28	42	353	*68	116	159	55	179	47	38	70	38
6	41	40	148	70	87	113	72	*107	42	38	47	26
7	89	a140	474	72	72	92	84	98	*40	36	32	52
8	32	a120	215	65	62	101	70	170	56	40	30	99
9	28	a60	120	60	75	98	60	485	65	38	56	47
10	26	a58	368	55	72	104	52	320	56	38	62	36
11	22	a50	257	42	70	98	60	258	47	28	62	1,020
12	*21	a50	132	62	62	87	75	149	45	25	38	1,060
13	32	*a46	205	58	55	84	68	113	99	25	32	211
14	36	44	630	58	50	171	62	101	53	26	28	113
15	38	37	605	68	50	205	62	116	85	36	32	88
16	30	40	209	65	81	121	81	142	65	28	36	130
17	26	46	145	58	147	101	330	120	45	32	36	205
18	32	50	110	46	159	95	870	92	38	32	*32	126
19	38	52	92	60	98	90	266	58	34	40	32	88
20	45	52	84	60	78	433	149	55	30	34	40	94
21	43	48	84	148	101	243	120	358	32	65	28	88
22	43	42	145	160	480	129	104	490	45	40	30	133
23	45	178	138	92	204	110	101	169	51	36	32	91
24	45	148	104	68	123	92	126	116	42	42	36	73
25	143	180	72	68	173	103	95	92	38	47	42	68
26	105	203	72	84	145	217	90	81	34	49	36	76
27	58	92	78	159	113	121	90	70	28	60	26	113
28	189	72	84	247	92	75	159	65	32	96	23	73
29	245	58	95	113	-	70	138	65	51	112	20	59
30	206	55	92	84	-------	68	98	104	51	68	23	59
31	84	---	90	65	-------	68	-------	70	-------	40	322	-------
Total	1,863	2,192	5,431	2,526	3,089	4,527	3,784	4,733	1,472	1,347	2,060	4,700
Mean	60.1	73.1	175	81.5	110	146	126	153	49.1	43.5	66.5	157
Cfsm	0.812	0.988	2.36	1.10	1.49	1.97	1.70	2.07	0.664	0.588	0.899	2.12
In.	0.94	1.10	2.72	1.27	1.55	2.27	1.90	2.39	0.74	0.68	1.04	2.36

Calendar year 1953: Max 2,100 Min 19 Mean 168 Cfsm 2.27 In. 30.75
Water year 1953-54: Max 1,060 Min 19 Mean 103 Cfsm 1.39 In. 18.96

Peak discharge (base, 1,000 cfs).--Dec. 14 (10 p.m.) 1,080 cfs (4.82 ft); Apr. 18 (8:30 a.m.) 1,140 cfs (4.88 ft); Sept. 11 (11 p.m.) 1,980 cfs (6.10 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for North and South Branches.

Hockanum River near East Hartford, Conn.

Location.--Lat 41°46'57", long 72°35'16", on left bank 700 ft downstream from dam at Case Bros. Inc. paper mill, 1½ miles downstream from Hop Brook and 2¾ miles east of of East Hartford, Hartford County.

Drainage area.--74.5 sq mi.

Records available.--September 1919 to September 1921, July 1928 to September 1954.

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.--28 years, 114 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 1,150 cfs Sept. 11 (gage height, 6.83 ft); minimum, 21 cfs Oct. 16, 18, 19 (gage height, 1.13 ft); minimum daily, 21 cfs Oct. 18. 1919-21, 1928-54: 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, 1.2 cfs Sept. 2, 1920.

Remarks.--Records excellent. Flow regulated by Shenipsit Lake (see p. 234), and other small reservoirs and industrial plants upstream.

Revisions (water years).--WSP 781: Drainage area. WSP 851: 1934(M), 1936(M), WSP 1051: 1920-21 and 1928-45 (monthly and yearly discharge and runoff). WSP 1201: 1920(M), 1929(M), 1931, 1932-34(m), 1944.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.1	19
1.5	54
2.0	104
3.0	244
4.7	575

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	45	69	71	78	115	121	79	141	86	35	206
2	30	72	68	68	77	164	121	100	120	86	38	118
3	30	66	63	67	112	156	72	184	*103	42	179	154
4	30	60	65	67	129	253	70	152	121	39	151	55
5	28	46	70	93	133	190	82	188	74	37	182	39
6	25	52	79	84	73	90	117	130	71	34	132	54
7	26	60	207	102	68	111	110	129	68	33	54	88
8	25	44	170	107	107	156	126	122	68	34	39	116
9	39	53	115	68	111	*126	124	293	68	35	44	85
10	32	69	146	66	81	117	74	273	68	37	115	113
11	24	62	145	65	102	121	72	239	87	39	90	496
12	29	54	97	64	78	126	85	246	44	52	97	564
13	39	59	99	64	75	72	113	215	31	*54	101	266
14	40	41	238	76	66	79	90	203	105	60	50	153
15	26	30	257	90	65	191	108	132	111	140	42	188
16	33	42	183	67	89	131	76	179	102	94	39	163
17	26	41	142	66	91	123	123	196	98	49	55	214
18	21	37	127	64	116	120	470	154	108	42	66	135
19	34	39	92	65	124	122	309	143	44	39	78	149
20	42	42	46	89	72	114	244	127	35	46	102	199
21	35	32	122	123	68	151	228	151	44	59	51	113
22	44	26	136	177	133	167	202	96	66	66	43	179
23	51	79	136	73	160	128	200	140	86	66	49	152
24	44	79	129	76	131	124	151	188	96	45	67	150
25	58	92	62	131	134	129	161	150	84	40	106	60
26	73	98	45	114	136	148	189	143	45	35	77	108
27	59	112	78	119	72	85	147	126	40	47	74	194
28	86	47	137	139	80	104	161	128	36	69	47	106
29	105	39	118	121	-	149	159	79	95	102	41	107
30	126	78	108	70	-------	124	149	75	103	108	37	118
31	59	-------	102	67	-------	121	-------	91	-------	48	155	-------
Total	1,349	1,696	3,651	2,713	2,761	4,107	4,454	4,851	2,362	1,763	2,436	4,842
Mean	43.5	56.5	118	87.5	98.6	132	148	156	78.7	56.9	78.6	161
(†)	+4.8	+11.4	+24.0	-0.4	+9.3	+19.2	+6.1	0	-14.9	-19.8	-10.2	+4.3
Adjusted for change in contents in Shenipsit Lake												
Mean	48.3	67.9	142	87.1	108	151	154	156	63.8	37.1	68.4	165
Cfsm	0.648	0.911	1.91	1.17	1.45	2.03	2.07	2.09	0.856	0.498	0.918	2.21
In.	0.75	1.02	2.20	1.35	1.51	2.34	2.31	2.41	0.96	0.57	1.06	2.47

	Observed						Adjusted					
Calendar year 1953:	Max	867	Min	21	Mean	155	Mean	156	Cfsm	2.09	In.	28.47
Water year 1953-54:	Max	564	Min	21	Mean	101	Mean	104	Cfsm	1.40	In.	18.95

Peak discharge (base, 900 cfs).--Sept. 11 (9:30 p.m.) 1,150 cfs (6.83 ft).

* Discharge measurement made on this day.

† Change in contents in Shenipsit Lake, equivalent in cubic feet per second. Records furnished by Rockville Water & Aqueduct Co.

Salmon River near East Hampton, Conn.

Location.--Lat 41°33'11", long 72°26'57", on right bank at 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 1954.

Gage.--Water-stage recorder. Datum of gage is 69.50 ft above mean sea level, datum of 1929.

Average discharge.--26 years, 176 cfs.

Extremes.--Maximum discharge during year, 6,030 cfs Sept. 11 (gage height, 6.7 ft, from floodmarks); minimum, 5.0 cfs Oct. 1 (gage height, 0.42 ft).
1928-54: 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 fair. Slight regulation at low flow by mills upstream.

Revisions (water years).--WSP 1201: 1929.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 14				Dec. 14 to Sept. 30			
0.4	4.2	1.2	95	0.5	7.9	1.5	197
.5	7.9	1.5	170	.7	23	2.0	380
.7	17	2.0	345	.9	50	3.0	1,020
.9	40	2.8	770	1.2	113	4.5	2,670

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.0	53	70	131	134	188	191	263	87	46	27	425
2	6.1	37	70	b120	147	300	185	236	85	42	31	176
3	6.5	30	61	129	*156	332	176	260	89	34	95	89
4	6.5	26	56	134	236	598	159	435	78	33	164	70
5	6.8	23	258	121	223	360	153	372	81	30	83	55
6	7.5	24	229	161	182	270	161	282	72	28	50	46
7	12	100	728	173	150	229	185	243	64	24	36	40
8	12	136	398	113	131	219	176	289	59	23	29	89
9	10	89	250	b100	136	203	173	610	54	21	57	96
10	9.7	63	309	b110	126	197	153	435	50	19	207	83
11	9.3	50	305	b100	118	185	150	364	50	17	126	2,590
12	9.3	42	226	b90	87	170	173	*296	48	16	72	2,070
13	10	36	282	b85	b75	164	153	263	55	*14	47	592
14	10	32	755	b80	b80	256	139	243	55	13	35	344
15	10	30	738	b90	b100	332	134	229	64	19	29	256
16	10	27	416	b90	136	243	161	308	74	15	29	246
17	10	25	293	b90	179	200	1,090	274	64	12	25	368
18	10	24	223	b90	200	182	2,050	226	50	11	21	300
19	10	23	203	b100	159	167	804	197	42	13	20	243
20	10	22	b190	b110	136	713	485	188	35	14	21	236
21	10	21	191	b300	142	547	380	210	33	18	22	210
22	10	20	226	340	485	340	332	239	29	23	21	210
23	11	231	243	249	360	270	332	219	*28	19	18	185
24	16	275	188	215	246	239	460	188	54	16	16	153
25	34	266	176	159	274	*239	360	170	40	27	17	134
26	42	333	159	156	270	372	300	156	33	22	17	136
27	25	185	150	229	232	293	282	134	29	25	17	150
28	65	123	142	293	200	239	352	123	25	35	16	139
29	140	93	188	194	-	219	352	118	36	101	14	118
30	143	76	179	164	------	207	282	116	47	55	*12	106
31	84	---	161	156	-------	197	-------	99	--------	33	458	-------
Total	760.7	2,515	8,063	4,672	5,100	8,670	10,483	7,785	1,610	818	1,832	9,955
Mean	24.5	83.8	260	151	182	280	349	251	53.7	26.4	59.1	332
Cfsm	0.233	0.798	2.48	1.44	1.73	2.67	3.32	2.39	0.511	0.251	0.563	3.16
In.	0.27	0.89	2.86	1.66	1.80	3.08	3.70	2.76	0.57	0.29	0.65	3.53

Calendar year 1953: Max 1,960 Min 4.2 Mean 229 Cfsm 2.18 In. 29.69
Water year 1953-54: Max 2,590 Min 5.0 Mean 171 Cfsm 1.63 In. 22.06

Peak discharge (base, 1,300 cfs).--Apr. 18 (5:30 a.m.) 2,800 cfs (4.58 ft); Sept. 11 (5 p.m.) 6,030 cfs (6.7 ft).

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

East Branch Eightmile River near North Lyme, Conn.

Location.--Lat 41°25'40", long 72°20'05", on left bank at highway bridge on State Highway 156, 0.4 mile upstream from confluence with West Branch, 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 1954.

Gage.--Water-stage recorder. Datum of gage is 55.21 ft above mean sea level, datum of 1929.

Average discharge.--17 years, 45.4 cfs.

Extremes.--Maximum discharge during year, 910 cfs Sept. 12 (gage height, 4.63 ft); minimum, 0.25 cfs (regulated) Aug. 21-29 (gage height, -0.11 ft).
1937-54: 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. Occasional regulation at low water.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 7		Dec. 8 to Sept. 30			
0.6	16	-0.1	0.25	0.7	22
1.0	50	0.0	.35	1.1	52
1.7	125	.1	.6	2.0	157
2.4	217	.2	1.3	3.0	329
		.3	3.8	4.0	650
		.5	11	5.0	1,050

Note.--Same as following table below 0.6 ft and above 2.4 ft.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	17	30	36	b35	48	52	67	21	7.2	2.9	211
2	.55	12	29	34	37	65	50	61	20	6.4	2.4	90
3	.5	10	26	33	*38	74	46	67	19	5.4	4.1	39
4	.55	8.3	24	34	53	133	41	111	18	5.0	6.8	29
5	.6	7.5	57	32	56	104	40	*110	17	5.0	6.8	22
6	.65	7.5	75	43	46	72	41	79	16	4.4	8.7	16
7	2.4	28	259	46	39	60	41	64	14	3.8	6.1	13
8	2.4	43	209	b34	34	56	41	67	12	3.8	4.1	*17
9	2.1	27	111	b30	34	52	43	122	12	3.2	11	16
10	2.4	17	104	30	32	49	38	117	10	2.6	54	13
11	1.9	13	106	b27	31	47	37	92	9.5	2.1	52	275
12	1.7	12	81	b26	b24	43	43	75	8.7	1.9	21	694
13	1.5	10	104	b25	b20	41	40	64	9.5	*1.7	14	238
14	1.5	9.1	170	b24	21	56	36	57	10	1.5	10	127
15	1.5	8.7	224	b27	26	88	34	55	11	1.9	8.3	91
16	1.3	7.9	131	32	31	69	39	70	12	1.5	7.5	78
17	1.1	7.5	92	b29	41	52	192	70	10	1.2	6.1	115
18	1.1	7.2	70	b27	50	45	*455	56	8.3	1.1	4.7	113
19	1.2	6.8	60	b27	43	41	234	48	7.2	2.4	4.1	84
20	1.3	6.4	56	28	37	179	149	44	6.1	12	4.1	79
21	1.1	6.4	56	56	37	200	117	47	5.0	2.6	2.5	72
22	1.1	6.4	64	79	89	110	99	49	4.7	3.8	.25	62
23	1.0	57	70	b56	103	79	93	45	*5.7	4.7	.25	51
24	1.0	103	57	43	68	67	160	40	15	3.5	.25	41
25	4.7	94	48	40	67	*65	129	38	10	3.8	.25	35
26	7.5	118	45	41	80	99	98	35	7.5	3.8	.25	34
27	6.4	82	41	51	63	93	84	32	5.7	3.2	.25	36
28	12	58	40	89	53	72	95	29	5.0	2.9	.25	35
29	37	43	46	b84	-	63	104	27	5.4	7.5	.3	31
30	47	33	47	b56	------	58	81	27	7.2	7.5	.95	28
31	34	---	42	b41	------	54	------	24	------	4.1	96	------
Total	179.65	866.7	2,574	1,260	1,288	2,334	2,752	1,889	322.5	121.5	340.20	2,785
Mean	5.80	28.9	83.0	40.6	46.0	75.3	91.7	60.9	10.8	3.92	11.0	92.8
Cfsm	0.264	1.31	3.77	1.85	2.09	3.42	4.17	2.77	0.491	0.178	0.500	4.22
In.	0.30	1.46	4.35	2.13	2.18	3.94	4.65	3.19	0.55	0.21	0.58	4.71

Calendar year 1954: Max 500 Min 0.25 Mean 61.8 Cfsm 2.81 In. 38.13
Water year 1953-54: Max 694 Min 0.25 Mean 45.8 Cfsm 2.08 In. 28.25

Peak discharge (base, 300 cfs).--Dec. 7 (6 p.m.) 380 cfs (3.22 ft); Apr. 18 (11 a.m.) 500 cfs (3.62 ft); Sept. 12 (2 a.m.) 910 cfs (4.63 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

West Branch 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 of Eightmile River.

Drainage area.--18.6 sq mi.

Records available.--September 1937 to September 1954. Published as "near North Lyme" September 1937 to April 1939.

Gage.--Wire-weight gage and, since Nov. 7, 1952, crest-stage indicator; 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.--17 years, 39.0 cfs (adjusted to present site).

Extremes.--Maximum discharge during year, 1,240 cfs Sept. 11 (gage height, 6.56 ft); minimum, 0.35 cfs Oct. 4 (gage height, 1.65 ft).

1937-54: Maximum discharge, 1,810 cfs Sept. 21, 1938 (gage height, 8.2 ft, from floodmarks, site and datum then in use), by computation of flow through submerged highway bridge; minimum observed, 0.05 cfs Sept. 12, 1944 (gage height, 1.60 ft).

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)
891,1301	1940	Mar. 15, 1940	830	6.19
921,1301	1941	Feb. 8, 1941	720	6.0
971,1301	1943	Dec. 30, 1942	1,160	6.7
1111,1301	1948	Nov. 12, 1947	650	5.61
1201	1951	Apr. 3, 1951	650	5.6
1231	1952	Dec. 21, 1951	860	6.05
1271	1953	Mar. 13, 1953	860	6.05

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

Revisions (water years).--WSP 1141: 1948. The figures of peak discharge for the water years 1952 and 1953 have been revised as shown below, superseding those published in WSP 1231 and 1271.

Revised peak discharges.--1951-52: Dec. 21 (8:45 a.m.) 860 cfs (6.05 ft); Mar. 11 (time unknown) 750 cfs (5.75 ft).

1952-53: Mar. 4 (about 11 a.m.) 605 cfs (5.46 ft); Mar. 13 (about 10 a.m.) 860 cfs (6.05 ft); Mar. 15 (time unknown) 605 cfs (5.5 ft).

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.55	6.5	25	30	b27	41	43	58	17	6.8	2.5	74
2	.4	5.0	22	26	36	60	40	54	15	6.2	2.2	36
3	.45	4.6	20	27	*32	70	39	60	14	5.0	3.6	23
4	.35	4.2	18	27	48	103	33	107	14	4.8	11	20
5	.55	4.0	74	25	42	71	33	86	14	4.4	6.8	15
6	1.6	3.4	56	37	38	60	34	67	12	4.0	7.7	14
7	3.8	27	335	32	31	52	38	58	11	3.6	5.0	*11
8	1.8	26	135	25	33	48	34	74	8.8	3.8	4.8	18
9	1.7	15	84	21	29	44	36	128	8.4	3.2	12	14
10	1.8	10	101	b21	27	42	32	93	8.0	2.6	36	12
11	1.6	8.4	80	20	24	38	30	84	8.0	2.6	21	440
12	1.6	7.7	60	19	b19	36	45	67	8.0	2.3	12	330
13	1.4	6.5	90	18	b15	34	34	57	10	*2.2	8.4	157
14	1.2	6.2	205	18	b16	60	30	52	8.0	2.2	7.1	84
15	1.2	5.6	165	b25	b20	64	28	50	12	2.5	6.5	65
16	1.1	5.3	99	26	25	49	36	65	10	2.2	4.6	62
17	1.1	5.3	76	b23	44	42	290	54	8.0	1.8	4.2	94
18	1.0	4.6	64	20	39	38	*414	44	7.1	1.8	3.8	67
19	1.1	4.4	54	b20	32	35	203	40	5.0	3.4	3.2	53
20	1.0	4.4	46	b22	29	265	101	39	5.0	2.6	3.4	58
21	1.0	4.2	44	b65	40	143	84	44	4.0	3.2	3.6	46
22	.9	4.2	59	b50	119	90	81	40	4.2	3.2	3.2	46
23	.9	95	49	b40	70	74	95	36	*12	3.0	2.8	35
24	1.5	78	39	b31	54	64	145	33	14	2.5	2.6	31
25	6.5	79	36	b30	70	*65	99	28	9.6	3.6	2.5	26
26	6.5	97	34	38	63	91	80	27	4.6	3.2	2.6	26
27	4.6	52	32	54	53	67	*76	24	5.3	2.6	2.5	28
28	13	39	30	73	44	59	96	23	4.2	3.0	2.3	23
29	33	31	40	b55	-	54	82	22	5.0	8.0	2.3	22
30	18	25	36	b42	-------	50	65	24	8.8	5.0	1.9	20
31	8.4	--- ---	31	b34	-------	46	-------	19	-------	3.0	180	-------
Total	119.6	668.5	2,239	994	1,119	2,055	2,476	1,657	275.0	108.1	372.1	1,950
Mean	3.86	22.3	72.2	32.1	40.0	66.3	82.5	53.5	9.17	3.49	12.0	65.0
Cfsm	0.208	1.20	3.88	1.73	2.15	3.56	4.44	2.88	0.493	0.188	0.645	3.49
In.	0.24	1.34	4.47	1.99	2.24	4.10	4.95	3.32	0.55	0.22	0.74	3.89

Calendar year 1953: Max 473 Min 0.15 Mean 53.3 Cfsm 2.87 In. 38.92
Water year 1953-54: Max 440 Min 0.35 Mean 38.4 Cfsm 2.06 In. 28.05

Peak discharge (revised base, 350 cfs).--Dec. 7 (about 8 a.m.) 427 cfs (5.02 ft); Mar. 20 (about 10 a.m.) 355 cfs (4.7 ft); Apr. 18 (about 1 a.m.) 628 cfs (5.57 ft); Aug. 31 (about 12 m.) 441 cfs (5.05 ft); Sept. 11 (about 6 p.m.) 1,240 cfs (6.56 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Reservoirs in Connecticut River basin

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 with 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., 3,330,000,000 cu ft. Records furnished by New England Power Co.

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.

Comerford Station Pond on Connecticut River, 4½ miles northeast of Barnet, Vt., completed in 1930 for storage of water for hydroelectric power development, has usable capacity of 1,279,000,000 cu ft. Records furnished by New England Power Co.

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.

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.

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.

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.

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.

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.

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.

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.

Ludlow Reservoir in Chicopee River basin, 3¼ 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, Mass.

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.

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.

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.

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 1954. Records furnished by The Collins Co., Collinsville, Conn.

Barkhamsted, East Branch, and Nepaug Reservoirs in Farmington River basin are operated as a unit for municipal water supply and compensation for water diverted from river. The downstream order and capacities are as follows: Barkhamsted Reservoir on East Branch Farmington River, 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 1954. East Branch Reservoir on East Branch Farmington River, lat 41°52'49", long 72°57'30", 1 mile east of New Hartford, Litchfield County, Conn. Drainage area, 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 1954. Nepaug Reservoir on Nepaug River, lat 41°49'37", long 72°56'34", 1½ miles northwest of Collinsville, Hartford County, Conn. Drainage

Reservoirs in Connecticut River basin--Continued

Barkhamsted, East Branch, and Nepaug Reservoirs--Continued.
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 1954. All three reservoirs are equipped with water-stage recorders. Records furnished by Water Bureau, Metropolitan District Commission, Hartford, Conn.

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 1954. Records furnished by Board of Water Commissioners, New Britain, Conn.

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 State Board of Fisheries and Game. Records available, September 1919 to September 1921, July 1928 to September 1954. Stage records furnished by Rockville Water & Aqueduct Co.

Month-end usable contents, in millions of cubic feet, water year October 1953 to September 1954

Date	First and Second Connecticut Lakes	Lake Francis	Comerford Station Pond	Union Village Reservoir	Lakes and ponds in Mascoma River basin
Sept.30, 1953.....	2,840.8	3,230.7	1,176	1.4	469.5
Oct. 31.....	2,482.5	2,903.3	1,294	1.8	332.6
Nov. 30.....	2,355.0	2,789.2	1,275	3.6	374.4
Dec. 31.....	2,227.5	2,811.9	1,167	3.1	646.9
Jan. 31, 1954.....	1,495.9	2,180.8	1,289	4.5	527.4
Feb. 28.....	1,005.1	1,738.7	1,294	18.6	733.4
Mar. 31.....	994.9	573.1	1,013	6.6	638.4
Apr. 30.....	2,888.4	2,930.2	993	18.6	1,166.6
May 31.....	3,531.5	4,181.8	1,284	4.2	1,255.2
June 30.....	3,649.2	4,247.1	1,317	3.5	1,215.7
July 31.....	3,405.5	4,026.5	1,289	3.3	1,069.1
Aug. 31.....	3,437.2	3,907.3	1,181	5.9	876.0
Sept.30.....	3,636.1	4,102.2	1,137	2.4	1,073.9

Date	Sunapee Lake	Surry Mountain Reservoir	Birch Hill Reservoir	Tully Reservoir	Somerset and Harriman Reservoirs
Sept.30, 1953.....	201	0.1	1.0	0	5,113.6
Oct. 31.....	163	.3	3.6	.2	4,666.0
Nov. 30.....	184	6.1	3.3	.3	4,334.6
Dec. 31.....	323	31.9	3.3	23.0	4,897.3
Jan. 31, 1954.....	347	35.1	3.0	23.0	3,925.0
Feb. 28.....	430	55.3	8.0	22.0	3,995.9
Mar. 31.....	459	2.6	5.4	.4	4,677.6
Apr. 30.....	671	3.3	7.5	.4	6,510.0
May 31.....	707	1.6	5.7	.3	6,955.4
June 30.....	629	5.5	4.8	.3	6,659.7
July 31.....	493	.2	2.0	.1	6,361.0
Aug. 31.....	403	.9	18.2	.3	6,059.9
Sept.30.....	503	.3	3.0	.2	6,473.8

Date	Quabbin Reservoir†	Ludlow Reservoir	Watershops Pond	Knightville Reservoir	Borden Brook and Cobble Mountain Reservoirs
Sept.30, 1953.....	50,428	125.7	70.3	0.1	2,588.8
Oct. 31.....	49,682	121.0	71.3	.3	2,486.3
Nov. 30.....	49,041	148.1	68.9	3.6	2,426.2
Dec. 31.....	49,563	181.1	71.3	23.3	2,559.4
Jan. 31, 1954.....	49,870	181.1	71.1	17.3	2,281.5
Feb. 28.....	50,079	181.1	71.3	7.0	2,316.9
Mar. 31.....	51,080	181.1	70.7	3.5	2,626.7
Apr. 30.....	53,001	181.1	72.1	.6	2,880.7
May 31.....	54,773	181.1	73.1	.7	3,259.1
June 30.....	53,899	178.5	70.0	.3	3,164.5
July 31.....	52,517	163.8	69.4	.2	3,039.2
Aug. 31.....	51,648	163.1	0	27.2	2,884.9
Sept.30.....	52,226	181.1	0	.2	3,155.1

Date	Otis Reservoir	Barkhamsted, East Branch and Nepaug Reservoirs	Whigville Reservoir	Shenipsit Lake	
Sept.30, 1953.....	521	4,273	4.9	537.6	
Oct. 31.....	405	3,759	6.3	550.4	
Nov. 30.....	310	3,441	6.5	580.0	
Dec. 31.....	319	3,638	7.5	644.3	
Jan. 31, 1954.....	271	3,553	7.9	643.3	
Feb. 28.....	361	3,807	6.8	665.7	
Mar. 31.....	535	4,406	8.7	717.1	
Apr. 30.....	684	4,856	8.7	732.9	
May 31.....	772	5,365	8.3	732.9	
June 30.....	761	5,202	4.6	694.4	
July 31.....	768	4,889	5.9	641.4	
Aug. 31.....	742	4,395	5.1	614.2	
Sept.30.....	673	4,665	4.1	625.4	

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

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 1954.

Gage.--Water-stage recorder. Datum of gage is 23.64 ft above mean sea level, datum of 1929.

Average discharge.--13 years, 21.7 cfs (adjusted).

Extremes (unadjusted for storage or diversion).--Maximum discharge during year, 1,600 cfs Sept. 11 (gage height, 8.51 ft), from rating curve extended above 270 cfs on basis of computation of peak flow over Kelseytown Dam; minimum discharge, 0.004 cfs Oct. 6 (gage height, 0.63 ft).
1941-54: Maximum discharge, that of Sept. 11, 1954; no flow at times during August and September 1944; minimum gage height, 0.48 ft Sept. 9-12, 1944.

Remarks.--Records good except those for periods of backwater from rocks and those below 2.0 cfs, which are fair. 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. 1-27, June 6 to Aug. 30 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. Draft on Killingworth Reservoir is determined at a staff-gage station just below spillway. Change in contents in Kelseytown Reservoir is determined at a temporary recording station at dam. 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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	6.0	16	17	18	22	22	28	10	2.8	4.9	86
2	.15	4.5	16	16	18	40	20	28	8.2	2.6	4.0	34
3	.1	3.5	15	15	20	38	20	34	7.8	2.4	7.7	19
4	.1	3.0	13	14	29	c76	16	54	7.2	2.3	19	14
5	.2	2.5	35	14	27	52	16	47	6.8	c2.7	13	10
6	*.35	2.5	38	20	23	38	16	35	6.4	c3.2	14	8.4
7	1.4	10	108	19	19	32	17	29	6.2	a2.4	8.9	*7.1
8	1.3	c12	71	16	17	28	19	39	5.8	c1.8	6.3	13
9	.1	c8.5	43	13	17	26	20	93	5.4	c1.3	21	13
10	.7	c7.0	48	14	15	24	16	c66	4.6	c1.1	91	10
11	.55	c6.0	48	13	15	22	15	c58	4.1	c.95	44	*533
12	.45	c5.0	37	15	12	22	19	c46	3.8	*c.9	22	371
13	.35	c4.5	52	12	9.7	21	17	c37	4.5	.85	14	100
14	.3	c4.0	93	11	10	35	16	c32	5.2	.85	9.6	63
15	.25	c3.5	108	12	12	50	14	c29	6.0	.8	7.2	47
16	.25	c3.0	c57	14	14	37	17	c44	6.1	.75	7.0	48
17	.2	2.7	c41	13	19	29	156	c37	5.4	.7	6.1	87
18	.2	2.5	c30	12	24	26	324	c28	4.8	.7	4.6	63
19	.15	2.3	25	11	19	22	121	c24	3.6	.8	3.9	51
20	.15	2.1	23	14	16	88	71	c22	3.5	1.8	3.8	78
21	.15	2.0	22	*34	16	85	53	c23	2.8	3.4	3.9	56
22	.1	2.0	27	41	56	48	42	37	2.6	5.0	4.1	46
23	.1	27	29	27	47	38	39	30	3.2	5.7	3.5	35
24	.3	44	23	22	32	32	65	24	3.9	6.7	3.1	27
25	.85	35	21	20	35	31	51	20	4.6	18	2.9	23
26	2.0	49	19	19	34	48	40	18	3.7	11	2.7	22
27	1.4	30	18	29	29	39	35	15	3.1	7.6	2.5	23
28	2.0	23	18	47	23	32	42	14	2.6	6.0	2.3	20
29	3.5	19	24	34	-	28	*43	13	2.8	13	2.2	18
30	11	17	24	25	-------	26	34	14	3.0	9.0	2.1	15
31	8.4	-------	19	21	-------	23	-------	12	-------	6.8	66	-------
Total	37.25	343.1	1,161	604	625.7	1,158	1,396	1,030	147.7	123.9	407.3	1,940.5
Mean	1.20	11.4	37.5	19.5	22.3	37.4	46.5	33.2	4.92	4.00	13.1	64.7
Cfsm	0.103	0.983	3.23	1.68	1.92	3.22	4.01	2.86	0.424	0.345	1.13	5.58
In.	0.12	1.10	3.72	1.94	2.00	3.71	4.47	3.30	0.47	0.40	1.30	6.23

Calendar year 1953: Max 332 Min 0.1 Mean 29.2 Cfsm 2.52 In. 34.12
Water year 1953-54: Max 533 Min 0.1 Mean 24.6 Cfsm 2.12 In. 28.76

Peak discharge (base, 200 cfs, unadjusted for storage or diversion).--Apr. 18 (7:30 a.m.) 445 cfs (4.83 ft); Sept. 11 (7:30 p.m.) 1,600 cfs (8.51 ft).

* Discharge measurement made on this day.
c Backwater from rocks on control.

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 1954.

Gage.--Water-stage recorder and timber control. Datum of gage is 20.24 ft above mean sea level, datum of 1929.

Average discharge.--24 years, 206 cfs.

Extremes.--Maximum discharge during year, 1,810 cfs Sept. 11 (gage height, 6.81 ft); minimum, 34 cfs Aug. 30 (gage height, 0.55 ft).
1930-54: 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 (gage height, 0.38 ft).

Remarks.--Records excellent except those for periods of backwater from grass and those for periods of fragmentary gage-height record, which are good. Flow regulated by mills above station.

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).

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from aquatic vegetation May 21 to Sept. 10)

Oct. 1 to Dec. 14		Dec. 15 to Sept. 30	
0.6	40	0.6	45
1.0	84	1.0	92
1.5	158	1.5	173
2.0	265	2.0	270
3.1	555	4.0	765
		5.4	1,150

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	f47	116	101	150	134	180	187	218	143	97	76	328
2	f47	97	100	139	137	*230	184	214	139	94	68	212
3	f47	82	92	134	150	279	177	232	132	87	121	135
4	f46	69	88	135	177	505	162	315	128	82	298	112
5	f44	64	245	134	186	435	160	340	128	81	252	86
6	f47	65	243	139	166	284	164	260	118	74	147	76
7	82	149	505	139	146	238	169	224	112	71	109	77
8	68	203	385	127	132	222	173	260	108	74	88	185
9	60	171	255	110	128	212	164	450	102	68	105	167
10	57	135	322	106	125	204	150	420	*99	67	84	123
11	52	117	328	86	123	195	150	365	128	64	54	913
12	f50	102	253	117	111	182	189	*308	128	61	100	1,150
13	f48	90	263	112	90	182	164	264	132	61	82	721
14	f48	85	531	105	90	226	150	258	130	61	69	385
15	f47	82	655	114	95	270	141	252	132	73	62	276
16	f45	74	465	120	120	252	155	246	135	59	61	246
17	f46	72	308	114	157	200	308	234	132	54	61	270
18	f44	69	236	97	186	180	655	220	116	54	56	256
19	f44	69	204	111	164	169	680	204	105	80	54	230
20	f45	66	191	110	142	525	480	193	92	68	59	236
21	41	65	193	182	153	505	298	238	86	64	61	224
22	42	63	214	230	385	330	254	404	86	69	58	260
23	44	146	228	160	382	266	236	442	102	66	53	244
24	47	187	200	148	254	230	270	285	99	66	53	189
25	85	183	173	132	234	226	270	260	92	76	62	166
26	100	191	164	135	230	276	216	229	86	*65	58	155
27	87	156	157	191	210	274	151	221	82	94	53	173
28	155	126	155	272	187	230	226	209	77	122	49	177
29	236	110	180	222	-	206	274	191	87	155	46	160
30	230	101	180	175	-------	200	250	179	95	128	47	150
31	168	-------	166	151	-------	195	-------	164	--------	95	294	--------
Total	2,249	3,307	7,780	4,397	4,794	8,108	7,187	8,299	3,331	2,428	2,840	8,082
Mean	72.5	110	251	142	171	262	240	268	111	78.3	91.6	269
Cfsm	0.665	1.01	2.30	1.30	1.57	2.40	2.20	2.46	1.02	0.718	0.840	2.47
In.	0.77	1.13	2.65	1.50	1.64	2.77	2.46	2.84	1.14	0.83	0.97	2.76

Calendar year 1954: Max 1,950 Min 41 Mean 283 Cfsm 2.60 In. 35.28
Water year 1953-54: Max 1,150 Min 41 Mean 172 Cfsm 1.58 In. 21.46

Peak discharge (base, 900 cfs).--Sept. 11 (6 p.m.) 1,810 cfs (6.81 ft).
* Discharge measurement made on this day.
f Fragmentary gage-height record; discharge computed from partly estimated gage heights.

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 1954. 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.--18 years, 115 cfs (adjusted for diversion).

Extremes.--Maximum discharge during year, 1,870 cfs Sept. 11 (gage height, 6.98 ft); minimum daily, 11 cfs Aug. 22.
1936-54: Maximum discharge, 6,400 cfs Sept. 21, 1938 (gage height, 10.80 ft), from rating curve extended above 1,300 cfs on basis of computation of peak flow over dam; minimum daily, 4.4 cfs Aug. 15, 1936.

Remarks.--Records good except those for period of no gage-height record, which are fair. Flow regulated by powerplants above station. 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 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.8	7.5	3.5	267
2.0	17	4.0	412
2.2	31	5.0	800
2.5	67	5.5	1,020
3.0	155		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	21	30	23	48	221	80	95	81	37	22	179
2	22	27	32	27	45	552	78	92	67	36	22	65
3	19	25	29	23	42	340	73	109	60	24	21	42
4	15	22	26	36	41	573	51	210	57	21	28	45
5	24	23	55	29	45	242	62	183	70	22	25	29
6	24	23	56	29	37	146	62	*126	59	33	23	29
7	37	19	497	29	29	108	140	97	62	35	22	51
8	30	28	243	25	44	118	133	136	46	30	20	88
9	26	34	93	25	37	97	108	297	*45	26	16	72
10	24	29	171	13	39	99	72	314	45	19	18	46
11	20	a29	174	37	38	80	111	448	46	16	25	839
12	22	a29	78	26	32	76	262	280	38	18	31	789
13	18	a28	72	27	29	70	151	198	79	26	18	244
14	24	a28	83	25	22	64	109	157	86	20	19	*140
15	19	a21	111	27	39	88	95	122	218	23	19	119
16	24	a27	85	25	90	74	105	107	422	19	26	146
17	18	a26	*46	13	200	69	394	107	246	22	22	247
18	14	a26	36	34	171	67	773	79	123	14	24	169
19	21	a25	34	25	138	64	342	59	86	25	29	124
20	20	*a26	29	29	153	256	223	65	65	22	23	141
21	19	25	43	*120	170	235	175	138	61	28	16	115
22	20	20	53	141	455	127	149	435	57	29	11	128
23	*18	63	72	70	322	92	139	283	51	25	24	111
24	21	65	43	42	190	85	143	202	50	24	21	89
25	18	47	32	47	196	105	124	155	40	30	16	80
26	38	67	32	39	*198	300	114	126	35	*31	24	69
27	25	47	34	102	230	186	109	96	29	23	25	83
28	31	34	36	109	175	114	211	88	37	24	23	68
29	47	24	35	72	-	107	198	83	36	27	13	70
30	52	33	34	52	-------	111	131	209	32	54	22	70
31	33	-------	24	41	-------	*90	-------	116	-------	29	139	-------
Total	760	941	2,418	1,362	3,255	4,956	4,917	5,212	2,429	812	787	4,487
Mean	24.5	31.4	78.0	43.9	116	160	164	168	81.0	26.2	25.4	150
(†)	149	106	120	132	140	174	159	276	189	169	124	147

Adjusted for diversion

Mean	32.0	36.8	84.0	50.5	124	169	172	182	90.7	34.6	31.6	157
Cfsm	0.560	0.644	1.47	0.884	2.17	2.96	3.01	3.19	1.59	0.606	0.553	2.75
In.	0.65	0.72	1.70	1.02	2.26	3.40	3.36	3.67	1.77	0.70	0.64	3.07

	Observed			Adjusted			
Calendar year 1953:	Max 1,160	Min 11	Mean 118	Mean 126	Cfsm 2.21	In. 29.91	
Water year 1953-54:	Max 839	Min 11	Mean 88.6	Mean 96.6	Cfsm 1.69	In. 22.96	

Peak discharge (base, 1,150 cfs).--Apr. 18 (3:30 a.m.) 1,220 cfs (5.93 ft); Sept. 11 (4:30 to 5 p.m.) 1,870 cfs (6.98 ft).

* Discharge measurement made on this day.

† Diversion above station from Cleveland Brook Reservoir for municipal supply of Pittsfield, in millions of gallons. Records furnished by city of Pittsfield.

a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage, and records for stations on nearby streams.

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 1954.

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.--41 years, 529 cfs.

Extremes.--Maximum discharge during year, 2,710 cfs Sept. 12 (gage height, 6.78 ft); minimum daily, 41 cfs Oct. 4.
1913-54: 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 period of ice effect, which are fair. Flow regulated by powerplants above station.

Revisions (water years).--WSP 415: 1913 calendar year. WSP 781: 1928(M). WSP 1051: 1928, 1933. WSP 1301: 1914-15(M), 1917-27(M), 1929-31(M).

Rating tables, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 22				Feb. 23 to Sept. 30			
2.0	36	3.5	390	2.1	48	4.0	680
2.3	63	4.0	655	2.5	97	5.0	1,480
2.6	105	5.0	1,410	3.0	209	7.0	2,870
3.0	200	6.0	2,110	3.5	399		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	109	121	209	213	542	990	587	687	636	208	125	622
2	109	176	188	296	377	1,230	542	549	484	200	164	433
3	119	159	172	188	328	1,460	527	613	441	214	157	292
4	41	100	174	331	319	1,820	398	802	421	117	200	203
5	87	119	235	260	312	1,720	493	1,020	463	183	190	102
6	114	102	299	236	271	1,270	479	*865	361	253	142	168
7	154	164	1,300	228	196	849	652	708	465	212	124	247
8	166	101	1,670	b175	433	823	660	701	343	189	96	268
9	147	189	1,090	b195	309	722	648	1,110	341	186	155	296
10	135	175	980	b175	269	667	577	1,360	*274	198	127	259
11	72	173	1,120	b270	247	622	490	1,450	336	129	149	842
12	137	166	804	b260	272	538	964	1,500	334	134	143	2,340
13	134	171	631	b165	224	478	956	1,300	268	143	118	2,010
14	108	173	698	b175	138	414	765	1,040	448	176	137	1,080
15	109	109	868	b190	342	637	628	857	617	142	128	*578
16	113	170	769	b180	438	573	623	656	998	122	136	505
17	108	156	*562	b140	978	504	1,110	697	1,120	127	128	648
18	90	162	431	b220	1,180	483	2,390	603	818	115	102	729
19	67	151	373	b205	900	447	2,330	495	591	99	124	520
20	118	143	311	b210	734	666	1,680	452	329	107	115	605
21	104	*150	448	*b300	675	1,020	1,230	585	407	128	128	494
22	97	87	395	b570	1,250	973	998	1,360	355	147	*114	484
23	*86	201	399	462	1,540	715	802	1,540	334	212	84	473
24	68	309	346	323	1,280	597	802	1,260	343	142	106	428
25	*87	344	275	396	1,080	571	722	964	269	77	107	262
26	251	231	382	342	*1,050	1,110	733	795	295	115	123	291
27	181	362	248	445	1,090	1,220	660	674	184	152	114	405
28	169	282	356	631	990	878	772	567	279	*106	119	318
29	251	109	309	494	-	791	948	505	238	146	57	291
30	293	212	287	404	-------	694	833	535	216	196	135	265
31	274	...	218	316	-------	*654	-------	687	-------	259	185	-------
Total	4,098	5,267	16,547	8,995	17,784	26,136	25,999	26,937	13,008	4,934	4,032	16,458
Mean	132	176	534	290	635	843	867	869	434	159	130	549
Cfsm	0.471	0.629	1.91	1.04	2.27	3.01	3.10	3.10	1.55	0.568	0.464	1.96
In.	0.54	0.70	2.20	1.19	2.36	3.47	3.45	3.58	1.73	0.66	0.54	2.19

Calendar year 1953: Max 3,710 Min 39 Mean 577 Cfsm 2.06 In. 27.96
Water year 1953-54: Max 2,390 Min 41 Mean 466 Cfsm 1.66 In. 22.61

Peak discharge (base, 2,400 cfs).--Apr. 19 (9 a.m.) 2,600 cfs (6.63 ft); Sept. 12 (7:45 a.m.) 2,710 cfs (6.78 ft).

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

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 690 ft (from topographic map).

Extremes.--Maximum discharge during year, 1,050 cfs Dec. 7 (gage height, 5.01 ft); minimum daily, 3.3 cfs Oct. 20-22.
1951-54: Maximum discharge, 1,710 cfs Apr. 6, 1952 (gage height, 5.86 ft), from rating curve extended above 680 cfs by logarithmic plotting; maximum gage height, 5.91 ft June 1, 1952; minimum discharge, 3.0 cfs Sept. 2-5, 1952.

Remarks.--Records good except those for period of no gage-height record, which are fair.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 7				Dec. 8 to Sept. 30			
1.67	3.3	2.5	130	1.73	6.8	2.2	47
1.7	4.3	3.0	236	1.8	10	2.5	100
1.8	8.9	3.5	377	1.9	16	3.0	224
1.9	16	4.0	560	2.0	25	4.0	560
2.0	28						

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.3	6.9	17	34	b92	159	113	94	69	15	13	62
2	4.2	6.9	17	34	84	180	102	94	60	15	12	32
3	4.1	6.9	16	33	76	200	94	102	54	14	14	23
4	4.0	6.4	16	33	73	390	80	185	50	13	16	22
5	4.3	6.0	25	32	67	239	75	152	53	15	15	19
6	5.5	6.4	32	32	62	196	80	*128	46	21	13	17
7	7.5	8.4	559	31	58	166	132	115	41	15	11	19
8	6.0	9.5	236	b31	b52	154	102	179	39	14	10	24
9	5.0	9.5	146	28	52	135	94	290	41	13	11	26
10	4.5	8.9	266	29	48	128	84	290	*40	12	11	22
11	4.0	8.9	188	b29	46	113	109	296	37	11	12	221
12	3.9	8.9	144	29	b45	96	144	239	35	11	11	212
13	3.9	8.4	152	b28	b43	90	117	204	52	10	11	113
14	3.9	8.4	204	b28	b41	104	106	174	43	9.5	10	84
15	3.7	8.4	230	b27	43	110	98	152	75	11	9.5	*67
16	3.6	8.4	164	27	117	86	121	132	56	10	9.5	104
17	3.6	8.4	*130	b26	336	82	333	115	42	9.5	9.0	115
18	3.5	8.4	100	b26	266	76	492	98	35	9.5	8.5	92
19	3.4	8.4	88	b25	216	71	320	88	33	9.5	9.5	82
20	3.3	8.4	82	26	196	207	260	78	31	9.0	11	84
21	3.3	*7.9	78	*98	217	169	218	174	27	9.5	9.5	71
22	3.3	7.4	80	b90	347	135	188	254	24	9.0	8.5	75
23	3.6	11	78	b69	248	126	144	182	22	8.5	8.0	60
24	3.6	9.5	59	58	202	115	156	149	22	8.5	8.5	52
25	*4.2	13	52	54	210	140	137	135	20	8.5	9.5	47
26	5.6	24	50	53	*191	271	121	115	19	8.0	8.0	43
27	4.7	24	46	161	207	185	113	98	18	*7.6	7.6	42
28	6.0	21	41	b172	166	162	152	88	16	7.6	7.2	41
29	7.4	19	40	b126	-	152	126	82	16	9.6	6.8	39
30	8.4	17	39	b113	-------	139	106	121	15	27	6.8	37
31	7.4	---	37	b98	-------	*121	-------	84	--------	16	'8	-------
Total	143.7	314.6	3,412	1,680	3,801	4,697	4,517	4,687	1,131	366.8	355.4	1,947
Mean	4.64	10.5	110	54.2	136	152	151	151	37.7	11.8	11.5	64.9
Cfsm	0.088	0.200	2.10	1.03	2.59	2.90	2.88	2.88	0.718	0.225	0.219	1.24
In.	0.10	0.22	2.42	1.19	2.69	3.33	3.20	3.32	0.80	0.26	0.25	1.38

Calendar year 1953: Max 973 Min 3.0 Mean 100 Cfsm 1.90 In. 25.87
Water year 1953-54: Max 559 Min 3.3 Mean 74.1 Cfsm 1.41 In. 19.16

Peak discharge (base, 750 cfs).--Dec. 7 (8 a.m.) 1,050 cfs (5.01 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Oct. 1-24; discharge estimated on basis of weather records, recorded range in stage, and records for Green River at Williamstown and Housatonic River near Great Barrington.

Blackberry River at Canaan, Conn.

Location.--Lat 42°01'26", long 73°20'32", on right bank downstream from highway 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 1954.

Gage.--Water-stage recorder. Datum of gage is 645.72 ft above mean sea level, datum of 1929.

Average discharge.--5 years, 83.3 cfs.

Extremes.--Maximum discharge during year, 1,910 cfs Sept. 11 (gage height, 8.50 ft), from rating curve extended above 900 cfs as explained below; minimum, 5.8 cfs Oct. 4; minimum gage height, 1.51 ft Aug. 19.
1949-54: Maximum discharge, 2,550 cfs Nov. 26, 1950 (gage height, 9.37 ft), from rating curve extended above 900 cfs on basis of slope-area determination of peak flow of flood of Dec. 31, 1948, at East Canaan, 2.5 miles upstream; minimum, 2.2 cfs Aug. 28, 1949 (gage height, 1.12 ft); minimum daily, 2.3 cfs Aug. 28, 1949.
Maximum stage known, 12.0 ft Dec. 31, 1948, from floodmarks (discharge, 7,000 cfs, from slope-area determination at East Canaan, adjusted for intervening drainage area).

Remarks.--Records good. Infrequent regulation at low flow.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 17				Apr. 18 to Sept. 11				Sept. 12-30	
1.5	6.0	2.2	42	1.5	7.2	2.5	96	1.9	23
1.6	7.7	2.5	83	1.6	10.5	3.5	281	2.1	40
1.8	13.5	3.5	259	1.8	20	5.0	566	2.5	96
2.0	25	5.0	555	2.0	35	6.5	940	3.5	281
				2.2	54			4.9	547

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.2	23	26	33	41	100	62	70	49	16	20	111
2	6.5	18	26	30	43	244	57	67	44	15	16	45
3	6.2	14	23	28	41	256	57	70	42	14	18	28
4	6.0	13	23	30	42	393	44	125	40	13	29	21
5	6.5	11	86	27	40	167	44	104	40	15	20	18
6	9.3	11	71	30	37	121	50	79	36	42	16	16
7	21	17	309	27	31	100	106	66	33	22	14	14
8	14	31	163	23	30	88	86	119	*29	18	12	20
9	11	26	90	20	31	77	76	186	27	15	11	34
10	9.8	27	330	22	29	77	58	190	26	13	12	21
11	9.3	25	160	22	28	67	113	169	26	12	16	921
12	9.1	25	110	24	26	57	122	130	25	11	14	545
13	8.8	27	150	23	24	54	88	103	61	9.8	13	171
14	8.6	24	550	22	20	84	70	86	49	9.5	11	104
15	8.4	20	400	23	57	96	62	74	54	16	10	67
16	7.9	22	180	26	135	70	86	70	40	14	10	100
17	7.7	21	110	23	214	58	358	62	34	12	9.5	192
18	7.5	19	75	21	162	50	566	55	27	10	8.2	122
19	7.2	18	60	22	117	48	226	51	24	10	7.9	88
20	7.0	16	55	24	95	221	159	49	21	11	24	86
21	6.8	14	60	163	107	156	128	214	18	14	16	69
22	6.7	14	70	116	205	101	110	310	17	15	12	91
23	6.7	73	60	90	138	84	103	182	16	12	*10	63
24	6.8	70	45	52	*98	76	108	130	18	10	9.5	49
25	12	58	40	41	111	95	88	108	16	10	21	41
26	25	78	37	41	104	178	80	85	15	10	17	39
27	14	44	37	131	122	122	79	69	15	9.5	15	44
28	36	33	40	106	94	92	118	64	14	9.8	12	36
29	61	28	45	71	-	82	103	60	16	22	10	30
30	86	24	40	67	-------	76	80	82	17	73	9.5	27
31	40	---	36	53	-------	67	-------	60	-------	34	114	-----
Total	480.0	844	3,507	1,431	2,222	3,557	3,487	3,289	889	517.6	537.6	3,213
Mean	15.5	28.1	113	46.2	79.4	115	116	106	29.6	16.7	17.3	107
Cfsm	0.322	0.583	2.34	0.959	1.65	2.39	2.41	2.20	0.614	0.346	0.359	2.22
In.	0.37	0.63	2.70	1.11	1.72	2.76	2.69	2.54	0.68	0.40	0.41	2.48

Calendar year 1953: Max 832 Min 4.0 Mean 93.1 Cfsm 1.93 In. 26.20
Water year 1953-54: Max 921 Min 6.0 Mean 65.7 Cfsm 1.36 In. 18.49

Peak discharge (base, 800 cfs).--Mar. 3 (11 p.m.) 850 cfs (6.19 ft); Apr. 18 (1 to 2 a.m.) 910 cfs (6.43 ft); Sept. 11 (4 p.m.) 1,910 cfs (8.50 ft).
* Discharge measurement made on this day.
Note.--No gage-height record Dec. 8 to Jan. 20; discharge estimated on basis of recorded range in stage, weather records, and records for nearby streams.

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 1954.

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.--42 years, 1,071 cfs.

Extremes.--Maximum discharge during year, 5,750 cfs Sept. 12 (gage height, 10.0 ft, from floodmark); minimum, 98 cfs Aug. 28 (gage height, 1.03 ft); minimum daily, 131 cfs Oct. 20.

1912-54: 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 excellent except those for periods of ice effect and backwater from aquatic vegetation, which are good. Low flow completely regulated by powerplant of Connecticut Power Co.

Revisions.--WSP 781: Drainage area.

Rating table, water year 1953-54, except periods of ice effect or backwater from aquatic vegetation (gage height, in feet, and discharge, in cubic feet per second)

1.0	126	7.0	3,420
1.5	280	9.2	5,090
3.0	1,000		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	164	400	423	532	750	1,930	1,430	1,560	1,280	376	388	1,080
2	161	236	366	524	960	2,350	1,270	1,320	1,130	353	204	1,120
3	161	283	360	576	860	2,470	1,210	1,210	974	340	326	718
4	174	252	322	510	880	3,560	1,120	1,480	896	345	320	402
5	155	212	514	608	840	3,350	984	1,820	886	340	340	346
6	155	183	747	543	800	2,860	1,080	1,770	899	400	306	202
7	204	190	1,430	510	720	2,290	1,320	1,520	742	430	304	356
8	252	367	2,860	340	570	1,930	1,510	1,470	*804	346	169	598
9	250	272	2,660	240	780	1,820	1,400	1,980	650	324	175	473
10	220	404	2,730	480	720	1,600	1,290	2,470	614	338	216	484
11	170	350	2,860	300	660	1,520	1,200	2,790	566	260	272	2,230
12	158	288	2,290	560	510	1,370	1,500	2,660	638	250	241	5,010
13	187	306	1,990	450	480	1,220	1,820	2,530	620	161	246	3,770
14	188	322	1,800	320	430	1,260	1,640	2,230	770	228	210	3,000
15	183	298	2,530	440	490	1,400	1,390	1,930	927	300	206	2,110
16	170	272	2,230	490	1,170	1,420	1,340	1,770	1,090	279	210	1,510
17	170	242	1,930	430	1,770	1,260	1,930	1,400	1,380	190	238	1,810
18	139	312	1,290	330	2,660	1,140	4,210	1,340	1,370	180	206	1,760
19	164	290	1,170	410	2,410	1,100	4,290	1,220	1,060	254	172	1,540
20	131	274	1,060	510	1,990	1,460	3,840	1,060	828	166	252	1,370
21	162	243	938	870	1,880	2,170	3,070	1,220	548	262	204	1,300
22	*134	264	1,030	1,110	2,170	2,050	2,410	2,410	548	184	208	1,210
23	164	278	1,070	1,130	*2,660	1,880	2,050	2,860	546	243	*224	1,150
24	156	643	976	950	2,530	1,610	1,930	2,600	536	306	241	1,040
25	136	556	794	790	2,290	1,420	1,820	2,170	538	199	234	911
26	206	677	764	840	2,110	1,880	1,600	1,880	446	*161	258	644
27	334	482	774	1,040	2,110	2,290	1,540	1,640	421	182	229	*782
28	322	580	622	1,530	2,110	2,110	1,620	1,360	326	244	174	824
29	479	421	795	1,280	-	1,880	1,740	1,190	412	248	186	670
30	622	216	706	1,120	-------	1,680	1,680	1,300	363	510	150	619
31	490	----	668	950	-------	1,450	-------	1,310	-------	441	552	-------
Total	6,761	10,113	40,699	20,713	38,310	57,730	55,234	55,470	22,808	8,840	7,661	39,039
Mean	218	337	1,313	668	1,368	1,862	1,841	1,789	760	285	247	1,301
Cfsm	0.345	0.533	2.08	1.06	2.16	2.95	2.91	2.83	1.20	0.451	0.391	2.06
In.	0.40	0.59	2.40	1.22	2.25	3.40	3.25	3.26	1.34	0.52	0.45	2.30

Calendar year 1953: Max 7,600 Min 131 Mean 1,317 Cfsm 2.08 In. 28.30
Water year 1953-54: Max 5,010 Min 131 Mean 996 Cfsm 1.58 In. 21.38

Peak discharge (base, 3,600 cfs).--Mar. 4 (8 p.m.) 3,770 cfs (7.48 ft); Apr. 18 (6 p.m.) 4,610 cfs (8.63 ft); Sept. 12 (about 3 a.m.) 5,750 cfs (10.0 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Jan. 7 to Feb. 15. Backwater from aquatic vegetation Oct. 1 to Nov. 8, July 21 to Sept. 30.

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 Connecticut-New York State line, 1.7 miles upstream from mouth, and 2½ miles northwest of Gaylordsville, Litchfield County.

Drainage area.--204 sq mi.

Records available.--December 1929 to September 1954.

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.--25 years, 292 cfs.

Extremes.--Maximum discharge during year, 1,900 cfs Sept. 11 (gage height, 5.36 ft); minimum, 21 cfs Oct. 5 (gage height, 0.66 ft); minimum daily, 22 cfs Oct. 1-5.
1929-54: Maximum discharge, 12,500 cfs Sept. 22, 1938 (gage height, 12.77 ft); minimum, 8 cfs Sept. 24, 26, 1939 (gage height, 0.52 ft); minimum daily, 9 cfs Sept. 23-26, 1939.

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

Revisions (water years).--WSP 1201: 1939.

Rating tables, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Sept. 11				Sept. 11-30			
0.6	16	2.0	263	1.6	157	3.5	820
.8	34	3.0	600	2.0	255	4.6	1,410
1.2	88	4.3	1,230	2.5	406		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	118	110	237	300	443	362	359	269	64	52	160
2	22	93	121	230	350	662	341	338	242	65	44	109
3	22	75	119	217	350	699	326	329	227	59	44	83
4	22	65	110	212	440	1,200	300	432	212	58	53	65
5	22	58	175	198	460	895	291	426	205	57	52	54
6	25	54	207	205	400	730	300	362	188	82	45	46
7	36	62	613	205	350	640	390	326	176	85	40	64
8	43	90	600	165	320	600	356	362	167	66	35	139
9	38	96	457	150	300	552	323	572	*150	58	34	102
10	34	91	862	160	290	520	291	708	139	52	37	77
11	33	86	845	160	260	482	285	870	137	46	41	1,010
12	31	82	620	170	220	436	365	730	129	43	52	1,410
13	29	77	640	170	180	415	329	600	154	40	43	752
14	29	83	902	160	200	478	300	528	172	37	37	492
15	28	74	1,070	170	220	572	283	478	152	42	36	359
16	28	69	798	190	350	468	291	436	135	41	34	334
17	27	65	640	150	550	422	512	390	123	38	31	343
18	27	62	478	140	800	387	1,070	356	114	35	29	304
19	26	61	432	150	650	359	870	335	103	40	27	277
20	27	61	384	170	550	616	708	314	96	44	29	282
21	31	59	371	390	500	662	600	486	88	43	28	255
22	29	58	415	320	600	540	528	798	80	44	27	271
23	27	86	422	290	550	485	496	620	75	43	25	242
24	27	150	356	270	460	454	520	510	74	40	24	209
25	31	137	311	260	*482	446	468	450	69	44	28	187
26	42	183	291	260	471	580	443	404	65	43	29	185
27	52	158	271	450	496	496	429	347	64	37	29	219
28	64	135	263	600	454	440	482	320	61	37	28	*190
29	114	121	291	420	-	422	457	306	61	41	27	166
30	224	110	288	400	-------	398	398	359	59	57	26	150
31	176	-------	274	350	-------	377	-------	314	-------	75	54	-------
Total	1,384	2,719	13,736	7,619	11,553	16,876	13,114	14,165	3,986	1,556	1,120	8,536
Mean	44.6	90.6	443	246	413	544	437	457	133	50.2	36.1	285
Cfsm	0.219	0.444	2.17	1.21	2.02	2.67	2.14	2.24	0.652	0.246	0.177	1.40
In.	0.25	0.50	2.50	1.40	2.10	3.08	2.39	2.58	0.73	0.28	0.20	1.56

Calendar year 1953: Max 4,320 Min 15 Mean 392 Cfsm 1.92 In. 26.09
Water year 1953-54 : Max 1,410 Min 22 Mean 264 Cfsm 1.29 In. 17.57

Peak discharge (base, 1,400 cfs).--Sept. 11 (3 p.m.) 1,900 cfs (5.36 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Jan. 9-21. No gage-height record Jan. 22 to Feb. 24; discharge estimated on basis of records for Wappinger Creek near Wappingers Falls, N. Y.

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 miles 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 1954.

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.--14 years, (1940-54), 1,644 cfs.

Extremes.--Maximum discharge during year, 8,670 cfs Sept. 12 (gage height, 8.08 ft); minimum daily, 80 cfs Nov. 18.

1900-1914, 1940-54: Maximum discharge, 32,300 cfs Jan. 1, 1949 (gage height, 14.85 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 of 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 above station.

Revisions (water years).--WSP 1301: 1949.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	76	3.0	1,050
1.4	195	4.0	1,940
1.5	236	5.0	3,120
2.0	447	7.5	7,380
2.5	710		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	212	364	366	1,090	1,500	2,680	2,000	2,270	1,790	556	572	1,140
2	228	597	609	906	1,360	3,460	1,890	2,000	1,640	432	469	1,290
3	212	264	572	978	1,500	3,670	1,740	1,840	1,420	460	405	1,070
4	192	341	532	951	1,560	5,630	1,600	2,220	1,370	382	359	726
5	190	320	756	848	1,540	4,930	1,550	2,560	1,290	470	458	349
6	254	268	1,050	1,070	1,370	4,280	1,500	2,440	1,290	654	364	382
7	254	380	2,540	909	1,260	3,460	1,940	2,160	1,250	550	364	303
8	236	279	3,670	827	1,100	2,990	2,160	2,160	*1,070	466	382	621
9	252	496	3,530	578	1,060	2,740	1,890	2,990	1,080	378	257	672
10	294	340	4,280	b500	1,280	2,440	1,840	3,740	928	433	222	615
11	256	536	4,440	b670	1,110	2,320	1,690	4,280	914	402	304	3,770
12	238	504	3,460	b540	b1,030	2,100	2,100	3,970	862	324	357	7,380
13	176	446	3,120	b780	b800	2,000	2,320	3,670	946	356	292	4,930
14	190	466	3,530	b740	b820	2,050	2,160	3,180	1,100	206	298	3,900
15	122	683	4,280	b600	b902	2,320	1,890	2,800	1,080	320	304	2,740
16	206	727	3,670	b770	1,470	2,270	1,890	2,560	1,230	338	264	2,100
17	230	356	2,990	b750	2,800	2,000	2,920	2,160	1,540	360	221	2,320
18	178	80	2,130	b750	3,670	1,790	6,000	2,000	1,650	208	278	2,270
19	167	330	1,770	b620	3,460	1,740	6,000	1,890	1,380	368	237	1,940
20	182	408	1,760	b700	2,860	2,620	5,270	1,690	1,150	460	207	1,840
21	215	346	1,680	b1,300	2,620	3,160	4,280	2,260	896	224	286	1,690
22	204	314	1,740	1,830	3,120	2,990	3,460	3,740	648	330	286	1,640
23	203	545	1,830	1,840	3,600	2,680	3,060	3,970	778	218	208	1,480
24	190	628	1,650	1,560	3,390	2,440	2,860	3,670	762	336	288	1,370
25	195	910	1,450	1,340	*3,120	2,160	2,680	3,180	691	415	318	1,220
26	276	978	1,330	1,300	2,920	2,740	2,380	2,680	643	226	316	1,030
27	273	895	1,260	1,520	2,990	3,060	2,380	2,320	534	137	267	*1,100
28	564	762	1,230	2,300	2,860	2,860	2,500	2,000	485	339	221	1,100
29	770	748	1,160	2,090	-	2,560	2,560	1,840	512	446	262	988
30	1,100	562	1,360	1,800	-------	2,380	2,380	2,000	490	419	216	902
31	730	---	1,170	1,600	-------	2,160	-------	1,890	-------	602	524	---
Total	8,989	14,873	64,915	34,057	57,072	86,700	78,890	82,130	31,419	11,815	9,806	52,878
Mean	290	496	2,094	1,099	2,038	2,797	2,630	2,649	1,047	381	316	1,763
Cfsm	0.292	0.499	2.11	1.11	2.05	2.81	2.65	2.66	1.05	0.383	3.318	1.77
In.	0.34	0.56	2.43	1.28	2.14	3.24	2.96	3.07	1.17	0.44	0.37	1.98

Calendar year 1953: Max 12,400 Min 80 Mean 2,036 Cfsm 2.05 In. 27.81
Water year 1953-54: Max 7,380 Min 80 Mean 1,462 Cfsm 1.47 In. 19.98

Peak discharge (base, 4,500 cfs).--Dec. 10 (1 p.m.) 4,930 cfs (6.22 ft); Mar. 4 (4 to 6 p.m.) 5,630 cfs (6.60 ft); Apr. 18 (6 to 7 p.m.) 6,380 cfs (7.05 ft); Sept. 12 (6 a.m.) 8,670 cfs (8.08 ft).

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

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 1954.

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.--23 years, 119 cfs.

Extremes.--Maximum discharge during year, 590 cfs Apr. 19 (gage height, 6.68 ft); minimum, 15 cfs Oct. 5 (gage height, 0.87 ft).

1931-54: Maximum discharge, 3,590 cfs (revised) Sept. 22, 1938 (gage height, 10.88 ft), from rating curve extended above 3,000 cfs by logarithmic plotting; minimum, 5 cfs Oct. 30, 1946; minimum daily, 8 cfs Sept. 27, 1948; minimum gage height, 0.77 ft Aug. 10, 1939.

Revisions.--The figures of maximum discharge for the water years 1936, 1938, and 1941 have been revised to 3,260 cfs Mar. 12, 1936 (gage height, 10.58 ft), 3,590 cfs Sept. 22, 1938 (gage height, 10.88 ft), and 3,180 cfs Feb. 8, 1941 (gage height, 10.47 ft), superseding figures published in WSP 798, 801, 851, 867, 921, and 1301 respectively.

Remarks.--Records good except those for periods of no gage-height record or backwater from ice or grass on control, 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.

Rating tables, water year 1953-54, except periods of ice effect or backwater from grass on control (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 12)

Oct. 1 to Sept. 12				Sept. 12-30			
0.9	16	4.0	198	2.2	62	5.0	283
1.1	22	5.0	308	3.0	105	6.0	406
2.0	60	6.5	530	4.0	182		
3.0	114						

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	47	44	64	76	*107	101	114	74	38	30	161
2	18	42	53	60	74	201	95	104	68	39	28	92
3	18	36	50	60	74	218	92	107	65	38	90	64
4	17	34	48	60	95	386	84	175	62	37	80	55
5	16	32	84	60	100	389	82	188	66	36	50	48
6	19	31	101	60	85	213	84	128	58	36	40	43
7	34	38	191	62	75	161	92	107	53	35	33	42
8	32	86	234	54	64	148	86	114	52	37	30	49
9	24	73	118	50	66	140	84	234	*51	37	31	52
10	22	54	167	46	65	132	76	234	48	33	40	48
11	20	46	234	43	64	124	74	244	49	31	55	56
12	18	43	136	48	58	114	114	184	50	30	45	480
13	20	40	161	52	55	110	104	140	51	31	37	400
14	21	37	249	50	52	154	86	121	53	30	32	148
15	21	34	426	52	51	234	80	110	48	30	30	93
16	23	32	342	54	71	166	82	101	46	32	33	90
17	23	32	166	54	122	124	167	92	47	32	30	114
18	20	33	116	47	184	110	449	86	42	28	27	108
19	19	31	101	55	118	104	530	80	41	28	25	85
20	21	32	86	55	92	212	277	80	40	33	27	139
21	23	31	86	100	89	320	174	160	38	32	32	173
22	24	30	101	170	215	196	148	358	37	32	27	152
23	24	41	110	100	218	140	136	242	38	29	25	156
24	24	95	92	85	132	128	213	136	40	29	24	102
25	26	68	76	75	132	124	188	121	40	27	*40	80
26	46	82	71	80	144	188	140	107	39	24	37	70
27	34	60	69	110	132	156	128	92	38	28	31	77
28	45	52	67	190	114	121	170	86	35	29	28	80
29	92	48	82	170	-	110	184	82	34	47	26	69
30	92	*44	84	120	-------	107	136	110	37	40	24	62
31	66	-------	77	90	-------	104	-------	92	-------	34	55	-------
Total	920	1,384	4,020	2,376	2,817	5,241	4,456	4,329	1,440	1,022	1,142	3,388
Mean	29.7	46.1	130	76.6	101	169	149	140	48.0	33.0	36.8	113
Cfsm	0.433	0.673	1.90	1.12	1.47	2.47	2.18	2.04	0.701	0.482	0.537	1.65
In.	0.50	0.75	2.19	1.29	1.53	2.85	2.43	2.35	0.78	0.56	0.62	1.84

Calendar year 1953: Max 1,130 Min 16 Mean 151 Cfsm 2.20 In. 29.94
Water year 1953-54: Max 530 Min 16 Mean 89.1 Cfsm 1.30 In. 17.69

Peak discharge (base, 600 cfs).--No peak above base.
* Discharge measurement made on this day.
Note.--No gage-height record Aug. 1-25; discharge estimated on basis of recorded range in stage, weather records, and records for nearby streams. Stage-discharge relation affected by ice Jan. 1 to Feb. 14. Backwater from grass on control June 13 to Aug. 1, Aug. 26-31.

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 1954.

Gage.--Nonrecording gage read usually once daily.

Average discharge.--19 years, 84.6 cfs (adjusted for storage and diversion).

Extremes.--Maximum discharge during year from graph based on gage readings, 800 cfs Apr. 17; no flow at times.
1935-54: Maximum discharge observed, 6,000 cfs Sept. 21, 1938; no flow at times (result of regulation).

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 dam, which was calibrated with sharp-crested weir. Water diverted from Shepaug River for municipal supply of Waterbury. Flow regulated since September 1933 by Shepaug Reservoir (see p. 253).

Cooperation.--Records furnished by Bureau of Engineering, city of Waterbury.

Revisions (water years).--WSP 971: 1936-42. WSP 1231: 1937(M), 1940(M), 1941(M), 1943-45(M), 1947, 1948(M), 1950(M). WSP 1301: 1936.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	1.2	0	46	46	110	53	53	28	2.4	2.4	2.4
2	2.4	0	0	40	53	300	51	42	14	2.4	2.4	2.4
3	2.4	0	0	40	42	280	42	42	8.8	2.4	2.4	2.4
4	2.4	0	0	37	55	483	33	115	6.1	2.4	2.4	2.4
5	2.4	0	0	29	53	218	31	107	4.6	2.4	2.4	2.4
6	2.4	0	0	38	46	151	35	71	2.5	2.4	2.4	2.4
7	2.4	0	0	35	42	116	74	55	2.4	2.4	2.4	2.4
8	2.4	0	100	29	38	107	64	125	2.4	2.4	2.4	2.4
9	2.4	0	128	26	35	87	46	268	2.4	2.4	2.4	2.4
10	2.4	0	380	24	33	82	38	191	2.4	2.4	2.4	2.4
11	2.4	0	259	24	35	74	29	210	2.4	2.4	2.4	2.4
12	2.4	0	170	26	31	57	67	131	2.4	2.4	2.4	300
13	2.4	0	173	24	28	55	42	101	2.4	2.4	2.4	222
14	2.4	0	350	12	26	100	35	76	2.4	2.4	2.4	125
15	2.4	0	400	11	26	138	29	64	2.4	2.4	2.4	79
16	2.4	0	226	12	84	76	44	53	2.4	2.4	2.4	67
17	2.4	0	119	11	268	55	260	46	2.4	2.4	2.4	67
18	2.4	0	64	11	290	46	605	35	2.4	2.4	2.4	51
19	2.4	0	42	11	173	46	273	24	2.4	2.4	2.4	40
20	2.4	0	51	11	135	270	169	21	2.4	2.4	2.4	79
21	2.4	0	46	46	120	230	125	180	2.4	2.4	2.4	51
22	2.4	0	59	84	350	128	101	284	2.4	2.4	2.4	49
23	2.4	0	49	49	210	104	95	145	2.4	2.4	2.4	33
24	2.4	0	35	64	145	84	125	101	2.4	2.4	2.4	20
25	2.4	0	24	53	135	90	84	90	2.4	2.4	2.4	13
26	2.4	0	23	64	128	191	69	67	2.4	2.4	2.4	12
27	2.4	0	21	71	169	119	62	49	2.4	2.4	2.4	40
28	2.4	0	46	82	128	87	100	35	2.4	2.4	2.4	24
29	2.4	0	55	69	-	71	98	26	2.4	2.4	2.4	18
30	2.4	0	57	59	-------	64	67	57	2.4	2.4	2.4	14
31	2.4	-------	51	53	-------	62	-------	40	-------	2.4	2.4	-------
Total	74.4	1.2	2,928	1,191	2,924	4,081	2,946	2,904	121.6	74.4	74.4	1,330.4
Mean	2.40	0.04	94.5	38.4	104	132	98.2	93.7	4.05	2.40	2.40	44.3
(†)	+7.4	+24.1	+44.5	+6.1	+7.0	+21.3	+27.0	+28.8	+18.4	+8.1	+4.3	+31.1

Adjusted for diversion and change in contents in Shepaug Reservoir

Mean	9.80	24.1	139	44.5	111	153	125	122	22.4	10.5	6.70	75.4
Cfsm	0.258	0.634	3.66	1.17	2.92	4.03	3.29	3.21	0.589	0.276	0.176	1.98
In.	0.30	0.71	4.22	1.35	3.04	4.65	3.67	3.70	0.66	0.32	0.20	2.21

	Observed			Adjusted			
Calendar year 1953:	Max 1,100	Min 0	Mean 98.4	Mean 108	Cfsm 2.84	In. 38.59	
Water year 1953-54:	Max 605	Min 0	Mean 51.1	Mean 70.1	Cfsm 1.84	In. 25.03	

† Net diversion and change in contents, equivalent in cubic feet per second, in Shepaug Reservoir, furnished by city of Waterbury.

Shepaug River near Roxbury, Conn.

Location.--Lat 41°32'59", long 73°19'49", on right bank at downstream side of Wellers highway bridge on Wellers Bridge road, half a mile south of Roxbury Station, 1¼ 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 1954.

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.--24 years, 244 cfs (adjusted for storage and diversion).

Extremes.--Maximum discharge during year, 2,130 cfs Sept. 11 (gage height, 5.85 ft); minimum, 6.5 cfs Oct. 1-5 (gage height, 1.40 ft).
1930-54: Maximum discharge, 10,500 cfs Sept. 21, 1938 (gage height, 12.8 ft, from floodmarks), from rating curve extended above 3,500 cfs by logarithmic plotting on basis of two computations of flow over dam; minimum, 2 cfs Oct. 6, 1951 (gage height, 1.25 ft).

Remarks.--Records good except those for periods of ice effect, which are poor. Water diverted from Shepaug Reservoir for municipal supply of city of Waterbury. Flow regulated by Shepaug Reservoir (see p. 253). Diurnal fluctuations from an unknown cause during low flow.

Revisions (water years).--WSP 801: 1931-36. WSP 971: 1936, 1939-40, 1942. WSP 1301: 1936(M), 1947(M).

Rating table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.4	6.5	2.0	68
1.5	11	2.4	152
1.6	18	3.0	350
1.7	28	4.0	835
1.8	39	4.7	1,250
1.9	52		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.5	32	86	185	200	*382	253	280	179	52	21	72
2	6.5	28	86	175	220	650	239	263	*157	48	21	35
3	6.5	28	81	174	200	692	224	266	145	39	70	30
4	6.5	25	77	166	220	1,000	199	448	130	37	58	27
5	6.5	22	216	150	200	650	191	386	124	36	35	24
6	7.0	21	140	160	190	535	199	306	113	34	29	21
7	15	36	487	145	180	458	239	270	102	31	24	31
8	14	58	310	120	170	422	230	394	94	30	21	94
9	11	44	358	110	170	378	202	600	86	28	28	47
10	9.2	43	812	110	160	354	179	625	82	27	36	34
11	8.8	39	675	120	150	322	176	555	81	26	72	908
12	8.8	42	494	130	140	292	233	453	72	26	38	634
13	7.8	43	550	120	130	277	202	390	94	25	30	444
14	7.4	39	1,040	115	140	370	179	350	79	24	26	342
15	7.4	36	991	130	180	412	166	314	73	25	23	273
16	7.4	35	700	130	240	322	202	284	68	24	25	273
17	7.4	34	540	125	540	280	651	259	65	22	22	273
18	7.4	32	410	120	540	259	1,220	233	58	22	20	233
19	7.4	31	350	130	390	242	675	211	55	28	18	230
20	7.8	30	320	125	330	665	535	179	52	51	21	277
21	7.8	29	303	300	363	575	453	527	48	31	30	233
22	8.3	39	338	400	725	422	399	650	44	30	21	217
23	8.3	115	334	300	516	362	386	430	46	25	18	185
24	8.3	108	255	250	412	330	430	358	46	23	*17	160
25	11	104	230	220	435	342	366	334	39	23	20	142
26	40	128	215	200	417	471	326	284	37	21	20	145
27	17	98	202	300	448	386	338	242	36	20	18	196
28	38	90	211	350	390	330	440	220	34	49	16	163
29	73	84	233	270	-	306	382	205	37	89	14	138
30	90	81	230	250	-------	284	318	208	72	39	14	126
31	44	-------	214	220	-------	263	-------	208	-------	29	80	-------
Total	512.0	1,574	11,488	5,800	8,396	13,033	10,232	10,732	2,348	1,014	906	6,007
Mean	16.5	52.5	371	187	300	420	341	346	78.3	32.7	29.2	200
(†)	+7.4	+24.1	+44.5	+6.1	+7.0	+21.3	+27.0	+28.8	+18.4	+8.1	+4.3	+31.1

Adjusted for diversion and change in contents in Shepaug Reservoir

Mean	23.9	76.6	416	193	307	441	368	375	96.7	40.8	33.5	231
Cfsm	0.180	0.576	3.13	1.45	2.31	3.32	2.77	2.82	0.727	0.307	0.252	1.74
In.	0.21	0.64	3.61	1.67	2.40	3.83	3.09	3.25	0.81	0.35	0.29	1.94

	Observed			Adjusted			
Calendar year 1953:	Max 2,800	Min 5.4	Mean 319	Mean 329	Cfsm 2.47	In. 33.59	
Water year 1953-54:	Max 1,220	Min 6.5	Mean 197	Mean 216	Cfsm 1.62	In. 22.09	

Peak discharge (base, 1,500 cfs).--Dec. 14 (11 a.m.) 1,500 cfs (5.04 ft); Apr. 17 (12 p.m.) 1,650 cfs (5.25 ft); Sept. 11 (1 p.m.) 2,130 cfs (5.85 ft).
* Discharge measurement made on this day.
† Net diversion and change in contents, equivalent in cubic feet per second, in Shepaug Reservoir; furnished by city of Waterbury.
Note.--Stage-discharge relation affected by ice Dec. 18-20, 24-26, Jan. 1, 2, 5, Jan. 7 to Feb. 17.

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 1954.

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.--22 years, 127 cfs.

Extremes.--Maximum discharge during year, 1,790 cfs Sept. 11 (gage height, 7.55 ft), from rating curve extended above 1,200 cfs as explained below; minimum, 6.5 cfs Oct. 2 (gage height, 2.40 ft).
1932-54: Maximum discharge, 7,420 cfs Sept. 21, 1938 (gage height, 16.0 ft, from floodmarks), from rating curve extended above 1,200 cfs on basis of computation of peak flow over dam 2 miles downstream; minimum, 3.3 cfs Aug. 27, 1949 (gage height, 2.32 ft).

Remarks.--Records good except those for periods of no gage-height record, which are fair. Infrequent 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 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.4	6.5	4.0	208
2.5	10	4.5	338
2.7	21	5.0	515
3.1	59	5.8	870
3.5	116		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.8	29	55	82	121	*156	124	147	91	45	23	88
2	6.8	24	55	82	103	283	116	140	*82	43	20	48
3	7.6	21	50	81	108	289	113	164	78	34	91	36
4	7.2	19	50	82	230	508	100	259	82	33	74	30
5	6.8	17	120	74	180	242	100	194	81	31	42	26
6	7.6	17	80	79	137	202	103	160	69	28	34	23
7	14	51	250	77	114	180	128	142	63	25	27	22
8	13	75	150	61	97	175	110	186	58	24	23	66
9	12	55	200	b55	102	160	98	249	54	23	38	46
10	10	52	450	b56	96	158	90	275	51	21	61	34
11	10	46	350	57	92	146	92	247	51	20	84	869
12	9.6	47	250	b61	71	133	151	194	48	19	46	391
13	9.3	50	350	b60	69	130	108	169	77	18	35	177
14	9.3	45	650	b58	69	224	97	151	63	17	29	131
15	9.6	42	*434	66	78	221	92	138	63	17	25	108
16	9.3	40	262	65	128	160	116	131	57	16	24	124
17	9.3	38	204	64	190	142	370	119	54	16	21	153
18	9.3	36	b155	b60	169	130	795	108	46	16	19	114
19	9.6	34	b140	65	130	121	314	100	41	20	17	115
20	9.6	33	137	63	113	408	237	97	36	29	19	160
21	9.3	32	135	236	147	249	204	455	34	25	40	119
22	8.6	40	175	196	386	184	184	437	30	27	28	156
23	9.0	90	165	b130	208	165	184	242	31	23	20	103
24	9.0	80	128	b97	167	156	230	194	32	19	*19	85
25	14	75	111	94	208	166	180	178	28	17	20	75
26	25	100	108	97	188	249	164	156	27	17	20	75
27	17	65	100	175	202	175	167	133	27	18	19	133
28	61	55	97	235	165	153	252	124	24	18	18	90
29	75	50	130	146	-	146	206	119	29	85	17	74
30	85	45	116	b150	------	138	167	133	59	41	16	66
31	41	----	106	b125	-------	130	--------	103	--------	30	114	--------
Total	540.6	1,403	5,763	3,029	4,068	6,079	5,392	5,644	1,566	815	1,083	3,737
Mean	17.4	46.8	186	97.7	145	196	180	182	52.2	26.3	34.9	125
Cfsm	0.231	0.622	2.47	1.30	1.93	2.60	2.39	2.42	0.693	0.349	0.463	1.66
In.	0.27	0.69	2.85	1.50	2.01	3.00	2.67	2.79	0.77	0.40	0.53	1.85

Calendar year 1953: Max 1,500 Min 6.5 Mean 160 Cfsm 2.12 In. 28.80
Water year 1953-54: Max 869 Min 6.8 Mean 107 Cfsm 1.42 In. 19.33

Peak discharge (base, 1,400 cfs).--Sept. 11 (7:20 p.m.) 1,790 cfs (7.55 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Nov. 13 to Dec. 14; discharge estimated on basis of recorded range in stage, weather records, and records for stations on Shepaug River near Roxbury and Blackberry River at Canaan.

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 1954.

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.--26 years, 2,578 cfs (adjusted for storage and diversion).

Extremes.--Maximum discharge during year, 11,000 cfs Sept. 12 (gage height, 9.89 ft); minimum, 39 cfs July 9 (gage height, 0.43 ft); minimum daily, 58 cfs Aug. 8.
1928-54: Maximum discharge, 69,500 cfs Mar. 12, 1936 (gage height, 23.5 ft, from floodmarks), from rating curve extended above 35,000 cfs on basis of computation of peak flow at Stevenson and Derby dams and slope-area determination of peak flow; practically no flow at times, result of regulation.

Remarks.--Records excellent. Ordinary flow completely regulated by Stevenson hydraulic plant. Flow regulated by Lake Candlewood, Lake Zoar and Shepaug Reservoir, having a combined usable capacity of 6,600,000,000 cu ft (see p. 253), 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 table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.6	52	4.0	1,250
.7	60	5.0	2,130
1.0	90	7.0	4,860
1.5	161	9.0	8,700
2.0	285	9.5	9,950
3.0	660		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	80	217	890	1,050	2,000	3,720	3,110	3,070	2,590	950	458	942
2	238	498	871	902	2,020	*4,080	2,960	3,000	2,080	960	680	1,340
3	166	645	604	178	2,770	5,550	2,320	2,660	2,450	834	1,484	970
4	69	830	626	1,910	2,580	8,480	2,160	4,000	2,060	716	526	580
5	308	551	1,400	1,430	2,480	7,600	2,600	4,110	1,270	137	446	370
6	451	768	1,480	1,630	1,890	6,600	2,340	3,520	854	1,070	363	250
7	341	427	3,630	1,860	2,110	5,770	2,510	3,480	1,970	1,100	248	410
8	555	94	4,420	970	1,570	4,680	3,010	2,890	1,600	845	58	752
9	594	921	4,630	762	2,200	4,690	2,550	4,660	*2,330	348	1,080	756
10	102	846	5,510	720	1,950	3,980	2,350	5,340	1,620	740	662	1,450
11	160	400	6,060	1,500	2,010	3,630	2,060	6,240	1,270	148	117	3,570
12	759	560	5,250	1,110	1,920	3,210	2,540	6,060	1,110	557	372	9,950
13	1,050	304	4,660	1,300	880	3,060	3,360	5,280	784	582	547	7,200
14	800	594	5,120	1,670	780	3,750	3,340	5,370	1,560	506	214	5,520
15	848	137	7,400	1,230	1,650	3,820	2,940	5,740	1,640	433	104	4,860
16	1,200	1,600	6,100	1,560	1,870	3,650	2,630	3,520	1,780	438	508	3,480
17	494	970	5,380	240	3,990	3,060	4,220	3,830	1,870	398	598	3,500
18	212	523	3,680	1,490	4,570	2,770	8,260	2,740	1,580	508	468	3,140
19	244	266	1,980	1,040	5,360	2,750	8,950	2,260	2,100	488	497	1,900
20	240	302	2,560	1,550	3,750	4,660	7,820	2,390	638	923	386	3,510
21	162	196	2,370	1,940	2,840	5,340	6,800	4,030	1,020	872	136	2,910
22	134	154	2,520	2,310	5,010	4,820	6,060	6,060	1,390	916	100	2,680
23	181	1,770	2,580	2,150	5,230	4,500	5,450	5,880	1,510	446	196	2,420
24	122	735	2,920	1,800	5,880	3,740	4,740	4,990	1,340	292	533	1,750
25	118	1,740	1,880	2,310	5,700	3,900	5,360	4,730	804	118	873	1,720
26	182	962	1,570	2,030	5,340	4,420	3,560	4,050	878	486	584	682
27	215	686	1,120	2,560	4,810	4,400	3,420	3,300	716	488	397	1,830
28	1,000	975	2,320	3,470	4,200	4,190	4,300	2,920	700	464	174	1,920
29	769	632	1,840	3,570	-	3,740	3,340	2,900	711	930	154	1,470
30	1,170	*924	1,720	2,040	-------	3,640	4,090	2,640	867	784	310	833
31	1,060	-------	1,840	1,450	-------	3,660	-------	2,640	-------	320	1,540	-------
Total	14,024	20,227	94,931	49,712	87,360	35,860	119,150	124,300	43,072	18,795	14,813	72,665
Mean	452	674	3,062	1,604	3,120	4,383	3,972	4,010	1,436	606	478	2,422
(†)	-27	+97	+322	+77	-21	+42	+19	+55	-43	-56	+17	+178
Adjusted for diversion and change in reservoir contents												
Mean	425	771	3,384	1,681	3,099	4,425	3,991	4,065	1,393	550	495	2,600
Cfsm	0.275	0.499	2.19	1.09	2.01	2.86	2.58	2.63	0.902	0.356	0.320	1.68
In.	0.32	0.56	2.52	1.26	2.09	3.30	2.88	3.03	1.01	0.41	0.37	1.87

	Observed			Adjusted			
Calendar year 1953:	Max 22,000	Min 69	Mean 3,266	Mean 3,286	Cfsm 2.13	In. 28.87	
Water year 1953-54:	Max 9,950	Min 58	Mean 2,178	Mean 2,233	Cfsm 1.45	In. 19.62	

Peak discharge (base, 11,000 cfs).--Sept. 12 (1:30 p.m.) 11,000 cfs (9.89 ft).
* Discharge measurement made on this day.
† Change in contents in Lake Candlewood, Lake Zoar and 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.

Naugatuck River near Thomaston, Conn.

Location.--Lat 41°42'15", long 73°03'53", on right bank near downstream side of Twomile Bridge, 250 ft downstream from New York, New Haven & Hartford Railroad bridge, 0.4 mile upstream from Leadmine Brook, 2 miles north of Thomaston, Litchfield County, and at mile 31.

Drainage area.--71.9 sq mi.

Records available.--October 1930 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 389.44 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--24 years, 141 cfs.

Extremes.--Maximum discharge during year, 1,980 cfs Apr. 18 (gage height, 5.00 ft); minimum, 18 cfs Aug. 24, 29, 30 (gage height, 1.01 ft).
1930-54: Maximum discharge, 10,200 cfs Dec. 31, 1948 (gage height, 12.03 ft); minimum, about 7 cfs Mar. 12, 1940 (result of freezeup); minimum daily, 13 cfs Oct. 24, 1931; minimum gage height, 0.91 ft Dec. 2, 1946 (result of freezeup).

Remarks.--Records excellent except those for periods of no gage-height record, which are fair. Slight diurnal fluctuation.

Revisions (water years).--WSP 741: 1931-32. WSP 781: Drainage area. WSP 821: 1936(M). WSP 1111: 1939(M).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.0	17	2.5	310
1.3	41	3.0	540
1.6	77	3.9	1,090
2.0	155		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	33	45	a80	a80	212	130	134	61	41	33	122
2	31	34	50	a75	85	555	117	124	55	38	30	59
3	31	36	42	a70	83	527	117	144	57	33	54	39
4	26	34	43	a75	189	744	98	298	61	28	44	33
5	27	32	254	a70	124	322	98	225	59	38	32	26
6	35	32	148	a75	97	234	109	158	52	84	30	23
7	54	63	572	a70	82	195	170	130	49	43	26	30
8	35	a70	268	a60	74	183	148	245	44	33	23	42
9	34	a55	150	a50	77	162	122	395	39	26	28	29
10	32	a45	608	a55	73	160	102	405	41	24	32	26
11	27	a42	312	a60	70	148	107	306	47	21	39	843
12	27	a40	180	a65	56	130	160	225	44	26	30	480
13	32	41	225	a60	53	128	124	*180	100	30	28	144
14	32	35	671	a55	56	210	104	155	93	30	25	91
15	32	28	539	a60	85	240	98	139	119	*38	23	70
16	31	30	275	a60	207	162	128	128	85	31	24	92
17	30	34	186	a60	415	139	631	115	71	29	24	148
18	25	32	a150	a55	289	124	1,080	107	56	28	24	107
19	26	31	a130	a60	183	113	378	102	49	34	24	103
20	30	30	a120	a65	150	598	254	90	42	32	26	122
21	30	28	a130	a170	232	375	204	387	41	34	23	90
22	30	22	a150	a150	565	225	175	525	39	29	20	93
23	30	109	a130	98	292	183	183	275	40	28	20	73
24	28	66	a110	85	201	162	222	195	40	26	20	58
25	57	68	a100	74	240	192	172	170	37	24	40	49
26	42	76	a90	79	222	338	155	153	34	29	28	53
27	34	47	a90	*145	258	225	160	178	29	30	26	74
28	80	41	a95	190	201	175	244	111	30	35	24	55
29	85	36	a105	106	-	160	204	79	43	50	19	44
30	73	36	a100	102	-------	148	155	85	47	52	20	39
31	41	----	a90	a90	-------	137	-------	67	-------	46	164	----
Total	1,159	1,306	6,158	2,569	4,739	7,606	6,149	6,030	1,604	1,070	1,003	3,257
Mean	37.4	43.5	199	82.9	169	245	205	195	53.5	34.5	32.4	109
Cfsm	0.520	0.605	2.77	1.15	2.35	3.41	2.85	2.71	0.744	0.480	0.451	1.52
In.	0.60	0.68	3.19	1.33	2.45	3.93	3.18	3.12	0.83	0.55	0.52	1.70

Calendar year 1953: Max 2,350 Min 22 Mean 197 Cfsm 2.74 In. 37.15
Water year 1953-54: Max 1,080 Min 19 Mean 117 Cfsm 1.63 In. 22.08

Peak discharge (base, 1,500 cfs).--Apr. 18 (12:30 a.m.) 1,980 cfs (5.00 ft); Sept. 11 (2:30 p.m.) 1,710 cfs (4.70 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 near Naugatuck and on Leadmine Brook near Thomaston.

Leadmine Brook near Thomaston, Conn.

Location.--Lat 41°42'06", long 73°03'28", on left bank 10 ft downstream from highway bridge, 0.4 mile upstream from mouth, and 2¼ miles northeast of Thomaston, Litchfield County.

Drainage area.--24.0 sq mi.

Records available.--September 1930 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 401.23 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Sept. 6, 1930, to Nov. 25, 1934, chain or wire-weight gage at same site and datum.

Average discharge.--24 years, 47.4 cfs.

Extremes.--Maximum discharge during year, 720 cfs Sept. 11 (gage height, 6.00 ft); minimum, 0.9 cfs Oct. 1, 2 (gage height, 2.05 ft).

1930-54: Maximum discharge, 6,160 cfs (revised) Sept. 17, 1934 (gage height, 11.2 ft, from floodmarks), from rating curve extended above 800 cfs on basis of contracted-opening determination at 10,400 cfs; minimum, 0.08 cfs Aug. 27-29, 1941; minimum gage height, 1.60 ft at times during period Sept. 12-15, 1931, and on July 30, Aug. 12, 1933.

Revisions.--The figures of maximum discharge and supplemental peak discharges 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)
711	1931	Mar. 29, 1931	890	6.4
741,1301	1933	Nov. 10, 1932	2,670	8.8
(a)	1934	Sept.17, 1934	6,160	11.2
781,1301	1935	Jan. 10, 1935	2,670	8.8
(b)	1936	Mar. 12, 1936	4,830	10.43
821,1301	1937	Feb. 22, 1937	1,070	6.75
851,966	1938	Jan. 25, 1938	4,700	10.35
851,966	1938	July 21, 1938	3,620	9.60
(c)	1938	Sept.21, 1938	6,050	11.14
871	1939	Dec. 6, 1938	1,100	6.80
871,1301	1939	Aug. 21, 1939	2,370	8.50
891	1940	Mar. 31, 1940	1,310	7.14
891,1301	1940	Apr. 9, 1940	1,890	7.95
951,1301	1942	Mar. 9, 1942	1,850	7.89
951	1942	Mar. 22, 1942	1,100	6.80
971,1301	1943	Dec. 30, 1942	960	†6.65
1001,1301	1944	Sept.15, 1944	1,130	6.84
1031,1301	1945	Apr. 25, 1945	3,240	9.33
1031	1945	June 21, 1945	1,550	7.50
1081,1301	1947	Mar. 14, 1947	1,310	7.17
1141,1301	1949	Dec. 31, 1948	5,150	10.63
1141	1949	Jan. 6, 1949	1,660	7.65
1201	1951	(d)	1,810	7.85
1201	1951	Feb. 7, 1951	1,770	7.78
1201	1951	(e)	1,770	7.8
1271	1953	Jan. 24, 1953	2,420	8.56
1271	1953	Mar. 13, 1953	1,410	7.30

† Gage height only revised.
a Published in WSP 756, 781, 1301.
b Published in WSP 798, 801, 1301.
c Published in WSP 851, 867, 1301.
d Occurred Nov. 25 or 26, 1950.
e Occurred Mar. 30 or 31, 1951.

Remarks.--Records good except those for periods of ice effect and no gage-height record, which are fair. Occasional low-water regulation.

Revisions.--WSP 781: Drainage area. Revised figures of discharge, in cubic feet per second, for the water years 1934, 1936, 1938, 1945, and 1949, superseding those published in WSP 756, 781, 801, 821, 851, 871, 1031, 1051, 1141, and 1301, are given herein. Figures of discharge at indicated time in WSP 798, 867, and 966, are too low.

1934		1938-Con.	
Sept.17	1,750	July 21	1,070
		Sept.21	1,890
1936		1945	
Mar. 11	680	Apr. 25	284
12	2,380	26	778
18	1,150		
1938		1948	
Jan. 25	1,660	Dec. 31	2,180

Leadmine Brook near Thomaston, Conn.--Continued

Revised figures of monthly discharge, in cubic feet per second, 1934, 1936, 1938, 1945, 1949

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
September 1934	-	1,750	1.6	146	6.08	6.78
Water year 1933-34	-	1,750	1.5	49.8	2.08	28.15
Calendar year 1934	-	1,750	1.5	65.2	2.72	36.87
March 1936	8,298	2,360	32	268	11.2	12.91
Water year 1935-36	15,744.8	2,360	1.1	43.0	1.79	24.44
Calendar year 1936	18,261.5	2,360	1.1	49.9	2.08	28.34
January 1938	3,586	1,660	24	116	4.83	5.57
July	3,693.5	1,070	6.5	119	4.96	5.72
September	3,911.4	1,890	6.1	130	5.42	6.05
Water year 1937-38	27,135.7	1,890	6.1	74.4	3.10	42.07
Calendar year 1938	25,608.7	1,890	6.1	70.2	2.92	39.72
April 1945	2,836	778	28	94.5	3.94	4.40
Water year 1944-45	25,297.9	778	5.5	69.3	2.89	39.22
Calendar year 1945	25,181.4	778	7.6	69.0	2.88	39.04
December 1948	3,178	2,180	7	103	4.29	4.95
Calendar year 1948	17,498.6	2,180	0.4	47.8	1.99	27.13
Water year 1948-49	16,994.35	2,180	0.08	46.6	1.94	26.36

Rating table, water year 1953-54, except periods of ice effect, (gage height, in feet, and discharge, in cubic feet per second)

2.0	0.6	3.3	48
2.2	2.0	3.8	108
2.5	5.6	4.5	240
2.7	11	4.9	340
3.0	26		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	10	16	b29	b35	84	41	45	21	7.4	3.5	31
2	1.0	7.8	18	28	*b38	217	38	41	19	6.7	2.7	13
3	1.0	6.7	16	26	36	184	37	60	18	5.3	18	8.1
4	1.0	6.0	16	26	b90	216	31	124	19	5.0	16	7.1
5	1.0	5.3	96	b24	b65	104	31	82	18	4.8	7.1	5.2
6	1.4	5.3	52	25	b45	77	37	59	15	4.5	4.8	4.2
7	4.1	34	211	b23	b38	67	50	46	13	4.2	3.7	6.2
8	4.0	33	85	b20	b35	62	41	85	11	3.7	2.9	15
9	2.8	24	56	b18	b34	56	36	119	9.4	3.2	3.1	9.1
10	2.5	22	212	b19	32	55	31	145	*9.1	2.8	5.2	6.0
11	2.4	19	104	a20	29	49	34	94	9.7	2.5	11	318
12	2.3	21	73	a23	b25	44	45	70	10	2.3	5.5	134
13	2.2	*20	93	a20	b23	43	35	57	28	2.2	4.0	56
14	2.1	16	278	a19	22	84	31	48	20	*2.0	3.2	34
15	2.0	13	185	a21	b35	88	29	44	38	2.3	2.7	25
16	2.0	12	101	a21	b80	60	45	41	29	2.3	2.9	31
17	2.0	11	67	a20	b120	49	210	36	23	2.0	2.6	56
18	2.5	10	56	a19	91	43	309	32	15	1.9	2.1	38
19	2.2	9.4	66	a21	60	40	122	29	11	2.5	1.9	39
20	2.0	8.8	53	a22	49	226	88	28	8.4	2.9	2.1	52
21	2.0	8.1	40	a85	76	121	69	171	6.7	3.6	2.2	38
22	2.2	7.8	65	a70	202	79	58	170	5.6	3.8	2.2	37
23	2.2	60	58	b40	98	64	59	94	5.3	2.5	1.9	28
24	2.6	44	41	b33	69	55	79	71	6.0	2.3	1.8	24
25	7.0	40	b36	b30	91	66	58	66	4.9	2.8	1.8	22
26	9.4	47	34	b31	79	108	50	50	4.2	2.3	2.4	24
27	4.9	27	31	b65	79	69	55	38	4.1	3.4	2.2	33
28	19	22	b30	b75	62	56	95	34	3.8	3.8	1.9	21
29	33	18	36	b50	-	51	74	31	6.5	6.3	1.7	16
30	37	15	36	b45	-------	47	55	32	11	7.6	1.6	14
31	16	--- ---	31	b40	-------	42	-------	25	-------	4.3	59	----- -
Total	176.8	583.2	2,292	1,008	1,738	2,606	1,973	2,067	402.7	113.2	183.7	1,144.9
Mean	5.70	19.4	73.9	32.5	62.1	84.1	65.8	66.7	13.4	3.65	5.93	38.2
Cfsm	0.238	0.808	3.08	1.35	2.59	3.50	2.74	2.78	0.558	0.152	0.247	1.59
In.	0.27	0.90	3.55	1.56	2.70	4.04	3.06	3.20	0.62	0.18	0.28	1.77

Calendar year 1953: Max 630 Min 0.9 Mean 60.0 Cfsm 2.50 In. 33.92
Water year 1953-54: Max 318 Min 1.0 Mean 39.1 Cfsm 1.63 In. 22.13

Peak discharge (base, 650 cfs).--Sept. 11 (2:30 p.m.) 720 cfs (6.00 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of recorded range in stage, weather records, engineers' notes, and records for Naugatuck River near Thomaston and near Naugatuck.

b Stage-discharge relation affected by ice.

Naugatuck River near Naugatuck, Conn.

Location.--Lat 41°28'15", long 73°03'10", on left bank 0.2 mile upstream from Beacon Hill Brook, 1.3 miles downstream from Naugatuck, New Haven County, and at mile 12.4.
Drainage area.--246 sq mi.
Records available.--June 1918 to September 1924, September 1928 to September 1954.
Gage.--Water-stage recorder. Datum of gage is 155.17 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).
Average discharge.--32 years (1918-24, 1928-54), 462 cfs (adjusted for storage and diversion).
Extremes.--Maximum discharge during year, 5,710 cfs Sept. 11 (gage height, 5.83 ft); minimum, 59 cfs Oct. 25 (gage height, 0.24 ft); minimum daily, 68 cfs Oct. 4.
1918-24, 1928-54: Maximum discharge, 28,500 cfs Dec. 31, 1948 (gage height, 12.40 ft), from rating curve extended above 9,000 cfs on basis of slope-area determinations at gage heights 7.56 and 12.4 ft; minimum, 24 cfs Oct. 21, 1935; minimum daily, 40 cfs Oct. 5, 12, 1930, Sept. 7, 1936; minimum gage height, 0.14 ft July 17, 1939.
Flood in November 1927 reached a stage of 14 ft (discharge, about 26,000 cfs).
Remarks.--Records excellent. Flow regulated by plants above station during low stages and by Pitch, Morris, and Wigwam Reservoirs having a combined capacity of 550,000,000 cu ft (see p. 253). Flow increased by diversion from Shepaug Reservoir into Naugatuck River basin.
Revisions (water years).--WSP 781: Drainage area. WSP 1171: 1918-24, 1928-49.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 14, Apr. 17 to Aug. 3				Dec. 14 to Apr. 17, Aug. 3 to Sept. 30			
0.3	68	2.0	700	0.3	75	2.0	780
.6	125	3.0	1,450	.6	138	3.0	1,640
1.0	235	4.0	2,500	1.0	261	4.2	3,070
1.5	430	4.5	3,150	1.5	470		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	98	127	181	316	335	664	485	530	317	184	108	556
2	96	127	190	305	371	1,540	455	490	298	159	108	287
3	82	125	181	293	375	1,350	440	603	284	132	835	205
4	68	121	165	312	725	2,600	384	991	294	112	486	157
5	91	112	563	290	662	1,210	380	806	284	102	247	128
6	122	108	466	312	460	*882	406	607	252	144	177	114
7	156	258	1,470	301	388	738	520	515	*232	162	138	181
8	121	302	816	251	351	696	490	678	229	135	116	322
9	108	229	515	214	359	640	440	1,100	210	123	259	227
10	87	204	1,400	227	343	616	384	1,110	207	102	288	180
11	73	190	979	241	327	562	398	932	216	87	296	2,960
12	90	184	634	268	276	505	532	730	184	98	195	2,140
13	98	187	760	244	230	505	455	612	304	106	157	760
14	100	162	2,010	227	244	776	398	541	299	112	126	485
15	100	132	1,950	254	279	978	384	485	388	123	114	398
16	96	142	1,030	254	484	696	455	460	284	112	133	450
17	76	135	738	234	944	568	1,640	440	249	96	131	604
18	68	135	538	227	952	510	3,140	398	207	85	128	480
19	89	127	475	244	592	475	1,300	385	172	131	128	434
20	94	123	455	251	485	1,770	890	365	152	121	138	562
21	94	108	460	655	592	1,320	730	1,350	159	137	126	465
22	96	96	596	668	1,800	858	652	1,810	159	145	99	563
23	94	474	592	384	1,060	692	685	977	180	132	118	406
24	75	385	455	363	724	628	820	754	165	100	121	343
25	146	325	384	339	856	681	646	694	152	89	*155	301
26	162	361	367	343	815	1,100	596	574	135	149	138	310
27	121	242	367	580	794	794	612	502	112	145	126	445
28	346	195	375	842	661	622	900	484	136	235	104	347
29	409	170	445	485	-	592	790	394	177	256	88	283
30	328	167	411	406	-------	538	624	403	192	175	110	254
31	181	-------	375	375	-------	500	-------	345	-------	142	754	-------
Total	3,965	5,753	20,363	10,705	16,484	26,606	21,031	21,065	6,629	4,131	6,247	15,347
Mean	128	192	657	345	589	858	701	680	221	133	202	512
(†)	-19.0	-11.4	+20.0	-6.3	-5.2	-21.8	-26.3	-29.2	-27.4	-22.6	-21.2	-7.5
Adjusted for diversion and change in reservoir contents												
Mean	109	181	677	339	584	836	675	651	194	110	181	504
Cfsm	0.443	0.736	2.75	1.38	2.37	3.40	2.74	2.65	0.789	0.447	0.736	2.05
In.	0.51	0.82	3.17	1.59	2.47	3.92	3.06	3.06	0.88	0.52	0.85	2.29

	Observed			Adjusted		
Calendar year 1953:	Max 5,880	Min 68	Mean 638	Mean 629	Cfsm 2.56	In. 34.67
Water year 1953-54:	Max 3,140	Min 68	Mean 434	Mean 419	Cfsm 1.70	In. 23.14

Peak discharge (base, 4,000 cfs).--Apr. 18 (3:30 a.m.) 4,700 cfs (5.50 ft); Sept. 11 (5:30 p.m.) 5,710 cfs (5.83 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.

Reservoirs in Housatonic River basin

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 1954. Records furnished by Connecticut Light & Power Co.

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 1954. Records furnished by Bureau of Engineering, city of Waterbury, Conn.

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 1954. Records furnished by Connecticut Light & Power Co.

Pitch, Morris, and Wigwam Reservoirs on Branch Brook, are operated as a unit with Shepaug Reservoir for storage of water for municipal supply. The downstream order and capacity of each is as follows: Pitch Reservoir, 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. Total capacity, 190,000,000 cu ft. Records available, November 1943 to September 1954. Morris Reservoir, 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. Total capacity, 265,000,000 cu ft. Records available, May 1918 to September 1924, September 1928 to September 1954. Wigwam Reservoir, 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. Total capacity, 97,000,000 cu ft. Records available, May 1918 to September 1924, September 1928 to September 1954. Records furnished by Bureau of Engineering, city of Waterbury, Conn.

Monthly contents, water year October 1953 to September 1954

Date	Lake Candlewood (Rocky River Reservoir)		Shepaug Reservoir		Lake Zoar	
	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)
Sept.30	5,063	-	20.5	-	231.3	-
Oct. 31	4,934	-48	32.1	+4.3	267.0	+13.3
Nov. 30	5,133	+77	45.1	+5.0	258.0	+3.5
Dec. 31	5,943	+302	97.5	+19.6	191.8	-24.7
Calendar year 1953	-	+13	-	0	-	-2.5
Jan. 31	6,052	+41	97.6	0	267.0	+28.1
Feb. 28	6,088	+15	98.6	+.4	161.6	-43.6
Mar. 31	6,100	+4	97.7	-.3	204.8	+16.1
Apr. 30	6,052	-19	97.8	0	231.3	+10.2
May 31	6,113	+23	97.2	-.2	240.2	+3.3
June 30	5,895	-84	83.3	-5.4	298.7	+22.6
July 31	5,714	-68	67.1	-6.0	307.9	+3.4
Aug. 31	5,846	+49	47.2	-7.4	209.2	-36.9
Sept.30	6,186	+131	96.7	+19.1	249.0	+15.4
Water year 1953-54	-	+36	-	+2.4	-	0

Date	Pitch, Morris, and Wigwam Reservoirs	
	Contents (m.c.f.)	Change in contents (equivalent in cfs)
Sept.30	453.1	-
Oct. 31	410.4	-15.9
Nov. 30	430.4	+7.7
Dec. 31	550.5	+44.8
Calendar year 1953	-	+.2
Jan. 31	549.8	-.3
Feb. 28	553.1	+1.4
Mar. 31	552.6	-.2
Apr. 30	554.3	+.7
May 31	553.8	-.2
June 30	544.6	-3.5
July 31	522.0	-8.4
Aug. 31	496.7	-9.4
Sept.30	508.2	+4.4
Water year 1953-54	-	+1.7

Saugatuck River near Westport, Conn.

Location.--Lat 41°10'15", long 72°22'00", on left bank on old Ford Road (Clinton Avenue), 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 1954.

Gage.--Water-stage recorder. Datum of gage is 18.16 ft above mean sea level, datum of 1929.

Average discharge.--22 years, 141 cfs (adjusted for storage and diversion from Saugatuck Reservoir since October 1941).

Extremes.--Maximum discharge during year, 720 cfs Mar. 20 (gage height, 5.05 ft); minimum, 0.2 cfs Oct. 19 (gage height, 1.92 ft); minimum daily, 1.4 cfs Aug. 20.

1932-54: Maximum discharge, 5,310 cfs Mar. 12, 1936 (gage height, 11.30 ft), from rating curve extended above 1,700 cfs, verified by computation of flow over dam for flood of September 1938 (gage height, 10.28 ft); minimum, that of Oct. 19, 1953; minimum daily, 1.0 cfs Aug. 11, 1939.

Remarks.--Records excellent except those for period of no gage-height record, which are fair. 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. Infrequent regulation at dam of Dorr Co.

Revisions (water years).--WSP 781: Drainage area. WSP 1201: 1935.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.0	1.0	2.6	36
2.1	3.0	3.0	91
2.2	6.5	3.5	195
2.3	11	4.0	335
2.4	18	4.8	620

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.6	15	27	46	42	70	138	131	72	14	2.4	26
2	8.8	12	24	43	42	160	121	125	*69	12	2.6	13
3	8.8	11	23	41	47	*160	125	140	68	12	10	9.6
4	9.6	9.6	22	40	88	262	103	229	54	12	13	8.8
5	11	9.2	88	36	72	183	96	200	31	12	5.8	8.3
6	9.2	9.6	61	37	61	135	96	153	24	12	7.0	7.8
7	11	41	150	36	53	157	105	125	21	11	6.5	7.8
8	9.2	43	100	32	47	200	108	197	20	11	6.5	7.8
9	7.8	28	72	29	47	188	116	262	18	10	14	7.8
10	7.4	23	112	31	46	181	91	285	17	9.6	18	7.0
11	6.5	18	94	31	44	160	88	279	18	9.6	11	143
12	7.0	17	77	34	40	144	108	216	20	9.6	8.8	140
13	7.8	16	91	31	36	138	100	171	26	9.2	7.8	68
14	7.4	15	233	30	33	236	89	144	33	8.8	7.4	33
15	7.0	12	290	33	30	270	88	131	28	8.8	7.8	22
16	14	12	183	33	50	195	100	127	26	16	8.3	30
17	7.0	13	127	32	90	153	241	114	20	4.0	7.4	47
18	5.8	14	93	31	125	133	620	105	18	3.4	6.5	31
19	2.5	14	77	30	80	119	438	94	18	7.4	12	29
20	2.4	13	75	31	60	571	311	88	14	6.5	1.4	34
21	6.5	12	75	44	55	501	248	265	13	7.4	6.5	28
22	7.4	12	77	54	150	329	205	338	12	6.5	6.5	28
23	9.6	47	77	44	120	270	213	243	17	6.5	6.5	22
24	7.8	46	64	38	85	234	254	178	17	6.5	6.5	18
25	9.6	37	57	36	80	229	216	142	14	6.5	6.5	17
26	12	40	56	40	95	293	188	121	13	6.2	7.4	15
27	10	29	54	60	80	234	166	100	12	6.5	7.0	17
28	42	25	53	86	70	200	198	89	10	7.4	6.5	16
29	48	24	65	64	-	183	178	86	11	7.4	6.5	13
30	36	24	60	49	-------	169	150	89	14	14	7.8	*12
31	20	-------	53	46	-------	142	-------	78	-------	5.1	40	-------
Total	368.7	641.4	2,710	1,248	1,878	6,599	5,298	5,045	748	278.9	271.9	866.9
Mean	11.9	21.4	87.4	40.3	66.7	213	177	163	24.9	9.00	8.77	28.9
(†)	0	+8.3	+72.2	+32.9	+58.5	+30.2	+0.2	-1.7	+0.1	-4.69	-3.84	+30.9
Adjusted for diversion and change in reservoir contents												
Mean	11.9	29.7	160	73.2	125	243	177	161	25.0	4.31	4.93	59.8
Cfsm	0.154	0.383	2.06	0.945	1.61	3.14	2.28	2.08	0.323	0.056	0.064	0.772
In.	0.18	0.43	2.38	1.09	1.68	3.62	2.54	2.40	0.36	0.06	0.07	0.86

	Observed			Adjusted			
Calendar year 1953:	Max 2,460	Min 2.4	Mean 159	Mean 164	Cfsm 2.12	In. 28.72	
Water year 1953-54:	Max 620	Min 1.4	Mean 71.1	Mean 89.4	Cfsm 1.15	In. 15.67	

Peak discharge (base, 900 cfs).--No peak above base.

* Discharge measurement made on this day.

† Change in contents and diversion, equivalent in cubic feet per second, from Saugatuck Reservoir for domestic water supply. No adjustments made for Aspetuck Reservoir.

Note.--No gage-height record Feb. 12 to Mar. 3; discharge estimated on basis of recorded range in stage, weather records, and records for Still River near Lanesville.

Measurements of streamflow in the North Atlantic slope basins, Maine to Connecticut, made at points other than regular gaging stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements when correlated with the simultaneous discharge of a nearby stream where continuous records are available will give a picture of the low-flow potentiality of stream. For many sites measurements have been made in other years.

Miscellaneous discharge measurements in North Atlantic slope basins, Maine to Connecticut, during water year October 1953 to September 1954

Menunketesuck River basin, Conn.

Date	Stream	Tributary to or diverting from--	Locality	Discharge (cfs)
July 12	Killingworth Reservoir outlet.	Menunketesuck River	Just below Killingworth Reservoir near Killingworth.	0.90
12	....do.....	....do.....	At Wood's road bridge just above junction with Menunketesuck River, near Killingworth.	.47
June 14	Menunketesuck River	Long Island Sound..	Above Kelseytown Reservoir.....	3.54
23	....do.....	....do.....	....do.....	1.43
July 12	....do.....	....do.....	....do.....	1.36
Sept. 7	....do.....	....do.....	....do.....	4.63

Quinnipiac River basin, Conn.

Dec. 9	Eightmile River..	Quinnipiac River...	Near Southington.....	13.7
9	....do.....	....do.....	....do.....	12.8
Jan. 25	....do.....	....do.....	....do.....	11.2
25	....do.....	....do.....	....do.....	10.8
June 10	....do.....	....do.....	....do.....	9.16
July 7	....do.....	....do.....	....do.....	7.09
14	....do.....	....do.....	....do.....	6.21
June 23	....do.....	....do.....	....do.....	6.91

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