

# Compilation of Records of Surface Waters of the United States through September 1950

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

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

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GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1301



**UNITED STATES DEPARTMENT OF THE INTERIOR**

**Douglas McKay, *Secretary***

**GEOLOGICAL SURVEY**

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## PREFACE

This report contains summaries of streamflow records in the North Atlantic slope basins, Maine to Connecticut. It was prepared by the United States Geological Survey in 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.

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(See bar chart, p. 10-15, for list of gaging stations and individual page numbers in this report)

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COMPILATION OF RECORDS OF SURFACE WATERS OF NORTH ATLANTIC SLOPE BASINS, MAINE TO  
CONNECTICUT, THROUGH 1950

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PURPOSE AND SCOPE

This volume is one of a series of reports presenting monthly and yearly summaries of streamflow and reservoir data collected by the Geological Survey. Included with these data are some records furnished by other Federal, State, and private agencies.

The purpose of this series of reports is to make available in summarized form all the surface-water records collected up to September 30, 1950.

The first known streamflow records to be systematically collected in the United States are those for Eaton and Madison Brooks in Madison County, N. Y., by John B. Jervis during 1835. Stream gaging by the United States Geological Survey was begun in 1888. At that time the Congress authorized the Irrigation Survey to be conducted by the Geological Survey in connection with special studies relating to irrigation. The work consisted of the measurement of stage and discharge of a few streams in the West. Since that time the work has expanded so that measurements of stage and discharge of streams and of stage and contents of lakes and reservoirs have been made at more than 12,000 gaging stations in the 48 states and the territories of Hawaii and Alaska, of which about 6,400 were in operation on September 30, 1950. The details of the records collected at those stations are contained in annual reports, bulletins, and water-supply papers, which have been issued usually on an annual basis. Most of the records collected over the years are found only in numerous individual volumes, many of which are out of print and difficult to obtain.

The records have been collected and published in annual reports by the Geological Survey in cooperation with State, municipal, and other Federal cooperating agencies. However, this series of compilation reports has been prepared by the Geological Survey as a special project not included in the cooperative program.

The data presented in this series of reports consist of records of discharge of streams and contents of reservoirs summarized on a monthly and yearly basis. Results of miscellaneous discharge measurements and, in general, stage records have been excluded. Also included are bar charts showing the period of record covered by each gaging station and a map of the area showing the location of each station (pl. 1). The reports of this series are uniform in the type of data they contain and in the form of presentation.

In compiling the data for these summary reports, one important feature of the project was to review the analyses and computations originally made on the basis of all information now available. For some stations additional base data, obtained subsequently, allowed for reinterpretation and recomputation of more accurate records of discharge. All records were examined for major computation errors and tested wherever possible by comparison with records of discharge at other stations and weather data. Records that were found to be in need of substantial revision were recomputed or omitted if revision was not feasible. Estimates of discharge were made to fill short gaps to complete the continuity of the record, whenever practical.

Records furnished by other agencies are incorporated in these reports when they supplement records collected by the Geological Survey, and appeared consistent and reliable. Furnished records were reviewed in the same manner as Geological Survey records whenever base data were available and detailed study was feasible.

#### STREAM-GAGING PROGRAM

The Geological Survey began to collect records of streamflow in the area covered by this report (fig. 1), which includes the North Atlantic slope basins from Maine to Connecticut, in the summer of 1901 when 6 gaging stations were established on rivers in Maine. The first streamflow record in the area covered by this report is that for Merrimac River at Lowell, Mass., which was started by J. B. Francis in 1848. This record is not complete because the discharge is for the 10-hour period each day when mills were in operation. Other individuals, companies, and state organizations started to collect data usually at points where there was a specific power or water-supply development.

The stream-gaging program in the New England area has grown continuously since its inception. In 1906 the Geological Survey began a State cooperative stream-gaging program with Maine. This was the forerunner of others which followed in Massachusetts, Vermont, Connecticut, Rhode Island, and New Hampshire. Participation by the States gave impetus to the expanding program and provided the principal source of funds to sustain the work during the early years.

The Corps of Engineers, U. S. Army, as a result of their congressional authorization to make a comprehensive report on the rivers in the United States, supported a considerable expansion of the work in the New England area during 1928 and again after the floods of 1936 and 1938. The initiation of these programs had a significant effect in advancing stream-gaging activities in the area.

Numerous municipal and private organizations have assisted the Geological Survey in the stream-gaging program, as have several bureaus of the Federal government. Details of the cooperation have been acknowledged in the annual water-supply papers.

#### DESCRIPTION OF DATA

The gaging-station records are arranged in a downstream order. The order used in this report is the same as that adopted for use in the annual series of reports on surface water supply beginning with the water year 1951. 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 indentation in the listing of gaging stations in the bar chart (see p. 10) represents one rank. This downstream order and system of indentation 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 in the annual reports through the water year 1950 was different. In those reports all stations on the main stem are listed first in order, proceeding from the headwaters toward the mouth, then all stations on the uppermost tributary from

its source to mouth, followed by all stations from source to mouth on the tributaries to the tributary.

The data presented for most of the gaging stations comprise a description of the station, tables of monthly discharge and runoff, and a yearly summary table. The station description gives the location of the gaging station, drainage area, supplemental records available (for some stations), types and datums of gages, average discharge, extremes of discharge, and general remarks concerning the data. When records were furnished by another agency the fact is so stated.

The location of the gaging station and the drainage area are obtained from the best available maps. When more than one site was used and the difference in drainage areas is significant, the area for the latest site is shown first followed by the areas for other sites in chronological order. In some instances drainage-area figures have not been obtained because of the lack of suitable maps or because the boundaries cannot be defined or the effective drainage area determined.

For some stations a paragraph headed "Supplemental records available" gives reference to records other than those given in the present report. Such records may consist of gage-height records for periods other than those for which discharge records are presented, records concerning quality of the water, or the results of periodic discharge measurements.

The gage described first is the present gage or the one used most recently. Information is then given in chronological order for all gages used earlier, giving changes in location, type of gage, or datum. The location or datum of all earlier gages is given with reference to the present or most recently used gage. The datum of the gage is the elevation of the zero of the gage above mean sea level. Where information as to datum is not available, the altitude of the gage is given. This may be determined from topographic maps, river-profile surveys, barometric levels, or where nothing better is available, by estimates based on average fall between a known elevation and the gage or on other known factors. The degree of accuracy of an altitude determination is indicated by the source of the information and to some extent by the refinement to which the figure is given.

The average discharge for a station is the average of all complete water years and is published only if there are five or more complete water years of record. The years used to determine the average are not necessarily consecutive. The average discharge is not published for some stations because of extensive changes in diversion or storage, or other water development, that have occurred upstream.

In general, the momentary maximum and minimum discharges and stages for the entire period of record are published in the "Extremes" paragraph. These are qualified if necessary according to the type of gage used and the completeness of the record. Maximum and minimum discharges at nonrecording gaging stations are qualified as "observed" unless determined from a graph drawn through actual gage heights which approximates the actual hydrograph.

Under "Remarks" information is given on factors which affect the basin yield and runoff characteristics. These include upstream regulation, diversion, and utilization -- a history of changes in these items is given when known. Also, references are made to the records of storage or diversion upstream, if published. When discharge records are furnished by another agency, credit is given under "Cooperation".

The streamflow data summarized in this paper are generally contained in two monthly

tables and one yearly table. The first monthly table is a tabulation of monthly and yearly mean discharge in cubic feet per second. These figures represent discharge passing the station; they are unadjusted for storage or diversion upstream. Each monthly figure is the mean flow for the entire month; generally no record for part of a month is tabulated. Likewise, each yearly figure is the mean flow for a full year, and no figure is shown for a partial year. Usually the months are arranged on a water-year basis. Exceptions to this rule are made in connection with seasonal records wherein the months are grouped to give a complete season for each calendar year.

The second monthly table is a tabulation of monthly and yearly runoff in inches. For streams that are subject to considerable regulation, the second table contains the adjusted runoff in inches. The table of runoff in inches is omitted if the data do not represent natural yield without a gross error, whether adjusted or unadjusted.

The third table contains a yearly summary of the streamflow data. The column headed "W.S.P. no." lists the number of the water-supply paper or other publication in which the figures of daily and monthly discharge are published; for early years for which daily discharges were not published, that column lists the report that contains daily gage heights, rating tables, and monthly discharges. If a part of the record has been revised and published, then reference is made to both the original report and the one containing the revised record; if the daily discharge record for the entire year has been republished to include revisions, then only the later report is listed. For some stations the third table is omitted, however, the report containing records for any particular year can be found by reference to the tables given on p. 6.

In the third table the momentary maximum discharge for each water year and the date of its occurrence is given whenever obtainable. This is maximum discharge for the water year unless otherwise qualified. For nonrecording gage records, momentary maximums were often obtained from graphs drawn through the gage readings. If a graph was not feasible, then the discharge was computed from the maximum gage height observed, provided it was believed to be of significant value. Momentary maximum discharge believed to be representative of the absolute maximum for the water year is not qualified in any way. Occasionally maximum daily discharges are tabulated, but only when it was not practicable to give momentary maximums and when figures may have general statistical value.

The minimum daily discharge for each water year is listed if known. The annual mean discharge listed in the third table is the same as that given in the yearly column in the first table.

Other data in this table are given for both the water and calendar year and consist of runoff in inches or in acre-feet, or both. These are adjusted or unadjusted for storage or diversion as the occasion demands, but in general no adjustments have been made in the West. In arid regions where the average annual precipitation is less than 20 inches, the computation of runoff in cubic feet per second per square mile and in depth in inches is not ordinarily made.

Most canal and diversion records are given in a single table. There are some records for large canals, however, that are published in the same detail as those for streams. Records of reservoirs also are given in a single table which shows the contents at the end of each month.

Figures of discharge that have been revised as the result of the review made in connection with this compilation are so noted; however, revisions that have been previously published are not indicated as revisions in this report. Revised daily discharges made in connection with this compilation will be published in a later annual water-supply paper. If only annual maximum discharges are revised and no revision of daily discharge is made for a station, revised annual maximums are given only in this report and will not be republished in a later annual report. Revisions of figures of runoff in inches resulting solely from a revision of the drainage area are not noted as such. Figures that represent corrections of typographical or computational errors where no figures of daily discharge have been revised or changed are indicated as "corrected" in this report. Estimates of discharge made to complete months or years for this report are noted as estimates and as "not previously published."

For a few stations, after reviewing the past records, it was found that part or all of the previously published records was grossly in error, yet the base data were such that the record could not be improved or revised. For such stations a note listing the periods of record which have been discredited and not republished is given with the records published herein.

In addition to the above, records for some other stations in the area, previously published by the Geological Survey in the annual series of reports, are omitted from this compilation. In general, the records of such stations either are too fragmentary to allow computation of monthly mean discharge or are records that did not measure streamflow, total diversion, or return flow and were considered not important enough to warrant publication in this report. The only station omitted is the following:

	<u>Period of record</u>
Mianus River near Stamford, Conn.....	1903

## PUBLICATIONS

To facilitate publication of streamflow records, the area of the United States is divided into 14 parts whose boundaries coincide with certain natural drainage lines. Formerly the annual series of water-supply papers on the surface-water supply of the United States was published in 14 volumes, one for each of the 14 parts. Beginning with the reports for 1951, the records are published in 18 volumes, including 2 volumes each for parts 1, 2, 3, and 6. This system is used in publishing the present series of compilation reports. The boundaries of the various parts are indicated in the following list and on figure 1.

- Part 1. North Atlantic slope basins, in two volumes:  
 A, North Atlantic slope basins, Maine to Connecticut.  
 B, North Atlantic slope basins, New York to York River.
2. South Atlantic slope and eastern Gulf of Mexico basins, in two volumes:  
 A, South Atlantic slope basins, James River to Savannah River.  
 B, South Atlantic slope and eastern Gulf of Mexico basins, Ogeechee River to Pearl River.
3. Ohio River basin, in two volumes:  
 A, Ohio River basin except Cumberland and Tennessee River basins.  
 B, Cumberland and Tennessee River basins.
4. St. Lawrence River basin.
5. Hudson Bay and upper Mississippi River basins.

# COMPILATION OF SURFACE WATER RECORDS, PART 1A

- Part 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.

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; W = Water-Supply Paper)

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.....	1884-82.
14th A, pt. 2	Monthly discharge.....	1888-93.
B 151.....	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.
W 11.....	Gage heights.....	1896.
18th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge..	1895-96.
W 15.....	Descriptions, measurements, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries above Kansas River.	1897.
W 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..	1898.
W 27.....	Measurements, ratings, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries.	1898.
W 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.
W 35 to 39.....	Descriptions, measurements, gage heights, and ratings.....	1899.
21st A, pt. 4	Monthly discharge.....	1899.
W 47 to 52.....	Descriptions, measurements, gage heights, and ratings.....	1900.
22d A, pt. 4.	Monthly discharge.....	1900.
W 65, 66.....	Descriptions, measurements, gage heights, and ratings.....	1901.
W 75.....	Monthly discharge.....	1901.

Reports on surface-water supply containing records from 1899 to 1950 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.

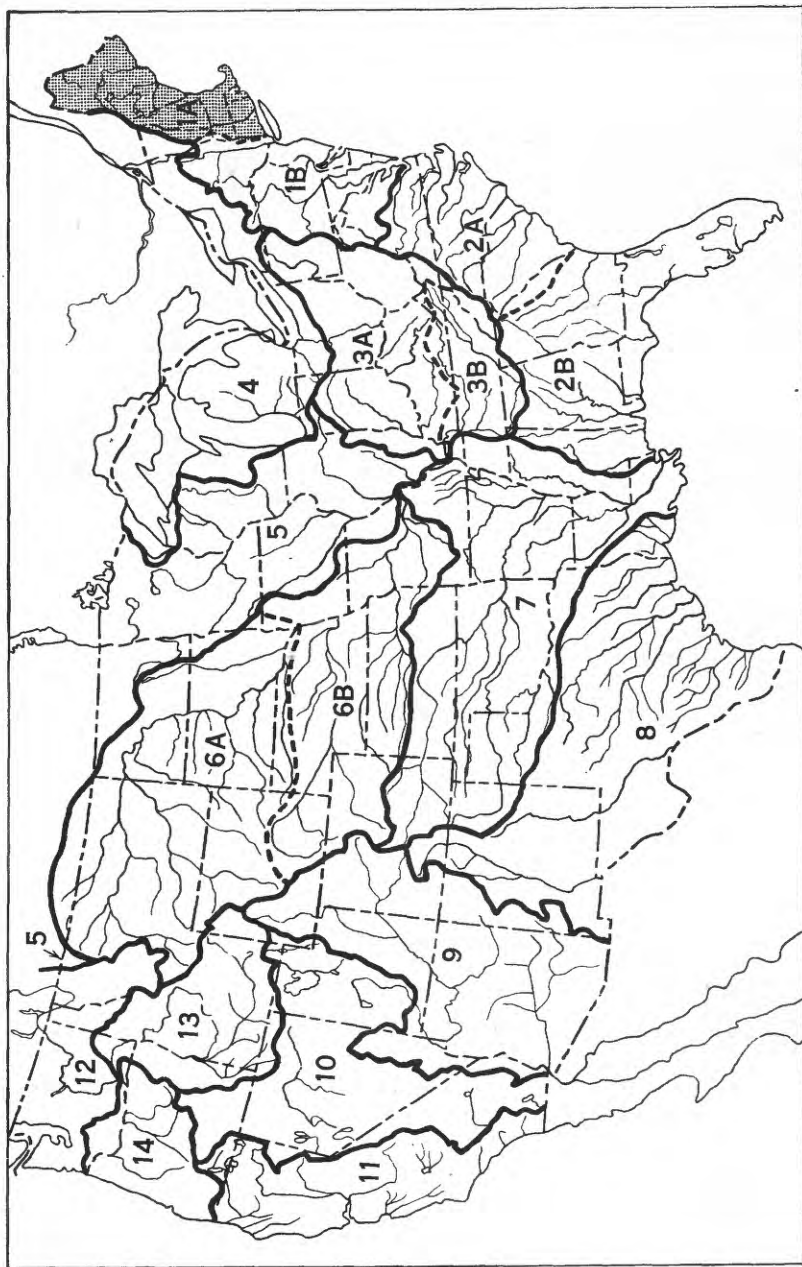
Numbers of water-supply papers containing streamflow records in North Atlantic slope basins, Maine to Connecticut, 1899-1950

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

The records at most of the stations discussed in these reports extend over many years. Miscellaneous 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.

Reports also have been published that are compilation of records for various areas, usually a single State or drainage basin. These reports contain records previously





published (some of which may have been revised), as well as some records not contained in the present series of reports. Such reports for the area covered by this report are as follows:

<u>Water-Supply Paper</u>	<u>Title</u>
198.....	Water resources of Kennebec River Basin (Maine), 1890-1906.
279.....	Water resources of Penobscot River Basin (Maine), 1904-9.
415.....	Surface waters of Massachusetts, 1848-1915.
424.....	Surface waters of Vermont, 1875-1916.
1105.....	Hydrology of Massachusetts, Part 1, Summary of stream flow and precipitation records, 1863-1945.

Records of discharge have been published also in State reports. Some of these are not contained in the publications of the Geological Survey or are revisions of records previously published in its water-supply papers. The following table contains a list of these reports for the area covered by this report.

State reports containing compilations of records of discharge in North Atlantic slope basins, Maine to Connecticut

<u>State</u>	<u>Period</u>	<u>Report</u>	<u>Issued by</u>
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.

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. Such reports for the area covered by this report are as follows:

<u>Water-Supply Paper</u>	<u>Title</u>
636-C.....	The New England flood of November 1927.
798.....	The floods of March 1936, part 1, New England rivers.
836-A.....	Stages and flood discharges of the Connecticut River at Hartford, Conn.
867.....	Hurricane floods of September 1938.
966.....	Minor floods of 1938 in North Atlantic States.
967-C.....	Flood of August 21, 1939, in town of Baldwin, Maine.

## HYDROLOGIC CONDITIONS

Streamflow, a residual of precipitation after other demands have been met, varies considerably from year to year. The annual discharge for three key stations in the area covered by this report with the median discharge for the 25-year period 1921-45 is shown in figure 2 below.

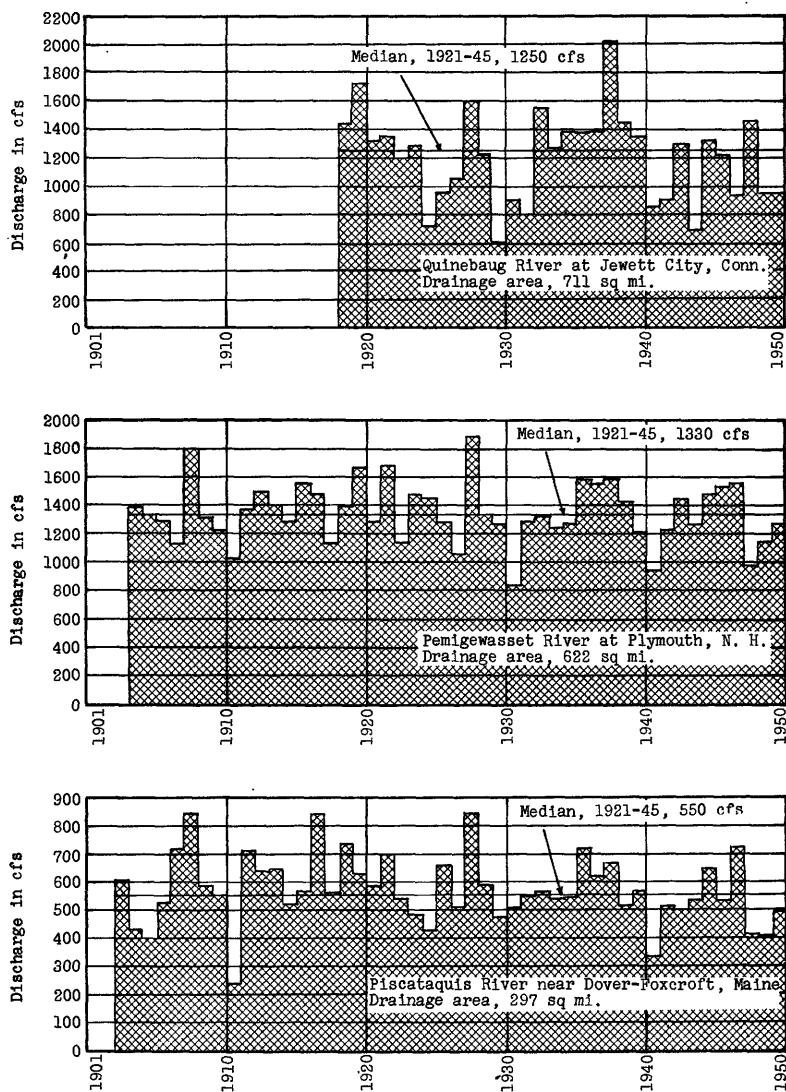


Figure 2.--Annual discharge at three key gaging stations.

## BAR CHARTS

The following bar charts show the period of record of discharge of streams and contents of reservoirs for all stations compiled in this report through September 30, 1950. Periods of record of stage only are not included. The stations are listed in downstream order (see p. 2) and are numbered consecutively. The number is used to identify the station on the map (pl. 1) showing location of gaging stations.

## Bar chart of gaging-station records

Legend:  Streamflow  Reservoir contents

Period of record						Gaging station	Map no.	Page no.
1900	1910	1920	1930	1940	1950			
						St. John River basin:		
						St. John River at Dickey, Maine.....	1	16
						Ailagash River near Ailagash, Maine.....	2	16
						St. Francis River near St. Francis, Maine.....	3	18
						St. John River at Fort Kent, Maine.....	4	18
						Fish River at Wallagrass, Maine.....	5	19
						Fish River near Fort Kent, Maine.....	6	20
						St. John River below Fish River, at Fort Kent, Maine.....	7	21
						Madawaska River at Ste. Rose du Degele, Quebec.....	8	22
						St. John River at Van Buren, Maine.....	9	22
						Aroostook River:		
						Millinocket Lake in T. 7, R. 9.....	10	24
						Squapan Lake in T. 10, R. 4.....	11	24
						Aroostook River at Washburn, Maine.....	12	24
						Aroostook River at Fort Fairfield, Maine.....	13	26
						Meduxnekeag River near Houlton, Maine.....	14	26
						St. Croix River basin:		
						St. Croix River at Vanceboro, Maine.....	15	27
						Grand Lake Stream at Grand Lake Stream, Maine.....	16	28
						St. Croix River near Baileyville, Maine.....	17	29
						St. Croix River at Spragues Falls, near Baring, Maine.....	18	30
						Machias River basin:		
						Machias River at Whitneyville, Maine.....	19	31
						East Machias River near East Machias, Maine.....	20	32
						Marraguagus River basin:		
						Marraguagus River at Cherryfield, Maine.....	21	34
						Union River basin:		
						West Branch Union River (head of Union River) at Amherst, Maine.....	22	34
						East Branch Union River near Waltham, Maine.....	23	36
						Green Lake Stream at Lakewood, Maine.....	24	36
						Branch Lake Stream near Ellsworth, Maine.....	25	37
						Penobscot River basin:		
						West Branch Penobscot River (head of Penobscot River):		
						Reservoirs in West Branch Penobscot River basin, Maine.....	26	37
						St Branch Penobscot River at Millinocket, Maine.....	27	38
						West Branch Penobscot River near Medway, Maine.....	28	40
						East Branch Penobscot River:		
						Telos Lake in T. 8, R. 11, Maine.....	29	42
						Grand Lake in T. 6, R. 8, Maine.....	30	42
						East Branch Penobscot River at Grindstone, Maine.....	31	42
						Penobscot River near Mattawamkeag, Maine.....	32	45
						Mattawamkeag River near Mattawamkeag, Maine.....	33	45
						Mattawamkeag River at Mattawamkeag, Maine.....	34	46
						Piscataquis River near Dover-Foxcroft, Maine.....	35	48
						Sebec River:		
						Wilson Pond near Greenville, Maine.....	36	50
						Sebec Lake at Sebec, Maine.....	37	51
						Sebec River at Sebec, Maine.....	38	51
						Pleasant River near Milo, Maine.....	39	53
						Piscataquis River at Medford, Maine.....	40	55
						Penobscot River at West Enfield, Maine.....	41	56
						Passadumkeag River at Lowell, Maine.....	42	58
						Cold Stream at Enfield, Maine.....	43	60
						Penobscot River at Passadumkeag, Maine.....	44	61
						Penobscot River at Sunkhaze Rip, near Costigan, Maine.....	46	62
						Kenduskeag Stream near Kenduskeag, Maine.....	45	62
						Kenduskeag Stream near Bangor, Maine.....	46	63
						Phillips Lake and outlets in Holden and Dedham, Maine.....		64
						St. George River basin:		
						St. George River at Union, Maine.....	47	64
						Sheepscoot River basin:		
						Sheepscoot River at North Whitefield, Maine.....	48	64
						Kennebec River basin:		
						Moose River (head of Kennebec River):		
						Brassua Lake near Rockwood, Maine.....	49	65
						Moose River near Rockwood, Maine.....	50	66
						Moosehead Lake:		
						Second Roach Pond near Kokadjo, Maine.....	51	67

Bar chart of gaging-station records--Continued

Period of record						Gaging station	Map no.	Page no.
1900	1910	1920	1930	1940	1950			
						Kennebec River basin--Continued		
						Moosehead Lake--Continued		
						..First Roach Pond near Kokadjo, Maine.....	52	67
						..Roach River at Roach River, Maine.....	53	68
1895						..Moosehead Lake at East Outlet, Maine.....	53	68
						..Kennebec River at Moosehead, Maine.....	54	69
						..Moxie Pond near The Forks, Maine.....	55	70
						..Kennebec River at The Forks, Maine.....	56	71
						Dead River:		
						..Flagstaff Lake near Dead River, Maine.....	57	73
						..Dead River near Dead River, Maine.....	58	73
						..Dead River Pond at Dead River Dam, Maine.....	59	74
						Spencer Stream:		
						..Spencer Lake at Spencer Lake Outlet, Maine.....	60	75
						..Dead River at The Forks, Maine.....	61	75
						Wyman Pond near Bingham, Maine.....	62	77
						..Austin Stream at Bingham, Maine.....	63	78
						..Kennebec River at Bingham, Maine.....	64	79
						..Kennebec River at North Anson, Maine.....	65	80
						..Carrabassett River near North Anson, Maine.....	65	81
						..Sandy River near Farmington, Maine.....	66	82
						..Sandy River near Mercer, Maine.....	67	83
1895						..Sandy River near Madison, Maine.....	68	84
						..Kennebec River at Waterville, Maine.....	68	85
						..Sebastcook River at Pittsfield, Maine.....	69	87
						..Sebastcook River near Pittsfield, Maine.....	69	87
1890						..Messalonskee Stream at Waterville, Maine.....	70	88
						..Cobbooseecontee Stream at Gardiner, Maine.....	70	88
						Androscoggin River basin:		
						..Kennebago Lake (head of Androscoggin River) at Kennebago, Maine.....	71	90
1880						..Mooselookmeguntic Lake at Upper Dam, Maine.....	72	90
						..Rangeley Lake at Oquossoc, Maine.....	73	91
						..Upper and Lower Richardson lakes at Middle Dam, Maine.....	74	92
						Umbagog Lake:		
						..Azischohos Lake at Azischohos Dam, Maine.....	75	93
						..Magalloway River at Azischohos Dam, Maine.....	76	94
1879						..Diamond River near Wentworth Location, N. H.....	77	94
						..Umbagog Lake at Errol Dam, N. H.....	78	95
						..Androscoggin River at Errol (Errol Dam), N. H.....	79	98
						..Androscoggin River at Berlin, N. H.....	80	99
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1. St. John River at Dickey, Maine 1/

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.

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.

Extremes--1946-50: Maximum discharge, 68,700 cfs May 9, 1947, from rating curve extended above 33,000 cfs by logarithmic plotting; maximum gage height, 16.96 ft Apr. 15, 1947 (ice jam); minimum discharge, 129 cfs Sept. 17, 1948.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1910	-	-	-	-	-	-	-	-	-	-	1,550	1,040	-
1911	1,410	-	-	-	-	-	-	-	3,170	1,280	2,200	1,880	-
1912	1,690	-	-	-	-	-	-	-	-	-	-	-	-
1947	5,351	5,009	1,958	1,063	1,949	1,425	7,592	33,430	10,840	6,516	2,211	926	6,565
1948	814	605	703	341	201	742	12,810	18,080	2,510	1,626	1,519	600	3,388
1949	2,827	4,091	2,987	1,178	666	1,065	16,640	8,648	2,717	904	836	1,531	3,671
1950	1,096	2,354	2,601	2,696	1,112	1,179	8,859	9,373	5,878	2,571	1,326	2,212	3,442

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1910	-	-	-	-	-	-	-	-	-	-	0.66	0.43	-
1911	0.60	-	-	-	-	-	-	-	1.30	0.55	.94	.78	-
1912	.72	-	-	-	-	-	-	-	-	-	-	-	-
1947	2.28	2.08	0.84	0.45	0.75	0.61	3.14	14.28	4.47	2.78	.94	.38	35.00
1948	.35	.25	.30	.15	.08	.32	5.29	7.72	1.04	.69	.65	.25	17.09
1949	1.21	1.70	1.28	.50	.26	.45	6.87	3.69	1.13	.39	.36	.63	18.47
1950	.47	.97	1.11	1.15	.43	.50	3.66	4.00	2.43	1.10	.57	.91	17.30

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1910	281	-	-	-	-	-	-	-	-
1911	301	-	-	-	-	-	-	-	-
1947	1081	68,700	May 9, 1947	429	6,565	2.43	33.00	5,711	28.70
1948	1111	36,600	May 9, 1948	135	3,388	1.25	17.09	4,038	20.58
1949	1141	29,200	Apr. 17, 1949	186	3,671	1.36	18.47	3,348	16.83
1950	1171	36,000	Apr. 23, 1950	285	3,442	1.27	17.30	-	-

## 2. 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 240 sq mi drained by Chamberlain Lake through Telos Canal). Prior to Dec. 1, 1911, 1,260 sq mi, approximately.

Gage--Water-stage recorder. Datum of gage is 604.6 ft above mean sea level, datum of 1929. July 21, 1910, to Nov. 30, 1911, staff gage at site 3 miles downstream at datum 24.1 ft lower than present datum.

Average discharge--19 years (1931-50), 1,883 cfs.

Extremes--1931-50: Maximum discharge, 23,400 cfs May 5, 1933; maximum gage height, 13.14 ft May 1, 1939 (ice jam); minimum daily discharge, 91 cfs Mar. 9-15, 1948.

Remarks--Some storage in lakes above station.

Cooperation--Records for 1910-11 furnished by International Commission, River St. John.

1/ Published as "near Dickey" prior to 1946.

Monthly and yearly mean discharge, in cubic feet per second, of Allagash River near Allagash, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1910	-	-	-	-	-	-	-	-	-	439	426	919	-
1911	356	*416	-	-	-	-	-	*4,560	1,700	422	*423	453	-
1912	426	564	-	-	-	-	-	-	-	-	-	-	-
1932	2,500	2,380	699	779	549	455	6,740	5,980	1,790	1,900	1,220	2,860	2,300
1933	2,240	2,670	1,360	586	442	326	3,440	9,620	2,760	1,530	434	356	2,160
1934	1,470	978	619	281	223	241	6,952	7,136	2,721	2,011	765	681	2,012
1935	1,068	1,941	1,936	729	444	356	3,689	5,273	3,758	1,765	527	370	1,836
1936	998	455	505	222	186	3,560	5,005	8,805	2,787	914	323	566	2,035
1937	1,462	1,592	952	1,091	790	819	3,803	7,766	2,688	884	1,374	832	2,010
1938	1,119	2,119	1,339	578	351	557	4,553	6,162	1,603	2,158	1,166	2,482	2,022
1939	1,759	1,060	1,818	728	280	288	1,315	9,347	3,502	2,583	3,077	1,159	2,265
1940	2,201	2,459	1,450	483	252	267	3,210	6,949	4,331	2,991	614	489	2,146
1941	242	1,311	635	1,175	477	397	4,761	3,440	2,091	1,381	1,324	966	1,517
1942	1,236	2,447	1,111	465	357	455	3,836	8,067	2,125	1,398	690	365	1,888
1943	538	395	271	198	145	191	716	8,902	3,462	2,114	1,181	734	1,584
1944	1,557	2,822	596	243	220	196	623	4,528	1,353	1,054	615	1,515	1,505
1945	2,099	992	608	561	429	751	8,699	4,863	2,354	2,981	1,043	1,083	2,207
1946	1,730	996	523	461	403	594	3,102	8,987	1,724	1,910	921	576	1,842
1947	741	1,113	924	446	850	852	3,142	11,700	4,544	1,458	1,858	609	2,365
1948	315	279	286	192	119	241	2,545	6,835	1,665	1,716	931	358	1,297
1949	717	1,595	1,586	708	524	826	5,443	3,901	2,177	822	320	307	1,577
1950	273	637	776	1,210	710	662	3,481	4,251	2,147	1,353	726	770	1,418

\* Revised.

\* Not previously published; estimated on basis of weather records and records for stations in the St. John River Basin.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1910	-	-	-	-	-	-	-	-	-	0.40	0.39	0.81	-
1911	0.33	*0.37	-	-	-	-	-	*4.17	1.51	.39	*.39	.40	-
1912	.39	.50	-	-	-	-	-	-	-	-	-	-	-
1932	2.12	2.12	0.64	0.72	0.47	0.42	6.01	5.51	1.60	1.75	1.13	2.56	25.05
1933	2.06	2.39	1.26	.54	.37	.30	3.07	8.88	2.47	1.41	.40	.32	23.47
1934	1.36	.87	.57	.26	.19	.22	6.20	6.58	2.43	1.86	.71	.61	21.86
1935	.98	1.73	1.79	.67	.37	.33	3.40	4.86	3.36	1.63	.49	.33	19.94
1936	.92	.41	.47	.21	.16	3.29	4.46	8.12	2.49	.84	.30	.51	22.18
1937	1.35	1.42	.88	1.01	.68	.76	5.39	7.16	2.40	.82	1.27	.73	21.85
1938	1.03	1.90	1.23	.53	.29	.51	4.06	5.68	1.43	1.99	1.08	2.22	21.95
1939	1.63	.95	1.67	.67	.23	.27	1.17	8.62	3.12	2.39	2.84	1.03	24.59
1940	2.03	2.20	1.34	.44	.22	.25	2.87	6.41	3.86	2.76	.57	.44	23.39
1941	.22	1.17	.59	1.08	.40	.37	4.25	3.17	1.86	1.27	1.22	.86	16.46
1942	1.14	2.19	1.02	.43	.30	.42	3.42	7.44	1.90	1.29	.64	.33	20.52
1943	.50	.34	.25	.18	.12	.18	.64	8.21	3.09	1.95	1.09	.68	17.20
1944	1.44	2.61	.55	.22	.19	.18	.56	4.17	1.19	.97	.75	1.35	14.18
1945	1.94	.98	.56	.52	.36	.69	7.76	4.48	2.10	2.74	.96	.97	23.96
1946	1.59	.89	.48	.43	.34	.55	2.77	8.29	1.54	1.76	.85	.51	20.00
1947	.68	.99	.85	.41	.71	.79	2.80	10.79	4.06	1.35	1.72	.54	25.69
1948	.29	.25	.26	.18	.10	.22	2.28	6.31	1.48	1.58	.86	.32	14.13
1949	.66	1.43	1.46	.65	.44	.76	4.85	3.60	1.94	.76	.30	.27	17.12
1950	.25	.57	.72	1.12	.59	.61	3.10	3.92	1.92	1.24	.67	.69	15.40

\* Revised.

\* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1910	281	-	-	-	-	-	-	-	-
1911	301,1231	-	-	-	-	-	-	-	-
1932	726	16,500	Sept. 16, 1932	410	2,300	1.84	25.05	2,375	25.88
1933	741	23,400	May 5, 1933	210	2,160	1.73	23.47	1,893	20.56
1934	756	16,300	Apr. 26, 1934	140	2,012	1.61	21.86	2,169	23.56
1935	781	10,800	May 2, 1935	245	1,836	1.47	19.94	1,586	17.24
1936	801	18,100	May 3, 1936	131	2,035	1.63	22.18	2,206	24.03
1937	821	12,600	Apr. 30, 1937	341	2,010	1.61	21.85	2,057	22.36
1938	851	11,100	Apr. 21, 1938	235	2,022	1.62	21.95	2,030	22.54
1939	871	21,500	May 11, 1939	210	2,265	1.81	24.59	2,386	25.91
1940	891	14,300	May 4, 1940	184	2,146	1.72	23.39	1,817	19.80
1941	921	17,600	Apr. 22, 1941	142	1,517	1.21	16.46	1,735	18.83
1942	951	22,500	May 5, 1942	264	1,888	1.51	20.52	1,588	17.26
1943	971	15,900	May 13, 1943	132	1,584	1.27	17.20	1,907	20.71
1944	1001	10,800	May 11, 1944	148	1,303	1.04	14.18	1,191	12.96
1945	1031	15,500	Apr. 29, 1945	380	2,207	1.77	23.96	2,170	23.54
1946	1051	17,700	May 17, 1946	326	1,842	1.47	20.00	1,801	19.56
1947	1081	16,900	May 8, 1947	340	2,365	1.89	25.69	2,206	23.97
1948	1111	10,200	May 9, 1948	91	1,297	1.04	14.13	1,549	16.88
1949	1141	11,000	May 4, 1949	150	1,577	1.26	17.12	1,549	16.11
1950	1171	8,150	Apr. 23, 1950	199	1,418	1.13	15.40	-	-

## 3. Saint Francis River near Saint Francis, Maine

Location.--Lat 47°11'15", long. 68°55'10", on left bank 1 mile upstream from mouth, 1½ miles northwest of St. Francis, Aroostook County, and 3 miles below Glazier Lake.

Drainage area.--560 sq mi, approximately.

Gage.--Staff gage. Datum of gage is 528.84 ft above mean sea level, unadjusted. May 11 to Nov. 30, 1910, staff gage 3 miles upstream at different datum.

Extremes.--1910-11: Maximum discharge, 12,000 cfs May 9, 1911 (gage height, 540 ft, computed from graph based on gage readings).

Cooperation.--Records furnished by International Commission, River St. John.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1910	-	-	-	-	-	-	-	\$2,630	1,230	343	313	161	-
1911	189	477	-	-	-	-	-	\$5,460	656	348	422	216	-
1912	155	172	-	-	-	-	-	-	-	-	-	-	-

\* Not previously published; partly estimated on basis of weather records and records for nearby stations.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1910	-	-	-	-	-	-	-	\$5.42	2.46	0.71	0.64	0.32	-
1911	0.39	0.95	-	-	-	-	-	\$11.24	1.30	.72	.87	.43	-
1912	.32	.54	-	-	-	-	-	-	-	-	-	-	-

\* Not previously published; see footnote to preceding table.

## 4. St. John River at Fort Kent, Maine

Location.--Lat 47°14'55", long. 68°36'20", on left abutment of foot bridge in town of Fort Kent, Aroostook County, one-half mile upstream from mouth of Fish River.

Drainage area.--4,790 sq mi, approximately (revised), not including 240 sq mi drained by Chamberlain Lake through Telos Canal.

Gage.--Staff gage. Altitude of gage is 490 ft (from topographic map).

Average discharge.--9 years (1906-15), 7,750 cfs.

Extremes.--1905-15: Maximum discharge, 76,700 cfs May 13, 1909 (gage height, 19.7 ft, from graph based on gage readings); minimum daily, 475 cfs Oct. 5-8, 1906.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1906	-	-	-	-	-	-	-	24,000	7,090	3,060	\$877	\$545	-
1907	\$6,570	\$3,690	\$2,990	\$2,230	\$1,030	\$1,230	\$6,150	39,800	15,600	11,900	5,750	3,210	\$8,410
1908	7,510	14,500	\$5,930	\$3,480	\$2,950	\$3,130	\$8,010	41,200	16,100	3,040	2,690	\$1,210	\$9,170
1909	1,050	825	\$1,770	\$1,330	\$1,480	\$1,940	\$14,300	41,300	\$8,320	\$8,590	4,940	9,660	\$8,010
1910	11,800	6,250	\$6,210	\$4,080	\$2,430	\$3,600	\$29,600	16,400	8,630	1,850	2,640	2,410	\$7,990
1911	2,080	4,880	\$780	\$820	\$585	\$629	\$5,190	\$25,500	5,640	2,370	3,300	2,500	\$4,560
1912	2,300	\$3,270	\$2,920	\$1,520	\$890	\$857	\$16,100	\$38,100	\$22,400	2,260	\$3,470	\$3,220	\$8,620
1913	7,560	14,800	\$5,150	\$4,290	\$2,400	\$6,340	\$30,600	21,400	10,000	6,170	1,900	1,590	\$9,350
1914	4,810	5,660	4,220	\$1,590	\$1,270	\$1,460	\$8,000	\$36,500	8,550	2,420	1,570	2,970	\$6,630
1915	5,530	4,910	\$3,620	\$1,850	\$1,990	\$6,020	\$21,200	23,400	5,010	3,900	2,890	3,070	\$7,010
1916	6,000	4,980	3,240	-	-	-	-	-	-	-	-	-	-

\* Revised.

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1906	-	-	-	-	-	-	-	5.78	1.65	0.74	\$0.21	\$0.13	-
1907	\$1.58	\$0.86	\$0.72	\$0.54	\$0.22	\$0.30	\$1.43	9.58	3.64	1.38	.75	.75	\$23.86
1908	1.81	3.38	\$1.43	\$0.84	\$0.66	\$0.75	\$1.86	9.92	3.75	.73	.65	\$0.28	\$26.06
1909	.25	.19	\$0.43	\$0.32	\$0.32	\$0.47	\$3.34	9.94	\$1.94	\$2.06	1.19	2.25	\$22.70
1910	2.84	1.45	\$1.50	\$0.98	\$0.53	\$0.87	\$6.90	3.94	2.01	.44	.64	.56	\$22.66
1911	.50	1.14	\$0.19	\$0.20	\$0.14	\$0.15	\$1.20	\$6.13	1.32	.57	.79	.58	\$12.91
1912	.55	\$0.76	\$0.70	\$0.37	\$0.20	\$0.21	\$3.75	\$9.16	\$5.22	.54	\$2.28	\$0.75	\$24.49
1913	1.92	3.45	\$1.24	\$1.03	\$0.52	\$1.52	\$7.13	5.15	2.53	1.49	.46	.37	\$26.51
1914	1.15	1.32	1.02	\$0.38	\$0.28	\$0.35	\$1.86	\$8.78	1.99	.58	.58	.69	\$18.78
1915	1.33	1.15	\$0.87	\$0.44	\$0.43	\$1.45	\$4.94	5.73	1.17	.94	.70	.72	\$19.87
1916	1.44	1.16	.78	-	-	-	-	-	-	-	-	-	-

\* Revised.

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Yearly discharge, in cubic feet per second, of St. John River at Fort Kent, Maine

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1906	201	\$42,400	May 8, 1906*	-	-	-	-	-	-
1907	241,1231	\$60,200	May 3, 1907*	\$475	\$8,410	\$1.76	\$23.86	\$9,630	\$27.32
1908	241,1231	\$63,900	May 4, 1908*	\$980	\$9,170	\$1.91	\$26.06	\$7,150	\$20.31
1909	261,1231	\$76,700	May 13, 1909*	\$535	\$8,010	\$1.67	\$22.70	\$9,740	\$27.62
1910	261,1231	\$62,600	Apr. 25, 1910*	\$1,060	\$7,990	\$1.67	\$22.66	\$6,590	\$18.70
1911	301,1231	\$67,500	May 3, 1911*	\$501	\$4,560	\$ .952	\$12.91	\$4,630	\$13.09
1912	321,1231	\$72,400	Apr. 27, 1912*	\$655	\$8,620	\$1.80	\$24.49	\$10,200	\$28.99
1913	351,1231	\$75,400	Apr. 30, 1913*	\$660	\$9,350	\$1.95	\$26.51	\$8,290	\$23.49
1914	381,1231	\$68,300	May 11, 1914	\$1,060	\$6,630	\$1.38	\$18.78	\$6,580	\$18.64
1915	401,1231	\$43,200	May 6, 1915*	\$840	\$7,010	\$1.46	\$19.87	\$7,020	\$19.90
1916	431	-	-	-	-	-	-	-	-

\* Revised.

\* Not previously published.

## 5. Fish River at Wallagrass, Maine

Location.--Lat 47°10'10", long. 68°35'10", on left bank just below the mouth of Wallagrass Stream, 7 miles south of Fort Kent, Aroostook County, and 8 miles upstream from mouth.

Drainage area.--860 sq mi.

Gage.--Chain gage. Altitude of gage is 570 ft above mean sea level (from topographic map).

Average discharge.--5 years (1903-8), 1,188 cfs.

Extremes.--1903-8, 1911: Maximum discharge, 9,010 cfs May 9, 1908 (gage height, 13.76 ft); minimum daily, 47 cfs Oct. 13, 14, 1905 (gage height, 1.7 ft).

Remarks.--Large lake area above station has not yet been developed for storage.

Cooperation.--Records for May 7, 1911, to Nov. 30, 1911, furnished by International Commission, River St. John.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	-	-	-	-	-	-	-	484	242	-
1904	\$194.0	\$206	\$215	\$149	\$116	\$202	\$1,170	6,360	\$2,025	742	592	898	\$1,050
1905	1,513	727	\$364	\$227	\$174	\$144	\$1,560	\$2,700	1,514	597	158	74.3	\$821
1906	62.8	\$98.2	\$142	\$181	\$212	\$336	\$954	6,330	2,010	753	206	\$93.0	\$956
1907	419	860	\$576	\$484	\$238	\$203	\$838	\$6,120	3,040	1,920	2,070	\$817	\$1,480
1908	1,330	2,480	\$1,220	\$731	\$433	\$463	1,790	7,090	2,490	670	485	302	\$1,630
1909	150	120	150	-	-	-	-	-	-	-	-	-	-
1910	-	-	-	-	-	-	-	-	-	-	-	-	-
1911	-	-	-	-	-	-	-	-	1,140	429	445	300	-
1912	187	168	-	-	-	-	-	-	-	-	-	-	-

\* Revised.

† Corrected.

\* Not previously published; estimated on basis of weather records and records for stations in Penobscot and St. John River Basins.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	-	-	-	-	-	-	-	0.65	0.31	-
1904	\$0.13	\$0.27	\$0.29	\$0.20	\$0.15	\$0.27	\$1.52	8.53	\$2.62	0.99	.53	1.16	\$16.66
1905	2.03	.94	.49	\$ .30	\$ .21	\$ .19	\$2.02	\$3.62	1.96	.80	.21	.10	\$12.87
1906	.08	\$ .13	\$ .19	\$ .24	\$ .26	\$ .45	\$1.24	8.48	2.61	1.01	.28	\$1.2	\$15.09
1907	.56	1.12	\$ .77	\$ .65	\$ .29	\$ .27	\$1.09	\$8.21	3.94	2.57	2.78	\$1.06	\$23.31
1908	1.79	3.21	\$1.64	\$ .98	\$ .54	\$ .62	2.32	9.50	3.24	.80	.65	.59	\$25.78
1909	.19	.15	.19	-	-	-	-	-	-	-	-	-	-
1910	-	-	-	-	-	-	-	-	-	-	-	-	-
1911	-	-	-	-	-	-	-	-	1.48	.58	.60	.39	-
1912	.25	.22	-	-	-	-	-	-	-	-	-	-	-

\* Revised.

† Corrected.

\* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1903	165	-	-	-	-	-	-	-	-
1904	165	\$8,420	May 7, 1904*	\$65	\$1,050	\$1.22	\$16.66	\$1,230	\$19.45
1905	165	\$3,170	May 7, 1905*	\$59	\$821	\$ .955	\$12.87	\$627	\$9.81
1906	201	\$8,560	May 11, 1906*	\$47	\$956	\$1.11	\$15.09	\$1,090	\$17.14
1907	241	\$7,610	May 21, 1907*	\$59	\$1,480	\$1.72	\$23.51	\$1,740	\$27.50
1908	241	\$9,010	May 9, 1908*	\$203	\$1,630	\$1.90	\$25.78	\$1,240	\$19.59
1911	301	-	-	-	-	-	-	-	-

\* Revised.

\* Not previously published.

## 6. 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.

**Gage.**--Water-stage recorder. Datum of gage is 511.38 ft above mean sea level, datum of 1929.

**Average discharge.**--21 years (1929-50), 1,327 cfs.

**Extremes.**--1929-50: Maximum discharge, 11,000 cfs Apr. 26, 1934, May 8, 1947; maximum gage height, 10.50 ft Apr. 26, 1934; minimum discharge, 56 cfs Sept. 26, 1942, but may have been less during period of ice effect, Mar. 2, 1944.

**Remarks.**--large lake area above station has not yet been developed for storage.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	351	498	285	412	338	480	2,930	6,040	2,790	1,540	886	685	1,440
1931	490	476	471	305	239	230	3,160	2,520	1,470	541	290	370	880
1932	1,310	1,770	671	628	437	425	4,620	4,250	1,210	748	1,170	1,370	1,550
1933	1,230	1,840	1,290	498	515	305	2,250	6,080	1,890	1,190	307	250	1,460
1934	471	692	597	295	161	250	4,400	5,589	1,446	933	526	269	1,307
1935	510	1,212	1,188	626	367	284	2,191	4,851	1,979	1,131	315	230	1,246
1936	151	187	324	289	258	3,104	4,719	5,346	2,122	700	333	480	1,504
1937	708	1,393	769	733	621	744	2,540	4,440	1,495	429	640	263	1,234
1938	431	1,913	1,502	685	510	518	2,843	4,228	1,507	1,872	650	757	1,456
1939	766	796	1,434	777	512	320	1,134	6,242	1,775	1,534	2,925	1,139	1,585
1940	1,549	2,184	1,755	544	325	287	2,204	5,756	2,338	1,907	420	213	1,629
1941	205	1,162	822	729	413	322	3,367	3,857	1,138	2,555	569	738	1,328
1942	1,410	2,045	929	514	392	464	2,395	5,683	2,156	943	298	128	1,453
1943	146	258	232	187	139	245	554	6,251	2,633	825	561	447	1,045
1944	741	2,563	742	210	164	107	390	3,685	1,089	603	345	209	906
1945	1,030	1,388	725	679	531	649	5,974	3,722	1,625	1,691	650	518	1,599
1946	1,000	866	594	441	336	525	2,550	6,835	1,647	672	345	275	1,332
1947	188	557	821	296	626	700	2,176	8,036	3,498	950	417	219	1,547
1948	134	278	303	203	119	175	2,691	5,051	1,928	585	528	281	1,025
1949	749	1,237	1,259	730	399	384	3,794	3,404	1,508	947	341	197	1,248
1950	198	688	800	1,134	703	551	2,598	3,992	1,321	679	275	171	1,094

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	0.46	0.64	0.38	0.55	0.40	0.64	3.75	7.99	3.57	2.04	1.18	0.88	22.48
1931	.65	.61	.62	.40	.29	.30	4.05	3.33	1.89	.72	.38	.47	13.71
1932	1.73	2.26	.89	.83	.54	.56	5.91	5.62	1.55	.99	1.54	1.75	24.18
1933	1.63	2.35	1.71	.65	.38	.40	2.86	8.05	2.42	1.58	.41	.32	22.79
1934	.62	.89	.79	.39	.19	.33	5.63	7.40	1.85	1.23	.70	.34	20.36
1935	.68	1.55	1.57	.83	.44	.58	2.81	6.42	2.53	1.50	.42	.29	19.42
1936	.20	.24	.43	.38	.32	4.10	6.05	7.08	2.72	.93	.44	.61	23.50
1937	.94	1.78	1.02	.97	.74	.98	3.26	5.88	1.92	.57	.85	.34	19.25
1938	.57	2.46	1.98	.91	.61	.69	3.64	5.59	1.93	2.48	.86	.97	22.69
1939	1.01	1.02	1.90	1.03	.37	.42	1.45	8.27	2.28	1.76	3.74	1.46	24.71
1940	2.05	2.80	2.32	.72	.40	.58	2.82	7.62	2.99	2.52	.56	.27	25.45
1941	.27	1.48	1.09	.97	.49	.43	4.32	5.11	1.46	3.38	.75	.94	20.69
1942	1.87	2.62	1.23	.68	.47	.61	3.07	7.52	2.77	1.24	.39	.16	22.63
1943	.19	.33	.31	.21	.17	.32	.71	8.28	3.37	1.09	.74	.57	16.29
1944	.98	3.28	.98	.28	.20	.14	.50	4.88	1.40	.80	.46	.27	14.17
1945	1.36	1.77	.96	.90	.64	.86	7.65	4.92	2.09	2.24	.86	.66	24.91
1946	1.33	1.11	.79	.58	.40	.70	3.27	8.78	2.11	.89	.46	.35	20.77
1947	.25	.71	1.09	.39	.75	.93	2.79	10.64	4.48	1.26	.55	.28	24.12
1948	.18	.36	.40	.27	.15	.23	3.45	6.69	2.47	.77	.70	.36	16.03
1949	.99	1.58	1.67	.97	.48	.51	4.86	4.51	1.93	1.26	.45	.25	19.46
1950	.25	.88	1.06	1.50	.84	.73	3.32	5.28	1.70	.90	.36	.22	17.04

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1930	696	9,380	May 8, 1930	139	1,440	1.65	22.48	1,470	22.88		
1931	711	5,110	Apr. 24, 25, 1931	142	890	1.01	13.71	1,070	16.71		
1932	726	7,530	Apr. 23, 1932	350	1,550	1.78	24.18	1,600	24.99		
1933	741	9,980	May 5, 1933	173	1,460	1.68	22.78	1,240	19.39		
1934	756	11,000	Apr. 26, 1934	130	1,307	1.50	20.36	1,406	21.86		
1935	781	7,900	May 1, 1935	188	1,246	1.43	19.42	1,058	16.49		
1936	801	8,210	Mar. 24, 1936	106	1,504	1.73	23.50	1,688	26.37		
1937	821	7,010	May 3, 1937	183	1,234	1.42	19.25	1,316	20.52		
1938	851	5,830	Apr. 29, 30, 1938	168	1,456	1.67	22.69	1,387	21.61		
1939	871	10,700	May 11, 1939	265	1,585	1.82	24.71	1,793	27.95		
1940	891	8,640	May 6, 7, 1940	192	1,629	1.87	25.45	1,353	21.12		
1941	921	8,460	Apr. 22, 1941	160	1,328	1.52	20.69	1,511	23.57		
1942	951	10,600	May 5, 1942	65	1,453	1.67	22.63	1,139	17.74		
1943	971	8,460	May 13, 14, 1943	106	1,045	1.20	16.29	1,329	20.70		
1944	1001	5,710	May 11, 12, 1944	70	906	1.04	14.17	833	13.02		
1945	1031	8,340	Apr. 14, 1945	229	1,599	1.84	24.91	1,542	24.05		
1946	1051	7,840	May 17, 1946	95	1,332	1.53	20.77	1,257	19.59		
1947	1081	11,000	May 8, 1947	95	1,547	1.78	24.12	1,476	23.01		
1948	1111	5,800	May 11, 1948	60	1,025	1.18	16.03	1,237	19.33		
1949	1141	5,700	Apr. 24, 1949	154	1,248	1.43	19.46	1,116	17.41		
1950	1171	6,330	Apr. 29, 30, 1950	75	1,094	1.26	17.04	-	-		

## 7. St. John River below Fish River, at Fort Kent, Maine 1/

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.

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 side of river, same datum.

Average discharge.--24 years (1926-50), 9,418 cfs.

Extremes.--1926-50: Maximum discharge, 121,000 cfs May 5, 1933 (gage height, 25.1 ft): minimum daily, 510 cfs Mar. 13-15, 1948.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	5,620	13,200	5,840	2,180	1,200	1,920	19,000	20,200	14,500	5,920	3,450	2,080	7,940
1928	9,160	24,200	12,600	5,110	2,670	1,780	17,000	60,200	18,500	7,620	5,650	4,220	14,100
1929	7,690	7,890	4,930	4,580	2,420	2,510	18,900	45,000	11,600	6,600	3,470	2,400	9,890
1930	5,660	5,710	2,060	3,900	2,070	2,450	15,200	46,700	16,900	9,400	6,660	4,250	10,100
1931	2,940	7,740	3,990	1,860	1,060	1,080	27,200	15,600	11,300	4,380	2,560	5,150	7,060
1932	10,500	11,200	5,610	5,080	2,580	1,750	33,300	28,900	7,610	9,150	7,070	11,400	11,400
1933	7,460	12,300	5,190	2,860	1,560	1,210	16,600	52,900	10,600	6,520	1,980	1,800	10,100
1934	4,683	4,125	2,086	1,316	1,006	1,106	38,370	36,870	9,893	6,535	3,671	2,377	9,341
1935	4,492	9,968	8,423	3,086	1,743	1,742	18,700	28,210	14,920	7,803	2,580	2,293	8,690
1936	2,812	2,213	2,627	1,519	1,235	23,590	25,660	42,130	11,030	3,862	2,263	4,715	10,350
1937	8,063	8,359	3,617	6,379	3,550	3,038	20,810	32,440	10,820	3,535	7,536	4,997	9,459
1938	8,736	13,460	7,016	2,414	2,426	1,940	25,550	28,030	6,724	9,275	7,955	10,800	10,380
1939	7,197	5,212	9,448	3,139	1,376	1,252	6,875	47,830	13,940	8,992	16,400	6,043	10,730
1940	11,620	10,570	7,595	1,926	1,161	1,125	12,570	41,270	19,050	10,420	2,120	1,873	10,150
1941	1,970	10,430	3,916	3,892	1,893	1,396	30,150	16,950	7,589	9,604	3,280	7,518	8,205
1942	10,310	14,310	4,638	2,909	1,528	2,101	20,730	42,290	13,440	4,541	2,155	1,190	10,060
1943	2,901	3,398	1,483	900	688	1,023	5,141	50,550	15,860	6,422	4,781	2,832	8,071
1944	8,960	17,210	2,816	1,185	790	669	3,298	29,960	6,485	4,702	3,455	3,564	6,952
1945	10,060	5,083	2,480	3,397	2,138	4,805	45,570	22,610	11,370	10,790	3,479	5,858	10,630
1946	8,935	5,239	2,886	2,128	1,610	4,510	22,050	40,990	7,132	3,918	3,698	2,053	8,838
1947	6,952	7,432	2,386	2,149	3,941	3,500	14,870	64,120	21,800	10,130	5,813	2,127	12,330
1948	1,578	1,367	1,411	871	562	1,294	21,730	35,490	7,644	4,654	3,469	1,645	6,330
1949	5,375	8,098	7,039	3,016	1,958	2,631	28,820	19,390	8,438	3,813	1,924	2,909	7,785
1950	2,064	4,468	4,621	5,539	2,914	2,795	17,940	20,920	11,340	5,770	2,694	3,381	7,046

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	1.14	2.59	1.19	0.44	0.22	0.39	3.73	4.09	2.84	1.20	0.70	0.41	18.94
1928	1.86	4.74	2.55	1.04	.51	.36	3.34	12.22	3.63	1.54	1.14	.83	33.76
1929	1.56	1.55	1.00	.93	.44	.51	3.70	9.12	2.28	1.34	.70	.47	23.60
1930	1.15	1.12	.42	.79	.38	.50	2.98	9.46	3.31	1.90	1.35	.83	24.19
1931	.60	1.52	.81	.38	.19	.22	5.33	3.16	2.22	.88	.52	1.01	16.84
1932	2.13	2.20	.71	1.03	.45	.36	6.53	5.86	1.50	1.86	1.43	2.23	26.29
1933	1.51	2.41	1.05	.54	.29	.25	3.26	10.72	2.08	1.33	.40	.35	24.19
1934	.95	.81	1.42	.82	.18	.22	7.52	7.47	1.94	1.28	.74	.47	20.72
1935	.91	1.95	1.71	.82	.32	.35	3.67	5.72	2.92	1.58	.52	.45	20.72
1936	.57	.43	.53	.31	.23	4.78	5.03	8.53	2.16	.78	.46	.92	24.73
1937	1.64	1.64	.73	1.29	.65	.62	4.08	6.57	2.12	.72	1.52	.98	22.56
1938	1.78	2.64	1.42	.49	.44	.39	5.01	5.68	1.32	1.88	1.61	2.12	24.78
1939	1.45	1.02	1.91	.64	.25	.25	1.30	9.70	2.73	1.82	3.32	1.18	25.57
1940	2.35	2.08	1.53	.59	.22	.23	2.47	8.36	3.74	2.11	.43	.37	24.28
1941	.40	2.04	.79	.79	.35	.28	5.91	3.44	1.48	1.95	.66	1.47	19.56
1942	2.09	2.80	.94	.59	.28	.43	4.06	8.57	2.63	.92	.44	.23	23.98
1943	.59	.67	.30	.18	.13	.21	1.01	10.24	3.11	1.30	.97	.56	19.67
1944	1.81	3.37	.57	.24	.15	.14	.65	6.08	1.27	.95	.70	.70	16.23
1945	2.03	1.00	.50	.69	.39	.97	8.94	4.58	2.23	2.19	.70	1.15	25.37
1946	1.81	1.04	.58	.43	.33	.91	4.33	8.30	1.40	.79	.75	.40	21.07
1947	1.41	1.46	.42	.44	.72	.71	2.51	12.95	4.27	2.05	1.38	.42	29.42
1948	.32	.27	.29	.18	.11	.26	4.26	7.19	1.50	.94	.70	.32	18.34
1949	1.09	1.58	1.43	.61	.36	.53	5.66	3.93	1.65	.77	.39	.57	18.57
1950	.42	.88	.94	1.12	.53	.57	3.51	4.24	2.22	1.16	.55	.66	16.80

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1927	641	66,500	Apr. 24, 1927		990	7,940	1.40	18.94	9,710
1928	661	90,000	May 8, 1928		1,180	14,100	2.48	33.76	12,000
1929	681	78,200	May 6, 1929		1,330	9,890	1.74	23.60	9,290
1930	696	86,500	May 4, 1930		1,500	10,100	1.78	24.19	10,200
1931	711	48,400	Apr. 24, 1931		970	7,060	1.24	16.84	7,940
1932	726	69,600	Apr. 24, 1932		1,600	11,000	1.93	26.29	11,000
1933	741	121,000	May 5, 1933		940	10,100	1.78	24.19	9,960
1934	756	95,700	Apr. 26, 1934		940	9,341	1.64	22.27	10,340
1935	781	75,400	May 2, 1935		1,140	8,690	1.53	20.72	7,417

1/ Published as "at Fort Kent" prior to Oct. 1, 1931.

Yearly discharge, in cubic feet per second, of St. John River below Fish River,  
at Fort Kent, Maine--Continued

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1936	801	82,000	Mar. 23, 1936	1,170	10,350	1.82	24.73	11,390	27.21
1937	821	60,700	May 1, 1937	2,200	9,459	1.66	22.56	10,220	24.39
1938	851	70,200	Apr. 22, 1938	1,430	10,380	1.82	24.78	9,781	23.32
1939	871	115,000	May 11, 1939	1,150	10,730	1.89	25.57	11,390	27.15
1940	891	87,000	May 5, 1940	1,040	10,150	1.78	24.28	9,007	21.55
1941	921	109,000	Apr. 22, 1941	1,150	8,205	1.44	19.56	9,294	22.16
1942	951	115,000	May 5, 1942	900	10,050	1.77	23.98	8,252	19.71
1943	971	89,000	May 13, 1943	640	8,071	1.42	19.27	9,834	23.46
1944	1001	73,400	May 7, 1944	610	8,952	1.22	16.63	6,018	14.41
1945	1031	78,000	Apr. 3, 1945	1,430	10,630	1.87	25.37	10,590	25.27
1946	1051	69,100	May 18, 1946	1,110	8,838	1.55	21.07	8,960	21.37
1947	1081	114,000	May 9, 1947	1,520	12,330	2.17	29.42	11,140	26.57
1948	1111	60,100	May 10, 1948	510	6,830	1.20	16.34	8,180	19.56
1949	1141	49,100	May 4, 1949	870	7,785	1.37	18.57	7,000	16.71
1950	1171	66,600	Apr. 23, 1950	1,460	7,046	1.24	16.80	-	-

#### 8. Madawaska River at Ste. Rose du Degele, Quebec

Location--Lat 47°33'30", long. 68°38'00", on right highway bridge abutment a fifth of a mile east of Temiscouata railroad station, 2 miles downstream from mouth of Lake Temiscouata, and 21 miles northwest of Edmundston, Province of New Brunswick, Canada.

Drainage area--1,010 sq mi, approximately (revised).

Gage--Staff gage. Datum of gage is 475.70 ft above mean sea level, unadjusted.

Cooperation--Records furnished by International Commission, River St. John.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1910	-	-	-	-	-	-	-	#7,190	2,770	1,050	721	413	-
1911	414	891	#520	-	-	-	-	#6,280	2,410	1,080	598	426	-
1912	375	326	-	-	-	-	-	-	-	-	-	-	-

\* Not previously published; partially estimated on basis of weather records and records for nearby streams.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1910	-	-	-	-	-	-	-	#7.12	2.74	1.04	0.71	0.41	-
1911	0.41	0.88	#0.51	-	-	-	-	#6.22	2.39	1.07	.59	.42	-
1912	.37	.32	-	-	-	-	-	-	-	-	-	-	-

\* Not previously published; see footnote to preceding table.

#### 9. St. John River at Van Buren, Maine

Location--Lat 47°09'35", long. 67°55'55", on second pier from Van Buren side of International Bridge on route between Van Buren, Aroostook County, and St. Leonard, New Brunswick, 13 miles above Grand Falls, New Brunswick.

Drainage area--8,270 sq mi, approximately.

Gage--Staff gage. Datum of gage is 407.69 ft above mean sea level, unadjusted. Prior to Mar. 20, 1911, staff gage 700 ft downstream at same datum.

Average discharge--20 years (1908-28), 14,100 cfs.

Extremes--1908-28: Maximum discharge, 135,000 cfs (revised) May 2, 1923 (gage height, 29.2 ft); minimum daily, 720 cfs Mar. 18, 1923.

Cooperation--Station established by International Commission, River St. John, and maintained by that Commission until May 6, 1912. Winter gage heights at Grand Falls, New Brunswick, furnished by H. S. Ferguson, consulting engineer, New York, N. Y., and New Brunswick Electric Power Commission, St. John, New Brunswick, Canada.



Monthly and yearly mean discharge, in cubic feet per second, of St. John River at Van Buren, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1908	-	-	-	-	-	-	-	\$90,900	38,600	11,500	*7,540	*2,510	-
1909	*2,710	*2,130	*2,730	*2,250	*2,520	*3,220	*19,000	*74,100	19,300	15,900	9,820	18,000	*14,400
1910	23,400	13,900	*11,600	*7,340	*4,160	*6,090	*53,800	*35,800	18,500	4,890	4,690	3,570	*15,700
1911	3,430	7,050	1,800	1,340	1,010	1,070	12,900	53,500	13,200	5,410	5,840	3,880	9,270
1912	3,570	*5,530	*5,040	*2,630	*1,550	*1,490	*30,100	*69,100	*42,400	*6,720	*14,500	*5,660	*15,700
1913	*10,900	*24,300	*13,500	*7,380	*4,080	*10,600	*47,600	*38,600	*19,700	*9,610	*4,200	*3,220	*16,200
1914	*6,860	*9,240	*6,560	2,590	2,510	2,510	11,500	61,100	19,100	5,660	*3,030	*5,070	*11,400
1915	7,160	*7,270	6,320	3,030	3,350	8,390	38,900	47,500	12,300	8,250	*4,570	5,220	*12,700
1916	11,200	10,000	7,580	5,380	4,210	5,340	37,900	35,200	16,600	10,900	*4,760	*2,630	*12,600
1917	7,730	5,400	9,180	4,630	2,580	2,300	28,200	60,300	44,400	18,100	7,500	*3,620	*16,100
1918	8,920	18,100	4,570	2,240	1,630	1,630	26,700	54,800	17,500	22,500	8,770	9,690	14,800
1919	11,800	14,300	7,900	5,850	3,560	4,980	39,400	78,400	15,700	5,800	5,060	5,450	16,600
1920	5,190	6,930	4,020	1,860	1,200	3,410	35,300	55,800	17,200	15,500	7,380	10,600	13,700
1921	21,400	11,600	6,910	4,720	3,100	12,700	52,700	30,100	5,830	*3,630	6,570	*3,820	*13,600
1922	14,700	8,950	6,550	3,370	2,130	3,370	36,000	29,400	36,700	16,600	4,000	2,160	13,700
1923	2,840	2,400	1,350	1,150	865	770	8,420	65,800	12,100	4,330	3,260	5,880	9,000
1924	6,850	14,800	16,600	4,890	2,910	2,290	8,740	82,900	16,600	5,790	3,880	5,260	14,400
1925	6,670	7,630	6,480	2,980	3,260	4,500	36,300	53,900	15,300	8,930	6,570	6,000	13,500
1926	18,300	25,200	10,800	4,300	2,340	1,650	2,550	68,100	24,900	7,650	2,670	6,120	14,700
1927	10,300	21,400	9,590	3,750	2,270	2,840	27,100	32,500	23,800	9,020	6,400	4,170	12,800
1928	12,600	37,000	21,100	8,990	4,420	2,960	29,300	78,100	28,800	12,600	10,300	6,430	21,100

\* Revised.

\* Not previously published; estimated on basis of weather records and records for station at Grand Falls, N. B.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1908	-	-	-	-	-	-	-	*12.68	5.21	1.60	*1.05	*0.34	-
1909	*0.38	*0.29	*0.38	*0.31	*0.32	*0.45	*2.57	*10.33	2.60	2.21	1.37	2.43	*23.64
1910	3.26	1.87	*1.61	*1.02	.52	*.85	*7.26	*4.99	2.50	.68	.65	.48	*25.69
1911	.48	.95	.25	.19	.15	1.74	7.46	1.78	.75	.81	.52	.15	15.21
1912	.50	*.75	*.70	*.37	*.20	*.21	*4.06	*9.64	*5.72	*1.94	*2.02	*.76	*25.87
1913	*1.52	*3.28	*1.88	*1.03	*.51	*1.48	*6.43	*5.38	*2.66	*.34	*.59	*.43	*26.53
1914	*.96	*1.25	*.91	.36	.29	.35	1.55	8.53	2.58	.79	*.42	*.68	*18.67
1915	1.00	*.98	.88	.42	.42	1.16	5.24	6.62	1.66	1.15	*.64	.70	*20.87
1916	1.56	1.35	1.06	.75	.55	.74	5.11	4.91	2.24	1.52	*.66	*.35	*20.80
1917	1.08	.77	1.28	.65	.32	.32	3.80	8.40	5.99	2.25	1.05	*.49	*26.43
1918	1.24	2.44	.64	.31	.21	.23	3.60	7.66	2.35	3.11	1.22	1.29	24.30
1919	1.65	1.93	1.10	.82	.45	.69	5.31	10.35	2.12	.81	.71	.74	27.28
1920	.72	.94	.56	.26	.16	.48	4.76	7.78	2.32	2.16	1.05	1.43	22.60
1921	2.99	1.56	.96	.66	.39	1.78	7.11	4.20	.79	*.51	.92	*.52	*22.39
1922	2.05	1.20	.91	.47	.27	.47	4.85	4.10	4.95	2.32	.56	.29	22.44
1923	.40	.32	.19	.16	.11	.11	1.14	9.18	1.63	.60	.45	.48	14.77
1924	.91	2.00	2.32	.68	.38	.32	1.18	11.55	2.24	.81	.54	.71	23.84
1925	.96	1.03	.90	.39	.41	.63	4.90	7.52	2.06	1.24	.92	.81	21.77
1926	2.55	3.40	1.51	.60	.29	.23	.34	9.49	3.36	1.07	.37	.83	24.04
1927	1.44	2.89	1.34	.52	.29	.40	3.66	4.53	3.21	1.26	.89	.56	20.99
1928	1.75	4.99	2.94	1.26	.58	.41	3.95	10.88	3.88	1.75	1.44	.87	34.70

\* Revised.

\* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Runoff in inches
		Discharge	Date					
1908	281,1231	a108,000	May 4, 1908*	-	-	-	-	-
1909	281,501	b134,000	May 13, 1909	*1,720	*14,400	*1.74	*23.64	*17,900
1910	281	-	-	*1,570	*15,700	*1.90	*25.69	*12,600
1911	301,501	b134,000	May 3, 1911	875	9,270	1.12	15.21	*9,430
1912	321,1231	-	-	*1,120	*15,700	*1.90	*25.87	*18,600
1913	351,1231	*119,000	Apr. 29, 1913*	*2,080	*16,200	*1.96	*26.53	*14,000
1914	381,1231	*105,000	May 12, 1914	1,880	*11,400	*1.38	*18.67	*11,200
1915	401,1231	*90,100	May 9, 1915	1,740	*12,700	*1.54	*20.87	*13,400
1916	431,1231	*85,300	Apr. 26, 1916*	*2,290	*12,600	*1.52	*20.80	*12,100
1917	451,1231	*94,000	June 20, 1917	*1,930	*16,100	*1.95	*26.56	*18,900
1918	471,1231	*105,000	May 2, 1918	1,520	14,800	1.79	24.30	24.66
1919	501,1231	*103,000	May 20, 1919	2,280	16,600	2.01	27.26	15,100
1920	501,1231	*105,000	May 11, 1920	1,050	13,700	1.66	22.60	15,700
1921	521,1231	*92,000	Apr. 30, 1921	*2,040	*13,600	*1.64	*22.39	*12,800
1922	541,1231	*109,000	June 20, 1922	1,330	13,700	1.66	22.44	11,700
1923	561,1231	*135,000	May 2, 1923	720	9,000	1.09	14.77	11,800
1924	581,1231	*111,000	May 17, 1924*	2,100	14,400	1.74	23.64	12,900
1925	601,1231	*96,000	May 7, 1925	1,800	13,500	1.61	21.77	16,000
1926	621,1231	*92,700	May 19, 1926	1,500	14,700	1.78	24.04	13,600
1927	641,1231	*88,200	Apr. 24, 1927	1,850	12,800	1.55	20.99	15,200
1928	661,1231	*118,000	May 8, 1928	2,440	21,100	2.55	34.70	-

\* Revised.

\* Not previously published.

a Maximum observed, not previously published.

b Maximum observed, revised.

## ST. JOHN RIVER BASIN

## 10. Millinocket Lake in T. 7, R. 9, Maine

Location.--Lat 46°18'25", long. 68°50'10", on Millinocket Stream at outlet of natural lake in T. 7, R. 9, Piscataquis County.

Drainage area.--74.1 sq mi.

Gage.--Staff gage.

Remarks.--Reservoir completed in 1943 for storage of water for power. Has usable capacity of 1,007,000,000 cu ft. Records of contents not available prior to December 1946.

Cooperation.--Records furnished by Maine Public Service Co.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1947	-	-	518	424	548	228	604	1,007	1,029	855	493	113
1948	42	57	38	38	28	47	493	1,018	1,018	796	717	399
1949	424	728	919	844	579	180	910	1,019	1,007	723	725	725
1950	717	868	930	976	880	335	980	1,010	1,038	1,018	736	678

## 11. Squapan Lake in T. 10, R. 4, Maine

Location.--Lat 46°33'25", long. 68°19'30", at dam on Squapan Stream in T. 10, R. 4, Aroostook County, 6 miles downstream from old dam (flooded out).

Drainage area.--67.1 sq mi.

Gage.--Staff gage. Datum of gage is 494.88 ft above mean sea level, datum of Bangor & Aroostook Railroad.

Remarks.--Reservoir completed in 1928 for storage of water for power, has usable capacity of 2,554,000,000 cu ft between gage heights 94.0 and 110.0 ft. Records of contents not available prior to September 1932.

Cooperation.--Records furnished by Maine Public Service Co.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1933	2,604	2,505	2,554	2,554	2,242	1,795	2,313	2,242	2,554	2,604	2,433	2,373
1934	2,517	2,554	2,554	2,196	1,992	1,881	2,289	2,457	2,592	2,616	2,579	2,457
1935	2,554	2,566	2,554	2,554	2,445	1,320	2,002	2,529	2,554	2,554	2,313	2,150
1936	1,936	1,826	1,881	1,914	1,547	2,058	2,493	2,542	2,529	2,554	2,604	2,579
1937	2,566	2,554	2,529	2,457	1,914	1,627	2,409	2,616	2,654	2,409	2,219	1,826
1938	1,447	1,753	1,892	1,795	1,709	1,517	2,277	2,616	2,642	2,679	2,642	2,692
1939	2,493	2,566	2,505	2,301	1,732	947	695	1,816	1,925	2,024	2,002	1,785
1940	1,925	2,173	2,409	2,092	1,330	713	1,784	2,554	2,554	2,554	2,277	2,056
1941	2,081	2,579	2,692	2,579	1,958	1,043	2,081	2,493	2,554	2,554	2,654	2,654
1942	2,679	2,679	2,629	2,505	1,903	1,408	1,350	2,433	2,679	2,566	2,104	1,233
1943	1,119	1,157	909	316	211	125	408	1,567	1,816	1,848	1,870	1,881
1944	2,081	2,313	1,836	1,567	856	148	291	966	1,100	1,100	1,043	1,090
1945	1,487	1,826	1,837	1,784	1,467	1,195	2,493	2,629	2,629	2,554	2,173	2,184
1946	2,254	2,196	2,046	1,925	1,753	1,100	1,547	2,289	2,254	2,116	1,881	1,597
1947	1,330	1,330	1,350	1,148	1,188	1,262	1,816	2,704	2,616	2,196	1,711	1,090
1948	59	67	0	0	0	0	816	1,527	1,607	1,447	1,320	1,100
1949	1,214	1,547	1,638	1,690	1,272	852	1,859	2,127	2,196	2,173	2,150	2,184
1950	1,980	2,104	2,301	2,301	1,837	1,487	2,433	2,629	2,642	2,597	2,230	1,925

## 12. 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.

Gage.--Water-stage recorder. Datum of gage is 436.40 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1948, at datum 2.0 ft higher. Prior to Oct. 31, 1933, chain gage on railroad bridge at datum 2.0 ft higher than present datum.

Average discharge.--20 years (1930-50), 2,442 cfs.

Extremes.--1930-50: Maximum discharge, 37,800 cfs Mar. 22, 1936; maximum gage height, 15.50 ft (present datum) Apr. 15, 1940 (backwater from ice); minimum daily discharge, 75 cfs Feb. 13-15, 1948.

Remarks.--Flow partly regulated by Millinocket and Squapan Lakes (see above), Machias Lake, and Rowe Lake. Runoff adjusted for change in contents in Squapan Lake since October 1932 and Millinocket Lake since December 1946.

Monthly and yearly mean discharge, in cubic feet per second (observed), of Arcoostook River at Washburn, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	-	-	-	-	-	554	596	-
1931	355	722	454	284	290	368	9,060	3,520	3,470	1,170	466	1,620	1,810
1932	4,310	3,270	653	1,150	687	725	12,000	6,170	1,310	924	1,220	2,760	2,930
1933	2,310	4,740	1,150	467	306	504	7,440	8,650	3,180	1,340	372	442	2,580
1934	1,110	1,420	676	488	412	663	14,290	6,454	2,351	1,190	782	704	2,539
1935	1,944	3,048	2,695	592	382	790	8,120	7,264	4,969	1,170	271	303	2,631
1936	280	558	667	528	573	10,440	8,942	9,381	2,433	758	568	1,607	2,908
1937	3,038	2,534	1,438	1,377	1,140	1,284	6,916	7,312	1,936	538	605	427	2,583
1938	1,238	3,064	1,940	517	638	520	6,364	7,564	2,156	4,489	1,243	1,470	2,609
1939	1,577	1,352	3,843	864	532	557	3,391	12,160	2,587	1,409	729	602	2,488
1940	2,135	3,256	1,909	575	587	565	8,317	9,278	5,231	2,223	356	564	2,913
1941	503	3,078	1,184	1,362	666	668	8,831	4,779	1,127	2,586	432	649	2,154
1942	1,505	3,083	1,241	915	613	1,437	8,233	8,708	3,728	815	491	520	2,609
1943	685	910	700	427	324	467	2,582	12,020	3,474	1,139	556	782	2,129
1944	2,606	5,712	980	546	404	1,468	5,980	1,737	758	568	830	1,834	1,834
1945	5,647	2,747	1,252	1,116	890	2,192	12,450	7,186	2,042	1,948	690	1,311	3,123
1946	2,140	1,955	895	733	554	1,470	7,646	9,757	1,416	1,135	836	606	2,439
1947	558	1,476	1,252	648	1,263	1,030	4,748	14,810	4,619	1,477	982	609	2,801
1948	515	469	351	167	101	324	6,432	8,000	1,852	567	489	414	1,641
1949	1,250	2,832	2,145	1,294	822	1,490	10,300	4,094	1,374	681	427	392	2,254
1950	468	1,429	1,353	1,966	971	1,293	7,910	5,267	1,508	996	819	777	2,063

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1933	1.65	3.24	0.83	0.33	0.11	0.24	5.27	6.13	2.28	0.97	0.22	0.29	21.56
1934	.83	.99	.48	.25	.21	.44	9.95	4.64	1.65	.84	.55	.45	21.28
1935	1.41	2.10	1.91	.42	.22	.26	5.77	5.32	3.42	.83	.13	.17	21.96
1936	.14	.36	.49	.38	.28	7.56	4.90	6.69	1.67	.55	.42	1.10	24.54
1937	2.16	1.74	1.02	.96	.59	.84	4.98	5.26	1.34	.32	.38	.19	19.78
1938	.78	2.19	1.42	.34	.39	.42	4.59	5.48	1.50	3.20	.86	1.03	22.22
1939	1.07	.95	2.72	.56	.39	.19	2.26	8.95	1.81	1.03	.51	.37	20.61
1940	1.56	2.31	1.42	.33	.19	.24	6.01	6.80	3.60	1.58	.18	.33	24.55
1941	.36	2.25	.87	.94	.27	.23	6.38	3.52	.79	1.84	.33	.45	18.21
1942	1.08	2.12	.87	.62	.23	.89	5.68	6.48	2.63	.55	.22	.13	21.48
1943	.46	.60	.43	.15	.18	.31	1.85	9.57	2.46	.82	.61	.53	17.97
1944	1.90	3.99	.60	.30	.10	.07	1.05	4.44	1.23	.54	.39	.58	15.19
1945	2.70	1.99	.89	.78	.49	1.49	8.91	5.15	1.40	1.37	.39	.90	26.39
1946	1.54	1.33	.60	.49	.31	.87	5.39	7.14	.97	.77	.53	.34	20.28
1947	.33	1.02	.90	.41	.82	.76	3.41	10.78	3.16	.94	.57	.25	23.35
1948	.07	.33	.23	.12	.06	.24	4.76	6.02	1.29	.30	.29	.14	13.85
1949	.85	2.12	1.60	.91	.35	.84	7.55	3.01	.96	.40	.30	.28	19.17
1950	.28	1.06	1.03	1.41	.47	.68	5.87	3.80	1.05	.64	.46	.44	17.19

Note.--Adjusted records for water years 1933, 1940-50 not previously published. Adjusted records for period Oct. 1, 1933, to Sept. 30, 1939, revised on basis of revised capacity curve for Squapan Lake storage.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1930	696	-	-	-	-	-	-	-	-	-	-
1931	711	13,500	Apr. 13, 1931	215	1,810	-	-	-	2,370	-	-
1932	726	20,900	Apr. 13, 1932	256	2,930	-	-	-	2,920	-	-
1933	741	24,000	May 4, 1933	150	2,580	2,573	1.59	21.56	2,162	2,150	18.14
1934	756	36,200	Apr. 21, 1934	126	2,539	2,541	1.57	21.28	2,915	2,915	24.40
1935	781, 951	23,300	May 1, 1935	94	2,631	2,621	1.62	21.96	2,113	2,092	17.53
1936	801	37,800	Mar. 22, 1936	159	2,908	2,922	1.80	24.54	3,369	3,389	28.47
1937	821	15,500	Apr. 30, 1937	131	2,383	2,359	1.46	19.78	2,316	2,296	19.25
1938	851	17,500	Apr. 21, 1938	132	2,609	2,636	1.65	22.22	2,659	2,678	22.57
1939	871	30,100	May 11, 1939	360	2,468	2,460	1.58	20.61	2,527	2,525	21.16
1940	891	30,900	Apr. 14, 1940	214	2,913	2,921	1.80	24.55	2,699	2,708	22.74
1941	921	27,100	Apr. 22, 1941	251	2,154	2,173	1.34	18.21	2,244	2,242	16.00
1942	951	26,000	Apr. 28, 1942	140	2,609	2,564	1.58	21.48	2,314	2,259	18.80
1943	971	24,400	May 13, 1943	290	2,129	2,150	1.33	17.97	2,710	2,743	22.97
1944	1001	16,300	Nov. 11, 1943	167	1,854	1,809	1.12	15.19	1,702	1,699	14.28
1945	1031	21,000	Apr. 5, 1945	312	3,123	3,158	1.95	26.39	2,900	2,907	24.35
1946	1051	22,900	Apr. 28, 1946	332	2,439	2,420	1.49	20.28	2,295	2,273	19.06
1947	1081	31,800	May 8, 1947	387	2,801	2,785	1.72	23.35	2,638	2,580	21.62
1948	1111	14,200	May 20, 1948	75	1,641	1,650	1.02	13.85	2,049	2,081	17.79
1949	1141	14,000	Apr. 18, 1949	142	2,254	2,299	1.42	19.17	2,006	2,027	16.97
1950	1171	22,100	Apr. 23, 1950	327	2,063	2,053	1.27	17.19	-	-	-

Note.--See footnote to preceding table.

## 13. Aroostook River at Fort Fairfield, Maine

Location.--Lat 46°46'25", long. 67°49'55", on upstream side of bridge on route 165 at Fort Fairfield, Aroostook County, 3 miles upstream from the international boundary line and 7½ miles below the mouth of Little Madawaska Stream.

Drainage area.--2,230 sq mi, approximately.

Gage.--Chain gage. Altitude of gage is 340 ft (from topographic map).

Average discharge.--7 years (1903-10), 3,333 cfs.

Extremes.--1903-10: Maximum discharge, 34,500 cfs May 1, 1907 (gage height, 15.05 ft); minimum, 130 cfs several times during August, September, and October 1905 (gage height, 3.0 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	-	-	-	-	-	-	-	-	-	-
1904	*267	910	*1,160	*444	*286	*529	*4,110	*14,700	3,648	1,825	641	473	-
1905	3,352	1,348	*1,200	*636	*401	*389	*4,220	*6,940	2,644	785	291	184	*2,640
1906	162	390	*367	*455	*552	*805	*4,660	18,400	4,000	1,600	620	254	*2,710
1907	3,120	1,740	*1,420	*985	*496	*608	*4,520	17,300	6,160	5,350	5,180	2,290	*4,130
1908	3,150	6,050	*4,170	*1,840	*1,370	*1,470	*3,720	17,800	6,140	793	855	360	*3,990
1909	425	543	*731	*568	*666	*884	*6,480	16,500	2,410	*2,930	*2,830	5,940	*3,430
1910	6,810	4,880	*4,010	*1,920	*1,160	*1,590	*15,500	9,410	5,250	2,950	666	494	*4,560
1911	*581	*1,290	*305	-	-	-	-	-	-	-	-	-	-

\* Revised.

\* Not previously published; estimated on basis of weather records and records for nearby streams.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	-	-	-	-	-	-	-	-	-	-
1904	*0.14	0.46	*0.60	*0.23	*0.14	*0.27	*2.05	*7.60	1.83	0.94	.38	1.49	*16.13
1905	1.73	.67	*.62	*.33	*.19	*.20	*2.11	*3.58	1.32	.41	.15	.09	*11.40
1906	.08	.20	*.19	*.24	*.26	*.42	*2.33	9.51	2.00	.83	.32	.13	*16.51
1907	1.61	.87	*.73	*.51	*.23	*.31	*2.28	8.95	3.08	2.77	2.68	1.15	*25.15
1908	1.63	3.02	*2.16	*.95	*.66	*.76	*1.86	9.20	3.07	.41	*.44	.18	*24.34
1909	.22	.27	*.38	*.29	*.31	*.48	*3.25	8.53	1.20	*1.51	*1.46	2.97	*20.85
1910	3.52	2.44	*2.08	*.99	*.54	*.82	*7.75	4.86	2.62	1.52	.34	.25	*27.73
1911	*.30	*.64	*.16	-	-	-	-	-	-	-	-	-	-

\* Revised.

\* Not previously published; estimated on basis of weather records and records for nearby streams.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1904	124,1231	*30,100	May 2, 1904*	*155	*2,640	*1.18	*16.13	*2,940	*17.95	
1905	165	-	-	*130	*1,870	*.839	*11.40	*1,450	*8.85	
1906	201,1231	*28,400	May 7, 1906*	*130	*2,710	*1.22	*16.51	*3,160	*19.25	
1907	241,1231	*34,500	May 1, 1907*	*310	*4,130	*1.85	*25.15	*4,720	*28.75	
1908	241,1231	*32,000	May 3, 1908*	*180	*3,990	*1.79	*24.34	*3,020	*18.40	
1909	261,1231	*35,700	May 13, 1909*	*310	*3,430	*1.54	*20.85	*4,610	*28.02	
1910	281,1231	*31,100	Oct. 1, 1909*	*275	*4,560	*2.04	*27.73	*3,420	*20.79	

\* Revised.

\* Not previously published.

## 14. 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.

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

Average discharge.--10 years (1940-50), 244 cfs.

Extremes.--1940-50: Maximum discharge, 5,440 cfs May 5, 1947 (gage height, 8.56 ft); minimum, 3.6 cfs Sept. 19, 1946 (gage height, 2.09 ft).

Remarks.--Small diurnal fluctuation caused by sawmills above station.

## ST. JOHN RIVER BASIN

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Monthly and yearly mean discharge, in cubic feet per second, of Meduxnekeag River near Houlton, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	#63.1	#557	174	158	70.0	68.0	956	248	84.0	44.1	19.8	31.9	#205
1942	83.7	233	92	177	59.2	314	1,316	469	449	85.6	28.5	16.2	276
1943	36.7	103	79.5	24.5	64.1	155	674	912	181	85.0	49.0	42.5	201
1944	311	634	101	24.4	17.6	58.5	460	441	177	60.0	21.9	102	200
1945	535	512	210	268	89.1	335	1,374	731	168	75.6	24.5	79.5	367
1946	191	274	180	149	105	632	777	546	100	33.3	9.31	6.8	250
1947	17.2	100	141	67	207	188	930	1,118	372	299	100	53.5	300
1948	22.2	65.1	46.3	20.7	18.6	117	788	714	179	40.1	18.7	10.3	170
1949	76.8	354	259	311	98.6	303	1,002	249	91.4	38.4	14.7	71.9	239
1950	76.8	226	264	244	99.0	153	1,063	321	117	134	67.9	82.2	237

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	#0.42	#0.35	1.15	1.04	0.42	0.45	6.09	1.64	0.54	0.29	0.13	0.20	#15.92
1942	.55	1.48	.61	1.18	.35	2.06	8.39	3.09	2.87	.56	.19	.10	21.41
1943	.24	.66	.52	.16	.38	1.02	4.30	6.01	1.15	.56	.32	.27	15.59
1944	2.06	4.04	.67	.16	.11	.39	2.93	2.90	1.13	.40	.14	.65	15.57
1945	3.53	3.27	1.38	1.76	.53	2.20	8.76	4.82	1.07	.50	.16	.51	28.49
1946	1.26	1.75	1.19	.98	.62	4.16	4.95	3.60	.64	.22	.06	.04	19.41
1947	.11	.64	.93	.44	1.23	1.23	5.92	7.37	2.38	1.97	.66	.34	23.22
1948	.15	.42	.31	.14	.11	.77	5.02	4.70	1.14	.26	.12	.07	13.21
1949	.51	2.25	1.71	2.05	.59	1.99	6.39	1.64	.58	.25	.09	.46	18.51
1950	.51	1.44	1.74	1.60	.59	1.01	6.77	2.11	.75	.88	.45	.52	16.37

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1941	921	2,080	Apr. 18, 1941	8.7	#205	#1.17	#15.92	173	13.44
1942	951	3,190	Apr. 26, 1942	6.6	276	1.58	21.41	260	20.19
1943	971	2,470	Apr. 26, 1943	15	201	1.15	15.59	270	20.93
1944	1001,1031	2,580	Nov. 10, 1943	4.8	200	1.14	15.57	218	16.99
1945	1031	3,520	Apr. 3, 1945	6.7	367	2.10	28.49	316	24.51
1946	1051	2,700	Apr. 28, 1946	3.9	250	1.43	19.41	219	16.95
1947	1081	5,440	May 5, 1947	7.8	300	1.71	23.22	289	22.42
1948	1111	2,670	May 19, 1948	6.5	170	.971	13.21	216	16.80
1949	1141	1,490	Apr. 17, 1949	8.0	229	1.37	18.51	229	17.71
1950	1171	5,400	Apr. 22, 1950	14	237	1.35	18.37	-	-

\* Not previously published.

## ST. CROIX RIVER BASIN

15. 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.

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

Average discharge.--22 years (1928-50), 655 cfs.

Extremes.--1929-50: Maximum discharge, 4,010 cfs Mar. 23, 1936 (gage height, 8.81 ft); minimum, 1.9 cfs several times during October and November 1936 (gage height, 1.91 ft).

Remarks.--Flow regulated by Chiputneticook Lakes (combined usable capacity, about 13,200,000,000 cu ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	#390	561	698	462	1,080	862	337	1,190	1,200	827	868	441	#742
1930	152	325	697	782	555	438	276	1,090	1,020	586	314	452	558
1931	883	658	463	394	305	246	96.3	417	258	721	1,160	412	505
1932	124	264	300	468	714	571	944	1,260	688	558	579	691	596
1933	415	704	825	812	718	379	1,160	1,370	837	524	823	485	753
1934	257	278	336	582	655	862	1,791	1,225	1,011	874	659	611	761
1935	509	363	308	357	291	835	804	1,172	975	892	1,009	561	676
1936	617	469	152	551	489	1,487	1,798	1,005	1,567	1,010	886	1,297	943
1937	200	112	224	764	646	437	305	1,294	977	816	765	502	588
1938	620	384	362	545	722	373	75.4	718	662	529	631	364	498
1939	491	740	376	908	856	502	819	1,310	706	969	1,105	688	789
1940	640	352	262	927	657	353	97.4	230	828	1,120	615	809	574

\* Not previously published; estimated on basis of records for nearby streams.

Monthly and yearly mean discharge, in cubic feet per second, of St. Croix River at Vanceboro, Maine--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	695	600	604	995	1,079	763	149	595	1,173	682	538	419	689
1942	494	401	418	445	436	194	85.3	694	899	890	630	1,446	586
1943	887	507	472	383	310	346	221	193	497	1,128	796	950	560
1944	553	219	609	984	630	547	130	283	990	719	856	274	568
1945	121	161	523	551	1,358	689	1,143	2,801	538	1,449	567	763	887
1946	229	322	819	782	422	421	224	1,433	843	1,229	642	740	679
1947	504	334	440	419	549	303	204	998	1,262	1,362	922	676	666
1948	1,332	739	431	293	222	192	126	293	807	1,407	951	410	603
1949	226	214	225	476	993	474	151	598	1,066	1,096	785	354	551
1950	239	297	388	509	942	592	302	671	1,239	411	1,395	615	631

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	681	1,870	May 13, 1929	154	*742	-	-	702	-
1930	696	1,270	May 7, 1930	142	558	-	-	628	-
1931	711	1,450	Aug. 3, 4, 1931	22	505	-	-	394	-
1932	726	2,190	Apr. 22, 1932	22	596	-	-	701	-
1933	741	1,780	May 5, 1933	258	753	-	-	663	-
1934	756	3,650	Apr. 25, 1934	246	761	-	-	787	-
1935	781	2,080	May 2, 3, 6, 1935	198	676	-	-	681	-
1936	801	4,010	Mar. 23, 1936	65	943	-	-	884	-
1937	821	1,850	May 25, 1937	1.9	588	-	-	657	-
1938	851	1,590	May 21, 1938	15	498	-	-	518	-
1939	871	2,220	May 10, 11, 1939	85	789	-	-	760	-
1940	891	2,560	Aug. 30, 1940	63	574	-	-	628	-
1941	921	1,510	July 2, 1941	79	689	-	-	640	-
1942	951	2,850	Aug. 29, 1942	46	586	-	-	632	-
1943	971	1,590	Sept. 7, 1943	80	560	-	-	519	-
1944	1001	1,390	June 9, 1944	81	568	-	-	519	-
1945	1031	3,410	May 1, 2, 3, 4	111	887	-	-	935	-
1946	1051	1,880	May 10, 1946	127	679	-	-	671	-
1947	1081	2,670	June 5, 1947	110	866	-	-	769	-
1948	1111	2,170	Oct. 1, 1947	102	603	-	-	449	-
1949	1141	1,440	July 27, 1949	100	551	-	-	574	-
1950	1171	2,500	July 29, 1950	126	631	-	-	-	-

\* Not previously published.

## 16. Grand Lake Stream at Grand Lake Stream, Maine

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

Drainage area.--224 sq mi.

Average discharge.--22 years (1928-50), 329 cfs.

Extremes.--1928-50: Maximum discharge, 2,150 cfs Aug. 5, 1937 (gage height, 5.58 ft); minimum daily, 5 cfs Dec. 3-6, 11, 1945.

Remarks.--Flow regulated by Grand and other lakes (combined usable capacity, about 8,250,000,000 cu ft). Records affected by occasional small diversion through Farm Cove Dam.

Monthly and yearly mean discharge, in cubic feet per second.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*230	137	102	234	238	89.1	101	741	407	283	586	470	*302
1930	465	237	310	235	47.5	39.4	107	300	167	494	928	575	330
1931	330	205	116	257	291	235	49.7	17.7	54.9	167	142	277	178
1932	554	183	54.5	87.8	466	680	140	636	306	281	295	271	332
1933	301	244	122	228	440	731	421	693	377	350	458	290	338
1934	214	222	88	101	445	762	350	651	284	269	346	170	325
1935	237	250	103	244	1,117	666	197	165	524	183	172	430	351
1936	481	267	115	136	483	529	1,248	524	437	253	129	139	393
1937	802	264	181	400	631	347	123	837	321	348	952	575	482
1938	430	162	143	221	128	122	82.5	371	187	346	231	387	235
1939	501	373	147	279	585	468	506	142	645	658	697	414	450
1940	296	177	188	331	292	263	130	107	204	293	352	630	272
1941	500	295	386	443	395	287	134	181	356	367	508	295	346
1942	174	135	117	185	258	192	128	79.4	494	102	513	933	274
1943	448	358	513	295	252	248	158	127	404	446	536	369	330
1944	182	120	286	661	453	238	158	155	176	510	392	343	306
1945	308	161	125	153	168	182	622	1,127	378	249	1,065	719	440
1946	419	39.4	20.3	306	498	214	84.5	78.8	492	786	394	425	312
1947	373	257	268	298	139	124	148	133	620	416	540	687	334
1948	890	414	249	184	141	97.5	66.5	147	588	597	388	216	333
1949	849	127	210	258	393	273	69.8	515	571	516	171	103	259
1950	84.6	105	186	352	356	255	75.3	307	667	151	378	597	274

\* Not previously published; estimated on basis of records for nearby streams.

Yearly discharge, in cubic feet per second, of Grand Lake Stream at Grand Lake Stream, Maine									
Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	681	1,650	Aug. 10, 1929	44	4502	-	-	350	-
1930	696	1,430	July 23, 1930	35	330	-	-	298	-
1931	711	828	Sept. 29, 1931	11	178	-	-	190	-
1932	726	1,450	May 5, 1932	51	332	-	-	321	-
1933	741	1,090	Mar. 23, 1933	86	388	-	-	376	-
1934	756	1,360	May 7, 1934	80	325	-	-	351	-
1935	761	1,420	Feb. 5, 6, 1935	94	351	-	-	374	-
1936	811	1,680	Apr. 8, 1936	90	393	-	-	426	-
1937	821	2,150	Aug. 5, 1937	114	482	-	-	439	-
1938	851	800	May 17, 1938	43	235	-	-	259	-
1939	871	1,310	June 21, 1939	99	450	-	-	420	-
1940	891	1,380	Aug. 27, 1940	87	272	-	-	315	-
1941	921	918	June 23, 1941	75	346	-	-	282	-
1942	951	1,730	June 7, 1942	65	274	-	-	333	-
1943	971	834	Aug. 5, 1943	76	330	-	-	286	-
1944	1001	1,190	Jan. 19, 1944	70	306	-	-	307	-
1945	1051	1,680	Aug. 18, 1945	114	440	-	-	430	-
1946	1051	1,200	June 25, 1946	5	312	-	-	347	-
1947	1081	1,800	Sept. 26, 1947	79	334	-	-	389	-
1948	1111	838	Oct. 16, 1947	17	335	-	-	241	-
1949	1141	1,010	May 19, 1949	51	259	-	-	251	-
1950	1171	960	June 20, 1950	37	274	-	-	-	-

\* Not previously published.

† Maximum peak discharge; maximum discharge during the year, 1,540 cfs at 12:01 a.m., Oct. 1, stage falling.

## 17. St. Croix River near Baileyville, Maine

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

Drainage area.--1,320 sq mi, approximately.

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

Average discharge.--31 years (1919-50), 2,104 cfs.

Extremes.--1920-50: Maximum discharge, about 23,300 cfs May 1, 1923 (gage height, 13.90 ft); minimum daily discharge, 100 cfs (estimated) July 20, 1924, when plant was closed down.

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

Monthly and yearly mean discharge, in cubic feet per second.													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1920	*1,470	*1,580	1,640	1,300	1,010	1,420	9,510	5,880	1,710	1,600	1,670	1,750	*2,540
1921	2,510	2,010	2,390	1,840	1,530	3,810	4,020	2,120	1,140	1,450	1,530	1,010	2,120
1922	*723	*930	*1,020	*839	*596	1,890	3,300	1,370	1,020	1,820	1,910	2,030	*1,460
1923	1,380	1,410	1,250	1,470	1,310	1,110	4,110	7,490	1,720	1,740	1,700	1,990	2,230
1924	1,170	1,250	1,740	1,470	1,440	1,180	3,220	2,630	1,820	1,650	1,670	1,660	1,740
1925	1,330	1,040	979	943	1,100	2,480	3,070	1,350	1,500	1,420	1,300	1,290	1,480
1926	3,310	3,480	2,550	2,230	2,420	2,490	3,710	5,390	2,200	1,790	1,400	1,420	2,700
1927	2,430	2,770	2,210	2,200	1,990	2,870	2,690	3,360	3,120	1,440	1,440	1,380	2,310
1928	2,640	3,240	3,810	3,570	2,440	2,500	5,660	4,430	2,710	1,780	2,280	1,620	3,050
1929	1,660	1,550	1,570	1,860	1,640	2,310	4,040	5,290	2,200	1,630	1,410	1,210	2,200
1930	1,060	990	1,080	1,270	1,380	4,110	4,020	2,260	1,930	1,690	1,290	1,200	1,860
1931	1,080	994	935	774	829	1,310	3,420	1,550	1,580	1,580	1,400	1,510	1,410
1932	1,580	1,950	1,310	1,450	2,040	2,010	6,010	3,420	1,780	1,350	1,100	1,370	2,130
1933	2,350	2,630	1,400	1,590	1,830	2,170	5,850	3,050	1,890	1,440	1,170	1,350	2,190
1934	1,188	1,518	1,830	1,464	2,049	3,362	6,827	3,081	2,058	1,202	1,137	1,154	2,368
1935	1,426	2,255	1,702	1,913	1,922	2,220	5,834	3,547	2,351	1,467	1,237	1,271	2,257
1936	1,340	1,478	1,895	2,199	1,601	7,979	6,195	2,833	3,224	1,488	1,962	1,601	2,858
1937	1,443	1,494	3,113	2,249	1,810	2,017	2,595	4,586	2,288	1,635	1,538	1,572	2,200
1938	1,499	1,626	1,543	1,718	2,027	1,480	3,378	3,230	1,533	1,491	1,418	1,718	1,885
1939	1,939	1,858	1,736	3,082	1,861	2,166	2,588	4,856	4,013	1,945	1,805	1,796	2,407
1940	1,325	1,649	1,790	1,622	1,581	1,599	4,431	2,712	2,012	2,256	1,753	1,931	2,063
1941	1,975	2,358	1,706	2,085	1,935	1,981	3,144	1,808	1,542	1,212	1,312	1,093	1,843
1942	1,048	1,098	863	1,890	1,418	2,239	3,790	2,043	2,668	2,082	1,857	1,995	1,915
1943	1,779	1,226	1,652	1,164	1,010	1,422	2,077	2,848	1,838	1,703	1,860	1,826	1,706
1944	2,744	3,251	1,980	1,707	1,654	1,723	2,331	1,909	1,753	1,561	1,373	1,495	1,956
1945	1,771	2,216	1,754	2,140	2,002	2,568	6,046	7,550	2,100	1,915	1,558	1,717	2,782
1946	1,700	1,882	1,767	1,694	1,670	3,371	3,171	3,748	1,974	2,084	1,614	1,507	2,171
1947	1,096	858	929	1,202	2,138	1,927	2,924	4,315	4,166	2,941	1,600	1,807	2,198
1948	2,025	1,432	832	628	573	1,000	2,270	3,023	2,258	2,273	1,689	1,015	1,589
1949	777	838	1,276	2,516	2,021	1,926	2,782	2,272	2,049	1,717	1,416	838	1,700
1950	862	1,437	1,770	1,991	1,996	2,145	4,190	2,443	2,217	1,759	1,319	1,069	1,929

\* Revised.

\* Not previously published; estimated on basis of records for nearby streams.

Yearly discharge, in cubic feet per second, of St. Croix River near Baileyville, Maine

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1920	501	13,900	Apr. 15, 1920	-	*2,540	-	-	2,730	-
1921	521	7,360	Mar. 29, 1921	680	2,120	-	-	*1,760	-
1922	541, 1231	7,900	Aug. 29, 1922	*425	*1,460	-	-	*1,570	-
1923	561	23,300	May 1, 1923	674	2,230	-	-	2,240	-
1924	581	6,470	May 3, 1924	100	1,740	-	-	1,670	-
1925	601	6,020	Mar. 31, 1925	520	1,480	-	-	1,990	-
1926	621	10,100	May 2, 1926	934	2,700	-	-	2,540	-
1927	641	7,620	May 30, 1927	715	2,310	-	-	2,500	-
1928	661	12,000	Apr. 9, 1928	952	3,050	-	-	2,640	-
1929	681	9,510	May 4, 1929	798	2,200	-	-	2,060	-
1930	696	10,300	Apr. 9, 1930	690	1,860	-	-	1,850	-
1931	711	6,360	Apr. 13, 1931	510	1,410	-	-	1,570	-
1932	726	9,890	Apr. 13, 1932	633	2,110	-	-	2,240	-
1933	741	-	-	550	2,190	-	-	2,040	-
1934	756	13,700	Apr. 16, 1934	495	2,388	-	-	2,458	-
1935	781	10,400	Apr. 22, 1935	420	2,257	-	-	2,203	-
1936	811	16,900	Mar. 23, 1936	700	2,858	-	-	2,972	-
1937	821	8,690	May 16, 1937	157	2,200	-	-	2,083	-
1938	851	7,190	May 18, 1938	585	1,885	-	-	2,054	-
1939	871	10,300	Apr. 24, 1939	540	2,407	-	-	2,263	-
1940	891	16,900	Apr. 14, 1940	720	2,053	-	-	2,143	-
1941	921	5,880	Nov. 18, 1940	310	1,843	-	-	1,589	-
1942	951	6,600	June 18, 1942	385	1,915	-	-	2,054	-
1943	971	6,240	May 5, 1943	275	1,706	-	-	1,982	-
1944	1001	7,660	Nov. 9, 1943	375	1,956	-	-	1,769	-
1945	1031	12,800	May 20, 1945	510	2,782	-	-	2,749	-
1946	1051	7,850	Apr. 29, 1946	510	2,171	-	-	1,964	-
1947	1081	12,800	May 6, 1947	465	2,198	-	-	2,316	-
1948	1111	8,820	May 19, 1948	248	1,589	-	-	1,472	-
1949	1141	6,790	Jan. 6, 1949	385	1,700	-	-	1,799	-
1950	1171	19,500	Apr. 22, 1950	394	1,929	-	-	-	-

\* Revised.

\* Not previously published.

## 18. St. Croix River at Spragues Falls, near Baring, Maine 1/

Location.--Lat 45°10'00", long. 45°24'20", near right bank on downstream side of railroad bridge, 0.4 mile upstream from present dam of St. Croix Paper Co. at Woodland, Washington County.

Drainage area.--1,350 sq mi (revised), approximately.

Gage.--Chain gage. Altitude of gage is 130 ft (from topographic map).

Extremes.--1902-5: Maximum discharge, 14,750 cfs Apr. 12, 1904 (gage height, 12.55 ft, from graph based on gage readings); minimum, 525 cfs Oct. 14, 12, 1904 (gage height, 5.9 ft).

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	*3,040	*2,330	*2,730	*6,800	4,834	2,206	2,525	2,714	1,836	725	-
1904	723	1,029	1,837	*2,088	*1,057	*1,765	6,027	7,026	2,605	3,089	1,495	1,140	*2,503
1905	1,368	1,102	1,418	*1,180	*1,111	*1,184	4,531	2,494	2,267	3,210	1,420	964	*1,856

\* Revised.

\* Not previously published; estimated on basis of gage-height record and weather records.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1902	82	-	-	-	-	-	-	-	-
1903	97, 1231	-	-	-	-	-	-	-	-
1904	124	*14,750	Apr. 12, 1904*	525	*2,503	-	-	*2,526	-
1905	165, 201	-	-	690	*1,856	-	-	*2,521	-

\* Revised.

\* Not previously published.

Note.--Records for period Oct. 1, 1905, to Dec. 31, 1911, published in Water-Supply Papers 201, 241, 261, 281, and 301, have been found to be in error on the basis of re-study of the original data. Those records are not published herein and should not be used.

1/ Published as "at Woodland" after July 1, 1905.



## 19. 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.

Gage.--Water-stage recorder. Datum of gage is 37.22 ft above mean sea level, datum of 1929. Prior to Sept. 30, 1905, chain gage at railroad bridge 1,000 ft downstream and at different datum. Sept. 30, 1905, to Oct. 9, 1911, staff gage; Oct. 10, 1911, to Sept. 30, 1921, chain gage; both gages at same datum on highway bridge 800 ft upstream but at different datum from present gage.

Average discharge.--37 years (1905-21, 1929-50), 919 cfs.

Extremes.--1905-21, 1929-50: Maximum discharge, 11,500 cfs (revised), Sept. 30, 1909 (gage height, 14.75 ft, from graph based on gage readings), from rating curve extended above 4,000 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 coffer dam during reconstruction of highway bridge upstream.

Remarks.--Some storage in lakes above station. Records for Oct. 17, 1903, to Sept. 30, 1905, published in Water-Supply Papers 97, 124, 165, and 241, have been found to be in error on basis of re-study of the original data and comparisons with records for nearby stations. Those records are not published herein and should not be used.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1906	148	527	*635	*1,020	*404	*909	2,370	2,560	1,910	1,010	323	161	*1,000
1907	299	852	*578	*608	403	550	2,230	2,190	1,810	554	293	283	*871
1908	708	1,400	*1,310	*903	*1,050	*1,470	1,750	1,890	1,550	392	402	247	*1,090
1909	418	446	*483	*993	*970	*1,860	4,130	2,310	1,200	400	*272	1,050	*1,200
1910	1,350	1,430	*947	*871	*641	*1,220	1,770	2,150	1,050	718	283	242	*1,060
1911	*153	*123	293	*429	*239	*537	1,700	1,260	1,500	302	*158	247	*578
1912	229	461	*714	*401	*415	1,760	1,940	1,740	1,840	319	403	328	*879
1913	1,030	1,560	*1,090	*1,470	*568	*1,940	2,120	2,120	1,040	298	250	336	*1,160
1914	1,040	833	*802	409	*507	*1,500	3,020	2,120	1,010	378	421	*175	*1,020
1915	231	499	402	*533	*564	*309	1,000	2,760	910	1,070	576	320	*766
1916	329	440	811	487	448	705	1,820	2,140	1,440	1,010	436	617	890
1917	600	476	1,220	1,580	679	1,160	3,240	2,020	3,210	812	884	492	1,360
1918	1,390	1,020	416	325	411	630	3,180	2,460	1,200	720	396	976	1,090
1919	1,870	1,210	910	1,040	542	2,290	2,060	2,470	1,140	577	326	680	1,260
1920	416	941	701	261	235	1,790	5,840	2,080	1,070	596	250	303	1,700
1921	753	833	1,500	748	334	2,000	1,990	1,020	602	205	130	79.1	853
1930	304	435	264	660	711	2,840	2,430	1,090	389	330	233	182	824
1931	136	334	325	249	219	596	2,460	1,100	875	613	422	521	653
1932	890	817	612	836	599	554	2,920	979	424	387	358	265	802
1933	900	1,400	566	422	636	804	2,840	1,000	706	332	281	358	859
1934	1,009	805	811	597	625	1,260	3,923	1,404	843	376	264	594	1,041
1935	732	1,201	1,012	1,210	615	811	2,520	1,898	731	327	164	160	949
1936	141	562	756	1,100	590	3,633	2,468	993	719	379	277	300	995
1937	609	632	1,677	1,159	658	801	1,629	1,699	799	444	286	233	888
1938	708	957	1,055	1,004	947	726	1,888	1,724	664	526	427	705	943
1939	781	764	1,998	655	521	909	2,254	1,795	645	451	120	109	920
1940	170	583	978	355	195	396	3,242	2,236	600	603	133	843	860
1941	374	1,091	604	495	372	502	1,824	812	228	260	130	108	566
1942	280	529	516	739	296	2,087	2,287	1,400	1,303	502	198	171	860
1943	441	810	797	304	419	820	1,439	2,271	610	494	993	363	817
1944	1,794	2,225	821	278	269	687	1,918	872	409	224	93	674	853
1945	900	1,327	1,245	1,252	483	1,575	2,921	2,022	910	344	153	133	1,108
1946	628	1,019	744	780	661	1,752	2,293	1,368	344	149	144	99.6	832
1947	153	340	566	425	1,171	1,138	1,598	2,406	1,593	1,189	267	134	912
1948	362	323	241	146	210	696	1,256	2,408	855	271	128	82	581
1949	171	729	569	1,581	644	963	1,834	1,161	322	127	91	150	695
1950	223	734	890	895	697	872	2,449	959	445	410	379	251	765

\* Revised.

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1906	0.37	1.29	*1.60	*2.57	*0.92	*2.29	5.79	6.46	4.66	2.55	0.82	0.39	*29.70
1907	.75	2.08	*1.45	*1.53	.91	1.38	5.44	5.52	3.93	1.40	.74	.69	*22.82
1908	1.79	3.41	*3.31	*2.28	*2.48	*3.71	4.27	4.77	3.78	.99	1.01	.60	*32.40
1909	1.06	1.09	*1.22	*2.50	*2.21	*4.69	10.09	5.82	2.93	1.01	*.66	2.57	*35.85
1910	3.40	3.49	*2.29	*2.20	*1.46	*3.08	4.32	5.42	2.57	1.91	.71	.59	*31.44
1911	*.39	*.30	.74	*1.08	*.54	*1.36	4.15	3.19	3.66	.76	*.40	.60	*17.16
1912	.58	1.13	*1.80	*1.01	*.98	4.44	4.74	4.39	4.50	.80	1.02	.80	*26.19
1913	2.59	3.80	*2.76	*3.91	*1.29	*4.90	5.18	5.35	2.54	.73	.63	.82	*34.30
1914	2.63	2.03	2.02	*1.03	*1.16	*3.78	7.38	5.35	2.47	.95	1.06	*.43	*30.29
1915	.58	1.19	1.01	*1.35	*1.28	*.78	2.44	6.96	2.22	2.70	1.45	.78	*22.74
1916	.83	1.07	2.04	1.23	1.06	1.78	4.44	5.40	3.51	2.55	1.10	1.51	26.52
1917	1.51	1.16	3.08	1.38	1.55	2.93	7.91	5.10	7.83	2.05	2.22	1.20	40.55
1918	3.50	2.49	1.05	.82	.94	1.59	7.76	6.20	2.93	1.82	1.00	2.39	32.49
1919	4.71	2.96	2.29	2.63	1.24	5.78	5.03	6.23	2.78	1.45	.82	1.66	37.58
1920	1.05	2.30	1.76	.66	.55	4.52	14.26	5.25	2.61	1.50	.63	.74	35.83
1921	1.90	2.03	3.78	1.89	.76	5.05	4.85	2.57	1.47	.52	.33	.19	25.34

\* Revised.

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Monthly and yearly runoff, in inches, of Machias River at Whitneyville, Maine--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	.77	1.06	.67	1.66	1.62	7.16	5.94	2.76	.95	.83	.59	.44	24.45
1931	.34	.82	.82	.63	.50	1.50	6.00	2.78	2.13	1.54	1.06	1.27	19.39
1932	2.25	2.00	1.54	2.11	1.41	1.40	7.13	2.47	1.04	.98	.90	.65	23.68
1933	2.27	3.41	1.43	1.06	1.45	2.03	6.93	2.52	1.72	.84	.96	.67	25.49
1934	2.55	1.96	2.04	1.51	1.43	3.18	9.57	3.54	2.05	.95	.67	1.45	30.90
1935	1.84	2.93	2.55	3.06	1.41	2.04	6.15	4.78	1.78	.83	.41	.39	28.17
1936	.36	1.37	1.90	2.78	1.39	9.16	6.02	2.50	1.75	.96	.70	.73	29.62
1937	1.53	1.54	4.23	2.93	1.50	2.02	3.97	4.29	1.95	1.12	.72	.57	26.37
1938	1.79	2.33	2.66	2.54	2.16	1.83	4.61	4.35	1.62	1.33	1.08	1.72	28.02
1939	1.97	1.86	5.04	1.65	1.19	2.29	5.50	4.53	1.57	1.14	.30	.27	27.31
1940	.43	1.43	2.47	.90	.46	1.00	7.91	5.64	1.46	1.52	.34	2.05	25.61
1941	.94	2.67	1.52	1.24	.85	1.27	4.45	2.05	.56	.66	.33	.26	16.80
1942	.71	1.29	1.30	1.87	.67	5.27	5.58	3.53	3.18	1.27	.47	.42	25.56
1943	1.11	1.98	2.01	.77	.95	2.06	3.51	5.73	1.48	1.24	2.50	.89	24.23
1944	4.53	5.43	2.08	.70	.64	1.73	4.69	2.20	1.00	.56	.24	1.64	25.44
1945	2.27	3.24	3.14	3.16	1.10	3.98	7.13	5.10	2.22	.87	.39	.32	32.92
1946	1.58	2.49	1.88	1.97	1.51	4.42	5.60	3.45	.84	.38	.36	.24	24.72
1947	.39	.83	1.43	1.07	2.67	2.87	3.90	6.06	3.66	3.00	.67	.33	27.08
1948	.91	.79	.61	.37	.50	1.75	3.07	6.08	2.04	.68	.32	.20	17.32
1949	.43	1.78	1.44	3.99	1.47	2.43	4.47	2.93	.79	.32	.23	.37	20.65
1950	.56	1.80	2.25	2.26	1.59	2.20	2.98	2.42	1.09	1.03	.96	.61	22.75

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1906	241,1231	\$5,570	Apr. 16, 1906*	40	\$1,000	\$2.19	\$29.70	\$1,030	\$30.74
1907	241,1231	\$5,080	Apr. 25, 1907*	10	\$871	\$1.91	\$25.82	\$1,010	\$30.05
1908	241,1231	\$4,130	May 2, 1908*	77	\$1,090	\$2.39	\$32.40	\$915	\$27.26
1909	261,1231	\$11,500	Sept. 30, 1909	-	\$1,200	\$2.63	\$35.85	\$1,410	\$41.76
1910	281,1231	\$5,350	Nov. 27, 1909*	105	\$1,060	\$2.32	\$31.44	\$795	\$23.59
1911	301,1231	\$4,800	Mar. 30, 1911*	\$60	\$578	\$1.26	\$17.16	\$648	\$19.24
1912	321,1231	\$5,730	June 1, 1912*	132	\$879	\$1.52	\$26.19	\$1,070	\$31.74
1913	351,1231	\$6,500	Oct. 26, 1912*	121	\$1,160	\$2.54	\$34.30	\$1,070	\$31.83
1914	381,1231	\$5,790	Apr. 10, 1914*	\$45	\$1,020	\$2.23	\$30.29	\$889	\$26.39
1915	401,1231	\$7,020	May 3, 1915*	30	\$766	\$1.68	\$22.74	\$805	\$23.90
1916	431,1231	\$4,430	May 18, 1916	178	890	1.95	26.52	951	28.33
1917	451,1231	\$7,000	June 18, 1917	221	1,360	2.98	40.53	1,410	41.82
1918	471,1231	\$6,010	Apr. 23, 1918*	160	1,090	2.39	32.49	1,190	35.41
1919	501,1231	\$5,800	Apr. 27, 1919	221	1,260	2.76	37.56	1,100	32.73
1920	501,1231	\$9,310	Apr. 7, 1920	61	1,200	2.63	35.83	1,290	38.43
1921	521,1231	\$4,580	Dec. 16, 1920	40	853	1.87	25.34	-	-
1930	696	5,530	Mar. 13, 1930	100	824	1.80	24.45	806	23.93
1931	711	4,690	Apr. 3, 1931	45	653	1.43	19.39	781	23.20
1932	726	6,100	Apr. 2, 1932	97	802	1.75	23.88	846	25.20
1933	741	6,200	Oct. 29, 1932	107	859	1.88	25.49	840	24.33
1934	756	7,000	Apr. 14, 1934	128	1,041	2.28	30.90	1,067	31.67
1935	781	4,990	Apr. 17, 1935	92	949	2.08	28.17	824	24.48
1936	811	10,000	Mar. 20, 1936	84	995	2.18	29.62	1,119	33.29
1937	821	4,370	Dec. 12, 1936	134	888	1.94	26.37	870	25.85
1938	851	4,470	Oct. 25, 1937	125	943	2.06	28.02	1,014	30.11
1939	871	5,700	Apr. 22, 1939	51	920	2.01	27.31	766	22.77
1940	891	9,420	Apr. 14, 1940	3.5	860	1.88	25.61	887	26.41
1941	921	3,430	Nov. 16, 17, 1940	23	566	1.24	16.80	504	14.97
1942	951	-	Aug. 10, 1942	62	860	1.88	25.56	921	27.36
1943	971	6,850	Aug. 14, 1943	104	817	1.79	24.23	1,050	31.17
1944	1001	5,000	Nov. 24, 1943	37	853	1.87	25.44	740	22.05
1945	1031	5,310	May 19, 1945	45	1,108	2.42	32.92	1,017	30.22
1946	1051	4,730	Nov. 23, 1945	33	832	1.82	24.72	721	21.42
1947	1081	8,010	May 6, 1947	91	912	2.00	27.08	901	26.74
1948	1111	7,070	May 19, 1948	53	581	1.27	17.32	626	18.66
1949	1141	4,740	Jan. 7, 1949	51	695	1.52	20.65	727	21.61
1950	1171	7,630	Apr. 22, 1950	57	765	1.67	22.75	-	-

\* Revised.

\* Not previously published.

\* Maximum peak discharge; maximum discharge during the year, 11,000 cfs at 12:01 a.m., Oct. 1, stage falling.

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 and 3 miles upstream from East Machias, Washington County.

Drainage area.--251 sq mi.

Gage.--Staff gage. Datum of gage is 35.9 ft above mean sea level, datum of 1929.

Average discharge.--23 years (1927-50), 480 cfs.

Extremes.--1926-50: Maximum discharge, 3,010 cfs Mar. 20, 1936 (gage height, 7.29 ft); minimum, 8.4 cfs Nov. 8, 1947 (gage height, -0.35 ft).

Monthly and yearly mean discharge, in cubic feet per second, of East Machias River near East Machias, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	543	741	449	-	-	-	707	510	550	528	410	381	-
1928	729	908	976	808	487	440	1,310	915	504	298	*155	*127	*638
1929	*197	248	410	687	284	359	1,250	1,860	710	281	106	*100	*543
1930	*126	252	230	454	394	1,320	1,370	464	257	170	73.2	32.6	*428
1931	30.8	116	236	208	145	253	1,170	540	356	257	177	199	306
1932	448	442	370	550	442	296	1,630	470	202	270	202	147	454
1933	299	861	358	285	432	571	1,380	431	412	207	160	238	470
1934	594	673	549	416	450	764	2,009	939	320	187	85.8	271	604
1935	425	791	760	844	359	423	1,407	1,163	630	246	49.6	36.6	595
1936	42.4	220	652	765	398	1,755	1,790	741	435	123	30.7	26.3	582
1937	258	460	1,189	719	320	415	835	900	449	185	47.5	63.7	489
1938	248	599	700	508	572	369	1,051	867	350	259	214	261	499
1939	347	450	1,060	429	298	679	1,277	1,200	332	237	70.8	23.8	536
1940	25.0	240	556	270	136	222	1,729	1,257	309	167	47.7	326	440
1941	320	656	521	388	273	255	990	487	179	94.8	86.8	51.7	358
1942	62.9	308	311	587	287	1,217	1,225	582	741	340	76.5	37.6	482
1943	182	442	482	189	256	513	796	1,088	461	191	618	290	460
1944	734	1,351	699	169	125	305	1,006	579	225	198	63.0	207	471
1945	498	872	752	644	270	680	1,525	1,231	551	186	85.7	43.8	613
1946	200	543	676	436	428	960	1,108	958	305	89.4	30.8	17.6	480
1947	21.4	69.4	265	300	700	701	788	1,102	968	505	147	34.8	465
1948	15.6	40.5	145	121	141	387	888	1,094	596	176	67.6	27.4	308
1949	30.3	317	346	966	355	464	1,061	441	210	91.4	37.7	30.2	362
1950	109	388	727	664	417	385	1,301	784	198	230	88.3	101	449

\* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	2.49	3.29	2.06	-	-	-	3.15	2.34	2.44	2.42	1.88	1.70	-
1928	3.34	4.04	4.48	3.71	2.09	2.02	5.82	4.21	2.24	1.37	*7.1	*.56	*34.59
1929	*.90	1.10	1.88	3.16	1.18	1.65	5.56	8.54	3.16	1.29	4.49	*.44	*29.35
1930	*.58	1.12	1.06	2.09	1.64	6.06	6.09	2.13	1.14	.78	.34	.14	*23.17
1931	.14	.52	1.08	.96	.60	1.16	5.20	2.48	1.58	1.18	.81	.88	16.59
1932	2.05	1.96	1.70	2.52	1.90	1.36	7.24	2.16	1.90	1.24	.93	.65	24.61
1933	1.37	3.83	1.79	1.31	1.79	2.62	6.14	1.98	1.83	.95	.73	1.06	25.40
1934	2.73	2.99	2.52	1.91	1.86	3.50	8.93	4.31	1.42	.86	.39	1.20	32.62
1935	1.95	3.51	3.49	3.86	1.49	1.94	6.25	5.34	2.80	1.13	.23	.17	32.16
1936	.19	.98	3.00	3.52	1.72	8.06	7.94	3.40	1.93	.56	.14	.12	31.56
1937	1.19	2.04	5.46	3.30	1.32	1.90	3.72	4.13	2.00	.85	.22	.28	26.41
1938	1.14	2.67	3.22	2.33	2.37	1.70	4.68	3.98	1.55	1.19	.98	1.16	26.97
1939	1.59	2.00	4.86	1.97	1.24	3.11	5.68	5.51	1.47	1.08	.32	.11	28.84
1940	.12	1.07	2.56	1.24	.58	1.02	7.69	5.78	1.37	.76	.22	1.45	23.86
1941	1.46	2.91	2.40	1.79	1.14	1.18	4.40	2.24	.80	.44	.40	.23	26.39
1942	.29	1.37	1.43	2.70	1.19	5.59	5.44	2.68	3.29	1.56	.35	.17	19.06
1943	.84	1.96	2.21	.87	1.06	2.35	3.54	4.99	2.05	.88	2.84	1.29	24.88
1944	3.37	6.00	3.20	.78	.54	1.41	4.47	2.66	1.00	.91	.29	.92	25.55
1945	2.28	3.87	3.46	2.96	1.12	3.12	6.78	5.65	2.46	.85	.38	.20	33.13
1946	.92	2.41	3.10	2.01	1.78	4.40	4.92	4.40	1.36	.41	.14	.08	25.93
1947	.10	.31	1.22	1.38	2.90	3.22	3.49	5.06	4.31	2.32	.68	.16	25.15
1948	.07	.18	.67	.56	.61	1.78	3.95	5.03	2.64	.81	.31	.12	16.73
1949	.14	1.41	1.59	4.44	1.47	2.13	4.72	2.03	.93	.42	.17	.13	19.58
1950	.50	1.73	3.54	3.06	1.73	1.76	5.78	3.60	.88	1.06	.41	.45	24.30

\* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Maximum day		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1927	641	1,660	Oct. 26, 1926	58	-	-	-	-	-
1928	661,1231	1,910	May 3, 1928	103	*638	*2.54	*34.59	*491	*26.61
1929	681,1231	2,140	May 23, 24, 1929	64	*543	*2.16	*29.35	*522	*28.23
1930	696,1231	2,060	Mar. 15, 1930	25	*428	*1.71	*23.17	409	22.15
1931	711	1,780	Apr. 6, 1931	23	306	1.22	16.59	390	20.56
1932	726	1,980	Apr. 14, 1932	108	454	1.81	24.61	478	25.89
1933	741	2,130	Apr. 10, 1933	93	470	1.87	25.40	492	26.65
1934	756	2,680	Apr. 18, 1934	50	604	2.41	32.62	617	33.33
1935	781	2,220	Apr. 23, 1935	24	595	2.37	32.16	506	27.38
1936	801	3,010	Mar. 20, 1936	14	582	2.32	31.56	666	36.08
1937	821	1,790	Dec. 14, 15, 1936	16	489	1.95	26.41	458	24.75
1938	851	1,240	Apr. 22, 23, 1938	65	499	1.99	26.37	525	28.39
1939	871	2,420	Apr. 25, 1939	13	536	2.14	28.94	448	24.24
1940	891	2,660	Apr. 15-16, 1940	18	440	1.75	23.86	496	26.88
1941	921	1,240	Nov. 20, 1940	26	358	1.43	19.39	290	15.71
1942	951	2,230	Mar. 14, 1942	21	482	1.92	26.06	517	27.98
1943	971	1,470	May 5-7, Aug. 16, 1943	81	460	1.85	24.88	470	32.44
1944	1001	1,750	Nov. 26, 28, 1943	24	471	1.88	25.55	416	22.59
1945	1031	2,450	Apr. 8, 1945	33	613	2.44	33.13	554	29.95
1946	1051	1,470	Mar. 31, 1946	12	480	1.91	25.93	391	21.13
1947	1081	1,750	May 9, 1947	14	465	1.85	25.15	442	24.44
1948	1111	2,120	May 24, 1948	8.4	308	1.23	16.73	349	18.95
1949	1141	1,650	Jan. 9, 1949	17	362	1.44	19.58	407	22.00
1950	1171	2,310	Apr. 25, 26, 1950	46	449	1.79	24.30	-	-

\* Revised.

## 21. 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 below mouth of West Branch Narraguagus River.

Drainage area.--232 sq mi.

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 location.

Extremes.--1948-50: Maximum discharge, 5,840 cfs May 19, 1948 (revised) (gage height, 14.93 ft, revised); minimum, 33 cfs Sept. 17, 1948 (gage height, 7.15 ft).

Monthly and yearly mean discharge, in cubic feet per second												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
The year												
1948	-	-	-	-	-	481	806	1,265	341	117	69.3	41.1
1949	88.5	518	393	1,004	329	571	973	336	166	78.8	55.9	67.0
1950	78.3	310	484	561	359	563	1,206	380	165	154	75.7	89.7

Monthly and yearly runoff, in inches												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
The year												
1948	-	-	-	-	-	2.39	3.87	6.28	1.64	0.58	0.34	0.20
1949	0.44	2.49	1.95	4.99	1.48	2.84	4.68	1.67	.80	.39	.28	.32
1950	.39	1.50	2.41	2.79	1.61	2.80	5.80	1.89	.79	.77	.38	.43

Yearly discharge, in cubic feet per second												
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year				
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches			
		Discharge	Date									
1948	1111	*5,840	May 19, 1948	-	-	-	-	-	-	-	-	-
1949	1141	3,600	Jan. 1, 1949	38	361	1.64	22.33	371	21.75	-	-	-
1950	1171	3,920	Apr. 22, 1950	53	368	1.59	21.56	-	-	-	-	-

\* Revised.

## UNION RIVER BASIN

22. West Branch Union River at Amherst, Maine <sup>1/</sup>

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. Prior to Oct. 1, 1919, 155 sq mi (revised).

Gage.--Water-stage recorder. Altitude of gage is 160 ft (from topographic map). Prior to Oct. 1, 1919, staff or chain gage 1 mile downstream at datum 25 ft lower.

Average discharge.--31 years (1909-19, 1929-50), 252 cfs.

Extremes.--1909-19, 1929-50: Maximum discharge, 4,140 cfs Apr. 13, 1940; maximum gage height, 10.41 ft Mar. 9, 1942 (ice jam); minimum discharge, 3.6 cfs Sept. 29, 1941.

Monthly and yearly mean discharge, in cubic feet per second												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
The year												
1909	-	-	-	-	-	-	-	-	-	-	21.5	145
1910	373	325	*311	*246	*201	*461	570	312	145	75.0	87.4	37.7
1911	33.0	55.3	*91.0	*145	*76.0	*171	*973	357	175	55.2	68.1	58.2
1912	46.2	130	*254	*128	*123	*502	*761	478	448	64.7	78.0	68.2
1913	200	535	*324	*467	*178	*673	828	368	296	*94.1	*36.5	105
1914	544	419	*236	*104	*127	443	1,160	527	136	60.2	25.5	27.1
1915	39.5	99.1	*87.4	*81.7	*202	*170	481	758	155	362	128	87.1
1916	57.3	146	323	294	94.8	176	669	309	220	178	51.1	79.9
1917	126	128	437	197	121	287	1,360	597	710	193	152	76.4
1918	247	322	193	115	66.5	206	939	386	32.3	265	80.6	240
1919	650	432	398	297	195	678	685	412	142	57.3	29.7	49.6
1929	-	-	-	-	-	-	-	-	-	-	22.8	15.5
1930	32.6	94.1	37.4	216	203	698	850	214	110	29.2	15.4	10.9
1931	15.2	64.2	60.2	39.9	44.6	105	819	333	400	182	91.7	92.1
1932	231	357	170	287	189	96.2	965	349	118	70.1	90.3	75.5
1933	210	520	154	120	187	221	1,060	321	150	45.4	29.0	28.5
1934	67.0	134	152	137	144	279	1,423	389	158	77.6	42.4	148
1935	243	357	306	339	168	214	1,037	504	178	56.9	12.2	11.2
1936	11.7	65.3	224	352	184	1,430	767	457	277	97.9	30.5	21.8
1937	141	230	615	280	155	151	556	667	232	62.5	29.0	24.5
1938	166	287	243	280	345	226	644	577	167	77.9	70.1	117
1939	172	235	621	161	139	210	625	617	149	89.9	16.8	11.7
1940	30.4	230	255	96.1	60.7	121	1,318	614	211	182	29.5	186

\* Revised.

† Corrected.

<sup>1/</sup> Published as Union River at Amherst prior to Oct. 1, 1913.

Monthly and yearly mean discharge, in cubic feet per second, of West Branch Union River at Amherst, Maine--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	141	342	194	148	119	127	661	241	80.6	40.0	16.8	8.1	174
1942	25.0	108	101	168	62.0	554	783	362	375	121	23.8	13.8	225
1943	40.2	117	171	46.8	99.4	246	506	606	202	86.6	78.6	57.4	188
1944	489	785	263	53.9	52.9	180	681	329	123	79.7	15.1	93.2	261
1945	241	373	343	381	123	455	977	716	246	93.7	26.0	17.6	334
1946	113	262	206	195	163	576	555	421	131	27.8	14.6	22.4	224
1947	70.8	151	196	141	377	362	623	770	438	289	69.4	21.0	291
1948	13.9	53.8	72.3	38.5	40.9	221	554	556	177	44.9	19.4	6.71	150
1949	14.2	205	157	452	116	240	590	208	114	43.1	11.2	9.01	180
1950	22.2	189	334	248	150	194	852	301	73.5	49.2	25.4	28.8	205

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1909													
1910	2.78	2.34	*2.32	*1.83	*1.35	*3.42	4.11	2.32	1.04	0.56	0.16	1.04	
													*22.99
1911	.25	.40	*.68	*1.08	*.51	*1.27	*7.01	2.65	1.26	.41	.51	.42	*16.45
1912	.34	.94	*1.89	*.95	*.86	*3.74	*5.48	3.55	3.22	.48	.58	.49	*22.52
1913	1.48	3.85	2.41	*3.47	*1.20	*5.00	5.96	2.73	2.13	.70	.27	.76	*29.97
1914	4.05	3.01	*1.75	*.77	*.85	3.30	8.34	3.92	.98	.45	.19	.19	*27.80
1915	.29	.71	*.50	*.61	*1.35	*1.27	3.46	5.64	1.12	2.70	.95	.63	*19.23
1916	.43	1.05	2.40	2.19	.66	1.31	4.82	2.29	1.58	1.33	.38	.57	19.01
1917	.94	.92	3.25	1.46	.81	2.13	9.78	4.44	5.11	1.44	1.13	.55	31.96
1918	1.83	2.32	1.44	.86	.45	1.53	6.76	2.87	.66	1.97	.60	1.73	23.02
1919	4.83	3.11	2.29	2.21	1.31	5.04	4.93	3.07	1.02	.43	.22	.36	28.82
1929											.18	.12	
1930	.25	.71	.29	1.68	1.43	5.44	6.40	1.67	.83	.23	.12	.08	19.13
1931	.12	.48	.47	.31	.31	.82	6.17	2.59	3.01	1.42	.71	.69	17.10
1932	1.80	2.69	1.33	2.24	1.38	.75	7.27	2.72	.90	.55	.70	.55	22.88
1933	1.64	3.92	1.20	.94	1.31	1.72	7.99	2.50	1.13	.35	.23	.22	23.15
1934	.52	1.01	1.19	1.07	1.01	2.18	10.72	3.03	1.19	.60	.33	1.12	23.97
1935	1.89	2.69	2.39	2.64	1.19	1.67	7.82	3.93	1.34	.44	.09	.08	26.17
1936	.09	.49	1.74	2.74	1.34	11.14	5.78	3.56	2.09	.76	.24	.16	30.13
1937	1.10	1.73	4.80	2.18	1.09	1.18	4.20	5.20	1.75	.49	.23	.19	24.14
1938	1.29	2.16	1.89	2.18	2.43	1.75	4.85	4.50	1.26	.61	.55	.88	24.35
1939	1.34	1.77	4.84	1.26	.96	1.64	4.71	4.81	1.13	.70	.13	.09	23.40
1940	.24	1.73	1.98	.75	.44	.94	9.94	4.78	1.60	1.19	.23	1.41	25.23
1941	1.10	2.58	1.51	1.15	.83	.99	4.99	1.88	.46	.31	.13	.06	15.99
1942	.18	.81	.79	1.31	.44	4.31	5.90	2.82	2.82	.94	.19	.10	20.61
1943	.31	.88	1.34	.36	.70	1.91	3.82	4.72	1.52	.67	.61	.43	17.27
1944	3.80	5.91	2.05	.42	.39	1.41	5.13	2.56	.93	.62	.12	.70	24.03
1945	1.88	2.81	2.68	2.96	.87	3.54	7.36	5.58	1.85	.73	.20	.13	30.59
1946	.88	1.98	1.60	1.52	1.14	4.48	4.18	3.27	.99	.22	.11	.17	20.54
1947	.55	1.14	1.52	1.10	2.66	2.84	4.70	6.00	3.30	2.25	.54	.16	26.76
1948	.11	.41	.56	.30	.30	1.72	4.17	4.34	1.34	.35	.15	.05	13.80
1949	.11	1.55	1.22	3.52	.82	1.87	4.45	1.63	.86	.34	.09	.07	16.53
1950	.17	1.43	2.61	1.94	1.05	1.51	6.43	2.34	.55	.38	.20	.22	18.83

\* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean
		Discharge	Date					
1909	321	\$2,050	Sept. 29, 1909*	-	-	-	-	-
1910	321, 1231	\$1,760	Mar. 8, 1910*	23	*262	*1.69	*22.99	*193
1911	321, 1231	-	-	22	*188	*1.21	*16.45	*209
1912	321, 1231	*1,740	Apr. 24, 1912*	14	*256	*1.65	*22.52	*308
1913	351, 1231	*2,100	Mar. 28, 1913*	23	*342	*2.21	*29.97	*355
1914	381, 1231	*2,180	Apr. 22, 1914*	18	*317	*2.05	*27.80	*234
1915	401, 1231	*1,920	May 1, 1915	19	*220	*1.42	*19.23	*247
1916	431, 1231	*1,180	Apr. 2, 1916	23	217	1.40	19.01	231
1917	451, 1231	*1,980	Apr. 7, 1917	55	365	2.35	31.96	371
1918	471, 1231	*1,480	Apr. 24, 1918	12	263	1.70	23.02	316
1919	501, 1231	*1,480	Oct. 6, 1918	20	329	2.12	28.82	-
1930	696	1,580	Apr. 7, 1930	10	209	1.41	19.13	207
1931	711	1,200	Apr. 12, 1931	8	187	1.26	17.10	239
1932	726	1,760	Apr. 12, 1932	16	249	1.68	22.88	259
1933	741	1,580	Apr. 11, 1933	12	252	1.70	23.15	208
1934	756	2,560	Apr. 17, 1934	17	261	1.76	23.97	308
1935	781, 801	1,830	Apr. 22, 1935	9.7	285	1.93	26.17	235
1936	801	3,580	Mar. 19, 1936	10	328	2.22	30.13	385
1937	821	1,290	Dec. 12, 1936	17	263	1.78	24.14	236
1938	851	1,270	Jan. 23, 1938	16	266	1.80	24.35	294
1939	871	1,510	Apr. 23, 1939	9.6	255	1.72	23.40	211
1940	891	4,140	Apr. 13, 1940	14	274	1.85	25.23	288

\* Revised.

\* Not previously published.

## UNION RIVER BASIN

Yearly discharge, in cubic feet per second, of West Branch Union River at Amherst, Maine--Continued

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1941	921	1,040	Apr. 16, 17, 1941	3.9	174	1.18	15.99	137	12.58	
1942	951	3,210	Mar. 9, 1942	4.5	225	1.52	20.61	235	21.36	
1943	971	1,170	May 4, 1943	19	188	1.27	17.27	289	26.50	
1944	1001	1,440	Nov. 9, 1943	7.4	261	1.76	24.03	213	19.64	
1945	1031	2,270	Apr. 5, 1945	12	334	2.26	30.59	302	27.68	
1946	1051	1,020	Mar. 28, 1946	7.1	224	1.51	20.54	211	19.29	
1947	1081	2,110	May 4, 1947	16	291	1.97	26.75	268	24.63	
1948	1111	1,640	May 18, 1948	5	180	1.01	13.80	170	15.60	
1949	1141	1,100	Jan. 6, 1949	5	180	1.22	16.53	194	17.86	
1950	1171	1,910	Apr. 23, 1950	13	205	1.39	18.83	-	-	

## 23. East Branch Union River near Waltham, Maine

Location.--Lat 44°44'55", long. 68°19'25", on right bank 25 ft downstream from Jones Bridge on route 179 between Ellsworth Falls and Aurora, 3 miles northeast of Waltham Post Office, Hancock County, and 4½ miles upstream from confluence of East and West Branches.

Drainage area.--123 sq mi.

Gage.--Staff gage. Altitude of gage is 160 ft (from topographic map).

Remarks.--Dam a half mile below causes backwater when gates are closed.

Monthly and yearly mean discharge, in cubic feet per second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1909	-	-	-	-	-	-	#84.2	42.5	158	517	#296	-	-

\* Not previously published; partly estimated on basis of weather records and records for station at Amherst, Maine.

Monthly and yearly runoff, in inches

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1909	-	-	-	-	-	-	#0.79	0.40	1.43	4.84	#2.69	-	-

\* Not previously published; see footnote to preceding table.

## 24. Green Lake Stream at Lakewood, Maine

Location.--Lat 44°37'30", long. 68°26'10", on right abutment of bridge on Route 180 between Ellsworth Falls and Clifton, a quarter of a mile downstream from dam at outlet of Green Lake, and 8 miles north of Ellsworth, Hancock County.

Drainage area.--47 sq mi.

Gage.--Staff gage. Altitude of gage is 90 ft (from topographic map).

Extremes.--1909-14: Maximum discharge, 570 cfs Mar. 25 to Apr. 8, 1913 (gage height, 4.2 ft); minimum daily, 7 cfs Nov. 19-24, 1909.

Remarks.--Flow regulated by Green Lake (capacity, 534,800,000 cu ft). Runoff in inches, as published in Water-Supply Papers 281, 301, 321, and 351, does not represent natural yield. Those records are not published herein and should not be used.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1909	-	-	-	-	-	-	-	-	-	45.0	98.5	118	-
1910	22.2	12.5	77.0	104	152	202	166	150	67.4	54.3	56.6	122	98.4
1911	68.2	46.9	87.7	14.3	128	54.5	43.7	38.7	39.5	58.4	107	124	67.0
1912	78.2	24.5	19.9	20	120	263	163	160	64.9	61.2	117	93.2	
1913	79.5	23.0	50.2	158	177	276	381	142	92	57	143	83	138
1914	62	74	90	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean
		Discharge	Date					
1910	281	-	-	7	98.4	-	-	106
1911	301	-	-	12	67.0	-	-	60.3
1912	321	-	-	-	93.2	-	-	95.8
1913	351	-	-	19	138	-	-	144

## 25. Branch Lake Stream near Ellsworth, Maine

Location.--Lat 44°34'05", long. 68°30'30", on right abutment of highway bridge on route to Branch Pond, 100 ft downstream from dam at outlet of pond, and 5 miles northwest of Ellsworth, Hancock County.

Drainage area.--31 sq mi.

Gage.--Staff gage. Altitude of gage is 219 ft (from topographic map).

Average discharge.--5 years (1909-14), 56.0 cfs.

Extremes.--1909-14: Maximum discharge, 293 cfs Mar. 8, 1910 (gage height, 5.66 ft); minimum discharge, 1 cfs Sept. 30, Oct. 1, 2, 8, 9, 13, 1910 (gage height, 3.5 ft).

Remarks.--Flow regulated by Branch Lake (capacity, 482,300,000 cu ft). Records for period July 1, 1909, to Dec. 31, 1911, determined from relationship between discharge, wheels running, head, and stage. Runoff in inches, as published in Water-Supply Papers 261, 281, 301, 351, and 381, does not represent natural yield. Those records are not published herein and should not be used.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1909	-	-	-	-	-	-	-	-	-	66.6	53.0	47.4	-
1910	51.4	54.6	69.8	45.3	55.7	119	102	112	81.5	57.8	75.0	58.3	73.6
1911	54.0	62.4	42.1	22.0	8.7	45.4	64.9	63.8	68.0	48.8	55.9	50.3	49.1
1912	35.0	25.9	31.0	34.7	31.1	46.5	41.4	65.8	55.2	38.4	40.3	42.3	40.4
1913	42.5	43.5	32.8	52	90	96	117	72	76	45	55	46	63.8
1914	33	44	44	44	44	44	88	94	44	18	72	71	55.3

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1909	261	-	-	-	-	-	-	-	-
1910	281	-	-	1	75.6	-	-	72.2	-
1911	301	-	-	1	49.1	-	-	43.2	-
1912	351	-	-	10	40.4	-	-	42.9	-
1913	351	-	-	30	63.8	-	-	64	-
1914	381	-	-	5	55.3	-	-	-	-

## PENOBSCOT RIVER BASIN

## 26. Reservoirs in West Branch 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 storage of water for power and log driving. Usable capacity of reservoir, 30,000,000,000 cu ft. Records furnished by Great Northern Paper Co.

Ambajesus, 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 storage of water for power and log driving. Usable capacity of reservoir, 15,000,000,000 cu ft. Records furnished by Great Northern Paper Co.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1902	-	3,391	8,693	9,952	9,686	7,811	15,069	17,051	17,077	12,953	9,016	7,020
1903	8,669	12,108	11,144	9,326	8,938	5,249	15,358	20,286	18,938	14,765	9,246	4,554
1904	3,076	3,143	3,538	5,381	3,228	5,019	7,840	27,148	25,128	20,440	14,507	14,074
1905	19,698	18,423	14,825	10,528	6,082	2,467	12,051	19,128	22,342	20,280	12,942	7,240
1906	3,571	3,213	2,862	2,950	2,935	3,002	6,812	25,826	26,137	20,781	13,540	8,968
1907	7,763	7,089	4,531	2,289	0	43	3,724	28,201	26,915	29,245	27,830	26,326
1908	26,781	26,211	23,720	21,819	18,712	14,775	17,626	32,623	31,353	25,006	21,069	16,533
1909	12,007	7,445	2,973	1,420	1,268	465	15,525	31,218	28,548	25,843	22,121	21,288
1910	26,598	27,528	26,778	24,693	18,974	12,006	29,652	31,296	29,790	28,146	24,785	19,738
1911	14,758	11,902	7,901	3,054	635	0	2,564	20,667	21,030	17,629	14,186	11,822
1912	10,251	8,531	12,416	12,236	9,319	6,845	21,662	32,740	32,080	27,531	30,080	28,743
1913	30,570	28,295	26,470	25,951	23,230	23,633	32,815	33,240	32,690	30,925	27,721	24,687
1914	25,474	27,250	26,116	22,589	17,487	10,735	13,044	33,010	32,085	27,319	21,753	17,099
1915	14,309	12,881	9,969	5,763	2,340	1,816	11,219	25,564	27,562	27,058	22,347	18,876
1916	16,831	14,565	14,040	13,124	10,977	7,765	19,860	29,343	31,800	32,460	30,825	28,970
1917	27,743	26,627	30,200	28,276	24,877	22,347	33,491	41,476	42,747	41,451	41,371	40,045
1918	40,635	41,055	37,364	31,597	23,941	13,931	26,374	40,336	39,285	41,059	39,620	37,537
1919	38,228	41,790	40,813	38,896	34,242	32,085	41,154	41,675	40,470	37,423	32,498	27,420
1920	25,524	29,831	27,042	20,146	13,693	6,867	29,791	38,947	37,974	37,547	32,831	30,229

## PENOBSCOT RIVER BASIN

Month-end contents, in millions of cubic feet, of reservoirs in West Branch  
Penobscot River basin, Maine--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1921	30,375	32,248	31,020	26,611	21,074	25,126	41,430	39,431	34,832	31,521	26,078	19,923
1922	18,946	18,170	15,074	8,801	4,170	0	21,633	24,561	37,115	36,928	32,879	27,070
1923	22,502	19,512	12,958	7,102	2,790	0	13,061	37,629	35,333	31,863	26,457	21,652
1924	19,202	20,058	24,505	20,088	14,516	7,806	12,523	40,145	38,413	35,301	33,048	27,601
1925	22,894	17,971	5,299	3,755	5,455	9,379	21,157	23,735	22,928	36,161	31,670	29,104
1926	37,165	44,484	43,675	39,320	35,393	29,165	26,473	44,870	44,707	43,013	39,442	34,817
1927	30,718	38,194	36,436	31,797	26,969	22,070	29,226	35,419	40,053	39,401	34,469	30,617
1928	32,111	41,710	44,475	41,865	38,584	30,649	40,648	44,685	44,251	41,711	40,120	35,296
1929	34,054	36,527	34,384	30,884	26,722	20,562	30,128	45,035	45,522	40,085	35,431	29,018
1930	24,138	18,683	13,513	8,156	5,619	3,733	18,501	37,861	39,970	38,607	34,846	29,582
1931	24,961	23,325	19,732	13,924	8,057	1,860	16,874	24,537	31,121	29,912	25,578	21,972
1932	24,078	25,471	22,618	19,231	16,247	11,985	29,660	39,491	37,262	34,247	32,597	37,915
1933	25,756	39,753	37,917	31,942	26,147	19,501	30,442	45,077	44,275	39,928	35,556	32,623
1934	26,568	21,218	15,125	9,496	4,952	0	26,653	35,501	33,724	32,677	26,865	20,656
1935	16,491	17,680	15,655	11,022	6,694	434	13,745	31,051	38,435	37,224	31,497	25,992
1936	18,019	13,113	10,255	7,782	3,896	29,525	40,659	44,755	43,697	41,905	36,921	33,875
1937	36,560	35,550	36,595	34,200	30,998	25,739	31,333	44,805	42,625	40,165	35,233	27,481
1938	26,006	30,423	27,893	23,008	17,633	13,708	26,357	41,423	41,708	41,708	40,135	38,635
1939	38,884	38,889	41,695	38,808	32,512	24,606	23,645	52,507	51,215	45,370	39,607	32,131
1940	30,508	29,662	27,524	21,002	12,989	8,530	18,714	44,956	51,533	47,824	39,851	33,262
1941	25,330	29,083	26,422	22,660	17,229	10,669	32,264	32,897	24,404	20,574	12,532	9,082
1942	5,238	7,277	6,070	3,603	0	0	22,582	42,957	44,111	38,770	32,716	25,606
1943	20,246	16,368	13,425	10,083	6,222	1,890	4,000	43,959	52,479	52,416	45,942	38,129
1944	37,375	47,112	41,034	34,785	30,045	24,035	23,668	43,598	41,265	36,180	31,025	27,469
1945	28,898	28,370	24,139	21,110	15,661	14,339	50,789	55,572	55,669	55,867	49,441	41,599
1946	43,266	41,558	37,384	30,610	24,465	24,954	39,784	55,171	51,526	44,972	36,704	28,632
1947	26,289	25,034	24,007	18,947	17,788	16,130	27,260	55,746	55,940	54,895	48,771	39,154
1948	31,495	24,352	18,402	12,480	7,972	4,127	17,739	41,991	38,846	31,699	24,830	16,548
1949	12,876	16,697	18,845	17,585	13,621	9,876	28,687	35,713	31,133	24,558	18,338	11,414
1950	9,038	6,118	3,324	2,235	503	162	15,278	26,650	29,854	28,466	22,485	18,199

## 27. West Branch Penobscot River at Millinocket, Maine

Location.--Lat 45°38'50", long. 68°42'15", at Millinocket mill of the Great Northern Paper Co., Millinocket, Penobscot County.

Drainage area.--1,910 sq mi (approximately).

Gage.--Staff gage. Altitude of gage is 348 ft above mean sea level (from survey by Great Northern Paper Co.).

Average discharge.--49 years (1901-50), 3,003 cfs (adjusted for storage).

Extremes.--1901-50: Records of extremes not available.

Remarks.--Daily discharge determined by computation of flow over dam and through turbines. Runoff adjusted for change in contents in West Branch Penobscot storage reservoirs (see preceding page).

Cooperation.--Records furnished by Great Northern Paper Co.

## Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1901	-	-	-	-	1,630	1,620	9,450	6,580	2,650	3,600	2,580	2,600	-
1902	1,360	656	1,160	2,130	2,270	5,380	11,800	9,460	9,390	2,400	2,620	2,170	4,230
1903	2,290	2,450	2,660	1,630	1,860	5,770	15,300	6,450	2,120	2,430	3,330	1,920	3,860
1904	790	387	429	328	365	527	1,000	5,090	3,690	3,200	3,400	2,150	1,790
1905	2,210	2,300	2,160	2,320	2,180	1,720	2,220	6,050	2,660	2,400	3,070	2,300	2,630
1906	1,470	432	409	403	748	688	1,200	6,900	4,820	3,650	3,220	2,030	2,170
1907	2,040	2,060	2,030	2,030	1,510	380	1,440	7,060	6,930	5,210	3,480	2,140	3,040
1908	2,710	7,190	4,510	3,130	2,860	2,990	2,930	10,200	6,910	3,790	2,430	2,000	4,310
1909	2,000	2,000	2,000	1,590	813	1,360	2,440	9,340	4,630	3,310	2,320	2,270	2,840
1910	2,250	2,210	2,190	2,134	4,067	4,052	2,512	5,706	5,581	2,854	2,305	2,348	3,160
1911	2,209	2,152	2,144	2,190	1,430	687	1,100	2,390	2,340	2,220	2,320	2,210	1,950
1912	2,220	2,160	2,010	2,060	2,040	2,030	2,300	6,630	7,510	3,400	2,390	2,210	3,080
1913	2,240	6,340	3,270	2,170	2,170	2,360	6,120	6,820	3,800	2,560	2,220	2,300	3,530
1914	2,320	2,340	2,330	2,570	2,710	2,870	3,590	6,920	3,300	3,180	3,120	2,500	3,140
1915	2,300	2,280	2,230	2,230	2,060	1,700	1,740	2,240	2,260	2,470	2,680	2,270	2,200
1916	2,300	2,270	2,280	2,230	2,230	2,590	2,970	2,660	2,880	3,550	3,040	2,560	2,630
1917	2,240	2,250	2,220	2,380	2,230	2,590	2,950	7,650	12,800	4,720	5,950	2,810	4,250
1918	2,920	3,450	2,900	2,780	3,460	3,940	3,380	2,970	2,940	4,800	3,080	2,820	3,290
1919	2,980	4,280	3,460	2,940	3,040	3,010	6,410	12,600	3,810	3,080	3,080	3,020	74,320
1920	2,410	2,390	2,600	3,070	3,060	3,010	3,000	6,740	3,300	2,960	3,130	3,050	3,230
1921	3,020	3,160	3,120	3,330	3,410	3,460	3,890	3,820	3,000	2,930	3,050	2,820	3,250
1922	3,020	3,080	3,000	2,870	2,590	1,960	2,440	2,730	2,630	2,660	2,760	2,680	2,700
1923	2,680	2,840	2,820	2,700	2,280	1,590	1,220	2,980	2,760	2,720	2,790	2,690	2,510
1924	2,470	2,020	2,460	2,660	2,720	2,730	2,690	2,660	2,720	2,470	2,490	2,510	2,550
1925	2,450	2,490	2,380	2,180	2,080	2,270	2,480	2,500	2,540	2,570	2,720	2,640	2,440

† Corrected.



PENOBSCOT RIVER BASIN

39

Monthly and yearly mean discharge, in cubic feet per second (observed),  
of West Branch Penobscot River at Millinocket, Maine--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	2,710	3,280	3,620	2,890	2,580	2,630	2,620	5,690	3,550	2,800	2,830	2,850	3,180
1927	2,790	2,480	2,700	2,860	2,890	2,890	2,870	2,870	3,840	2,880	3,110	2,910	2,840
1928	2,600	2,590	2,890	3,550	3,480	3,890	3,630	10,800	5,940	3,200	3,290	3,280	4,100
1929	3,260	3,290	3,150	3,180	3,180	3,120	3,730	4,010	4,270	3,240	3,090	3,200	3,390
1930	5,310	3,160	2,440	2,190	2,070	2,330	3,420	3,240	3,210	2,950	2,920	3,030	2,860
1931	2,840	2,560	2,670	2,680	2,660	2,580	2,460	2,740	2,720	2,750	2,650	2,660	2,670
1932	2,550	2,540	2,540	2,620	2,590	2,510	2,590	2,590	2,770	2,640	2,640	2,540	2,590
1933	3,020	3,160	3,110	3,020	3,000	2,900	2,990	4,060	3,360	3,080	3,120	3,080	3,160
1934	3,282	2,954	2,722	2,543	2,373	2,044	2,693	3,345	3,206	3,157	3,136	2,979	2,873
1935	2,693	2,836	2,712	2,507	2,531	2,495	2,164	2,827	2,785	2,600	2,642	2,977	2,648
1936	2,911	2,526	2,140	2,134	2,210	2,575	3,163	10,290	3,490	2,996	2,989	2,991	3,378
1937	3,095	3,169	2,978	3,065	3,057	3,163	3,258	4,247	3,758	3,165	3,187	3,113	3,272
1938	2,980	3,061	3,065	3,073	3,118	2,582	2,480	2,883	2,860	2,920	2,893	2,996	2,941
1939	3,450	3,430	3,196	3,590	3,403	3,522	3,470	3,585	3,325	3,035	3,065	3,264	3,324
1940	5,491	3,156	2,954	2,614	2,833	2,704	2,694	3,082	3,150	3,101	3,157	3,124	3,023
1941	3,065	2,847	2,674	2,827	2,781	2,925	2,806	2,829	2,809	2,656	2,615	2,217	2,786
1942	2,141	2,033	2,050	2,024	1,953	1,207	1,803	2,620	2,883	2,785	2,938	3,010	2,248
1943	3,000	2,647	2,193	2,167	2,064	2,181	1,957	2,285	2,577	2,849	2,904	2,848	2,673
1944	2,904	2,849	2,683	2,524	2,485	2,605	2,432	2,497	2,556	2,609	2,563	2,709	2,419
1945	2,648	2,869	2,882	2,839	2,730	2,607	2,691	7,558	3,125	3,050	2,886	2,972	3,246
1946	3,166	3,126	2,985	3,224	3,200	3,213	3,253	4,031	3,300	3,241	3,324	3,253	3,277
1947	3,175	3,018	2,904	2,941	2,866	2,954	3,059	7,450	5,913	3,065	3,114	3,205	3,643
1948	3,224	2,874	2,592	2,297	2,197	2,237	2,653	2,658	2,828	2,984	2,900	2,632	2,675
1949	2,171	2,020	2,073	2,276	2,496	2,714	2,614	2,778	2,823	2,663	2,411	2,146	2,432
1950	2,037	2,008	2,007	2,002	1,997	1,502	1,967	2,448	2,379	2,397	2,576	2,760	2,174

Note.--Records since October 1937 not previously published.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1901	-	-	-	-	0.46	0.44	7.18	4.92	1.41	0.85	1.11	0.41	-
1902	0.25	0.37	1.89	1.57	1.18	2.82	8.52	6.16	5.49	.52	.69	.82	30.28
1903	1.80	2.16	1.38	.57	.48	3.10	10.05	5.00	1.94	.53	.77	.06	26.84
1904	.14	.24	.30	.21	.17	.27	1.67	4.42	1.70	.88	.67	1.20	14.87
1905	2.61	1.06	.45	.42	.19	.22	3.45	5.25	2.28	.98	.20	.06	17.17
1906	.06	.17	.17	.26	.40	.43	1.56	8.45	2.89	.98	.31	.16	15.84
1907	.96	1.05	.60	.76	.31	.24	1.67	9.78	3.79	3.67	1.81	.94	25.58
1908	1.74	4.07	2.16	1.46	.91	.92	2.35	9.53	3.75	.86	.62	.15	28.52
1909	.19	.14	.20	.49	.41	.64	4.82	9.18	2.10	1.58	.56	1.14	21.25
1910	2.56	1.51	1.15	.86	.98	.88	5.44	3.82	2.80	1.55	.63	.23	22.11
1911	.21	.61	.39	.23	.23	.27	1.23	5.52	1.45	.57	.63	.75	12.09
1912	1.00	.89	2.10	1.19	.49	.66	4.69	6.51	4.24	1.03	2.02	.99	25.81
1913	1.76	3.30	1.45	1.19	.57	1.57	5.60	4.21	2.10	1.15	.62	.66	24.18
1914	1.58	1.76	1.16	.74	.33	.21	2.50	8.69	1.72	.85	.62	.44	20.60
1915	.76	1.01	.69	.40	.35	.90	3.42	4.59	1.77	1.37	.56	.54	16.36
1916	.92	.81	1.26	1.14	.77	.84	4.46	3.75	2.24	2.29	1.46	1.08	21.02
1917	1.06	1.06	2.14	1.00	.49	.99	4.24	6.40	7.76	2.55	3.57	1.34	32.58
1918	1.89	2.11	.92	.38	.16	.12	4.78	4.95	1.46	3.31	1.31	1.41	22.80
1919	1.96	3.30	1.87	1.35	.61	1.34	5.79	7.72	1.95	1.18	.75	.62	28.44
1920	1.03	2.36	.94	.30	.27	.28	6.90	6.16	1.71	1.70	.83	1.19	23.67
1921	1.86	2.26	1.60	1.02	.61	3.01	5.96	1.86	.72	1.03	.62	.26	20.81
1922	1.60	1.63	1.11	.32	.36	.24	6.30	2.26	4.41	1.57	.75	.25	20.80
1923	.54	1.03	.17	.31	.27	.59	3.66	7.37	1.09	.85	.47	.48	16.83
1924	.94	1.37	2.49	.61	.23	.16	2.63	7.85	1.20	.79	1.00	.24	19.53
1925	.42	.35	.59	.39	.50	1.20	5.37	3.10	2.05	2.27	.63	.96	17.83
1926	3.45	3.56	2.01	.76	.53	.16	.92	7.61	2.03	1.31	.90	.62	23.86
1927	.76	3.14	1.23	.68	.49	.64	3.29	3.12	2.70	1.59	.77	.83	19.24
1928	1.90	3.68	2.36	1.56	1.23	.56	4.37	7.48	3.38	1.36	1.63	.83	30.34
1929	1.70	2.48	1.42	1.13	.80	.49	4.34	5.78	2.21	1.18	.82	.42	22.77
1930	.90	.62	.31	.12	.56	.98	5.30	6.34	2.34	1.48	.92	.54	20.41
1931	.72	1.13	.80	.31	.13	.16	4.82	3.38	3.07	1.38	.62	.74	17.26
1932	2.02	1.80	.89	.82	.79	.56	4.47	3.78	1.11	.91	1.22	2.68	22.05
1933	1.34	2.74	1.46	.48	.33	.25	4.22	5.75	1.78	.65	.90	1.14	21.04
1934	.62	.52	.27	.27	.27	.21	7.59	4.01	1.47	1.67	.59	.34	17.83
1935	.69	1.93	1.18	.47	.40	.09	4.26	5.60	3.29	1.29	.30	.50	20.00
1936	-.04	.37	.65	.73	.37	6.88	4.36	7.14	1.80	1.41	.68	1.06	25.41
1937	2.43	1.68	2.04	1.42	.83	.71	3.17	5.60	1.70	1.56	.79	.11	21.82
1938	1.46	2.78	1.28	.75	.49	.67	4.30	5.15	1.54	1.96	1.45	1.58	23.39
1939	.74	1.09	3.26	.60	.44	.34	1.81	8.51	1.70	.52	.55	.24	19.80
1940	1.73	1.65	1.30	.23	.11	.63	3.87	7.78	3.32	1.04	.11	.34	22.11
1941	.06	2.51	1.01	.86	.29	.29	6.35	1.84	.18	.80	.18	.52	14.89
1942	.43	1.65	.96	.67	.25	.73	6.15	6.17	1.94	.48	.41	.16	20.00
1943	.59	.68	.67	.56	.28	.31	1.50	10.44	3.35	1.83	.40	.16	20.43
1944	1.58	5.86	.22	.07	.58	.21	1.58	5.74	1.01	.43	.34	.92	16.34
1945	1.92	1.56	.79	1.03	.26	1.28	9.78	5.64	1.85	1.89	.29	-.03	26.26
1946	2.28	1.44	.86	.42	.36	2.04	5.24	5.90	1.11	.48	.14	.08	20.35
1947	1.38	1.48	1.52	.64	1.30	1.41	4.50	10.92	3.50	1.61	.50	-.29	28.27
1948	.22	.07	.22	.05	.22	.48	4.62	7.07	.94	.19	.20	-.33	13.95
1949	.48	2.04	1.74	1.09	.47	.79	5.77	3.26	.62	.13	.05	-.31	16.13
1950	.69	.51	.58	.96	.70	.83	4.55	4.04	2.11	1.13	.21	.65	16.96

Note.--Records prior to January 1911 and since October 1937 not previously published. Negative figures indicate that evaporation and seepage from reservoirs exceeded inflow.

## PENOBSCOT RIVER BASIN

Yearly discharge, in cubic feet per second, of West Branch Penobscot River at Millinocket, Maine											
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year			
		Observed			Adjusted			Observed		Adjusted	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1901	279	-	-	-	-	-	-	-	-	-	-
1902	279	-	-	-	4,230	4,270	2.23	30.28	4,580	4,660	33.11
1903	279	-	-	-	3,860	3,780	1.98	26.84	3,370	3,120	22.18
1904	279	-	-	-	1,790	2,090	1.09	14.87	2,200	2,570	18.31
1905	279	-	-	-	2,630	2,410	1.26	17.17	2,260	1,890	13.45
1906	279	-	-	-	2,170	2,220	1.16	15.84	2,480	2,540	18.05
1907	279	-	-	-	3,040	3,600	1.88	25.58	3,720	4,350	30.94
1908	279	-	-	-	4,310	4,000	2.09	28.52	3,610	2,960	21.08
1909	279	-	-	-	2,840	2,990	1.57	21.25	2,880	3,650	25.94
1910	281	-	-	-	3,160	3,120	1.63	22.11	3,150	2,550	18.10
1911	351	-	-	-	1,950	1,690	.887	12.09	1,940	2,090	14.87
1912	351	-	-	-	3,080	3,620	1.90	25.81	†3,530	3,980	28.33
1913	351	-	-	-	3,530	3,400	1.78	24.18	3,130	3,120	22.17
1914	381	-	-	-	3,140	2,900	1.52	20.60	2,840	2,610	18.56
1915	401	-	-	-	2,200	2,300	1.20	16.36	2,210	2,340	16.61
1916	431	-	-	-	2,630	2,950	1.54	21.02	2,620	3,130	22.31
1917	451	-	-	-	4,250	4,590	2.40	32.58	4,450	4,680	33.22
1918	471	-	-	-	3,280	3,210	1.68	22.80	3,410	3,520	25.01
1919	501	-	-	-	†4,320	4,000	2.09	28.44	4,040	3,610	25.64
1920	501	-	-	-	3,230	3,320	1.74	23.67	3,390	3,510	25.06
1921	521	-	-	-	3,250	2,930	1.53	20.81	3,230	2,730	19.43
1922	541	-	-	-	2,700	2,930	1.53	20.80	2,640	2,560	18.20
1923	561	-	-	-	2,510	2,370	1.24	16.83	2,390	2,800	19.89
1924	581	-	-	-	2,550	2,740	1.43	19.53	2,580	2,260	16.09
1925	601	-	-	-	2,440	2,510	1.31	17.83	2,640	3,590	25.49
1926	621	-	-	-	3,180	3,360	1.76	23.86	3,040	2,810	19.97
1927	641	-	-	-	2,840	2,710	1.42	19.24	2,850	3,100	22.05
1928	661	-	-	-	4,100	4,260	2.23	30.34	4,240	3,930	28.00
1929	681	-	-	-	3,390	3,200	1.68	22.77	3,330	2,670	19.00
1930	696	-	-	-	2,860	2,870	1.50	20.41	2,790	2,990	21.23
1931	711	-	-	-	2,670	2,430	1.27	17.26	2,630	2,720	19.32
1932	725	-	-	-	2,590	3,090	1.62	22.05	2,730	3,210	22.88
1933	741	-	-	-	3,160	2,960	1.55	21.04	3,130	2,380	16.91
1934	756	-	-	-	2,873	2,506	1.31	17.83	2,812	2,641	20.22
1935	781	-	-	-	2,648	2,817	1.47	20.00	2,592	2,421	17.18
1936	801	-	-	-	3,378	3,564	1.87	25.41	3,517	4,286	30.56
1937	821	-	-	-	3,272	3,070	1.61	21.82	3,261	2,987	21.21
1938	-	-	-	-	2,941	3,293	1.72	23.39	3,021	3,230	22.96
1939	-	-	-	-	3,324	2,784	1.46	19.80	3,286	2,726	19.39
1940	-	-	-	-	3,023	3,101	1.62	22.11	2,957	2,948	21.01
1941	-	-	-	-	2,746	2,096	1.10	14.89	2,548	2,020	14.35
1942	-	-	-	-	2,288	2,812	1.47	20.00	2,424	2,659	18.88
1943	-	-	-	-	2,473	2,870	1.50	20.43	2,526	3,399	24.17
1944	-	-	-	-	2,619	2,292	1.20	16.34	2,615	2,081	14.95
1945	-	-	-	-	3,246	3,694	1.93	26.26	3,320	3,740	26.57
1946	-	-	-	-	3,277	2,866	1.50	20.35	3,262	2,838	20.15
1947	-	-	-	-	3,643	3,977	2.08	28.27	3,609	3,431	24.40
1948	-	-	-	-	2,675	1,960	1.03	13.95	2,472	2,486	17.70
1949	-	-	-	-	2,432	2,271	1.19	16.13	2,414	1,922	13.65
1950	-	-	-	-	2,174	2,389	1.25	16.96	-	-	-

† Corrected.

Note.--Adjusted runoff records prior to January 1911 and all records since October 1937 not previously published.

## 28. West Branch Penobscot River near Medway, Maine

Location.--Lat 45°36'25", long. 68°32'25", on left bank just above Nichatou Rapids at Nichatou Island, half a mile upstream from confluence of East and West Branches, and half a mile west of Medway, Penobscot County.

Drainage area.--2,120 sq mi, approximately.

Gage.--Water-stage recorder. Datum of gage is 235.6 ft above mean sea level, datum of 1929. Prior to August 4, 1916, chain gage at same site and datum.

Average discharge.--23 years (1916-39), 3,733 cfs (adjusted for storage).

Extremes.--1916-39: Maximum discharge, 25,900 cfs (revised) June 16, 1917 (gage height, 9.88 ft); minimum, 100 cfs (estimated) at times in 1923 and 1924 when plant above was closed.

Remarks.--Diurnal fluctuation caused by operation of power plant upstream. Runoff adjusted for change in contents in reservoirs of West Branch Penobscot River above Millinocket (see p. 37).

Monthly and yearly mean discharge, in cubic feet per second (observed) of West Branch

Penobscot River near Medway, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	-	-	-	-	-	2,740	3,700	3,370	3,340	3,460	3,530	2,600	-
1917	2,270	2,590	2,970	3,400	2,650	3,060	4,040	*8,900	*12,900	5,090	6,130	2,850	*4,820
1918	3,160	4,240	3,260	3,590	3,830	5,080	4,430	3,960	3,420	5,270	3,480	3,110	3,980
1919	3,690	5,430	4,190	3,830	3,650	3,820	*7,260	*13,900	*5,020	3,300	3,270	3,300	*5,060
1920	2,820	2,230	3,120	3,540	3,560	3,300	4,940	*8,900	4,410	3,290	3,380	3,410	*3,990
1921	3,800	3,790	4,060	4,140	4,340	4,570	5,030	3,290	3,390	3,420	3,280	3,280	4,050
1922	3,530	3,870	3,850	3,670	3,230	2,930	3,510	3,220	4,100	3,310	3,380	3,180	3,480
1923	3,030	3,580	3,430	3,430	2,740	1,840	1,980	4,050	3,150	2,950	2,780	2,740	2,960
1924	3,050	2,800	2,960	3,130	3,150	3,070	4,020	3,980	3,110	2,930	2,810	3,340	3,190
1925	2,940	2,920	2,850	2,600	2,400	2,800	3,140	2,820	3,090	3,150	2,890	3,040	2,890
1926	3,530	4,370	4,830	3,870	3,270	3,220	3,320	6,250	4,170	3,240	3,120	3,010	3,860
1927	3,440	3,450	3,310	3,230	3,230	3,270	3,610	3,610	3,600	3,390	3,730	3,360	3,440
1928	3,340	3,590	3,590	3,800	3,780	4,180	4,780	12,900	7,140	3,680	3,720	3,620	4,870
1929	3,660	3,790	3,620	3,680	3,430	3,470	4,750	5,120	4,920	3,380	3,090	3,240	3,850
1930	3,540	3,490	2,700	2,510	2,350	3,310	4,660	4,150	3,810	3,260	3,260	3,250	3,360
1931	3,140	2,820	2,910	2,990	2,810	3,070	3,500	5,220	3,500	3,260	3,100	3,090	3,130
1932	3,160	3,070	2,970	3,120	2,960	2,910	3,270	2,970	3,270	3,060	3,080	2,990	3,190
1933	3,620	4,110	3,580	3,270	3,260	3,250	4,560	5,260	4,300	3,670	3,620	3,600	3,840
1934	3,490	3,154	3,087	3,002	2,916	2,728	4,087	3,996	3,718	3,668	3,868	3,107	3,362
1935	2,984	3,065	2,984	2,969	3,066	3,093	3,515	3,721	3,706	3,297	3,127	3,239	3,230
1936	3,121	2,961	2,600	2,582	2,546	3,819	4,766	11,950	4,117	3,320	3,285	3,324	4,044
1937	3,488	3,584	3,742	3,837	3,820	3,816	4,164	5,496	4,420	3,634	3,580	3,498	3,922
1938	3,449	3,801	3,649	3,609	3,571	3,539	3,544	3,948	3,523	3,651	3,787	4,014	3,641
1939	3,933	4,037	4,292	3,875	3,752	3,717	4,263	4,595	3,986	3,641	3,530	3,767	3,948
1940	3,871	-	-	-	-	-	-	-	-	-	-	-	-

\* Revised.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	-	-	-	-	-	0.84	4.41	3.76	2.25	2.02	1.59	1.00	-
1917	0.99	1.14	2.34	1.45	0.61	1.15	4.38	6.44	7.55	3.32	1.23	33.13	33.13
1918	1.86	2.32	1.02	.78	.82	.73	4.85	4.99	1.57	3.24	1.40	1.42	25.00
1919	2.14	3.58	2.09	1.70	.85	1.64	*5.66	*7.67	*2.40	1.18	.78	.69	*30.38
1920	1.15	2.58	1.13	.52	.50	.41	7.23	*6.69	2.12	1.71	.88	1.26	*26.18
1921	2.10	2.38	1.96	1.36	1.01	3.31	6.21	2.33	.80	1.18	.76	.48	23.88
1922	1.72	1.87	1.46	.72	.63	.74	6.26	2.31	4.74	1.76	1.02	.49	23.72
1923	.68	1.20	.48	.68	.47	.67	3.69	7.23	1.18	.89	.42	.46	18.05
1924	1.24	1.64	2.51	.80	.43	.35	3.07	7.78	1.29	.96	1.07	.65	21.45
1925	.64	.54	.78	.58	.61	1.37	5.19	2.97	2.14	2.38	.66	1.08	18.92
1926	3.56	3.78	2.47	1.22	.82	.47	1.20	7.12	2.16	1.42	.97	.65	25.64
1927	1.04	3.34	1.44	.82	.61	.78	3.35	3.22	2.83	1.72	1.03	.98	32.16
1928	2.28	3.99	2.51	1.53	1.26	.66	4.55	7.94	3.67	1.49	1.71	.93	21.36
1929	1.74	2.50	1.53	1.29	.84	.64	4.44	5.82	2.33	1.14	.73	.40	23.40
1930	.94	.73	.42	.28	.64	1.42	5.42	6.20	2.43	1.50	1.01	.60	21.59
1931	.81	1.15	.85	.45	.24	.41	4.89	3.31	3.18	1.53	.80	.89	18.51
1932	2.14	1.90	1.04	1.01	.90	.72	5.68	3.87	1.26	1.00	1.35	2.81	23.68
1933	1.53	2.98	1.58	.67	.42	.42	4.62	5.82	2.10	.91	1.08	1.30	23.35
1934	.67	.57	.44	.49	.51	.56	7.56	3.97	1.60	1.79	.65	.37	19.18
1935	.78	1.85	1.21	.67	.63	.41	4.55	5.53	3.45	1.54	.54	.59	21.75
1936	.08	.56	.83	.90	.51	6.87	4.76	7.33	1.95	1.44	.77	1.13	27.13
1937	2.40	1.72	2.25	1.71	1.12	1.00	3.32	5.72	1.87	1.48	.91	.30	23.89
1938	1.58	2.90	1.48	.97	.66	1.02	4.33	5.21	1.73	2.17	1.74	1.81	22.60
1939	.93	1.29	3.53	.81	.57	.41	2.05	8.32	.97	.79	.75	.48	21.80
1940	1.73	-	-	-	-	-	-	-	-	-	-	-	-

\* Revised.

Note.--Adjusted runoff prior to October 1918 not previously published.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30										Calendar year		
		Observed					Adjusted					Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date											
1917	451,1231	*25,900	June 16, 1917	1,960	*4,820	5,160	2.43	33.13	*5,060	5,280	33.86			
1918	471	11,500	July 16, 1918	2,000	3,980	3,900	1.84	25.00	4,200	4,310	27.61			
1919	501,1231	*19,900	Apr. 26, 1919	2,400	*5,060	*4,740	*2.24	*30.38	*4,710	*4,260	*27.43			
1920	501,1231	*14,900	May 15, 1920	2,200	*3,990	*4,080	*1.93	*26.18	*4,200	*4,330	*27.76			
1921	521	11,900	Apr. 29, 1921	1,750	4,050	3,730	1.76	23.88	4,010	3,510	22.49			
1922	541	7,890	May 22, 1922	2,100	3,480	3,710	1.75	23.72	3,360	3,290	21.03			
1923	561	7,530	May 5, 1923	-	2,960	2,820	1.33	18.05	2,870	2,820	20.98			
1924	581	6,740	May 2, 1924	1,850	3,190	3,380	1.59	21.69	3,190	2,860	18.36			
1925	601	6,520	Sept. 20, 1925	1,850	2,890	2,950	1.39	18.92	3,220	4,180	26.77			
1926	621	14,900	May 23, 1926	2,230	3,860	4,030	1.90	25.84	3,640	3,410	21.85			
1927	641	6,940	July 5, 1927	2,220	3,440	3,310	1.56	21.16	3,490	3,740	23.96			
1928	661	24,100	May 27, 1928	2,600	4,870	5,040	2.38	32.36	4,910	4,590	29.51			
1929	681	12,400	June 4, 1929	2,040	3,850	3,660	1.73	23.40	3,733	3,081	19.72			
1930	696	6,380	Apr. 15, 1930	2,040	3,360	3,370	1.59	21.59	3,290	3,485	22.31			
1931	711	5,800	July 13, 1931	1,990	3,130	2,890	1.36	18.51	3,153	3,245	20.78			
1932	726	9,430	Sept. 17, 1932	2,060	3,190	3,690	1.74	23.68	3,361	3,845	24.49			
1933	741	9,620	May 25, 1933	2,230	3,840	3,640	1.72	23.35	3,712	2,955	18.92			
1934	756	6,090	Apr. 16, 1934	2,090	3,362	2,999	1.41	19.18	3,503	3,532	21.34			
1935	761	5,520	Dec. 3, 1934	2,020	3,230	3,399	1.60	21.75	3,201	3,592	19.38			
1936	801	20,800	May 16, 1936	2,090	4,044	4,229	1.99	27.13	4,223	4,992	32.03			
1937	821	12,400	May 22, 1937	2,290	3,922	3,720	1.75	23.80	3,928	3,653	23.39			
1938	851	6,240	May 21, 1938	2,090	3,641	3,996	1.88	25.60	3,754	3,965	25.39			
1939	871	6,390	May 10, 1939	2,360	3,948	3,405	1.61	21.80	-	-	-			

\* Revised.

Note.--Adjusted runoff prior to October 1918 not previously published.

## PENOBSCOT RIVER BASIN

## 29. Telos Lake in T. 6, R. 11, Maine

Location.--Lat 46°08'50", long. 69°08'15", at Telos Lake Dam in East Branch Penobscot River Basin, T. 6, R. 11, Piscataquis County.

Drainage area.--240 sq mi, approximately.

Gage.--Staff gage. Altitude of gage is 927 ft (from river profile map).

Remarks.--Chamberlain and Telos Lakes and Round Pond controlled by dams at outlets of Chamberlain and Telos Lakes, regulation at Telos Dam. Telos Dam was rebuilt during 1941 and has a usable capacity of 5,040,000,000 cu ft between gage heights 2.0 and 11.0 ft.

Cooperation.--Records furnished by the Bangor Hydro-Electric Co.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1942	-	-	-	-	-	-	-	-	-	-	4,595	2,808
1943	1,517	2,105	1,902	598	0	0	1,204	4,711	4,839	4,784	3,877	1,082
1944	2,270	4,038	4,098	1,452	510	176	692	4,128	3,949	2,022	1,452	1,452
1945	2,105	2,837	3,182	3,622	2,326	874	4,857	4,400	4,338	4,338	3,154	2,665
1946	3,533	4,128	3,556	1,995	822	822	2,780	3,095	3,154	2,895	1,056	458
1947	328	926	1,777	1,030	692	0	1,886	4,522	4,552	4,582	4,188	2,382
1948	718	303	176	100	0	75	1,832	4,613	4,613	4,491	3,386	1,668
1949	900	1,886	2,408	1,941	1,240	0	3,067	4,552	4,552	3,681	2,722	2,438
1950	2,382	2,298	1,777	2,270	1,426	0	2,023	4,128	4,613	4,613	2,895	3,125

## 30. Grand Lake in T. 6, R. 8, Maine

Location.--Lat 46°08'20", long. 68°47'35", at outlet of Grand Lake in T. 6, R. 8, Penobscot County.

Drainage area.--484 sq mi, approximately (including about 240 sq mi drained by Chamberlain Lake through Telos Canal).

Gage.--Staff gage. Altitude of gage is at mean sea level (from river profile map).

Remarks.--Second and Grand Lakes controlled by dam rebuilt in 1942, usable capacity, 1,785,000,000 cu ft between gage heights 643.0 and 655.0 ft.

Cooperation.--Records furnished by Bangor Hydro-Electric Co.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1942	-	-	-	-	-	-	-	1,785	1,754	1,749	1,153	898
1943	1,212	1,443	1,533	1,516	717	256	1,332	1,785	1,551	1,255	1,068	1,085
1944	1,767	1,785	1,623	1,677	415	57	262	1,650	1,357	775	1,003	1,289
1945	1,785	1,767	1,785	1,785	1,416	1,153	1,785	1,767	1,677	1,713	1,470	760
1946	1,238	1,767	1,785	1,785	1,749	849	1,569	1,767	1,272	560	1,641	415
1947	213	57	275	560	1,102	250	1,443	1,758	1,659	1,136	995	717
1948	238	105	61	69	57	189	1,605	1,785	1,408	849	287	350
1949	659	1,749	1,569	1,731	1,255	480	1,659	1,785	971	1,391	1,255	574
1950	45	602	1,605	1,749	1,731	376	1,443	1,677	1,749	1,713	1,785	1,238

## 31. 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).

Gage.--Water-stage recorder. Datum of gage is 294.74 ft above mean sea level, datum of 1929. Prior to June 29, 1929, chain gage on upstream side of railroad bridge 500 ft upstream at same datum.

Average discharge.--48 years (1902-50), 1,842 cfs.

Extremes.--1902-50: Maximum discharge, 37,000 cfs (revised) Apr. 30, 1923 (gage height, 18.9 ft (revised), site then in use, present datum); minimum daily, 77 cfs Nov. 19, 1924, but may have been less during period of ice effect, 1904.

Remarks.--Flow partly regulated by Chamberlain, Telos, Second, and Grand Lakes and Round Pond for log driving and for power since 1942. Runoff adjusted for change in contents in East Branch Penobscot storage reservoirs since 1942 (see Telos and Grand Lakes above).

Monthly and yearly mean discharge, in cubic feet per second, of East Branch  
Penobscot River at Grindstone, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	1,040	1,220	947	689	607	\$5,070	4,710	3,240	1,050	2,750	1,740	634	\$1,990
1904	342	\$480	\$278	\$193	\$171	\$246	\$2,930	6,830	3,160	2,440	1,700	1,030	\$1,650
1905	1,810	\$867	\$2,190	\$862	\$755	\$755	\$5,820	2,740	2,040	2,140	820	910	\$1,650
1906	220	\$457	\$313	\$384	\$536	\$821	\$3,960	8,150	3,540	3,100	377	708	\$1,890
1907	1,040	1,560	453	\$221	\$206	\$258	\$2,170	8,000	5,000	3,590	1,500	797	\$2,060
1908	684	\$3,450	2,970	\$1,160	\$883	\$1,560	\$2,090	6,930	2,960	2,340	858	511	\$2,290
1909	380	\$475	\$203	660	\$741	\$1,020	\$2,100	7,580	3,910	1,860	764	2,470	\$2,180
1910	2,960	1,930	\$1,640	\$1,600	\$694	\$701	\$5,500	3,980	4,870	1,610	509	264	\$2,180
1911	210	396	\$290	\$411	\$230	\$254	\$2,770	3,470	2,050	1,060	527	649	\$1,030
1912	651	\$852	\$1,840	\$1,260	\$475	\$1,150	\$5,470	5,140	5,370	1,760	2,060	1,140	\$2,260
1913	2,530	4,290	1,760	\$1,490	\$604	\$2,880	6,180	3,840	3,570	1,520	674	493	\$2,490
1914	2,300	1,960	997	568	399	678	4,440	7,670	3,430	1,460	520	271	2,060
1915	248	485	228	397	1,140	1,080	3,560	4,940	2,680	1,920	872	432	1,480
1916	400	665	1,170	1,070	618	1,090	4,480	3,480	3,220	2,980	1,010	448	1,710
1917	650	538	\$2,310	1,230	638	974	\$5,620	5,540	6,290	4,020	2,090	949	2,580
1918	1,560	2,350	431	315	263	507	4,670	3,550	2,080	4,700	1,440	914	1,900
1919	2,070	3,120	1,670	1,160	641	2,050	6,490	6,660	3,000	1,100	599	414	2,420
1920	534	1,890	1,020	371	263	1,410	7,400	2,560	1,890	989	1,250	2,140	
1921	2,200	1,610	1,830	924	555	3,340	5,560	2,330	796	623	551	401	1,730
1922	1,710	1,590	1,300	808	375	1,240	3,990	2,430	4,950	3,020	857	465	1,880
1923	436	550	361	549	284	222	3,590	6,530	1,080	1,350	617	331	1,330
1924	509	893	1,890	959	688	2,700	6,930	2,240	781	388	388	350	1,580
1925	296	379	558	327	771	1,490	3,910	3,010	1,620	1,310	514	543	1,230
1926	2,460	4,610	2,900	679	633	981	1,270	6,830	2,380	1,510	577	776	2,130
1927	724	2,590	932	688	561	867	3,940	2,540	3,140	960	1,060	1,060	1,580
1928	1,780	4,910	3,300	2,170	993	715	5,360	6,140	3,910	1,280	743	558	2,650
1929	784	1,130	1,360	1,480	778	701	4,700	5,750	1,780	1,130	459	272	1,700
1930	437	425	212	629	401	1,730	5,290	5,940	2,660	1,370	910	628	1,720
1931	342	542	472	331	315	494	5,010	2,350	3,090	1,310	833	705	1,310
1932	2,010	2,090	661	1,190	1,130	675	6,810	3,720	1,210	811	718	2,640	1,960
1933	1,840	2,940	1,390	584	477	451	6,020	4,570	2,120	881	591	666	1,880
1934	1,308	1,004	730	602	552	710	7,258	4,110	2,097	912	529	521	1,693
1935	1,100	1,660	1,969	1,063	726	743	4,960	4,837	2,654	884	501	450	1,797
1936	418	600	691	937	775	7,851	5,341	5,505	2,613	993	518	726	2,255
1937	1,793	1,967	1,863	1,455	1,026	1,036	4,023	5,409	2,119	839	535	277	1,866
1938	1,075	2,211	1,534	929	919	1,139	4,838	4,946	2,005	2,440	1,237	1,235	2,046
1939	1,307	1,145	2,799	828	662	529	2,432	6,401	2,302	1,122	596	411	1,721
1940	898	2,179	1,384	534	302	395	5,507	6,506	2,785	1,901	602	791	1,982
1941	622	2,371	921	871	685	523	4,909	2,864	861	460	250	374	1,288
1942	562	1,173	658	783	527	1,359	4,431	5,036	2,573	561	601	925	1,600
1943	793	756	581	673	601	1,005	2,471	6,642	2,576	1,679	832	1,135	1,635
1944	1,617	3,542	756	1,065	1,000	458	1,297	3,062	1,195	844	906	1,369	1,769
1945	1,679	1,858	1,033	1,361	1,186	2,491	6,389	5,539	1,864	1,446	755	1,216	2,252
1946	1,195	980	894	1,239	998	3,092	3,880	5,156	1,314	818	599	928	1,764
1947	713	993	1,068	774	1,788	1,981	3,440	7,757	3,569	1,676	676	888	2,112
1948	961	611	357	255	216	736	4,400	5,001	1,779	697	839	652	1,376
1949	848	1,879	1,478	1,712	1,073	1,539	4,780	2,264	1,247	430	535	694	1,536
1950	460	871	1,010	1,124	1,213	2,240	4,459	2,034	1,510	926	1,063	632	1,462

\* Revised.

\* Not previously published; estimated on basis of weather records and records for West Branch Penobscot River at Millinocket.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	\$1.12	1.27	\$1.02	\$0.74	\$0.59	\$5.48	4.91	3.49	1.09	2.96	1.88	0.66	\$25.10
1904	.37	\$5.50	\$5.30	\$2.1	\$1.17	\$2.27	\$3.06	7.36	3.29	2.63	1.83	1.07	\$21.06
1905	1.95	\$4.90	\$2.36	\$4.93	\$4.74	\$8.1	\$3.98	2.95	2.13	2.31	.88	.95	\$20.89
1906	.24	\$4.48	\$3.34	\$4.1	\$5.2	\$8.8	\$4.13	8.78	3.69	3.34	.41	.74	\$23.96
1907	1.12	1.42	.49	\$2.24	\$2.20	\$2.28	\$2.26	8.82	5.21	3.87	1.61	.83	\$26.15
1908	.74	3.59	3.20	\$1.26	\$1.89	\$1.68	\$3.22	7.47	3.09	2.52	.80	.53	\$29.09
1909	.41	\$4.52	\$4.22	\$1.71	\$1.72	\$1.10	\$6.36	8.16	4.07	2.01	.82	.28	\$27.66
1910	3.10	2.02	\$1.76	\$1.73	\$6.8	\$7.6	\$5.74	4.29	5.08	1.73	.55	.28	\$27.72
1911	.23	.41	\$3.31	\$4.44	\$2.2	\$2.27	\$2.89	3.74	2.14	1.15	.57	.68	\$13.05
1912	.70	\$8.9	\$1.98	\$1.36	\$4.48	\$1.23	\$5.70	5.53	5.60	1.89	2.22	1.19	\$28.77
1913	2.72	4.47	1.89	\$1.60	\$5.59	\$3.10	6.43	4.14	3.73	1.64	.73	.51	\$31.55
1914	2.48	2.04	1.07	.61	.39	.73	4.63	8.27	3.58	1.57	.56	.28	26.21
1915	.27	.51	.25	.43	1.11	1.16	3.50	5.33	2.79	2.06	.94	.45	16.80
1916	.43	.69	1.26	1.15	.62	1.18	4.65	3.75	3.37	3.10	1.09	.47	21.76
1917	.70	.56	2.49	1.33	.62	1.05	5.86	5.97	6.56	4.34	2.25	.99	32.72
1918	1.68	2.46	.46	.34	.26	.55	4.86	3.83	2.16	5.06	1.56	.93	24.17
1919	2.22	3.26	1.80	1.24	.62	2.21	6.77	7.17	3.12	1.19	.65	.43	30.68
1920	.58	1.96	1.10	.40	.27	1.52	7.72	6.63	2.67	2.04	1.07	1.30	27.28
1921	2.38	1.67	1.97	1.00	.54	3.60	5.80	2.51	.83	.67	.59	.42	21.98
1922	1.84	1.66	1.40	.65	.36	1.54	4.18	2.62	5.17	3.25	.92	.49	23.86
1923	.47	.57	.39	.59	.28	.24	3.75	7.03	1.13	1.45	.67	.34	16.91
1924	.55	.93	2.04	1.03	.58	.74	2.81	7.47	2.33	.84	.42	.36	20.10
1925	.32	.40	.60	.35	.75	1.60	4.07	3.24	1.68	1.41	.55	.57	15.54
1926	2.65	4.81	3.12	.73	.62	1.06	1.33	7.36	2.48	1.63	.62	.60	27.01
1927	.78	2.70	1.00	.74	.55	.93	4.11	2.73	3.27	1.03	1.11	1.11	20.06
1928	1.91	5.12	3.55	2.34	1.00	.77	5.59	6.62	4.07	1.38	.80	.58	33.73
1929	.85	1.18	1.46	1.59	.76	.76	4.90	6.19	1.65	1.22	.49	.28	21.53
1930	.47	.44	.23	.68	.39	1.57	5.51	6.40	2.78	1.48	.98	.65	21.68

\* Revised.

\* Not previously published; see footnote to preceding table.

Monthly and yearly runoff, in inches, of East Branch Penobscot River at Grindstone, Maine--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	.57	.57	.51	.56	.31	.53	5.22	2.54	3.22	1.41	.90	.74	16.68
1932	2.17	2.18	.71	1.28	1.14	.73	7.10	4.01	1.26	.87	.77	2.76	24.98
1933	1.98	3.07	1.50	.63	.46	.49	6.28	4.92	2.21	.95	.64	.69	23.82
1934	1.41	1.05	.79	.65	.54	.77	7.56	4.43	2.19	.98	.57	.54	21.48
1935	1.19	1.73	2.12	1.14	.71	.80	5.18	5.21	2.77	.95	.54	.47	22.81
1936	.45	.63	.75	1.01	.78	8.46	5.57	5.93	2.72	1.07	.56	.76	28.69
1937	1.94	2.05	2.01	1.57	1.00	1.12	4.20	5.83	2.21	.90	.58	.29	23.70
1938	1.35	2.31	1.65	1.00	.89	1.22	5.44	5.33	2.09	2.63	1.34	1.28	25.93
1939	.41	1.19	3.02	.89	.84	.57	2.53	6.89	2.40	1.21	.64	.43	21.82
1940	.97	2.28	1.49	.58	.30	.43	5.75	7.01	2.90	2.05	.86	.82	25.23
1941	.67	2.48	.99	.94	.67	.56	6.12	2.87	.90	.50	.27	.39	16.56
1942	.61	1.63	1.31	1.05	.31	1.35	5.62	6.14	2.72	.52	.37	.28	21.91
1943	.54	1.06	.59	.28	.22	.90	3.46	8.46	2.66	1.24	.50	.28	20.19
1944	2.50	4.41	.77	.13	.12	.22	1.64	5.04	1.33	.60	.05	.83	17.64
1945	2.49	2.21	1.26	1.65	.46	1.98	8.51	5.78	1.89	1.57	.24	.78	26.84
1946	1.83	1.47	.66	.78	.48	2.96	5.13	5.76	1.19	.49	.34	.22	21.31
1947	.64	1.22	1.58	.65	1.82	1.51	4.84	9.55	3.68	1.60	.52	.08	27.70
1948	.17	.42	.32	.24	.17	.87	5.87	6.58	1.71	.48	.23	.01	17.07
1949	.72	2.79	1.73	1.72	.57	.85	6.69	3.09	.97	.28	.14	.34	19.89
1950	.29	1.10	1.28	1.46	.83	1.29	5.89	3.14	1.80	.98	.48	.53	19.07

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30										Calendar year		
		Observed					Adjusted					Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date											
1903	279	*10,900	Mar. 26, 1903*	#275	\$1,990	-	*1.86	*25.19	\$1,810	-	*22.95	-	-	*22.95
1904	279	*13,900	May 2, 1904*	-	\$1,650	-	*1.54	*21.06	\$1,980	-	*25.10	-	-	*25.10
1905	279	*7,780	Apr. 7, 1905*	#110	\$1,650	-	*1.54	*20.89	\$1,320	-	*16.74	-	-	*16.74
1906	279	*12,400	May 7, 1906*	#140	\$1,890	-	*1.77	*23.96	\$2,040	-	*25.93	-	-	*25.93
1907	279, 1231	*18,200	May 1, 1907*	#180	*2,060	-	*1.13	*26.15	*2,420	-	*30.65	-	-	*30.65
1908	279, 1231	*14,600	May 2, 1908*	#258	*2,290	-	*2.14	*29.08	\$1,780	-	*22.69	-	-	*22.69
1909	(a)	*24,400	Sept. 29, 1909	#120	*2,180	-	*2.04	*27.66	*2,640	-	*33.41	-	-	*33.41
1910	281, 1231	*8,290	Apr. 7, 1910*	#180	*2,180	-	*2.04	*27.72	\$1,720	-	*21.79	-	-	*21.79
1911	301, 1231	*9,820	May 3, 1911*	#150	*1,030	-	*.963	*13.05	*1,230	-	*15.67	-	-	*15.67
1912	321, 1231	*12,400	Apr. 24, 1912*	#324	*2,260	-	*2.11	*28.77	*2,710	-	*34.28	-	-	*34.28
1913	351, 1231	*16,700	Oct. 26, 1912*	#185	*2,490	-	*2.33	*31.55	*2,210	-	*28.06	-	-	*28.06
1914	381, 1231	*15,900	May 10, 1914	185	2,060	-	1.93	26.21	1,710	-	21.65	-	-	21.65
1915	401, 1231	*10,200	May 5, 1915	110	1,480	-	1.38	18.60	1,590	-	20.15	-	-	20.15
1916	431, 1231	*7,580	May 1, 1916*	275	1,710	-	1.60	21.76	1,820	-	23.13	-	-	23.13
1917	451, 1231	*18,600	June 19, 1917	210	2,580	-	2.41	32.72	2,640	-	33.57	-	-	33.57
1918	471, 1231	*12,900	July 9, 1918	210	1,900	-	1.78	24.17	2,120	-	26.85	-	-	26.85
1919	501, 1231	*10,800	Apr. 26, 1919	190	2,420	-	2.26	30.68	2,133	-	27.06	-	-	27.06
1920	501, 1231	*14,700	May 10, 1920	170	2,140	-	2.00	27.28	2,350	-	29.64	-	-	29.64
1921	521, 1231	*13,200	Mar. 29, 1921	210	1,730	-	1.62	21.98	1,640	-	20.86	-	-	20.86
1922	541, 1231	*15,700	June 22, 1922*	290	1,880	-	1.76	23.86	1,610	-	20.39	-	-	20.39
1923	561, 1231	*37,000	Apr. 30, 1923	185	1,330	-	1.24	16.91	1,500	-	19.00	-	-	19.00
1924	581, 1231	*14,000	May 2, 1924	185	1,580	-	1.48	20.10	1,410	-	17.90	-	-	17.90
1925	601, 1231	*6,020	Apr. 5, 1925*	77	1,230	-	1.15	15.54	1,960	-	24.80	-	-	24.80
1926	621, 1231	*14,000	May 4, 1926	270	2,130	-	1.99	27.01	1,650	-	20.91	-	-	20.91
1927	641, 1231	*10,500	Apr. 24, 1927	320	1,580	-	1.48	20.06	2,060	-	26.16	-	-	26.16
1928	661, 1231	*22,400	Nov. 5, 1927	345	2,650	-	2.48	33.73	2,090	-	26.64	-	-	26.64
1929	681, 1231	*15,200	May 4, 1929	200	1,700	-	1.59	21.53	1,510	-	19.18	-	-	19.18
1930	696	9,670	May 4, 1930	192	1,720	-	1.61	21.88	1,750	-	22.19	-	-	22.19
1931	711	8,130	June 10, 1931	254	1,310	-	1.22	16.68	1,600	-	20.29	-	-	20.29
1932	726	16,600	Sept. 17, 1932	414	1,960	-	1.83	24.98	2,080	-	26.47	-	-	26.47
1933	741	16,600	Apr. 18, 1933	350	1,880	-	1.76	23.82	1,620	-	20.52	-	-	20.52
1934	756	14,900	Apr. 21, 1934	338	1,693	-	1.58	21.48	1,834	-	23.27	-	-	23.27
1935	761	12,900	Apr. 29, 1935	379	1,797	-	1.68	22.81	1,544	-	19.60	-	-	19.60
1936	801	26,900	Mar. 20, 1936	295	2,255	-	2.11	28.69	2,582	-	32.86	-	-	32.86
1937	821	10,300	May 21, 1937	182	1,866	-	1.74	23.70	1,797	-	22.81	-	-	22.81
1938	851	9,860	Apr. 22, 1938	178	2,046	-	1.91	25.93	2,085	-	26.44	-	-	26.44
1939	871	12,700	May 10, 1939	285	1,721	-	1.61	21.82	1,651	-	20.94	-	-	20.94
1940	891	23,700	Apr. 14, 1940	205	1,982	-	1.85	25.23	1,935	-	24.63	-	-	24.63
1941	921	12,000	Apr. 22, 1941	164	1,288	-	1.20	16.36	1,183	-	14.76	-	-	14.76
1942	951	12,700	Apr. 26, 1942	231	1,600	1,727	1.61	21.91	1,578	1,621	20.55	-	-	20.55
1943	971	11,600	May 15, 1943	273	1,633	1,592	1.49	20.19	1,948	2,020	25.68	-	-	25.68
1944	1001	13,900	Nov. 10, 1943	265	1,569	1,388	1.30	17.64	1,275	1,252	15.91	-	-	15.91
1945	1031	12,900	Apr. 3, 1945	461	2,252	2,274	2.13	28.84	2,112	2,118	26.84	-	-	26.84
1946	1051	12,900	Apr. 28, 1946	226	1,764	1,682	1.57	21.31	1,739	1,640	20.79	-	-	20.79
1947	1081	16,300	May 7, 1947	295	2,112	2,184	2.04	27.70	2,041	1,984	25.17	-	-	25.17
1948	1111	12,600	May 19, 1948	188	1,376	1,341	1.25	17.07	1,565	1,683	21.40	-	-	21.40
1949	1141	8,080	Apr. 18, 1949	281	1,536	1,568	1.47	19.89	1,584	1,565	17.32	-	-	17.32
1950	1171	13,900	Apr. 22, 1950	327	1,462	1,505	1.41	19.07	-	-	-	-	-	-

\* Revised.

\* Not previously published.

a In W.S.P. 279, 501, 1231.

## 32. 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, 1½ miles upstream from Mattaseunk Brook, and 4½ miles upstream from Mattawamkeag, Penobscot County.

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

Gage.--Water-stage recorder. Datum of gage is 191.7 ft above mean sea level, datum of 1929.

Average discharge.--10 years (1940-50), 5,055 cfs (adjusted for storage).

Extremes.--1940-50: 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.--Flow regulated by several reservoirs above station. Runoff adjusted for change in contents in reservoirs of West Branch Penobscot River above Millinocket (see p. 24), Telos (see p. 42) and Grand Lakes (see p. 42).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	5,435	4,227	4,387	-
1941	3,920	6,007	4,369	4,519	4,041	3,934	9,118	6,140	4,006	3,311	3,065	2,903	4,589
1942	3,004	3,602	3,059	3,253	2,891	3,732	8,680	8,252	6,924	4,013	3,919	4,339	4,638
1943	4,255	4,002	3,628	3,176	3,447	3,951	5,857	10,010	5,962	4,658	4,008	4,201	4,740
1944	5,131	7,655	5,911	3,693	3,731	3,582	4,897	6,409	4,112	3,889	3,672	4,247	4,575
1945	5,455	5,459	4,392	4,882	4,521	6,430	11,200	14,540	6,074	5,468	4,148	4,648	6,446
1946	4,942	4,909	4,555	4,768	4,334	7,197	8,696	10,120	4,985	4,570	4,325	4,571	5,872
1947	4,249	4,548	4,156	4,081	5,024	5,242	8,169	18,110	10,510	5,452	4,534	4,644	6,568
1948	4,544	5,734	3,225	2,866	2,727	3,521	7,842	9,442	5,671	4,118	4,061	3,805	4,635
1949	3,474	5,154	4,276	4,802	4,121	4,997	8,929	5,701	4,718	3,524	3,503	3,246	4,691
1950	2,724	3,616	5,571	5,577	3,559	3,873	8,003	5,059	4,305	3,816	4,145	3,813	4,153

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	1.41	0.44	0.62	-
1941	0.33	2.51	1.18	1.02	0.66	0.52	5.79	2.23	0.50	.69	.30	.53	16.16
1942	.55	1.61	1.10	.39	.39	1.33	8.48	5.65	2.50	.68	.49	.32	21.98
1943	.87	.93	.75	.53	.45	.74	2.47	9.14	3.06	1.65	.48	.07	20.94
1944	1.89	4.12	.53	.14	.31	.38	1.70	5.38	1.11	.59	.39	.93	17.47
1945	2.24	1.86	1.03	1.36	.50	1.84	9.12	5.63	2.04	1.94	.42	.39	28.37
1946	2.12	1.57	.95	.60	.41	2.46	5.21	5.59	1.14	.61	.33	.25	21.24
1947	1.13	1.43	1.45	.70	1.46	1.41	4.61	10.40	3.56	1.70	.71	.04	28.60
1948	.31	.26	.33	.22	.29	.75	4.83	6.82	1.45	.42	.30	-.01	15.97
1949	.67	2.50	1.61	1.46	.63	.99	6.00	5.11	.89	.35	.20	.07	18.65
1950	.90	.94	1.19	.72	.94	.50	5.07	3.55	1.91	1.14	.45	.69	18.06

Note.--Figures in this table not previously published. Negative figure indicates that evaporation and seepage from reservoirs exceeded inflow.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Observed			Adjusted			Observed	Adjusted	
		Discharge	Maximum	Minimum	Mean	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
1940	891	-	-	-	-	-	-	-	-	-
1941	921	20,000	Apr. 17, 1941	1,430	4,589	3,939	1.19	16.16	4,201	3,751 15.40
1942	951	26,400	June 16, 1942	2,100	4,638	5,340	1.61	21.98	4,796	5,121 21.07
1943	971	23,100	May 9, 1943	2,300	4,740	5,097	1.54	20.94	5,169	6,119 25.13
1944	1001	23,500	Nov. 16, 1943	2,200	4,575	4,251	1.28	17.47	4,463	3,906 16.06
1945	1031	40,200	May 21, 1945	3,010	6,446	6,916	2.09	28.37	6,371	6,795 27.88
1946	1051	19,800	Apr. 28, 1946	3,040	5,672	5,180	1.56	21.24	5,550	5,027 20.61
1947	1081	27,700	May 7, 1947	2,930	6,568	5,973	2.11	28.00	6,447	8,212 25.49
1948	1111	20,400	May 19, 1948	2,430	4,833	3,883	1.17	15.37	4,748	4,680 20.05
1949	1141	15,400	Apr. 15, 1949	2,100	4,691	4,560	1.38	18.68	4,441	3,930 16.10
1950	1171	21,800	Apr. 23, 1950	2,300	4,153	4,411	1.33	18.06	-	- -

Note.--Adjusted figures not previously published.

## 33. Mattawamkeag River near Mattawamkeag, Maine

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

Drainage area.--1,400 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 420 ft (from topographic map).

Average discharge.--16 years (1934-50), 2,223 cfs.

Extremes.--1934-50: Maximum discharge, 29,200 cfs Mar. 23, 1936 (gage height, 15.34 ft); minimum, 84 cfs Sept. 21, 22, 1946 (gage height, 0.29).

Remarks.--Some storage in lakes above station.

Monthly and yearly mean discharge, in cubic feet per second, of Mattawamkeag River near Mattawamkeag, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	1,131	2,411	1,860	971	590	801	9,675	6,282	3,163	878	316	185	2,353
1936	186	1,191	1,847	1,092	977	11,330	8,016	4,144	2,646	840	409	505	2,771
1937	2,253	2,523	2,671	1,782	903	921	6,513	6,466	1,756	551	377	291	2,240
1938	1,180	2,965	2,425	1,273	1,509	1,707	7,361	5,170	1,528	2,239	867	1,088	2,442
1939	1,508	1,642	4,968	951	734	867	4,822	8,889	1,451	612	355	289	2,273
1940	1,102	2,829	1,718	586	261	345	10,200	6,508	1,914	1,548	302	986	2,345
1941	1,155	3,712	1,137	1,315	745	633	7,186	2,062	744	506	424	268	1,650
1942	648	1,963	959	1,188	577	2,513	8,470	5,405	4,248	814	305	263	2,278
1943	432	1,005	1,112	414	504	1,323	4,853	8,476	2,136	1,188	498	398	1,870
1944	2,413	5,759	911	325	165	230	5,012	4,555	1,441	614	235	837	1,705
1945	3,551	4,137	1,660	2,197	833	2,548	11,200	7,604	1,498	674	281	629	3,072
1946	1,843	2,425	1,615	1,257	893	4,346	6,408	6,100	1,098	371	223	127	2,233
1947	146	872	1,557	651	1,969	1,997	6,838	9,865	3,591	3,053	1,105	385	2,672
1948	192	465	486	197	173	1,074	6,893	6,574	1,654	445	213	124	1,540
1949	527	3,250	2,005	3,076	611	1,235	7,904	2,342	1,198	544	254	546	1,955
1950	504	1,916	2,597	2,438	948	1,187	8,767	3,787	1,277	1,424	484	698	2,168

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	0.93	1.92	1.53	0.80	0.44	0.66	7.71	5.18	2.52	0.72	0.26	0.15	22.82
1936	.15	.95	1.52	.90	.75	9.33	6.39	3.41	2.11	.69	.34	.40	26.94
1937	1.86	2.01	2.20	1.46	.67	.76	5.03	5.33	1.40	.45	.31	.23	21.71
1938	.97	2.36	1.99	1.05	1.12	1.41	5.87	4.25	1.22	1.84	.71	.87	23.66
1939	1.24	1.32	4.09	.78	.55	.71	3.84	7.32	1.16	.50	.29	.23	22.01
1940	.83	2.25	1.42	.48	.20	.28	8.13	5.36	1.53	1.28	.25	.79	22.80
1941	.95	2.96	.94	1.08	.55	.52	5.72	1.70	.59	.42	.35	.21	15.99
1942	.53	1.56	.79	.98	.43	2.06	6.75	4.45	3.38	.67	.25	.21	22.06
1943	.36	.80	.92	.34	.37	1.08	3.87	6.98	1.71	.98	.41	.32	18.15
1944	1.98	4.59	.75	.27	.13	.19	2.40	3.75	1.15	.51	.19	.67	16.58
1945	2.93	3.29	1.57	1.81	.62	2.10	8.93	6.26	1.19	.55	.23	.50	29.78
1946	1.52	1.93	1.33	1.04	.66	3.57	5.11	5.03	.87	.31	.18	.10	21.65
1947	.12	.70	1.28	.54	1.47	1.65	5.44	8.13	2.86	2.51	.91	.31	25.92
1948	.16	.37	.40	.16	.13	.88	5.49	5.42	1.32	.37	.18	.10	14.98
1949	.43	2.59	1.65	2.54	.45	1.02	6.30	1.92	.96	.45	.21	.44	18.96
1950	.42	1.53	2.14	2.01	.70	.98	6.98	3.11	1.02	1.18	.40	.56	21.03

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1935	781	20,800	Apr. 24, 1935	118	2,353	1.68	22.82	2,172	21.06	
1936	801	29,200	Mar. 23, 1936	115	2,771	1.98	26.94	3,125	30.39	
1937	821	10,500	May 23, 1937	206	2,240	1.60	21.71	2,164	20.96	
1938	851	11,900	Apr. 22, 1938	154	2,442	1.74	23.66	2,577	24.97	
1939	871	18,000	Apr. 30, May 1	168	2,273	1.62	22.01	2,052	19.88	
1940	891	23,600	Apr. 16, 17, 1940	195	2,345	1.67	22.80	2,380	23.15	
1941	921	13,400	Apr. 22, 1941	120	1,650	1.18	15.99	1,448	14.02	
1942	951	17,000	Apr. 28, 1942	116	2,278	1.63	22.06	2,193	21.26	
1943	971	12,900	Apr. 29, 30, 1943	240	1,870	1.34	18.15	2,412	23.39	
1944	1001	12,900	Nov. 13, 1943	128	1,705	1.22	16.58	1,732	16.85	
1945	1031	19,200	Apr. 6, 1945	179	3,072	2.19	29.78	2,783	26.97	
1946	1051	12,900	Apr. 30, 1946	87	2,233	1.59	21.65	1,956	18.97	
1947	1081	23,900	May 8, 1947	94	2,672	1.51	25.92	2,552	24.75	
1948	1111	12,900	May 21, 1948	96	1,540	1.10	14.98	1,926	18.72	
1949	1141	9,950	Apr. 18, 1949	96	1,955	1.40	18.96	1,894	18.36	
1950	1171	21,100	Apr. 24, 1950	211	2,168	1.55	21.03	-	-	

## 34. Mattawamkeag River at Mattawamkeag, Maine

Location.--Lat 45°31'05", long. 68°21'00", on downstream side of Maine Central Railroad bridge in the village of Mattawamkeag, Penobscot County, half a mile upstream from mouth.

Drainage area.--1,500 sq mi.

Gage.--Chain gage. Datum of gage is 185.84 ft above mean sea level, datum of 1929. After Feb. 21, 1929, water-stage recorder at site 4 miles upstream at different datum, but records represent flow at chain gage site.

Average discharge.--32 years (1902-34), 2,657 cfs.

Extremes.--1902-34: Maximum discharge, 48,900 cfs (revised) May 1, 1923 (gage height, 19.60 ft); minimum, 86 cfs Oct. 4-12, 1905, Sept. 19, Oct. 6, 1906, Sept. 24-29, 1908, and Oct. 14-17, 1910 (gage height, 2.5 ft).

Remarks.--Some storage in lakes above station.



Monthly and yearly mean discharge, in cubic feet per second, of Mattawamkeag River at Mattawamkeag, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1902	-	-	-	-	-	-	-	-	-	-	-	1,140	-
1903	2,010	2,880	*1,800	*1,020	*520	*8,960	8,990	2,990	798	938	613	327	*2,600
1904	242	887	*1,030	*520	*239	*1,350	*8,330	11,500	2,990	952	508	1,360	*2,500
1905	2,600	*1,650	*827	*737	*428	*461	*8,480	3,900	1,690	601	250	208	*1,810
1906	98.7	541	*582	*600	*824	*1,120	*8,580	10,300	2,650	846	345	*223	*2,230
1907	1,720	3,080	*1,240	*1,460	*617	*629	*6,420	9,070	3,970	4,260	2,350	441	*1,508
1908	2,520	3,680	*4,410	*2,740	*1,810	*1,870	*5,570	9,150	3,500	457	443	191	*3,030
1909	429	919	*842	*1,000	*1,220	*2,560	*13,000	9,710	1,690	*1,480	548	1,670	*2,920
1910	4,340	3,410	*2,730	*1,480	*1,540	*2,260	8,070	4,680	3,070	1,090	538	267	*2,790
1911	142	704	*573	*618	*423	*566	*4,810	4,550	1,900	327	458	813	*1,320
1912	885	1,490	4,220	*2,620	*1,770	*2,350	*8,380	6,110	7,030	743	3,300	1,190	*3,340
1913	2,830	7,310	2,640	*2,160	*834	*1,550	*13,400	5,140	2,980	955	736	678	*3,420
1914	5,620	6,320	*3,770	*1,330	*693	*1,200	*7,590	12,300	2,580	942	378	226	*3,430
1915	295	985	560	*928	*1,340	*2,860	6,310	8,500	2,200	3,070	979	757	*2,410
1916	912	1,390	*2,280	*1,930	*845	*1,010	*5,990	3,350	2,100	*2,270	775	514	*1,950
1917	1,320	1,160	4,470	2,270	1,060	1,390	12,400	7,610	9,660	3,060	1,620	918	3,910
1918	5,090	3,130	758	589	615	1,050	7,840	4,980	1,750	3,640	925	2,540	2,580
1919	4,580	6,180	3,110	1,800	916	3,600	10,800	7,220	3,480	766	534	913	3,660
1920	1,250	4,030	2,100	459	347	1,520	16,300	9,120	1,660	1,060	766	2,800	3,440
1921	4,070	2,880	4,070	1,950	1,130	6,040	9,380	2,130	906	421	616	365	2,840
1922	599	1,600	2,060	777	532	3,660	7,870	2,120	5,280	3,320	934	758	2,460
1923	707	1,230	732	1,050	739	531	7,400	*12,100	1,000	329	334	222	*2,210
1924	311	1,080	2,870	1,020	749	970	5,920	6,730	1,180	730	239	395	1,850
1925	361	619	1,110	382	976	3,990	6,120	2,310	1,200	1,040	411	965	1,620
1926	5,580	6,570	2,830	1,410	1,060	1,090	3,560	12,600	2,450	614	373	541	3,240
1927	1,820	5,240	2,000	1,320	921	2,040	4,230	3,770	911	1,510	932	2,640	2,640
1928	2,340	7,080	4,830	2,890	1,400	1,160	8,870	5,790	2,300	821	1,640	1,190	3,350
1929	1,590	2,010	2,200	2,420	936	*1,013	7,390	8,040	1,950	*775	328	241	*2,460
1930	*656	*1,120	*680	*1,240	*1,210	4,510	9,270	3,910	2,200	*875	*314	*246	*2,180
1931	*195	*570	*633	*385	*282	*633	8,870	2,560	3,470	1,550	621	832	*1,710
1932	2,760	3,750	1,040	1,930	1,100	767	12,900	4,390	1,320	1,080	1,240	1,730	2,820
1933	2,710	4,630	1,460	834	651	799	10,900	4,150	2,230	780	287	211	2,460
1934	1,324	1,690	1,214	727	811	1,453	16,470	4,723	2,514	1,195	590	399	2,748

\* Revised.

† Corrected.

\* Not previously published; estimated on basis of weather records and records for West Branch Penobscot River at Millinocket.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1902	-	-	-	-	-	-	-	-	-	-	-	-	0.85
1903	1.54	2.14	*1.38	*0.78	*0.36	*6.88	6.68	2.29	0.59	0.72	0.47	.24	*24.07
1904	1.19	.86	*.79	*.40	*.17	*1.04	*6.19	8.84	2.22	.75	.39	1.01	*22.63
1905	1.99	*1.15	*.64	*.57	*.30	*.35	*6.30	3.00	1.26	.46	.19	.16	*16.37
1906	.08	.40	*.45	*.46	*.57	*.86	*6.38	7.92	1.98	.65	.26	*1.17	*20.18
1907	1.33	2.29	*.95	*1.12	*.43	*.48	*4.78	6.98	2.96	3.27	1.81	1.12	*27.52
1908	1.94	2.73	3.59	*2.11	*1.30	*1.44	*4.14	7.04	2.60	.35	.34	.14	*27.52
1909	.33	.68	*.65	*.77	*.85	*1.97	*9.67	7.46	1.26	*1.14	.42	1.24	*26.44
1910	3.33	2.53	*2.10	*1.14	*1.07	*1.74	6.00	3.60	2.29	.84	.41	.20	*25.25
1911	.11	.52	*.44	*.49	*.29	*.43	*3.58	3.49	1.42	.25	.35	.60	*11.96
1912	.68	1.11	3.24	*2.02	*1.27	*1.81	*6.24	4.69	5.23	.57	2.54	.88	*30.28
1913	2.18	5.43	2.03	*1.66	*.58	*1.19	*9.96	3.95	2.20	.74	.56	.50	*30.98
1914	2.78	4.70	*2.89	*1.02	*.48	*.92	*5.64	9.45	1.92	.72	.29	.17	*30.98
1915	.23	.73	.43	*.71	*.93	*2.20	4.70	6.54	1.64	2.36	.75	.56	*21.78
1916	.70	1.03	*1.75	*1.49	*.61	*.78	*4.45	2.57	1.56	*1.74	.60	.38	*17.66
1917	1.01	.86	5.44	1.74	.74	1.07	9.23	5.84	7.18	2.35	1.24	.68	35.38
1918	2.38	2.35	.58	.45	.45	.81	5.84	3.85	1.30	2.80	.71	1.89	23.35
1919	3.52	4.60	2.39	1.38	.64	2.77	8.03	5.54	2.59	.59	.41	.14	33.14
1920	.95	3.00	1.61	.35	.25	1.16	12.16	7.01	1.24	.82	.59	2.09	31.23
1921	3.12	2.14	3.12	1.50	.78	4.65	6.97	1.64	.67	.32	.47	.27	25.65
1922	.46	1.19	1.58	1.60	.37	2.81	5.86	1.63	3.93	2.55	.72	.56	22.26
1923	.54	.91	.56	.81	.51	.41	5.50	*9.33	.74	.25	.26	.17	*19.96
1924	.24	.80	2.20	.78	.54	.75	4.41	5.18	.88	.56	.18	.29	16.81
1925	.28	.46	.95	.29	.68	3.07	4.55	1.78	.89	.80	.32	.72	14.69
1926	4.29	4.89	2.18	1.08	.74	.84	2.64	9.68	1.82	.47	.29	.40	29.32
1927	1.40	3.89	1.53	1.01	.64	1.57	5.22	3.25	2.80	.70	1.16	.69	23.86
1928	1.80	5.27	3.71	2.22	1.01	.89	6.59	4.45	1.71	.63	1.26	.88	30.42
1929	1.21	1.50	1.70	1.86	.65	*.78	5.95	6.18	1.45	*.60	.25	.18	*22.31
1930	*.50	*.83	*.52	*.95	*.84	3.47	6.90	3.01	1.64	*.67	*.24	*.18	*19.75
1931	*.15	*.42	*.49	*.30	*.20	*.49	6.59	1.97	2.58	1.19	.48	.62	*15.48
1932	2.12	2.79	.80	1.49	.79	.59	9.60	3.38	.98	.83	.95	1.28	25.60
1933	2.09	3.45	1.12	.64	.45	.61	8.11	3.19	1.66	.60	.22	.16	22.30
1934	1.02	1.26	.93	.56	.56	1.12	12.25	3.63	1.87	.92	.45	.30	24.87

\* Revised.

† Corrected.

\* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Mattawamkeag River at Mattawamkeag, Maine									
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1903	279, 1231	*17,200	Mar. 25, 1903*	*258	*2,660	*1.77	*24.07	*2,290	*20.65
1904	279, 1231	*17,900	May 15, 1904*	*114	*2,500	*1.67	*22.63	*2,740	*24.77
1905	279, 1231	*13,500	Apr. 10, 1905*	*114	*1,810	*1.21	*16.37	*1,490	*13.52
1906	279, 1231	*16,500	May 7, 1906*	*86	*2,230	*1.49	*20.18	*2,630	*23.82
1907	279, 1231	*25,200	Apr. 25, 1907*	*86	*3,040	*2.03	*27.52	*3,430	*31.01
1908	279, 1231	*17,600	May 2, 1908*	*86	*3,030	*2.02	*27.52	*2,330	*21.12
1909	279, 1231	*21,400	Apr. 20, 1909*	*107	*2,920	*1.95	*26.44	*3,615	*32.74
1910	281, 1231	*11,000	Apr. 25, 1910*	*114	*2,790	*1.86	*25.25	*2,030	*18.27
1911	301, 1231	*11,500	May 2, 1911*	*86	*1,320	*.880	*11.96	*1,760	*15.92
1912	321, 1231	*20,600	June 4, 1912*	*258	*3,340	*2.23	*30.28	*3,840	*34.89
1913	351, 1231	*21,200	Apr. 29, 1913*	*223	*3,420	*2.28	*30.98	*3,500	*31.71
1914	381, 1231	*21,600	May 11, 1914*	*114	*3,430	*2.29	*30.98	*2,430	*22.00
1915	401, 1231	*16,600	May 7, 1915*	*123	*2,410	*1.61	*21.78	*2,640	*23.87
1916	451, 1231	*9,370	Apr. 22, 1916*	*390	*1,950	*1.30	*17.66	*2,150	*19.49
1917	451, 1231	*24,900	June 13, 1917*	*390	*3,910	*2.61	*35.39	*3,910	*35.35
1918	471, 1231	*12,700	Apr. 26, 1918	*340	*2,580	*1.72	*23.35	*3,160	*29.57
1919	501, 1231	*13,200	Apr. 1, 1919*	*390	*3,660	*2.44	*33.14	*3,110	*28.19
1920	501, 1231	*26,100	Apr. 18, 1920	*320	*3,440	*2.29	*31.23	*3,750	*34.05
1921	521, 1231	*15,600	Apr. 2, 1921	*275	*2,840	*1.89	*25.65	*2,270	*20.50
1922	541, 1231	*17,700	June 24, 1922*	*270	*2,460	*1.64	*22.26	*2,320	*21.04
1923	561, 1231	*48,900	May 1, 1923	*162	*2,210	*1.47	*19.96	*2,350	*21.19
1924	581, 1231	*14,500	May 3, 1924*	*162	*1,850	*1.23	*16.81	*1,670	*15.16
1925	601, 1231	*10,700	Apr. 5, 1925	*210	*1,620	*1.08	*14.69	*2,700	*24.46
1926	621, 1231	*24,500	May 6, 1926	*275	*3,240	*2.16	*29.32	*2,740	*24.78
1927	641, 1231	*14,200	Apr. 26, 1927*	*484	*2,640	*1.76	*23.86	*3,080	*27.82
1928	661, 1231	*17,700	Nov. 6, 1927*	*436	*3,350	*2.23	*30.42	*2,650	*24.05
1929	681, 1231	*16,500	May 4, 1929*	*150	*2,460	*1.64	*22.31	*2,180	*19.75
1930	681, 1231	*13,700	Apr. 15, 1930*	*120	*2,180	*1.45	*19.75	*2,100	*18.96
1931	1231	13,900	Apr. 14, 1931	*120	*1,710	*1.14	*15.48	*2,220	*20.13
1932	726	21,700	Apr. 15, 1932	*480	*2,820	*1.88	*25.60	*2,930	*26.55
1933	741	17,600	Apr. 20, 1933	*102	*2,460	*1.64	*22.30	*2,080	*18.85
1934	756	30,900	Apr. 21, 1934	*252	*2,748	*1.83	*24.87	-	-

\* Revised.

† Corrected.

‡ Not previously published.

## 35. Piscataquis River near Dover-Foxcroft, Maine 1/

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 (revised).

Gage.--Water-stage recorder. Datum of gage is 358.06 ft above mean sea level, datum of 1929. Prior to July 20, 1930, staff gage at same site and datum.

Average discharge.--48 years (1902-50), 569 cfs.

Extremes.--1902-50: Maximum discharge, 21,500 cfs (revised) 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.--Some regulation at low flow by mills above station.

## Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1902	-	-	-	-	-	-	-	-	-	-	-	287	-
1903	558	600	*380	*192	*146	*2,300	*1,630	286	*623	228	207	42.8	*602
1904	49.1	82.0	*204	*108	*61.2	*121	*1,150	*2,150	318	388	174	325	*427
1905	587	*395	*183	*176	*86.1	*168	*1,480	858	*395	200	96.4	103	*394
1906	76.1	82.2	*85.2	*141	*213	*363	*2,260	*1,970	461	220	185	207	*522
1907	464	62	*259	*157	*259	*1,708	*2,230	618	*87	*147	59	171	*712
1908	*1,130	*1,590	*1,020	*541	*444	*643	*1,860	*2,060	408	88.1	171	95.0	*636
1909	92.6	67.6	*125	*193	*321	*618	*2,780	*1,770	249	99.4	51.7	*667	*584
1910	600	447	*405	*365	*388	*726	*2,030	596	688	131	146	78.9	*548
1911	41.5	39.0	*95.4	*118	*87.4	*115	*1,110	*889	192	50.6	60.1	57.9	*238
1912	125	*506	*956	*460	*230	*563	*2,570	*1,690	*753	123	*367	138	*707
1913	*793	*1,130	501	*448	*193	*1,170	*2,140	608	192	165	111	205	*639
1914	*1,090	1,080	488	*292	*152	*302	*1,848	*2,130	147	*190.3	*139.1	*136.9	*644
1915	*44.9	*69.5	*79.1	*192	*451	*610	*1,690	*1,110	122	*506	695	369	*514
1916	208	466	*483	*258	*188	*258	*1,770	*1,220	*1,040	527	203	142	*563
1917	280	269	1,110	415	*305	*351	*2,450	*1,280	*1,920	*503	974	204	*838
1918	647	726	217	61.6	69.8	216	1,970	914	448	852	182	377	*557
1919	852	1,170	550	486	290	1,220	1,990	1,460	346	120	94.3	209	733
1920	273	788	465	83.7	52.3	401	3,210	1,630	233	98.9	162	187	630

\* Revised.

† Corrected.

‡ Not previously published; estimated on basis of climatological records and records for Penobscot River at Millinocket.

1/ Published as Piscataquis River at Lows Bridge near Foxcroft, 1902, and as Piscataquis River near Foxcroft, 1903-34.

Monthly and yearly mean discharge, in cubic feet per second, of Piscataquis River near Dover-Foxcroft, Maine—Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1921	617	490	1,370	315	178	1,300	1,940	442	68.8	47.9	162	44.2	585
1922	172	528	653	256	99.8	771	2,140	961	1,460	822	324	169	697
1923	202	208	115	243	155	166	2,800	1,970	335	59.1	68.0	23.9	529
1924	86.2	294	656	245	111	299	1,720	1,950	107	60.3	36.8	186	480
1925	78.6	196	232	88.5	442	967	1,520	457	359	444	126	240	428
1928	1,110	1,500	1,080	350	171	141	940	1,910	502	58.0	53.5	53.3	659
1927	250	1,410	388	236	116	428	1,140	1,280	440	126	141	108	506
1928	1,210	1,300	970	522	302	333	1,910	2,210	718	252	112	257	842
1929	447	514	300	427	141	412	2,270	1,880	460	83.1	74.4	68.8	591
1930	101	184	60.6	209	213	745	2,090	1,110	471	275	102	84.2	470
1931	112	385	198	97.0	95.8	390	2,060	891	1,150	269	200	212	503
1932	457	384	360	359	161	108	2,850	754	188	51.8	124	338	549
1933	502	1,220	315	137	140	172	2,540	1,230	332	104	159.7	162.2	566
1934	587	324	211	151	134	385	*2,941	789	463	231	87	203	*537
1935	282	456	402	256	156	265	*2,208	1,105	739	403	175	67	*541
1936	58.1	242	265	387	216	3,791	1,853	1,107	314	190	73.5	60.7	717
1937	426	395	674	425	372	412	2,031	1,915	500	170	61.8	40.0	619
1938	578	804	642	368	432	567	1,877	1,295	324	437	189	452	664
1939	402	321	1,107	226	160	187	1,263	1,901	227	84.3	61.5	44.5	502
1940	82.8	440	444	111	75.4	162	2,368	2,511	385	224	69.3	97.9	564
1941	73.5	763	234	252	223	134	1,671	363	105	113	66.6	52.2	335
1942	80.4	276	240	381	120	569	2,274	1,123	781	167	57.6	52.5	510
1943	109	357	459	116	132	264	1,420	2,072	544	205	167	79.2	497
1944	804	1,465	282	145	121	225	1,368	1,513	236	86.9	46.1	89.1	531
1945	346	444	607	483	182	888	2,275	1,696	325	259	76.8	136	645
1946	672	524	392	201	141	1,172	1,662	1,093	207	85.1	117	80.3	531
1947	898	622	405	289	766	594	1,679	2,171	816	298	98.8	61.7	722
1948	35.2	132	85.9	68.5	68.2	343	1,634	2,137	245	102	45.8	16.7	410
1949	49.0	613	400	707	158	410	1,714	452	157	84.7	31.4	40.0	401
1950	43.4	279	307	332	190	436	2,420	734	638	310	121	115	492

\* Revised.

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1902	-	-	-	-	-	-	-	-	-	-	-	1.08	-
1903	2.17	2.25	*1.48	*0.74	*0.51	*8.92	*6.12	1.11	*2.34	0.89	0.80	.16	*27.49
1904	.19	.123	*.79	*.42	*.22	*.47	*4.32	*8.35	1.19	1.51	.68	1.22	*19.59
1905	2.28	1.48	*.71	*.68	*.30	*.65	*5.56	3.33	1.48	.78	.37	.59	*18.01
1908	.50	.31	*.33	*.55	*.75	*1.41	*8.49	*7.64	1.73	.85	.72	.78	*23.86
1907	1.80	2.35	*1.01	*1.26	*.55	*.92	*6.38	*8.61	2.32	*3.33	1.74	2.24	*32.51
1908	*4.38	*5.97	*3.95	*2.10	*1.61	*2.49	*6.98	*8.00	1.53	.27	.66	.56	*38.30
1909	.36	.25	*.49	*.75	*1.12	*2.40	*10.44	*6.87	.94	.39	.20	*2.51	*26.72
1910	2.53	1.68	*1.57	*1.42	*1.36	*2.81	*7.63	2.32	2.59	.51	.57	.30	*25.09
1911	.16	.15	*.37	*.46	*.31	*.45	*4.17	*3.45	.72	.20	.23	.22	*10.89
1912	.49	*1.90	*3.71	*1.79	*.84	*2.19	*9.65	*6.56	*2.83	.48	1.43	.52	*32.39
1913	*3.08	*4.24	1.95	*1.74	*.68	*.54	*8.03	2.36	.72	.64	.43	.77	*29.18
1914	*4.23	4.06	1.91	*1.13	*.53	*1.18	*6.92	*8.27	.55	.35	.15	.14	*29.42
1915	*1.17	.34	*.31	*.74	*1.58	*3.15	*6.35	*4.31	.46	*1.97	2.70	1.46	*23.54
1916	.81	1.75	*1.88	*1.00	*.68	*1.00	*6.65	*4.74	3.90	2.04	.79	.53	*25.77
1917	1.09	1.01	4.31	1.61	*1.07	*1.36	*9.20	4.97	*7.21	*1.95	3.78	.77	*38.33
1918	2.61	2.75	.84	.24	.24	.84	7.40	3.60	1.69	3.31	.71	1.42	25.60
1919	3.51	4.40	2.15	1.89	1.02	4.74	7.48	5.67	1.29	.47	.37	.79	33.56
1920	1.06	2.96	1.81	.33	.19	1.56	12.06	6.35	.88	.38	.63	.70	28.89
1921	2.40	1.84	5.32	1.22	.62	5.05	7.29	1.72	.26	.19	.63	.17	26.71
1922	.67	1.99	2.54	.99	.35	3.00	8.04	3.74	5.49	3.19	1.26	.63	31.89
1923	.78	.78	.45	.94	.54	.64	10.52	7.64	1.26	.23	.26	.09	24.13
1924	.33	1.10	2.65	.99	.40	1.16	6.46	7.57	.40	.23	.14	.70	21.99
1925	.51	.74	.90	.34	1.55	3.76	5.71	1.78	1.35	1.72	.49	.90	19.55
1926	4.31	5.63	4.20	1.36	.60	.55	3.53	7.41	1.89	.22	.21	.20	30.11
1927	.97	5.30	1.51	.92	.41	1.66	4.28	4.97	1.65	.49	.55	.41	23.32
1928	4.69	4.89	3.77	2.03	1.10	1.29	7.17	8.58	2.70	.98	.43	.97	38.60
1929	1.74	1.93	1.16	1.66	.49	1.60	8.52	7.30	1.73	.32	.29	.26	27.00
1930	.59	.69	.24	.81	.75	2.89	7.86	4.31	1.77	1.07	.40	.32	21.50
1931	.43	1.45	.77	.38	.34	1.51	7.74	3.46	4.32	1.04	.78	.80	23.02
1932	1.78	1.44	1.40	.58	.42	10.71	2.95	.71	.71	.20	.48	3.15	25.20
1933	1.95	4.59	1.22	.53	.49	.67	9.54	4.77	1.26	.40	.23	.23	25.87
1934	2.20	1.22	.82	.59	.47	1.50	*11.06	3.07	1.74	.90	.26	.76	*24.58
1935	1.02	1.72	1.56	.99	.55	1.03	*8.29	4.29	2.74	1.50	.68	.25	*24.62
1936	.23	.91	1.03	1.50	.78	14.71	6.96	4.30	1.18	.74	.28	.23	32.85
1937	1.65	1.48	2.62	1.65	1.30	1.60	7.63	7.44	1.87	.66	.24	.16	28.30
1938	2.25	3.02	2.49	1.43	1.51	2.20	7.05	5.03	1.22	1.70	.73	1.70	30.33
1939	1.56	1.21	4.30	.88	.56	.73	4.74	7.38	.85	.33	.24	.17	22.95
1940	.52	1.65	1.72	.43	.27	.63	8.69	8.97	1.45	.67	.27	.37	25.84

\* Revised.

† Corrected.

\* Not previously published; estimated on basis of climatological records and records for Penobscot River at Millinocket.

## PENOBSCOT RIVER BASIN

Monthly and yearly runoff, in inches, of Piscataquis River near Dover-Foxcroft, Maine--Continued													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	.28	2.87	.91	.98	.78	.52	6.28	1.41	.40	.44	.26	.20	15.33
1942	.31	1.04	.95	1.48	.42	2.21	6.55	4.56	2.93	.65	.22	.20	23.30
1943	.42	1.34	1.79	.45	.46	1.10	5.33	8.05	2.04	.80	.65	.30	22.73
1944	3.12	5.50	1.09	.56	.44	.87	5.14	5.87	.89	.34	.18	.33	24.33
1945	1.34	1.66	2.35	1.88	.64	3.45	8.54	6.58	1.22	1.01	.30	.51	29.48
1946	2.61	1.96	1.52	.78	.49	4.55	6.25	4.24	.78	.33	.45	.30	24.26
1947	3.48	2.33	1.58	1.04	2.69	2.31	6.30	8.43	3.07	1.15	.38	.23	32.99
1948	.14	.50	.33	.27	.25	1.33	6.14	8.30	.92	.40	.18	.06	18.82
1949	.19	2.30	1.56	2.74	.55	1.59	6.44	1.75	.59	.33	.12	.15	18.51
1950	.17	1.05	1.19	1.29	.67	1.70	9.09	2.85	2.40	1.20	.47	.45	22.51

Yearly discharge, in cubic feet per second									
Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1903	279,1201	\$5,140	June 14, 1903*		\$19	\$602	\$2.03	\$27.49	\$500
1904	279,1201	\$7,420	May 12, 1904*		\$19	\$427	\$1.44	\$19.59	\$498
1905	279,1201	\$2,410	Apr. 15, 1905*			\$394	\$1.33	\$18.01	\$317
1906	279,1201	\$10,400	Apr. 17, 1906*		\$19	\$522	\$1.76	\$23.86	\$614
1907	279,1201	\$8,040	Apr. 24, 1907*		\$24	\$712	\$2.40	\$32.51	\$912
1908	279,1201	\$10,100	Nov. 7, 1907*		\$15	\$836	\$2.81	\$38.30	\$548
1909	(a)	\$17,400	Sept. 29, 1909		\$5	\$584	\$1.97	\$26.72	\$682
1910	281,1201	\$4,010	Apr. 1, 1910*		\$40	\$548	\$1.85	\$25.09	\$442
1911	301,1201	\$4,110	Apr. 29, 30, 1911*		\$16	\$238	\$*.801	\$10.89	\$356
1912	321,1201	\$7,580	Apr. 23, 1912*		\$51	\$707	\$2.38	\$32.39	\$778
1913	351,1201	\$7,130	Apr. 1, 1913*		46	\$639	\$2.15	\$29.18	\$660
1914	381,1201	\$6,930	Oct. 21, 1913*		19	\$644	\$2.17	\$29.42	\$438
1915	401,1201	\$6,100	May 1, 1915*		15	\$514	\$1.73	\$23.54	\$594
1916	431,1201	\$6,200	May 18, 1916		72	\$563	\$1.90	\$25.77	\$606
1917	451,1201	\$14,600	June 18, 1917		31	\$838	\$2.82	\$38.33	\$831
1918	471,1201	\$5,960	Oct. 31, 1917		17	557	1.88	25.60	639
1919	501,1201	\$4,710	Mar. 29, 1919		40	733	2.47	33.56	646
1920	501,1201	\$8,650	Apr. 14, 1920		10	630	2.12	28.89	712
1921	521,1201	\$7,600	Dec. 15, 1920		31	585	1.97	26.71	489
1922	541,1201	\$8,350	June 30, 1922		31	697	2.35	31.89	627
1923	561,1201	\$21,500	Apr. 29, 1923		14	529	1.78	24.13	572
1924	581,1201	\$8,690	May 2, 1924		11	480	1.62	21.99	436
1925	601,1201	\$4,570	Apr. 1, 1925		20	428	1.44	19.55	694
1926	621,1201	\$8,040	Nov. 16, 1925		18	659	2.22	30.11	520
1927	641,1201	\$7,780	Nov. 20, 1926		26	506	1.70	23.12	628
1928	661,1201	\$10,400	Oct. 20, 1927		27	842	2.84	38.60	657
1929	681,1201	\$9,600	May 3, 1929		29	591	1.99	27.00	514
1930	696,1201	\$8,040	Apr. 8, 1930		34	470	1.58	21.50	499
1931	711	6,870	June 10, 1931		\$38	503	1.69	23.02	546
1932	726	12,900	Sept. 17, 1932		29	549	1.85	25.20	618
1933	741	5,960	Apr. 19, 1933		26	566	1.91	25.87	489
1934	756,1201	\$8,040	Apr. 21, 1934		23	\$537	\$1.81	\$24.58	\$537
1935	781,1201	\$5,590	Apr. 22, 1935		29	\$541	\$1.82	\$24.62	\$494
1936	801	19,300	Mar. 20, 1936		18	717	2.41	32.85	795
1937	821	6,750	Apr. 29, 1937		8	619	2.08	28.30	663
1938	851	8,110	Oct. 24, 1937		8	664	2.24	30.33	648
1939	871	6,240	Dec. 7, 1939		30	502	1.69	22.95	428
1940	891	13,700	Apr. 13, 1940		31	564	1.90	25.84	572
1941	921	4,010	Apr. 17, 1941		28	335	1.13	15.33	296
1942	951	6,970	Apr. 26, 1942		23	510	1.72	23.30	537
1943	971	4,880	May 4, 1943		34	497	1.67	22.73	632
1944	1001	13,500	Nov. 9, 1943		33	531	1.79	24.33	436
1945	1031	7,190	Apr. 28, 1945		39	645	2.17	29.48	661
1946	1051	5,300	Apr. 27, 1946		27	531	1.79	24.26	560
1947	1081	11,600	Oct. 1, 1946		20	722	2.43	32.99	581
1948	1111	9,640	May 18, 1948		16	410	1.38	19.82	477
1949	1141	3,100	Jan. 7, 1949		17	401	1.35	18.31	365
1950	1171	11,300	Apr. 21, 1950		12	492	1.66	22.51	-

\* Revised.

\* Not previously published.

a In W.S.P. 279, 501, 1201.

## 36. Wilson Pond near Greenville, Maine

Location.--Lat 45°27'25", long. 69°31'50, 3 miles east of Greenville, Piscataquis County.Drainage area.--36 sq mi.Gage.--Staff gage. Altitude of gage is 1,022 ft (from topographic map).Remarks.--Reservoir used for storage of water for hydroelectric power development, has usable capacity of 390,000,000 cu ft between gage heights 27.5 and 33.5 ft.Cooperation.--Gage-height record furnished by Central Maine Power Co.

Month-end contents, in millions of cubic feet, of Wilson Pond near Greenville, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1932	-	-	-	343	257	121	147	316	356	349	296	376
1933	363	390	349	290	231	95	69	390	369	303	284	238
1934	186	179	147	153	30	0	356	358	410	356	290	179
1935	134	82	30	6	0	0	309	349	390	349	212	0
1936	0	0	0	0	0	376	356	390	390	390	323	251
1937	205	179	166	173	160	349	349	356	356	316	251	186
1938	316	349	356	356	356	160	160	383	390	383	343	349
1939	345	356	363	329	303	134	18	369	356	316	251	179
1940	69	140	369	343	238	127	153	390	390	345	349	290
1941	251	257	244	192	140	.76	390	369	316	303	290	257
1942	270	264	264	316	309	212	238	390	369	336	277	296
1943	199	205	199	166	63	0	140	390	390	329	270	140
1944	153	376	336	212	50	0	0	343	363	140	50	63
1945	69	166	251	296	270	277	390	390	309	336	257	277
1946	383	390	309	264	166	173	356	349	290	336	323	336
1947	404	363	356	277	277	166	376	390	390	390	363	349
1948	257	270	356	264	24	18	348	383	376	376	356	251
1949	218	356	390	356	95	30	356	390	383	257	277	270
1950	257	356	270	336	225	63	257	383	376	369	218	76

## 37. Sebec Lake at Sebec, Maine

Location.--Lat 45°16'10", long. 69°06'45", at Sebec, Piscataquis County.

Drainage area.--327 sq mi.

Gage.--Staff gage. Datum of gage is 225.1 ft above mean sea level, datum of 1929.

Remarks.--Reservoir used for storage of water for power and log driving, has usable capacity of 2,511,000,000 cu ft between gage heights 91.0 and 100 ft.

Cooperation.--Gage-height record furnished by Bangor Hydro-Electric Co.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1924	-	-	-	2,667	2,423	2,277	2,180	2,643	2,154	1,887	1,398	1,216
1925	514	854	898	604	1,284	2,473	2,570	2,546	2,496	2,400	1,960	1,625
1926	2,473	2,300	2,619	2,520	2,326	1,910	2,227	2,446	2,473	2,007	1,534	1,101
1927	1,080	2,693	2,643	2,350	1,960	2,300	2,154	2,643	2,423	2,130	2,033	1,788
1928	2,550	2,546	2,400	2,253	1,671	1,442	2,716	2,739	2,546	2,423	2,473	2,570
1929	2,619	2,473	2,643	2,374	2,130	1,837	2,667	2,374	2,277	1,860	1,352	817
1930	731	1,026	956	1,301	1,671	1,330	2,593	1,788	1,887	2,033	1,646	1,058
1931	1,306	2,057	2,546	2,520	2,350	2,473	2,910	2,667	2,253	2,423	2,227	2,253
1932	2,716	2,643	2,693	2,693	2,693	2,496	2,374	2,619	2,300	1,808	2,130	2,957
1933	2,667	2,227	2,446	2,423	2,374	1,740	2,277	2,693	2,593	2,253	1,887	1,603
1934	2,473	2,277	2,423	2,204	1,984	1,887	2,983	2,423	2,423	2,081	2,033	2,180
1935	2,057	2,350	2,150	2,154	2,007	1,860	2,570	2,180	1,887	2,277	1,740	1,646
1936	1,534	1,788	2,204	2,716	2,423	4,455	1,194	2,326	2,253	1,887	1,671	1,510
1937	1,910	2,107	2,154	2,277	2,154	1,887	2,593	2,130	2,277	2,180	1,764	1,693
1938	1,966	2,461	2,374	2,464	2,256	2,148	2,338	2,315	2,593	2,400	2,312	2,350
1939	2,347	2,414	2,397	2,256	2,172	1,671	2,573	2,300	2,253	2,051	1,849	2,611
1940	2,133	2,160	2,391	2,148	1,714	1,654	2,573	2,204	2,414	2,124	1,698	1,908
1941	1,450	2,186	2,174	2,081	2,107	1,726	0	0	0	0	0	0
1942	0	0	0	0	0	0	0	2,446	2,467	2,130	1,600	1,338
1943	1,229	1,749	2,072	1,837	1,665	1,693	2,277	2,394	2,423	1,866	1,693	1,121
1944	2,687	2,218	1,925	1,420	985	767	2,335	2,101	2,218	1,474	740	794
1945	1,749	2,365	2,335	2,482	1,837	2,423	2,570	2,189	2,218	1,896	1,365	1,611
1946	2,218	2,160	2,130	1,311	1,039	2,042	2,511	2,130	2,130	1,896	1,779	1,749
1947	2,072	2,042	1,954	2,101	1,925	1,502	1,837	2,042	2,160	2,242	1,720	1,474
1948	821	1,229	1,202	1,121	1,066	1,740	1,925	2,042	2,130	1,984	1,638	1,257
1949	1,121	2,218	2,218	957	2,042	1,148	2,306	2,013	2,130	1,474	1,093	957
1950	767	1,638	2,013	2,247	2,189	1,896	2,160	2,218	2,247	2,101	2,042	1,039

## 38. 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 (revised).

Gage.--Water-stage recorder. Datum of gage is 296.3 ft above mean sea level, datum of 1929.

Average discharge.--Prior to June 22, 1942, water-stage recorder on opposite bank 60 ft downstream.

Extremes.--1924-50: Maximum discharge, 11,400 cfs (revised) Mar. 20, 1936 (gage height, 14.48 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.--Flow partly regulated by Sebec Lake and Wilson Pond. Runoff adjusted for change in contents in Sebec Lake (see above) and Wilson Pond since December 1931 (see preceding page).

Monthly and yearly mean discharge, in cubic feet per second (observed), of Sebec River at Sebec, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	*490	158	206	193	188	594	1,370	716	386	671	278	258	*460
1926	475	1,480	674	315	336	356	788	1,730	624	289	257	269	634
1927	262	760	532	390	373	454	1,200	1,030	666	280	274	290	544
1928	909	1,230	1,210	724	627	353	1,370	1,800	834	413	301	413	849
1929	569	546	465	798	364	357	1,960	1,990	569	279	297	271	707
1930	143	88.3	94.1	101	143	901	1,950	1,150	710	349	328	357	527
1931	99.8	28.5	102	286	227	291	1,470	703	1,480	204	221	167	438
1932	295	405	358	328	352	263	2,760	689	444	218	235	1,180	605
1933	473	1,260	592	290	290	495	1,170	881	259	260	226	225	627
1934	232	355	284	329	416	410	2,718	889	567	381	102	173	571
1935	252	288	468	259	276	281	2,073	1,682	757	300	224	108	579
1936	106	95.0	135	338	360	3,804	2,740	882	504	281	151	165	798
1937	348	379	861	445	612	656	1,490	2,030	623	301	232	89.3	673
1938	597	632	641	673	514	639	1,743	1,281	375	517	205	401	585
1939	338	317	1,141	352	285	399	971	1,919	353	221	196	137	553
1940	126	466	560	276	230	249	2,124	2,097	316	321	162	87.9	585
1941	260	567	338	353	360	353	1,313	352	260	183	224	254	400
1942	177	263	266	338	320	702	1,801	1,078	594	354	295	240	535
1943	215	223	307	332	349	343	1,071	1,786	718	498	281	302	536
1944	439	1,608	402	335	321	272	639	1,135	312	321	272	173	518
1945	185	328	550	584	443	668	2,074	1,792	386	352	256	119	644
1946	641	818	510	386	364	707	1,375	1,368	236	199	129	69.1	551
1947	713	615	485	518	939	809	1,347	2,171	854	362	310	171	773
1948	144	101	105	107	173	294	1,252	2,062	294	217	213	148	427
1949	125	439	559	872	458	540	1,360	456	423	320	162	76.8	482
1950	76.9	152	178	392	340	743	2,289	667	696	355	190	446	542

\* Revised.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	*0.80	0.99	0.76	0.29	1.49	3.66	4.80	2.49	1.25	2.24	0.40	0.44	*19.63
1926	2.79	4.82	2.80	.98	.82	.71	3.10	6.39	2.16	.41	.28	.35	25.61
1927	.90	4.72	1.81	.99	.67	2.05	3.90	4.28	2.05	.60	.84	.66	23.47
1928	5.94	4.45	4.07	2.36	1.30	.94	6.35	6.38	2.59	1.29	1.13	1.54	36.34
1929	2.08	1.67	1.86	2.46	.84	.87	7.78	6.65	1.82	.43	.38	.22	27.04
1930	.39	.69	.24	.81	.94	2.73	8.31	3.00	2.56	1.43	.65	.44	22.19
1931	.68	1.06	1.01	.97	.50	1.19	5.59	2.16	4.51	.94	.52	.60	19.75
1932	1.65	1.28	1.33	1.15	.98	.49	9.36	2.97	.46	.11	1.18	5.22	26.18
1933	1.27	3.76	1.61	.91	.78	.73	7.33	5.10	1.48	.36	.38	.36	24.89
1934	1.50	1.44	1.15	.88	.87	1.28	11.18	2.40	2.01	.82	.21	.64	24.38
1935	.67	1.30	1.29	.91	.68	.73	8.41	5.46	2.25	1.51	-.10	-.03	23.08
1936	.23	.66	1.02	1.87	.80	16.58	5.03	4.65	1.63	.51	.16	.26	33.40
1937	1.70	1.52	3.08	1.74	1.77	2.21	6.01	6.56	2.32	.88	.18	.11	26.08
1938	2.63	2.86	2.16	2.49	1.36	1.86	6.19	4.78	1.65	1.56	.55	1.43	29.52
1939	1.18	1.16	4.04	.94	.70	.53	4.35	6.87	1.15	.46	.34	1.37	23.09
1940	-.32	1.72	2.58	.62	.05	.65	8.49	7.22	1.35	.69	.02	.50	23.59
1941	.26	2.91	1.16	1.05	1.11	.66	2.62	1.21	.82	.63	.77	.82	14.02
1942	.64	.89	.94	1.26	1.01	2.35	6.18	7.22	2.03	.76	.26	.50	24.04
1943	.49	1.45	1.50	.82	.75	1.18	4.61	6.78	2.49	.94	.68	.11	21.78
1944	3.63	5.17	.98	.35	.27	.81	4.24	4.15	1.25	-.14	-.13	.68	21.06
1945	1.91	2.05	2.02	2.32	.53	3.14	7.42	5.82	1.25	.78	.10	.76	28.10
1946	3.19	2.04	1.65	.22	.67	3.82	5.56	4.31	.73	.45	.28	.21	23.13
1947	3.03	2.01	1.59	1.91	2.76	2.16	5.31	7.94	3.07	1.38	.36	.24	31.76
1948	-.47	.90	.42	.18	.18	.80	6.27	7.47	1.11	.57	.27	-.14	17.36
1949	.22	3.12	2.02	1.37	2.54	.64	6.59	1.73	.97	.25	.10	.07	19.62
1950	0	1.77	1.03	1.78	.86	2.02	8.41	2.59	2.40	1.05	.40	.01	22.32

\* Revised.

Note.--Adjusted runoff not previously published. Negative figures indicate that evaporation and seepage from reservoirs exceeded inflow.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30									Calendar year		
		Observed					Adjusted				Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches		
		Discharge	Date										
1925	601	3,230	Apr. 2, 1925	82	*460	*473	*1.45	*19.63	†608	663	27.57		
1926	621	3,670	Nov. 16, 1925	138	634	617	1.89	25.61	544	545	22.63		
1927	641	2,830	May 31, 1927	128	544	566	1.73	23.47	695	687	28.50		
1928	661	3,630	May 28, 1928	198	849	874	2.67	36.34	701	709	29.49		
1929	681	3,870	May 6, 1929	184	707	651	1.99	27.04	602	548	22.75		
1930	696	3,150	Apr. 13, 1930	58	527	535	1.64	22.19	519	569	23.64		
1931	711	3,650	June 11, 1931	2	438	476	1.46	19.75	507	512	21.24		
1932	726	4,340	Sept. 17, 1932	44	605	627	1.92	26.18	693	685	28.56		
1933	741	3,480	Nov. 22, 1932	92	627	580	1.77	24.09	526	519	21.50		
1934	756	4,780	Apr. 21, 1934	78	571	587	1.80	24.38	580	567	23.55		
1935	781	3,880	Apr. 30, 1935	70	579	556	1.70	23.08	522	523	21.73		

\* Revised.

† Corrected.

Note.--Adjusted runoff not previously published.

Yearly discharge, in cubic feet per second, of Sebec River at Sebec, Maine--Continued

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Fer square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1936	801,1201	*11,400	Mar. 20, 1936	57	798	802	2.45	33.40	904	908	37.79
1937	821	2,970	May 21, 1937	46	673	677	2.07	28.08	696	709	29.43
1938	851	3,330	Apr. 22, 1938	24	685	711	2.17	29.52	680	681	28.25
1939	871	3,900	May 9, 1939	48	553	556	1.70	23.09	498	498	20.69
1940	891	5,390	Apr. 15, 1940	33	585	566	1.73	23.59	586	575	23.94
1941	921	2,430	Apr. 18, 1941	55	400	338	1.03	14.02	361	293	12.12
1942	951	3,710	Apr. 27, 1942	28	535	579	1.77	24.04	539	603	25.01
1943	971	3,020	May 8-9, 1943	206	536	524	1.60	21.78	677	677	28.12
1944	1001	4,120	Nov. 10, 1943	105	518	505	1.54	21.06	405	415	17.26
1945	1031	3,700	Apr. 3, 1945	51	644	677	2.07	28.10	703	698	29.00
1946	1051	2,440	Apr. 28, 1946	65	551	557	1.70	23.13	555	551	22.88
1947	1081	5,210	May 8, 1947	148	733	765	2.34	31.76	651	627	25.96
1948	1111	4,490	May 19, 1948	98	427	417	1.28	17.36	432	526	21.87
1949	1141	1,850	Apr. 10, 1949	60	482	473	1.45	19.62	422	412	17.06
1950	1171	5,410	Apr. 23, 1950	43	542	538	1.65	22.32	-	-	-

\* Revised.

Note.--Adjusted runoff not previously published.

## 39. Pleasant River near Milo, Maine 1/

Location.--Lat 45°17'05", long. 69°00'25", on left bank 2 miles northwest of Milo, Piscataquis County, and 8½ miles upstream from mouth.

Drainage area.--322 sq mi. Prior to June 17, 1929, 325 sq mi.

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

Average discharge.--30 years (1920-50), 664 cfs.

Extremes.--1920-50: Maximum discharge, 24,400 cfs Apr. 30, 1923, from rating curve extended above 5,500 cfs (gage height, 14.33 ft, from floodmarks, site and datum then in use); minimum, 15 cfs Aug. 17, 1944 (gage height, 1.21 ft).

Remarks.--Diurnal fluctuation at low flow caused by mill above station. Slight regulation by small storage dam upstream.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1920	-	-	-	-	-	-	-	-	-	256	539	491	-
1921	1,150	667	1,410	370	352	1,020	2,480	590	430	113	209	93.4	741
1922	512	642	803	215	160	987	2,170	979	2,010	908	500	186	840
1923	232	322	166	263	164	153	2,180	2,880	485	224	138	107	611
1924	187	408	773	240	203	269	1,280	2,300	598	281	142	223	577
1925	142	269	398	147	418	1,250	1,380	857	466	615	160	161	522
1926	881	1,660	883	334	265	234	854	2,170	798	206	167	244	726
1927	353	1,840	420	336	323	358	1,170	1,340	747	264	353	348	653
1928	1,230	1,970	1,510	589	317	307	1,910	2,470	1,010	512	418	397	1,060
1929	554	642	746	1,110	431	477	1,680	2,170	635	354	208	99.6	762
1930	136	245	167	275	285	867	2,090	1,700	610	428	218	158	599
1931	163	311	238	128	144	339	1,720	994	1,350	477	324	298	540
1932	677	595	572	473	273	242	2,900	1,060	352	208	391	1,520	768
1933	636	1,210	408	208	181	195	2,320	1,610	562	232	176	165	659
1934	398	356	267	203	218	403	3,110	1,068	452	274	150	188	589
1935	317	533	520	216	164	213	2,076	1,552	828	343	185	125	590
1936	108	313	421	424	242	4,260	1,822	1,567	531	272	126	189	861
1937	668	866	726	486	413	445	1,844	2,173	558	209	112	95.9	693
1938	606	523	691	329	350	519	1,969	1,409	511	601	293	546	721
1939	473	416	1,258	338	208	267	1,191	2,132	401	230	144	157	609
1940	265	716	570	135	104	176	2,202	2,494	544	336	155	393	674
1941	219	1,029	298	331	271	144	1,496	443	184	230	173	231	419
1942	132	445	338	458	171	606	2,132	1,480	744	258	171	118	568
1943	328	591	461	145	207	378	1,243	2,323	611	322	267	124	586
1944	1,230	1,701	307	129	125	247	1,088	1,470	298	119	68.5	294	589
1945	761	788	561	532	216	984	2,757	1,854	386	408	131	327	611
1946	975	699	386	277	232	1,189	1,623	1,394	294	129	171	152	629
1947	592	720	522	346	784	607	1,567	2,880	1,114	492	212	150	832
1948	95.4	210	137	93.0	63.4	245	1,616	2,174	373	227	239	75.8	463
1949	235	1,199	491	897	235	527	1,777	704	291	182	90.8	184	567
1950	189	611	560	598	305	625	2,516	630	659	398	226	230	644

1/ Published as "at Milo" prior to 1931.

## PENOBSCOT RIVER BASIN

Monthly and yearly runoff, in inches, of Pleasant River near Milo, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1920	-	-	-	-	-	-	-	-	-	0.91	1.20	1.68	-
1921	4.08	2.29	5.00	1.31	1.12	3.62	8.51	2.10	1.47	.40	.74	.32	30.96
1922	1.82	2.21	2.85	.76	.51	3.50	7.45	3.47	6.90	3.22	1.78	.64	35.11
1923	.82	1.11	.59	.93	.53	.54	7.49	10.22	1.66	.79	.49	.37	25.54
1924	.66	1.41	2.74	.85	.87	.95	4.40	8.16	2.05	1.00	.50	.77	24.16
1925	.50	.92	1.41	.52	1.54	4.44	4.74	5.04	1.60	2.18	.57	.55	21.81
1926	3.12	5.70	3.14	1.19	.85	.83	2.93	7.70	2.74	.73	.59	.84	30.36
1927	1.26	6.32	1.49	1.19	1.04	1.27	4.02	4.75	2.57	.94	1.26	1.19	27.30
1928	4.36	6.76	5.36	2.09	1.05	1.09	6.56	8.76	3.47	1.82	1.49	1.36	44.17
1929	1.96	2.21	2.65	3.94	1.38	1.70	5.77	7.70	2.18	1.27	.74	.34	31.84
1930	.49	.85	.60	.98	.92	3.10	7.24	6.09	2.11	1.53	.78	.55	25.24
1931	.58	1.08	.85	.45	.47	1.21	5.96	3.56	4.68	1.71	1.16	1.04	22.75
1932	2.42	2.06	2.05	1.70	.91	.87	10.05	3.79	1.22	.74	1.40	5.27	32.48
1933	2.28	4.20	1.46	.74	.59	.70	8.03	5.76	1.95	.83	.63	.57	27.74
1934	1.43	1.24	.96	.73	.70	1.44	10.78	3.83	1.56	.98	.54	.65	24.84
1935	1.13	1.85	1.86	.77	.53	.76	7.20	5.56	2.87	1.23	.66	.43	24.85
1936	.39	1.08	1.51	1.52	.81	15.22	6.32	5.62	1.84	.97	.45	.65	36.38
1937	2.39	1.96	2.59	1.74	1.35	1.59	6.39	7.78	1.93	.75	.40	.33	29.18
1938	2.17	2.86	2.48	1.18	1.14	1.86	6.82	5.05	1.77	2.16	1.05	1.90	30.44
1939	1.70	1.44	1.51	1.21	.87	.96	4.15	7.82	1.40	.82	.52	.54	25.72
1940	.95	2.48	2.04	.48	.35	.83	7.65	8.94	1.89	1.20	.55	1.36	28.50
1941	.78	3.57	1.07	1.19	.88	.52	5.19	1.59	.64	.82	.62	.80	17.67
1942	.47	1.54	1.21	1.64	.55	2.17	7.39	5.30	2.58	.92	.61	.41	24.79
1943	1.18	2.05	1.65	.52	.67	1.35	4.31	8.31	2.12	1.15	.96	.43	24.70
1944	4.40	5.89	1.10	.46	.42	.88	3.77	5.27	1.03	.43	.25	1.02	24.92
1945	2.72	2.73	2.01	1.90	.70	3.53	9.55	6.64	1.34	1.46	.47	1.14	34.19
1946	3.49	2.42	1.58	.99	.75	4.25	5.62	4.99	1.02	.46	.61	.53	26.51
1947	2.09	2.50	1.87	1.24	2.53	2.18	5.43	10.31	3.86	1.76	.76	.52	35.05
1948	.33	.73	.49	.33	.21	.88	5.60	7.78	1.29	.81	.86	.26	19.57
1949	.84	4.15	1.75	3.22	.76	1.89	6.16	2.52	1.01	.65	.33	.64	23.92
1950	.68	2.12	2.01	1.14	.98	2.24	8.71	2.97	2.29	1.43	.81	.80	27.18

Yearly discharge, in cubic feet per second

Year	W. S. P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1920	501	-	-	-	-	-	-	-	-
1921	521	*9,420	Oct. 1, 1920*	31	741	2.28	30.96	634	26.47
1922	541	*10,300	June 30, 1922	67	840	2.58	35.11	736	30.75
1923	561	24,400	Apr. 30, 1923	40	611	1.88	25.54	665	27.83
1924	581	*7,680	May 2, 1924	50	577	1.78	24.16	530	22.18
1925	601	*4,420	Mar. 29, 1925	28	522	1.61	21.81	740	30.94
1926	621	*10,100	Nov. 17, 1925	70	726	2.23	30.36	657	27.47
1927	641	*7,000	Nov. 20, 1926	75	653	2.01	27.30	832	34.71
1928	661	-	-	142	1,060	3.26	44.17	823	34.51
1929	681	*9,470	May 4, 1929	48	762	2.34	31.84	645	26.95
1930	696	5,650	Apr. 8, 1930	71	599	1.86	25.24	612	25.81
1931	711	7,310	June 10, 1931	78	540	1.68	22.75	635	26.77
1932	726	22,100	Sept. 17, 1932	146	768	2.39	32.48	802	33.89
1933	741	5,380	May 4, 1933	80	659	2.05	27.74	556	23.43
1934	756	7,300	Apr. 21, 1934	46	589	1.83	24.84	618	26.05
1935	781	5,580	Apr. 29, 1935	72	590	1.83	24.85	545	22.99
1936	801	23,400	Mar. 20, 1936	53	861	2.67	36.38	955	40.34
1937	821	5,340	May 21, 1937	38	693	2.15	29.18	706	29.75
1938	851	5,090	Apr. 21, 1938	51	721	2.24	30.44	724	30.58
1939	871	6,930	Dec. 7, 1938	60	609	1.89	25.72	558	23.54
1940	891	17,000	Apr. 13, 1940	47	674	2.09	28.50	673	28.45
1941	921	3,780	Apr. 17, 1941	89	419	1.30	17.67	367	15.47
1942	951	6,550	Apr. 26, 1942	47	588	1.83	24.79	627	26.45
1943	971	4,860	May 13, 1943	65	586	1.82	24.70	741	31.21
1944	1001	14,000	Nov. 10, 1943	18	589	1.83	24.32	496	20.99
1945	1031	5,900	Apr. 2, 1945	38	611	2.52	34.19	807	34.02
1946	1051	4,530	Apr. 28, 1946	41	629	1.95	26.51	609	25.68
1947	1081	9,850	May 7, 1947	90	832	2.58	35.05	715	30.14
1948	1111	9,370	May 19, 1948	36	463	1.44	19.57	586	24.76
1949	1141	4,090	Nov. 11, 1948	48	567	1.76	23.92	521	21.99
1950	1171	11,200	Apr. 22, 1950	75	644	2.00	27.18	-	-

\* Revised.



## 40. Piscataquis River at Medford, Maine

Location.--Lat 45°15'40", long. 68°52'05", on left bank  $1\frac{1}{2}$  miles southwest of Medford, Piscataquis County, and  $3\frac{1}{2}$  miles downstream from Pleasant River.

Drainage area.--1,161 sq mi (revised).

Gage.--Water-stage recorder. Datum of gage is 248.7 ft above mean sea level, datum of 1929. Prior to June 17, 1929, staff gage at site  $1\frac{1}{2}$  miles downstream at different datum.

Average discharge.--26 years (1924-50), 2,172 cfs.

Extremes.--1924-50: 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 since at least 1846, 20.8 ft, from floodmarks, May 1, 1923, at first site and datum.

Remarks.--Some regulation for power and log driving by lakes above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	-	-	-	-	-	-	-	-	-	708	487	722	-
1925	560	665	1,000	512	1,260	3,640	5,460	2,370	1,370	1,920	708	824	1,690
1926	3,160	5,990	3,430	1,280	1,110	998	3,760	7,180	2,180	689	644	736	2,600
1927	1,170	5,020	1,500	1,060	948	1,180	4,180	4,000	2,330	783	940	863	1,990
1928	4,400	5,190	4,240	2,110	1,580	1,220	6,440	8,240	2,830	1,360	1,130	1,280	3,340
1929	1,860	1,950	1,880	2,650	1,080	1,550	8,480	7,610	2,060	875	644	448	2,580
1930	416	572	363	803	858	3,590	7,660	4,440	2,110	1,200	730	603	1,950
1931	411	996	590	530	510	1,400	6,420	2,940	4,680	1,220	940	883	1,790
1932	1,910	1,820	1,590	1,530	1,120	846	10,200	2,820	914	533	829	4,240	2,350
1933	1,950	4,400	1,170	820	730	1,010	8,560	4,440	1,720	677	551	578	2,210
1934	1,516	1,304	934	775	903	1,288	11,030	3,215	1,851	999	360	735	2,067
1935	1,089	1,695	1,766	889	752	1,023	7,945	4,865	2,721	1,201	625	320	2,073
1936	*276	813	1,189	1,487	1,005	14,520	6,997	3,854	1,459	809	380	480	*2,786
1937	1,529	1,686	2,629	1,830	1,568	1,702	6,800	7,363	1,947	798	487	234	2,366
1938	2,048	2,635	2,229	1,544	1,454	1,958	6,751	4,843	1,550	1,885	853	1,626	2,448
1939	1,431	1,270	4,309	1,015	776	956	4,574	6,847	1,125	639	439	372	1,991
1940	499	1,910	2,060	550	450	622	8,646	7,840	1,584	1,071	472	795	2,207
1941	707	2,988	1,045	1,212	1,047	820	5,770	1,411	623	651	578	648	1,450
1942	702	1,465	1,093	1,649	741	2,624	7,502	4,141	2,618	834	554	423	2,029
1943	731	1,390	1,530	725	947	1,289	4,767	7,093	2,170	1,327	908	557	1,957
1944	3,110	5,691	1,212	656	656	902	4,105	4,552	1,156	688	406	660	1,980
1945	1,568	2,027	2,135	2,020	978	3,287	8,320	6,323	1,366	1,133	506	618	2,530
1946	2,594	2,295	1,615	1,118	970	3,909	5,595	4,616	932	453	451	322	2,079
1947	2,399	2,356	1,580	1,244	2,949	2,588	5,646	8,012	3,442	1,444	705	416	2,727
1948	301	511	400	339	352	1,185	5,543	7,307	1,149	635	544	258	1,545
1949	479	2,751	1,747	3,177	1,003	1,883	5,796	1,967	998	642	308	380	1,759
1950	377	1,357	1,490	1,624	1,965	1,925	8,304	2,704	2,271	1,222	627	963	1,982

\* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	-	-	-	-	-	-	-	-	-	0.70	0.48	0.69	-
1925	0.56	0.64	0.99	0.51	1.14	3.62	5.24	2.35	1.32	1.90	0.70	0.79	19.76
1926	3.14	5.76	3.40	1.27	1.00	.99	3.62	7.13	2.10	.68	.64	.71	30.44
1927	1.16	4.82	1.49	1.05	.85	1.15	4.02	3.98	2.24	.78	.93	.83	23.30
1928	4.37	4.99	4.21	2.10	1.47	1.21	6.19	8.19	2.72	1.35	1.12	1.23	39.15
1929	1.85	1.87	1.67	2.64	.97	1.55	8.15	7.55	1.98	.87	.64	.43	30.17
1930	.41	.55	.36	.80	.47	3.56	7.36	4.40	2.03	1.19	.73	.58	22.74
1931	.41	.96	.59	.53	.46	1.40	6.17	2.92	4.80	1.21	.93	.85	20.93
1932	1.90	1.75	1.58	1.52	1.04	.84	9.81	2.80	.89	.53	.82	4.07	27.54
1933	1.94	4.23	1.16	.81	.66	1.00	8.22	4.40	1.65	.67	.55	.57	25.86
1934	1.51	1.25	.93	.77	.81	1.28	10.60	3.19	1.77	.99	.36	.71	24.17
1935	1.08	1.63	1.75	.88	.67	1.02	7.65	4.83	2.61	1.19	.62	.31	24.22
1936	*.27	.78	1.18	1.48	.93	14.41	6.73	3.83	1.41	.80	.38	.46	*32.66
1937	1.52	1.62	2.61	1.92	1.41	1.70	6.34	7.31	1.87	.79	.46	.23	27.68
1938	2.03	2.53	2.21	1.53	1.30	1.95	6.48	4.81	1.50	1.97	.85	1.56	28.62
1939	1.42	1.22	4.28	1.01	.70	.95	4.40	6.80	1.08	.63	.44	.36	23.29
1940	.50	1.84	2.04	.55	.42	.62	8.31	7.78	1.52	1.06	.47	.76	25.87
1941	.70	2.87	1.04	1.20	.94	.81	5.55	1.41	.60	.65	.57	.62	16.96
1942	.70	1.41	1.08	1.64	.66	2.61	7.21	4.12	2.51	.83	.55	.41	23.73
1943	.73	1.33	1.52	.72	.85	1.28	4.59	7.04	2.09	1.31	.90	.54	22.90
1944	5.09	5.47	1.20	.65	.61	.90	3.95	4.52	1.11	.68	.40	.63	23.21
1945	1.56	1.95	2.12	2.01	.88	3.26	8.00	6.28	1.32	1.13	.50	.59	29.60
1946	2.57	2.21	1.60	1.11	.87	3.89	5.38	4.59	.90	.45	.45	.31	24.33
1947	2.39	2.27	1.57	1.23	2.65	2.57	5.42	7.96	3.30	1.43	.70	.40	31.89
1948	.30	.49	.40	.34	.33	1.15	5.32	7.25	1.10	.63	.54	.25	18.10
1949	.48	2.64	1.73	3.16	.90	1.67	5.57	1.95	.96	.64	.31	.36	20.57
1950	.37	1.31	1.48	1.61	.88	1.91	7.98	2.69	2.19	1.21	.62	.92	23.17

\* Revised.

## PENOBSCOT RIVER BASIN

Yearly discharge, in cubic feet per second, of Piscataquis River near Medford, Maine									
Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1924	581	-	-	-	-	-	-	-	-
1925	601,1231	*13,700	Mar. 30, 1925	218	1,690	1.46	19.76	2,550	29.87
1926	621,1231	*23,600	Nov. 17, 1925	312	2,600	2.24	30.44	2,190	25.61
1927	641,1231	*20,700	Nov. 20, 1926	312	1,990	1.71	23.30	2,510	29.40
1928	661,1231	*26,200	Oct. 21, 1927	630	3,340	2.88	39.15	2,640	30.97
1929	681,1231	*28,000	May 4, 1929	308	2,580	2.22	30.17	2,230	26.10
1930	696	19,400	Apr. 8, 1930	274	1,950	1.68	22.74	2,000	23.38
1931	711	20,200	June 10, 1931	244	1,790	1.54	20.93	2,070	24.20
1932	726	35,000	Sept. 18, 1932	412	2,350	2.03	27.54	2,530	29.64
1933	741	16,600	Apr. 19, 1933	397	2,210	1.90	25.86	1,900	22.22
1934	756	22,600	Apr. 21, 1934	127	2,067	1.78	24.17	2,134	24.94
1935	781	16,600	Apr. 22, 1935	231	2,073	1.79	24.22	*1,883	*21.99
1936	801,1231	50,200	Mar. 20, 1936	133	*2,786	*2.40	*32.66	3,085	36.18
1937	821	14,500	May 16, 1937	143	2,366	2.04	27.68	2,454	28.70
1938	851	17,600	Oct. 24, 1937	126	2,448	2.11	28.62	2,461	28.77
1939	871	20,200	Dec. 7, 1938	217	1,991	1.71	23.29	1,773	20.75
1940	891	38,100	Apr. 14, 1940	154	2,207	1.90	25.87	2,227	26.10
1941	921	11,800	Apr. 17, 1941	199	1,450	1.25	16.96	1,329	15.54
1942	951	17,700	Apr. 26, 1942	296	2,029	1.75	23.73	2,061	24.12
1943	971	12,800	May 13, 1943	420	1,957	1.69	22.90	2,487	29.08
1944	1001	26,900	Nov. 10, 1943	237	1,980	1.71	23.21	1,627	19.08
1945	1051	17,300	Apr. 28, 1945	218	2,530	2.18	29.60	2,595	30.35
1946	1051	12,800	Apr. 28, 1946	173	2,079	1.79	24.33	2,065	24.18
1947	1081	22,400	May 7, 1947	277	2,727	2.35	31.89	2,297	26.85
1948	1111	23,300	May 19, 1948	106	1,545	1.33	18.10	1,858	21.76
1949	1141	9,020	Jan. 7, 1949	186	1,759	1.52	20.57	1,614	18.68
1950	1171	27,100	Apr. 22, 1950	222	1,982	1.71	23.17	-	-

\* Revised.

## 41. Penobscot River at West Enfield, Maine 1/

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).

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 50 ft upstream and at same datum.

Average discharge.--48 years (1902-50), 11,320 cfs (adjusted for storage).

Extremes.--1902-50: Maximum discharge, 153,000 cfs May 1, 1923 (gage height, 25.15 ft); minimum, 1,630 cfs (corrected) Oct. 29, 1905 (gage height, 1.0 ft).

Remarks.--Flow regulated by several reservoirs above station. Runoff adjusted for change in contents in West Branch of the Penobscot River Basin reservoirs (see p. 37), Telos Lake since August 1942 (see p. 42), Grand Lake since May 1942 (see p. 42), Wilson Pond since January 1932 (see p. 50), and Sebec Lake (see p. 51).

Monthly and yearly mean discharge, in cubic feet per second (observed)													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1902	-	-	*4,000	*4,920	*5,270	*7,500	39,000	22,900	28,000	13,300	9,430	5,220	-
1903	7,000	8,640	*6,460	*4,350	*4,000	*50,400	34,800	15,900	6,250	9,950	6,280	4,380	*11,100
1904	2,260	2,780	*5,610	*2,890	*1,800	*4,600	*20,000	38,200	13,900	8,750	6,990	7,360	*9,450
1905	10,600	7,460	*5,310	*5,290	*3,970	*4,140	*23,900	17,100	8,480	5,510	5,000	4,070	*8,410
1906	2,740	2,630	*3,780	*3,510	*3,980	*4,680	*27,500	40,600	14,100	8,560	6,850	4,240	*10,300
1907	8,230	11,000	*6,750	*6,100	*3,830	*4,880	*24,500	40,200	19,900	17,600	10,800	7,580	*15,500
1908	10,100	22,400	*15,000	*8,490	*8,930	*10,800	*21,100	39,400	17,800	7,900	6,000	4,220	*14,400
1909	3,450	*4,200	*3,410	*5,400	*4,830	*7,590	*40,000	38,700	13,100	8,520	5,110	10,600	*12,100
1910	15,500	11,400	*9,600	*8,460	*12,500	11,800	*27,200	19,800	16,800	8,380	6,140	4,260	*12,600
1911	3,370	4,070	*3,640	*4,110	*2,810	*2,450	*15,400	16,100	8,390	5,390	4,790	5,930	*6,380
1912	5,070	5,910	*11,300	*7,950	*5,750	*8,300	*29,000	26,500	25,100	7,680	11,200	6,640	*12,500
1913	12,800	25,500	*10,200	*10,600	*6,910	19,800	33,300	20,700	12,900	7,310	4,840	5,060	*14,200
1914	13,100	12,600	8,010	5,990	6,130	8,560	28,800	41,200	11,800	8,480	4,100	3,980	12,600
1915	3,750	4,670	4,140	4,650	6,690	8,370	18,200	26,000	8,190	11,100	7,320	5,410	9,060
1916	5,220	6,400	8,580	7,760	5,470	6,710	24,900	15,000	12,300	12,100	7,090	4,890	9,700
1917	6,350	5,920	14,300	9,190	6,030	7,780	36,700	27,200	38,700	14,200	14,100	6,480	15,600
1918	10,600	13,700	8,080	5,070	5,780	8,010	27,800	18,000	9,060	17,400	6,980	9,370	11,500
1919	15,000	21,800	11,800	10,100	7,390	18,200	33,400	32,600	12,800	6,140	5,000	5,710	15,000
1920	5,820	13,700	7,760	5,260	4,630	7,370	50,000	33,700	9,560	7,410	6,050	9,140	13,500
1921	14,000	10,900	14,200	10,500	8,190	21,900	30,800	12,000	5,850	4,860	5,140	4,340	11,900
1922	6,260	8,360	8,890	5,720	5,010	14,500	25,700	11,700	21,300	14,800	7,190	5,590	11,300
1923	5,340	8,460	4,990	7,520	5,360	4,610	26,700	37,400	7,180	5,480	4,760	3,970	10,000
1924	4,230	5,350	10,100	7,390	5,550	6,830	20,400	25,300	8,130	5,250	4,300	4,960	9,040
1925	4,540	4,950	5,890	4,020	5,820	14,500	20,200	10,900	7,500	7,790	4,910	5,980	8,080

\* Revised.

† Not previously published; estimated on basis of weather records and records for nearby stations.

1/ Published as "at Montague", 1901-3.

Monthly and yearly mean discharge, in cubic feet per second (observed), of Penobscot River at West Enfield, Maine--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	16,000	22,800	14,500	8,120	7,010	6,920	14,500	35,200	11,900	6,500	5,390	5,670	12,900
1927	8,090	18,400	8,450	7,530	6,820	9,090	20,600	15,700	14,000	6,590	7,680	6,590	10,800
1928	13,300	23,500	17,100	12,400	8,940	8,380	28,200	33,600	17,000	7,840	8,160	7,630	15,500
1929	8,990	9,720	9,550	11,500	7,270	8,060	28,800	29,400	11,500	6,630	5,080	4,530	11,800
1930	5,330	6,040	4,080	6,560	5,630	17,500	29,900	19,200	11,400	7,060	5,480	4,940	10,300
1931	4,220	5,050	4,740	4,360	4,370	6,540	26,500	12,000	16,500	8,820	6,150	5,870	8,750
1932	11,000	12,200	6,620	8,890	6,700	5,860	38,500	15,800	7,220	5,760	6,340	13,100	11,500
1933	11,500	17,900	8,540	6,060	5,870	6,350	34,300	19,400	11,200	6,630	5,460	5,280	11,500
1934	8,742	8,458	6,505	5,671	5,618	7,357	47,990	17,990	11,340	7,485	5,525	5,872	11,520
1935	7,491	10,440	8,853	6,139	5,501	6,514	33,060	22,790	13,380	7,024	5,034	4,465	10,890
1936	4,165	6,423	7,445	9,091	7,074	46,110	29,940	25,890	11,860	6,440	5,004	5,285	13,770
1937	9,932	10,740	13,590	8,793	7,812	8,073	24,310	28,050	11,490	6,581	5,334	4,705	11,720
1938	8,792	12,880	10,780	8,885	8,799	9,210	25,250	21,470	9,475	10,980	7,670	9,123	11,940
1939	9,324	9,016	19,680	7,415	6,454	6,988	20,390	29,990	9,719	6,501	5,137	5,145	11,360
1940	6,760	12,340	9,549	5,280	4,407	5,036	36,130	28,910	11,360	9,357	5,267	7,075	11,780
1941	6,876	14,970	7,314	7,750	6,610	6,233	25,560	10,580	5,832	5,046	4,603	4,265	8,779
1942	4,811	8,034	5,863	7,403	4,479	11,260	27,970	16,320	16,380	6,285	5,198	5,166	10,770
1943	5,694	12,400	6,555	4,806	5,555	7,953	18,520	29,430	11,350	7,935	5,654	5,271	9,720
1944	12,400	22,590	7,081	5,812	5,993	5,795	15,020	17,880	7,486	5,691	4,945	6,142	9,605
1945	11,800	13,530	9,157	10,800	6,979	14,900	36,260	33,630	9,837	7,781	5,240	6,198	13,870
1946	10,330	11,010	8,801	7,955	7,000	17,530	24,540	24,510	7,866	5,797	5,122	5,151	11,330
1947	7,171	8,821	8,243	6,877	11,290	11,800	24,770	39,900	20,270	11,530	6,892	5,557	13,600
1948	5,045	4,988	4,343	3,602	3,452	6,793	23,510	26,800	9,734	5,869	5,068	4,320	8,553
1949	4,873	13,190	9,004	13,090	6,825	9,932	26,120	11,540	7,402	5,146	4,179	4,579	9,644
1950	4,175	7,718	8,848	9,242	6,176	8,892	30,840	13,000	8,337	7,299	5,555	6,008	9,664

† Corrected.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1902	-	-	*2.79	*0.94	*0.81	*2.90	7.06	4.13	4.73	2.05	1.40	0.75	-
1903	1.35	1.67	*1.07	*.64	*.47	*5.21	6.54	2.74	.97	.94	.74	.43	*22.77
1904	.30	.48	*.64	*.51	*.28	*.79	*3.70	7.93	2.21	1.22	.82	1.23	*20.11
1905	2.21	1.18	*.68	*.66	*.34	*.49	*4.66	3.46	-1.64	.83	.39	.32	*16.86
1906	.24	.42	*.64	*.62	*.63	*.82	*4.90	8.34	2.40	1.15	.73	.42	*21.31
1907	1.36	1.81	*1.00	*.93	*.46	*.86	*4.37	8.61	3.29	3.23	1.80	1.19	*28.91
1908	1.80	3.75	*2.47	*1.36	*1.26	*1.63	*3.75	7.86	2.92	.97	.79	.42	*28.98
1909	.31	*.43	*.30	*.84	*.72	*1.27	*7.74	7.78	2.04	1.31	.65	1.74	*25.11
1910	3.06	2.00	*1.63	*1.36	*1.59	1.60	*5.85	3.56	2.73	1.36	.85	.39	*25.98
1911	.26	.50	*.38	*.40	*.29	*.39	*2.77	4.00	1.44	.72	.61	.85	*12.61
1912	.79	.89	*2.24	*1.37	*.75	*1.29	*5.87	5.36	4.21	1.04	2.13	1.03	*26.97
1913	2.35	4.20	*1.63	*1.82	*.91	3.49	6.23	3.66	2.14	1.16	.64	.66	*28.89
1914	2.34	2.25	1.33	.81	.63	1.05	5.02	8.51	1.90	.82	.35	.37	25.37
1915	.47	.70	.53	.54	.86	1.43	3.69	5.49	1.52	1.90	.97	.69	18.76
1916	.78	.93	1.46	1.30	.75	.96	5.00	3.24	2.24	2.16	1.13	.71	20.66
1917	1.03	.91	2.73	1.48	.73	1.19	6.93	5.27	6.63	2.40	2.46	1.01	32.77
1918	1.89	2.34	.82	.51	.41	.75	5.51	4.06	1.46	3.16	1.06	1.52	23.49
1919	2.66	3.92	1.99	1.64	.86	3.04	6.24	5.73	2.09	.87	.55	.63	30.22
1920	.89	2.60	1.18	1.47	.34	.84	9.94	6.49	1.55	1.27	.75	1.37	27.69
1921	2.48	1.96	2.40	1.54	.93	4.09	6.27	1.96	.69	.63	.54	.33	23.80
1922	1.03	1.36	1.35	.59	.49	2.26	5.76	2.22	4.43	2.57	.99	.57	23.62
1923	.43	.87	.83	.57	.70	.57	8.14	1.06	.73	.56	.24	.30	20.30
1924	.58	1.06	2.05	1.00	.53	.77	3.76	6.23	1.26	.71	.80	.46	19.03
1925	.44	.53	.79	.42	.78	2.57	4.55	2.36	1.43	1.57	.54	.82	16.80
1926	3.37	4.33	2.50	1.13	.84	.77	2.30	7.37	2.00	1.00	.68	.63	26.92
1927	1.14	3.70	1.56	.96	.74	1.29	3.94	3.18	2.66	1.09	1.01	.85	21.92
1928	2.47	4.59	3.16	1.99	1.21	.93	5.49	6.14	2.84	1.20	1.33	.98	32.33
1929	1.49	1.80	1.53	1.73	.86	.99	5.54	6.13	1.86	.91	.55	.31	23.70
1930	.61	.68	.37	.82	.75	2.92	6.08	4.55	2.06	1.15	.69	.44	21.12
1931	.46	.80	.62	.38	.30	.75	5.49	2.58	3.19	1.48	.78	.76	17.59
1932	2.10	2.14	.97	1.34	.90	.72	7.65	3.42	1.05	.78	1.02	.62	24.71
1933	1.86	3.26	1.38	.66	.54	.62	6.54	4.38	1.83	.78	.64	.68	23.17
1934	1.16	1.09	.75	.61	.57	.98	9.95	3.68	1.81	1.21	.58	.59	22.98
1935	1.03	1.86	1.40	.77	.58	.72	6.53	5.08	2.73	1.18	.46	.38	22.72
1936	.20	.78	1.14	1.46	.90	9.75	5.58	4.86	1.93	.98	.53	.68	28.79
1937	1.92	1.77	2.44	1.59	.98	1.06	4.52	5.75	1.81	.98	.57	.29	23.68
1938	1.46	2.50	1.72	1.24	1.02	1.34	5.11	4.75	1.58	1.96	1.23	1.45	25.36
1939	1.24	1.26	3.83	.87	.60	.66	3.44	7.11	1.56	.74	.50	.43	22.24
1940	1.03	2.04	1.56	.48	.25	.58	6.83	6.76	2.36	1.37	.37	.78	24.41
1941	.65	2.82	1.10	1.10	.69	.63	5.59	1.89	.56	.65	.42	.49	16.59
1942	.59	1.55	1.01	1.16	.44	1.35	6.52	5.16	2.84	.71	.43	.28	22.64
1943	.58	1.00	.97	.53	.72	1.07	3.43	8.00	2.44	1.36	.56	.24	20.70
1944	2.32	4.57	.80	.40	.34	.56	2.67	4.72	1.14	.53	.28	.79	19.12
1945	2.29	2.34	1.35	1.73	.59	2.44	8.82	6.13	1.65	1.36	.36	.47	29.53
1946	2.05	1.82	1.21	.80	.60	3.10	5.33	5.29	1.06	.51	.30	.22	22.29
1947	1.10	1.44	1.44	.85	1.71	1.82	5.16	9.04	3.45	1.91	.73	.16	28.81
1948	.19	.37	.36	.23	.24	.93	5.13	6.47	1.34	.45	.30	.05	16.06
1949	.57	2.70	1.74	2.10	.80	1.29	6.01	2.58	.88	.40	.23	.25	19.55
1950	.57	1.20	1.42	1.60	.79	1.31	6.43	3.18	1.65	1.18	.46	.64	20.38

\* Revised.

† Not previously published.

Note.--Adjusted runoff not previously published except for period Oct. 1, 1936, to Sept. 30, 1939 (records for this period have been revised to include change in contents in Sebec River reservoirs).

## PENOBSCOT RIVER BASIN

Yearly discharge, in cubic feet per second, of Penobscot River at West Enfield, Maine												
Year	W.S.P. no.	Water year ending Sept. 30							Calendar year			
		Observed				Adjusted			Observed		Adjusted	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	
		Discharge	Date									
1902	279,1231	\$75,900	Mar. 31, 1902*	-	-	-	-	-	\$14,000	14,100	28.86	
1903	279,1231	\$64,800	Mar. 25, 1903*	2,580	\$11,100	11,100	1.67	22.77	\$10,000	9,750	20.10	
1904	279,1231	\$54,500	May 1, 1904*	1,690	\$9,450	9,750	1.48	20.11	\$10,700	11,100	22.77	
1905	279,1231	\$35,400	Apr. 12, 1905*	2,950	\$8,410	8,180	1.24	16.86	\$7,210	6,840	14.09	
1906	279,1231	\$62,000	May 11, 1906*	1,630	\$10,300	10,300	1.56	21.31	\$11,700	11,800	24.18	
1907	279,1231	\$92,600	May 2, 1907*	2,860	\$13,500	14,000	2.12	28.91	\$14,700	5,300	32.76	
1908	279,1231	\$70,900	May 2, 1908*	1,670	\$14,400	14,100	2.14	28.98	\$11,300	10,700	21.98	
1909	(a)	\$85,900	Sept. 30, 1909	2,060	\$12,100	12,200	1.85	25.11	\$14,200	15,000	30.78	
1910	281,1231	\$39,600	Apr. 28, 1910*	3,230	\$12,600	12,700	1.92	25.98	\$10,500	9,900	20.43	
1911	301,1231	\$39,800	May 2, 1911*	1,860	\$6,380	6,120	.927	12.61	\$7,330	7,480	15.39	
1912	321,1231	\$62,900	Apr. 24, 1912*	3,430	\$12,500	13,000	1.97	26.97	\$14,700	15,100	31.23	
1913	351,1231	\$66,800	Nov. 9, 1912*	3,330	\$14,200	14,100	2.14	28.89	13,000	13,000	26.63	
1914	381	67,300	May 10, 1914	3,100	\$12,600	12,400	1.88	25.37	10,800	10,300	21.16	
1915	401	53,800	May 2, 1915	2,570	9,060	9,110	1.38	18.76	9,710	9,840	20.25	
1916	431	36,700	Apr. 19, 1916	\$4,060	9,700	10,000	1.52	20.66	10,300	10,800	22.16	
1917	451	87,900	June 19, 1917	3,730	15,600	15,900	2.42	32.77	15,800	16,100	35.15	
1918	471	40,700	May 2, 1918	4,170	11,500	11,400	1.73	23.49	13,000	13,100	27.01	
1919	501	45,000	Apr. 26, 1919	3,950	15,000	14,700	2.22	30.22	13,200	12,800	26.32	
1920	501	72,300	Apr. 15, 1920	4,100	13,300	13,400	2.03	27.69	14,300	14,400	29.84	
1921	521	51,400	Mar. 29, 1921	3,330	11,900	11,600	1.75	23.80	10,600	10,100	20.72	
1922	541	60,400	June 23, 1922	3,630	11,300	11,500	1.75	23.62	10,700	10,600	21.84	
1923	561	153,000	May 1, 1923	2,940	10,000	9,860	1.49	20.30	10,300	10,700	22.03	
1924	581	53,800	May 1, 1924	2,940	9,040	9,250	1.40	19.03	8,630	8,310	17.15	
1925	601	53,800	Apr. 4, 5, 1925	3,300	8,080	8,160	1.24	16.80	11,300	12,300	25.24	
1926	621	67,500	May 5, 1926	4,100	12,900	13,100	1.98	26.92	11,400	11,200	22.92	
1927	641	41,800	Nov. 20, 1926	4,630	10,800	10,700	1.62	21.92	12,300	12,500	25.94	
1928	661	60,800	Nov. 6, 1927	4,850	15,500	15,700	2.38	32.33	13,400	13,100	26.93	
1929	681	68,700	May 4, 1929	4,100	11,800	11,600	1.76	23.70	10,700	9,990	20.54	
1930	696	50,300	Apr. 9, 1930	3,460	10,300	10,300	1.56	21.12	10,100	10,300	21.34	
1931	711	44,300	June 10, 1931	3,530	8,750	8,550	1.30	17.59	10,100	10,200	20.92	
1932	726	69,500	Apr. 13, 1932	3,810	11,500	12,000	1.82	24.71	12,100	12,600	26.00	
1933	741	56,600	Apr. 19, 1933	4,230	11,500	11,300	1.71	23.17	10,300	9,540	19.67	
1934	756	83,900	Apr. 21, 1934	4,190	11,520	11,170	1.69	22.98	11,770	11,790	24.27	
1935	781	60,800	Apr. 23, 1935	3,830	10,890	11,040	1.67	22.72	10,150	9,980	20.55	
1936	801	125,000	Mar. 21, 1936	3,570	13,770	13,960	2.12	28.79	15,130	15,900	32.80	
1937	821	48,200	May 22, 1937	3,810	11,720	11,520	1.75	23.68	11,560	11,290	23.23	
1938	851	41,900	Apr. 22, 1938	3,690	11,940	12,320	1.87	25.36	12,430	12,640	26.01	
1939	871	51,000	May 10, 1939	4,210	11,360	10,820	1.64	22.24	10,560	9,990	20.54	
1940	891	\$113,000	Apr. 14, 1940	3,690	\$11,780	11,840	1.79	24.41	11,800	11,800	24.35	
1941	921	43,100	Apr. 17, 1941	3,300	8,779	8,067	1.22	16.59	7,893	7,376	15.17	
1942	951	56,600	Apr. 27, 1942	3,500	10,270	11,020	1.67	22.64	10,340	10,680	21.97	
1943	971	46,100	May 13, 1943	3,790	9,721	10,070	1.53	20.70	11,620	12,570	25.84	
1944	1001	65,700	Nov. 10, 1943	3,500	9,605	9,269	1.40	19.12	8,988	8,441	17.41	
1945	1031	62,200	Apr. 6, 1945	4,100	13,870	14,370	2.18	29.53	13,510	13,930	28.63	
1946	1051	48,900	Apr. 28, 1946	4,320	11,330	10,840	1.64	22.29	10,830	10,300	21.18	
1947	1081	79,100	May 7, 1947	4,420	13,600	14,000	2.12	28.81	12,770	12,510	25.75	
1948	1111	63,600	May 19, 1948	3,300	8,553	7,793	1.18	16.06	9,605	9,771	20.15	
1949	1141	31,900	Apr. 20, 1949	3,530	9,644	9,504	1.44	19.55	9,122	8,601	17.68	
1950	1171	81,100	Apr. 23, 1950	3,630	9,664	9,918	1.50	20.38	-	-	-	

\* Revised.

† Corrected.

# Not previously published.

a In W.S.P. 279, 501, 1231.

b Maximum peak discharge; maximum discharge during the year, 60,200 cfs at 12:01 a.m., Oct. 1, stage falling.

Note.--Adjusted runoff figures not previously published; see footnote to preceding table.

## 42. 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.

Gage--Water-stage recorder. Datum of gage is 151.3 ft above mean sea level, datum of 1929. Prior to Oct. 5, 1921, staff or chain gage at several sites within a quarter of a mile of present site at different datums.

Average discharge--35 years (1915-50), 476 cfs.

Extremes--1915-50: 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--Some regulation at low flow by mill above station prior to 1932.

Monthly and yearly mean discharge, in cubic feet per second, of Passadumkeag River at Lowell, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	248	262	342	281	188	201	791	549	810	479	262	211	385
1917	288	198	513	359	229	336	1,650	1,330	1,350	963	399	242	656
1918	465	489	309	180	204	246	1,010	998	586	558	235	400	474
1919	800	823	471	456	357	736	1,240	1,040	528	338	141	198	595
1920	177	451	280	110	109	315	2,290	1,700	703	428	169	460	598
1921	540	404	597	342	278	966	1,570	788	281	97.0	85.3	70.1	502
1922	108	225	219	88.9	82.1	533	943	812	859	592	300	385	450
1923	332	273	143	184	111	155	1,430	2,300	878	391	289	142	554
1924	129	260	444	217	197	215	824	996	744	265	130	228	387
1925	155	157	271	116	202	632	744	496	500	369	183	269	342
1926	765	951	784	358	258	193	662	1,740	734	434	252	245	618
1927	383	727	522	315	174	449	668	821	908	363	234	218	463
1928	966	904	589	593	317	1,110	1,070	658	383	472	327	622	632
1929	369	371	353	477	277	333	1,170	1,360	812	318	173	108	511
1930	164	182	138	243	328	792	1,280	845	470	183	98.0	101	402
1931	87.1	165	130	102	106	195	1,090	455	628	446	344	277	335
1932	409	570	290	388	288	252	1,440	1,060	463	256	268	277	496
1933	343	848	373	278	262	273	1,590	976	412	181	105	107	477
1934	243	269	286	222	220	435	2,030	1,232	475	237	219	216	507
1935	354	474	400	441	309	348	1,434	1,474	513	255	120	71.6	515
1936	64.1	201	392	396	362	1,789	1,761	889	634	364	157	118	594
1937	277	390	862	539	316	319	923	1,174	736	273	152	101	506
1938	212	534	481	349	432	441	1,043	1,107	534	297	238	220	490
1939	259	357	824	361	245	282	841	1,180	408	304	146	88.3	443
1940	137	405	358	222	142	166	1,644	1,155	625	432	168	294	478
1941	309	577	343	372	288	222	1,000	563	278	266	126	78.6	368
1942	103	230	150	251	122	578	1,329	1,081	764	436	211	73.9	445
1943	115	199	251	116	151	282	705	1,280	439	312	176	152	350
1944	513	1,115	567	252	152	243	914	696	469	184	66.6	208	448
1945	451	546	523	615	316	590	1,553	1,475	821	325	111	82.9	618
1946	234	372	322	289	321	812	920	939	457	113	84.4	98.4	414
1947	112	277	289	159	464	559	986	1,746	938	780	271	110	558
1948	72.0	251	206	108	100	303	823	1,085	464	154	88.5	52.8	309
1949	97.7	374	257	624	208	413	1,095	537	420	112	60.3	75.4	352
1950	83.4	277	361	320	227	305	1,394	680	399	244	89.4	114	374

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	0.96	0.98	1.31	1.08	0.68	0.77	2.96	2.12	3.02	1.84	1.01	0.79	17.52
1917	1.11	.74	1.98	1.38	.80	1.29	6.16	5.13	5.04	3.71	1.53	.90	29.77
1918	1.60	1.83	1.19	.69	.71	.95	3.77	3.85	2.19	2.16	.91	1.50	21.55
1919	3.09	3.07	1.82	1.76	1.24	2.84	4.63	4.01	1.98	1.30	.54	.74	27.02
1920	.68	1.68	1.08	.42	.39	1.21	8.55	6.56	2.62	1.65	.65	1.72	27.21
1921	2.09	1.51	2.31	1.31	.97	3.72	5.86	3.04	1.05	.37	.33	.26	22.82
1922	.42	.84	.64	.34	.29	2.05	3.51	3.14	3.20	2.28	1.15	1.44	19.50
1923	1.28	1.02	.55	.71	.39	.60	5.33	8.87	3.28	1.51	1.11	.53	25.18
1924	.50	.97	1.71	.84	.71	.83	3.08	3.84	2.78	1.02	.50	.85	17.63
1925	.60	.59	1.04	.45	.70	2.43	2.78	1.91	1.86	1.42	.71	1.00	15.49
1926	2.95	3.55	3.02	1.38	.90	.74	2.47	6.71	2.73	1.67	.97	.91	28.00
1927	1.48	2.71	2.02	1.21	.61	1.73	2.49	3.17	3.59	1.40	.90	.81	21.92
1928	1.51	3.60	3.48	2.27	1.42	1.22	4.14	4.13	2.46	1.48	1.82	1.22	28.75
1929	1.42	1.38	1.36	1.84	.96	1.28	4.36	5.25	3.04	1.22	.67	.40	23.18
1930	.63	.68	.53	.94	1.14	3.06	4.78	3.26	1.75	.71	.38	.58	18.24
1931	.34	.62	.50	.39	.37	.75	4.07	1.75	2.34	1.72	1.33	1.03	15.21
1932	1.58	2.13	1.12	1.50	1.04	.97	5.38	4.09	1.73	.99	1.03	1.03	22.59
1933	1.33	3.17	1.44	1.07	.91	1.05	5.94	3.76	1.54	.70	.40	.39	21.70
1934	.94	1.00	1.10	.86	.77	1.67	7.58	4.75	1.77	.91	.84	.81	23.00
1935	1.29	1.77	1.54	1.70	1.07	1.34	5.36	5.68	1.92	.98	.46	.27	23.38
1936	.25	.75	1.51	1.52	1.30	6.89	6.57	3.42	2.36	1.41	.61	.44	27.03
1937	1.07	1.45	3.32	2.08	1.10	1.23	3.45	4.53	2.74	1.05	.59	.38	22.99
1938	.82	2.00	1.86	1.35	1.50	1.70	3.89	4.27	2.00	1.14	.92	.82	22.27
1939	1.00	1.33	5.16	1.40	.85	1.09	3.14	4.55	1.52	1.18	.56	.33	20.13
1940	.53	1.51	1.38	.86	.51	.64	6.14	4.45	2.33	1.66	.65	1.10	21.76
1941	1.19	2.15	1.33	1.43	1.00	.86	3.73	2.17	1.04	1.03	.49	.29	16.71
1942	.40	.86	.58	.97	.42	2.22	4.95	4.17	2.86	1.68	.81	.28	20.20
1943	.44	.74	.97	.45	.53	1.09	2.63	4.93	1.64	1.20	.68	.57	15.87
1944	1.98	4.16	2.19	.97	.55	.94	3.41	2.69	1.75	.71	.26	.78	20.39
1945	1.74	2.04	2.02	2.38	1.10	2.27	5.79	5.68	3.07	1.26	.43	.31	28.09
1946	.90	1.38	1.24	1.11	1.11	3.14	3.44	3.62	1.71	.44	.33	.37	18.79
1947	.43	1.03	1.11	.61	1.61	2.16	3.68	6.73	3.50	3.01	1.04	.41	25.32
1948	.28	.94	.79	.42	.36	1.16	3.07	4.18	1.73	.59	.34	.20	14.06
1949	.38	1.40	.99	2.41	.73	1.59	4.08	2.08	1.56	.43	.23	.28	16.16
1950	.32	1.03	1.40	1.23	.79	1.18	5.20	2.62	1.48	.94	.34	.43	16.96

## PENOBSCOT RIVER BASIN

Yearly discharge, in cubic feet per second, of Passadumkeag River at Lowell, Maine

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1916	451	*1,140	June 24, 1916*	146	385	1.29	17.52	398	18.10
1917	451	*2,490	Apr. 26, 1917	120	656	2.19	29.77	678	30.76
1918	471	*1,570	May 1, 1918*	127	474	1.59	21.55	543	24.71
1919	501	*1,710	Nov. 21, 1918*	95	595	1.99	27.02	496	22.48
1920	501	*3,400	Apr. 20, 1920*	96	598	2.00	27.21	652	29.68
1921	521	*2,680	Apr. 25, 1921*	5	502	1.68	22.82	419	19.01
1922	541	*1,720	June 24, 1922	68	430	1.44	19.50	446	20.25
1923	561	5,680	May 2, 1923	13	554	1.85	25.18	562	25.51
1924	581	1,520	Apr. 26, 1924	22	387	1.29	17.63	366	16.68
1925	601	1,450	Apr. 1, 1925	26	342	1.14	15.49	502	22.78
1926	621	2,910	May 5, 1926	158	618	2.07	28.00	544	24.69
1927	641	1,480	June 1, 1927	118	483	1.82	21.92	535	24.30
1928	661	1,790	Apr. 14, 1928	123	632	2.11	28.75	535	24.32
1929	681	1,860	Apr. 30, 1929	84	511	1.71	23.18	459	20.86
1930	696	2,110	Apr. 18, 1930	78	402	1.34	18.24	393	17.86
1931	711	1,560	Apr. 14, 1931	49	335	1.12	15.21	409	18.58
1932	726	1,990	Apr. 13, 1932	82	496	1.66	22.59	520	23.70
1933	741	2,140	Apr. 19, 1933	74	477	1.60	21.70	414	18.80
1934	756	3,160	Apr. 21, 1934	97	507	1.70	23.00	541	24.56
1935	781	2,520	Apr. 23, 1935	66	515	1.72	23.38	469	21.29
1936	801	4,020	Mar. 22, 1936	46	594	1.99	27.03	668	30.36
1937	821	1,540	May 26, 1937	60	506	1.69	22.99	480	21.83
1938	851	1,600	May 18, 1938	63	490	1.64	22.27	509	23.10
1939	871	2,140	Apr. 28, 1939	61	443	1.48	20.13	397	18.04
1940	891	3,400	Apr. 15, 16, 1940	99	478	1.60	21.76	505	23.01
1941	921	1,500	Apr. 18-20, 1941	37	368	1.23	16.71	306	13.88
1942	951	1,990	Apr. 26, 1942	37	445	1.49	20.20	452	20.51
1943	971	1,800	May 14, 1943	78	350	1.17	15.87	486	22.05
1944	1001	1,490	Nov. 14, 1943	48	448	1.50	20.39	392	17.86
1945	1031	2,720	Apr. 6, 1945	63	618	2.07	28.09	569	25.81
1946	1051	1,340	Mar. 30, 1946	63	414	1.38	18.79	393	17.84
1947	1081	3,110	May 8, 1947	69	558	1.87	25.32	545	24.76
1948	1111	1,910	May 21, 1948	49	309	1.03	14.06	326	14.82
1949	1141	1,280	Apr. 21, 1949	44	356	1.19	16.16	356	16.14
1950	1171	2,440	Apr. 24, 1950	59	374	1.25	16.96	-	-

\* Revised.

## 43. Cold Stream at Enfield, Maine

Location.--Lat 45°14'55", long. 68°34'05", on right bank 200 ft below site of old sawmill in Enfield, Penobscot County, and 0.25 mile below outlet of Cold Stream Pond.

Drainage area.--28.5 sq mi (revised).

Gage.--Chain gage. Altitude of gage is 155 ft above mean sea level (from topographic map).

Extremes.--1904-6: Maximum discharge, not determined; minimum, 2 cfs Sept. 10, 1904, Aug. 12, 13, 14, 15, 1905 (gage height, 2.4 ft).

## Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1905	*59.2	*33.7	*23.4	*23.9	*24.4	*27.5	*48.6	*88.7	*51.4	*49.9	*9.36	*32.0	*39.4
1906	19.0	*18.0	*16.4	*15.0	*18.2	*16.2	*71.6	*106	153	*65.9	*36.0	*29.9	*47.1
1907	*26.3	*22.6	*20.5	-	-	-	-	-	-	-	-	-	-

\* Revised.

## Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1905	*2.40	*1.32	*0.95	*0.97	*0.89	*1.11	*1.91	*3.58	*2.01	*2.02	*0.38	*1.25	*18.79
1906	.77	*.71	*.66	*.61	*.67	*.65	*2.80	*4.29	5.99	*2.66	*1.45	*1.17	*22.43
1907	*1.06	*.88	*.85	-	-	-	-	-	-	-	-	-	-

\* Revised.

## Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1906	1231	-	-	-	*3.4	*39.4	*1.38	*18.79	*34.1
1906	1231	-	-	-	2.0	*47.1	*1.65	*22.43	*48.4
1907	1231	-	-	-	-	-	-	-	*23.06

\* Revised.

## 44. 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 and 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).

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

Average discharge.--12 years (1938-50), 11,180 cfs (adjusted for storage).

Extremes.--1938-50: Maximum discharge, 126,000 cfs (revised) Apr. 14, 1940 (gage height, 13.62 ft); minimum, 2,600 cfs Sept. 1, 1941 (gage height, 2.44 ft).

Remarks.--Flow regulated by several reservoirs above station. Runoff adjusted for change in contents in West Branch Penobscot River Basin reservoirs (see p. 37), Telos Lake since August 1942 (see p. 42), Grand Lake since May 1942 (see p. 42), Wilson Pond (see p. 50), and Sebec Lake (see p. 51).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	9,682	9,510	20,850	7,831	6,711	7,345	21,310	31,310	10,250	6,817	5,300	5,251	11,890
1940	6,915	12,960	10,140	5,578	4,637	5,300	39,200	30,160	12,180	9,836	5,458	7,458	12,470
1941	7,183	15,570	7,741	8,196	6,941	6,496	26,820	11,450	6,302	5,427	4,765	4,382	9,249
1942	5,135	8,474	5,908	7,769	4,671	12,070	29,710	21,890	17,400	6,869	5,488	5,316	10,900
1943	5,900	7,225	6,922	4,965	5,762	8,314	19,450	30,790	11,860	8,282	6,108	5,807	10,140
1944	12,970	23,790	7,846	6,180	5,304	6,125	16,290	18,900	8,117	5,797	4,575	6,400	10,180
1945	12,290	14,180	9,787	11,630	7,327	15,810	38,450	35,710	10,710	8,139	5,341	6,369	14,670
1946	10,720	11,520	9,192	8,341	7,446	18,540	25,660	25,580	8,612	6,007	5,231	5,286	11,870
1947	7,515	9,016	8,602	7,083	11,920	12,520	26,040	42,470	21,350	12,570	7,199	5,713	14,320
1948	5,192	5,289	4,577	3,752	3,590	7,242	24,270	28,140	9,648	5,700	5,185	4,399	8,923
1949	4,989	13,470	9,323	13,910	7,104	10,450	27,480	12,300	7,902	5,291	4,229	4,662	10,080
1950	4,270	8,116	9,243	9,683	6,511	9,310	32,630	14,140	8,850	7,569	7,676	6,151	10,170

\* Not previously published; partly estimated on basis of records for Penobscot River at West Enfield.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	1.23	1.26	3.79	0.90	0.61	0.72	3.34	6.92	1.56	0.76	0.52	0.38	21.99
1940	1.04	2.01	1.53	.52	.31	.60	6.87	6.58	2.34	1.40	.41	.78	24.39
1941	.70	2.71	1.11	1.12	.70	.67	5.56	1.92	.60	.68	.42	.49	16.68
1942	.61	1.54	.99	1.15	.45	1.97	6.42	4.92	2.84	.79	.49	.31	22.48
1943	.58	.99	.98	.53	.52	1.07	5.37	7.77	2.39	1.34	.56	.25	20.35
1944	2.28	4.51	.88	.44	.55	.58	2.71	4.61	1.17	.54	.28	.79	19.14
1945	2.26	2.32	1.37	1.76	.61	2.46	6.67	6.12	1.70	1.34	.56	.48	29.44
1946	1.99	1.80	1.20	.82	.63	3.09	5.21	5.16	1.12	.51	.30	.23	22.06
1947	1.06	1.38	1.42	.83	1.71	1.83	5.05	8.95	3.41	1.98	.74	.17	28.53
1948	.21	.40	.38	.24	.25	.95	5.00	6.32	1.33	.45	.31	.06	15.90
1949	.56	2.59	1.70	2.11	.79	1.30	5.89	2.56	.91	.40	.22	.25	19.28
1950	.51	1.20	1.40	1.69	.80	1.31	6.35	3.18	1.64	1.15	.45	.63	20.21

\* Not previously published; see footnote to preceding table.

Note.--Adjusted runoff not previously published.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30									
		Observed					Adjusted				
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1939	871	52,800	May 10, 11, 1939	4,260	11,890	11,350	1.62	21.99	11,030	10,470	20.29
1940	891, 1171	126,000	Apr. 14, 1940	3,960	12,470	12,550	1.79	24.39	12,500	12,510	24.33
1941	921	43,600	Apr. 17, 1941	3,390	9,249	8,599	1.23	16.68	8,336	7,887	15.30
1942	951	57,500	Apr. 27, 1942	3,530	10,900	11,600	1.66	22.48	10,940	11,280	21.89
1943	971	47,000	May 15, 1943	3,960	10,140	10,480	1.50	20.35	12,180	13,130	25.47
1944	1001	63,400	Nov. 11, 1943	3,670	10,180	9,844	1.41	19.14	9,498	9,951	17.41
1945	1031	67,500	Apr. 6, 1945	4,250	14,670	15,170	2.17	29.44	14,270	14,690	28.49
1946	1051	50,600	Apr. 28, 1946	4,250	11,870	11,380	1.63	22.06	11,330	10,600	20.93
1947	1081	84,000	May 7, 1947	4,550	14,320	14,720	2.10	28.53	13,490	13,230	25.86
1948	1111	66,000	May 19, 1948	5,250	8,923	8,161	1.17	15.90	9,978	10,140	19.76
1949	1141	33,500	Apr. 20, 1949	3,530	10,080	9,940	1.42	19.28	9,573	9,052	17.54
1950	1171	84,000	Apr. 23, 1950	3,770	10,170	10,420	1.49	20.21	-	-	-

\* Not previously published.

Note.--Adjusted records not previously published.

## Penobscot River at Sunkhaze Rips, near Costigan, Maine

Location.--Lat 44°58'10", long. 68°38'25", on right bank 1½ miles downstream from Sunkhaze Stream and 2 1/8 miles south of Costigan, Penobscot County.

Drainage area.--7,260 sq mi.

Gage.--Staff gage. Altitude of gage is 94 ft (from topographic map).

Remarks.--Records for period Sept. 15, 1899, to Sept. 21, 1900, published in Water-Supply Paper 65, has been found to be in error on basis of re-study of the original data and comparison with records for nearby stations. Those records are not published herein and should not be used.

## 45. Kenduskeag Stream near Kenduskeag, Maine

Location.--Lat 44°53'50", long. 68°53'00", 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.

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

Average discharge.--9 years (1941-50), 270 cfs.

Extremes.--1941-50: Maximum discharge, 4,040 cfs May 19, 1948 (gage height, 11.15 ft); maximum gage height, 12.56 ft Mar. 11, 1942 (ice jam); minimum discharge, 1.0 cfs Sept. 30, Oct. 1, 1948 (gage height, 1.09 ft).

Remarks.--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 the basis of current-meter measurements made at various times, the maximum amount of water diverted into basin is about 7.5 % of the total flow of Kenduskeag Stream when flows are above 900 cfs.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	15.6	70.4	127	151	10.8	892	1,054	178	359	64.1	14.1	5.22	246
1943	10.9	84.6	181	29.3	99.8	330	901	550	178	56.0	57.9	24.8	209
1944	609	954	189	53.0	59.3	391	1,366	189	49.4	29.7	8.4	38.0	326
1945	158	380	439	352	94.5	882	1,070	903	181	44.6	9.96	8.92	379
1946	69.8	271	262	181	172	1,024	627	384	67.1	13.4	13.9	14.4	259
1947	79.5	260	230	174	521	715	748	582	426	147	25.9	16.1	331
1948	7.01	84.8	36.9	13.9	17.9	473	591	878	138	31.7	13.4	2.27	190
1949	4.24	162	121	559	77.0	493	728	191	61.9	22.0	23.5	102	213
1950	82.6	376	295	293	198	421	1,376	189	45.3	24.5	8.58	7.64	275

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	0.10	0.44	0.82	0.98	0.06	5.78	6.60	1.15	2.25	0.42	0.09	0.03	18.72
1943	.07	.53	1.18	.19	.58	2.13	5.64	3.56	1.12	.36	.37	.16	15.89
1944	5.94	5.98	1.22	.34	.36	2.54	8.56	1.22	.31	.19	.05	.24	24.95
1945	1.02	2.38	2.85	2.28	.55	5.72	6.71	5.84	1.14	.29	.06	.06	28.90
1946	.45	1.70	1.70	1.18	1.01	6.63	3.93	2.49	.42	.09	.09	.09	19.78
1947	.52	1.63	1.49	1.13	3.05	4.62	4.69	4.22	2.67	.95	.17	.10	25.24
1948	.04	.41	.24	.09	.11	3.07	3.70	5.68	.86	.21	.09	.01	14.51
1949	.03	1.02	.78	3.62	.45	3.19	4.56	1.23	.39	.14	.15	.64	16.20
1950	.53	2.35	1.91	1.90	1.16	2.73	8.62	1.22	.28	.16	.06	.05	20.97

Note.--Figures in this table not previously published except for water year 1945.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1942	951	3,420	Mar. 11, 1942	2.6	246	11.58	18.72	251	19.14	
1943	971	1,600	Apr. 21, 1943	4.7	209	11.17	15.89	331	25.25	
1944	1001	3,330	Oct. 18, 1943	2.6	326	11.63	24.95	262	20.06	
1945	1031	3,600	Mar. 30, 1945	3.4	379	2.15	28.90	347	26.50	
1946	1051	1,660	Mar. 28, 1946	6.0	259	11.46	19.78	256	19.57	
1947	1081	2,350	May 5, 1947	8.0	331	11.86	25.24	292	22.29	
1948	1111	4,040	May 19, 1948	1.0	190	11.07	14.51	205	15.65	
1949	1141	2,120	Jan. 7, 1949	1.4	213	11.20	16.20	252	19.16	
1950	1171	2,960	Apr. 22, 1950	2.6	275	11.54	20.97	-	-	

\* Not previously published.



## 46. Kenduskeag Stream near Bangor, Maine

Location.--Lat 44°51'40", long. 68°49'55", on downstream side of bridge on Route 15 just below Six Mile Falls and 6 miles northwest of Bangor, Penobscot County.

Drainage area.--195 sq mi (revised).

Gage.--Chain gage. Altitude of gage is 79 ft (from topographic map).

Average discharge.--11 years (1908-19), 405 cfs.

Extremes.--1908-19: Maximum discharge, 6,300 cfs (revised) Apr. 15, 1909 (gage height, 10.45 ft, from graph based on gage readings), from rating curve extended above 3,600 cfs by logarithmic plotting; minimum, 7 cfs Sept. 15 to Oct. 1, 1908, and Oct. 11-16, 1914 (gage height, 1.30 ft).

Remarks.--An artificial cut has been made through a low divide between Souadabscook Stream and Black Stream which enters Kenduskeag Stream 7.3 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 the basis of current-meter measurements made at various times, the maximum amount of water diverted into basin is about 7.5 % of the total flow of Kenduskeag Stream when flows are above 900 cfs.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1909	32.5	131	*80.7	*184	*287	*779	*2,060	592	102	63.5	24.3	348	*389
1910	454	521	*302	*298	*238	*809	592	273	132	45.9	47.7	17.6	*311
1911	15.4	28.0	113	*173	*68.0	*345	1,780	304	119	63.1	85.6	80.4	*263
1912	116	237	*818	*368	*166	*507	*1,550	455	493	61.7	105	89.4	*413
1913	514	853	*508	*465	*156	*1,430	1,380	*294	190	*67.3	*42.5	*43.7	*497
1914	432	449	*337	*204	*112	*445	*1,430	459	140	42	35	24	*342
1915	20.2	58.8	47.2	*182	*491	*429	*659	825	122	540	326	148	*320
1916	165	387	607	559	201	267	1,280	477	480	387	144	112	421
1917	178	209	888	262	*119	761	1,880	399	260	313	619	145	587
1918	472	518	119	*70.2	150	487	1,590	306	58.7	694	*105	593	*430
1919	913	814	331	437	176	1,320	786	678	142	77.2	21.1	62.1	483

\* Revised.

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1909	0.19	0.75	*0.48	*1.09	*1.53	*4.60	*11.78	3.50	0.58	0.38	0.14	1.99	*27.01
1910	2.69	2.98	*1.79	*1.76	*1.27	*4.78	3.39	1.61	.76	.27	.28	.10	*21.68
1911	.09	.16	.67	*1.02	*.36	*2.04	10.19	1.80	.68	.37	.51	.46	*18.35
1912	.69	1.36	*4.85	*2.18	*.92	*3.00	*8.87	2.69	2.82	.36	.62	.51	*28.85
1913	3.04	4.88	*3.01	*2.74	*.83	*8.45	7.90	*1.74	1.09	*4.0	*4.25	*4.25	*34.58
1914	2.56	2.57	*1.99	*1.21	*.60	*2.63	*8.18	2.71	.80	.25	.21	.14	*23.85
1915	.12	.34	.28	*1.08	*2.62	*2.54	*3.77	4.88	.70	3.19	1.92	.85	*22.29
1916	.98	2.21	3.58	3.18	1.11	1.58	7.39	2.82	2.74	2.28	.85	.64	29.36
1917	1.05	1.19	5.25	1.54	.64	4.50	10.76	2.36	7.21	1.86	3.66	.83	40.85
1918	2.79	2.97	.70	*.42	.80	2.88	9.09	1.84	.34	4.10	*.62	3.39	*29.95
1919	5.40	4.65	1.96	2.58	.94	7.80	4.50	4.01	.81	.46	.12	.56	33.58

\* Revised.

† Corrected.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1909	(a)	*6,300	Apr. 15, 1909	7	*389	*1.99	*27.01	*475	*33.05
1910	281,1231	*1,550	Nov. 27, 1909*	12	*311	*1.59	*21.68	*217	*15.14
1911	301,1231	*5,470	Apr. 12, 1911*	12	*263	*1.55	*18.35	*349	*24.31
1912	321,1231	*2,740	June 1, 1912*	34	*413	*2.12	*28.85	*471	*32.90
1913	351,1231	*3,630	Mar. 21, 1913*	22	*497	*2.55	*34.58	*442	*30.77
1914	381,1231	*4,800	Apr. 21, 1914	12	*342	*1.75	*23.85	*251	*17.47
1915	401,1231	*3,770	May 2, 1915*	7	*320	*1.64	*22.29	*407	*28.32
1916	430,1231	*3,500	Apr. 2, 1916	57	421	2.16	29.36	431	30.08
1917	451,1231	*5,400	Apr. 8, 1917	65	587	3.01	40.85	572	39.82
1918	471,1231	*4,610	Apr. 4, 1918	29	*430	*2.20	*29.95	*510	*35.50
1919	501,1231	*4,500	Mar. 23, 1919	11	483	2.48	33.58	-	-

\* Revised.

\* Not previously published.

a In W.S.P. 279, 501, 1231.

## PENOBSCOT RIVER BASIN

Phillips Lake and outlets in Holden and Dedham, Maine

Location.--Lat 44°44'05", long. 68°37'55", on right bank 0.25 mile south of East Holden, Penobscot County, and 1½ miles downstream from dam on northern outlet of Phillips Lake.

Drainage area.--12.3 sq mi.

Gage.--Chain gage. Altitude of gage is 160 ft (from topographic map). Prior to Dec. 6, 1904, staff gage at same site and datum.

Remarks.--Records augmented by auxiliary gages to determine overflow of lake in south outlet. Records for July 7, 1904, to July 1, 1908, published in Water-Supply Paper 279, have been found to be in error on basis of re-study of the original data and comparison with records for nearby stations. Those records are not published herein and should not be used.

## ST. GEORGE RIVER BASIN

47. St. George River at Union, Maine

Location.--Lat 44°13'40", long. 69°16'45", on left bank 200 ft below tailrace of electric plant of Dirigo Power Co., half a mile below outlet of Sennebec Lake, and 1 mile above Union, Knox County.

Drainage area.--116 sq mi.

Gage.--Staff gage. Datum of gage is 62.15 ft above mean sea level, unadjusted.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1914	-	-	-	#80	#61	#449	727	205	67	40	24	23	-
1915	13.8	13.0	41.0	-	-	-	-	-	-	-	-	-	-

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1914	-	-	-	#0.80	#0.55	#4.46	7.00	2.04	0.64	0.40	0.24	0.22	-
1915	0.14	0.12	0.41	-	-	-	-	-	-	-	-	-	-

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1914	381	-	-	-	-	-	-	#145	#17.02
1915	401	-	-	-	-	-	-	-	-

\* Not previously published.

## SHEEPSCOT RIVER BASIN

48. 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 on Route 126 and half a mile downstream from Pleasant Pond Brook.

Drainage area.--148 sq mi.

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

Average discharge.--12 years (1938-50), 206 cfs.

Extremes.--1938-50: 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.--Some regulation at low flow by sawmill at North Whitefield.

## SHEEPSCOT RIVER BASIN

65

Monthly and yearly mean discharge, in cubic feet per second, of Sheepscot River at North Whitefield, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	135	223	531	186	130	203	915	370	79.8	51.9	40.6	21.2	241
1940	*17.3	75.1	108	135	97.3	193	1,333	569	157	91.5	39.5	69.3	*239
1941	53.7	303	183	177	210	179	471	127	58.1	25.0	14.9	9.5	150
1942	6.75	21.1	44.0	107	72.8	655	551	236	183	107	40.4	26.1	171
1943	29.0	112	247	73.7	150	331	453	568	153	43.4	47.1	29.0	187
1944	178	587	226	88.0	114	277	927	244	82.5	56.6	27.8	43.6	238
1945	71.1	236	428	331	105	525	737	656	279	129	62.5	41.0	302
1946	115	276	299	269	231	614	364	238	102	29.2	18.0	14.7	216
1947	37.8	93.8	141	193	425	449	400	462	268	62.3	31.9	17.2	214
1948	13.8	20.5	32.7	28.5	35.8	313	455	660	232	62.7	22.0	8.74	157
1949	13.4	94.3	129	499	139	402	485	155	104	46.5	20.5	22.2	176
1950	31.4	124	219	257	176	346	744	198	58.4	33.6	22.1	20.2	185

\* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	1.05	1.68	4.14	1.45	0.91	1.58	6.90	2.88	0.60	0.40	0.32	0.16	22.07
1940	*.13	.57	.84	1.05	.71	1.50	10.05	4.43	1.18	.71	.31	.52	*22.00
1941	.42	2.29	1.43	1.38	1.40	1.40	3.55	.99	.44	.19	.12	.07	13.76
1942	.05	.16	.34	.83	.51	5.11	4.15	1.83	1.58	.83	.31	.20	15.70
1943	.23	.84	1.92	.57	1.05	2.58	3.41	4.43	1.15	.34	.37	.22	17.11
1944	1.38	4.43	1.76	.69	.83	2.16	6.98	1.90	.62	.44	.22	.33	21.74
1945	.55	1.77	3.33	2.58	.74	4.09	5.56	5.11	2.11	1.01	.49	.31	27.65
1946	.90	2.08	2.33	2.25	1.62	4.78	2.74	1.86	.77	.23	.14	.11	19.81
1947	.29	.71	1.10	1.50	2.99	3.49	3.01	3.60	2.02	.49	.25	.33	19.58
1948	.11	.16	.25	.22	.26	2.43	3.42	5.14	1.75	.49	.17	.07	14.47
1949	.10	.71	1.01	3.88	.98	3.14	3.66	1.21	.78	.36	.16	.17	16.16
1950	.24	.94	1.71	2.01	1.24	2.70	5.61	1.54	.44	.26	.17	.15	17.01

\* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Fer square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	871	1,910	Apr. 20, 1939	13	241	1.63	22.07	*183	*16.74
1940	891,1231	5,260	Apr. 13, 1940	*12	*239	*1.61	*22.00	268	24.60
1941	921	1,130	Nov. 15, 1940	5.5	150	1.01	13.76	111	10.17
1942	951	3,460	Mar. 10, 1942	5.1	171	1.16	16.70	198	18.14
1943	971	1,260	May 13, 1943	16	197	1.26	17.11	238	21.69
1944	1001	1,640	Apr. 13, 1944	17	236	1.59	21.74	216	19.82
1945	1051	1,950	Jan. 2, 1945	17	302	2.04	27.65	297	27.31
1946	1051	1,110	Mar. 9, 1946	7.8	216	1.46	19.81	181	16.60
1947	1081	1,390	Feb. 5, 1947	9.7	214	1.45	19.58	196	18.00
1948	1111	2,050	May 18, 1948	5.2	157	1.06	14.47	172	15.77
1949	1141	1,420	Jan. 6, 1949	5.6	176	1.19	16.16	188	17.23
1950	1171	1,140	Apr. 6, 1950	12	185	1.25	17.01	-	-

\* Revised.

## KENNEBEC RIVER BASIN

49. Brassua Lake near Rockwood, Maine

Location.--Lat 45°39'40", long. 69°48'50", on Moose River 4 miles southwest of Rockwood, Somerset County.

Drainage area.--708 sq mi.

Gage.--Staff gage. Altitude of gage is 1,000 ft (from topographic map).

Remarks.--Reservoir completed in 1928 for storage of water for power, has usable capacity of 8,560,000,000 cu ft between gage heights 43.0 and 73.0 ft.

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

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1929	4,331	5,321	4,085	3,245	1,084	556	7,172	8,770	8,833	7,015	3,989	2,575
1930	1,708	68	30	120	75	190	4,804	8,200	8,890	7,852	6,086	5,164
1931	4,430	1,788	112	52	30	82	5,628	6,237	5,540	5,218	4,906	4,974
1932	4,855	2,509	150	596	105	190	7,590	9,000	8,890	7,030	5,452	5,326
1933	5,321	5,751	3,022	2,074	2,126	2,153	7,629	8,854	8,980	8,157	4,429	3,814
1934	4,248	2,808	0	0	0	15	7,090	8,758	9,000	8,780	8,692	8,736
1935	6,407	1,650	270	63	30	68	*4,804	8,332	8,991	8,921	8,685	7,126

Note.--Contents are at 7 a.m. on first day of following month.

## KENNEBEC RIVER BASIN

Month-end contents, in millions of cubic feet, of Brassua Lake near Rockwood, Maine--Continued												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1936	4,182	124	0	0	0	6,533	6,855	8,837	8,956	7,881	5,290	5,355
1937	5,488	2,793	2,839	3,257	3,200	3,395	7,282	8,824	8,991	8,727	8,516	7,330
1938	4,888	2,660	3,110	1,471	430	711	7,891	8,807	8,956	8,956	8,765	8,723
1939	4,664	1,614	2,993	1,471	31	15	971	8,616	8,786	8,659	8,680	8,470
1940	4,664	3,086	2,960	0	0	26	1,009	8,470	8,998	8,862	4,530	1,973
1941	1,885	1,221	115	46	15	0	5,006	5,232	5,250	4,597	4,496	4,021
1942	188	299	43	0	0	41	4,370	8,994	8,994	8,824	6,956	3,989
1943	3,350	848	31	0	0	46	1,438	8,786	9,041	8,828	8,035	5,321
1944	4,731	6,362	5,934	5,751	5,144	812	1,997	8,220	8,178	6,782	5,338	5,427
1945	5,606	1,707	1,898	2,087	2,087	4,664	8,934	8,977	8,998	8,998	8,574	6,305
1946	7,629	7,912	6,995	5,897	4,480	5,624	7,729	8,875	8,854	6,400	4,748	4,380
1947	3,942	1,948	2,060	2,354	3,958	4,331	5,180	8,560	9,023	8,980	8,707	7,953
1948	5,391	1,525	0	0	0	199	5,588	7,810	8,665	8,338	5,356	3,942
1949	3,846	918	8	0	0	122	5,534	6,879	7,549	4,954	4,597	4,331
1950	4,216	314	160	414	46	61	3,894	6,494	7,912	7,589	6,136	4,282

Note.--Contents are at 7 a.m. on first day of following month.

## 50. Moose River near Rockwood, Maine

Location.--Lat 45°39'40", long. 69°48'50", on left bank 3 miles upstream from mouth and 4 miles southwest of Rockwood, Somerset County.

Drainage area.--708 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 1,035 ft (from topographic map). Sept. 4, 1902, to Dec. 31, 1908, May 16, 1910, to Sept. 30, 1912, and Nov. 1, 1919, to Sept. 30, 1921, staff or chain gage at site 0.9 mile downstream at datum 10 ft lower.

Average discharge.--14 years (1902-8, 1910-12, 1919-25), 1,200 cfs.

Extremes.--1902-7, 1910-11, 1919-25: Maximum discharge, 12,200 cfs May 1, 1923 (gage height, 9.58 ft), from rating curve extended above 5,200 cfs by logarithmic plotting; minimum, 53 cfs Dec. 16, 1904 (gage height, 1.30 ft).

Remarks.--Flow partly regulated each year by log driving dams during period April to June.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	*933	*1,303	652	*430	*423	*2,461	*3,747	*2,470	*1,022	*470	462	*182	*1,216
1904	*886	*124	*373	*505	*580	*2,492	*2,151	*5,079	*1,791	*715	358	*814	*1,244
1905	*1,543	649	*356	*692	*373	*1,110	*2,706	*3,926	*1,963	*813	287	220	*1,225
1906	*143	*157	214	*190	*368	*150	*1,226	*6,124	*2,375	*745	264	255	*1,023
1907	*599	*834	*503	*333	*216	*209	*1,200	*6,230	*2,270	*1,760	*1,080	472	*1,318
1908	*1,440	*4,170	*3,680	*714	*546	*472	*2,340	*6,110	*2,660	343	219	*186	*1,910
1909	191	136	*211	-	-	-	-	-	-	-	-	-	-
1910	-	-	-	-	-	-	-	-	*2,228	*828	277	237	-
1911	236	434	*337	*186	*149	*116	*860	*3,923	*900	643	447	573	*732
1912	765	684	*1,128	*673	*208	*417	*2,537	*4,907	*3,532	*735	606	*537	*1,400
1920	*436	2,100	677	248	164	345	3,880	5,200	2,170	917	346	242	*1,390
1921	545	744	994	602	364	1,620	5,160	831	723	458	263	158	1,040
1920	409	890	804	359	223	459	4,220	1,870	2,040	1,400	359	183	1,100
1923	239	329	361	316	193	165	1,730	5,290	1,830	966	537	301	1,040
1924	390	905	1,420	580	313	221	1,340	5,320	1,280	867	494	341	1,130
1925	429	309	879	185	465	828	3,180	2,380	2,160	1,170	412	399	1,070

\* Revised.

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Yearly discharge, in cubic feet per second												
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year				
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date									
1903	198,1231	a5,920	Mar. 27, 28, 1903	*86	*1,216	*1.72	*23.30	*1,023	*19.62			
1904	198,1231	a8,560	May 13, 1904	*53	*1,244	*1.76	*23.91	*1,409	*27.07			
1905	198,1231	a5,125	May 11, 1905	*180	*1,225	*1.73	*23.50	*1,054	*20.22			
1906	198,1231	a7,768	May 11, 12, 1906	*74	*1,023	*1.44	*19.60	*1,142	*21.89			
1907	241,1231	a7,440	May 12-15, 1907	*140	*1,318	*1.86	*25.30	*1,930	*37.10			
1908	241,1231	a8,720	May 2, 1908	*93	*1,910	*2.70	*36.72	*1,180	*22.66			
1909	241,1231	-	-	-	-	-	-	-	-			
1910	281,1231	-	-	-	-	-	-	-	-			
1911	301,1231	a7,120	May 4, 1911	*80	*732	*1.03	*14.16	*872	*16.70			
1912	321,1231	a7,760	May 4, 1912	*67	*1,400	*1.98	*26.84	-	-			
1920	501	b6,200	May 11-14, 1920	*145	*1,390	*1.96	*26.75	1,320	25.30			
1921	521	b10,000	Apr. 5-7, 1921	130	1,040	1.47	19.88	1,020	19.60			
1922	541	7,600	Apr. 20, 1922	103	1,100	1.55	21.10	1,000	19.21			
1923	561	12,200	May 1, 1923	94	1,040	1.47	19.85	1,190	22.74			
1924	581	7,460	May 15, 1924	183	1,130	1.60	21.71	1,040	19.94			
1925	601	4,500	Apr. 29, 1925	73	1,070	1.51	20.46	-	-			

\* Revised.

\* Not previously published.

a Maximum observed, not previously published.

b Maximum observed.

## 51. Second Roach Pond near Kokadjo, Maine

Location.--Lat 45°40'25", long. 69°19'25", at outlet dam on Roach River 6 miles east of Kokadjo, Piscataquis County.

Drainage area.--19 sq mi.

Gage.--Staff gage. Altitude of gage is 1,265 ft (from topographic map).

Remarks.--Reservoir used for storage of water for power, has usable capacity of 216,000 cu ft between gage heights 0.5 and 10.0 ft.

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

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1928	-	-	174	160	160	160	160	188	244	188	0	0
1929	0	0	0	0	0	0	244	244	0	0	0	0
1930	134	0	0	0	0	0	174	169	87	0	0	11
1931	11	0	0	0	0	0	134	134	107	92	57	57
1932	0	0	0	0	0	0	107	185	167	57	34	134
1933	22	11	0	0	0	0	107	134	134	128	22	0
1934	0	0	0	0	0	0	97	107	57	0	0	0
1935	0	0	0	0	0	0	107	150	147	134	38	0
1936	0	0	0	0	0	160	134	174	134	43	0	0
1937	50	0	0	0	0	0	100	195	222	188	202	0
1938	82	0	0	0	0	0	160	216	188	188	209	134
1939	11	0	0	0	0	0	82	195	216	225	11	0
1940	0	0	0	0	0	0	69	230	216	107	0	0
1941	0	0	0	0	0	0	82	94	102	92	94	84
1942	0	11	0	0	0	0	174	230	222	120	43	0
1943	0	0	0	0	0	0	57	230	216	107	0	0
1944	34	0	0	0	0	0	34	160	160	107	107	0
1945	0	0	0	0	0	57	244	222	216	216	174	34
1946	0	0	0	0	0	45	188	216	188	133	11	0
1947	0	0	0	0	0	0	45	174	202	188	107	0
1948	0	0	0	0	0	22	54	188	45	0	0	0
1949	0	11	0	0	0	11	147	152	172	120	97	0
1950	0	0	0	0	0	0	22	69	107	104	79	0

Note.--Contents are at 7 a.m. on first day of following month.

## 52. First Roach Pond near Kokadjo, Maine

Location.--Lat 45°40'15", long. 69°26'50", on Roach River at Kokadjo, Piscataquis County.

Drainage area.--85 sq mi.

Gage.--Staff gage. Altitude of gage is 1,220 ft (from topographic map).

Remarks.--Reservoir used for storage of water for power, has usable capacity of 938,000 cu ft between gage heights 1.5 and 8.0 ft.

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

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1928	-	-	842	732	732	732	732	664	732	530	0	0
1929	0	0	0	0	0	0	801	801	503	329	262	262
1930	52	262	262	329	329	329	610	801	530	597	262	0
1931	0	223	262	262	329	0	870	664	463	584	530	275
1932	0	0	0	0	0	0	530	705	496	316	262	610
1933	196	229	0	0	0	0	732	664	597	597	151	0
1934	0	0	0	0	0	0	597	624	530	0	0	0
1935	0	0	0	0	0	0	530	842	924	835	664	678
1936	383	396	0	0	0	801	490	938	811	185	0	0
1937	597	400	369	223	0	0	500	938	938	801	664	131
1938	597	463	289	597	170	131	787	904	801	664	396	530
1939	530	329	100	0	0	0	409	966	911	924	801	691
1940	436	262	131	0	0	0	801	938	911	719	530	463
1941	0	564	329	66	0	0	732	705	630	564	423	362
1942	210	262	396	597	543	570	870	870	897	732	630	732
1943	732	610	610	570	490	423	664	1,008	938	801	664	678
1944	801	870	815	530	396	530	732	938	801	938	863	870
1945	980	664	870	938	938	1,008	1,008	870	973	973	870	801
1946	712	870	924	904	938	904	938	1,008	597	530	651	530
1947	530	597	597	597	801	651	801	938	938	856	732	490
1948	396	275	0	0	0	131	610	938	870	856	610	0
1949	0	66	329	329	105	66	774	911	732	691	651	746
1950	664	157	450	664	597	329	801	801	911	911	815	870

Note.--Contents are at 7 a.m. on first day of following month.

## Roach River at Roach River, Maine

Location.--Lat 45°40'15", long. 69°26'50", on right bank at Roach River, Piscataquis County, 100 ft downstream from dam at outlet of First Roach Pond.

Drainage area.--85 sq mi.

Gage.--Staff gage. Altitude of gage is 1,210 ft (from topographic map).

Remarks.--Records for Nov. 10, 1901, to Dec. 31, 1908, published in Water-Supply Papers 198 and 241, have been found to be in error on the basis of re-study of the original data and comparison with records for nearby stations. Those records are not published herein and should not be used.

## 53. 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.

Gage.--Staff gage. Datum of gage is 1,011.48 ft above mean sea level, datum of 1929.

Extremes.--1895-1950: 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 elevation 7.0 ft. Lake outlet dredged in 1948 to permit drawing level down to elevation 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.

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

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1895	-	-	-	-	-	4,985	14,759	18,908	11,115	8,435	5,454	465
1896	2,018	7,964	13,646	16,351	15,077	16,850	22,928	19,550	15,236	10,957	6,080	5,454
1897	7,179	14,600	14,441	14,282	12,696	12,063	21,477	24,059	19,871	18,268	14,123	9,536
1898	9,064	10,641	14,918	14,759	13,646	10,325	21,960	22,282	16,670	10,325	6,080	5,298
1899	7,179	10,799	12,349	11,747	9,694	9,221	18,108	20,673	14,918	13,488	10,167	6,080
1900	4,359	4,359	5,611	2,642	8,278	11,115	20,513	24,059	19,229	17,948	12,854	8,435
1901	7,493	11,905	11,589	10,167	8,121	6,080	23,897	22,443	17,948	12,854	13,330	9,694
1902	6,708	4,828	11,589	13,488	11,905	12,537	24,707	25,355	24,585	18,428	15,713	15,395
1903	15,395	17,948	16,032	13,964	10,799	20,032	20,192	19,550	15,872	12,063	9,694	4,985
1904	1,862	310	-	-	-	-	15,713	22,443	19,229	15,713	11,589	12,696
1905	15,872	15,395	12,696	6,237	3,422	2,530	14,123	21,155	18,748	14,441	9,536	6,865
1906	4,828	3,110	1,550	1,550	2,486	2,486	9,064	23,574	21,799	15,584	9,852	6,551
1907	8,749	10,325	10,641	10,009	7,807	5,298	13,488	23,735	23,412	22,766	19,871	17,948
1908	21,316	22,766	23,412	22,121	19,871	20,032	19,550	24,585	20,994	14,759	10,325	5,924
1909	3,110	3,174	1,240	1,550	1,240	2,798	16,032	24,059	20,994	16,989	11,115	10,641
1910	12,854	13,488	13,488	11,905	11,431	12,221	23,412	24,059	23,897	19,229	14,759	11,905
1911	7,964	6,080	3,799	1,862	465	156	4,516	16,351	14,441	10,799	7,179	4,985
1912	5,611	6,865	12,221	12,854	10,957	10,641	22,121	24,059	23,089	17,948	16,989	16,032
1913	16,670	22,282	21,477	20,192	17,628	19,390	23,735	23,735	22,121	17,948	12,221	8,907
1914	12,063	15,713	16,989	13,171	10,325	10,009	15,236	24,059	21,155	16,850	10,957	7,650
1915	6,237	5,611	4,672	3,734	3,734	5,298	12,537	17,628	15,713	14,600	14,759	12,854
1916	10,325	9,694	10,009	11,115	10,325	10,325	20,352	23,735	23,735	22,121	20,192	16,989
1917	15,872	14,441	17,308	16,351	11,431	7,493	18,108	23,412	23,412	18,908	24,383	17,628
1918	16,670	19,068	14,759	9,694	6,237	4,359	16,670	23,089	21,477	21,155	16,351	14,441
1919	19,550	23,897	21,638	18,908	13,964	13,012	23,089	22,927	21,799	18,428	12,854	10,325
1920	8,749	15,554	14,441	10,009	6,551	3,266	16,989	23,089	21,477	18,108	14,441	12,221
1921	12,537	12,221	14,918	12,221	8,278	14,918	23,089	19,871	16,510	13,171	8,435	4,672
1922	3,890	5,454	6,865	4,359	2,174	4,828	21,638	23,089	23,897	20,192	14,918	9,694
1923	6,708	4,515	3,266	3,422	2,174	1,240	11,273	23,573	21,799	17,788	12,854	9,536
1924	7,179	7,807	11,589	10,167	6,551	3,422	9,694	23,735	21,477	17,308	12,221	9,536
1925	6,551	5,298	5,454	3,734	4,985	9,064	20,673	23,735	23,412	21,638	18,268	16,351
1926	21,799	23,412	20,994	16,191	10,799	4,515	4,359	23,250	23,735	19,068	13,964	10,641
1927	8,435	13,605	14,123	11,589	7,964	7,022	14,759	23,573	23,412	20,352	18,748	15,236
1928	18,748	22,574	23,574	23,250	20,513	16,032	20,674	23,897	23,250	20,674	18,268	16,510
1929	17,508	19,710	19,229	18,268	15,554	13,488	18,908	23,412	23,574	20,192	17,308	12,854
1930	9,379	8,906	7,493	6,865	4,672	5,298	13,488	23,735	23,412	21,155	16,989	13,805
1931	9,852	13,012	10,009	4,046	1,706	1,240	8,749	16,032	20,192	18,588	16,351	14,282
1932	14,441	17,628	17,628	18,908	16,351	13,488	20,192	23,735	22,604	21,799	19,871	18,748
1933	17,308	21,155	21,477	17,308	13,330	9,064	15,077	23,412	23,574	20,032	19,068	13,488
1934	11,905	12,696	12,537	8,278	4,359	2,642	16,032	23,574	23,574	20,352	13,964	11,905
1935	9,694	15,713	16,989	14,068	9,127	6,080	13,551	23,477	23,638	22,314	16,064	12,095
1936	9,379	12,095	10,989	10,569	5,830	19,325	23,347	23,735	22,057	19,390	16,670	14,727
1937	15,930	20,758	21,477	21,638	18,012	14,600	18,524	23,477	23,444	19,550	14,791	11,937
1938	14,123	19,589	19,871	18,908	18,108	16,511	22,605	22,928	23,574	23,251	19,550	17,628
1939	19,550	19,710	22,443	18,588	13,805	7,807	7,964	21,316	23,412	19,871	15,077	11,747
1940	15,841	19,101	19,967	14,123	8,655	4,484	11,463	23,154	23,800	21,477	19,582	18,844

Note.--Contents are at 7 a.m. on first day of following month.

Month-end contents, in millions of cubic feet, of Moosehead Lake at East Outlet, Maine--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1941	12,790	18,010	17,790	14,380	9,536	5,141	14,120	17,950	15,710	14,150	8,970	5,298
1942	6,708	9,379	8,561	6,865	4,515	5,705	14,282	23,509	23,735	20,577	17,948	16,702
1943	13,488	15,395	15,872	10,799	6,651	5,924	10,167	23,735	24,059	22,282	18,588	16,670
1944	18,268	23,412	21,155	14,600	7,807	6,551	8,749	20,352	20,052	18,268	15,713	13,964
1945	14,600	19,871	19,068	18,588	13,012	13,171	23,251	23,735	23,412	23,735	18,108	17,468
1946	20,352	21,960	21,638	19,550	14,759	16,670	23,089	23,412	22,121	19,229	16,032	13,805
1947	15,554	19,550	21,155	17,628	16,989	9,064	18,588	22,766	23,735	23,250	18,268	11,905
1948	7,807	8,592	7,179	4,515	1,240	1,550	8,907	22,766	22,605	20,031	17,149	13,171
1949	8,844	15,172	16,351	15,427	10,799	7,367	15,077	21,767	19,935	17,788	11,842	7,399
1950	2,673	7,556	7,210	8,498	7,744	7,933	14,377	20,738	22,346	21,380	18,588	15,300

Note.--Contents are at 7 a.m. on first day of following month.

## 54. Kennebec River at Moosehead, Maine

Location.--Lat 45°35'10", long. 69°43'10", on right bank one 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.

Gage.--Water-stage recorder. Datum of gage is 1,015.53 ft above mean sea level, datum of 1929. Prior to Oct. 8, 1924, chain gage at railroad bridge 300 ft downstream at same datum.

Average discharge.--31 years (1919-50), 1,792 cfs.

Extremes.--1919-50: Maximum discharge, 15,600 cfs May 8, 1947 (gage height, 9.94 ft); minimum, about 62 cfs Apr. 7-15, 1923.

Remarks.--Some water diverted down west channel by leakage and occasional opening of gates in dam at West Outlet. Flow regulated by reservoirs above station. Since November 1927 runoff adjusted for change in contents in Brassua Lake (see p. 65), Second Roach Pond (see p. 67), First Roach Pond (see p. 67), and Moosehead Lake (see preceding page), and for water diverted at west outlet of Moosehead Lake.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1920	1,120	328	1,640	2,130	2,120	1,980	816	4,810	3,600	2,820	2,520	1,900	2,150
1921	1,720	1,540	1,220	2,080	2,170	893	2,690	3,070	3,100	2,510	2,010	1,640	2,050
1922	1,060	980	985	1,420	1,230	330	298	2,840	4,360	3,380	2,760	2,090	1,820
1923	1,440	1,070	851	693	810	775	204	2,830	2,620	2,990	2,260	1,640	1,520
1924	1,140	895	694	1,510	1,790	1,530	489	1,770	2,840	2,640	2,470	1,600	1,610
1925	1,380	974	1,080	1,260	743	312	460	2,380	3,640	2,940	1,690	1,320	1,520
1926	530	3,580	2,810	2,650	2,640	2,690	1,100	472	3,040	2,530	1,940	1,610	2,130
1927	1,200	405	1,160	1,740	1,950	1,330	291	1,250	2,840	2,020	1,420	1,380	1,410
1928	698	2,260	3,290	1,870	2,350	2,220	1,580	6,420	4,090	2,280	2,270	1,340	2,560
1929	1,180	663	1,950	1,990	2,680	1,870	524	5,740	2,610	2,470	2,260	2,050	2,170
1930	1,660	1,200	1,150	981	1,420	1,280	490	2,010	2,660	2,510	2,460	1,960	1,650
1931	1,740	818	2,620	2,890	1,430	795	267	411	944	1,700	1,310	1,390	1,360
1932	1,150	1,100	1,810	1,120	2,120	1,790	653	2,530	1,500	1,730	1,630	1,650	1,570
1933	1,070	810	1,870	2,580	2,170	2,120	637	4,810	1,990	2,040	1,690	2,000	1,990
1934	844	759	1,719	2,042	2,014	1,112	291	1,599	1,636	2,095	2,256	1,194	1,464
1935	1,828	617	1,488	1,938	2,724	1,530	442	1,049	3,608	1,351	2,366	2,245	1,758
1936	1,992	1,105	1,203	1,355	2,221	1,015	4,310	6,078	2,318	1,967	2,049	1,511	2,259
1937	1,203	1,187	1,400	1,515	2,722	1,996	843	5,328	1,990	1,927	2,145	1,820	2,006
1938	1,539	606	1,070	1,951	2,009	1,554	638	5,592	1,762	1,755	1,716	1,363	1,785
1939	1,957	1,947	1,159	2,992	3,225	2,665	1,406	231	1,240	1,955	1,977	1,219	1,824
1940	1,597	1,298	1,907	2,632	2,456	1,948	96.7	166	2,077	2,221	2,334	1,634	1,698
1941	1,941	593	1,782	2,498	2,644	2,174	305	599	1,459	1,261	1,823	1,688	1,561
1942	1,588	597	1,196	1,257	1,467	597	132	1,083	3,126	2,405	2,188	1,954	1,466
1943	1,795	1,015	1,328	2,301	2,223	1,042	123	976	3,933	2,397	2,106	1,828	1,752
1944	1,542	503	2,089	3,266	3,445	2,819	511	274	1,559	1,822	1,968	1,446	1,753
1945	987	1,050	1,208	1,619	2,994	1,616	3,295	6,237	2,011	2,058	2,422	1,947	2,284
1946	842	1,034	1,478	2,178	3,274	1,556	2,253	4,654	1,897	2,370	1,880	1,740	2,091
1947	795	759	1,095	2,184	1,673	4,284	570	7,403	3,336	1,582	2,027	2,225	2,340
1948	2,517	1,527	1,326	1,364	1,467	625	127	390	1,514	1,781	2,345	1,954	1,379
1949	1,878	581	1,241	1,529	2,619	1,957	133	354	1,664	2,198	2,242	1,797	1,504
1950	1,858	386	822	673	1,487	1,054	194	340	935	1,542	1,930	2,221	1,119

Monthly and yearly runoff, in inches (adjusted), of Kennebec River at Moosehead, Maine													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	3.70	3.41	1.58	1.08	0.51	3.04	7.08	3.50	1.14	1.03	0.60	-
1929	2.88	1.77	1.22	1.22	.56	.84	5.01	7.46	2.29	.43	.16	-.01	23.74
1930	.07	.40	.59	.77	.43	1.46	5.04	6.68	2.53	1.37	.30	.40	20.04
1931	.06	.99	.86	.60	.41	.49	5.10	3.06	2.05	1.01	.42	.58	15.63
1932	.97	1.34	.92	1.71	.84	.74	5.76	4.27	1.09	.80	.46	1.32	20.22
1933	.37	2.29	.90	.89	.50	.53	4.85	7.78	2.10	.59	.01	-.19	20.42
1934	.45	.49	.61	.45	.35	.46	7.04	4.78	1.60	.63	-.01	.48	17.93
1935	.16	1.03	1.41	.94	.42	.40	4.89	5.84	3.78	.97	.05	.26	20.15
1936	-.07	.56	.59	.95	.50	8.27	5.36	6.77	1.76	.47	.15	.84	26.15
1937	1.88	1.77	1.65	1.64	.99	.79	3.74	7.48	2.08	.34	.23	-.02	22.57
1938	1.36	1.53	1.26	1.02	.90	.97	5.46	5.78	1.98	2.03	.79	.93	24.01
1939	1.04	.68	2.42	.88	.55	.39	1.82	7.74	1.96	1.04	.52	.19	19.25
1940	1.31	1.70	1.08	.43	.24	.37	3.16	6.91	2.40	1.27	.04	.38	19.29
1941	-.38	2.32	1.11	1.02	.50	.49	5.41	2.03	.59	.43	-.14	.08	13.46
1942	-.55	1.53	.78	.64	.40	.99	4.76	5.83	2.90	1.08	.48	.32	20.26
1943	.33	.66	1.12	.35	.40	.71	2.18	8.35	3.78	1.57	.41	.11	19.97
1944	1.68	2.81	.99	.60	.38	.73	1.72	6.56	1.24	.62	.42	.68	18.43
1945	1.23	1.32	.98	1.43	.58	2.50	8.06	6.28	1.74	2.03	.10	.67	26.92
1946	2.20	1.64	.96	.91	.61	2.51	5.04	4.86	1.10	.31	.17	.62	20.93
1947	1.20	1.41	1.61	.91	1.81	1.31	4.18	9.35	3.50	1.26	.36	-.09	26.81
1948	-.02	.31	.12	.34	.14	.81	4.71	6.11	1.35	.63	.13	-.29	14.34
1949	.21	1.73	1.54	1.10	.51	.66	4.96	3.17	.95	.37	-.08	-.02	14.90
1950	.02	.51	.69	1.23	.84	.96	3.92	3.45	1.94	.99	.41	.21	15.17

Note.--Runoff for period November 1927 to September 1935 revised to include storage in First and Second Roach Ponds and Brassua Lake. Runoff since October 1938 not previously published. Negative figures indicate that evaporation and seepage from reservoirs exceeded inflow.

Yearly discharge, in cubic feet per second													
Year	W.S.P. no.	Water year ending Sept. 30							Calendar year				
		Observed				Adjusted			Observed			Adjusted	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches		
		Discharge	Date										
1920	501	-	-	102	2,150	-	-	-	-	-	-		
1921	521	-	-	157	2,050	-	-	-	-	-	-		
1922	541	-	-	64	1,820	-	-	-	-	-	-		
1923	561	-	-	62	1,520	-	-	-	-	-	-		
1924	581	-	-	202	1,610	-	-	-	-	-	-		
1925	601	8,020	July 1, 1925	170	1,520	-	-	-	-	-	-		
1926	621	12,700	Nov. 17, 1925	156	2,130	-	-	-	-	-	-		
1927	641	8,720	June 4,5,1927	194	1,410	-	-	-	-	-	-		
1928	661	13,000	May 31, 1928	215	2,560	-	-	-	2,354	2,314	25.43		
1929	681,1231	13,600	May 9, 1929	478	2,170	2,168	1.75	23.74	2,187	1,730	18.95		
1930	696,1231	6,980	May 31, 1930	300	1,650	1,829	1.49	20.04	1,752	1,904	20.89		
1931	711,1231	8,260	Dec. 12, 1930	176	1,360	1,426	1.15	15.63	1,268	1,549	16.95		
1932	726,1231	4,430	May 14, 1932	520	1,570	1,843	1.49	20.22	1,540	1,869	20.55		
1933	741,1231	8,550	May 12,15, 1933	520	1,990	1,866	1.50	20.42	1,951	1,681	18.41		
1934	756,1231	7,960	July 12, 1934	198	1,464	1,837	1.32	17.93	1,517	1,733	18.98		
1935	781,1231	6,770	June 6, 1935	188	1,758	1,839	1.48	20.15	1,788	1,701	18.63		
1936	801	10,200	May 4, 1936	260	2,259	2,379	1.92	26.15	2,216	2,766	30.37		
1937	821	10,100	May 23, 1937	296	2,006	2,062	1.66	22.57	1,942	1,957	21.42		
1938	851	11,800	May 15, 1938	226	1,785	2,192	1.77	24.01	1,956	2,192	24.00		
1939	871	6,820	July 9, 1939	165	1,824	1,756	1.42	19.23	1,786	1,750	19.18		
1940	891	5,190	June 21, 1940	66	1,698	1,760	1.42	19.29	1,675	1,664	18.25		
1941	921	5,060	Aug. 14, 1941	87	1,561	1,231	.993	13.46	1,482	1,221	15.27		
1942	951	9,540	June 18, 1942	110	1,466	1,850	1.49	20.26	1,529	1,781	19.51		
1943	971	8,370	July 1, 1943	115	1,752	1,824	1.47	19.97	1,736	2,131	23.34		
1944	1001	3,740	Jan. 30, 1944	90	1,753	1,678	1.35	18.43	1,693	1,511	16.48		
1945	1031	14,100	Apr. 28, 1945	180	2,284	2,458	1.98	26.92	2,293	2,575	28.19		
1946	1051	9,390	Apr. 27, 1946	210	2,091	1,914	1.54	20.93	2,032	1,860	20.55		
1947	1081	15,600	May 8, 1947	221	2,340	2,471	1.98	26.81	2,552	2,124	23.00		
1948	1111	4,590	May 29, 1948	106	1,379	1,507	1.05	14.34	1,257	1,559	17.21		
1949	1141	3,920	July 11, 1949	122	1,504	1,361	1.10	14.90	1,451	1,174	12.84		
1950	1171	5,060	July 17, 1950	106	1,119	1,384	1.12	15.17	-	-	-		

Note.--Period 1928-35, adjusted runoff as published in Water-Supply Papers revised to include storage of First and Second Roach Ponds. Adjusted runoff figures for calendar years not previously published. Period 1939-50, adjusted runoff figures not previously published. Adjusted records prior to 1936 water year, revised; those since 1939, not previously published.

#### 55. Moxie Pond near The Forks, Maine

Location.--Lat 45°21'00", long. 69°52'30", at outlet dam on Moxie Stream  $4\frac{1}{2}$  miles east of The Forks, Somerset County.

Drainage area.--89 sq mi.

Gage.--Staff gage. Altitude of gage is 960 ft (from topographic map).

Remarks.--Reservoir used for storage of water for power, has usable capacity of 640,000,000 cu ft between gage heights 6.0 and 14.0 ft.

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



Month-end contents, in millions of cubic feet, of Moxie Pond near The Forks, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1928	-	-	595	409	210	282	550	563	595	383	473	105
1929	345	586	532	298	315	0	622	595	586	550	532	234
1930	0	88	95	210	242	218	460	550	595	559	505	298
1931	350	478	48	0	0	0	528	595	568	559	523	359
1932	341	194	60	162	0	0	640	618	460	400	505	505
1933	341	460	210	60	60	60	577	577	577	541	442	438
1934	613	60	0	0	0	0	568	613	640	568	409	210
1935	27	74	0	0	0	0	739	640	658	550	550	60
1936	0	102	0	0	0	694	730	676	595	586	550	95
1937	307	50	50	0	0	0	640	640	640	447	452	60
1938	482	315	0	130	0	130	640	640	640	626	577	667
1939	550	0	315	170	170	170	417	662	604	564	550	146
1940	202	130	60	0	0	0	460	640	640	613	550	194
1941	116	226	109	95	95	95	730	595	568	577	564	61
1942	0	102	0	0	0	0	550	667	667	568	559	0
1943	0	0	0	0	0	0	290	622	662	595	595	30
1944	332	685	60	0	0	0	290	622	613	586	577	170
1945	178	505	60	0	0	460	685	640	640	604	568	315
1946	586	631	0	0	0	332	640	708	595	568	595	30
1947	460	341	0	0	0	60	332	640	622	595	60	0
1948	0	50	0	0	0	95	586	640	568	559	554	0
1949	0	409	0	0	0	60	640	622	577	559	550	0
1950	0	95	30	0	0	0	514	586	622	550	577	154

Note.--Contents are at 7 a.m. on first day of following month.

## 56. 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.

Gage.--Water-stage recorder. Datum of gage is 569.03 ft above mean sea level, datum of 1929. From June 21, 1912, to Oct. 17, 1919, water-stage recorder at highway bridge half a mile downstream used during most of the open-water periods; chain gage read once a day during winter periods. Prior to June 21, 1912, chain gage only at highway bridge. Datum of chain gage, approximately 3.5 ft below datum now in use.

Average discharge.--49 years (1901-50), 2,499 cfs.

Extremes.--1901-50: Maximum discharge, about 23,700 cfs June 18, 1917 (gage height, 10.1 ft, site then in use); minimum, 215 cfs Oct. 27, 1911.

Remarks.--Flow regulated by reservoirs above station. Since January 1928 runoff adjusted for change in contents in Grassus Lake (see p. 65), Second Roach Pond (see p. 67), First Roach Pond (see p. 67), Moosehead Lake (see p. 68), and Moxie Pond (see preceding page).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1902	1,590	1,400	*3,350	*1,330	*2,220	*3,100	*8,560	*8,200	*8,280	*5,650	2,930	1,630	*4,020
1903	1,430	*1,530	*2,750	*1,790	*2,233	3,260	*7,270	3,540	4,280	4,590	2,790	1,900	*3,110
1904	1,110	684	*708	*869	*522	*957	*1,790	*4,810	*6,060	*5,360	2,970	2,120	*2,260
1905	1,560	1,350	*1,500	*2,110	*1,620	*1,840	1,670	4,330	5,410	4,060	2,070	1,250	*2,400
1906	864	838	*1,030	*939	*1,190	*466	*2,130	*6,720	*5,390	4,300	2,740	1,610	*2,360
1907	1,270	633	*1,200	920	*804	*1,400	*1,590	*7,470	5,070	3,920	3,670	1,940	*2,510
1908	1,190	*5,320	2,720	*2,260	*2,320	*3,670	3,030	*8,910	*6,240	12,950	2,830	1,550	*3,580
1909	906	581	*655	*673	*1,370	*1,430	*2,920	8,020	3,950	3,230	2,580	1,800	*2,350
1910	*1,240	1,380	*972	*2,230	*1,660	*1,460	4,070	5,980	*4,740	3,210	*2,430	1,400	*2,570
1911	1,590	1,200	*1,330	*1,260	*901	*815	*976	2,600	3,030	2,330	2,290	1,720	*1,680
1912	980	487	*767	*963	*1,680	*1,780	*2,660	8,520	4,990	2,760	2,130	1,610	*2,450
1913	1,434	1,520	1,630	2,210	2,440	2,560	7,250	4,170	3,480	3,320	2,590	1,590	*2,860
1914	1,090	853	*1,120	*2,490	*2,000	*1,220	*2,620	8,180	3,470	3,040	2,780	1,680	*2,550
1915	1,250	1,040	1,190	957	852	787	1,440	3,570	2,540	3,200	1,750	1,930	*1,710
1916	1,620	1,320	1,700	1,900	1,700	2,240	2,210	4,310	3,710	3,540	3,010	2,160	*2,460
1917	1,510	1,700	1,620	2,060	2,640	2,440	2,120	5,240	10,400	6,000	4,740	3,780	*3,680
1918	2,340	2,070	3,030	2,520	1,980	1,430	2,300	3,200	2,790	3,280	2,900	2,320	*2,520
1919	1,670	3,630	3,520	3,370	3,210	2,230	4,510	7,900	3,270	3,210	3,250	2,210	*3,490
1920	1,810	1,060	2,080	2,160	2,070	2,110	3,180	6,580	3,790	3,500	3,240	2,240	*2,820
1921	2,260	2,480	2,110	2,450	2,490	2,020	4,700	3,760	2,980	2,950	2,130	1,680	*2,670
1922	1,340	1,350	1,470	1,630	1,450	872	2,710	3,550	5,290	4,090	*3,100	2,180	*2,420
1923	1,650	1,280	1,040	1,120	1,060	1,000	2,400	5,740	3,450	3,210	2,510	1,850	*2,200
1924	1,400	1,460	1,360	1,730	2,050	1,950	1,590	4,630	3,020	2,920	2,670	1,920	*2,230
1925	1,550	1,320	1,250	1,470	1,030	1,060	1,750	3,090	4,170	3,790	1,920	1,740	*2,020
1926	1,300	4,550	3,110	2,880	2,840	2,930	1,540	2,350	3,790	2,750	2,180	1,880	*2,670
1927	1,370	1,400	1,550	1,940	2,140	1,670	1,240	2,430	3,790	2,340	1,990	1,930	*1,970
1928	1,960	3,540	4,090	2,400	2,690	2,520	3,200	8,650	5,000	2,830	2,630	1,710	*3,450
1929	1,620	1,110	2,310	2,370	2,910	2,270	2,120	8,220	3,260	2,760	2,630	2,240	*2,840
1930	1,930	1,390	1,300	1,140	1,580	1,980	2,380	3,890	3,480	3,090	2,810	2,280	*2,280

\* Revised.

† Corrected.

‡ Not previously published; estimated on basis of weather records and records for nearby stations.

Monthly and yearly mean discharge, in cubic feet per second (observed), of Kennebec River at The Forks, Maine--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	1,980	1,180	3,080	2,980	1,520	920	1,930	1,150	1,670	2,290	1,560	1,850	1,850
1932	1,520	1,510	2,200	1,600	2,560	2,000	2,750	3,460	2,050	2,200	1,950	2,350	2,180
1933	1,530	2,000	2,310	2,830	2,470	2,300	2,420	6,490	2,730	2,530	2,130	2,330	2,680
1934	1,200	1,244	1,807	2,169	2,108	1,306	2,846	2,669	2,228	2,421	2,576	1,635	2,016
1935	2,088	1,023	1,916	2,225	2,870	1,793	2,784	2,613	4,793	1,899	2,718	2,726	2,447
1936	2,224	1,396	1,330	1,558	2,401	4,019	5,973	7,770	2,930	2,375	2,360	2,070	3,037
1937	1,842	1,865	1,988	2,004	3,203	2,435	2,542	8,031	2,819	2,327	2,209	2,077	2,747
1938	1,817	1,218	1,605	2,311	2,347	2,005	2,042	7,613	2,326	3,211	2,607	2,352	2,630
1939	2,321	2,415	2,098	3,247	3,304	2,841	2,153	2,274	1,635	2,572	2,479	1,958	2,439
1940	1,759	1,845	2,280	2,968	2,703	2,184	1,172	2,281	2,574	2,630	2,565	2,104	2,257
1941	2,138	1,065	1,993	2,591	2,773	2,284	1,836	1,049	1,678	1,984	2,031	2,051	1,903
1942	1,789	1,011	1,384	1,389	1,567	869	1,817	2,159	4,094	2,843	2,431	2,355	1,975
1943	2,091	1,470	1,733	2,472	2,413	1,375	928	2,939	4,760	2,981	2,216	2,132	2,281
1944	1,703	1,332	2,451	3,352	3,474	2,962	1,285	1,961	1,681	1,874	2,024	1,688	2,149
1945	1,541	1,298	1,492	1,952	3,074	2,443	5,506	8,637	2,341	2,511	2,498	2,209	2,942
1946	1,470	1,494	1,810	2,433	3,451	2,492	3,709	5,982	2,093	2,466	2,014	2,025	2,616
1947	1,164	1,287	1,522	2,349	2,179	4,660	1,758	9,589	4,114	1,724	2,635	2,864	2,999
1948	2,546	1,613	1,396	1,417	1,510	842	1,125	2,306	1,546	1,965	2,517	2,275	1,758
1949	1,939	1,144	1,711	1,844	2,801	2,303	1,446	940	1,759	2,270	2,318	2,055	1,878
1950	1,920	576	948	830	1,643	1,392	1,784	1,217	1,433	1,810	2,207	2,453	1,516

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	1.59	1.04	0.64	3.62	7.23	3.41	1.24	1.10	0.69	-
1929	2.66	1.78	1.21	1.19	.60	.87	5.27	7.70	2.23	.54	.29	.02	24.36
1930	.14	.45	.56	.74	.44	1.65	5.39	6.69	2.49	1.35	.33	.37	20.59
1931	.18	1.07	.87	.52	.38	.47	5.37	2.97	2.06	1.18	.41	.65	16.13
1932	1.03	1.26	.93	1.67	.88	.71	6.17	3.97	1.01	.79	.48	1.45	20.35
1933	.54	2.63	.90	.63	.56	.53	5.24	7.38	2.00	.65	.09	-.09	21.06
1934	.61	.55	.50	.42	.32	.50	7.98	4.51	1.62	.65	.07	.55	18.28
1935	.24	1.09	1.36	.91	.40	.49	5.70	5.67	3.66	.99	.14	.28	20.93
1936	-.02	.66	.50	.88	.50	8.90	5.36	6.48	1.62	.49	.21	.83	26.41
1937	1.96	1.63	1.67	1.58	1.05	.91	4.15	7.83	2.05	.47	.23	.06	23.59
1938	1.53	1.60	1.30	1.10	.90	1.14	5.44	5.98	1.83	2.22	.77	1.17	24.98
1939	1.05	.72	2.70	.84	.49	.44	2.04	7.68	1.76	.88	.42	.28	19.30
1940	1.31	1.71	1.11	.43	.36	.47	3.38	7.06	2.14	1.16	.08	.45	19.65
1941	-.24	2.19	1.00	.87	.49	.47	5.53	1.84	.56	.45	-.03	.15	13.28
1942	.56	1.53	.73	.60	.38	.98	5.11	5.43	2.98	1.07	.50	.38	20.25
1943	.48	.85	1.18	.40	.44	.80	2.36	8.13	3.53	1.56	.33	.09	20.15
1944	1.65	3.01	.88	.52	.32	.68	1.99	6.51	1.06	.52	.37	.60	18.11
1945	1.24	1.31	.86	1.36	.51	2.68	7.76	6.43	1.61	1.92	.13	.59	26.60
1946	2.27	1.64	.83	.91	.60	2.77	5.11	4.84	.98	.30	.16	.54	20.95
1947	1.34	1.34	1.50	.84	1.77	1.33	4.22	9.27	3.31	1.09	.29	.03	28.44
1948	.02	.28	.14	.31	.14	.33	4.56	6.25	1.22	.63	.17	-.16	14.39
1949	.25	1.87	1.29	1.10	.53	.79	5.02	2.93	.88	.34	-.05	.02	14.97
1950	.06	.57	.62	1.08	.76	1.00	4.36	3.39	1.90	.96	.43	.21	15.34

Note.--Runoff for period January 1928 to Sept. 30, 1955, revised to include change in contents in First Roach, Second Roach, and Moxie Ponds. Negative figures indicate that evaporation and seepage from reservoirs exceeded inflow.

Yearly discharge, in cubic feet per second

really discharge, in cubic feet, per second														
Year	W.S.P. no.	Water year ending Sept. 30								Calendar year				
		Observed				Adjusted				Observed		Adjusted		
		Momentary		maximum	Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches		
		Discharge	Date											
1902	198	\$22,400	Dec. 15, 1901*	\$505	*4,020	-	-	-	-	*3,970	-	-	-	
1903	1231	\$11,500	Apr. 6, 1903*	-	*3,110	-	-	-	-	*2,840	-	-	-	
1904	198,1231	\$11,500	June 7, 1904*	\$390	*2,260	-	-	-	-	*2,480	-	-	-	
1905	198	\$11,700	June 22, 1905*	\$765	*2,400	-	-	-	-	*2,260	-	-	-	
1906	198	\$11,900	May 24, 1906*	\$340	*2,360	-	-	-	-	*2,590	-	-	-	
1907	241	\$14,700	May 19, 1907*	\$340	*2,510	-	-	-	-	*3,010	-	-	-	
1908	241	\$14,600	Nov. 9, 1907*	\$770	*5,580	-	-	-	-	*5,000	-	-	-	
1909	261	\$14,900	May 11, 1909*	\$260	*2,350	-	-	-	-	*2,580	-	-	-	
1910	281	\$10,200	May 10, 1910*	\$300	*2,570	-	-	-	-	*2,620	-	-	-	
1911	301	\$8,630	Aug. 16, 1911*	\$300	*1,680	-	-	-	-	*1,520	-	-	-	
1912	321	\$16,200	May 2, 1912*	\$235	*2,450	-	-	-	-	*2,660	-	-	-	
1913	351	\$15,600	Apr. 29, 1913*	\$602	*2,860	-	-	-	-	*2,720	-	-	-	
1914	381,1231	*\$17,400	May 11, 1914*	\$255	*2,550	-	-	-	-	*2,590	-	-	-	
1915	401	\$9,520	May 7, 1915	300	1,710	-	-	-	-	1,800	-	-	-	
1916	431	10,700	May 20, 1916	450	2,460	-	-	-	-	2,470	-	-	-	
1917	451	23,700	June 18, 1917	710	3,680	-	-	-	-	3,910	-	-	-	
1918	471	9,670	May 2, 1918	750	2,520	-	-	-	-	2,620	-	-	-	
1919	501,1231	*\$13,400	(c)	800	3,490	-	-	-	-	3,170	-	-	-	
1920	501,1231	*\$14,600	May 12, 1920	615	2,820	-	-	-	-	-	-	-	-	

\* Revised.

\* Not previously published.

a Maximum observed, not previously published.

b Maximum observed.

c Nov. 22, 1918, May 19, 1919.

Yearly discharge, in cubic feet per second, of Kennebec River at The Forks, Maine--Continued

Year	W.S.P. no.	Water year ending Sept. 30								Calendar year		
		Observed				Adjusted				Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	
		Discharge	Date									
1921	521	9,440	Apr. 18,	1921	766	2,670	-	-	-	2,440	-	-
1922	541	13,700	June 22,	1922	540	2,420	-	-	-	2,410	-	-
1923	561,1231	*17,700	Apr. 30,	1923	580	2,200	-	-	-	2,220	-	-
1924	581	9,120	May 14,	1924	375	2,230	-	-	-	2,220	-	-
1925	601	11,600	July 1,	1925	460	2,020	-	-	-	2,420	-	-
1926	621,1231	*14,100	Nov. 17,	1925	820	2,670	-	-	-	-	-	-
1927	641	11,800	May 29,	1927	587	1,970	-	-	-	-	-	-
1928	661,1231	*14,900	May 28,	1928	622	3,450	-	-	-	3,070	3,028	26.21
1929	681,1231	*16,500	May 6,	1929	793	2,840	2,818	1.79	24.36	2,800	2,294	19.86
1930	696	8,690	May 30,31,	1930	784	2,280	2,386	1.52	20.59	2,410	2,491	21.56
1931	711	8,980	Dec. 13,	1930	594	1,850	1,871	1.19	16.13	1,760	1,995	17.23
1932	726	9,560	May 17,	1932	722	2,180	2,350	1.50	20.35	2,230	2,447	21.20
1933	741	10,100	May 14,	1933	762	2,680	2,440	1.55	21.06	2,543	2,157	18.65
1934	756	8,690	May 4,	1934	466	2,018	2,115	1.35	18.28	2,084	2,234	19.31
1935	781	8,690	June 18,	1935	380	2,447	2,419	1.54	20.93	2,439	2,240	19.38
1936	801,1231	*15,200	Mar. 20,	1936	515	3,037	3,044	1.94	26.41	3,082	3,517	30.53
1937	821	14,200	May 23,	1937	822	2,747	2,724	1.74	23.59	2,676	2,630	22.76
1938	851,1231	*14,400	May 16,	1938	569	2,630	2,892	1.84	24.98	2,814	2,896	25.02
1939	871	7,300	July 10,	1939	635	2,439	2,229	1.42	19.30	2,360	2,191	18.96
1940	891	8,140	May 4,	1940	425	2,257	2,267	1.44	19.65	2,200	2,131	18.48
1941	921	4,910	Aug. 15,	1941	430	1,903	1,537	.979	13.28	1,617	1,521	13.15
1942	951	13,200	June 19,	1942	413	1,975	2,542	1.49	20.25	2,068	2,506	19.94
1943	971	10,200	June 18,	1943	390	2,291	2,531	1.48	20.15	2,308	2,671	23.18
1944	1001	4,910	May 5,	1944	395	2,149	2,077	1.32	18.11	2,034	1,842	15.98
1945	1031	18,900	Apr. 28,	1945	507	2,942	3,084	1.96	26.60	2,996	3,239	27.93
1946	1051	13,900	Apr. 28,	1946	490	2,616	2,420	1.54	20.95	2,549	2,367	20.50
1947	1081	18,700	May 9,	1947	551	2,999	3,050	1.94	26.44	3,132	2,806	22.59
1948	1111	5,240	May 19,	1948	380	1,758	1,656	1.05	14.39	1,699	2,001	17.34
1949	1141	3,970	July 11,	1949	503	1,878	1,731	1.10	14.97	1,760	1,480	12.81
1950	1171	5,160	July 19,	1950	292	1,516	1,774	1.13	15.34	-	-	-

\* Revised.

† Corrected.

Note.--Period 1928-35, adjusted runoff revised to include change in contents of First Roach, Second Roach, and Moxie Ponds. Period October 1939 to September 1950, adjusted runoff not previously published.

## 57. Flagstaff Lake near Dead River, Maine

Location.--Lat 45°13'20", long. 70°12'00", on Dead River three-fourths of a mile upstream from Black Brook in T. 3, R. 4.

Drainage area.--520 sq mi.

Gage.--Staff gage. Datum of gage is 1,110.0 ft above mean sea level, datum of 1929.

Remarks.--Reservoir completed for storage of water for power in 1950, has usable capacity of 12,050,000,000 cu ft between gage heights 1,110.0 and 1,146.0 ft.

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

Month-end contents, in millions of cubic feet												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1950	174	378	584	608	474	1,080	7,375	9,994	11,032	9,226	7,615	6,525

Note.--Contents are at 7 a.m. on first day of following month.

## 58. Dead River near Dead River, Maine

Location.--Lat 45°13'50", long. 70°12'00", on right bank in T. 3, R. 4, Somerset County, 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.

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

Average discharge.--11 years (1939-50), 728 cfs.

Extremes.--1939-50: Maximum discharge, 10,400 cfs May 5, 1940 (gage height, 9.66 ft); maximum gage height, 10.27 ft Jan. 21, 1946 (ice jam); minimum discharge, no flow part of day July 31, 1949 (gage height, 3.40 ft), when coffer dam at head of Long Falls held up the flow of the river.

Remarks.--Runoff adjusted for change in contents in Flagstaff Lake since Sept. 30, 1949 (see above).

## KENNEBEC RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second (observed), of Dead River near Dead River, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	*463	*702	*367	131	99.4	104	1,112	4,275	882	451	153	199	*749
1941	152	720	303	320	209	139	2,473	854	359	241	132	107	499
1942	169	499	226	193	139	404	2,622	2,661	1,982	284	133	150	788
1943	239	450	393	133	137	260	1,007	3,661	1,355	485	402	221	733
1944	910	1,274	427	231	202	206	1,212	3,675	391	252	267	182	772
1945	631	561	511	570	233	1,357	4,112	2,540	774	896	460	304	1,046
1946	1,021	725	531	324	214	1,690	2,073	1,677	498	219	169	138	777
1947	724	694	648	360	881	492	2,129	3,867	1,196	402	154	90.3	970
1948	65.6	145	95.3	81.6	73.4	353	2,226	2,988	547	324	138	64.7	593
1949	125	592	318	321	154	464	2,773	1,506	511	174	69.5	70.1	569
1950	92.2	236	294	625	276	90.5	52.5	559	549	1,059	950	545	447

\* Not previously published; estimated on basis of weather records and records for station at The Forks.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	*1.03	*1.51	*0.81	0.29	0.21	0.23	2.39	9.48	1.90	1.00	0.34	0.43	*19.62
1941	.34	1.54	.67	.71	.42	.31	5.31	1.89	.77	.53	.29	.23	13.01
1942	.37	1.07	.50	.43	.26	.90	5.62	5.90	4.25	.63	.30	.32	20.57
1943	.53	.97	.67	.30	.27	.58	2.16	8.12	2.91	1.08	.89	.47	19.15
1944	2.02	2.73	.95	.51	.42	.46	2.60	8.15	.84	.56	.59	.39	20.22
1945	1.40	1.20	1.13	1.27	.47	3.01	8.82	5.63	1.66	1.54	.58	.65	27.36
1946	2.26	1.55	1.18	.72	.43	3.75	4.45	3.71	1.07	.49	.37	.30	20.28
1947	1.60	1.48	1.44	.80	1.76	1.09	4.56	8.58	2.57	.89	.34	.19	25.30
1948	.15	.31	.21	.18	.15	.78	4.78	6.63	1.17	.72	.31	.14	15.53
1949	.28	1.27	.71	.71	.31	1.03	5.95	3.34	1.10	.39	.15	.15	15.39
1950	.35	.68	.82	1.41	.45	.70	5.32	3.41	2.03	.85	.77	.27	17.06

\* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1940	891	10,400	May 5, 1940	*92	*749	-	*1.44	*19.62	718	-	18.82
1941	921	6,250	Apr. 18, 1941	66	499	-	.960	13.01	475	-	12.40
1942	951	9,150	Apr. 28, 1942	64	788	-	1.52	20.57	804	-	21.00
1943	971	7,270	May 14, 1943	99	733	-	1.41	19.15	861	-	22.48
1944	1001	9,500	May 8, 1944	93	772	-	1.46	20.22	697	-	18.25
1945	1031	9,500	Apr. 1, 1945	121	1,048	-	2.02	27.36	1,096	-	28.62
1946	1051	5,100	Mar. 31, 1946	101	777	-	1.49	20.28	759	-	19.81
1947	1081	10,100	May 8, 1947	62	970	-	1.87	25.30	822	-	21.45
1948	1111	6,440	May 20, 1948	35	593	-	1.14	15.53	653	-	17.12
1949	1141	5,060	Apr. 17, 1949	0.7	569	-	1.13	15.39	555	574	14.96
1950	1171	3,010	Aug. 3, 1950	1.0	447	654	1.26	17.06	-	-	-

\* Not previously published.

## 59. Dead River Pond at Dead River Dam, Maine

Location.--Lat 45°17'40", long. 70°13'25", on Dead River 15 miles upstream from The Forks, Somerset County.

Drainage area.--546 sq mi.

Gage.--Staff gage. Altitude of gage is 1,020 ft (from topographic map).

Remarks.--Reservoir completed in 1905 for log driving, has usable capacity of 225,000,000 cu ft between gage heights 3.5 and 12.0 ft.

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

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1928	-	-	37	67	0	45	92	85	100	75	84	25
1929	106	-	0	0	0	0	100	100	50	40	55	10
1930	0	0	0	0	0	0	50	124	102	97	47	0
1931	0	0	0	0	0	0	106	110	92	130	0	0
1932	0	0	0	0	0	0	245	176	0	0	0	50
1933	0	0	0	0	0	0	150	205	0	0	0	0
1934	0	0	0	0	0	0	65	135	174	75	75	185
1935	0	0	0	0	0	0	150	211	185	0	0	0
1936	0	0	0	0	0	185	185	150	101	0	0	0
1937	40	0	0	0	0	0	225	225	150	10	0	0
1938	75	25	0	25	0	0	225	95	225	225	150	185
1939	10	0	0	0	0	0	95	225	168	0	0	0
1940	0	0	0	0	0	0	75	185	160	10	0	0

Note.--Contents are at 7 a.m. on first day of following month.

Month-end contents, in millions of cubic feet, of Dead River Pond at Dead River Dam, Maine--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1941	0	0	0	0	0	0	225	225	225	115	0	0
1942	0	0	0	0	0	0	185	185	185	0	0	0
1943	0	0	0	0	0	0	55	150	185	185	0	0
1944	25	0	0	0	0	0	55	150	225	40	120	0
1945	0	0	0	0	0	75	205	225	185	185	0	0
1946	0	0	0	0	0	48	185	185	120	0	0	0
1947	0	0	0	0	0	0	40	225	225	120	0	0
1948	0	0	0	0	0	40	150	185	168	0	0	0
1949	0	0	0	0	0	25	225	150	205	0	0	0
1950	0	0	0	0	0	0	0	95	108	48	0	14

Note.--Contents are at 7 a.m. on first day of following month.

60. Spencer Lake at Spencer Lake Outlet, Maine

Location.--Lat 45°21'55", long. 70°16'30", on Little Spencer Stream at outlet dam in T. 3, R. 5, Somerset County, 4 miles above mouth.

Drainage area.--48 sq mi.

Gage.--Staff gage. Altitude of gage is 1,080 ft (from topographic map).

Remarks.--Reservoir used for storage of water for power, has usable capacity of 639,000,000 cu ft between gage heights 3.5 and 12.0 ft.

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

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1928	-	-	639	657	314	0	487	553	665	604	553	314
1929	116	299	0	0	0	0	921	683	751	640	595	352
1930	0	0	0	0	0	0	430	814	661	639	391	0
1931	0	0	0	0	0	0	315	315	430	471	0	0
1932	100	125	0	0	0	300	648	639	639	553	70	70
1933	0	0	0	0	0	0	639	553	639	511	100	75
1934	160	40	0	0	0	0	315	695	595	315	315	391
1935	391	100	0	0	0	0	471	639	639	315	0	0
1936	0	0	0	0	0	729	315	639	241	0	0	0
1937	150	50	50	0	0	0	471	639	471	185	0	0
1938	136	38	0	0	0	70	639	639	639	639	639	639
1939	103	0	0	0	0	0	277	639	315	277	241	0
1940	0	0	0	0	0	0	352	639	639	430	0	0
1941	0	103	0	0	0	0	553	430	391	0	0	0
1942	0	0	0	0	0	0	471	595	511	315	0	0
1943	0	0	0	0	0	0	171	553	553	553	352	0
1944	136	103	0	0	0	0	136	471	511	38	0	0
1945	0	0	0	0	0	241	639	639	553	391	0	0
1946	0	0	0	0	0	241	595	430	277	241	0	0
1947	0	0	0	0	0	70	391	639	639	136	0	0
1948	0	0	0	0	0	38	315	553	595	352	315	0
1949	0	70	0	0	0	70	595	639	639	479	447	447
1950	384	90	38	0	0	0	528	511	683	562	553	337

Note.--Contents are at 7 a.m. on first day of following month.

61. 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.

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.--45 years (1902-7, 1910-50), 1,389 cfs.

Extremes.--1901-7, 1910-50: 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.--Flow regulated by reservoirs above station. Runoff adjusted for change in contents in Flagstaff Lake since September 1949 (see p. 73), and Dead River Pond (see preceding page) and Spencer Lake (see above) since January 1928.

Monthly and yearly mean discharge, in cubic feet per second (observed), of Dead River at The Forks, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1902	*492	*333	-	-	-	-	-	-	-	*957	991	*1,028	-
1903	*1945	*1,230	*819	*408	*412	*4,690	*3,260	*1,100	*1,630	646	648	222	*1,340
1904	172	357	*798	*623	*457	*5,330	*3,760	*8,890	*2,970	705	495	967	*1,970
1905	1,770	741	*485	*886	*439	*2,370	*3,340	*7,830	*1,960	1,180	739	*478	*1,870
1906	289	470	*954	*1,240	*691	*666	*3,930	*5,940	2,593	867	292	*1338	*1,530
1907	*940	701	*536	*832	*471	*1,260	*3,720	7,380	*2,300	1,690	*1,230	*1,160	*1,860
1910	-	-	-	-	-	-	6,300	4,120	1,830	501	436	371	-
1911	173	436	*353	*259	*185	*300	*2,060	4,050	1,140	402	478	489	*864
1912	762	677	1,540	*580	*401	*1,040	*4,450	5,860	2,040	353	1,280	811	*1,640
1913	1,230	1,510	1,140	*791	*602	*2,600	4,630	3,010	1,320	542	327	370	*1,510
1914	1,720	1,900	759	*517	*277	*793	*2,740	7,190	873	289	389	231	*1,480
1915	457	483	562	*511	*737	*1,580	*2,900	2,020	503	2,010	1,330	425	*1,130
1916	376	577	922	401	413	1,210	3,410	4,150	2,320	1,010	1,210	560	1,380
1917	406	356	1,080	560	389	941	4,140	4,120	5,610	1,260	2,290	606	1,820
1918	1,230	1,630	580	364	502	1,090	4,690	3,740	696	621	155	742	1,320
1919	1,800	2,780	791	622	330	1,860	4,170	4,630	1,100	894	188	538	1,580
1920	546	1,530	632	249	121	1,190	4,860	5,100	1,980	755	595	728	1,520
1921	1,580	1,150	1,630	702	516	3,120	3,980	1,220	459	289	205	157	1,250
1922	480	646	712	354	182	1,320	6,240	2,140	2,280	1,030	427	303	1,340
1923	327	296	233	360	207	224	4,280	5,740	1,760	589	317	255	1,220
1924	531	883	1,440	643	341	384	2,260	5,640	924	637	315	1,140	1,270
1925	464	1,140	919	291	1,350	1,220	4,130	2,360	1,710	1,240	409	652	1,320
1926	2,360	3,000	1,080	565	377	343	1,300	5,230	1,990	482	412	350	1,460
1927	567	1,930	700	479	370	1,010	2,780	2,880	1,320	532	569	524	1,140
1928	1,920	3,880	1,920	930	819	712	3,720	5,440	2,000	584	413	788	1,930
1929	1,200	1,600	918	810	562	727	4,130	5,820	1,280	458	276	275	1,520
1930	332	418	246	473	351	692	3,690	5,080	1,790	536	517	537	1,210
1931	324	857	491	302	201	353	3,570	2,520	1,190	479	928	634	987
1932	864	1,030	687	1,390	586	483	4,110	3,110	1,240	772	693	1,050	1,330
1933	705	1,910	659	438	374	329	4,190	6,360	1,290	475	591	237	1,470
1934	870	608	416	316	260	413	6,515	3,635	1,180	636	320	594	1,312
1935	527	1,025	758	544	445	507	3,903	4,596	2,859	948	447	278	1,404
1936	250	474	352	377	307	7,106	3,999	4,748	1,173	567	241	323	1,669
1937	1,082	814	1,185	1,163	863	769	3,313	7,055	1,814	603	515	410	1,639
1938	1,270	1,468	1,147	585	637	941	4,709	3,584	957	929	512	1,219	1,499
1939	958	699	1,604	456	334	378	1,883	5,494	1,598	589	319	447	1,238
1940	722	1,132	518	213	166	194	2,130	6,309	1,484	820	411	376	1,211
1941	271	1,142	545	488	359	275	3,954	1,270	587	658	283	211	834
1942	359	903	368	320	193	778	4,310	4,253	3,383	667	326	282	1,345
1943	500	715	620	279	278	437	1,682	6,065	2,419	823	750	508	1,264
1944	1,366	1,971	651	347	344	380	2,147	5,725	637	595	452	488	1,263
1945	983	822	834	888	375	2,312	6,644	4,311	1,202	1,058	580	492	1,713
1946	1,690	1,113	920	578	353	2,812	3,401	2,771	886	416	469	219	1,309
1947	1,228	1,206	995	592	1,432	1,001	3,587	7,116	2,135	764	468	150	1,725
1948	111	236	165	134	129	803	3,335	4,695	966	764	266	206	970
1949	266	1,013	609	571	253	726	4,131	2,381	770	342	120	143	943
1950	202	575	531	855	395	480	1,853	1,690	1,210	1,453	1,109	777	930

\* Revised.

† Corrected.

‡ Not previously published; estimated on basis of weather records and records for nearby stations.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	1.26	0.81	0.81	5.02	7.22	2.62	0.73	0.52	0.86	-
1929	1.53	2.09	1.07	1.07	.67	.96	5.79	7.57	1.65	.55	.35	.21	23.51
1930	.26	.53	.33	.62	.42	.92	4.95	6.94	2.20	.70	.54	.47	18.88
1931	.43	1.10	.65	.40	.24	.47	4.78	3.33	1.57	.67	.93	.81	15.58
1932	1.19	1.33	.85	1.83	.72	.79	5.56	4.07	1.50	.98	.68	1.37	20.87
1933	.95	2.44	.87	.58	.45	.43	5.75	8.39	1.60	.56	.58	.29	22.87
1934	1.19	.72	.55	.42	.31	.55	8.58	5.05	1.48	.65	.42	.85	20.67
1935	.61	1.17	.95	.72	.53	.67	5.30	6.19	3.65	1.00	.43	.56	21.58
1936	.33	.61	.47	.50	.38	9.85	4.91	6.42	1.28	.58	.32	.41	26.06
1937	1.52	.97	1.57	1.51	1.03	1.02	4.59	9.41	2.20	.59	.58	.52	25.51
1938	1.79	1.81	1.52	.79	.74	1.28	6.42	4.68	1.28	1.23	.64	1.57	23.75
1939	.92	.84	2.12	.60	.40	.50	2.59	7.50	1.85	.68	.40	.45	18.85
1940	.95	1.45	.68	.28	.20	.26	2.93	8.53	1.89	.91	.33	.48	18.89
1941	.56	1.52	.67	.65	.43	.36	5.44	1.61	.73	.62	.32	.27	12.98
1942	.48	1.16	.49	.42	.23	1.03	5.84	5.68	4.28	.69	.28	.36	20.94
1943	.66	.91	.82	.37	.33	.58	2.26	8.26	3.11	1.09	.80	.48	19.67
1944	1.89	2.50	.81	.46	.42	.50	2.84	7.78	.87	.46	.62	.57	19.72
1945	1.30	1.05	1.10	1.18	.45	3.22	8.76	5.71	1.47	1.31	.48	.63	26.66
1946	2.24	1.43	1.22	.76	.42	3.86	4.60	3.58	1.03	.47	.50	.28	20.39
1947	1.63	1.54	1.31	.78	1.71	1.36	4.76	9.63	2.73	.71	.49	.19	26.84
1948	.15	.30	.22	.18	.16	.84	4.46	6.34	1.25	.61	.33	.11	15.15
1949	.35	1.33	.77	.76	.30	1.01	5.64	3.14	1.01	.27	.14	.18	14.90
1950	.32	.69	.78	1.12	.41	.93	5.74	3.56	2.15	.94	.64	.36	17.64

Note.--Contents of reservoirs above station not available to adjust flow prior to January 1928. Adjusted runoff not previously published for periods January 1928 to September 1935, October 1940 to September 1950.

Yearly discharge, in cubic feet per second, of Dead River at The Forks, Maine

Water year ending Sept. 30												Calendar year		
Year	W.S.P. no.	Observed				Adjusted			Observed		Adjusted			
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches			
		Discharge	Date											
1902	198	-	-	-	-	-	-	-	-	-	-	-		
1903	198	-	-	-	-	-	-	-	-	-	-	-		
1904	198, 1231	*24,600	May 5, 1904	*110	*1,340	-	*1.54	*20.82	*1,200	-	*18.67	-		
1905	198	*21,300	May 4, 1905*	*110	*1,970	-	*2.26	*30.71	*2,110	-	*32.90	-		
1906	198	*23,000	May 12, 1906*	*318	*1,870	-	*2.14	*29.05	*1,760	-	*27.36	-		
1907	241, 1231	-	-	*148	*1,530	-	*1.75	*23.74	*1,560	-	*24.35	-		
1910	281	-	-	*228	*1,860	-	*2.13	*28.97	-	-	-	-		
1911	301, 1231	-	-	-	-	-	-	-	-	-	-	-		
1912	321, 1231	-	-	-	-	-	-	-	-	-	-	-		
1913	351, 1231	*24,700	May 14, 1912	*220	*1,640	-	*1.88	*25.56	*1,730	-	*27.05	-		
1914	381, 1231	*20,600	May 26, 1913*	*160	*1,510	-	*1.73	*23.48	*1,550	-	*24.10	-		
1915	401, 1231	*17,600	May 10, 1914	*100	*1,480	-	*1.70	*23.08	*1,240	-	*19.34	-		
1916	431, 1231	-	-	100	*1,130	-	*1.30	*17.61	*1,160	-	*16.11	-		
1917	451, 1231	*10,300	May 18, 1916	25	1,380	-	1.58	21.58	1,380	-	21.55	-		
1918	471	*22,600	June 21, 1917	100	1,820	-	2.09	28.25	1,930	-	30.04	-		
1919	501, 1231	-	-	-	1,320	-	1.51	20.56	1,500	-	23.33	-		
1920	501, 1231	*10,600	May 30, 1919*	20	1,580	-	1.81	24.58	1,360	-	21.10	-		
1921	521	*9,510	Apr. 24, 1920	60	1,520	-	1.74	23.76	1,660	-	25.97	-		
1922	541, 1231	-	-	148	1,250	-	1.43	19.54	1,040	-	16.22	-		
1923	561	*13,700	Apr. 14, 1922	84	1,340	-	1.54	20.86	1,260	-	19.58	-		
1924	581	23,800	Apr. 30, 1923	155	1,220	-	1.40	19.00	1,390	-	21.61	-		
1925	601	15,600	May 11, 1924	184	1,270	-	1.46	19.76	1,240	-	19.31	-		
1926	621	16,600	Apr. 30, 1925	145	1,320	-	1.51	20.50	1,540	-	25.61	-		
1927	641	12,800	May 4, 1926	167	1,460	-	1.67	22.79	1,190	-	18.55	-		
1928	661	12,800	May 10, 1927	224	1,140	-	1.31	17.72	1,520	-	23.61	-		
1929	681	16,000	May 21, 1928	281	1,930	-	2.21	29.87	1,569	-	24.54	-		
1930	696	17,600	May 3, 1929	189	1,510	1,511	1.73	23.51	1,280	1,280	19.94	-		
1931	711	12,800	May 17, 1930	200	1,220	1,209	1.39	18.88	1,280	1,280	19.94	-		
1932	726	15,700	May 11, 1931	158	987	987	1.13	15.38	1,060	1,060	16.57	-		
1933	741	16,000	May 8, 1932	190	1,330	1,334	1.53	20.87	1,390	1,390	21.74	-		
1934	756	18,200	May 4, 1933	158	1,470	1,472	1.69	22.87	1,350	1,350	21.07	-		
1935	781	14,700	Apr. 20, 1934	170	1,312	1,328	1.52	20.67	1,346	1,346	20.96	-		
1936	801	13,000	Apr. 30, 1935	180	1,404	1,386	1.59	21.58	1,301	1,301	20.26	-		
1937	821	28,700	Mar. 20, 1936	148	1,669	1,669	1.91	26.06	1,838	1,840	28.71	-		
1938	851	16,900	May 17, 1937	137	1,639	1,633	1.87	25.51	1,708	1,708	26.57	-		
1939	871	11,700	Apr. 21, 1938	170	1,499	1,525	1.75	23.75	1,446	1,446	22.51	-		
1940	891	14,400	May 10, 1939	228	1,238	1,212	1.39	18.85	1,161	1,161	19.06	-		
1941	921	14,400	May 4, 1940	132	1,211	1,211	1.39	18.89	1,176	1,173	18.36	-		
1942	951	10,200	Apr. 17, 1941	82	834	834	.956	12.98	807	807	12.56	-		
1943	971	16,900	June 17, 1942	104	1,345	1,345	1.54	20.94	1,363	1,363	21.20	-		
1944	1001	14,400	June 29, 1943	220	1,264	1,264	1.45	19.67	1,443	1,440	22.48	-		
1945	1031	14,400	May 6, 1944	232	1,263	1,263	1.45	19.72	1,152	1,152	17.97	-		
1946	1051	15,200	Apr. 3, 1945	170	1,713	1,713	1.96	26.66	1,804	1,804	28.10	-		
1947	1081	12,000	June 9, 1946	144	1,309	1,309	1.50	20.39	1,284	1,284	19.98	-		
1948	1101	18,200	May 7, 1947	96	1,725	1,725	1.98	26.84	1,480	1,480	23.03	-		
1949	1111	14,800	May 24, 1948	85	970	970	1.11	15.15	1,084	1,084	16.93	-		
1950	1141	13,000	May 31, 1949	78	943	957	1.10	14.90	895	903	14.24	-		
1950	1171	7,140	July 3, 1950	112	930	1,134	1.30	17.64	-	-	-	-		

\* Revised.

\* Not previously published.

Note.--Prior to water year 1929, data on change in contents in reservoirs not available. However, from history of operation of log driving dams, it is quite evident that change in contents has slight effect on annual runoff.

## 62. Wyman Pond near Bingham, Maine

Location--Lat 45°04'15", long. 69°54'20", on Kennebec River at Wyman Dam in township of Moscow and 1½ miles upstream from Bingham, Somerset County.

Drainage area--2,612 sq mi.

Gage--Staff gage. Datum of gage is at mean sea level.

Remarks--Reservoir completed in 1930 for storage of water for power. 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).

Cooperation--Gage-height record furnished by Central Maine Power Co.

## KENNEBEC RIVER BASIN

Month-end contents, in millions of cubic feet, of Wyman Pond near Bingham, Maine											
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept.
1931	1,500	2,460	5,200	7,500	5,200	2,740	8,890	8,960	8,500	8,960	8,900
1932	8,700	8,604	8,916	8,496	8,244	6,560	8,364	9,036	8,220	8,784	8,904
1933	8,184	8,844	8,640	8,688	7,992	6,960	8,352	9,036	8,544	8,856	8,832
1934	8,892	8,436	8,808	9,276	9,264	7,692	8,256	9,300	9,276	9,240	8,688
1935	8,780	9,040	8,890	8,790	8,800	6,666	7,960	9,020	9,060	8,830	9,050
1936	8,990	9,040	8,860	8,760	9,020	9,000	9,050	8,920	8,930	8,920	8,990
1937	9,020	8,780	8,940	8,680	8,960	8,040	8,780	8,960	8,990	9,000	8,960
1938	9,080	9,080	9,820	9,020	8,580	7,190	8,370	9,080	9,020	9,080	8,820
1939	8,860	9,020	8,850	8,860	8,780	7,515	7,710	9,080	8,920	8,930	8,960
1940	9,080	9,040	9,050	8,920	8,990	9,080	8,110	9,060	9,080	8,990	8,890
1941	9,000	8,920	9,060	8,790	8,680	7,970	8,960	9,060	8,870	8,970	8,790
1942	8,890	9,060	9,040	8,920	9,040	7,060	9,080	9,080	9,000	8,920	8,900
1943	9,020	9,020	9,020	8,870	9,100	7,580	8,540	9,060	9,060	8,910	8,900
1944	9,080	8,980	8,680	8,830	8,930	7,920	8,960	8,640	8,780	9,050	8,940
1945	8,890	8,780	9,020	8,550	8,720	8,860	8,990	8,900	9,040	8,960	8,990
1946	8,900	8,920	8,900	8,820	8,860	8,510	8,850	9,080	8,440	8,790	8,890
1947	8,610	9,000	8,890	8,790	8,920	8,940	8,960	9,080	9,040	8,870	8,890
1948	9,020	9,060	8,930	8,900	9,050	7,780	8,890	9,080	8,870	8,960	8,890
1949	8,890	9,020	8,930	8,830	8,790	8,800	9,080	9,040	8,570	9,020	8,830
1950	9,040	8,750	8,960	9,020	8,920	7,930	9,080	8,480	8,940	8,920	8,850

## 63. 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 (revised).

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

Average discharge.--19 years (1931-50), 161 cfs.

Extremes.--1931-50: Maximum discharge, 5,820 cfs Sept. 17, 1932 (gage height, 13.12 ft); minimum, 1.6 cfs Sept. 30, Oct. 1, 1948.

Monthly and yearly mean discharge, in cubic feet per second											
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	The year
1932	135	106	92.6	105	54.6	33.1	809	278	51.8	29.6	357
1933	160	417	82.1	35.9	33.2	34.3	632	494	77.4	43.5	173
1934	250	99.7	33.6	29.4	28.5	57.0	870	274	139	27.2	113
1935	95.2	139	107	49.9	35.7	40.4	712	418	233	138	24.1
1936	21.4	105	87.3	96.8	55.1	1,021	457	338	85.1	54.5	15.9
1937	141	130	160	122	79.8	103	536	619	154	41.0	19.9
1938	273	221	171	190	110	132	510	415	87.8	151	65.1
1939	142	100	358	37.5	31.9	35.1	286	644	66.3	28.7	29.5
1940	58.8	135	150	31.1	15.8	28.6	467	796	115	58.5	14.8
1941	25.4	261	64.6	71.1	56.8	33.0	484	103	33.7	15.0	11.2
1942	26.6	67.9	40.5	76.2	23.6	133	642	387	237	32.7	14.3
1943	65.9	142	141	31.2	32.5	67.5	317	658	182	68.8	56.7
1944	198	397	80.9	43.7	38.2	48.5	340	578	44.5	25.5	10.2
1945	93.4	141	147	133	46.4	244	639	447	106	153	36.1
1946	254	154	104	57.0	35.8	325	500	344	58.3	31.4	33.3
1947	258	171	94.3	47.4	209	124	417	704	256	101	21.8
1948	11.0	27.3	21.5	14.8	11.9	82.5	496	650	68.5	20.2	13.9
1949	16.9	244	116	149	36.0	111	564	168	40.7	23.5	7.85
1950	52.3	126	83.3	92.3	42.6	180	622	272	205	57.9	91.9

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Monthly and yearly runoff, in inches											
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	The year
1932	1.71	1.18	1.18	1.33	0.65	0.42	9.91	3.52	0.63	0.37	1.29
1933	2.03	5.11	1.04	.45	.38	.43	7.74	6.25	.95	.55	.49
1934	2.90	1.22	.43	.37	.33	.72	10.66	3.47	1.71	.34	1.4
1935	1.20	1.71	1.35	.63	.41	.51	8.72	5.29	2.86	1.74	.46
1936	.27	1.28	1.10	1.22	.65	12.92	5.60	4.28	1.04	.69	.20
1937	1.79	1.60	2.03	1.54	.91	1.30	6.56	7.83	1.89	.52	.25
1938	3.46	2.71	2.17	2.41	1.26	1.67	6.25	5.26	1.08	1.91	.82
1939	1.80	1.23	4.28	.48	.36	.44	3.50	8.15	.81	.36	.37
1940	.49	1.65	1.90	.39	.19	.36	5.72	10.08	1.41	.74	.19
1941	.32	3.19	.82	.90	.65	.42	5.92	1.30	.41	.19	.14
1942	.34	.85	.51	.96	.27	1.68	7.87	4.90	2.90	.41	.18
1943	.83	1.74	1.73	.39	.37	.95	3.88	8.32	2.23	.87	.72
1944	2.50	4.86	1.02	.55	.45	.61	4.16	7.31	.54	.32	.13
1945	1.19	1.73	1.86	1.68	.53	3.09	7.82	5.66	1.29	1.94	.46
1946	3.22	1.89	1.31	.72	.41	4.12	6.12	4.36	.71	.40	.42
1947	3.26	2.10	1.20	.60	2.38	1.57	5.11	8.91	3.14	1.28	.28
1948	.14	.35	.27	.19	.14	1.03	6.07	8.25	.84	.26	.18
1949	.21	2.99	1.46	1.89	.41	1.41	6.91	2.12	.50	.30	.10
1950	.66	1.54	1.05	1.16	.49	2.28	7.62	3.45	2.51	.73	1.16

\* Not previously published; estimated on basis of weather records and records for nearby stations.



Yearly discharge, in cubic feet per second, of Austin Stream at Bingham, Maine									
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1932	728	5,820	Sept. 17, 1932	11	179	1.96	26.67	205	30.67
1933	741	2,040	May 3, 1933	6.4	173	1.90	25.73	148	22.10
1934	756	2,150	Apr. 20, 1934	-	159	1.75	23.64	157	23.35
1935	761	1,640	Apr. 29, 1935	16	169	1.86	25.18	158	23.57
1936	801	5,480	Mar. 19, 1936	7	197	2.16	29.44	215	32.21
1937	821	2,400	Apr. 29, 1937	4.3	178	1.95	26.49	197	29.41
1938	851	4,030	Oct. 24, 1938	5.0	209	2.29	31.18	202	30.15
1939	871	1,980	Dec. 7, 1938	8.0	148	1.62	22.03	128	18.76
1940	891	3,610	May 3, 1940	4.1	158	1.73	23.66	160	23.95
1941	921	1,320	Apr. 16, 1941	3.9	96.8	1.06	14.41	79	11.76
1942	951	2,480	Apr. 26, 1942	4.6	142	1.56	21.19	160	23.87
1943	971	1,540	May 8, 1943	14	150	1.65	22.34	177	26.36
1944	1001	4,380	Nov. 9, 1943	3.9	153	1.68	22.75	128	19.15
1945	1031	1,430	Apr. 28, 1945	11	187	2.05	27.90	198	29.54
1946	1051	1,730	Apr. 27, 1946	7.9	161	1.77	24.05	162	24.19
1947	1081	2,980	May 6, 1947	8.0	201	2.21	30.02	162	24.20
1948	1111	2,700	May 18, 1948	1.8	119	1.31	18.08	145	22.06
1949	1141	1,050	Apr. 16, 1949	2.7	124	1.36	18.55	115	17.14
1950	1171	2,740	Apr. 21, 1950	12	157	1.72	23.41	-	-

† Not previously published.

#### 64. 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 1½ miles downstream from Wyman Dam.

Drainage area.--2,710 sq mi.

Gage.--Water-stage recorder. Datum of gage is 330.2 ft. Prior to October 1930, chain gage on highway bridge at different datum.

Average discharge.--22 years (1907-9, 1930-50), 4,082 cfs.

Extremes.--1907-9, 1930-50: Maximum discharge, 58,800 cfs (revised) Mar. 20, 1936 (gage height, 14.44 ft), from rating curve extended above 16,000 cfs on basis of computation of flow at Wyman Dam plus inflow; minimum daily, 110 cfs Dec. 25, 1947.

Remarks.--Flow regulated by reservoirs and power plant above station. The latter causes considerable diurnal fluctuation. Since October 1930, runoff adjusted for change in contents in Brassua Lake (see p. 65), Second Roach Pond (see p. 67), First Roach Pond (see p. 67), Moosehead Lake (see p. 68), Moxie Pond (see p. 70), Dead River Pond (see p. 74), Spencer Lake (see p. 75), and Wyman Pond (see p. 77), and, since October 1949, in Flagstaff Lake (see p. 73).

Monthly and yearly mean discharge, in cubic feet per second (observed)													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	-	-	-	-	-	-
1908	3,680	9,740	5,660	13,380	2,600	3,800	16,250	115,500	8,230	5,950	4,540	3,150	5,600
1909	1,120	744	749	1,070	1,740	2,000	9,000	116,700	6,170	4,070	3,160	2,720	4,110
1910	2,750	2,250	1,620	3,250	2,900	3,400	10,200	9,970	7,420	-	-	-	-
1931	2,430	1,900	2,400	2,520	2,520	2,370	4,740	4,330	3,670	2,690	2,680	2,580	2,900
1932	2,670	2,810	2,800	3,210	3,270	2,980	8,200	7,180	3,730	2,790	2,840	3,990	3,870
1933	2,870	4,580	3,220	3,280	3,210	3,040	7,730	14,100	4,400	2,940	2,740	2,630	4,570
1934	2,377	2,184	2,143	2,410	2,435	2,475	11,410	6,682	3,715	3,174	3,032	2,652	3,721
1935	2,613	2,156	2,933	3,038	3,443	3,292	8,195	8,068	8,545	3,263	3,175	2,983	4,503
1936	2,522	1,955	2,024	2,248	2,761	15,070	10,600	12,720	4,251	3,090	2,573	2,484	5,209
1937	3,240	2,919	3,544	3,617	4,174	3,811	6,870	16,220	5,105	3,007	2,766	2,555	4,829
1938	3,876	3,282	3,163	3,471	3,388	3,831	7,616	11,530	3,520	4,387	3,235	3,959	4,615
1939	3,455	3,219	4,545	3,751	3,747	3,744	4,686	8,930	3,607	3,193	2,826	2,434	4,019
1940	2,515	3,240	3,213	3,273	2,876	2,490	4,714	10,090	4,405	3,679	3,055	2,585	3,851
1941	2,388	2,933	2,689	3,418	3,425	2,984	6,829	2,580	2,417	2,179	2,309	2,358	3,033
1942	1,999	1,976	2,012	2,044	3,915	2,555	6,988	7,373	8,218	3,578	2,809	2,637	3,676
1943	2,676	2,343	2,562	2,845	2,705	2,584	3,473	10,800	7,733	4,235	2,781	2,706	3,963
1944	3,446	4,251	3,380	3,717	3,853	3,814	3,851	9,613	2,408	2,407	2,527	2,257	3,800
1945	2,539	2,418	2,507	3,322	3,576	5,490	14,340	14,650	3,916	4,009	3,288	2,932	5,256
1946	3,857	3,028	3,061	3,293	3,921	6,345	8,121	9,460	3,377	2,840	2,532	2,228	4,344
1947	3,041	2,723	2,842	3,167	4,093	5,906	6,590	18,910	6,798	2,882	3,145	3,150	5,284
1948	2,655	1,891	1,657	1,599	1,649	2,114	5,388	8,604	2,692	2,768	2,740	2,470	3,024
1949	2,247	2,585	2,574	2,941	3,190	3,206	6,681	3,548	2,697	2,607	2,464	2,210	3,082
1950	2,037	1,346	1,522	1,790	2,381	2,570	4,451	3,714	2,874	3,370	3,454	3,349	2,738

† Corrected.

Monthly and yearly runoff, in inches (adjusted), of Kennebec River at Bingham, Maine													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	0.28	1.10	0.65	0.47	0.24	0.50	5.31	3.09	1.96	0.94	0.61	0.68	15.83
1932	1.07	1.26	.82	1.59	.75	.61	6.20	3.98	1.12	.78	.56	1.56	20.30
1933	.75	2.69	.88	.57	.50	.46	5.67	7.61	1.75	.58	.26	.05	21.67
1934	.88	.62	.48	.42	.51	.53	8.30	4.55	1.54	.63	.21	.71	19.18
1935	.35	1.09	1.18	.86	.47	.58	5.84	5.81	3.67	1.02	.24	.29	21.40
1936	.12	.65	.53	.79	.48	10.00	4.95	5.88	1.41	.53	.23	.64	26.21
1937	1.76	1.40	1.65	1.54	1.03	.96	4.50	8.07	2.09	.50	.34	.23	24.07
1938	1.82	1.74	1.37	1.18	.84	1.22	5.77	5.23	1.56	1.80	.68	1.32	24.53
1939	.99	.73	2.54	.70	.44	.44	2.31	7.57	1.74	.74	.39	.32	18.97
1940	1.10	1.56	1.04	.56	.29	.42	3.32	7.62	2.00	1.05	.17	.45	19.58
1941	-.01	2.04	.88	.82	.51	.46	5.54	1.72	.59	.49	.09	.18	15.31
1942	.47	1.30	.68	.61	.37	.97	5.51	5.38	3.39	.86	.40	.36	20.50
1943	.52	.85	1.04	.37	.40	.74	2.61	8.21	3.27	1.31	.48	.22	20.02
1944	1.75	2.87	.84	.48	.55	.60	2.40	7.04	.95	.47	.42	.56	18.73
1945	1.22	2.00	.18	1.50	.51	2.94	8.36	6.27	1.58	1.72	.30	.65	27.03
1946	2.36	1.58	1.01	.88	.53	3.23	4.91	4.30	.96	.37	.29	.41	20.83
1947	1.51	1.50	1.41	.82	1.78	1.31	4.50	9.42	3.02	1.00	.36	.08	26.71
1948	.08	.27	.17	.25	.16	.81	4.52	6.33	1.15	.70	.19	.06	14.69
1949	.25	1.72	1.09	1.09	.45	.86	5.18	2.88	.83	.35	.00	.07	14.77
1950	.14	.58	.86	1.04	.69	1.02	4.89	3.36	1.96	.90	.52	.27	16.03

Note.--Adjusted runoff prior to October 1936 revised to include change in contents in Brassua Lake and First and Second Roach Ponds. Adjusted runoff since September 1939 not previously published. Negative figure indicates that evaporation and seepage from reservoirs exceeded inflow.

Yearly discharge, in cubic feet per second											
Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed	Adjusted	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches			
		Discharge	Date						Mean	Runoff in inches	
1907	241	-	-	-	-	-	-	-	-	-	-
1908	241	#28,800	Apr. 28, 1908*	1,350	5,600	-	-	-	†4,230	-	-
1909	261	#34,000	May 11, 1909*	580	4,110	-	-	-	4,450	-	-
1910	281	-	-	-	-	-	-	-	-	-	-
1931	711	23,100	Apr. 22, 1931	565	2,900	3,159	1.17	15.83	3,023	3,376	16.95
1932	726	25,600	Sept. 17, 1932	637	3,870	4,040	1.49	20.30	4,064	4,273	21.47
1933	741	28,400	May 9, 1933	780	4,570	4,326	1.60	21.67	4,240	3,859	19.33
1934	756	25,200	Apr. 21, 1934	1,400	3,721	3,831	1.41	19.18	3,806	3,958	19.82
1935	781	26,300	Apr. 29, 1935	950	4,303	4,268	1.57	21.40	4,202	4,002	20.06
1936	801	*58,800	Mar. 20, 1936	1,160	5,209	5,216	1.92	26.21	5,478	5,917	29.72
1937	821	27,800	May 21, 1937	1,180	4,829	4,805	1.77	24.07	4,880	4,828	24.19
1938	851	26,200	May 17, 1938	770	4,615	4,898	1.61	24.55	4,692	4,775	23.92
1939	871	24,800	May 10, 1939	1,400	4,019	3,788	1.40	18.97	3,828	3,685	18.55
1940	891	30,200	May 3, 1940	1,500	3,651	3,858	1.42	19.36	3,771	3,703	18.59
1941	921	20,800	Apr. 18, 1941	700	3,033	2,656	.980	13.31	2,864	2,567	12.85
1942	951	34,400	June 18, 1942	570	3,678	4,059	1.50	20.30	3,810	4,048	20.26
1943	971	23,000	May 12, 1943	820	3,963	3,999	1.48	20.02	4,254	4,608	23.07
1944	1001	26,000	May 5, 1944	770	3,800	3,730	1.58	18.73	3,499	3,518	16.67
1945	1031	37,300	Apr. 28, 1945	485	5,256	5,391	1.99	27.03	5,465	5,704	28.58
1946	1051	30,600	Apr. 28, 1946	930	4,344	4,158	1.53	20.83	4,231	4,049	20.30
1947	1081	44,400	May 9, 1947	1,240	5,284	5,332	1.97	26.71	5,081	4,555	22.81
1948	1111	24,400	May 18, 1948	110	3,024	2,921	1.08	14.69	3,125	3,426	17.23
1949	1141	14,200	May 4, 1949	830	3,082	2,947	1.09	14.77	2,873	2,613	15.13
1950	1171	14,000	Apr. 23, 1950	445	2,738	3,200	1.18	16.03	-	-	-

\* Revised.

† Corrected.

# Not previously published.

Note.--Adjusted records prior to October 1936 revised to include change in contents in Brassua Lake and First and Second Roach Ponds. Adjusted records since September 1939 not previously published.

#### Kennebec River at North Anson, Maine

Location.--Lat 44°51'10", long. 69°54'20", on right abutment of highway bridge (Patterson Bridge, now dismantled), 1 mile upstream from the Carrabassett River, and 1½ miles east of North Anson, Somerset County.

Drainage area.--2,790 sq mi.

Gage.--Staff gage. Altitude of gage is 265 ft (from topographic map). Chain gage used as auxiliary gage for low flows, same datum.

Remarks.--Flow regulated by Kennebec River reservoirs. Records for Oct. 18, 1901, to Aug. 16, 1907, published in Water-Supply Paper 198, have been found to be in error on the basis of re-study of the original data and comparison with records for nearby stations. Those records are not published herein and should not be used.

## 65. 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.

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

Average discharge.--29 years (1902-6, 1925-50), 663 cfs.

Extremes.--1902-6, 1925-50: Maximum discharge, 30,800 cfs (revised) Mar. 19, 1936 (gage height, 21.17 ft); minimum, 18 cfs Oct. 29, 1929 (gage height, 2.02 ft).

Remarks.--Some regulation at low flow by mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1902	-	-	-	-	-	-	-	-	-	435	738	694	-
1903	762	668	*419	*202	*197	*2,410	*1,690	492	*1,330	483	360	110	*763
1904	200	161	*451	*202	*163	*1,248	*2,590	3,556	*386	425	366	362	*850
1905	652	419	*236	*361	*163	*897	*1,810	*1,320	*780	459	343	490	*669
1906	205	354	*378	*452	*274	*242	*2,450	*1,960	708	389	215	119	*646
1907	774	408	*251	*294	*165	*628	*2,810	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-	-	314	-
1926	1,040	1,470	735	259	163	163	1,240	2,060	693	152	93.4	99.8	682
1927	205	1,360	341	189	183	981	1,370	1,510	561	265	210	204	616
1928	1,260	1,700	1,020	569	348	398	2,070	2,630	854	403	219	465	995
1929	469	480	422	579	278	517	2,700	2,010	315	129	98.6	65.4	673
1930	102	187	101	193	179	730	2,450	1,590	723	400	138	96.1	574
1931	202	570	284	126	110	385	2,020	1,070	787	298	279	377	541
1932	455	461	408	554	274	295	2,750	923	330	268	370	965	668
1933	634	1,430	385	213	184	166	2,620	1,610	328	285	322	168	695
1934	799	412	211	193	169	377	3,622	1,072	401	147	79.8	332	649
1935	259	458	368	264	185	296	2,739	1,312	1,099	466	245	156	653
1936	130	391	307	316	205	4,750	1,890	1,365	269	129	77.4	107	833
1937	553	418	664	492	441	486	2,469	2,703	566	217	104	240	781
1938	1,223	1,078	723	720	451	788	2,041	1,251	255	399	214	604	812
1939	365	342	1,087	213	170	186	2,053	2,067	309	143	89.5	68.9	593
1940	122	344	376	105	86.6	149	2,102	3,015	643	280	95.6	127	621
1941	96.7	594	199	236	272	163	1,577	456	161	117	78.6	69.0	333
1942	136	334	169	274	127	535	2,582	1,262	1,137	196	84.5	99.9	577
1943	201	454	451	159	153	306	1,656	2,633	798	356	310	215	643
1944	1,115	1,381	314	188	206	234	1,695	1,981	269	138	114	175	651
1945	411	494	626	535	279	1,565	2,458	1,867	502	406	128	212	793
1946	1,061	550	561	533	219	1,660	1,586	1,104	281	141	197	157	658
1947	731	522	393	289	743	462	1,809	2,204	856	477	153	89.0	726
1948	63.1	171	115	78.1	60.1	432	1,585	2,402	369	174	125	44.0	470
1949	114	657	381	724	129	530	1,813	790	264	132	63.7	79.6	473
1950	122	374	300	389	210	520	2,810	1,046	731	271	178	166	591

\* Revised.

† Corrected.

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1902	-	-	-	-	-	-	-	-	-	1.42	2.40	2.19	-
1903	2.48	2.11	*1.36	*0.66	*0.58	*7.85	5.32	1.60	4.20	1.57	1.18	1.35	*29.26
1904	.65	.50	*1.46	*.66	*.50	*4.07	*8.17	11.58	1.22	1.38	1.26	1.14	*32.59
1905	2.12	1.32	*.77	*1.18	*.48	*3.18	5.70	4.30	2.46	1.50	1.32	1.54	*25.67
1906	.67	1.12	*1.23	*1.48	*.81	*.79	*7.72	6.39	2.23	1.27	.70	.37	*24.78
1907	2.52	1.28	*.82	*.96	*.49	*2.04	8.86	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-	-	.99	-
1926	3.39	4.63	2.40	.84	.48	.53	3.90	6.68	2.19	.46	.30	.31	26.14
1927	.67	4.28	1.11	.62	.54	3.19	4.32	4.92	1.76	.86	.68	.64	23.59
1928	4.10	5.36	3.32	1.86	1.06	1.29	6.53	8.57	2.69	1.31	.71	1.46	38.26
1929	1.52	1.52	1.37	1.89	.82	1.68	8.51	6.55	.99	.42	.32	.21	25.80
1930	.33	.59	.33	.63	.53	2.36	7.72	5.18	2.28	1.30	.45	.30	22.00
1931	.66	1.80	.92	.41	.32	1.26	6.37	3.48	2.48	.97	.91	1.18	20.76
1932	1.49	1.45	1.53	1.80	.83	.86	9.67	5.01	1.04	.87	1.21	3.05	25.71
1933	2.06	4.51	1.26	.69	.54	.54	8.26	5.25	1.03	.93	1.06	.53	26.65
1934	2.61	1.29	.69	.63	.50	1.22	11.41	3.49	1.26	.46	.26	1.05	24.89
1935	.84	1.44	1.20	.86	.54	.96	8.64	4.28	3.46	1.52	.80	.49	25.03
1936	.42	1.23	1.00	1.03	.62	15.45	5.96	4.45	.85	.42	.25	.34	32.02
1937	1.80	1.32	2.17	1.60	1.30	1.61	7.78	8.81	1.78	.71	.34	.76	29.98
1938	3.98	3.40	2.35	2.54	1.27	2.57	6.44	4.07	.80	1.30	.70	1.91	31.13
1939	1.19	1.08	3.54	.69	.50	.67	6.47	6.73	.97	.47	.29	.22	22.78
1940	.40	1.08	1.22	.34	.26	.49	6.63	9.82	2.03	.91	.51	.40	23.89

\* Revised.

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Monthly and yearly runoff, in inches, of Carrabassett River near North Anson, Maine--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	.31	1.87	.65	.77	.80	.53	4.96	1.49	.51	.58	.26	.22	12.75
1942	.44	1.05	.55	.89	.37	1.74	8.13	4.10	3.58	.64	.28	.31	22.08
1943	.65	1.43	1.46	.52	.45	1.00	5.22	8.58	2.51	1.16	1.01	.68	24.67
1944	3.62	4.35	1.02	.61	.63	.76	5.34	6.46	.85	.45	.37	.55	25.01
1945	1.34	1.56	2.04	1.74	.82	5.10	7.74	6.08	1.58	1.33	.42	.67	30.42
1946	3.46	1.73	1.82	1.08	.64	5.41	5.00	3.60	.89	.46	.84	.50	25.23
1947	2.38	1.64	1.28	.94	2.19	1.51	5.70	7.18	2.70	1.56	.50	.28	27.86
1948	.21	.54	.37	.25	.16	1.41	5.00	7.83	1.16	.57	.41	.14	18.07
1949	.37	2.08	1.24	2.36	.38	1.73	5.71	2.57	.83	.43	.21	.25	18.16
1950	.40	1.18	.98	1.27	.62	1.70	8.86	3.40	2.30	.88	.58	.52	22.69

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1902	198	-	-	-	-	-	-	-	-
1903	198	-	-	-	455	763	22.16	4876	25.92
1904	198, 1231	-	-	-	455	850	22.40	4889	25.19
1905	198, 1231	-	-	-	420	689	21.89	4688	26.38
1906	198, 1231	-	-	-	477	646	21.82	4688	26.38
1907	241, 1231	-	-	-	-	-	-	-	-
1925	621	-	-	-	-	-	-	-	-
1926	621	8,590	May 3, 1926	35	682	1.93	26.14	568	21.78
1927	641	9,280	Nov. 19, 1926	44	616	1.74	23.59	791	30.31
1928	661, 1231	23,100	Nov. 4, 1927	63	995	2.81	38.26	778	29.89
1929	681	12,900	May 3, 1929	31	673	1.90	25.80	590	22.64
1930	696	11,800	Apr. 7, 1930	50	574	1.62	22.00	630	24.13
1931	711	5,140	Apr. 11, 1931	61	541	1.53	20.76	564	21.65
1932	726, 1231	25,600	Sept. 17, 1932	90	668	1.89	25.71	761	29.27
1933	741	8,440	Apr. 18, 1933	90	695	1.96	26.65	810	25.41
1934	756	11,600	Apr. 13, 1934	50	649	1.83	24.89	820	25.78
1935	781	7,430	Apr. 29, 1935	87	653	1.84	25.03	831	24.20
1936	801, 1231	30,800	Mar. 19, 1936	62	833	2.35	32.02	902	34.66
1937	821	9,730	May 20, 1937	43	781	2.21	29.98	898	34.42
1938	851, 1231	14,500	Oct. 24, 1937	78	812	2.29	31.13	709	27.21
1939	871	8,720	Apr. 23, 1939	44	593	1.68	22.76	513	19.65
1940	891	11,500	May 3, 1940	50	621	1.75	23.89	625	24.02
1941	921	4,300	Apr. 16, 1941	42	333	.941	12.75	312	11.96
1942	951	10,300	June 17, 1942	41	577	1.63	22.08	616	23.58
1943	971	9,440	May 27, 1943	62	643	1.82	24.67	785	30.12
1944	1001, 1231	18,400	Nov. 9, 1943	57	651	1.84	25.01	545	20.96
1945	1031	9,590	Mar. 30, 1945	66	793	2.24	30.42	847	32.49
1946	1051	10,800	Oct. 8, 1945	68	658	1.86	25.23	813	23.52
1947	1081	8,870	Oct. 1, 1946	60	726	2.05	27.86	817	23.68
1948	1111	8,000	Apr. 2, 1946	33	470	1.33	18.07	536	20.64
1949	1141	4,580	Jan. 1, 1949	27	473	1.34	18.16	444	17.03
1950	1171, 1231	22,100	Apr. 21, 1950	71	591	1.67	22.69	-	-

\* Revised.

\* Not previously published.

## 66. Sandy River near Farmington, Maine

Location.--Lat 44°42'05", long. 70°10'25", on downstream side of bridge on Route 4, three-quarters of a mile upstream from Baker Stream, and 2.4 miles northwest of Farmington, Franklin County.

Drainage area.--242 sq mi (revised).

Gage.--Chain gage. Altitude of gage is 355 ft (from topographic map).

Average discharge.--5 years (1910-15), 433 cfs.

Extremes.--1910-15: Maximum discharge, 8,800 cfs (revised) Nov. 10, 1913 (gage height, 10.8 ft, from graph based on gage readings), from rating curve extended above 1,600 cfs by logarithmic plotting; minimum, 13 cfs July 14, 15, 1911 (gage height, 2.0 ft).

Remarks.--Some diurnal fluctuation at low flow caused by power plant above the station at Phillips.

Monthly and yearly mean discharge, in cubic feet per second, of Sandy River near Farmington, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1910	-	-	-	-	-	-	-	-	-	-	107	65.1	-
1911	62.7	87.8	*59.6	*62.5	*43.8	*110	*1,170	694	207	69.6	134	144	*237
1912	308	375	541	*141	*82.0	*319	*1,830	1,330	433	58.8	181	106	*474
1913	622	686	*482	*414	*212	*1,310	1,640	691	238	120	51	184	*555
1914	1,030	894	*291	*141	*64.0	*123	*1,640	1,450	181	128	119	82	*514
1915	*108	*189	*236	*207	*399	*308	*1,220	*680	*146	*550	*477	*139	*387

\* Revised.

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1910	-	-	-	-	-	-	-	-	-	-	0.51	0.30	-
1911	0.30	0.40	*0.28	*0.30	*0.19	*0.52	*5.39	3.31	0.95	0.33	.64	.66	*13.27
1912	1.45	1.73	2.58	*.67	*.37	*1.52	*8.44	6.34	2.00	.28	.86	.49	*26.73
1913	2.96	3.16	*2.29	*1.97	*.91	*6.24	7.56	3.30	1.10	.57	.24	.85	*31.15
1914	4.91	4.12	*1.38	*.67	*.27	*.59	*7.56	6.91	.83	.61	.57	.38	*28.80
1915	*5.1	*8.7	*1.13	*.99	*1.72	*1.46	*5.62	*3.24	*.67	*2.62	*2.27	*.64	*21.74

\* Revised.

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1910	281	-	-	-	-	-	-	-	-
1911	321	*3,660	May 1, 1911	*13	*237	*.979	*13.27	*322	*18.05
1912	321	*7,250	May 30, 1912	*25	*474	*1.96	*26.73	*522	*29.38
1913	351,1231	*7,100	Oct. 25, 1912	*19	*556	*2.29	*31.15	*501	*33.15
1914	381,1231	*8,800	Nov. 10, 1913	*25	*514	*2.12	*28.80	*373	*20.90
1915	401	*7,320	July 9, 1915	*38	*387	*1.60	*21.74	-	-

\* Revised.

\* Not previously published.

## 67. 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  $\frac{9}{16}$  miles upstream from mouth.

Drainage area.--514 sq mi.

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

Average discharge.--22 years (1928-50), 874 cfs.

Extremes.--1928-50: Maximum discharge, 38,600 cfs (revised) 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.--Some regulation at low flow by mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*571	643	606	767	361	849	3,730	2,230	423	214	123	726	*883
1930	85.2	209	99.4	206	293	1,510	3,290	1,490	920	524	335	169	760
1931	261	810	400	267	256	633	3,120	1,340	1,110	396	356	555	789
1932	664	726	665	867	424	451	3,820	1,050	376	290	358	982	886
1933	802	2,050	632	330	306	314	4,356	1,634	366	258	424	279	975
1934	988	549	431	369	220	642	4,985	1,149	382	158	82.8	468	866
1935	377	589	563	491	323	529	4,043	1,503	1,398	603	295	183	906
1936	161	566	487	494	249	6,479	2,714	1,584	297	172	74.7	115	1,123
1937	608	542	983	860	598	568	3,388	3,607	880	337	180	165	1,051
1938	991	1,682	1,193	999	653	1,246	2,785	1,455	355	657	338	779	1,094
1939	539	518	1,599	360	259	537	2,799	2,526	406	160	131	79.7	812
1940	128	334	402	141	160	257	4,093	3,782	979	396	150	179	916
1941	123	760	323	383	432	294	1,937	480	202	172	80.7	76.9	436
1942	132	322	236	379	172	1,078	3,718	1,239	1,514	249	111	94.1	768
1943	167	483	537	203	244	607	2,505	2,993	1,323	379	501	259	852
1944	1,193	1,937	505	300	314	621	3,024	2,169	417	275	155	239	927
1945	453	710	896	670	391	2,412	3,312	2,638	732	449	189	201	1,108
1946	*239	919	991	569	386	2,508	1,928	1,338	422	183	273	208	919
1947	980	786	668	516	1,290	1,026	2,721	2,792	1,252	564	193	90.0	1,070
1948	61.1	182	138	100	87.7	964	2,066	2,916	591	229	122	58.4	628
1949	108	787	491	1,180	314	1,075	2,456	978	389	186	72.9	78.6	676
1950	101	357	433	508	390	798	4,446	1,205	188	262	131	152	780

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Monthly and yearly runoff, in inches, of Sandy River near Mercer, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*1.28	1.40	1.36	1.72	0.73	1.90	8.10	5.00	0.92	0.48	0.28	0.16	*23.53
1930	.19	.45	.22	.46	.59	3.39	7.14	3.34	2.00	1.18	.75	.37	20.08
1931	.59	1.76	.90	.60	.51	1.42	6.77	3.01	2.41	.89	.80	1.20	20.86
1932	1.49	1.57	1.49	1.95	.89	1.01	8.29	2.35	.82	.65	.80	2.13	23.44
1933	1.80	4.41	1.42	.74	.82	.70	9.45	3.87	.79	.58	.95	.61	25.74
1934	2.21	1.19	.97	.83	.45	1.44	10.82	2.58	.83	.35	.19	1.02	22.88
1935	.85	1.28	1.27	1.10	.65	1.19	8.78	3.37	3.04	1.35	.66	.40	23.94
1936	.36	1.23	1.09	1.11	.52	14.53	5.89	3.55	.64	.39	.17	.25	29.73
1937	1.36	1.17	2.20	1.48	1.21	1.50	7.35	8.09	1.86	.76	.40	.36	27.74
1938	2.22	3.65	2.68	2.24	1.32	2.79	6.05	3.26	.77	1.48	.76	1.70	28.92
1939	1.21	1.13	3.58	.81	.52	.76	8.08	5.66	.98	.36	.29	.17	21.45
1940	.29	.72	.90	.32	.34	.58	8.88	8.49	2.12	.89	.34	.39	24.26
1941	.28	1.65	.72	.86	.87	.66	4.21	1.08	.44	.39	.20	.17	11.53
1942	.30	.70	.53	.85	.35	2.42	8.07	2.78	3.29	.56	.25	.20	20.30
1943	.37	1.05	1.20	.46	.49	1.36	5.43	6.71	2.87	.85	1.12	.56	22.47
1944	2.68	4.21	1.13	.67	.66	1.40	6.56	4.86	.90	.61	.35	.52	24.55
1945	1.02	1.54	2.01	1.50	.79	5.41	7.18	6.36	1.58	1.01	.42	.44	29.26
1946	2.78	2.00	2.22	1.28	.78	5.63	4.18	3.00	.92	.41	.61	.45	24.26
1947	2.20	1.71	1.50	1.15	2.61	2.31	5.90	6.26	2.72	1.27	.43	.39	28.26
1948	.14	.40	.31	.22	.18	2.17	4.48	6.54	1.28	.51	.27	.13	16.63
1949	.24	1.71	1.10	2.65	.64	2.41	5.33	2.19	.84	.42	.16	.17	17.86
1950	.23	.78	.97	1.13	.79	1.79	9.65	2.70	1.34	.59	.29	.33	20.59

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	681	12,200	May 4, 1929	59	*883	*1.72	*23.33	763	20.15
1930	696	15,100	Apr. 8, 1930	37	760	1.48	20.08	850	22.47
1931	711	6,550	Apr. 4, 1931	64	789	1.54	20.86	839	22.16
1932	726	15,400	Sept. 17, 1932	92	886	1.72	23.44	1,000	26.52
1933	756	11,900	Apr. 19, 1933	96	975	1.90	25.74	852	22.48
1934	758	16,700	Apr. 13, 1934	36	866	1.68	22.88	828	21.91
1935	781	9,130	Apr. 14, 1935	95	906	1.78	23.94	877	23.16
1936	801	*38,600	Mar. 19, 1936	54	1,123	2.18	29.73	1,201	31.78
1937	821	12,100	May 21, 1937	78	1,051	2.04	27.74	1,195	31.56
1938	851	10,800	Jan. 26, 1938	63	1,094	2.13	28.92	995	26.29
1939	871	9,710	Dec. 7, 1939	32	812	1.58	21.45	661	17.44
1940	891	13,500	May 4, 1940	70	916	1.78	24.26	943	25.00
1941	921	3,880	Apr. 16, 1941	45	436	.848	11.53	393	10.41
1942	951	11,200	June 16, 1942	43	768	1.49	20.30	810	21.39
1943	971	16,000	June 16, 1943	62	852	1.66	22.47	1,056	27.87
1944	1001	15,700	Nov. 10, 1943	94	927	1.80	24.55	797	21.10
1945	1031	11,700	Mar. 30, 1945	102	1,109	2.16	29.26	1,201	31.69
1946	1051	10,300	Oct. 8, 1945	93	919	1.79	24.26	858	22.67
1947	1081	10,100	Oct. 1, 1946	51	1,070	2.08	28.26	897	23.70
1948	1111	10,100	May 18, 1948	44	628	1.22	16.63	712	18.83
1949	1141	7,160	Jan. 1, 1949	53	676	1.32	17.86	636	16.78
1950	1171	19,900	Apr. 21, 1950	71	780	1.52	20.59	-	-

\* Revised.

\* Not previously published.

## Sandy River near Madison, Maine

Location.--Lat 44°43'55", long. 69°53'50", on right bank at power house of the Madison Electric Works,  $4\frac{1}{2}$  miles upstream from mouth, and 4.6 miles south of Madison, Somerset County.

Drainage area.--573 sq mi (revised).

Gage.--Float or staff gage. Altitude of forebay gage is 80 ft (from topographic map).

Remarks.--Some regulation at low flow by mills above station. Records for Mar. 23, 1904, to Dec. 31, 1908, published in Water-Supply Papers 198 and 241, have been found to be in error on the basis of re-study of the original data and comparison with records for nearby stations. Those records are not published herein and should not be used.

## 68. Kennebec River at Waterville, Maine

Location.--Lat 44°33'45", long. 69°37'10", at dam and mill of Hollingsworth and Whitney Co. at Winslow, Kennebec County, 2 miles above Sebasticook River, and 3½ miles above Messalonskee Stream.

Drainage area.--4,270 sq mi.

Gage.--Water-stage recorder and staff gages. Datum of gage is 47.84 ft below mean sea level (levels by Corps of Engineers).

Average discharge.--57 years (1893-1950), 6,870 cfs (unadjusted).

Extremes.--1893-1950: Maximum discharge, 157,000 cfs Dec. 16, 1901 (gage height, 135.15 ft); minimum daily not ascertained, leakage only on several occasions.

Remarks.--Discharge computed from flow over dam and through logway and water wheels of mill. Comparison of monthly averages with similar averages of gaging stations above Waterville plus estimated flow from ungaged area indicates that figures below are small and that monthly and annual totals should be increased by approximately 400 cfs to equal flow as indicated by records from gaging stations above. Flow regulated by reservoirs and power plants above station. Since 1931, runoff adjusted for change in contents in Brassua Lake (see p. 65), Second Roach Pond (see p. 67), First Roach Pond (see p. 67), Moosehead Lake (see p. 68), Moxie Pond (see p. 70), Dead River Pond (see p. 74), Spencer Lake (see p. 75), and Wyman Pond (see p. 77), and, since October 1949, in Flagstaff Lake (see p. 78).

Cooperation.--Records furnished by Hollingsworth and Whitney Co.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1893	-	-	-	-	2,350	4,180	11,660	30,520	15,290	5,770	2,270	2,040	-
1894	2,530	2,250	1,580	1,640	1,780	4,020	14,680	9,570	7,790	5,720	2,970	2,740	4,756
1895	3,750	3,760	1,930	2,040	1,800	2,000	23,950	9,580	6,430	3,520	2,690	1,780	5,213
1896	1,250	5,610	6,030	4,300	2,830	13,140	27,400	17,050	5,520	5,330	3,150	3,410	8,018
1897	3,680	9,060	2,750	3,587	3,705	3,970	25,385	26,942	12,970	13,115	7,290	4,595	9,747
1898	2,635	5,702	5,551	3,213	3,402	11,287	29,833	25,120	9,983	3,908	3,153	2,618	8,855
1899	4,047	5,178	2,620	2,357	2,563	5,218	24,006	21,505	8,821	5,077	3,502	1,854	7,011
1900	1,274	2,252	2,741	2,584	9,050	9,155	28,475	28,272	10,053	5,791	4,175	2,807	8,716
1901	3,065	6,376	4,096	3,176	2,489	4,805	41,150	15,169	8,255	5,122	4,178	2,821	8,360
1902	2,925	2,405	11,910	3,856	3,800	28,768	22,191	16,873	15,260	7,840	5,057	4,218	10,450
1903	5,255	4,517	4,546	4,011	3,980	19,595	16,465	7,255	6,691	5,227	3,875	2,503	6,972
1904	1,922	1,468	1,589	975	821	3,786	14,960	20,716	8,286	5,360	4,705	2,835	5,738
1905	4,704	3,571	2,756	3,082	2,630	5,249	13,500	10,520	6,699	4,669	3,198	2,974	5,273
1906	1,767	2,306	2,063	3,212	2,279	12,290	17,200	22,290	12,790	6,309	3,665	2,530	6,570
1907	3,797	3,428	2,850	2,910	2,910	4,080	16,800	19,700	16,200	8,910	5,350	4,700	7,615
1908	7,710	19,100	15,900	3,900	3,890	5,110	8,940	8,850	7,570	4,110	3,960	2,150	7,430
1909	1,700	1,290	1,230	2,160	3,230	4,050	16,700	20,900	8,470	4,750	2,950	4,130	5,960
1910	3,770	3,470	3,030	5,530	4,760	10,400	22,300	14,400	11,700	5,360	4,210	2,570	7,620
1911	2,550	2,520	1,930	2,020	1,380	1,410	12,000	7,790	4,270	2,910	3,250	2,800	3,740
1912	2,630	2,950	4,450	3,040	3,010	4,750	21,500	20,400	12,200	3,810	4,590	5,540	7,250
1913	5,730	7,330	4,750	4,910	3,540	13,100	23,600	10,900	6,750	4,620	3,280	2,940	7,620
1914	8,400	7,870	4,000	3,500	3,580	4,970	20,900	23,600	5,660	4,070	3,690	2,500	7,730
1915	2,190	2,170	2,190	2,560	4,820	6,950	17,800	20,900	4,700	8,350	6,010	3,290	6,840
1916	2,940	3,770	4,640	3,820	4,530	5,440	20,900	16,900	13,300	7,810	6,800	4,540	7,960
1917	4,250	3,800	6,830	4,440	3,910	5,910	19,800	15,800	31,400	10,400	10,300	5,470	10,200
1918	5,370	5,820	3,870	3,550	3,230	4,300	19,100	13,300	5,370	6,560	4,400	4,410	6,680
1919	8,080	12,600	8,950	5,150	4,220	12,100	17,000	20,100	7,450	4,350	4,230	4,400	8,900
1920	4,050	6,150	4,540	3,520	2,910	6,280	27,500	18,500	6,040	4,770	4,570	3,950	7,660
1921	6,050	4,910	12,400	4,350	3,760	13,500	15,200	6,200	3,990	3,780	3,230	2,090	6,600
1922	2,350	3,390	3,650	2,390	2,140	9,890	23,200	11,000	12,100	9,430	4,400	3,350	7,280
1923	2,910	2,640	1,670	2,560	2,100	2,210	17,900	26,100	6,260	4,340	3,360	2,540	6,230
1924	2,470	3,340	5,560	3,570	3,040	4,560	12,700	16,500	4,820	3,980	3,210	4,610	5,700
1925	2,350	4,480	2,910	2,190	6,370	8,320	10,100	7,840	7,320	6,850	2,950	3,180	5,390
1926	8,240	14,300	7,700	4,770	3,830	3,970	9,880	13,400	8,070	3,720	2,830	2,310	6,860
1927	8,000	10,900	3,610	3,510	3,240	7,150	10,400	11,200	7,500	3,600	3,050	2,810	5,760
1928	11,000	17,500	11,800	5,940	4,200	4,500	25,600	31,700	13,400	4,570	3,600	4,150	11,500
1929	4,460	4,040	4,710	5,430	3,870	5,570	19,100	24,100	5,990	3,400	2,770	2,420	7,160
1930	2,280	2,350	1,660	2,330	2,720	7,090	16,200	15,600	6,930	4,200	3,610	2,710	5,650
1931	2,900	4,060	3,210	2,870	2,770	4,790	14,500	8,910	10,400	3,330	3,030	3,580	5,350
1932	4,150	4,630	4,260	4,320	4,100	4,240	24,800	12,800	4,530	3,240	3,540	7,060	6,840
1933	4,590	8,970	4,590	3,910	3,750	3,840	19,700	17,900	5,450	5,390	3,720	3,140	6,890
1934	5,276	3,695	2,714	3,081	2,912	3,918	26,220	9,622	4,458	3,363	2,937	7,765	5,985
1935	3,456	3,724	5,842	4,368	4,056	4,489	20,070	13,980	8,286	4,222	3,541	3,003	6,430
1936	2,552	3,089	2,868	4,430	3,688	33,140	17,500	12,720	4,399	2,734	2,223	2,684	7,699
1937	5,121	4,861	7,009	5,143	6,000	5,829	16,120	24,090	9,358	3,747	2,846	2,930	7,779
1938	6,266	6,152	5,857	5,875	3,909	5,920	13,840	13,960	4,175	5,683	3,924	5,821	6,782
1939	4,657	4,247	10,100	4,545	4,285	4,463	13,570	19,210	6,015	3,611	3,566	2,609	6,727
1940	2,821	4,422	4,980	3,743	3,169	3,595	15,660	17,530	6,571	4,935	3,575	3,158	6,154
1941	2,654	5,470	3,996	5,043	5,118	4,197	5,464	4,100	2,881	2,348	2,512	2,315	3,812
1942	2,329	2,994	3,572	3,877	2,618	6,102	15,870	9,913	10,710	4,022	3,111	3,365	5,671
1943	3,358	3,967	3,875	3,036	3,467	4,491	12,010	16,050	8,331	4,165	3,939	3,175	5,830
1944	5,670	7,423	3,774	3,638	3,717	4,539	7,499	9,638	3,504	2,350	2,701	2,710	4,760
1945	3,769	4,256	4,082	4,500	3,991	9,013	23,380	40,940	8,340	4,548	3,493	3,388	9,516
1946	6,527	6,552	4,129	3,955	4,068	9,240	3,908	4,074	3,626	2,476	3,260	2,714	4,552
1947	6,025	5,499	4,935	4,634	6,132	6,312	4,841	45,660	22,870	3,289	3,568	3,175	9,804
1948	2,610	2,534	1,915	1,620	1,753	3,954	10,960	15,880	6,449	2,784	3,008	2,387	4,646
1949	2,532	4,746	4,259	6,057	3,960	5,635	9,427	5,256	3,844	3,414	2,565	2,541	4,517
1950	2,702	2,864	2,907	3,623	3,572	6,204	15,040	6,459	5,007	4,364	3,901	3,762	5,044

Note.--Records since September 1955 not previously published.

## KENNEBEC RIVER BASIN

Monthly and yearly runoff, in inches (adjusted), of Kennebec River at Waterville, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	0.31	1.26	0.63	0.59	0.21	0.97	5.92	3.19	3.00	0.77	0.48	0.69	17.82
1932	1.07	1.27	.92	1.48	.69	.73	8.27	4.04	.92	.62	.55	1.80	22.36
1933	.94	2.86	.87	.53	.45	.50	6.66	5.86	1.38	.49	.43	.17	21.14
1934	1.54	.79	.46	.45	.31	.73	9.14	3.69	1.17	.45	.11	.74	19.38
1935	.45	1.10	.99	.90	.44	.69	6.81	5.29	2.25	.96	.25	.19	20.32
1936	.08	.71	.56	1.09	.54	11.23	4.94	3.74	.93	.24	.05	.46	24.57
1937	1.63	1.40	1.98	1.40	1.09	1.15	5.27	7.25	2.44	.52	.24	.24	24.61
1938	1.80	1.85	1.59	1.40	.66	1.34	5.29	3.98	1.16	1.49	.62	1.27	22.45
1939	.95	.77	3.11	.66	.41	.47	3.74	7.59	1.74	.58	.39	.25	20.66
1940	.78	1.29	1.14	.55	.26	.56	4.98	6.85	1.83	.98	.20	.43	19.65
1941	.06	1.96	.91	.96	.74	.62	3.16	1.50	.50	.35	.06	.10	10.92
1942	.39	1.10	.80	.88	.41	1.58	5.82	4.10	2.81	.67	.33	.37	19.26
1943	.52	.96	1.01	.29	.44	.98	3.88	6.65	2.25	.82	.62	.26	18.64
1944	1.71	2.64	.64	.28	.19	.57	2.48	4.47	.89	.28	.31	.48	14.94
1945	1.11	1.74	.54	1.14	.42	2.81	7.66	11.06	2.16	1.23	.24	.53	30.66
1946	2.22	1.93	.93	.74	.37	2.84	2.01	1.27	.67	.13	.38	.39	13.87
1947	1.76	1.67	1.43	.92	1.62	.94	2.40	12.66	6.11	.74	.34	.07	30.66
1948	.04	.30	.18	.17	.12	1.02	4.40	6.01	1.71	.42	.19	.07	14.49
1949	.24	1.65	1.14	1.53	.49	1.20	4.03	2.24	.82	.44	.03	.13	13.94
1950	.27	.77	.79	1.21	.73	1.63	5.87	2.87	1.80	.84	.45	.28	17.51

Note.--Records since September 1935 not previously published.

Yearly discharge, in cubic feet per second												
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year				
		Observed				Adjusted		Observed		Adjusted		
		Maximum day		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	
		Discharge	Date									
1893	198	83,500	May 18, 1893	1,440	-	-	-	-	6,906	-	-	-
1894	198	35,300	Apr. 23, 1894	467	4,756	-	-	-	5,050	-	-	-
1895	198	86,200	Apr. 15, 1895	100	5,213	-	-	-	5,523	-	-	-
1896	198	111,000	Mar. 2, 1896	1,080	8,018	-	-	-	8,235	-	-	-
1897	198	66,900	Apr. 28, 1897	1,490	9,747	-	-	-	9,607	-	-	-
1898	198	52,100	Apr. 25, 1898	913	8,855	-	-	-	8,695	-	-	-
1899	198	45,800	Apr. 27, 1899	246	7,011	-	-	-	6,547	-	-	-
1900	198	62,300	Apr. 21, 1900	406	8,716	-	-	-	9,473	-	-	-
1901	198	76,600	Apr. 9, 1901	700	8,360	-	-	-	8,697	-	-	-
1902	198	151,000	Dec. 16, 1901	170	10,450	-	-	-	10,160	-	-	-
1903	198	35,700	Mar. 20, 1903	115	6,972	-	-	-	6,182	-	-	-
1904	198	37,800	May 12, 1904	100	5,738	-	-	-	6,255	-	-	-
1905	198	32,100	Apr. 1, 1905	100	5,273	-	-	-	4,988	-	-	-
1906	198	39,400	Apr. 16, 1906	100	6,570	-	-	-	6,862	-	-	-
1907	241	47,300	June 2, 1907	873	7,615	-	-	-	10,200	-	-	-
1908	241	71,200	Nov. 8, 1907	680	7,430	-	-	-	4,390	-	-	-
1909	261	44,200	Apr. 16, 1909	100	5,960	-	-	-	6,470	-	-	-
1910	301	36,000	Apr. 7, 1910	100	7,620	-	-	-	7,350	-	-	-
1911	301	27,900	Apr. 16, 1911	194	3,740	-	-	-	4,000	-	-	-
1912	321	45,500	Apr. 24, 1912	248	7,250	-	-	-	7,880	-	-	-
1913	351	43,400	Mar. 25, 1913	554	7,620	-	-	-	7,820	-	-	-
1914	381	57,000	Apr. 21, 1914	415	7,750	-	-	-	8,600	-	-	-
1915	401	44,200	May 2, 1915	503	6,840	-	-	-	7,240	-	-	-
1916	431	44,500	May 19, 1916	455	7,960	-	-	-	8,240	-	-	-
1917	471	88,500	June 18, 1917	100	10,200	-	-	-	10,190	-	-	-
1918	471	52,900	Apr. 3, 1918	443	6,680	-	-	-	7,740	-	-	-
1919	501	59,800	Mar. 24, 1919	1,940	8,900	-	-	-	7,820	-	-	-
1920	501	54,300	Apr. 15, 1920	856	7,660	-	-	-	8,410	-	-	-
1921	521	37,900	Mar. 27, 1921	490	6,600	-	-	-	5,420	-	-	-
1922	541	60,600	Apr. 13, 1922	595	7,280	-	-	-	7,090	-	-	-
1923	561	134,000	May 1, 1923	200	6,230	-	-	-	6,580	-	-	-
1924	581	36,200	May 2, 1924	407	5,700	-	-	-	5,560	-	-	-
1925	601	32,500	Mar. 29, 1925	476	5,390	-	-	-	7,100	-	-	-
1926	621	42,000	Nov. 17, 1925	810	6,860	-	-	-	5,710	-	-	-
1927	641	41,200	Nov. 20, 1926	1,270	5,760	-	-	-	7,750	-	-	-
1928	661	87,200	Apr. 9, 1928	1,990	11,500	-	-	-	9,220	-	-	-
1929	711	66,400	May 4, 1929	1,140	7,160	-	-	-	6,590	-	-	-
1930	711	36,700	Apr. 8, 1930	703	5,650	-	-	-	5,970	-	-	-
1931	711	29,400	June 10, 1931	848	5,350	5,609	1.31	17.82	5,590	5,943	18.88	-
1932	726	59,600	Apr. 13, 1932	1,010	6,840	7,014	1.64	22.36	7,240	7,449	23.77	-
1933	741	39,900	Apr. 19, 1933	1,190	6,890	6,646	1.56	21.14	6,374	5,993	19.06	-
1934	756	51,400	Apr. 13, 1934	885	5,985	6,095	1.43	19.36	5,928	6,080	19.35	-
1935	781	35,500	Apr. 29, 1935	1,100	6,430	6,395	1.50	20.32	6,218	6,018	19.13	-
1936	-	140,000	Mar. 20, 1936	645	7,699	7,706	1.80	24.57	8,413	8,852	28.23	-
1937	-	41,100	May 16, 1937	866	7,762	7,758	1.81	24.61	7,866	7,814	24.84	-
1938	-	32,800	Oct. 24, 1937	815	6,779	7,062	1.65	22.45	6,848	6,931	22.04	-
1939	-	35,500	May 1, 1939	570	6,727	6,496	1.52	20.66	6,151	5,988	19.04	-
1940	-	51,500	Apr. 4, 1940	1,100	6,154	6,161	1.44	19.65	6,143	6,075	19.37	-
1941	-	13,500	Nov. 16, 1940	490	3,812	3,435	.804	10.92	3,528	3,251	10.28	-
1942	-	45,800	June 18, 1942	650	5,671	6,054	1.42	19.26	5,881	6,119	19.46	-
1943	-	33,800	May 12, 1943	1,040	5,830	5,866	1.37	18.64	6,299	6,651	21.14	-
1944	-	37,400	Nov. 10, 1943	415	4,760	4,690	1.10	14.94	4,367	4,186	13.34	-
1945	-	71,700	Apr. 28, 1945	630	9,516	9,651	2.26	30.66	9,943	10,182	32.35	-
1946	-	15,900	Mar. 29, 1946	200	4,552	4,366	1.02	13.87	4,482	4,300	13.66	-
1947	-	74,900	May 8, 1947	200	9,604	9,652	2.26	30.66	8,807	8,281	26.32	-
1948	-	42,200	May 18, 1948	466	4,646	4,543	1.06	14.49	5,033	5,334	17.00	-
1949	-	15,900	Apr. 16, 1949	717	4,517	4,382	1.03	13.94	4,262	4,002	12.74	-
1950	-	50,700	Apr. 21, 1950	1,180	5,044	5,506	1.29	17.51	-	-	-	-

Note.--Records since September 1935 not previously published.



## Sebasticook River at Pittsfield, Maine

Location.--Lat 44°46'57", long. 69°22'45", on upstream side of highway bridge near center of span at Pittsfield, Somerset County, 800 ft downstream from dam of American Woolen Mill, and 3½ miles upstream from mouth of East Branch of Sebasticook River.

Drainage area.--320 sq mi.

Gage.--Chain gage. Altitude of gage is 178 ft (from topographic map).

Remarks.--Flow regulated by Moose and Indian Ponds and by several mills above the station. Records for July 27, 1908, to Sept. 30, 1917, published in Water-Supply Papers 241, 261, 281, 301, 321, 351, 381, 401, 431, 451, and 471, have been found to be in error on the basis of re-study of the original data and comparison with records for nearby stations. Those records are not published herein and should not be used.

## 69. Sebasticook River near Pittsfield, Maine

Location.--Lat 44°42'55", long. 69°24'55", on right bank 1½ miles upstream from Twenty-Fivemile Stream and 4 miles south of Pittsfield, Somerset County.

Drainage area.--598 sq mi.

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

Average discharge.--21 years (1929-50), 872 cfs.

Extremes.--1928-50: 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.--Considerable diurnal fluctuation caused by power plant above station. Flow partly regulated by power plants above station and by Great Moose and Sebasticook Lakes and Plymouth Pond (combined capacity, about 2,345,000,000 cu ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	1,450	978	904	517	973	4,400	2,410	715	218	162	158	-
1930	98.4	90.7	73.1	210	341	2,540	2,920	596	599	205	210	209	674
1931	223	433	473	277	334	679	3,250	760	1,760	358	335	359	766
1932	836	837	602	824	536	446	4,370	575	228	223	312	1,210	911
1933	744	1,540	551	364	341	517	4,660	886	408	327	339	272	892
1934	626	642	518	370	356	936	5,768	768	275	343	294	390	934
1935	626	733	672	946	368	987	4,858	1,218	594	467	360	284	1,008
1936	199	280	620	870	361	5,764	3,192	1,117	436	316	199	135	1,130
1937	202	590	1,446	777	770	820	2,998	2,738	698	360	298	252	996
1938	288	742	1,050	1,090	948	1,076	2,526	1,433	399	460	394	320	892
1939	367	497	1,699	535	358	472	3,127	2,102	492	352	234	182	887
1940	151	441	651	343	202	350	5,038	2,306	575	479	305	328	927
1941	296	757	528	920	730	483	1,852	453	279	162	151	154	560
1942	119	220	242	572	271	1,314	3,215	925	907	469	178	161	715
1943	129	147	772	374	362	808	2,112	2,091	601	461	519	451	738
1944	967	2,898	946	377	364	737	3,350	1,075	316	223	160	194	963
1945	282	908	1,197	1,481	660	1,797	3,533	3,202	618	387	247	242	1,216
1946	408	758	832	819	658	2,180	2,141	1,285	401	250	248	198	849
1947	814	837	754	744	1,671	1,441	2,548	2,087	1,218	535	296	261	1,095
1948	183	263	241	173	130	759	1,960	568	568	269	184	111	661
1949	100	386	634	1,596	547	1,034	2,480	652	423	211	195	164	701
1950	141	448	553	875	729	965	3,888	937	337	258	218	168	789

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1929	681	7,440	Apr. 20, 1929	-	-	-	-	892	20.24	
1930	696	6,180	Apr. 11, 1930	23	674	1.13	15.29	747	16.94	
1931	711	6,850	Apr. 6, 1931	26	766	1.28	17.38	862	19.56	
1932	726	7,000	Apr. 14, 1932	24	911	1.52	20.73	940	21.39	
1933	741	7,300	Apr. 11, 1933	30	892	1.49	20.23	822	18.63	
1934	756	9,400	Apr. 16, 1934	89	934	1.56	21.25	954	21.73	
1935	781	8,310	Apr. 16, 1935	35	1,008	1.69	22.99	930	21.10	
1936	801	14,400	Mar. 22, 1936	13	1,130	1.89	25.70	1,225	27.88	
1937	821	5,290	Apr. 10, 1937	14	996	1.67	22.60	962	22.29	
1938	851	5,430	Jan. 28, 1938	21	892	1.49	20.28	951	21.62	
1939	871	7,760	Apr. 25, 1939	13	887	1.48	20.16	958	17.22	
1940	891	11,300	Apr. 15, 1940	9	927	1.55	21.09	955	21.73	
1941	921	3,240	Apr. 14, 1941	14	560	.936	12.73	477	10.83	
1942	951	5,460	Apr. 23, 1942	4.8	715	1.20	16.25	755	17.15	
1943	971	4,240	May 6, 1943	11	738	1.23	16.78	1,050	23.85	
1944	1001	6,360	Nov. 13, 1943	14	963	1.61	21.93	763	17.38	
1945	1031	7,760	Apr. 6, 1945	18	1,216	2.03	27.61	1,183	26.87	
1946	1051	4,760	Mar. 30, 1946	15	849	1.42	19.29	884	20.06	
1947	1081	4,630	May 8, 1947	21	1,095	1.83	24.83	990	21.55	
1948	1111	7,580	May 21, 1948	12	661	1.11	15.04	697	15.87	
1949	1141	4,460	Mar. 30, 1949	12	703	1.17	15.33	703	15.9	
1950	1171	6,940	Apr. 24, 1950	18	789	1.32	17.91	-	-	

† Corrected.

## Messalonskee Stream at Waterville, Maine

Location.--Lat 44°32'20", long. 69°39'00", at dam of Chase Manufacturing Co. 1 1/4 miles upstream from mouth and 1 1/8 miles southwest of the post office in Waterville, Kennebec County.

Drainage area.--205 sq mi.

Gage.--Staff gage. Altitude of gage is 60 ft (from topographic map).

Remarks.--Flow regulated by dams at outlets of Belgrade Lakes and power stations upstream. Records for June 18, 1903, to Jan. 1, 1906, published in Water-Supply Paper 198, have been found to be in error on the basis of re-study of the original data and comparison with records for nearby stations. Those records are not published herein and should not be used.

## 70. 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 (revised).

Gage.--Staff gage. Altitude of gage is at mean sea level (from topographic map).

Average discharge.--60 years (1890-1950), 320 cfs.

Extremes.--1890-1950: Maximum discharge, 5,020 cfs Mar. 21, 1936 (elevation, 139.4 ft above mean sea level); 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.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1890	-	-	-	-	-	-	-	-	-	-	244	261	-
1891	283	345	250	483	556	1,385	1,277	253	260	246	240	236	483
1892	194	60.3	147	216	240	244	246	253	233	181	244	243	210
1893	235	233	244	235	250	395	608	1,025	249	226	237	197	346
1894	179	187	177	192	189	341	273	304	327	226	244	217	238
1895	218	208	202	218	183	163	773	240	233	235	238	200	259
1896	101	144	186	232	235	1,101	812	229	243	235	227	219	331
1897	202	186	210	210	226	220	438	411	354	236	235	243	267
1898	201	234	231	235	301	643	590	306	245	226	239	219	322
1899	200	208	233	226	231	235	776	245	243	226	239	166	268
1900	86.2	131	116	119	453	1,365	964	544	245	222	230	204	390
1901	180	172	187	201	149	299	1,736	254	275	235	244	229	346
1902	219	205	441	450	287	1,364	691	336	233	227	235	243	413
1903	239	235	228	222	286	1,571	455	235	243	235	232	220	367
1904	205	126	133	157	136	278	493	778	243	223	231	221	269
1905	220	188	136	127	141	166	347	240	245	213	223	192	203
1906	175	143	156	198	236	235	610	436	569	377	285	240	305
1907	245	240	221	249	255	261	798	335	236	237	243	220	294
1908	232	294	223	409	466	422	424	623	386	231	226	228	347
1909	170	130	115	165	173	306	1,140	245	238	214	218	225	277
1910	218	225	222	191	214	283	300	387	250	213	233	232	248
1911	201	174	118	132	155	161	405	239	232	173	181	180	196
1912	146	107	112	185	201	388	769	317	475	220	232	191	277
1913	175	218	217	239	247	418	754	227	281	218	225	168	282
1914	199	215	241	245	244	710	1,190	323	227	228	220	206	354
1915	167	142	141	158	284	254	227	193	179	265	220	227	204
1916	215	227	223	222	286	502	914	724	358	220	228	227	362
1917	208	190	219	326	311	522	1,349	724	1,720	218	228	222	474
1918	213	194	182	207	228	463	231	221	223	276	269	243	269
1919	526	583	527	551	313	944	569	530	243	219	178	164	447
1920	184	263	286	239	232	800	2,390	493	230	220	223	232	480
1921	469	231	1,410	283	272	930	689	228	234	201	181	147	442
1922	106	150	191	223	218	326	587	850	740	229	239	238	346
1923	251	234	212	228	253	266	1,040	873	244	210	203	164	347
1924	147	154	207	237	241	245	644	836	228	228	184	176	294
1925	181	140	194	122	171	511	411	228	227	178	174	166	226
1926	149	184	255	245	250	323	1,100	383	236	200	161	154	303
1927	163	294	250	245	250	550	391	435	276	213	229	217	293
1928	230	241	498	384	399	373	820	962	354	220	237	227	411
1929	262	242	236	286	250	689	1,310	741	227	212	184	154	400
1930	144	189	182	221	222	705	636	235	256	211	214	195	284
1931	185	177	174	206	168	233	602	244	605	229	190	222	269
1932	198	190	224	228	217	234	955	208	205	159	157	167	261
1933	190	215	215	213	234	284	1,650	259	232	183	188	179	327
1934	187	236	240	245	220	245	1,337	259	249	174	180	176	311
1935	247	245	254	574	339	451	1,168	247	240	232	236	220	370

Note.--Records for period January 1910 to September 1915 revised to include leakage.

Monthly and yearly mean discharge, in cubic feet per second, of Cobbosseecontee Stream at Gardiner, Maine--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	178	199	230	260	264	2,086	1,268	237	244	205	173	165	462
1937	164	160	315	290	292	675	894	1,226	239	224	204	180	406
1938	162	228	286	418	569	382	612	363	229	176	216	218	320
1939	218	224	516	253	236	254	1,287	386	193	159	193	170	340
1940	179	223	251	236	234	220	1,370	627	347	228	231	194	361
1941	225	208	255	254	280	281	278	230	172	130	125	59.7	208
1942	55.0	71.7	39.7	114	97.5	386	729	250	327	257	268	199	233
1943	190	160	265	270	265	272	394	764	318	249	240	185	298
1944	180	356	301	310	306	310	1,331	331	233	195	172	149	346
1945	155	210	399	533	257	748	807	1,120	455	291	236	196	453
1946	197	207	222	272	296	754	488	372	263	223	198	136	302
1947	184	198	204	226	264	730	573	449	426	209	193	210	322
1948	201	190	151	115	110	182	275	903	319	233	171	159	282
1949	146	187	186	366	423	433	775	335	197	103	99.0	133	250
1950	161	168	185	179	196	212	1,115	322	219	150	137	155	265

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Maximum day		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1890	198	-	-	0	-	-	-	-	-
1891	198	2,580	Mar. 26, 1891	0	463	-	-	446	-
1892	198	306	Apr. 11, 1892	0	210	-	-	234	-
1893	198	2,690	May 18, 1893	0	346	-	-	330	-
1894	198	925	June 1, 1894	0	238	-	-	245	-
1895	198	2,620	Apr. 10, 1895	0	259	-	-	242	-
1896	198	2,700	Mar. 3, 1896	0	331	-	-	344	-
1897	198	914	May 30, 1897	0	267	-	-	272	-
1898	198	1,260	Mar. 25, 1898	0	322	-	-	320	-
1899	198	1,430	Apr. 20, 1899	0	268	-	-	245	-
1900	198	2,320	Mar. 3, 1900	0	390	-	-	407	-
1901	198	3,200	Apr. 9, 1901	0	346	-	-	374	-
1902	198	2,700	Dec. 16, 1901	0	413	-	-	396	-
1903	198	3,280	Mar. 12, 1903	0	367	-	-	347	-
1904	198	2,750	Apr. 30, May 1	0	269	-	-	275	-
1905	198	882	Apr. 7, 1905	0	203	-	-	198	-
1906	201	1,280	June 26, 1906	10	305	-	-	324	-
1907	241	1,690	Apr. 27, 1907	0	294	-	-	299	-
1908	241	1,820	May 3, 4, 1908	0	347	-	-	319	-
1909	261	2,000	Apr. 17, 1909	0	277	-	-	298	-
1910	1231	*882	May 2, 3, 6, 7	*7	*248	-	-	*233	-
1911	1231	*765	Apr. 1, 9, 1911	*7	*196	-	-	*185	-
1912	1231	*1,590	June 1, 3, 1912	*7	*277	-	-	*297	-
1913	1231	*1,670	Apr. 7, 1913	*7	*292	-	-	*286	-
1914	1231	*1,580	Apr. 12, 13, 1914	*7	*354	-	-	*338	-
1915	1231	*960	Feb. 27, 1915	*10	*204	-	-	*222	-
1916	541	2,110	May 20, 1916	10	362	-	-	358	-
1917	541	3,870	June 19, 20, 1917	10	474	-	-	472	-
1918	541	1,150	Apr. 4, 1918	13	243	-	-	331	-
1919	541	2,630	Mar. 30, 1919	13	447	-	-	371	-
1920	541	3,580	Apr. 15, 1920	13	480	-	-	598	-
1921	541	3,910	Dec. 16, 1920	13	442	-	-	301	-
1922	541	4,250	May 19, 1922	13	342	-	-	361	-
1923	561	3,050	May 1, 2, 1923	13	347	-	-	332	-
1924	581	2,300	May 2, 1924	13	294	-	-	295	-
1925	601	2,020	Mar. 30, 1925	13	226	-	-	232	-
1926	621	2,140	Apr. 26, 1926	13	303	-	-	313	-
1927	641	1,720	May 29, 1927	13	293	-	-	315	-
1928	661	2,560	May 25, 26, 1928	13	411	-	-	333	-
1929	681	2,960	Apr. 19, 1929	13	400	-	-	381	-
1930	696	2,420	Mar. 13, 1930	13	284	-	-	286	-
1931	711	1,980	June 10, 1931	13	269	-	-	276	-
1932	726	2,900	Apr. 15, 1932	13	261	-	-	261	-
1933	741	2,500	Apr. 19, 20, 1933	13	327	-	-	331	-
1934	756	2,700	Apr. 14, 1934	13	311	-	-	318	-
1935	781	2,180	Apr. 18, 1935	10	370	-	-	359	-
1936	801	4,320	Mar. 20, 21, 1936	10	462	-	-	464	-
1937	821	2,080	May 22, 1937	10	406	-	-	409	-
1938	851	1,900	Jan. 27, 1938	10	320	-	-	344	-
1939	871	2,570	Apr. 22, 1939	10	340	-	-	314	-
1940	891	2,590	Apr. 14, 1940	10	361	-	-	364	-
1941	921	290	Many days	10	208	-	-	164	-
1942	951	1,220	Mar. 11, 1942	10	233	-	-	271	-
1943	971	1,900	May 14, 1943	10	298	-	-	317	-
1944	1001	1,780	Apr. 5, 1944	10	346	-	-	341	-
1945	1031	2,140	May 15, 16, 1945	10	453	-	-	441	-
1946	1051	1,200	Mar. 11, 1946	10	302	-	-	298	-
1947	1081	1,770	Mar. 16, 1947	10	322	-	-	318	-
1948	1111	2,920	May 19, 1948	10	252	-	-	250	-
1949	1141	1,200	Apr. 10, 1949	10	280	-	-	280	-
1950	1171	1,830	Apr. 8, 1950	10	265	-	-	-	-

\* Revised.

## ANDROSCOGGIN RIVER BASIN

## 71. Kennebago Lake at Kennebago, Maine

Location.--Lat 45°06'10", long. 70°46'40", at dam at outlet of Kennebago Lake on Kennebago River at Kennebago, Franklin County.

Drainage area.--112 sq mi.

Gage.--Staff gage. Datum of gage is at mean sea level.

Remarks.--Reservoir used for storage of water for power. Usable capacity, 721,000,000 cu ft between elevations 1,773.0 and 1,780.5 ft.

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

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931	-	-	-	-	-	-	-	-	-	-	-	779
1932	835	882	930	866	794	765	887	952	897	897	887	755
1933	810	932	932	922	914	609	801	941	887	887	887	835
1934	937	945	908	857	696	620	952	879	879	887	815	865
1935	864	955	918	896	823	628	849	937	908	874	772	795
1936	792	918	916	882	723	887	1,165	991	891	851	756	821
1937	899	887	887	831	814	719	930	914	932	945	882	846
1938	891	903	897	925	900	735	908	945	968	945	914	900
1939	915	900	900	885	874	843	788	945	975	916	795	770
1940	947	947	945	879	809	748	863	949	945	927	731	757
1941	739	955	955	937	937	797	955	928	909	877	667	568
1942	587	717	722	543	426	400	661	697	725	633	471	400
1943	759	726	717	706	471	467	679	782	717	717	708	687
1944	736	744	736	736	721	516	508	673	688	787	636	636
1945	733	733	733	726	717	786	790	721	733	751	578	697
1946	726	735	717	717	702	783	846	717	726	569	452	376
1947	744	721	744	733	710	555	733	744	721	687	513	407
1948	326	345	365	345	417	710	813	859	767	698	502	376
1949	386	710	802	767	721	577	599	848	802	566	365	417
1950	528	687	698	687	733	676	687	698	802	545	470	459

Note.--Contents are at 7 a.m. on first day of following month.

## 72. Mooselookmeguntic Lake at Upper Dam, Maine

Location.--Lat 44°53', long. 70°52', at dam at outlet of Mooselookmeguntic Lake in township of Richardson, Oxford County.

Gage.--Staff gage. Datum of gage is 1,446 ft above mean sea level.

Drainage area.--405 sq mi.

Remarks.--Lake used for storage of water for power and log driving. Usable capacity, 8,370,000,000 cu ft between gage heights 8.3 and 20.5 ft.

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

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1880	-	-	-	-	-	-	1,598	1,532	0	0	0	0
1881	0	0	0	0	0	0	0	2,044	575	19	0	0
1882	0	0	0	0	0	0	0	3,028	1,213	372	0	0
1883	0	0	0	0	0	0	0	2,277	2,600	1,532	688	0
1884	0	0	0	0	0	0	847	3,042	0	50	0	0
1885	-	0	-	-	0	0	934	3,491	3,164	0	-	-
1886	-	-	-	-	-	-	3,294	3,423	3,178	19	0	0
1887	0	0	0	0	0	0	654	5,188	5,245	5,323	5,043	4,574
1888	4,368	4,464	5,015	5,029	3,872	2,031	1,153	5,338	5,091	4,746	4,157	4,642
1889	5,091	4,062	3,674	4,014	3,382	2,586	4,732	4,157	4,670	4,076	3,647	2,151
1890	0	3,368	3,722	3,647	3,749	3,042	2,376	4,856	4,843	4,103	1,765	3,334
1891	2,512	900	847	0	0	0	3,042	5,043	4,144	3,674	1,213	254
1892	0	0	0	0	0	0	186	2,797	5,160	5,015	2,824	4,470
1893	4,525	4,042	3,477	821	0	0	0	5,188	4,898	2,586	1,711	1,432
1894	767	0	0	0	0	0	1,898	3,552	4,815	3,518	2,230	2,233
1895	867	341	0	0	0	0	2,097	4,780	4,334	3,450	2,872	2,064
1896	634	1,665	3,518	4,028	3,178	2,264	4,608	5,056	4,988	4,849	3,960	3,552
1897	4,266	4,746	4,232	3,348	1,366	310	4,062	5,160	5,160	4,642	4,608	4,198
1898	4,232	2,498	2,330	1,931	1,299	372	4,266	5,091	5,056	4,815	4,746	4,574
1899	4,746	3,620	2,197	1,599	1,066	967	4,130	5,160	4,130	3,722	2,736	372
1900	0	0	0	0	0	186	3,790	5,091	4,746	4,712	3,858	3,008

Note.--Contents are at 7 a.m. on first day of following month.

Month-end contents, in millions of cubic feet, of Mooselookmeguntic Lake at Upper Dam, Maine--Con.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1901	2,634	4,642	4,232	3,416	1,698	0	4,642	4,642	4,539	4,539	4,677	3,654
1902	1,000	867	0	435	0	3,076	5,022	4,918	4,884	4,815	4,574	4,746
1903	4,712	4,815	4,368	4,774	3,246	4,130	4,436	4,746	4,334	4,062	2,770	1,765
1904	0	0	0	0	0	0	31	0	7,402	7,080	6,083	4,334
1905	6,474	7,223	3,518	501	0	248	2,804	7,223	6,651	7,009	6,973	6,580
1906	6,902	5,408	3,722	3,654	3,348	2,668	4,164	8,406	8,478	7,724	6,118	4,815
1907	3,586	4,096	2,736	967	0	0	1,831	7,902	7,974	8,226	7,902	7,902
1908	8,694	8,550	8,586	8,442	6,687	4,096	7,509	8,802	8,262	7,652	7,116	5,622
1909	3,246	0	0	0	0	0	4,198	8,370	8,370	7,188	5,231	3,110
1910	4,164	3,688	2,230	93	0	1,000	4,849	7,116	7,581	7,080	5,622	4,470
1911	3,552	3,552	0	0	0	0	2,064	5,091	5,480	3,654	3,382	3,484
1912	4,436	5,302	6,723	5,373	854	555	4,987	8,730	8,154	7,009	6,794	6,438
1913	6,296	8,154	8,768	8,586	8,010	8,514	8,658	8,694	8,298	7,295	5,728	4,988
1914	6,190	7,902	8,550	5,056	3,008	634	2,396	8,586	7,330	6,509	4,712	1,565
1915	568	341	217	155	279	217	2,872	5,196	5,056	6,723	7,544	6,651
1916	5,550	4,028	1,798	802	934	634	4,470	8,802	8,694	8,478	7,760	6,902
1917	6,758	6,794	7,152	4,684	1,632	468	2,464	8,226	8,586	7,795	7,368	6,509
1918	7,724	7,509	6,937	6,154	2,838	1,067	4,266	8,298	8,190	6,794	4,198	4,642
1919	6,758	7,760	7,330	6,973	4,815	2,566	6,580	8,550	8,370	6,937	6,012	5,302
1920	4,642	5,408	3,348	2,498	2,297	1,066	5,126	8,442	8,190	7,974	6,260	6,012
1921	5,338	4,062	4,198	4,884	2,297	3,518	8,622	7,509	6,225	5,125	4,130	3,178
1922	1,698	834	501	155	124	341	6,260	8,154	8,406	7,438	6,544	5,408
1923	3,824	4,062	4,334	2,736	435	124	4,062	8,262	7,795	6,866	6,048	4,953
1924	4,266	2,498	634	372	155	0	1,798	7,760	5,728	5,302	4,998	7,044
1925	7,152	6,225	5,692	2,736	2,940	4,199	7,902	8,226	7,974	6,723	4,712	5,160
1926	7,366	8,154	6,012	3,586	1,033	248	1,033	6,902	7,295	6,937	6,012	5,480
1927	5,515	6,474	6,332	5,799	1,865	1,598	4,746	7,867	7,080	5,444	4,677	3,892
1928	5,622	8,118	7,974	5,586	4,266	3,450	6,937	8,550	8,154	6,474	5,373	5,622
1929	6,794	6,794	3,790	2,566	2,031	2,770	6,616	7,259	7,402	6,225	5,056	4,164
1930	2,770	2,031	435	310	310	501	4,062	5,868	8,010	7,295	5,692	5,160
1931	4,232	1,665	468	435	435	0	3,280	6,616	7,152	6,723	6,580	6,723
1932	6,866	6,973	4,746	5,657	5,728	4,746	7,903	8,370	7,080	6,938	6,225	5,830
1933	6,866	6,973	5,373	5,618	1,698	2,164	6,759	8,370	7,581	6,296	5,657	5,056
1934	5,515	5,586	5,302	3,072	1,100	124	5,906	8,406	8,190	6,973	5,373	4,988
1935	4,334	4,368	4,164	3,552	1,599	1,100	3,892	8,478	8,406	7,474	5,976	5,196
1936	4,266	3,994	3,620	3,280	1,333	7,366	7,581	8,406	7,331	6,154	5,022	4,677
1937	6,652	6,118	5,231	6,686	6,296	3,382	5,657	8,298	8,298	7,402	6,438	5,515
1938	6,154	6,048	5,799	2,566	502	1,652	7,653	8,478	7,760	7,224	6,225	7,352
1939	7,402	6,687	7,188	6,544	4,988	3,280	4,574	8,478	8,226	7,581	5,976	4,815
1940	5,231	5,196	4,642	3,926	1,796	834	2,330	8,442	8,334	7,724	6,367	5,338
1941	4,470	4,436	3,620	1,599	186	124	4,539	5,480	4,840	4,746	3,246	1,366
1942	801	1,665	668	248	0	217	4,028	8,262	8,370	7,438	5,693	4,539
1943	3,756	3,722	2,974	1,033	341	535	2,230	8,406	8,478	7,831	7,760	7,223
1944	7,223	7,581	4,436	2,940	2,131	1,299	1,599	7,080	6,225	6,332	5,196	4,266
1945	4,504	4,368	4,028	3,450	1,898	2,838	7,938	7,652	7,688	6,902	5,160	4,164
1946	6,118	6,367	5,502	2,940	568	2,702	6,260	7,938	7,688	5,834	5,373	4,330
1947	4,746	6,402	6,651	5,799	4,884	2,031	5,231	7,938	7,760	7,616	6,260	3,624
1948	1,532	1,066	900	1,000	0	468	3,858	7,974	7,831	6,616	6,438	4,808
1949	1,166	1,765	186	279	62	248	4,470	6,937	7,509	7,295	5,231	3,518
1950	2,164	1,499	668	967	1,332	1,665	5,231	7,760	7,974	7,116	5,976	3,858

Note.--Contents are at 7 a.m. on first day of following month.

## 73. Rangeley Lake at Oquossoc, Maine

Location.--Lat 44°59', long. 70°47', at dam at outlet of Rangeley Lake on Rangeley Stream at Oquossoc, Franklin County.

Drainage area.--90 sq mi.

Gage.--Staff gage. Datum of gage is 1,514 ft above mean sea level.

Remarks.--Reservoir used for storage of water for power and log driving. Usable capacity, 1,339,200,000 cu ft in top 4 ft of lake (top of flashboards).

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

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1951	-	-	-	-	-	-	-	-	-	-	-	947
1952	67	94	0	335	224	335	613	1,366	1,339	1,339	1,339	780
1953	558	476	502	335	224	502	1,115	1,339	1,339	1,339	1,339	502
1954	502	0	0	0	0	0	1,115	1,255	1,339	1,339	1,255	1,061
1955	-503	-392	193	334	334	502	920	1,313	1,339	1,339	250	-838
1956	-529	-727	-670	-670	-727	1,196	1,480	1,366	1,339	1,339	1,366	1,004
1957	110	559	1,229	391	26	502	1,255	1,339	1,339	1,339	1,199	947
1958	562	1,004	837	1,229	1,255	894	1,112	1,366	1,366	1,339	1,313	894
1959	837	445	1,115	1,339	1,339	445	445	1,339	1,339	1,289	1,313	1,115
1960	193	224	277	294	-1	-1	391	1,339	1,339	1,326	1,198	1,196

Note.--Contents are at 7 a.m. on first day of following month. Storage capacity, 1,399 million cu ft for 4 ft drawdown. Negative figures indicate that drawdown exceeded 4 ft.

## ANDROSCOGGIN RIVER BASIN

Month-end contents, in millions of cubic feet, of Rangeley Lake at Oquossoc, Maine--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1941	669	780	616	629	622	40	991	1,115	1,172	1,102	981	811
1942	308	110	13	0	0	0	1,172	1,339	1,339	1,326	1,229	1,031
1943	720	703	837	368	0	0	335	1,339	1,390	1,390	1,390	1,088
1944	1,339	1,373	1,222	1,172	301	0	586	1,339	1,356	1,373	1,339	1,004
1945	1,038	954	954	1,004	418	670	1,339	1,306	1,339	1,339	1,339	1,339
1946	1,054	670	502	0	0	920	1,339	1,339	1,339	1,339	1,289	1,054
1947	720	0	0	820	837	368	954	1,289	1,339	1,339	1,172	1,004
1948	368	0	0	0	0	335	1,004	1,339	1,306	1,222	1,138	954
1949	385	251	26	83	0	83	1,198	1,313	1,313	1,256	1,088	894
1950	194	0	0	308	57	194	1,256	1,222	1,339	1,256	1,339	1,004

Note.--Contents are at 7 a.m. on first day of following month. Storage capacity, 1,399 million cu ft for 4 ft drawdown.

## 74. Upper and Lower Richardson Lakes at Middle Dam, Maine

Location--Lat 44°47', long. 70°55', on Rapid River at Middle Dam, Oxford County.

Drainage area--509 sq mi.

Gage--Staff gage. Datum of gage is 1,428 ft above mean sea level.

Remarks--Lakes used for storage of water for power and log driving. Usable capacity, 5,691,500,000 cu ft between gage heights 3.0 and 20.5 ft.

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

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1901	3,381	3,566	4,750	3,751	3,252	2,394	5,710	4,937	5,275	4,937	4,343	3,106
1902	3,051	1,412	4,362	3,677	2,105	3,069	5,750	5,614	5,730	5,672	5,050	4,713
1903	4,121	4,028	3,788	1,662	2,140	4,787	5,331	4,010	4,881	4,620	4,288	2,941
1904	3,361	2,088	384	0	66	84	814	5,406	3,197	3,788	3,640	4,121
1905	4,195	3,288	3,344	2,686	827	453	536	4,491	5,012	5,595	5,595	5,031
1906	2,960	2,704	3,160	2,649	2,540	2,394	2,978	5,444	5,672	5,050	3,714	2,850
1907	3,124	3,087	2,923	2,832	1,966	601	1,366	4,844	4,658	5,576	4,713	4,102
1908	5,652	5,331	5,614	4,585	3,973	3,714	4,324	5,672	5,444	4,436	3,492	1,646
1909	601	488	40	0	66	84	1,966	5,691	5,425	4,195	2,649	2,868
1910	1,830	938	748	653	180	500	4,602	4,694	5,041	3,677	3,770	2,140
1911	1,412	640	640	562	112	32	575	2,886	4,343	2,412	1,983	2,321
1912	3,806	4,472	4,956	4,881	4,750	2,321	3,288	5,387	5,218	3,362	2,795	2,986
1913	4,288	4,676	5,444	5,218	5,425	4,975	5,557	5,614	5,162	4,958	3,832	2,594
1914	2,886	3,529	3,658	3,344	1,983	1,396	2,448	5,068	4,102	4,306	2,302	1,932
1915	827	1,068	666	395	361	441	1,275	1,932	2,211	3,381	4,454	3,992
1916	2,795	2,722	2,631	2,795	1,428	2,230	3,566	5,557	5,519	5,557	5,125	4,158
1917	4,806	4,432	4,491	4,010	3,270	2,070	3,418	4,750	5,576	4,658	4,844	5,237
1918	3,732	4,195	4,715	3,510	3,510	1,529	3,714	5,218	4,787	4,800	3,825	2,814
1919	4,375	5,557	5,481	3,622	2,594	5,640	4,394	5,087	4,454	2,000	1,336	1,366
1920	1,082	2,832	4,994	4,825	2,339	1,245	2,777	5,730	5,595	4,881	3,529	2,759
1921	2,412	3,510	5,162	3,474	3,106	4,288	4,862	5,237	4,565	4,084	2,540	868
1922	441	441	1,068	210	75	284	2,284	5,576	6,710	5,068	4,768	3,788
1923	3,051	910	627	1,966	1,039	93	1,505	5,672	5,769	4,956	2,996	995
1924	653	1,830	4,844	3,362	476	130	500	3,051	4,528	4,158	3,806	3,862
1925	1,662	1,915	1,662	2,052	1,260	1,630	3,677	4,956	5,294	3,336	3,124	3,400
1926	5,237	5,633	5,125	4,325	2,613	966	430	2,941	4,750	4,713	3,899	2,740
1927	2,430	4,232	4,491	4,584	3,862	3,474	3,124	4,806	4,232	3,603	2,960	2,122
1928	2,430	5,500	5,652	4,506	2,996	2,105	3,106	5,200	5,200	3,658	3,584	3,640
1929	4,195	3,788	4,269	3,455	2,503	1,412	2,722	5,106	4,862	3,658	2,832	1,745
1930	1,474	1,443	1,505	406	274	180	2,052	5,444	5,331	5,031	3,677	2,868
1931	2,105	4,288	3,160	1,728	800	430	1,728	3,307	5,012	4,343	4,084	4,306
1932	4,028	4,232	4,343	4,324	3,862	3,566	4,125	5,275	4,528	4,639	4,375	4,820
1933	3,938	4,769	3,844	3,014	2,613	1,552	2,923	5,032	4,454	3,436	3,564	2,832
1934	3,529	3,473	3,887	3,233	1,646	395	3,566	5,359	5,519	4,806	3,566	3,529
1935	2,905	3,474	3,751	3,492	2,321	1,111	2,777	4,676	5,425	4,417	3,400	3,252
1936	3,069	3,270	3,474	3,362	2,942	4,788	3,806	5,200	4,639	4,472	3,936	3,510
1937	3,696	4,010	3,788	4,066	3,344	2,850	3,510	5,088	5,088	4,694	4,454	3,696
1938	3,270	4,362	4,509	4,232	3,917	3,307	4,639	5,258	4,862	4,491	4,250	4,846
1939	4,676	4,102	4,102	2,412	1,155	1,140	1,443	5,000	5,500	4,994	4,029	3,124
1940	2,704	3,474	3,124	2,375	1,613	1,796	2,358	5,407	5,500	5,088	3,548	3,288
1941	2,158	3,918	3,862	3,770	3,640	3,270	3,918	4,065	3,621	2,650	1,695	1,520
1942	1,646	2,035	2,070	1,796	1,350	1,474	3,603	5,012	5,256	4,380	3,529	2,996
1943	2,668	2,832	2,376	2,089	1,121	1,536	2,018	5,068	5,106	4,787	4,639	4,010
1944	4,787	4,472	3,862	2,979	2,814	1,290	2,503	4,602	4,750	4,750	4,084	3,806
1945	4,288	4,639	3,825	3,069	1,983	2,248	5,162	5,050	5,294	4,956	4,343	4,380
1946	4,176	4,214	3,474	3,788	3,640	3,840	4,620	5,312	4,472	4,066	3,492	2,832
1947	3,326	3,584	4,472	3,436	2,503	2,649	4,200	5,425	5,162	4,881	3,658	3,418
1948	2,759	1,779	1,830	1,695	679	588	3,233	5,200	5,425	4,583	3,233	2,211
1949	3,051	3,455	3,051	3,087	2,394	2,394	3,584	4,975	5,125	3,270	2,521	2,284
1950	1,796	1,864	2,376	3,492	2,485	1,864	3,142	5,331	5,331	3,880	3,640	3,160

Note.--Contents are at 7 a.m. on first day of following month.

## 75. Azischohos Lake at Azischohos Dam, Maine

Location.--Lat 44°56'40", long. 70°59'50" on Magalloway River in Lincoln Township and 3 miles east of village of Wilson's Mills, Oxford County.

Drainage area.--214 sq mi.

Gage.--Staff gage. Datum of gage is 1,000.0 ft above mean sea level.

Remarks.--Reservoir completed in 1911 for storage of water for power. Usable capacity, 9,593,000,000 cu ft between gage heights 490.0 and 535.0 ft.

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

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1911												
1912	3,890	2,678	2,570	2,509	2,515	2,610	1,530	5,280	5,348	4,776	5,173	5,059
1913	8,176	7,080	4,548	3,554	1,140	5,469	5,566	8,482	9,056	8,578	8,509	8,320
1914	2,434	2,945	80	0	75	370	5,523	8,051	6,051	6,296	6,310	3,842
1915	6,744	5,046	3,866	1,680	265	0	2,117	6,184	6,744	6,940	6,856	6,912
							3,290	4,610	5,198	4,210	4,685	4,968
1916	5,280	5,806	6,212	6,408	5,228	5,469	8,080	9,531	9,376	9,593	9,531	9,469
1917	7,444	5,960	5,793	5,176	3,244	4,535	8,770	9,345	9,469	9,655	7,360	
1918	7,276	7,761	3,698	532	180	666	3,674	6,436	6,212	6,548	5,904	6,324
1919	8,110	8,980	7,529	6,324	5,739	5,550	7,993	9,531	9,283	8,680	5,658	4,994
1920	6,072	7,848	5,904	2,044	0	1,060	3,914	7,304	6,772	7,360	7,964	7,416
1921	6,912	6,884	7,052	4,460	3,221	5,496	8,380	8,051	4,942	3,198	2,327	2,075
1922	2,285	2,830	3,129	2,243	92	534	5,150	6,744	8,620	9,041	9,562	9,469
1923	8,470	7,220	4,360	1,339	1,045	0	3,626	7,080	8,260	7,587	6,632	5,960
1924	4,864	5,202	6,268	6,380	6,268	3,938	3,890	8,051	6,828	6,240	4,890	6,548
1925	6,632	7,136	6,716	6,128	6,688	4,890	8,170	9,222	8,560	8,650	6,940	6,632
1926	8,620	9,717	9,376	8,500	7,616	4,786	3,794	9,192	9,345	8,170	5,415	4,410
1927	3,890	4,735	2,500	556	0	1,172	4,235	5,988	6,940	6,128	4,260	2,968
1928	4,110	6,968	8,350	8,710	7,761	5,202	7,819	9,376	9,345	8,350	7,558	7,080
1929	7,332	8,770	9,222	8,590	6,016	5,442	7,587	9,345	8,560	7,220	5,176	3,698
1930	2,876	2,390	1,462	1,870	1,045	1,076	3,698	7,819	9,624	9,655	9,132	7,935
1931	6,576	7,108	7,136	5,523	4,010	2,434	5,228	7,444	8,380	7,136	6,576	6,352
1932	7,150	8,290	8,680	9,531	7,602	5,960	8,290	9,376	8,470	9,392	8,800	8,530
1933	8,275	9,345	8,665	7,906	6,100	3,530	6,380	9,640	8,410	7,402	7,444	6,744
1934	6,352	5,820	4,598	3,542	3,072	2,423	6,912	9,516	9,624	9,071	7,804	6,912
1935	5,890	6,576	6,618	6,282	5,590	4,598	5,974	9,717	9,116	8,410	6,548	5,280
1936	3,626	5,410	2,621	310	0	5,307	7,458	9,732	9,578	8,380	6,408	5,604
1937	6,674	7,616	8,101	8,455	7,024	5,644	6,492	9,670	9,640	8,980	8,440	6,492
1938	6,240	6,940	7,732	7,775	7,950	7,066	8,650	9,593	9,500	9,329	8,680	9,314
1939	9,162	8,950	9,422	7,674	6,506	4,285	4,285	9,624	9,758	9,360	8,275	7,108
1940	7,164	7,388	6,380	5,007	3,830	2,274	2,478	7,761	8,500	8,845	7,819	6,926
1941	5,712	7,136	6,688	7,234	6,562	4,198	7,430	6,828	6,478	6,058	5,033	4,385
1942	4,672	5,685	4,773	4,916	3,818	2,720	5,735	9,624	9,732	8,620	6,870	5,523
1943	5,402	5,536	5,254	5,072	4,672	4,010	3,914	9,732	9,655	9,132	8,485	7,010
1944	6,954	8,665	8,260	5,988	3,710	2,797	3,578	8,860	8,890	8,725	7,402	6,986
1945	7,892	7,703	6,940	5,988	5,348	6,268	9,779	9,717	9,670	8,995	7,514	6,968
1946	8,410	8,395	7,862	6,408	4,685	6,016	8,530	9,593	9,655	8,365	6,898	5,658
1947	6,786	8,110	8,410	6,856	6,730	5,388	6,968	9,794	9,702	9,578	7,248	5,918
1948	5,228	4,825	3,164	365	184	1,570	5,685	9,531	9,500	8,800	6,296	4,877
1949	4,955	6,422	6,170	6,198	4,335	3,244	6,912	9,071	7,790	7,862	6,240	5,163
1950	4,994	5,111	5,523	6,506	5,604	3,410	6,282	9,562	9,888	9,422	7,587	6,968

Note.--Contents are at 7 a.m. on first day of following month. Contents below 1,390 million cu ft subject to error because capacity table is extended below that point without benefit of area curve.

## Magalloway River at Azischohos Dam, Maine

Location.--Lat 44°56'40", long. 70°59'50", at Azischohos Dam about 15 miles upstream from mouth in Lincoln Township, T. 5, R. 2, Oxford County.

Drainage area.--214 sq mi.

Gage.--Staff gage. Altitude of gage is 1,470 ft above mean sea level (from topographic map).

Remarks.--Records for January 1912 to September 1939, published in Water-Supply Papers 381, 401, 431, 451, 471, 501, 521, 541, 561, 581, 601, 621, 641, 661, 681, 696, 711, 726, 741, 756, 781, 801, 821, 851, and 871. Some of these records appear to be in error on the basis of a study of records for nearby stations and weather records. For a few years the figures for total runoff corrected for storage exceed the total precipitation measured at gages in the area. For these reasons it does not seem advisable to include the records here.

## ANDROSCOGGIN RIVER BASIN

## 76. 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.

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

Average discharge.--9 years (1941-50), 343 cfs.

Extremes.--1941-50: 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 (gage height, 0.81 ft).

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	-	-	-	-	-	-	-	-	-	-	63.2	58.2	-
1942	262	353	132	112	43.4	151	1,459	778	428	77.3	37.0	114	328
1943	204	386	165	58.4	61.2	147	512	1,744	804	146	243	165	388
1944	298	480	103	73.6	61.7	80.4	551	1,529	244	140	54.3	183	317
1945	437	225	141	214	74.0	841	1,296	769	308	257	75.4	259	410
1946	557	304	158	145	76.5	853	747	695	221	58.2	107	109	338
1947	379	463	390	147	262	199	875	1,649	477	265	82.0	109	442
1948	70.5	115	76.4	53.9	55.3	410	1,195	906	165	92.2	65.1	25.4	289
1949	54.0	368	156	157	59.9	334	1,126	495	265	108	31.9	77.3	269
1950	117	231	282	263	151	211	991	904	352	146	117	129	325

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	-	-	-	-	-	-	-	-	-	-	0.48	0.42	-
1942	1.97	2.58	0.99	0.84	0.30	1.14	10.64	5.86	3.12	0.58	.28	.83	29.13
1943	1.53	2.81	1.24	.44	.42	1.11	3.74	13.14	5.86	1.10	1.83	1.20	34.42
1944	2.25	3.50	1.78	.55	.43	.61	4.02	11.52	1.77	1.05	.41	1.34	28.23
1945	3.30	1.64	1.06	1.61	.50	6.34	9.45	5.80	2.24	1.94	.57	1.89	36.34
1946	4.20	2.22	1.19	1.09	.52	6.43	5.44	5.23	1.61	.44	.81	.79	29.97
1947	2.86	3.38	2.94	1.11	1.78	1.50	6.38	12.43	3.48	1.99	.62	.79	39.26
1948	.53	.84	.58	.41	.39	3.09	8.71	6.82	1.20	.70	.49	.19	23.95
1949	.41	2.69	1.18	1.19	.41	2.51	8.21	3.74	1.93	.81	.24	.56	23.88
1950	.88	1.68	2.12	1.98	1.03	1.59	7.23	6.81	2.57	1.10	.88	.94	28.81

Yearly discharge, in cubic feet per second											
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1942	951	5,230	Apr. 25, 1942	11	328	2.14	29.13	329	29.17		
1943	971	8,630	June 16, 1943	34	388	2.54	34.42	398	35.37		
1944	1001	6,000	May 5, 1944	22	317	2.07	28.23	312	27.70		
1945	1031	6,000	Mar. 29, 1945	27	410	2.68	36.34	428	37.95		
1946	1051	3,540	Mar. 29, 1946	22	338	2.21	29.97	355	31.54		
1947	1081	4,660	May 6, 1947	24	442	2.89	39.26	361	32.03		
1948	1111	3,670	Apr. 1, 1948	15	269	1.76	23.95	295	26.28		
1949	1141	3,060	Apr. 23, 1949	6.8	269	1.76	23.88	274	24.29		
1950	1171	4,780	Apr. 21, 1950	28	325	2.12	28.81				

## 77. Umbagog Lake at Errol Dam, N. H.

Location.--Lat 44°47'15", long. 71°07'30", on Androscoggin River at dam at outlet of Umbagog Lake at Errol Dam and three-quarters of a mile northeast of Errol, Coos County.

Drainage area.--1,095 sq mi.

Gage.--Staff gage. Datum of gage is 1,230 ft above mean sea level.

Remarks.--Lake used for storage of water for power and log driving. Usable capacity, 3,080,160,000 cu ft between gage heights 5.5 and 15.0 ft.

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

Month-end contents, in millions of cubic feet												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1880	-	-	760	502	371	550	1,679	1,188	522	0	0	0
1881	0	211	0	211	151	309	1,679	1,380	266	350	350	0
1882	0	88	249	110	350	309	859	2,110	910	436	266	480
1883	0	0	0	0	0	0	1,060	1,830	775	371	0	18
1884	129	37	0	0	0	0	1,740	2,495	620	436	110	1,166
1885	350	371	480	371	0	0	2,080	620	859	760	0	0
1886	189	1,246	33	522	266	110	1,830	961	760	88	18	88
1887	0	151	110	170	55	0	1,740	436	55	0	0	0
1888	0	0	0	0	0	0	170	1,066	0	0	0	399
1889	561	-	240	376	254	508	2,429	2,034	2,072	690	242	1,204
1890	592	1,092	1,092	746	441	805	1,542	1,758	634	182	620	242

Note.--Contents are at 7 a.m. on first day of following month.



Month-end contents, in millions of cubic feet, of Umbagog Lake at Errol Dam, N. H.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1891	850	648	254	350	441	940	2,651	1,866	805	77	376	110
1892	99	99	314	376	0	0	1,920	1,758	1,632	1,220	1,722	1,172
1893	428	1,812	454	278	99	0	326	1,236	454	564	564	266
1894	592	230	88	22	0	182	2,300	732	218	254	182	77
1895	454	88	146	0	0	0	2,091	1,380	970	170	389	66
1896	0	2,053	1,920	620	480	648	2,495	1,284	1,030	1,204	254	0
1897	578	1,268	620	350	389	11	2,186	1,996	1,398	1,172	278	592
1898	0	790	1,188	592	454	1,140	1,939	1,939	1,092	110	1,172	970
1899	746	1,204	1,124	790	266	122	2,224	1,560	1,516	790	22	1,499
1900	0	0	0	134	182	0	1,596	1,848	1,124	1,060	508	170
1901	0	1,158	134	326	338	110	2,729	2,015	1,188	1,015	690	415
1902	895	230	1,548	454	606	110	2,495	3,002	1,740	1,236	1,000	850
1903	1,776	1,470	1,140	805	266	1,414	2,243	1,776	1,140	522	536	146
1904	428	170	0	0	0	0	3,236	2,065	2,632	880	1,186	1,030
1905	1,092	760	1,204	1,092	508	790	3,260	2,514	2,573	1,650	746	955
1906	592	985	1,598	1,560	134	0	2,378	3,119	1,488	955	690	376
1907	1,704	970	820	895	606	266	1,996	2,186	2,300	2,129	1,316	1,506
1908	2,632	1,920	1,794	1,140	1,300	1,686	3,080	3,080	1,686	955	592	55
1909	480	760	350	146	266	194	1,996	3,080	1,284	1,045	690	1,252
1910	314	1,140	564	1,452	1,220	2,378	3,041	3,160	1,434	820	480	578
1911	835	676	1,124	428	302	0	2,224	1,920	970	2,515	1,939	1,316
1912	1,920	2,417	2,768	1,124	1,332	805	3,200	3,160	1,668	1,156	1,156	1,488
1913	662	790	1,045	1,015	1,000	2,300	3,280	3,280	1,830	1,668	620	1,204
1914	2,320	1,416	820	1,188	925	910	2,495	2,034	2,300	835	1,000	970
1915	940	1,045	835	1,030	940	350	3,100	1,650	1,188	2,243	2,091	1,000
1916	910	850	1,704	1,632	1,092	1,000	2,963	3,200	2,846	2,476	1,958	1,204
1917	1,632	1,920	1,776	1,598	1,470	1,300	2,148	3,160	2,690	1,560	1,668	1,256
1918	2,053	1,416	1,220	1,252	1,300	1,030	1,939	2,339	2,186	1,596	1,524	2,495
1919	2,885	2,729	2,262	1,722	1,542	1,848	2,495	3,180	2,148	1,598	1,092	704
1920	1,188	1,560	1,596	1,632	1,188	1,434	2,436	3,100	2,205	1,560	1,740	1,470
1921	1,848	1,902	1,776	1,650	1,332	2,748	2,690	2,358	1,884	1,668	1,172	790
1922	1,252	1,939	880	790	718	704	3,060	2,398	3,140	1,686	2,690	1,758
1923	1,939	1,740	970	1,380	970	3,500	3,120	3,041	2,612	1,722	1,268	1,220
1924	1,380	1,848	2,417	1,560	1,156	55	1,848	2,554	2,807	2,500	2,417	2,339
1925	2,015	2,826	2,262	1,236	1,348	1,996	2,651	2,729	2,690	2,514	2,300	2,110
1926	2,651	2,748	1,848	1,776	1,236	880	1,596	2,262	2,982	2,243	2,091	1,500
1927	1,704	1,958	1,996	2,072	1,902	1,045	2,053	2,907	2,690	2,339	2,281	1,506
1928	2,091	3,080	2,129	1,958	1,364	1,300	1,650	2,982	1,920	2,034	1,488	1,614
1929	1,560	1,977	2,320	2,436	2,398	1,030	2,417	2,690	2,612	1,996	1,632	1,172
1930	1,108	1,076	1,516	1,668	1,902	1,252	2,339	3,120	2,826	2,054	1,740	1,758
1931	1,920	2,243	2,378	2,339	2,205	1,920	2,924	3,120	2,148	2,262	2,053	2,944
1932	2,573	2,670	2,748	2,592	2,091	1,204	2,729	3,100	2,243	2,573	2,558	2,651
1933	2,091	2,807	2,729	2,262	2,091	1,108	1,452	2,690	2,186	2,592	1,539	1,524
1934	1,920	1,996	1,812	1,794	1,632	1,488	2,690	3,002	2,243	1,416	1,364	1,470
1935	1,884	2,534	2,320	2,339	2,205	1,348	2,417	3,080	2,573	2,320	2,262	2,205
1936	2,300	2,632	2,167	2,110	1,284	2,378	2,885	3,240	2,243	1,920	1,958	1,884
1937	2,670	1,939	2,110	2,458	1,364	1,015	2,690	2,885	2,710	2,339	1,045	1,268
1938	2,110	2,885	2,110	2,458	2,262	1,348	3,061	3,061	2,320	2,670	2,110	2,612
1939	2,053	1,996	2,320	1,920	1,830	1,076	1,542	3,217	2,983	2,476	1,839	1,839
1940	2,053	1,364	1,516	1,256	1,364	1,140	1,939	3,080	2,983	2,148	2,015	2,072
1941	1,902	2,300	2,281	1,920	1,416	1,156	2,982	2,768	2,015	1,506	1,524	1,332
1942	1,578	1,332	1,704	1,516	1,124	1,015	3,119	3,022	2,807	1,614	1,632	2,034
1943	1,542	1,958	1,740	1,668	1,364	1,060	1,848	3,080	3,178	2,281	2,167	2,072
1944	2,456	2,534	1,839	1,542	1,542	1,045	1,560	2,690	2,866	1,564	1,156	1,468
1945	1,884	1,996	2,072	1,794	1,348	2,807	2,963	2,944	1,524	1,252	1,252	1,704
1946	2,129	2,129	1,794	1,686	1,812	2,729	3,022	2,944	2,186	1,686	1,452	1,380
1947	2,034	2,224	1,902	1,830	1,452	1,596	2,091	3,140	3,160	1,380	1,452	1,524
1948	1,560	1,506	1,824	1,252	508	1,848	3,041	2,944	1,939	1,884	1,958	1,650
1949	1,776	2,339	1,848	1,884	1,632	2,148	3,041	2,129	2,690	1,794	1,668	1,468
1950	1,316	1,488	2,456	2,186	1,364	1,092	2,456	2,339	3,158	1,704	1,794	1,488

Note.--Contents are at 7 a.m. on first day of following month.

## 78. Androscoggin River at Errol, N. H. 1/

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.

Supplemental records available.--January 1880 to Dec. 31, 1904, gage heights only.

Gage.--Water-stage recorder. Datum of gage is 1,227.3 ft above mean sea level, datum of 1929. Prior to Dec. 8, 1943, movable rod gage in dam 0.4 mile upstream at datum 5.0 ft higher.

Average discharge.--45 years (1905-50), 1,854 cfs (adjusted for storage).

Extremes.--1905-50: Maximum daily discharge, 15,700 cfs June 18, 1943; minimum daily, leakage only at various times when gates in dam were closed.

Remarks.--Discharge prior to Dec. 8, 1943, determined by computation of flow through gates of dam. Flow regulated by Kennebag, Mooselookmeguntic, Rangeley, Upper and Lower Richardson, Azischoos and Umbagog Lakes. Runoff adjusted for change in contents in Kennebag Lake since September 1931 (see p. 90), Mooselookmeguntic Lake (see p. 90), Rangeley Lake since September 1931 (see p. 91), Upper and Lower Richardson Lakes (see p. 92), Azischoos Lake since April 1911 (see p. 93), and Umbagog Lake (see preceding page).

Cooperation.--Discharge records prior to Dec. 8, 1943, furnished by Union Water Power Co.

1/ Published as "at Errol Dam" prior to 1922.

## ANDROSCOGGIN RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second (observed),  
of Androscoggin River at Errol, N. H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1905	-	-	-	1,570	1,240	757	1,490	3,600	2,180	1,780	1,400	1,280	-
1906	1,350	1,380	1,160	1,160	1,130	915	1,390	5,060	3,630	1,560	1,330	1,230	1,780
1907	1,320	995	959	1,090	1,070	1,090	1,230	4,980	2,330	1,880	1,550	1,480	1,670
1908	1,470	3,740	1,760	1,590	1,760	1,940	2,530	5,930	3,080	1,390	1,120	1,360	2,290
1909	1,320	1,040	844	780	767	874	5,310	6,200	3,170	1,410	1,370	1,220	1,860
1910	941	1,070	1,080	1,120	1,190	1,150	3,390	2,800	2,760	1,220	1,120	1,180	1,580
1911	980	1,030	1,190	864	718	716	1,150	2,140	763	1,070	971	902	1,050
1912	973	903	1,190	1,650	1,780	1,570	1,610	2,180	3,320	1,680	1,430	1,500	1,680
1913	1,410	1,450	1,450	2,040	2,050	2,790	4,740	3,060	2,590	1,950	2,040	1,690	2,270
1914	1,300	1,210	1,790	1,840	1,840	1,650	1,150	2,330	1,540	1,560	1,660	1,780	1,640
1915	1,670	1,630	1,510	1,540	1,410	1,220	917	1,100	1,320	808	840	1,450	1,280
1916	1,570	1,610	1,660	1,480	1,500	1,620	1,420	2,140	4,410	1,940	1,760	1,780	1,910
1917	1,670	1,680	1,580	1,940	2,210	2,220	1,530	1,940	7,130	2,490	1,980	1,850	2,340
1918	1,770	1,930	2,140	2,010	2,020	2,110	1,990	1,490	1,480	1,790	1,970	1,390	1,840
1919	1,370	2,020	2,010	2,330	1,840	1,650	2,050	4,020	2,240	1,990	1,870	1,690	2,090
1920	1,340	1,180	1,740	1,920	1,990	1,670	1,560	3,000	2,110	1,580	1,690	1,700	1,790
1921	1,620	1,610	1,590	2,010	2,150	1,990	2,340	2,030	1,640	1,340	1,280	1,220	1,730
1922	920	759	920	1,180	1,150	837	2,020	1,780	2,840	1,970	1,630	1,700	1,470
1923	1,740	1,800	1,900	1,800	1,820	1,520	1,210	3,360	1,690	1,530	1,500	1,530	1,790
1924	1,360	1,140	923	1,490	1,700	1,810	1,630	2,320	1,460	1,150	1,150	1,600	1,480
1925	1,290	1,600	1,740	1,850	1,970	1,780	1,840	2,070	2,090	2,030	1,980	1,840	1,820
1926	1,250	3,010	2,750	2,200	2,530	2,280	1,790	3,120	1,670	1,980	2,050	1,890	2,210
1927	1,530	1,450	1,760	1,770	1,780	1,550	1,760	1,520	1,910	2,090	2,000	1,920	1,750
1928	1,250	2,100	2,430	2,590	2,570	2,500	2,060	6,150	3,580	2,310	2,130	1,750	2,610
1929	1,740	1,660	1,920	2,000	2,140	1,650	2,280	7,790	2,280	2,280	1,970	1,870	2,500
1930	1,650	1,520	1,420	1,020	973	1,190	1,750	2,760	3,330	1,650	1,600	1,590	1,710
1931	1,400	1,060	1,360	1,430	1,430	1,290	1,450	1,120	1,580	1,520	1,530	1,390	1,360
1932	1,300	1,180	1,610	1,610	1,770	1,690	1,990	3,630	2,740	1,490	1,610	1,720	1,860
1933	1,652	1,437	1,984	2,156	2,030	1,998	2,895	6,007	2,656	1,961	1,288	1,481	2,290
1934	1,092	1,513	1,627	1,717	1,939	1,686	3,808	5,235	1,845	1,933	1,757	1,445	1,951
1935	1,467	1,089	1,520	1,515	2,019	1,925	2,170	2,440	4,376	2,043	1,728	1,541	1,982
1936	1,419	1,043	1,379	1,366	1,531	1,454	4,006	6,234	1,667	1,595	1,595	1,457	2,404
1937	1,155	1,557	1,522	2,043	2,257	2,663	1,803	6,539	2,327	1,945	1,948	1,844	2,305
1938	1,445	1,207	1,556	2,010	1,831	1,997	3,312	3,145	1,598	1,438	1,566	1,646	1,896
1939	1,443	1,567	1,883	2,059	1,957	2,204	2,023	3,099	1,925	1,452	1,434	1,327	1,857
1940	1,198	1,174	1,344	1,418	1,461	1,347	770	3,548	1,702	1,174	1,281	1,100	1,462
1941	1,204	781	1,208	1,290	1,444	1,505	1,482	1,027	1,212	1,201	1,293	1,158	1,233
1942	939	874	1,128	1,033	1,146	1,015	2,271	1,694	3,530	1,601	1,632	1,402	1,520
1943	1,314	1,125	1,274	1,352	1,234	1,049	1,204	3,727	5,158	1,477	1,549	1,787	1,854
1944	1,173	2,170	2,687	2,228	1,817	1,892	1,779	3,642	1,619	1,511	1,556	1,375	1,957
1945	1,200	1,580	1,585	1,795	2,003	2,469	4,239	5,327	2,008	2,001	1,715	1,514	2,273
1946	1,452	1,871	2,020	2,082	2,261	2,108	1,514	3,171	1,859	1,845	1,478	1,501	1,922
1947	1,144	1,173	1,682	2,219	2,235	2,657	1,972	6,634	3,480	1,727	2,012	1,794	2,399
1948	1,470	1,283	1,181	1,265	1,218	592	1,701	2,806	1,339	1,575	1,760	1,726	1,434
1949	1,311	1,017	1,596	1,402	1,732	1,351	1,978	1,409	1,389	1,609	1,736	1,483	1,500
1950	1,321	1,142	1,083	1,144	1,868	1,813	1,819	2,030	1,703	2,530	1,855	1,887	1,682

Note.--Records for period Oct. 1, 1922, to Dec. 31, 1943, and water year 1944, not previously published.

## Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1905	-	-	-	0.17	0.02	0.90	4.11	6.71	2.33	1.97	1.15	1.06	-
1906	0.62	0.91	0.94	1.11	.37	.61	3.33	8.65	3.34	.94	.15	.29	21.25
1907	1.61	.96	.35	.47	.19	.50	3.10	9.51	2.48	2.48	.89	1.41	23.96
1908	3.06	3.51	2.02	.99	.92	1.13	4.79	7.63	2.40	.57	.48	-.14	27.36
1909	.22	-.16	.58	.74	.84	.94	6.78	10.54	2.53	.46	-.08	.75	24.14
1910	.66	.92	.27	.68	.86	2.29	7.16	4.10	2.58	.32	.53	.16	20.53
1911	.51	.72	.04	.63	.48	.63	3.84	5.98	1.20	.03	.71	.84	15.61
1912	1.84	1.31	2.19	.53	.01	.43	6.15	8.00	2.86	.11	1.24	1.67	24.41
1913	1.56	2.08	1.21	1.70	.89	4.51	7.77	3.87	1.87	.88	.43	.65	27.42
1914	1.82	1.90	.71	.49	.40	.77	4.10	7.86	.93	.89	.45	.33	20.65
1915	.41	1.14	.78	.76	.80	1.01	5.39	2.54	6.99	2.88	1.70	.78	18.88
1916	.68	1.00	1.34	1.41	1.22	1.23	5.87	5.45	4.49	2.03	1.28	1.02	27.02
1917	.96	1.13	1.52	.35	.33	.74	4.17	7.28	8.06	1.75	2.24	1.60	29.71
1918	2.56	1.40	.32	.18	.58	.69	6.59	4.96	1.25	1.31	.46	.60	22.42
1919	4.27	2.43	1.00	1.03	.29	1.43	6.21	5.93	1.82	-.01	.24	.87	25.31
1920	1.97	2.69	.98	.13	.01	1.57	5.97	7.17	1.60	1.52	.87	1.33	25.81
1921	1.13	1.16	2.42	.78	.27	4.96	6.14	.97	.15	-.07	-.13	-.35	17.43
1922	.46	.98	.79	.36	.04	1.75	8.87	4.17	1.48	1.23	1.96	.49	25.08
1923	.52	.54	.50	.83	.16	.13	7.91	7.43	1.91	.42	.06	.03	20.24
1924	.45	1.38	1.79	.71	.27	.18	4.28	7.85	.84	.55	.50	3.20	22.00
1925	-.01	2.10	.98	.50	1.97	2.73	5.94	3.17	2.08	1.14	.25	1.82	22.67
1926	3.97	4.26	.83	.72	.26	.20	2.08	9.85	3.10	.98	.44	.64	27.33
1927	1.24	2.98	.89	.41	.17	1.66	5.30	4.54	1.76	.98	.83	.51	21.27
1928	2.87	6.05	2.91	1.31	.56	.94	5.74	9.33	3.27	.78	1.52	1.76	37.04
1929	2.19	2.54	1.23	1.15	.53	1.10	6.44	11.02	1.73	.81	.46	.18	29.38
1930	.44	1.13	.35	1.13	.64	1.09	5.95	8.39	3.88	1.21	.22	.37	24.80
1931	.28	1.13	.67	.31	.21	.43	5.41	4.32	2.31	.91	1.14	1.76	18.88
1932	1.26	1.93	1.04	2.54	.59	.33	5.82	5.20	1.33	2.16	1.28	1.66	25.14
1933	1.15	2.68	.84	.69	.24	.48	7.20	10.17	1.41	.97	1.28	-.12	27.00
1934	1.73	1.02	.92	.57	.14	.58	10.70	6.57	1.71	.81	.16	.99	25.90
1935	.20	2.04	1.87	1.23	.36	.65	5.42	7.38	4.50	1.04	-.41	.28	24.57

Note.--Adjusted runoff not previously published. Negative figures indicate that evaporation and seepage from reservoirs exceeded inflow.

Monthly and yearly runoff, in inches (adjusted), of Androscoggin River at Errol, N. H.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	.59	1.10	.96	.53	.05	12.76	5.29	8.75	.58	.56	.32	.75	32.04
1937	2.59	1.84	1.79	2.47	1.00	.98	4.57	10.36	2.41	1.20	.81	.45	30.47
1938	1.79	2.49	1.61	1.10	.84	1.54	8.00	4.58	.92	1.26	.70	2.76	27.59
1939	1.23	.76	2.89	.51	.27	.12	2.99	10.02	1.92	.53	.17	-.19	21.22
1940	1.08	1.37	.70	.22	-.07	.32	2.29	10.76	2.08	.66	-.39	.31	19.33
1941	-.29	2.43	.71	.63	.32	.10	6.21	1.28	.41	.46	-.12	-.07	12.07
1942	.46	1.74	.59	.67	.28	.75	7.60	5.81	3.88	.03	-.09	.50	22.02
1943	.76	1.46	.76	.27	.25	.77	2.69	11.28	5.56	.65	1.30	.65	26.40
1944	1.87	3.10	.94	.56	.17	.33	5.29	10.16	1.54	1.07	.27	.90	23.90
1945	2.20	1.50	.99	.94	.22	4.36	9.62	5.64	1.67	1.36	.24	1.23	29.97
1946	2.99	1.95	1.05	.60	.45	4.62	4.75	4.83	1.25	.18	.56	.15	23.38
1947	2.47	2.35	2.33	1.26	1.34	1.07	4.90	11.01	3.51	1.06	-.04	.18	31.44
1948	-.16	.44	.59	.11	.08	2.19	6.81	7.30	.99	.52	.19	-.21	18.85
1949	.23	2.41	.58	1.64	.43	1.30	6.68	3.80	1.46	.46	-.12	.20	19.07
1950	.32	1.08	1.64	2.26	.80	.90	6.12	5.48	2.47	.91	.76	.42	23.16

Note.--Adjusted runoff not previously published. Negative figures indicate that evaporation and seepage from reservoirs exceeded inflow.

Yearly discharge, in cubic feet per second											
Year	W.S.P. no.	Water year ending Sept. 30									
		Observed				Adjusted				Calendar year	
		Maximum day		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1905	261	-	-	-	-	-	-	-	1,600	1,600	20.89
1906	261	6,320	May 22, 1906	433	1,780	1,640	1.57	21.25	1,720	1,660	21.70
1907	261	7,430	May 4, 1907	702	1,670	1,840	1.76	23.96	1,980	2,280	28.63
1908	261	8,760	Nov. 9, 1907	830	2,290	2,090	2.00	27.36	1,980	1,490	19.41
1909	261	9,420	May 19, 1909	467	1,860	1,860	1.78	24.14	1,850	1,950	25.35
1910	281	6,840	Apr. 9, 1910	553	1,580	1,580	1.51	20.53	1,590	1,530	19.95
1911	301	4,370	May 3, 1911	205	1,050	1,210	1.16	15.61	1,030	1,510	19.68
1912	321	6,020	June 4, 1912	344	1,650	1,880	1.80	24.41	1,750	1,840	23.92
1913	351	6,700	(a)	-	2,270	2,120	2.03	27.42	2,270	2,080	27.00
1914	381	7,080	May 11, 1914	398	1,640	1,590	1.52	20.65	1,680	1,430	18.55
1915	401	1,880	Nov. 19, 1914	80	1,280	1,450	1.39	18.88	1,290	1,510	19.57
1916	431	6,340	June 13, 1916	823	1,910	2,080	1.99	27.02	1,910	2,120	27.61
1917	451	12,500	June 21, 1917	844	2,340	2,280	2.18	29.71	2,420	2,340	30.38
1918	471	2,390	Dec. 4, 1917	-	1,840	1,720	1.65	22.42	1,800	1,990	25.84
1919	501	7,160	May 26, 1919	613	2,090	1,950	1.87	25.31	2,000	1,790	23.25
1920	501	5,120	May 26, 1920	370	1,790	1,980	1.90	25.81	1,840	1,910	24.88
1921	521	4,220	Mar. 29, 1921	531	1,730	1,340	1.28	17.43	1,550	1,150	14.95
1922	541	6,850	June 22, 1922	-	1,470	1,930	1.85	25.08	1,710	1,860	24.21
1923	-	9,710	May 2, 1923	-	1,790	1,560	1.49	20.24	1,620	1,730	22.50
1924	-	5,120	Sept. 12, 1924	118	1,480	1,690	1.62	22.00	1,580	1,640	21.45
1925	-	3,350	Nov. 24, 1924	513	1,820	1,750	1.67	22.67	2,010	2,200	28.66
1926	-	9,400	Nov. 18, 1925	432	2,210	2,100	2.01	27.33	2,020	1,800	23.38
1927	-	3,950	Apr. 24, 1927	571	1,750	1,640	1.57	21.27	1,840	2,150	27.99
1928	-	15,000	May 26, 1928	-	2,610	2,850	2.73	37.04	2,570	2,390	31.17
1929	-	15,300	May 10, 1929	654	2,500	2,270	2.17	29.38	2,440	1,950	25.34
1930	-	7,460	June 12, 1930	329	1,710	1,910	1.85	24.80	1,640	1,920	24.96
1931	-	2,770	Apr. 15, 1931	344	1,360	1,460	1.40	18.88	1,390	1,620	21.03
1932	-	7,760	May 5, 1932	536	1,860	1,930	1.85	25.14	1,944	1,964	25.59
1933	-	13,200	May 9, 1933	252	2,290	2,078	1.99	27.00	2,202	1,994	25.99
1934	-	9,040	Apr. 21, 1934	456	1,951	1,993	1.91	25.90	1,955	2,026	26.34
1935	-	8,170	June 21, 1935	430	1,982	1,889	1.81	24.57	1,963	1,779	23.11
1936	-	12,400	Mar. 21, 1936	173	2,404	2,455	2.35	32.04	2,436	2,729	35.61
1937	-	9,600	May 17, 1937	63	2,305	2,345	2.24	30.47	2,304	2,320	30.14
1938	-	9,600	Apr. 22, 1938	317	1,896	2,123	2.03	27.59	1,945	2,045	26.58
1939	-	8,030	May 11, 1939	605	1,857	1,634	1.56	21.22	1,766	1,501	19.48
1940	-	10,000	May 4, 1940	322	1,462	1,484	1.42	19.33	1,419	1,461	19.03
1941	-	8,730	Apr. 17, 1941	-	1,233	929	.889	12.07	1,211	923	12.00
1942	-	12,700	June 19, 1942	75	1,520	1,696	1.62	22.02	1,584	1,709	22.21
1943	-	15,700	June 18, 1943	468	1,854	2,030	1.94	26.40	2,048	2,256	29.33
1944	-	8,380	May 7, 1944	504	1,957	1,834	1.76	23.90	1,801	1,741	22.68
1945	1031	9,670	May 20, 1945	540	2,273	2,306	2.21	29.97	2,372	2,407	31.27
1946	1051	5,930	May 19, 1946	390	1,922	1,801	1.72	23.38	1,810	1,890	24.54
1947	1081	11,200	May 16, 1947	355	2,399	2,420	2.32	31.44	2,393	1,938	25.16
1948	1111	4,550	May 24, 1948	100	1,494	1,449	1.39	19.85	1,494	1,630	21.20
1949	1141	4,570	Apr. 24, 1949	243	1,500	1,471	1.41	19.07	1,467	1,456	18.89
1950	1171	4,620	Apr. 22, 1950	405	1,682	1,793	1.71	23.16	-	-	-

a Apr. 23, 30, May 1, 2, 1913.

Note.--Adjusted runoff and monthly records for period Oct. 1, 1922, to Dec. 31, 1943, not previously published. Yearly records for period 1923-1944 not previously published.

## 79. Androscoggin River at Berlin, N. H.

Location.--Lat 44°28'25", long. 71°10'14", at Riverside plant of Brown Paper Co., Berlin, Coos County, and three-quarters of a mile upstream from Dead River.

Drainage area.--1,350 sq mi (revised).

Gage.--Staff gages. Datum of gage is 1,010 ft above mean sea level (levels by Jackson and Moreland survey). Prior to Nov. 21, 1921, staff gages at upper mill at different datum.

Average discharge.--15 years (1913-28), 2,313 cfs (adjusted for storage).

Extremes.--1913-28: Maximum daily discharge, 20,000 cfs June 18, 1917, Apr. 30, 1923; minimum daily, 960 cfs Apr. 2, 1923.

Remarks.--Discharge determined by computation of flow over dam and through wheels and gates. Flow regulated by Mooselookmeguntic, Upper and Lower Richardson, Azischoos, and Umbagog Lakes. Runoff adjusted for change in contents in Mooselookmeguntic Lake (see p. 90), Upper and Lower Richardson Lakes (see p. 92), Azischoos Lake (see p. 93), and Umbagog Lake (see p. 94).

Cooperation.--Records furnished by Union Water Power Co.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1913	-	-	-	2,580	2,210	4,050	8,100	5,100	3,540	2,000	1,860	1,670	-
1914	1,770	1,840	1,920	1,840	1,700	1,950	3,020	4,890	1,810	1,800	1,740	1,750	2,170
1915	1,750	1,700	1,640	1,580	1,600	1,430	2,300	1,950	1,540	1,750	1,640	1,690	1,710
1916	1,750	1,760	1,860	1,840	1,800	1,850	3,210	3,750	6,670	2,970	2,560	2,040	2,660
1917	2,000	2,100	2,180	2,070	2,260	2,450	3,140	3,880	10,600	2,860	2,030	2,050	3,120
1918	2,190	2,450	2,220	2,210	2,020	2,100	2,920	2,420	1,960	1,930	1,690	1,670	2,170
1919	2,360	2,640	2,230	2,130	1,870	1,970	3,120	5,130	2,260	1,860	1,770	1,800	2,440
1920	1,770	1,880	1,900	1,820	1,890	1,940	2,960	3,370	2,380	1,900	1,900	1,940	2,140
1921	2,000	2,120	2,260	2,110	2,100	3,580	2,680	1,980	1,730	1,600	1,600	1,600	2,100
1922	1,510	1,410	1,350	1,330	1,300	1,380	3,730	2,370	3,760	2,430	1,990	1,940	2,040
1923	1,910	1,910	1,910	1,840	1,820	1,500	3,740	4,280	2,150	1,880	1,780	1,730	2,210
1924	1,580	1,670	1,730	1,890	1,830	1,750	2,020	4,260	1,820	1,700	1,640	2,350	2,020
1925	1,780	2,280	2,050	1,930	2,120	2,610	3,500	2,500	2,480	2,270	1,970	1,890	2,280
1926	1,940	3,670	2,520	2,240	2,290	2,260	2,460	4,720	2,230	2,170	2,020	1,890	2,540
1927	1,780	1,790	1,850	1,820	1,830	1,950	2,850	2,130	1,960	1,930	1,780	1,740	1,950
1928	1,830	3,280	3,080	2,410	2,410	2,450	3,490	7,200	3,430	2,110	2,000	1,960	2,970

† Corrected.

Note.--Records for periods Jan. 1 to Sept. 30, 1913, and Oct. 1, 1922, to Sept. 30, 1928, not previously published.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1913	-	-	-	1.78	0.81	4.56	8.79	4.74	2.24	0.73	0.18	0.48	-
1914	1.81	1.99	0.66	.38	.20	.85	4.72	8.28	.94	.90	.42	.25	21.40
1915	.37	.94	.72	.62	.76	.96	5.32	2.69	.72	3.03	1.99	.80	18.92
1916	.68	.90	1.20	1.40	1.19	1.15	6.02	5.59	5.34	2.46	1.50	1.00	28.43
1917	1.02	1.23	1.70	.83	.29	.77	4.56	7.29	9.10	1.67	1.78	.63	30.87
1918	2.34	1.52	.32	.31	.45	.68	5.87	4.62	1.36	1.14	.29	1.72	20.62
1919	4.15	2.40	.96	.62	.25	1.38	5.70	5.53	1.27	-.03	.10	.76	23.09
1920	1.89	2.67	.90	.02	-.07	1.44	5.78	5.87	1.46	1.45	.85	1.22	23.48
1921	1.20	1.33	2.44	.69	.17	5.03	5.03	.71	.19	.17	.17	.04	17.17
1922	.86	1.29	.98	.41	.15	1.82	8.12	3.74	4.00	1.35	1.83	.58	25.13
1923	.39	.51	.39	.67	.12	.09	8.21	6.51	1.66	.62	.28	.19	19.64
1924	.54	1.51	2.07	.88	.31	.09	3.64	7.74	.95	.90	.80	3.09	22.52
1925	.41	2.19	1.02	.45	1.64	2.82	5.97	2.81	1.92	1.08	.19	1.68	22.18
1926	3.67	3.85	.44	.59	.02	.14	2.16	8.98	2.87	.91	.32	.49	24.44
1927	1.18	2.59	.77	.38	.17	1.63	5.00	4.04	1.41	.62	.45	.24	18.46
1928	2.72	5.66	2.80	1.03	.30	.68	5.62	8.12	2.41	.44	1.07	1.54	32.39

Note.--Runoff in inches not previously published. Negative figures indicate that evaporation and seepage from reservoirs exceeded inflow.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed	Adjusted	
		Maximum day		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1913	-	#12,100	Mar. 28, 1913	-	-	-	-	-	#3,050	#2,860	#28.77
1914	401	14,300	May 10, 1914	1,500	2,170	2,120	1.57	21.40	2,130	1,880	18.97
1915	401	4,300	July 9, 1915	1,000	1,710	1,680	1.39	18.92	1,740	1,360	19.67
1916	431	9,500	June 11, 12, 1916	1,680	2,660	2,830	2.10	28.43	2,730	2,940	29.60
1917	451	20,000	June 18, 1917	1,500	3,120	3,060	2.27	30.87	3,180	3,100	31.10
1918	471	6,300	Oct. 31, 1917	1,570	2,170	2,060	1.53	20.62	2,200	2,390	23.95
1919	501	10,000	May 22, 23, 1919	1,500	2,440	2,300	1.70	23.09	2,300	2,090	21.04
1920	501	5,600	Apr. 24, 1920	1,600	2,140	2,330	1.73	23.48	2,210	2,280	22.99
1921	521	8,000	Mar. 28, 1921	1,550	2,100	1,710	1.27	17.17	1,920	1,520	15.33
1922	541	9,300	Apr. 18, 1922	1,220	2,040	2,500	1.85	25.13	2,160	2,310	23.29
1923	-	20,000	Apr. 30, 1923	960	2,210	1,980	1.47	19.64	2,140	2,260	22.67
1924	-	6,900	May 14, 1924	1,470	2,020	2,230	1.65	22.52	2,120	2,190	22.02
1925	-	6,000	Mar. 29, 1925	1,570	2,280	2,210	1.64	22.18	2,450	2,640	26.52
1926	-	11,000	May 4, 1926	1,700	2,540	2,430	1.80	24.44	2,310	2,090	21.02
1927	-	6,550	Apr. 23, 1927	1,600	1,950	1,840	1.36	18.46	2,180	2,490	25.10
1928	-	13,000	May 25, 26, 1928	1,190	2,970	3,210	2.38	32.38	2,790	2,610	26.43

\* Not previously published.

Note.--Adjusted figures and records for period Oct. 1, 1922, to Sept. 30, 1928, not previously published.

## 80. 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.

Gage.--Water-stage recorder. Datum of gage is 832.88 ft above mean sea level, datum of 1929.

Average discharge.--22 years (1928-50), 2,457 cfs (adjusted for storage).

Extremes.--1929-50: Maximum discharge, 19,900 cfs Mar. 22, 1936 (gage height, 9.99 ft), from rating curve extended above 12,000 cfs; minimum, 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.--Flow regulated by power plants above station and by Kennebago, Mooselookmeguntic, Rangeley, Upper and Lower Richardson, Azischoos, and Umbagog Lakes. Runoff adjusted for change in contents in Kennebago Lake since September 1931 (see p. 90), Mooselookmeguntic Lake, (see p. 90), Rangeley Lake since September 1931 (see p. 91), Upper and Lower Richardson Lakes (see p. 92), Azischoos Lake (see p. 93), and Umbagog Lake (see p. 94).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	2,070	2,070	2,110	2,220	2,250	2,340	4,270	8,210	2,470	2,210	1,850	1,790	2,830
1930	1,680	1,640	1,610	1,440	1,420	1,680	3,420	4,140	4,000	2,040	1,830	1,740	2,220
1931	1,650	1,590	1,630	1,610	1,580	1,580	3,100	2,100	2,080	1,730	1,670	1,710	1,830
1932	1,710	1,680	1,920	2,340	2,010	1,910	3,440	4,480	3,020	1,830	1,800	2,220	2,360
1933	2,080	2,180	2,270	2,400	2,250	2,140	4,820	7,040	2,900	2,150	1,860	1,790	2,830
1934	1,698	1,714	1,942	1,954	2,050	2,129	6,184	4,130	1,970	2,020	1,787	1,678	2,436
1935	1,592	1,692	1,866	2,105	2,308	2,361	3,807	3,628	5,133	2,150	1,755	1,693	2,503
1936	1,615	1,606	1,726	1,601	1,600	7,684	5,068	8,184	1,982	1,785	1,692	1,639	3,028
1937	1,803	1,998	2,207	2,796	2,623	2,965	3,669	10,050	2,585	1,960	1,872	1,821	3,038
1938	1,786	1,610	1,977	2,319	2,209	2,672	4,918	3,898	1,916	1,807	1,845	2,583	2,477
1939	1,875	1,932	2,289	2,386	2,310	2,667	4,082	5,947	2,769	1,993	1,853	1,762	2,710
1940	1,783	1,797	1,665	1,635	1,703	1,667	2,201	6,104	2,549	1,798	1,608	1,628	2,184
1941	1,610	1,752	1,787	1,820	1,791	1,841	3,349	1,746	1,617	1,585	1,515	1,406	1,824
1942	1,374	1,441	1,483	1,388	1,410	1,505	4,538	3,008	4,607	1,922	1,708	1,632	2,165
1943	1,619	1,660	1,725	1,649	1,616	1,646	2,530	5,661	5,803	2,095	2,453	2,501	2,584
1944	2,051	3,229	2,960	2,505	2,100	2,373	3,372	5,511	2,063	1,621	1,661	1,598	2,609
1945	1,696	1,788	1,926	2,201	2,304	4,149	6,214	6,990	2,522	2,282	1,820	1,819	2,980
1946	2,155	2,445	2,453	2,527	2,513	3,754	2,530	4,091	2,206	2,012	1,860	1,702	2,524
1947	1,786	1,786	2,139	2,581	2,745	3,282	5,702	8,185	4,476	2,085	2,161	1,936	3,077
1948	1,629	1,613	1,315	1,376	1,323	1,366	3,154	4,244	1,770	1,841	1,805	1,757	1,911
1949	1,429	1,548	1,821	1,915	1,886	1,968	3,473	2,127	1,750	1,611	1,765	1,570	1,905
1950	1,435	1,444	1,546	1,669	2,090	2,118	3,642	2,976	2,136	2,685	1,990	2,034	2,146

\* Not previously published; estimated on basis of flow at power plant upstream.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	1.96	2.29	1.11	1.07	0.51	1.26	6.58	8.81	1.38	0.56	0.25	0.07	25.85
1930	.36	.96	.43	1.22	.83	1.26	5.92	7.61	3.53	1.26	.36	.41	24.15
1931	.42	1.31	.74	.39	.28	.58	5.50	4.15	2.33	.87	.99	1.61	19.17
1932	1.31	1.89	1.06	2.56	.64	.44	5.65	4.70	1.25	1.94	1.14	1.69	24.27
1933	1.25	2.66	.89	.74	.36	.49	7.09	8.62	1.37	.90	1.48	.14	25.99
1934	1.83	1.11	.98	.64	.19	.82	10.14	5.80	1.42	.67	.15	.95	24.70
1935	.26	2.06	1.72	1.44	.49	.86	5.49	6.66	4.06	.89	-.29	.34	23.96
1936	.62	1.31	1.03	.45	.09	11.66	4.92	8.36	.70	.59	.27	.73	30.73
1937	2.54	1.77	1.95	2.53	1.05	1.01	5.03	10.92	2.05	.93	.56	.32	30.66
1938	1.66	2.40	1.59	1.11	.93	1.75	7.45	4.14	.97	1.28	.77	2.86	26.93
1939	1.31	.96	3.07	.67	.48	.48	3.96	10.09	2.19	.87	.49	.21	24.78
1940	1.33	1.56	.82	.36	.14	.52	2.93	10.41	2.29	1.03	-.02	.67	22.04
1941	.12	2.66	1.04	.93	.58	.36	6.29	1.59	.64	.88	.09	.15	15.13
1942	.72	1.80	.75	.82	.41	.99	7.68	5.57	3.86	.29	.00	.42	23.31
1943	.84	1.57	.96	.46	.48	1.09	3.15	10.27	4.79	1.02	1.78	1.08	27.47
1944	2.17	3.25	.95	.51	.35	.66	3.83	9.37	1.54	1.08	.51	.80	24.82
1945	2.11	1.48	1.05	1.07	.40	4.74	8.99	5.73	1.71	1.28	.27	1.19	30.02
1946	2.88	1.96	1.18	.84	.62	4.93	4.47	4.48	1.25	.28	.75	.28	23.92
1947	2.43	2.31	2.17	1.27	1.42	1.35	5.18	9.75	3.51	1.11	.11	.26	30.87
1948	.01	.53	.56	.18	.14	2.35	6.40	6.81	1.11	.45	.19	-.14	18.59
1949	.27	2.29	.64	1.68	.44	1.54	6.35	3.53	1.42	.36	.06	.23	19.81
1950	.34	1.07	1.65	2.18	.78	.95	6.19	5.00	2.24	.83	.70	.44	22.37

Note.--Adjusted runoff for periods 1929-31, 1940-50 not previously published. Negative figures indicate that evaporation and seepage from reservoirs exceeded inflow.

## ANDROSCOGGIN RIVER BASIN

Yearly discharge, in cubic feet per second, of Androscoggin River near Gorham, N. H.										
Year	W.S.P. no.	Water year ending Sept. 30								
		Observed				Adjusted			Calendar year	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean
		Discharge	Date							Runoff in inches
1929	681	13,900	May 4, 1929	1,710	2,630	2,600	1.91	25.85	2,720	2,240
1930	696	10,100	May 27, 1930	1,300	2,220	2,420	1.78	24.15	2,220	2,500
1931	711	6,820	June 10, 1931	1,480	1,830	1,930	1.42	19.17	1,870	2,100
1932	726	8,820	May 4, 1932	1,620	2,360	2,430	1.76	24.27	2,460	2,480
1933	741	13,900	May 4, 1933	1,720	2,930	2,620	1.92	25.99	2,730	2,520
1934	756	13,200	Apr. 20, 1934	1,430	2,436	2,478	1.82	24.70	2,419	2,430
1935	781	11,500	May 1, 1935	1,510	2,503	2,410	1.77	23.98	2,486	2,501
1936	801	19,900	Mar. 22, 1936	1,470	3,028	3,079	2.26	30.73	3,117	3,410
1937	821	15,500	May 16, 1937	1,640	3,038	3,078	2.26	30.66	3,002	3,018
1938	851	11,900	Apr. 21, 1938	1,540	2,477	2,704	1.98	26.93	2,572	2,672
1939	871	14,400	May 10, 1939	1,630	2,710	2,487	1.82	24.76	2,568	2,323
1940	891	15,500	May 4, 1940	1,480	2,184	2,206	1.62	22.04	2,174	2,216
1941	921	9,940	Apr. 17, 1941	1,360	1,824	1,520	1.12	15.13	1,752	1,464
1942	951	14,800	June 18, 1942	1,320	2,165	2,341	1.72	23.31	2,226	2,351
1943	971	14,500	June 19, 1943	1,550	2,584	2,760	2.02	27.47	2,852	3,060
1944	1001	12,400	May 7, 1944	1,450	2,609	2,486	1.82	24.82	2,373	2,313
1945	1031	12,700	Mar. 30, 1945	1,560	2,980	3,013	2.21	30.02	3,118	3,153
1946	1051	7,780	Mar. 30, 1946	1,610	2,524	2,403	1.76	23.92	2,412	2,492
1947	1081	14,200	June 4, 1947	1,570	3,077	3,098	2.27	30.87	2,971	2,516
1948	1111	7,180	Apr. 2, 1948	795	1,911	1,866	1.37	18.59	1,840	2,076
1949	1141	7,280	Apr. 16, 1949	1,280	1,905	1,876	1.38	18.81	1,874	1,863
1950	1171	9,800	Apr. 21, 1950	1,250	2,146	2,247	1.65	22.37	-	-

\* Not previously published.

Note.--Adjusted runoff for periods 1929-31, 1940-50 not previously published.

## Androscoggin River near Shelburne, N. H.

Location--Lat 44°24'20", long. 71°04'05", on downstream side of left end of steel highway bridge, about 5½ miles below mouth of Peabody River, and about 6 miles above Wild River, Shelburne, Coos County.

Drainage area--1,500 sq. mi.

Gage--Chain gage. Altitude of gage is 679 ft (from topographic map).

Remarks--Records for May 30, 1903, to May 1, 1907, published in Water-Supply Papers 97, 124, 165, 201, and 241, have been found to be in error on the basis of re-study of the original data and comparison with records for nearby stations. Those records are not published herein and should not be used.

## 81. Androscoggin River at Rumford, Maine

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

Drainage area--2,067 sq. mi.

Gage--Gages in pond above dam and in tailrace of upper power plant. Altitude of lower gage is 505 ft (from river profile map). Prior to Aug. 1, 1937, gages in pond and tailrace of middle plant 2,300 ft downstream at different datum.

Average discharge--58 years (1892-1950), 3,608 cfs (adjusted for storage).

Extremes--1892-1950: Maximum discharge, 74,000 cfs Mar. 20, 1936; minimum daily discharge, 625 cfs Mar. 27, 1911.

Remarks--Discharge computed from flow over dam and through wheels and gates. Flow regulated by Kennebec, Mooselookmeguntic, Rangeley, Upper and Lower Richardson, Azisconos, and Umbagog Lakes. Runoff adjusted for change in contents in Kennebec Lake since September 1931 (see p. 90), Mooselookmeguntic Lake (see p. 90), Rangeley Lake since September 1931 (see p. 91), Upper and Lower Richardson Lakes since October 1900 (see p. 92), Azisconos Lake since April 1911 (see p. 93), and Umbagog Lake (see p. 94).

Cooperation--Records furnished by Rumford Falls Power Co.

Monthly and yearly mean discharge, in cubic feet per second (observed), of Androscoggin River at Rumford, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1892	-	-	-	-	-	-	-	-	7,410	7,730	4,840	4,030	-
1893	2,780	5,720	3,200	3,180	2,990	3,190	5,030	17,290	5,720	2,870	3,300	2,690	4,846
1894	3,930	3,030	2,630	2,720	1,950	4,030	9,470	8,240	5,100	1,930	2,630	2,230	3,987
1895	2,500	3,040	2,090	1,800	1,250	1,230	12,000	7,628	2,873	1,775	1,819	1,989	3,332
1896	2,539	3,566	4,180	2,916	1,731	5,443	12,444	7,532	3,102	2,002	1,918	1,926	4,109
1897	2,104	3,062	2,008	1,821	1,686	1,810	7,913	11,621	6,998	6,605	2,345	1,592	4,142
1898	1,606	2,282	2,596	1,947	1,700	5,152	9,309	9,026	4,743	1,883	1,703	1,947	3,664
1899	2,821	2,746	2,189	2,111	1,843	1,848	8,709	10,114	3,238	1,817	1,428	1,580	3,375
1900	1,604	1,733	1,606	1,408	2,553	2,109	9,763	12,633	4,127	2,201	1,574	1,596	3,573
1901	2,213	3,945	2,331	1,895	1,832	2,463	14,891	10,714	4,420	2,671	2,820	1,590	4,315
1902	2,224	1,606	3,764	2,551	2,053	8,718	7,888	8,440	6,604	2,895	2,973	2,438	4,362
1903	2,835	3,031	2,329	2,180	2,080	9,730	6,820	4,100	4,550	2,270	1,900	1,510	3,603
1904	1,880	1,720	1,590	1,010	740	1,600	6,010	10,300	2,900	1,810	1,550	1,680	2,737
1905	2,520	1,690	1,640	1,907	1,572	2,836	5,350	5,685	3,286	2,937	2,990	2,777	2,940
1906	2,008	2,058	2,035	2,350	1,850	1,360	5,410	8,920	5,960	2,420	1,790	1,530	3,140
1907	1,950	1,820	1,880	1,550	1,390	1,940	5,680	9,640	3,740	2,970	2,040	2,460	3,050
1908	4,480	7,570	3,770	2,610	2,790	3,670	6,920	9,030	4,220	1,730	1,600	1,390	4,150
1909	1,560	1,510	1,120	1,350	1,640	1,750	10,200	10,100	4,000	1,850	1,650	1,860	3,210
1910	1,630	1,770	1,590	2,669	1,965	3,923	8,417	4,419	3,672	1,678	1,770	1,676	2,929
1911	1,447	1,646	1,436	1,440	951	789	5,080	5,020	1,790	1,380	1,450	1,540	2,000
1912	2,020	2,240	2,650	2,330	2,300	2,580	7,750	5,470	4,480	1,980	2,250	2,360	3,190
1913	3,050	3,150	2,790	3,080	2,550	6,630	8,480	5,360	3,650	2,230	2,000	2,130	3,760
1914	3,700	4,010	2,930	2,360	2,150	3,170	6,910	6,820	2,230	2,140	2,000	1,830	3,330
1915	1,760	1,890	1,750	2,000	2,800	2,150	4,380	3,140	1,830	3,390	2,610	1,900	2,470
1916	1,950	2,170	2,430	2,470	2,750	2,750	6,600	6,060	8,710	3,740	3,050	2,560	3,770
1917	2,540	2,630	2,990	2,510	2,510	3,220	6,070	5,690	12,200	3,220	2,990	2,350	4,070
1918	3,270	2,990	2,530	2,590	2,500	3,130	6,520	4,430	2,700	2,550	2,500	2,850	3,000
1919	3,730	3,900	3,400	2,970	2,490	4,130	5,610	6,050	3,000	2,280	2,150	2,400	3,480
1920	2,460	3,510	2,660	2,580	2,310	3,710	8,230	6,810	3,260	2,270	2,360	2,460	3,530
1921	3,000	2,780	4,320	2,960	2,700	6,960	6,420	3,130	2,010	1,820	1,800	1,630	3,300
1922	1,750	2,090	2,300	1,780	1,650	3,500	9,460	5,730	6,980	3,760	2,730	2,540	3,690
1923	2,420	2,380	2,340	2,640	2,400	2,220	8,410	7,270	2,970	2,060	1,880	1,730	3,220
1924	1,900	2,060	2,960	2,540	2,210	2,260	4,950	8,870	2,480	2,080	2,080	1,810	3,310
1925	2,910	4,190	2,770	2,470	3,860	5,000	6,410	4,030	2,970	3,050	2,270	2,240	3,510
1926	3,110	5,520	4,010	2,850	2,740	2,630	4,570	7,600	3,530	2,570	2,250	2,100	3,640
1927	2,270	3,640	2,360	2,310	2,280	3,630	5,210	4,440	2,990	2,840	2,420	2,380	3,060
1928	3,900	7,230	4,830	3,690	3,500	3,670	7,190	9,960	4,980	2,800	2,730	2,970	4,780
1929	2,840	3,900	2,780	3,320	2,910	3,860	7,950	10,400	2,980	2,450	2,030	1,980	3,880
1930	2,030	1,920	1,820	1,860	1,890	2,780	7,810	7,030	6,010	2,930	2,540	2,300	3,390
1931	1,980	2,730	2,020	1,830	1,780	2,170	7,170	4,840	4,700	2,420	2,040	2,430	3,010
1932	2,380	2,500	2,620	3,560	2,670	2,520	8,010	6,530	3,660	2,450	2,360	3,800	3,590
1933	3,720	4,520	2,980	2,860	2,630	2,560	10,400	10,200	3,630	2,760	2,890	2,130	4,280
1934	2,866	2,415	2,273	2,392	2,304	2,722	12,190	6,416	2,690	2,513	2,095	2,554	3,616
1935	2,206	3,014	2,828	3,055	2,776	3,259	8,030	6,409	7,352	2,865	2,104	2,075	3,826
1936	1,860	2,317	2,088	2,082	1,849	17,420	8,667	10,380	2,472	2,025	1,823	1,864	4,593
1937	2,902	2,699	3,805	4,169	3,530	3,781	7,961	16,390	4,003	2,657	2,296	2,197	4,714
1938	3,607	4,254	3,191	3,708	3,124	4,346	9,042	5,688	2,474	2,574	2,339	4,783	4,090
1939	2,649	2,550	5,291	2,980	2,638	5,010	7,488	10,320	3,519	2,092	1,967	3,905	3,905
1940	2,081	2,390	2,157	1,708	1,765	1,742	5,439	12,610	4,003	3,367	1,948	2,446	3,395
1941	1,905	3,039	2,451	2,551	2,451	2,132	6,215	2,550	1,930	2,014	1,686	1,517	2,513
1942	1,568	1,934	1,902	1,803	1,514	2,360	9,851	5,026	6,918	2,300	1,838	1,888	3,235
1943	2,013	2,731	2,437	1,861	1,937	2,420	5,451	11,320	7,316	2,488	3,201	3,307	3,880
1944	4,195	5,731	3,575	2,915	2,331	2,661	6,971	10,290	3,624	2,405	1,878	2,041	4,055
1945	2,330	2,556	2,657	3,185	2,538	7,702	10,560	11,010	3,837	2,973	2,155	2,280	4,493
1946	3,654	3,429	3,595	3,566	2,938	7,920	5,146	6,364	2,965	2,266	2,914	2,192	3,913
1947	3,283	2,914	2,666	3,487	4,538	5,119	8,044	13,230	7,142	3,267	2,495	2,063	4,871
1948	1,652	1,897	1,429	1,436	1,427	3,255	6,434	8,362	2,672	1,853	1,938	1,754	2,645
1949	1,631	3,097	2,474	3,380	2,305	3,233	7,029	3,714	2,304	1,776	1,828	1,750	2,874
1950	1,657	2,098	2,353	2,583	2,486	2,824	9,158	5,227	3,188	2,964	2,136	2,202	3,236

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1892	-	-	-	-	-	-	-	-	4.84	3.97	2.19	2.09	-
1893	1.10	3.88	1.38	1.11	1.10	1.44	2.86	11.87	2.80	.94	1.43	1.20	31.11
1894	2.03	1.32	1.27	1.46	.93	2.31	6.19	4.69	3.17	1.37	.55	.81	26.10
1895	1.26	1.54	.92	.85	.57	.65	7.60	5.21	1.51	.55	.82	.59	22.07
1896	1.13	2.59	2.82	1.67	.53	3.14	7.74	4.00	1.64	1.08	.66	.97	26.97
1897	1.06	2.16	.88	.56	.34	5.53	5.66	7.15	3.59	3.45	1.02	.29	36.71
1898	.54	1.60	1.66	.81	.63	2.64	6.25	5.45	4.62	.56	1.00	.24	24.23
1899	1.98	1.65	.94	.81	.48	.72	5.91	6.19	1.06	1.09	.13	.21	21.17
1900	.55	.92	.95	.85	1.34	1.23	6.54	7.96	1.99	1.24	.47	.32	24.36
1901	1.07	2.82	1.24	.72	.46	.79	10.24	5.66	2.26	1.38	1.41	.33	28.38
1902	.78	.36	2.77	1.09	.74	5.94	5.39	4.76	3.31	1.49	1.43	1.25	29.31
1903	1.65	1.57	1.09	.79	.71	6.40	4.03	1.98	2.31	1.03	.72	.24	22.52
1904	.83	.61	.50	.48	.40	.80	4.06	8.02	1.13	.56	.55	.96	19.00
1905	1.88	.81	.25	.28	.18	1.61	4.16	4.55	1.77	1.64	1.48	1.34	19.95
1906	.68	.83	.96	1.22	.55	.56	3.85	6.52	2.94	.95	.33	.31	19.70
1907	1.16	.82	.37	.49	.26	.73	3.97	7.43	2.02	1.87	.72	1.24	21.06
1908	3.23	3.84	2.14	1.07	1.00	1.53	4.86	5.58	1.83	.48	.51	-.06	26.01
1909	.25	.17	.45	1.70	.87	.96	7.15	7.50	1.73	.47	.12	.72	21.09
1910	.72	.84	.42	1.21	.82	2.71	6.34	2.99	1.80	.42	.63	.35	19.25

Note.--Runoff for periods 1892-1910 not previously published. Negative figure indicates that evaporation and seepage from reservoirs exceeded inflow.

Monthly and yearly runoff, in inches (adjusted), of Androscoggin River at Rumford, Maine--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1911	.52	.70	.15	.64	.36	.36	4.06	4.64	1.16	.19	.62	.77	14.17
1912	1.52	1.38	1.92	.65	.28	.78	6.43	4.86	2.08	.26	1.09	1.32	22.57
1913	1.71	1.96	1.36	1.44	.70	4.43	5.94	3.24	1.52	.60	.19	.56	23.65
1914	2.26	2.48	.77	.53	.36	1.23	5.18	6.47	.84	.77	.42	.21	21.52
1915	.26	.71	.55	.64	1.10	1.03	4.60	2.42	.63	2.89	1.85	.64	17.32
1916	.56	.81	1.10	1.27	1.27	1.32	5.78	4.95	4.59	2.03	1.37	.93	25.92
1917	.97	1.08	1.56	.79	.32	.83	4.56	5.76	6.81	1.29	1.70	.57	26.34
1918	2.13	1.28	.38	.30	.53	1.02	5.78	4.14	1.29	1.08	.53	1.76	20.22
1919	3.47	2.24	1.08	.88	.47	2.11	6.07	4.13	1.23	.16	.28	.62	21.94
1920	1.63	2.62	1.01	.32	.17	1.93	6.64	5.74	1.43	1.15	.81	1.08	24.53
1921	1.34	1.22	2.74	.93	.41	5.28	5.31	1.10	.28	.23	.22	.04	19.10
1922	.69	1.20	1.18	.52	.27	2.38	8.42	4.31	4.35	1.63	1.60	.70	27.25
1923	.54	.59	.50	.89	.37	.46	7.68	5.91	1.68	.51	.24	.12	19.67
1924	.53	1.44	2.04	.94	.40	.36	3.98	.98	.80	.77	.35	.23	23.19
1925	.90	2.46	1.07	.60	1.95	3.18	5.46	2.70	1.52	1.14	.29	1.29	22.46
1926	3.04	3.50	1.12	.73	.24	.30	2.54	7.47	2.58	.82	.33	.44	23.11
1927	1.04	2.69	.79	.51	.34	1.99	4.54	3.93	1.47	.91	.65	.50	19.36
1928	2.93	5.82	2.80	1.38	.77	1.13	5.67	6.86	2.41	.67	1.10	1.55	33.09
1929	1.72	2.01	1.10	1.33	.66	1.69	6.32	7.03	1.18	.50	.27	.15	23.95
1930	.43	.79	.40	1.04	.79	1.44	6.26	6.64	3.41	1.33	.64	.43	23.60
1931	.46	1.47	.71	.38	.28	.71	5.82	4.27	2.96	.96	.86	1.45	20.33
1932	1.23	1.68	1.09	2.38	.77	.63	6.20	4.24	1.16	1.63	1.07	1.96	24.04
1933	1.73	3.01	.98	.74	.43	.56	7.67	7.47	1.30	.94	1.54	.29	26.66
1934	1.86	1.11	.83	.67	.25	.87	9.93	5.10	1.32	.71	.27	1.10	24.02
1935	.51	2.08	1.67	1.48	.56	1.07	5.90	5.95	3.68	.99	.00	.43	24.52
1936	.55	1.25	.88	.57	.19	13.12	5.19	6.73	.73	.52	.29	.60	30.62
1937	2.28	1.55	2.19	2.43	1.14	1.12	5.63	10.73	2.12	1.00	.61	.42	31.21
1938	2.11	2.50	1.75	1.50	1.07	2.09	7.14	3.74	.94	1.27	.78	3.09	28.36
1939	1.29	.97	3.77	.77	.46	.51	4.46	9.10	1.83	.76	.45	.20	24.19
1940	1.04	1.35	.81	.28	.13	.38	3.68	10.49	2.29	1.00	.17	.68	22.50
1941	.24	2.44	1.05	.91	.67	.40	5.69	1.50	.59	.69	.15	.16	14.49
1942	.58	1.45	.73	.77	.32	1.13	7.93	4.80	3.79	.40	.07	.42	22.39
1943	.77	1.61	1.03	.42	.48	1.15	3.65	9.94	3.97	.89	1.58	1.15	26.64
1944	2.63	4.49	.97	.56	.35	.59	4.46	8.84	1.86	1.04	.31	.77	25.87
1945	1.74	1.38	1.10	1.26	.38	5.11	8.27	6.02	1.63	1.23	.37	1.04	29.73
1946	2.73	1.83	1.41	1.02	.65	5.58	4.36	4.22	1.23	.32	1.08	.45	24.88
1947	2.44	2.13	1.83	1.34	1.83	1.91	5.78	9.25	3.75	1.40	.25	.24	32.15
1948	.02	.55	.43	.15	.15	2.59	5.99	6.79	1.22	.42	.20	-.09	18.42
1949	.29	2.34	.78	1.92	.50	1.71	6.10	3.20	1.24	.33	-.07	.25	18.59
1950	.35	1.06	1.53	1.95	.72	1.02	7.06	4.55	2.05	.70	.54	.38	21.91

Note.--Runoff for periods 1911-1931, 1940-50 not previously published. Negative figures indicate that evaporation and seepage from reservoirs exceeded inflow.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30										Calendar year		
		Observed					Adjusted					Observed		Adjusted
		Maximum day		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date											
1893	69	38,060	May 18, 1893	1,600	4,846	4,738	2.29	31.11	4,654	4,451	29.37			
1894	69	22,230	Apr. 21, 1894	1,380	3,987	3,971	1.92	26.11	3,818	3,833	25.20			
1895	69	55,230	Apr. 15, 1895	1,230	3,332	3,360	1.63	22.07	3,554	3,790	24.89			
1896	69	39,010	May 2, 1896	1,390	4,109	4,250	2.08	27.97	3,849	3,861	25.53			
1897	69	22,906	July 15, 1897	1,055	4,142	4,070	1.97	26.71	4,073	4,010	26.41			
1898	69	16,748	Apr. 25, 1898	1,085	3,664	3,687	1.78	24.23	3,764	3,801	25.00			
1899	69	24,077	May 2, 1899	1,124	3,375	3,222	1.56	21.17	3,136	2,893	19.02			
1900	69	24,531	May 20, 1900	1,010	3,573	3,707	1.79	24.36	3,871	4,125	27.07			
1901	69	32,653	Apr. 22, 1901	1,343	4,315	4,327	2.09	28.38	4,241	4,133	27.16			
1902	82	27,785	Dec. 15, 1901	1,205	4,362	4,461	2.16	29.31	4,396	4,510	29.71			
1903	97	26,788	June 15, 1903	1,238	3,603	3,430	1.66	22.52	3,352	3,069	20.15			
1904	-	*18,200	Apr. 30, 1904*	*667	*2,737	2,684	1.40	19.00	*2,793	3,036	20.00			
1905	165	17,520	July 31, 1905	1,037	2,940	3,038	1.47	19.95	2,953	2,957	19.48			
1906	201	15,400	May 28, 1906	1,050	3,140	3,000	1.45	19.70	3,040	2,980	19.58			
1907	241	23,800	May 1, 1907	918	3,030	3,200	1.55	21.06	3,940	4,240	27.92			
1908	241	23,000	Nov. 3, 1907	1,150	4,150	3,950	1.91	26.01	3,180	2,690	17.67			
1909	261	23,600	Apr. 15, 1909	748	3,210	3,210	1.55	21.09	3,380	3,360	22.20			
1910	261	14,253	Apr. 27, 1910	1,160	2,930	2,930	1.42	19.25	2,890	2,840	18.64			
1911	301	15,000	May 2, 1911	625	2,000	2,160	1.04	14.17	2,200	2,680	17.62			
1912	321	17,000	Apr. 17, 1912	1,480	3,190	3,420	1.65	22.57	3,370	3,460	22.78			
1913	351	19,100	Mar. 26, 1913	1,260	3,760	3,610	1.75	23.65	3,860	3,770	24.13			
1914	381	23,900	Apr. 21, 1914	1,550	3,330	3,280	1.59	21.52	2,920	2,670	17.53			
1915	401	17,100	July 9, 1915	1,250	2,470	2,640	1.28	17.32	2,560	2,780	18.27			
1916	431	19,500	May 18, 1916	1,310	3,770	3,940	1.91	25.92	3,900	4,110	27.06			
1917	451	20,300	June 15, 1917	1,800	4,070	4,010	1.94	26.34	4,120	4,040	26.52			
1918	471	15,210	Oct. 31, 1917	1,490	3,200	3,090	1.49	20.22	3,350	3,540	23.22			
1919	501	14,600	Mar. 23, 1919	1,400	3,480	3,340	1.62	21.34	3,310	3,100	20.41			
1920	501	18,600	Apr. 14, 1920	1,710	3,530	3,720	1.80	24.53	3,660	3,730	24.57			
1921	521	16,800	Mar. 22, 1921	1,480	3,300	2,910	1.41	19.10	2,960	2,570	16.87			
1922	541	21,900	Apr. 14, 1922	1,310	3,690	4,150	2.01	27.25	3,770	3,920	25.61			
1923	561	35,800	Apr. 30, 1923	1,190	3,220	2,990	1.45	19.67	3,240	3,360	22.06			
1924	581	26,200	Sept. 11, 1924	1,090	3,310	3,520	1.70	23.19	3,510	3,580	23.61			
1925	601	23,400	Nov. 24, 1924	1,480	3,510	3,440	1.66	22.46	3,740	3,930	25.69			

\* Not previously published.

Note.--Adjusted records not previously published.



Yearly discharge, in cubic feet per second, of Androscoggin River at Rumford, Maine--Continued

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		Adjusted
		Maximum day		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1926	621	20,400	May 4, 1926	1,530	3,640	3,540	1.71	23.11	3,260	3,040	19.97
1927	641	11,600	Apr. 23, 1927	1,500	3,060	2,940	1.42	19.36	3,710	4,020	26.39
1928	661	39,100	Nov. 5, 1927	1,830	4,780	5,020	2.43	33.09	4,180	4,000	26.37
1929	681	22,000	May 4, 1929	1,430	3,880	3,650	1.77	23.95	3,640	3,150	20.74
1930	696	20,800	Apr. 8, 1930	990	3,390	3,590	1.74	23.60	3,470	3,750	24.62
1931	711	20,200	June 10, 1931	1,450	3,010	3,110	1.50	20.33	3,070	3,300	21.69
1932	726	24,000	Sept. 17, 1932	1,610	3,590	3,660	1.77	24.04	3,890	3,910	25.76
1933	741	24,500	Apr. 19, 1933	1,790	4,280	4,070	1.97	26.66	3,970	3,770	24.74
1934	756	23,900	Apr. 13, 1934	1,250	3,616	3,658	1.77	24.02	3,656	3,727	24.48
1935	781	19,000	Apr. 29, 1935	1,450	3,826	3,733	1.81	24.52	3,676	3,492	22.94
1936	801	68,300	Mar. 19, 1936	1,350	4,593	4,644	2.25	30.62	4,858	5,151	33.95
1937	821	26,700	May 8, 1937	1,760	4,714	4,754	2.50	31.21	4,850	4,868	31.94
1938	851	25,500	Sept. 22, 1938	1,510	4,090	4,317	2.09	28.36	4,047	4,147	27.25
1939	871	23,100	May 10, 1939	1,520	3,905	3,682	1.78	24.19	3,577	3,312	21.76
1940	891	32,200	May 4, 1940	1,470	3,395	3,417	1.65	22.50	3,458	3,500	23.03
1941	921	14,500	Apr. 16, 1941	1,370	2,513	2,209	1.07	14.49	2,347	2,069	13.51
1942	951	26,600	June 15, 1942	820	3,235	3,411	1.65	22.39	3,384	3,509	23.04
1943	971	22,300	May 13, 1943	1,560	3,880	4,056	1.96	26.64	4,409	4,617	30.32
1944	1001	23,700	Mar. 6, 1944	1,530	4,055	3,932	1.90	25.87	3,558	3,498	23.00
1945	1031	26,100	Mar. 30, 1945	1,710	4,493	4,526	2.19	29.73	4,758	4,793	31.48
1946	1051	16,000	Mar. 30, 1946	1,690	3,913	3,792	1.83	24.88	3,777	3,657	25.31
1947	1081	22,400	June 4, 1947	1,670	4,871	4,892	2.37	32.15	4,527	4,072	26.75
1948	1111	15,500	Apr. 2, 1948	890	2,845	2,800	1.35	18.42	3,030	3,166	20.83
1949	1141	12,200	Apr. 16, 1949	1,310	2,874	2,845	1.38	18.59	2,784	2,773	18.12
1950	1171	33,400	Apr. 21, 1950	1,350	3,236	3,337	1.61	21.91	-	-	-

Note.--Adjusted records for periods 1926-31, 1940-50 not previously published.

## 82. Swift River near Roxbury, Maine

Location.--Lat 44°38'30", long. 70°35'15"W on left bank  $2\frac{1}{2}$  miles downstream from Roxbury, Oxford County, and 6 miles upstream from mouth.

Drainage area.--95.8 sq mi.

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

Average discharge.--21 years (1929-50), 187 cfs.

Extremes.--1929-50: Maximum discharge, 14,500 cfs (revised) 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).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	26.8	17.6	9.2	-
1930	23.8	46.6	15.7	51.7	63.4	176	645	516	223	128	60.8	26.5	165
1931	52.2	173	70.2	33.0	24.6	59.1	552	419	246	60.4	43.7	136	155
1932	137	149	98.5	112	68.3	55.9	555	338	56.4	61.0	99.4	222	170
1933	175	414	96.2	57.4	41.2	41.9	683	596	73.0	74.9	150	46.2	204
1934	243	132	95.8	60.0	32.8	94.7	848	429	75.6	33.5	15.5	72.5	178
1935	69.3	146	123	154	42.8	76.4	718	492	358	81.6	41.4	48.9	196
1936	38.5	122	85.8	100	36.6	315	467	472	63.4	37.5	20.4	30.0	234
1937	214	126	268	150	178	170	529	799	156	72.2	40.6	52.5	230
1938	214	293	187	184	110	194	693	291	98.0	180	50.0	206	225
1939	104	101	303	73.0	47.2	47.5	406	847	108	40.0	37.3	23.0	179
1940	63.5	117	91.6	24.4	23.4	29.4	384	975	251	78.7	25.8	62.8	178
1941	27.5	170	86.2	62.8	95.9	36.4	537	111	42.4	39.1	18.9	22.3	103
1942	47.6	113	79.1	79.2	24.8	117	807	318	422	36.2	16.1	37.2	174
1943	75.5	163	89.6	35.0	61.6	93.3	355	868	322	97.8	179	101	204
1944	335	382	96.6	63.1	47.2	67.6	372	772	151	71.5	29.3	77.0	206
1945	123	138	124	147	44.9	522	793	518	156	86.6	36.6	70.8	231
1946	311	174	150	101	50.5	540	430	374	112	35.7	57.4	73.2	202
1947	183	196	124	90.8	214	144	513	810	300	88.9	22.9	19.5	225
1948	14.9	43.7	27.2	17.3	195	155	544	625	102	26.5	27.1	6.1	137
1949	41.3	250	134	165	55.8	158	576	270	95.0	34.1	12.7	31.8	162
1950	42.4	119	128	176	83.3	126	742	363	216	69.5	31.0	29.9	179

## ANDROSCOGGIN RIVER BASIN

Monthly and yearly runoff, in inches, of Swift River near Roxbury, Maine													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	-	-	-	-	0.36	0.24	0.12	
1930	0.29	0.54	0.19	0.62	0.69	2.12	7.51	6.21	2.60	1.55	.73	.31	23.36
1931	.63	2.02	.85	.40	.27	.71	6.43	5.04	2.87	.73	.53	1.58	22.06
1932	1.65	1.74	1.19	1.35	.77	.67	7.63	4.07	.66	.73	1.20	2.59	24.25
1933	2.11	4.82	1.15	.69	.45	.50	7.96	7.17	.88	.90	1.81	.54	28.95
1934	2.93	1.54	1.15	.72	.36	1.14	9.87	5.17	.88	.40	.19	.84	25.19
1935	.83	1.70	1.48	1.86	.47	.92	8.36	5.93	4.17	.98	.50	.57	27.77
1936	.46	1.42	1.03	1.20	.41	15.83	5.43	5.68	.74	.45	.25	.35	33.25
1937	2.57	1.47	3.23	1.81	1.94	2.04	6.16	9.62	1.82	.87	.49	.61	32.63
1938	2.57	3.41	2.25	2.21	1.20	2.34	8.07	3.51	1.14	2.17	.60	2.40	31.87
1939	1.26	1.17	3.64	.88	.51	.57	4.73	10.19	1.26	.48	.45	.27	25.41
1940	.76	1.36	1.10	.29	.26	.35	4.47	11.74	2.92	.95	.31	.73	25.24
1941	.33	1.98	1.04	.76	1.04	.44	6.26	1.34	.49	.47	.23	.26	14.64
1942	.57	1.32	.95	.95	.27	1.41	9.39	3.81	4.92	.44	.19	.43	24.65
1943	.91	1.90	1.08	.42	.67	1.12	4.14	10.45	3.75	1.18	2.16	1.17	28.95
1944	4.04	4.45	1.16	.76	.53	.81	4.33	9.29	1.76	.86	.35	.90	29.24
1945	1.48	1.61	1.49	1.76	.49	6.28	9.24	6.24	1.82	1.04	.44	.82	32.71
1946	3.75	2.03	1.81	1.21	.55	6.50	5.01	4.50	1.30	.43	.69	.85	28.63
1947	2.20	2.29	1.49	1.09	2.32	1.73	5.97	9.75	3.49	1.07	.28	.23	31.91
1948	.18	.51	.33	.21	.20	2.35	6.34	7.52	1.18	.32	.33	.07	19.54
1949	.50	2.31	1.61	1.98	.61	1.90	6.71	3.25	1.11	.41	.15	.37	21.51
1950	.51	1.38	1.54	2.12	.91	1.52	8.65	4.61	2.51	.94	.37	.35	25.31

Yearly discharge, in cubic feet per second									
Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	681	-	-	-	-	-	-	-	-
1930	696	4,570	Apr. 7, 1930	7.0	165	1.72	23.36	182	25.94
1931	711	3,580	May 24, 1931	13	155	1.62	22.06	183	23.14
1932	726	13,000	Sept. 17, 1932	10	170	1.77	24.25	195	27.75
1933	741	4,130	Nov. 20, 1932	17	204	2.13	28.95	187	26.49
1934	756	3,450	Apr. 12, 1934	5.4	178	1.86	25.19	167	23.58
1935	781	3,590	Apr. 28, 1935	12	196	2.05	27.77	188	26.67
1936	801	10,500	Mar. 19, 1936	9.1	234	2.44	33.25	265	37.61
1937	821	*5,070	May 7, 1937	8.5	230	2.40	32.63	237	33.59
1938	851	*7,680	Oct. 21, 1937	16	225	2.35	31.87	210	29.71
1939	871	3,580	May 7, 1939	10	178	1.87	25.41	159	22.56
1940	891	4,840	May 3, 1940	9.2	178	1.86	25.24	179	25.37
1941	921	2,380	Apr. 16, 1941	8.0	103	1.08	14.64	99.7	14.13
1942	951	*14,500	June 15, 1942	5.5	174	1.82	24.65	181	25.70
1943	971	10,200	June 16, 1943	19	204	2.13	28.95	245	34.71
1944	1001	9,800	Nov. 9, 1943	9.4	206	2.15	29.24	170	24.17
1945	1031	4,750	Mar. 29, 1945	11	231	2.41	32.71	252	35.72
1946	1051	4,020	Sept. 30, 1946	9.4	202	2.11	28.63	191	27.02
1947	1081	4,020	May 4, 1947	9.3	225	2.35	31.91	190	26.95
1948	1111	3,750	Apr. 9, 1948	3.8	137	1.43	19.54	166	23.54
1949	1141	1,900	May 3, 1949	5.0	152	1.59	21.51	141	19.92
1950	1171	10,800	Apr. 21, 1950	14	179	1.87	25.31	-	-

\* Revised.

## Androscoggin River at Dixfield, Maine

Location.--Lat 44°31'51", long. 70°27'51", on downstream side of bridge on highway between Dixfield and West Peru, Oxford County, and 1,000 ft upstream from Webb River.

Drainage area.--2,210 sq mi.

Gage.--Chain gage. Altitude of gage is 392 ft (from river profile map).

Remarks.--Records for August 1902 to July 1908, published in Water-Supply Papers 82, 97, 124, 165, 201, and 241, have been found to be in error on the basis of re-study of the original data and comparison with records for nearby stations. Those records are not published herein and should not be used.

## 83. 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.

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

Average discharge.--9 years (1941-50), 264 cfs.

Extremes.--1941-50: Maximum discharge, 3,810 cfs Apr. 21, 1950 (gage height, 6.04 ft); minimum, 16 cfs Oct. 1, 2, 1941.

Monthly and yearly mean discharge, in cubic feet per second, of Nezinscot River  
at Turner Center, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	-	-	-	-	-	-	-	-	-	-	-	-	-
1942	24.7	75.4	96.3	131	55.0	500	747	242	519	102	58.3	22.2	223
1943	61.4	134	192	70.3	99.4	274	714	656	169	97.6	121	67.8	223
1944	342	539	199	124	155	279	1,128	531	176	103	44.2	112	293
1945	150	297	387	276	142	807	749	890	416	182	75.2	69.7	372
1946	313	319	393	200	128	865	440	344	177	80.5	227	116	302
1947	355	257	198	216	478	530	795	572	250	160	61.3	31.2	324
1948	22.1	89.3	58.3	38.2	48.4	482	467	820	222	68.5	30.3	21.0	198
1949	24.0	228	200	551	151	459	685	259	108	50.7	24.1	19.8	230
1950	28.5	115	98.0	170	129	334	1,172	225	124	51.6	34.9	41.7	209

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	-	-	-	-	-	-	-	-	-	-	-	-	-
1942	0.17	0.48	0.58	0.88	0.32	3.37	5.52	1.64	3.39	0.69	0.39	0.26	17.69
1943	.41	.87	1.29	.47	.60	1.84	4.66	4.43	1.24	.66	.82	.44	17.73
1944	2.31	3.51	1.34	.84	.98	1.88	7.56	2.24	1.15	.69	.30	.73	23.53
1945	1.01	1.94	2.61	1.86	.86	5.44	4.89	6.00	2.71	1.22	.49	.46	29.49
1946	2.11	2.09	2.65	1.35	.78	5.83	2.87	2.32	1.16	.54	1.53	.76	23.99
1947	2.40	1.67	1.34	1.45	2.92	3.57	5.19	3.86	1.63	1.08	.41	.20	25.72
1948	.15	.58	.39	.26	.31	3.25	3.05	5.53	1.45	.46	.20	14	15.77
1949	.16	1.48	1.35	3.71	.92	3.09	4.47	1.74	.71	.34	.16	.13	18.26
1950	.19	.75	.66	1.15	.79	2.25	7.64	1.52	.81	.35	.24	.27	16.82

Yearly discharge, in cubic feet per second

Year	W.S.F. no.	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1941	951	-	-	-	-	-	-	-	-	-
1942	951	3,290	June 18, 1942	16	223	1.50	17.69	240	19.03	
1943	971	1,660	May 27, 1943	31	223	1.30	17.73	281	22.32	
1944	1001	3,050	Nov. 10, 1943	28	293	1.71	23.33	273	21.73	
1945	1031	2,550	Mar. 30, 1945	39	372	2.18	29.49	388	30.78	
1946	1051	1,750	Mar. 16, 1946	32	302	1.77	23.99	284	22.55	
1947	1081	2,180	Oct. 1, 1946	26	324	1.89	25.72	270	21.43	
1948	1111	2,970	May 19, 1948	18	198	1.16	15.77	222	17.64	
1949	1141	3,300	Jan. 1, 1949	17	250	1.54	18.26	213	16.87	
1950	1171	3,810	Apr. 21, 1950	22	209	1.22	16.82	-	-	

## 84. Gulf Island Pond near Lewiston, Maine

Location.--Lat 44°08'50", long. 70°12'25", at Gulf Island Dam on Androscoggin River, 3 miles upstream from Lewiston, Androscoggin County.

Drainage area.--2,860 sq mi.

Gage.--Staff gage. Datum of gage is at mean sea level.

Remarks.--Reservoir completed in 1926 for storage of water for hydro-electric power development. Capacity, 1,100,000,000 cu ft in top 10 ft of pond.

Cooperation.--Gage-height record furnished by Central Maine Power Co.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1926	-	-	-	-	-	-	-	-	-	-	-	92
1927	1,530	1,879	1,795	1,856	1,815	1,754	1,764	1,815	1,683	1,856	1,856	1,630
1928	1,856	1,856	1,925	1,858	1,909	1,803	1,902	1,975	2,022	1,758	1,535	1,939
1929	1,782	1,734	1,935	1,897	1,803	1,913	1,874	1,924	1,938	1,785	1,645	1,854
1930	1,869	1,866	1,922	1,776	1,923	1,959	1,876	1,913	2,088	1,913	1,904	1,987
1931	1,872	2,024	1,899	1,911	1,924	1,913	1,906	2,016	1,975	1,857	2,006	2,004
1932	2,032	1,994	2,037	1,994	2,044	1,968	1,926	1,940	1,902	1,985	1,906	2,040
1933	2,035	1,970	1,956	1,996	1,982	1,663	1,781	1,983	1,640	2,066	2,044	1,855
1934	2,078	1,873	1,909	2,073	1,987	1,830	1,722	1,909	1,982	2,071	2,084	1,910
1935	2,073	1,888	2,090	2,031	2,031	1,798	1,950	1,983	1,788	1,821	1,668	2,028
1936	1,956	2,013	1,867	1,863	1,924	1,946	1,870	2,080	1,937	1,803	1,989	1,862
1937	1,964	1,925	2,030	2,068	2,085	1,903	2,026	1,915	2,011	1,922	2,028	1,803
1938	2,032	1,971	1,704	2,276	1,975	1,975	2,024	2,489	2,227	2,464	2,540	2,350
1939	2,438	2,312	2,417	2,350	2,384	2,201	2,290	2,508	2,211	2,472	2,148	2,358
1940	2,388	2,439	2,493	2,271	2,287	2,436	2,453	2,398	2,490	2,367	2,414	2,432
1941	2,314	2,373	2,414	2,227	2,198	2,120	2,411	2,463	2,400	2,298	2,493	2,389
1942	2,327	2,499	2,287	2,363	2,403	2,417	2,483	2,509	2,461	2,295	2,452	2,462
1943	2,382	2,423	2,373	2,495	2,490	2,472	2,455	2,476	2,453	2,406	2,393	2,285
1944	2,465	2,490	2,298	2,437	2,386	2,365	2,438	2,437	2,442	2,493	2,355	2,425
1945	2,423	2,468	2,486	2,325	2,362	2,340	2,396	2,461	2,414	2,424	2,278	2,565
1946	2,420	2,461	2,486	2,389	2,295	2,343	2,486	2,501	2,377	2,408	2,420	2,500
1947	2,366	2,412	2,390	2,298	2,317	2,335	2,428	2,464	2,479	2,500	2,432	2,388
1948	2,316	2,479	2,308	2,354	2,486	1,448	2,355	2,493	2,285	2,323	2,418	2,348
1949	2,489	2,489	2,559	2,377	2,414	2,462	2,475	2,437	2,153	2,489	2,351	2,277
1950	2,393	2,300	2,463	2,473	2,298	2,406	2,461	2,431	2,404	2,406	2,312	2,336

## 85. Lake Auburn at East Auburn, Maine

Location.--Lat 44°08'10", long. 70°13'55", on outlet stream to Androscoggin River at East Auburn, Androscoggin County.

Drainage area.--17.7 sq mi.

Gage.--Staff gage. Altitude of gage is 198 ft (from topographic map).

Remarks.--Lake is used for storage of water for municipal supply, has usable capacity of 580,000,000 cu ft between gage heights 54.7 and 60.7 ft.

Cooperation.--Gage-height record furnished by Auburn Water District.

Month-end contents, in millions of cubic feet												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1928	-	-	-	496	496	556	532	532	508	452	419	408
1929	364	310	353	397	441	496	496	452	386	510	240	200
1930	171	144	144	118	144	353	474	463	452	419	397	353
1931	342	342	375	375	375	430	532	544	532	496	430	430
1932	331	300	310	353	386	397	568	532	474	430	397	375
1933	331	342	375	375	364	310	556	532	353	408	353	353
1934	353	342	331	353	386	556	520	496	419	353	320	496
1935	485	474	508	532	485	544	556	520	485	386	331	280
1936	240	260	280	342	485	628	532	452	375	331	270	230
1937	230	220	375	397	483	544	592	568	520	430	342	320
1938	364	568	496	496	485	520	556	544	520	463	397	353
1939	346	346	346	371	441	568	580	546	515	470	408	366
1940	419	474	496	568	532	496	556	580	556	496	452	430
1941	353	485	408	430	485	496	520	508	463	45	386	320
1942	290	280	290	310	310	544	616	568	616	568	496	474
1943	452	441	532	520	544	616	664	676	604	580	568	520
1944	604	664	568	532	544	616	652	544	568	532	452	485
1945	458	574	586	532	544	604	646	550	562	532	463	480
1946	520	604	592	556	520	628	568	544	485	441	474	474
1947	496	474	474	485	520	580	544	520	496	463	375	320
1948	270	260	260	250	240	364	441	568	496	430	353	290
1949	260	320	386	474	474	556	592	544	463	386	310	280
1950	250	260	270	320	342	485	664	520	485	408	364	300

## 86. Little Androscoggin River near South Paris, Maine

Location.--Lat 44°17'05", long. 70°32'10", on right bank just upstream from Biscoe Falls and  $4\frac{1}{2}$  miles upstream from South Paris, Oxford County.

Drainage area.--76.2 sq mi.

Gage.--Water-stage recorder and stone and concrete control. Datum of gage is 394.48 ft above mean sea level, datum of 1929. Sept. 14, 1913, to Apr. 24, 1924, staff or chain gage located on left bank directly opposite present gage at same datum.

Average discharge.--29 years (1913-23, 1931-50), 133 cfs.

Extremes.--1913-23, 1931-50: Maximum discharge, 6,980 cfs Mar. 19, 1936 (gage height, 11.72 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. 21 to Mar. 5, 1920.

Remarks.--Slight diurnal fluctuation at low and medium flows caused by sawmills and grist-mills above station.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1914	149	159	99.4	63.0	56.8	258	536	224	40.6	19.8	8.06	14.1	134
1915	12.0	21.6	19.4	60.2	216	162	274	205	50.5	236	120	54.3	119
1916	53.5	67.1	85.6	89.0	117	164	555	285	316	140	91.2	125	174
1917	95.3	90.7	200	118	57.0	160	515	203	464	71.4	93.7	46.1	176
1918	79.0	67.5	39.0	29.2	38.4	141	420	205	120	68.7	101	204	126
1919	205	204	135	140	85.5	355	311	260	72.5	21.3	9.48	43.7	154
1920	81.9	294	145	37.6	2.61	300	720	290	66.1	37.8	38.6	42.4	171
1921	91.8	118	321	98.5	61.1	527	367	130	33.2	29.1	5.02	4.85	150
1922	22.5	68.0	80.2	31.4	18.1	250	555	284	356	110	54.6	41.1	156
1923	22.6	23.3	9.71	61.0	22.9	43.6	620	239	52.8	10.8	9.26	4.96	93.0
1924	24.6	64.7	142	122	52.1	96.0	457	-	-	-	-	-	-
1932	44.1	51.9	74.0	93.4	51.6	53.4	515	92.6	23.8	29.0	27.3	145	99.4
1933	101	312	82.5	46.4	47.4	57.1	835	132	39.0	15.4	48.7	29.9	145
1934	121	64.9	44.8	49.0	45.4	89.7	702	114	54.5	22.9	16.1	71.0	116
1935	56.1	126	81.0	136	51.1	117	482	150	217	79.0	25.4	33.8	129
1936	21.6	95.7	70.2	97.1	61.5	1,133	446	176	43.6	15.9	6.33	7.85	182
1937	61.0	57.6	251	113	141	127	548	485	125	50.8	25.2	20.9	167
1938	128	263	195	231	85.0	190	351	150	45.0	133	44.0	90.3	159
1939	82.7	80.7	260	64.5	44.4	53.9	501	310	42.3	18.1	14.8	9.11	124
1940	15.2	41.2	63.6	17.5	13.0	31.3	589	341	116	37.8	13.7	25.3	108

Monthly and yearly mean discharge, in cubic feet per second, of Little Androscoggin River near South Paris, Maine--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	14.9	123	67.6	65.0	109	62.4	218	63.1	27.6	31.0	13.2	7.89	66.3
1942	13.2	34.4	76.9	28.0	183	465	114	360	39.4	16.2	15.4	116	116
1943	24.4	86.2	89.8	38.5	51.2	134	363	344	82.9	48.4	72.1	38.1	116
1944	184	283	83.2	50.4	50.4	90.0	493	188	82.9	35.1	14.1	26.6	131
1945	48.4	104	139	121	61.1	363	339	393	166	82.2	31.3	32.1	157
1946	151	154	165	97.1	59.5	408	213	158	86.4	19.4	122	70.3	143
1947	201	140	94.8	92.5	188	192	412	293	138	73.5	26.4	9.83	155
1948	6.14	35.0	19.9	16.2	17.7	220	243	391	105	25.1	10.9	5.16	91.5
1949	8.65	99.7	102	219	59.5	197	307	141	30.7	10.3	4.28	6.38	98.9
1950	12.3	52.0	75.9	85.4	59.0	135	597	119	71.5	16.3	21.2	18.1	105

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1914	2.26	2.33	1.50	0.95	0.78	5.60	7.84	3.39	0.59	0.30	0.12	0.21	23.87
1915	.18	.32	.29	.91	2.95	2.46	4.02	3.10	.74	3.57	1.81	.80	21.15
1916	.81	.98	1.29	1.35	1.66	2.48	8.12	4.31	4.63	2.12	1.38	1.83	30.96
1917	1.44	1.33	3.02	1.79	.78	2.42	7.54	3.07	6.80	1.08	1.42	.68	31.36
1918	1.20	.99	.59	.44	.52	2.13	6.15	3.10	1.75	1.04	1.53	2.99	22.43
1919	3.10	2.99	2.04	2.12	1.17	5.37	4.55	3.93	1.06	.32	.14	.64	27.43
1920	1.23	4.31	2.19	.57	.04	4.54	10.54	4.39	.97	.57	.58	.62	30.55
1921	1.38	1.73	4.85	1.49	.84	7.98	5.38	1.97	.49	.44	.08	.07	26.70
1922	.34	1.00	1.21	1.48	.25	3.78	8.12	4.30	5.21	1.66	.83	.60	27.78
1923	.34	.34	.15	.92	.31	.66	9.06	3.62	.80	.16	.14	.07	16.59
1924	.37	.95	2.14	1.84	.74	1.45	6.69	-	-	-	-	-	-
1932	.67	.76	1.12	1.42	.70	.81	7.54	1.41	.35	.44	.41	2.12	17.75
1933	1.53	4.56	1.24	.70	.65	.86	12.27	1.99	.57	.23	.74	.44	25.78
1934	1.83	.95	.68	.74	.62	1.36	10.28	1.73	.80	.35	.24	1.04	20.62
1935	.85	1.84	1.22	2.05	.70	1.78	7.05	2.27	3.18	1.20	.38	.50	23.02
1936	.33	1.41	1.06	1.46	.87	17.18	6.53	2.66	.64	.24	.10	.11	32.59
1937	.92	.84	3.79	1.71	1.93	1.92	8.02	7.33	1.83	.77	.35	.71	27.72
1938	1.94	3.85	2.95	3.49	1.17	2.87	5.14	2.27	.66	2.02	.67	1.32	28.35
1939	1.26	1.18	3.93	.98	.61	.80	7.33	4.69	.62	.27	.22	.13	22.02
1940	.23	.60	.96	.27	.18	.47	8.62	5.16	1.70	.57	.21	.37	19.34
1941	.23	1.80	1.02	.98	1.49	.94	3.19	.95	.40	.47	.20	.12	11.79
1942	.20	.50	.68	1.16	.38	2.77	6.81	1.73	5.27	.60	.25	.23	20.58
1943	.37	1.26	1.36	.58	.70	2.03	5.31	5.20	1.22	.73	1.09	.56	20.41
1944	2.78	4.14	1.26	.76	.71	1.36	7.22	2.85	1.22	.53	.21	.39	23.43
1945	.73	1.52	2.10	1.83	.84	5.49	4.96	5.95	2.43	1.24	.47	.47	28.03
1946	2.28	2.25	2.50	1.46	.81	6.17	3.12	2.39	1.26	.29	1.84	1.03	25.40
1947	3.04	2.05	1.43	1.40	2.57	2.90	6.04	4.44	2.02	1.11	.40	.14	27.54
1948	.09	.51	.30	.25	.25	3.33	3.56	5.91	1.54	.38	.16	.08	16.36
1949	.13	1.46	1.54	3.31	.81	2.99	4.50	2.13	.45	.16	.06	.09	17.63
1950	.19	.76	1.15	1.29	.81	2.04	8.74	1.80	1.05	.25	.32	.27	18.67

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1914	401	*2,720	Apr. 21, 1914*	1	134	1.76	23.87	104	18.57
1915	402	*3,150	July 9, 1915	2	119	1.56	21.15	132	23.44
1916	431	*2,500	May 18, 1916	9	174	2.28	30.96	189	33.67
1917	461	*2,150	June 12, 1917	20	176	2.51	31.36	159	29.36
1918	471	*1,700	Sept. 26, 1918	8.0	126	1.65	22.43	156	27.78
1919	501	*1,300	Mar. 29, 1919	4.0	154	2.02	27.43	152	27.03
1920	501	*3,980	Apr. 14, 1920	1.0	171	2.24	30.55	173	30.78
1921	521	*3,000	Dec. 15, 1920	3.0	150	1.97	26.70	119	21.29
1922	541	*2,400	Apr. 12, 1922	4.0	156	2.05	27.78	146	26.06
1923	561	*3,000	Apr. 29, 1923	2.0	93.0	1.22	16.59	108	19.22
1924	581	-	-	-	-	-	-	-	-
1932	726	2,380	Sept. 17, 1932	7	99.4	1.30	17.75	126	22.53
1933	741	3,150	Apr. 18, 1933	10	145	1.90	25.78	123	21.91
1934	756	3,340	Apr. 13, 1934	7.6	116	1.82	20.62	118	21.07
1935	781	910	Apr. 20, 1935	8.6	129	1.69	23.02	123	21.91
1936	801	6,980	Mar. 19, 1936	3.7	182	2.39	32.59	198	35.34
1937	821	1,870	May 20, 1937	4.6	167	2.19	29.72	165	32.91
1938	861	3,420	Jan. 25, 1938	8.3	159	2.09	28.35	146	25.98
1939	871	1,910	Apr. 24, 1939	3.7	124	1.62	22.02	99.0	17.44
1940	891	2,180	Apr. 13, 1940	7.1	108	1.42	19.34	115	20.60
1941	921	714	Feb. 8, 1941	4.8	66.3	.87	11.79	57.0	10.12
1942	951	3,480	June 15, 1942	8.0	116	1.52	20.58	125	22.19
1943	971	1,010	May 27, 1943	10	115	1.51	20.41	144	25.60
1944	1001	2,620	Nov. 9, 1943	7.8	131	1.72	23.43	110	19.60
1945	1051	1,530	Mar. 30, 1945	14	157	2.06	28.03	172	30.71
1946	1051	1,260	Aug. 27, 1946	8.3	143	1.88	25.40	140	24.89
1947	1081	2,040	Oct. 1, 1946	6.5	155	2.03	27.54	123	21.92
1948	1111	1,470	May 18, 1948	2.0	91.5	1.20	16.36	104	18.59
1949	1141	1,740	Jan. 1, 1949	1.3	98.9	1.30	17.63	95.1	16.60
1950	1171	2,960	Apr. 21, 1950	3.2	105	1.38	18.67	-	-

\* Revised.

\* Not previously published.

\* Maximum peak discharge; maximum discharge during the year, 1,970 cfs at 12:00 p.m., Sept. 30, stage rising.

## ANDROSCOGGIN RIVER BASIN

## 87. Pennesseewassee Lake at Norway, Maine

Location.--Lat 44°12'20", long. 70°32'44", on short outlet stream to Little Androscoggin River at Norway, Oxford County.

Drainage area.--21.1 sq mi.

Gage.--Staff gage. Altitude of gage is 297 ft (from topographic map).

Remarks.--Reservoir used for storage of water for hydroelectric power development, has usable capacity of 192,000,000 cu ft between gage heights 95.0 and 100.0 ft.

Cooperation.--Gage-height record furnished by Central Maine Power Co.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1932	-	-	93	150	74	2.4	102	134	111	116	125	130
1933	125	116	102	74	120	0	78	102	93	89	89	89
1934	102	107	85	66	0	12	93	107	116	93	82	85
1935	102	93	85	49	0	0	85	102	107	102	74	46
1936	27	43	63	82	52	107	111	111	107	102	93	33
1937	24	24	49	66	33	14.4	78	98	111	130	111	98
1938	78	89	66	102	46	66	89	116	116	116	111	98
1939	78	89	93	61	22	0	85	100	107	107	98	85
1940	95	59	55	30	14	4	85	116	116	107	85	36
1941	55	66	66	49	19	0	78	93	89	85	78	70
1942	46	93	98	85	55	66	102	116	116	111	107	89
1943	59	70	66	49	24	0	74	93	89	85	93	70
1944	111	93	82	52	36	49	82	98	111	102	93	107
1945	107	116	111	93	49	98	116	116	121	98	78	66
1946	93	93	125	66	43	98	111	121	102	85	111	89
1947	107	107	82	82	55	78	107	107	102	98	102	93
1948	49	59	27	0	0	66	116	116	107	98	89	82
1949	85	116	116	70	40	111	111	111	121	78	70	66
1950	59	82	85	82	55	66	111	116	102	89	78	66

Note.--Contents are at 7 a.m. on first day of following month.

## 88. Thompson Lake at Oxford, Maine

Location.--Lat 44°07'55", long. 70°29'45", on short outlet stream to Little Androscoggin River at Oxford, Oxford County.

Drainage area.--46.0 sq mi.

Gage.--Staff gage. Altitude of gage is 320 ft (from topographic map).

Remarks.--Reservoir used for storage of water for power and manufacturing purposes, has usable capacity of 950,000,000 cu ft between gage heights 95.0 and 100.0 ft.

Cooperation.--Gage-height record furnished by Robinson Manufacturing Co.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1928	-	-	-	2,107	1,980	2,042	2,090	2,122	2,107	2,042	1,964	1,995
1929	1,917	1,869	1,932	2,042	2,027	2,059	2,042	2,042	1,980	1,852	1,742	1,615
1930	1,537	1,472	1,457	1,457	1,377	1,757	2,155	2,186	2,122	2,074	2,122	1,980
1931	1,917	1,964	2,012	2,027	1,900	1,837	2,122	2,186	2,138	2,074	1,884	1,757
1932	1,632	1,600	1,632	1,710	1,774	1,790	2,107	2,069	1,995	1,964	1,837	1,822
1933	1,694	1,884	1,884	1,837	1,742	1,790	2,059	2,042	1,932	1,727	1,552	1,489
1934	1,584	1,520	1,504	1,472	1,330	1,283	2,138	2,107	2,012	1,932	1,774	1,869
1935	1,822	1,837	1,884	2,107	1,900	1,837	2,107	2,090	2,138	2,059	1,837	1,727
1936	1,567	1,552	1,442	1,584	1,537	2,074	2,155	2,122	1,995	1,822	1,632	1,489
1937	1,584	1,222	1,537	1,520	1,632	1,805	2,155	2,186	2,186	2,042	1,884	1,710
1938	1,710	1,947	2,138	2,170	1,817	2,042	2,090	2,138	2,122	1,935	1,852	1,917
1939	1,727	1,639	1,845	1,742	1,632	1,739	2,067	2,066	1,989	1,780	1,679	1,489
1940	1,547	1,253	1,210	1,044	969	1,044	2,057	2,208	2,134	2,067	1,932	1,786
1941	1,556	1,472	1,285	1,206	1,169	1,053	1,096	927	710	768	724	589
1942	622	649	715	788	864	1,394	1,831	1,900	2,112	1,955	1,799	1,632
1943	1,419	1,343	1,343	1,231	1,175	1,268	1,571	1,856	1,780	1,666	1,590	1,400
1944	1,436	1,628	1,514	1,438	1,362	1,343	2,027	1,989	1,951	1,837	1,609	1,571
1945	1,361	1,419	1,666	1,704	1,609	1,742	2,103	2,142	2,142	2,027	1,837	1,647
1946	1,609	1,685	1,837	1,856	1,799	1,875	1,913	1,951	1,837	1,685	1,742	1,780
1947	1,837	1,837	1,767	1,799	1,951	1,767	1,970	2,008	2,027	1,913	1,685	1,495
1948	1,193	1,212	1,100	1,025	914	1,156	1,287	1,761	1,799	1,685	1,419	1,212
1949	914	951	895	1,362	1,324	1,495	1,932	1,932	1,780	1,495	1,306	1,118
1950	1,044	1,081	1,156	1,306	1,419	1,609	2,122	2,065	2,008	1,875	1,837	1,799

## 89. 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.

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

Average discharge.--10 years (1940-50), 487 cfs (adjusted for storage).

Extremes.--1940-50: Maximum discharge, 5,800 cfs June 18, 1942 (gage height, 9.18 ft); minimum discharge, 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.--Flow regulated by Pennesseewassee and Thompson Lakes and several power plants above station. Runoff adjusted for change in contents in Pennesseewassee and Thompson Lakes (see preceding page).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	182	380	281	356	534	381	753	291	173	107	89.3	52.5	294
1942	55.3	114	110	231	116	875	1,308	381	1,101	244	180	138	404
1943	185	316	542	235	295	644	1,212	1,242	419	289	357	253	500
1944	637	960	430	288	327	538	1,795	657	360	247	198	261	556
1945	300	548	801	580	351	1,192	1,394	1,626	891	435	215	208	714
1946	494	633	752	464	346	1,471	803	634	417	242	588	389	605
1947	693	498	395	410	825	1,071	1,391	1,040	543	293	224	138	624
1948	115	167	127	90.9	112	689	774	1,281	566	182	96.4	116	361
1949	111	313	339	961	404	731	1,102	552	245	99.3	102	125	424
1950	50.8	149	199	283	239	563	2,037	500	281	220	47.3	64.5	385

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	0.29	1.19	0.74	1.13	1.60	1.16	2.72	0.82	0.30	0.45	0.25	-0.01	10.64
1942	.21	.49	.48	.89	.43	3.78	5.06	1.45	4.03	.65	.42	.23	18.12
1943	.34	.99	1.90	.66	.83	2.35	4.62	4.76	1.32	.86	1.16	.58	20.37
1944	2.34	3.49	1.35	.87	.95	1.88	7.05	2.28	1.19	.71	.39	.86	23.36
1945	.80	1.93	3.14	2.06	.93	4.43	5.24	5.76	3.04	1.35	.48	.44	29.60
1946	1.72	2.25	2.88	1.58	.99	5.34	2.80	2.29	1.25	.63	2.18	1.34	25.25
1947	2.54	1.70	1.27	1.49	2.75	3.55	5.04	3.70	1.88	.88	.49	.21	25.48
1948	-.05	.61	.26	.19	.22	2.82	2.87	5.13	1.96	.48	-.02	.11	14.58
1949	-.00	1.15	1.12	3.93	1.20	2.88	4.33	1.94	.65	-.08	.10	.17	17.39
1950	-.07	.58	.80	1.19	.87	2.25	7.67	1.70	.86	.58	.10	.16	16.83

Note.--Adjusted runoff not previously published. Negative figures indicate that evaporation and seepage from reservoirs exceeded inflow.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year			
		Observed				Adjusted			Observed		Adjusted	
		Minimum	Maximum	Mean	Mean	Per square mile	Runoff in inches		Mean	Mean	Runoff in inches	
		Discharge	Date	day								
1941	921	1,340	Feb. 9, 1941	17	294	257	0.784	10.64	249	232	9.60	
1942	951	5,800	June 18, 1942	26	404	438	1.54	18.12	468	487	20.17	
1943	971	2,600	Dec. 4, 1942	81	500	492	1.50	20.37	582	568	24.32	
1944	1001	3,050	Nov. 11, 1943	40	556	563	1.72	23.36	525	531	22.05	
1945	1031	3,540	Mar. 31, 1945	106	714	715	2.18	29.60	733	739	30.58	
1946	1051	2,880	Mar. 17, 1946	65	605	610	1.86	25.25	581	577	23.91	
1947	1081	2,700	Apr. 14, 1947	62	624	615	1.88	25.48	525	502	20.79	
1948	1111	3,070	May 19, 1948	25	351	352	1.07	14.58	390	386	16.03	
1949	1141	3,440	Jan. 2, 1949	34	424	420	1.28	17.39	393	400	16.57	
1950	1171	4,540	Apr. 22, 1950	14	385	407	1.24	16.83	-	-	-	

Note.--Adjusted records not previously published.

## 90. Androscoggin River near Auburn, Maine

Location.--Lat 44°04'15", long. 70°12'35", on right bank 1½ miles downstream from Little Androscoggin River and 2 miles downstream from north bridge between Auburn and Lewiston, Androscoggin County.

Drainage area.--3,257 sq mi.

Gage.--Water-stage recorder. Datum of gage is 109.18 ft above mean sea level, datum of 1928.

Average discharge.--22 years (1928-50), 5,695 cfs (adjusted for storage).

Extremes.--1928-50: Maximum discharge, 135,000 cfs Mar. 20, 1936 (gage height, 27.57 ft), by slope-area method 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.--Considerable fluctuation caused by power plants above station. Flow regulated by power plants above station and by Kennebago, Mooselookmeguntic, Rangeley, Upper and Lower Richardson, Azischoos, and Umbagog Lakes, Gulf Island Pond, and Auburn, Pennesseewassee, and Thompson Lakes. Runoff adjusted for change in contents in Kennebago Lake since September 1931 (see p. 90), Mooselookmeguntic Lake (see p. 90), Rangeley Lake since September 1931 (see p. 91), Upper and Lower Richardson Lakes (see p. 92), Azischoos Lake (see p. 93), Umbagog Lake (see p. 94), Gulf Island Pond (see p. 105), Lake Auburn since January 1928 (see p. 106), Pennesseewassee Lake since December 1931 (see preceding page), and Thompson Lake (see preceding page).

Monthly and yearly mean discharge, in cubic feet per second (observed), of Androscoggin River near Auburn, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	4,610	5,140	3,800	5,180	3,850	6,890	15,200	16,800	3,790	2,800	2,180	1,960	\$6,000
1930	2,099	2,138	1,902	2,390	2,457	6,819	13,110	9,288	8,217	4,017	3,607	2,413	4,857
1931	2,730	4,140	2,700	2,270	2,340	3,830	13,600	8,430	7,410	3,130	2,440	2,950	4,660
1932	3,160	3,470	3,490	5,060	3,640	3,660	14,500	8,260	4,310	2,820	2,860	5,540	5,050
1933	4,798	7,882	4,028	5,611	3,494	3,881	20,260	13,560	4,536	2,898	3,729	2,659	6,273
1934	4,535	3,536	2,834	3,139	3,068	4,465	21,810	9,392	3,683	3,265	2,684	4,552	5,554
1935	3,367	4,516	4,220	5,435	3,868	5,289	14,870	9,902	10,760	4,106	2,592	2,463	5,928
1936	2,279	3,260	3,258	3,724	3,049	32,680	16,010	13,930	3,531	2,523	2,048	2,265	7,416
1937	3,998	6,742	5,690	5,273	6,743	6,481	13,100	24,940	3,717	2,745	2,635		7,250
1938	4,968	7,636	6,039	6,258	4,521	6,660	14,110	8,562	3,585	3,715	3,139	5,685	6,221
1939	3,608	3,692	9,021	3,961	3,304	3,878	13,990	15,770	4,849	2,679	2,701	2,087	5,812
1940	2,379	3,340	3,107	2,059	2,042	2,384	13,600	19,020	6,492	3,345	2,411	2,972	5,265
1941	2,264	4,532	3,088	3,527	3,723	3,244	9,475	3,688	2,518	2,461	1,895	1,749	3,500
1942	1,859	2,513	2,572	2,733	1,963	5,580	15,290	7,818	10,990	3,254	2,320	2,267	4,923
1943	2,643	3,905	4,031	2,548	2,945	4,682	9,954	16,850	9,469	3,608	4,318	4,232	5,795
1944	6,432	9,922	4,875	5,872	3,529	4,687	13,170	14,410	5,223	3,367	2,545	2,936	6,245
1945	3,475	4,530	5,315	5,236	3,633	11,960	17,560	17,510	6,952	4,543	2,852	2,817	7,203
1946	6,146	5,942	6,001	4,965	3,922	13,290	9,117	9,164	4,574	3,051	4,331	2,983	6,147
1947	5,957	4,896	4,358	4,997	8,004	8,439	13,370	18,000	9,591	4,525	3,126	2,646	7,309
1948	1,997	2,491	1,916	1,852	1,881	5,934	9,963	13,290	5,002	2,445	2,226	2,015	4,258
1949	1,890	4,484	3,650	7,051	3,417	5,994	11,700	6,320	3,471	2,086	2,125	2,089	4,522
1950	1,973	3,103	3,303	3,612	3,363	5,249	17,290	8,359	4,732	3,772	2,750	2,821	5,019

\* Not previously published; estimated on basis of flow at Rumford Falls plus inflow.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	\$1.68	\$1.99	1.10	1.51	0.71	2.17	6.50	6.65	1.02	0.39	0.18	0.09	\$23.99
1930	.29	.56	.29	.82	.69	2.35	5.87	5.02	2.93	1.19	.78	.39	21.18
1931	.53	1.45	.68	.39	.34	1.04	5.96	4.00	2.79	.83	.67	1.08	19.76
1932	1.10	1.40	1.01	2.05	.82	.79	6.23	3.30	.94	1.15	.83	1.85	21.47
1933	1.46	3.08	1.00	.73	.54	.76	8.36	5.96	1.08	.65	1.24	.33	25.19
1934	1.82	.98	.85	.57	.37	1.16	9.71	4.31	1.17	.71	.56	1.40	23.41
1935	.88	1.74	1.59	1.80	.67	1.37	6.16	5.00	3.60	1.05	.11	.44	24.41
1936	.45	1.13	.95	.96	.53	13.83	5.80	5.54	.78	.49	.21	.46	31.13
1937	1.84	1.28	2.50	1.82	1.57	5.96	9.63	9.63	2.21	.97	.52	.36	30.43
1938	1.96	3.02	2.08	1.95	1.04	2.16	6.29	3.45	.94	1.22	.73	2.29	26.97
1939	1.15	.98	3.49	.81	.51	.64	5.12	7.74	1.56	.61	.44	.20	23.25
1940	.76	1.18	.85	.25	.16	.49	5.29	8.95	2.31	.95	.25	.71	22.15
1941	.23	2.08	.86	.96	.82	.62	4.79	1.34	.54	.59	.18	.14	15.15
1942	.46	1.15	.68	.84	.36	1.96	6.97	4.05	3.83	.54	.21	.37	21.42
1943	.67	1.42	1.22	.51	.62	1.54	3.92	8.31	3.24	.94	1.45	1.00	24.84
1944	2.50	3.68	1.02	.70	.60	1.10	5.06	7.06	1.73	.99	.38	.80	25.62
1945	1.49	1.58	1.67	1.50	.58	4.77	7.64	6.12	2.23	1.31	.43	.85	30.14
1946	2.63	2.05	1.78	1.19	.68	5.48	4.15	3.69	1.29	.46	1.21	.57	25.18
1947	2.49	2.03	1.68	1.38	2.29	2.38	5.51	7.56	3.22	1.31	.33	.28	30.46
1948	.07	.58	.41	.23	.25	2.51	5.17	6.16	1.54	.45	.19	.00	17.56
1949	.25	1.98	.90	2.59	.67	2.11	5.54	2.95	1.12	.31	.05	.23	18.70
1950	.53	1.01	1.35	1.63	.73	1.57	7.38	3.97	1.81	.70	.54	.44	21.46

\* Not previously published; estimated on basis of flow at Rumford Falls plus inflow.

Note.--Records for period 1932-36 revised to include effects of total storage above station.

Records for periods 1929-31, 1940-50 not previously published.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30										Calendar year		
		Observed					Adjusted					Observed		Adjusted
		Momentary maximum		Minimum			Mean		Per square mile		Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date	Day		Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
1929	681	40,100	May 4, 1929	640	\$6,000	\$5,745	\$1.76	\$23.99	5,398	4,892	20.36			
1930	696, 781	38,900	Apr. 8, 1930	660	4,857	5,081	1.56	21.18	5,143	5,450	22.70			
1931	711	\$26,700	June 12, 1931*	685	4,660	4,745	1.46	19.76	4,710	4,947	20.61			
1932	726	35,000	Sept. 18, 1932	710	5,050	5,135	1.58	22.47	5,598	5,623	23.50			
1933	741, 781	45,400	Apr. 13, 1933	640	6,273	6,044	1.86	25.19	5,776	5,591	23.30			
1934	756, 781	45,000	Apr. 13, 1934	677	5,554	5,134	1.72	23.41	5,673	5,768	23.97			
1935	781	28,200	Apr. 29, 1935	685	5,928	5,858	1.80	24.41	5,667	5,454	22.73			
1936	801	135,000	Mar. 20, 1936	465	7,416	7,452	2.29	31.13	7,890	8,193	34.23			
1937	821	40,700	May 8, 1937	760	7,250	7,300	2.24	30.43	7,591	7,619	31.77			
1938	851	36,600	Jan. 26, 1938	705	6,221	6,473	1.99	26.97	6,043	6,153	25.63			
1939	871	38,400	Apr. 24, 1939	440	5,812	5,576	1.71	23.25	5,176	4,897	20.42			
1940	891	46,300	Apr. 4, 1940	450	5,265	5,300	1.63	22.15	5,351	5,391	22.54			
1941	921	20,100	Apr. 17, 1941	340	3,500	3,154	.968	13.15	3,256	2,943	12.27			
1942	951	41,500	June 15, 1942	470	4,923	5,159	1.58	21.42	5,228	5,382	22.44			
1943	971	31,200	May 13, 1943	575	5,793	5,957	1.83	24.84	6,681	6,894	28.73			
1944	1001	38,900	Nov. 10, 1943	585	6,245	6,132	1.88	25.62	5,889	5,541	23.16			
1945	1031	39,300	Mar. 31, 1945	560	7,203	7,235	2.22	30.14	7,605	7,646	31.86			
1946	1051	29,700	Mar. 30, 1946	630	6,147	6,035	1.85	25.18	5,906	5,976	24.92			
1947	1081	34,700	Apr. 13, 1947	555	7,309	7,346	2.25	30.46	6,567	6,078	25.32			
1948	1111	29,700	May 18, 1948	470	4,258	4,202	1.29	17.56	4,559	4,697	19.63			
1949	1141	34,800	Jan. 1, 1949	425	4,522	4,487	1.38	18.70	4,386	4,381	18.26			
1950	1171	50,800	Apr. 22, 1950	480	5,019	5,144	1.58	21.46	-	-	-			

\* Not previously published; estimated on basis of records for power plant upstream.

Note.--Records for period 1932-36 revised to include effects of total storage above station.

Adjusted records for periods 1929-31, 1940-50 not previously published.



## 91. 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.

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

Extremes.--1949-50: Maximum discharge, 2,030 cfs Mar. 30, 1950 (gage height, 3.78 ft); minimum, 5.8 cfs Aug. 23, 24, 1950 (gage height, 0.64 ft).

Remarks.--Small diurnal fluctuation at low flow caused by mill above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	42.2	170	162	204	133	576	800	137	82.9	32.0	40.0	45.4	202

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	0.34	1.34	1.31	1.66	0.98	4.68	6.28	1.11	0.65	0.26	0.33	0.36	19.30

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1950	1171	2,030	Mar. 30, 1950	21	202	1.42	19.30	-	-	

## PRESUMPCOT RIVER BASIN

## 92. Panther Pond near Raymond, Maine

Location.--Lat 43°54'20", long. 70°28'00", at natural outlet of Panther Pond 0.4 mile northeast of Raymond, Cumberland County, and 2 miles upstream from mouth of Panther Run at Sebago Lake.

Drainage area.--30 sq mi.

Gage.--Staff gage. Altitude of gage is nearly at mean sea level (from topographic map).

Remarks.--Dam controls Rattlesnake and Panther Pond. Combined usable capacity is 405,000,000 cu ft between gage heights 277.30 and 281.51 ft. Lakes are used for storage of water for power.

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

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1920	-	-	-	150	174	270	368	348	313	340	216	264
1921	178	27	361	324	328	328	381	308	344	368	112	112
1922	36	24	136	200	180	315	168	344	392	313	289	240
1923	192	144	96	208	264	224	392	375	346	324	269	248
1924	128	88	170	289	298	250	347	327	279	173	212	192
1925	7.7	0	0	0	115	365	385	385	327	308	260	231
1926	154	212	308	365	164	183	289	317	327	303	212	202
1927	115	240	327	260	125	173	289	385	337	327	337	308
1928	212	298	317	337	250	433	375	380	394	394	375	375
1929	260	202	221	317	308	356	394	365	317	260	212	202
1930	125	96	135	173	269	337	317	394	385	375	375	337
1931	231	212	202	174	126	116	317	375	375	356	240	298
1932	212	173	221	346	337	337	327	298	260	231	192	212
1933	135	192	212	269	337	375	356	337	308	298	269	269
1934	240	221	269	346	375	317	337	346	346	317	240	308
1935	212	231	298	202	250	289	298	337	337	365	327	337
1936	202	250	346	327	212	471	375	240	289	289	250	212
1937	173	164	260	279	365	240	375	327	394	298	308	289
1938	212	327	240	250	250	375	346	327	327	394	346	365
1939	471	269	250	212	231	240	375	356	337	337	375	365
1940	308	308	289	284	317	298	414	404	356	385	356	317
1941	231	250	327	308	308	308	337	356	337	337	298	269
1942	144	106	144	183	221	356	337	327	327	356	317	298
1943	231	231	365	404	298	356	346	317	356	356	356	375
1944	298	385	240	298	279	240	298	308	375	337	308	385
1945	260	327	317	327	221	375	298	327	298	327	308	298
1946	240	385	346	356	192	327	337	337	308	337	375	346
1947	289	317	365	298	327	317	337	337	327	385	327	298
1948	231	231	287	365	289	356	327	317	327	327	308	250
1949	183	250	385	346	337	337	327	337	327	286	260	250
1950	221	269	250	298	279	250	404	308	317	279	279	250

## PRESUMPSCOT RIVER BASIN

## 93. Thomas Pond near South Casco, Maine

Location.--Lat 43°54'30", long. 70°30'45", at dam on short outlet of pond to Sebago Lake, half a mile southeast of South Casco, Cumberland County.

Drainage area.--5.3 sq mi.

Gage.--Staff gage. Altitude of gage is 272 ft (from topographic map).

Remarks.--Pond used for storage of water for power, has usable capacity of 135,000,000 cu ft between gage heights 0.0 and 6.8 ft.

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

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1920	-	-	135	135	139	148	127	119	119	102	99	81
1921	67	83	129	119	99	119	119	109	99	79	73	63
1922	79	75	83	99	99	139	119	119	115	109	87	91
1923	79	75	67	79	79	127	172	154	111	67	67	73
1924	79	81	93	111	117	119	129	119	115	103	93	91
1925	87	89	87	99	105	146	139	119	99	79	79	79
1926	81	89	95	99	110	141	139	135	133	115	107	115
1927	135	141	141	121	127	135	148	150	150	152	148	148
1928	143	135	131	129	133	137	137	137	135	131	127	131
1929	131	135	137	135	139	143	143	135	135	119	119	119
1930	119	119	119	119	119	127	135	137	137	135	131	127
1931	127	133	129	133	133	135	143	144	144	135	125	125
1932	134	133	135	135	139	139	143	139	139	133	132	135
1933	135	139	135	135	135	139	139	133	127	127	119	119
1934	129	135	135	135	135	139	139	135	111	119	119	128
1935	139	135	135	113	105	111	119	127	139	135	127	123
1936	119	135	139	139	137	144	137	133	119	119	111	107
1937	115	117	119	127	125	123	131	135	129	115	111	109
1938	111	119	111	119	119	127	127	135	119	115	115	115
1939	115	115	119	119	123	119	123	127	119	115	119	123
1940	127	119	99	99	109	115	129	131	123	127	119	115
1941	99	99	99	119	109	99	109	99	105	99	103	89
1942	99	107	103	119	99	119	119	119	119	115	99	99
1943	99	99	103	99	99	99	119	119	115	109	109	109
1944	119	119	99	99	99	99	99	99	99	99	99	99
1945	99	119	119	99	119	131	131	139	139	129	119	69
1946	59	99	119	119	119	125	131	135	131	131	129	139
1947	135	129	119	119	123	127	127	127	135	115	115	103
1948	95	99	119	119	115	135	135	135	135	119	109	99
1949	107	131	135	119	119	131	135	139	119	115	115	119
1950	119	123	123	123	123	135	135	131	119	119	123	119

## 94. Pleasant Lake at Casco, Maine

Location.--Lat 44°00'35", long. 70°31'30", on Mile Brook at Casco, Cumberland County.

Drainage area.--10.1 sq mi.

Gage.--Staff gage. Altitude of gage is 421 ft (from topographic map).

Remarks.--Dam at outlet of Pleasant Lake controls Parker Pond and Pleasant Lake. Combined usable capacity, 268,000,000 cu ft between gage heights 0.0 and 5.0 ft.

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

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1920	-	-	179	193	219	268	268	230	209	193	177	161
1921	143	145	206	241	223	220	220	230	209	193	187	170
1922	170	170	170	166	161	214	257	268	268	236	161	134
1923	107	91	91	96	107	161	268	284	209	203	198	193
1924	177	182	192	209	171	171	257	219	187	145	139	123
1925	107	102	86	75	118	193	193	166	134	107	54	43
1926	54	75	102	128	161	171	246	203	193	139	96	75
1927	96	166	134	155	155	161	171	193	209	86	96	107
1928	123	139	123	139	134	187	219	214	214	150	145	128
1929	123	134	139	171	166	230	241	203	139	123	107	80
1930	54	54	53	75	107	139	182	128	107	80	139	48
1931	64	91	43	43	70	123	166	187	177	150	134	118
1932	107	80	86	112	107	214	214	211	107	107	80	96
1933	107	107	96	123	155	193	214	214	166	166	155	139
1934	118	96	102	102	128	187	268	236	198	150	75	107
1935	139	118	171	209	209	236	268	230	230	182	134	134

Month-end contents, in millions of cubic feet, of Pleasant Lake at Casco, Maine--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1936	75	96	107	161	182	289	257	182	134	112	48	21
1937	21	64	139	145	193	219	278	203	187	134	96	32
1938	70	139	150	162	214	238	236	214	214	187	161	134
1939	107	75	214	214	225	289	268	236	166	107	80	54
1940	48	48	54	80	91	102	257	257	230	193	80	70
1941	54	86	96	102	112	118	91	80	27	27	16	16
1942	16	16	27	43	171	193	161	161	214	150	139	118
1943	107	112	123	161	187	230	321	321	268	214	161	161
1944	161	123	112	107	107	139	187	134	187	161	161	161
1945	161	187	161	139	161	161	321	321	321	268	214	161
1946	134	161	214	187	187	214	268	321	294	267	294	284
1947	273	289	268	257	262	268	294	294	294	268	257	241
1948	214	230	230	214	230	241	268	294	284	268	241	214
1949	214	268	268	257	268	284	294	294	268	219	203	198
1950	187	177	177	187	193	214	268	246	246	236	225	214

## 95. Crystal Lake at Harrison, Maine

Location.--Lat 44°06'40", long. 70°40'45", on short outlet stream to Long Lake at Harrison, Cumberland County.

Drainage area.--9.60 sq mi.

Gage.--Staff gage. Altitude of gage is 290 ft (from topographic map).

Remarks.--Lake used for storage of water for power, has usable capacity of 163,000,000 cu ft between gage heights 0.00 and 8.00 ft.

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

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1920	-	-	96	71	65	151	171	159	140	102	75	71
1921	76	65	142	124	102	175	163	140	116	91	57	45
1922	28	45	66	63	57	130	163	163	149	134	100	73
1923	53	43	41	43	43	53	159	159	126	102	88	69
1924	61	69	92	100	83	98	163	142	124	92	69	61
1925	59	59	59	45	85	163	155	124	94	88	45	43
1926	51	81	86	77	83	63	163	153	94	81	53	35
1927	41	90	92	71	69	130	153	165	142	114	79	61
1928	53	88	102	104	114	128	167	163	149	126	94	96
1929	92	90	96	104	92	150	163	128	108	85	67	59
1930	55	57	57	51	48	138	155	165	149	124	106	104
1931	102	138	102	114	108	142	161	163	136	118	79	69
1932	71	71	73	75	63	63	144	116	75	45	31	35
1933	41	92	94	85	73	96	153	130	88	71	41	39
1934	35	35	33	33	33	67	163	130	102	67	53	53
1935	49	65	65	96	75	112	159	142	118	94	67	61
1936	24	53	43	41	41	163	157	130	108	81	61	41
1937	41	43	110	94	108	110	163	155	128	94	57	37
1938	37	122	118	124	128	136	132	132	130	126	106	81
1939	81	122	122	102	92	92	163	163	132	126	128	118
1940	92	88	81	75	77	88	163	161	157	128	104	92
1941	81	90	75	65	77	77	102	98	79	63	49	41
1942	41	49	65	88	96	155	163	163	155	142	128	128
1943	124	132	142	110	128	124	163	159	153	132	122	100
1944	128	163	132	116	81	92	163	159	163	140	122	132
1945	130	147	132	114	81	83	163	163	163	138	122	104
1946	83	79	102	92	83	124	114	118	94	81	126	124
1947	104	122	112	100	92	92	142	132	128	106	79	61
1948	51	59	59	63	65	126	153	136	128	100	79	57
1949	49	81	144	122	104	153	163	147	128	104	85	81
1950	72	63	65	71	83	130	163	144	130	104	88	77

## 96. Highland Lake at Bridgton, Maine

Location.--Lat 44°03'20", long. 70°42'45", on Stevens Brook at Bridgton, Cumberland County.

Drainage area.--20 sq mi.

Gage.--Staff gage. Altitude of gage is 416 ft (from topographic map).

Remarks.--Lake used for storage of water for power, has usable capacity of 461,000,000 cu ft between gage-heights 0.00 and 7.87 ft.

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

## PRESUMPSCOT RIVER BASIN

Month-end contents, in millions of cubic feet, of Highland Lake at Bridgton, Maine												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1920	-	-	268	200	173	363	457	474	413	337	263	248
1921	215	234	416	354	266	483	468	433	316	228	123	111
1922	76	111	129	88	88	293	451	468	463	404	319	234
1923	158	35	53	111	41	64	451	457	363	234	193	141
1924	88	146	234	322	252	252	357	463	316	246	217	217
1925	117	211	205	170	205	457	410	404	322	275	164	158
1926	170	252	345	334	263	211	467	410	322	281	186	176
1927	176	263	265	205	164	293	468	468	457	381	293	146
1928	146	293	392	457	398	351	468	468	468	468	351	293
1929	269	258	316	304	269	398	468	468	404	293	186	0
1930	0	0	0	0	35	369	468	468	468	468	457	433
1931	293	350	410	351	298	299	468	468	427	398	310	234
1932	228	205	217	293	310	295	468	410	398	316	176	221
1933	176	340	328	263	234	310	468	474	390	419	363	322
1934	351	316	263	234	234	199	439	320	205	12	0	146
1935	170	222	263	381	322	381	468	468	468	439	392	345
1936	287	322	293	310	275	468	468	463	386	328	310	258
1937	258	275	351	293	345	422	468	468	439	363	287	211
1938	228	351	351	410	363	468	468	468	468	351	381	375
1939	328	310	381	351	351	304	468	468	386	310	322	263
1940	252	269	246	328	310	322	468	468	468	381	340	310
1941	234	269	234	322	351	351	410	468	468	468	351	351
1942	281	211	205	269	293	468	468	468	410	381	351	363
1943	334	304	369	351	351	322	468	468	445	410	381	351
1944	351	351	340	345	340	322	410	439	439	439	410	369
1945	363	433	398	381	457	468	468	468	457	445	410	398
1946	386	340	375	328	351	351	410	457	433	410	439	468
1947	310	240	281	275	322	381	451	439	439	392	351	293
1948	269	310	310	287	354	351	439	468	381	351	340	322
1949	292	369	468	410	322	439	451	439	363	345	304	258
1950	293	310	351	340	316	381	422	410	351	351	310	299

## 97. Long Lake near Songo Lock, Maine

Location.--Lat 43°55'55", long. 70°34'40", on Songo River at upper lock one-third of a mile west of Songo Lock, Cumberland County.

Drainage area.--120 sq mi.

Gage.--Staff gage. Altitude of gage is nearly at mean sea level (from topographic map).

Remarks.--Lock controls Brandy Pond and Long Lake. Combined usable capacity, 1,300,000,000 cu ft between gage heights 266.50 and 271.84 ft. Lakes used for storage of water for power.

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

Month-end contents, in millions of cubic feet												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1920	-	-	-	464	317	977	2,017	1,624	1,465	1,441	1,441	1,441
1921	1,319	1,343	1,123	537	537	1,368	1,612	1,514	1,416	1,416	1,319	1,221
1922	1,148	850	391	0	0	733	1,245	1,636	1,734	1,514	1,441	1,368
1923	1,270	1,136	708	0	0	0	1,465	1,416	1,416	1,367	1,245	1,197
1924	1,221	1,441	733	366	220	391	1,490	1,343	1,380	1,343	1,368	1,343
1925	1,089	586	171	98	73	1,478	1,575	1,502	1,502	1,551	1,392	1,453
1926	1,148	818	366	440	342	317	1,136	1,294	1,270	1,294	1,233	1,172
1927	440	342	98	0	0	611	1,026	1,551	1,392	1,441	1,416	1,197
1928	1,148	635	513	611	574	879	1,416	1,587	1,587	1,539	1,441	1,392
1929	879	366	342	342	220	757	1,478	1,465	1,514	1,539	1,392	1,268
1930	1,221	488	0	0	0	1,001	1,294	1,429	1,441	1,404	1,416	1,172
1931	1,294	1,099	1,392	494	1,182	620	1,319	1,465	1,465	1,526	1,490	1,392
1932	659	244	122	49	0	147	1,319	1,319	1,294	1,304	1,490	1,368
1933	1,245	1,368	391	122	49	122	1,563	1,490	1,441	1,392	1,416	1,343
1934	757	244	73	0	0	342	1,465	1,416	1,368	1,245	1,221	1,294
1935	1,123	879	293	195	73	220	1,568	1,416	1,441	1,441	1,416	1,392
1936	708	293	0	0	0	2,027	1,490	1,465	1,392	1,343	1,319	1,343
1937	1,465	733	635	366	171	513	1,539	1,587	1,465	1,368	1,343	1,343
1938	684	855	611	879	733	879	1,490	1,563	1,490	1,514	1,392	1,392
1939	1,148	733	757	733	635	440	1,734	1,441	1,465	1,392	1,343	1,343
1940	1,343	904	244	0	0	0	1,416	1,563	1,416	1,416	1,319	1,313
1941	1,221	1,392	391	49	0	122	562	1,050	1,270	1,123	1,123	1,123
1942	244	0	0	0	0	733	1,392	1,319	1,465	1,368	1,319	1,319
1943	1,294	611	220	0	0	342	1,416	1,441	1,392	1,392	1,392	1,319
1944	1,392	952	562	0	0	122	1,099	1,050	1,392	1,392	1,319	1,343
1945	586	366	269	220	147	904	1,075	1,563	1,490	1,343	1,343	1,319
1946	904	635	562	366	195	611	952	1,392	1,441	1,392	1,587	1,392
1947	1,416	562	195	122	122	586	928	1,465	1,392	1,441	1,368	1,343
1948	708	122	122	122	0	122	611	1,416	1,441	1,367	1,294	1,148
1949	1,099	1,270	1,001	708	366	611	1,294	1,392	1,294	1,245	1,123	1,099
1950	733	611	611	684	537	855	1,490	1,343	1,368	1,319	1,319	1,270

## 98. Sebago Lake near North Windham, Maine

Location.--Lat 43°50'45", long. 70°28'05", at White's Bridge 1.6 miles northwest of North Windham, Cumberland County.

Drainage area.--433 sq mi.

Gage.--Water-stage recorder. Altitude of gage is approximately at mean sea level (from topographic map).

Remarks.--Lake used for storage of water for power and municipal supply, has usable capacity of 9,700,000,000 cu ft between gage heights 262.50 and 270.13 ft.

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

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1920	-	-	-	4,132	3,750	5,212	11,060	10,106	9,662	8,771	7,183	6,293
1921	5,975	5,085	7,246	7,437	7,119	9,598	10,170	9,662	8,772	8,009	6,483	5,085
1922	5,814	3,432	3,687	3,369	3,115	4,704	8,962	10,424	10,234	9,852	8,835	7,437
1923	5,727	4,449	3,178	3,178	2,542	1,653	5,721	8,772	8,645	7,373	6,230	5,212
1924	4,449	5,442	4,704	4,958	5,466	5,085	5,708	10,329	9,407	8,263	7,628	7,755
1925	6,483	5,848	5,539	4,704	5,466	8,454	10,297	9,827	9,280	8,428	7,119	5,848
1926	5,339	5,848	5,975	5,721	5,466	5,021	7,437	8,454	8,136	7,310	6,102	5,060
1927	4,767	5,657	5,212	4,742	4,449	5,848	6,483	7,573	7,828	7,246	6,674	5,975
1928	5,466	6,738	7,691	7,755	7,780	7,691	9,725	10,561	10,043	9,725	9,344	8,746
1929	8,263	7,246	6,776	6,611	6,293	6,928	9,954	10,221	9,344	7,882	6,420	5,085
1930	3,569	2,924	2,352	1,462	636	3,305	5,594	6,674	6,992	6,674	6,420	5,466
1931	4,704	5,149	4,932	5,495	6,013	5,695	6,611	8,136	10,106	9,344	7,945	7,099
1932	6,611	6,102	5,466	5,733	5,021	4,767	7,602	7,500	6,738	6,039	4,894	4,958
1933	4,132	4,704	5,021	5,021	4,958	5,439	10,170	9,725	8,645	7,373	5,975	5,085
1934	5,721	5,149	4,577	3,877	3,305	3,560	8,136	8,263	7,500	6,356	4,831	4,831
1935	3,687	3,560	3,941	5,085	4,577	4,577	6,547	6,611	7,691	6,801	5,212	4,449
1936	3,877	4,322	3,750	4,449	4,577	11,568	10,246	10,106	9,128	7,500	5,721	4,068
1937	2,797	2,098	3,687	4,068	4,577	5,657	8,708	10,170	10,043	8,835	6,992	5,339
1938	5,339	6,483	7,882	8,517	8,454	8,772	10,297	10,170	9,852	9,534	8,263	7,437
1939	6,674	6,102	7,818	7,691	7,055	6,928	9,725	10,335	9,382	8,517	7,628	6,102
1940	4,449	3,687	3,750	2,733	1,907	1,843	7,500	9,954	9,916	8,772	6,865	5,784
1941	4,004	3,305	3,242	2,797	2,924	2,606	2,860	2,034	953	381	0	0
1942	0	0	0	0	0	1,271	4,386	4,704	7,628	7,183	5,721	4,386
1943	2,924	2,670	2,924	2,034	1,398	1,398	3,369	6,801	6,547	5,848	5,085	3,687
1944	3,580	5,212	4,851	3,687	2,670	2,670	6,293	6,865	10,547	5,466	3,814	3,305
1945	3,178	3,432	4,640	4,958	4,704	4,704	8,899	10,106	6,043	9,534	7,755	6,038
1946	5,975	6,102	6,611	6,038	5,149	6,611	7,373	7,691	6,738	5,403	5,975	5,911
1947	5,784	5,847	5,339	5,085	5,530	6,547	8,581	9,662	9,662	8,136	6,229	4,004
1948	2,543	2,098	1,017	0	0	509	1,271	4,577	4,894	3,814	2,161	636
1949	0	127	509	3,178	3,369	4,195	5,721	5,975	4,577	3,369	1,970	890
1950	0	0	0	0	445	1,526	6,547	7,183	6,102	4,449	3,560	2,034

## 99. 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.

Gage.--Staff gage at dam on outlet of Sebago Lake and float gages in forebay and tailrace of hydroelectric plant. Altitude of gage is at approximately mean sea level (from topographic map).

Average discharge.--63 years (1887-1950), 648 cfs.

Remarks.--Discharge computed by Allen meter records for each of three pairs of water wheels and from records of openings of two regulating gates at Eel Weir hydroelectric plant. Water wasted at rare intervals through gates in dam on outlet of Sebago Lake. Flow computed from records of gate openings. Water diverted by Portland Water District and leakage through dam, totaling about 35 cfs, not included in figures of daily discharge. Flow completely regulated by lakes above station. Runoff adjusted for change in contents in Panther Pond (see p. 111), Thomas Pond (see p. 112), Pleasant Lake (see p. 112), Crystal Lake (see p. 113), Highland Lake (see p. 113), Long Lake (see preceding page), Sebago Lake (see above), several small lakes and ponds, leakage through dam, and water diverted for municipal use.

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

## PRESUMPSCOT RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second (observed), of Presumpscot River at outlet of Sebago Lake, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1887	-	-	-	902	933	920	933	979	978	901	898	933	-
1888	933	933	950	969	969	910	909	1,363	1,117	884	836	878	962
1889	741	829	948	952	985	1,101	1,000	996	933	933	819	853	932
1890	847	883	872	930	979	931	1,123	1,326	981	802	857	869	950
1891	957	958	994	981	961	958	1,670	1,155	975	835	881	902	1,018
1892	912	866	758	792	811	768	723	727	725	796	833	744	788
1893	605	572	577	514	530	510	521	628	797	679	640	729	609
1894	887	850	717	749	628	583	461	622	649	608	613	491	622
1895	492	484	610	665	625	596	512	634	601	519	511	505	563
1896	475	464	432	472	484	515	670	795	815	771	696	657	604
1897	638	667	721	790	806	756	495	659	772	844	1,050	908	759
1898	944	817	912	836	895	772	1,079	1,185	924	886	903	852	917
1899	824	700	706	688	689	632	491	611	623	615	622	618	652
1900	590	601	574	466	495	586	866	1,330	746	721	649	598	686
1901	599	610	615	619	649	623	466	605	722	670	575	596	612
1902	598	618	618	602	589	671	4,205	1,186	586	651	681	676	965
1903	598	675	582	621	613	632	638	601	650	667	665	684	635
1904	682	644	611	564	426	469	569	598	662	598	612	647	589
1905	615	659	550	485	411	343	464	490	488	458	461	463	491
1906	456	407	385	494	616	537	512	529	554	624	681	681	539
1907	698	624	466	505	469	296	358	480	523	507	418	334	473
1908	489	594	611	676	766	553	523	560	637	563	679	719	613
1909	698	661	587	500	517	606	468	614	680	649	648	635	608
1910	642	662	645	624	641	515	508	512	527	508	521	518	568
1911	493	474	358	309	375	316	286	310	317	215	159	273	323
1912	316	489	383	496	487	358	345	469	471	491	575	601	456
1913	611	601	678	644	727	572	590	592	596	592	616	611	618
1914	586	617	583	592	614	484	449	550	582	567	639	676	578
1915	661	567	578	527	498	495	457	361	278	176	388	527	459
1916	540	557	574	564	550	551	460	537	1,620	818	758	724	687
1917	761	768	704	737	755	734	699	714	1,560	1,150	891	677	828
1918	713	691	701	681	676	597	486	478	494	555	630	517	602
1919	538	471	487	529	572	483	1,060	929	768	609	649	650	647
1920	679	608	669	740	726	612	1,090	1,890	752	674	696	684	819
1921	692	702	683	692	720	629	1,120	711	587	508	523	517	672
1922	542	493	470	498	496	382	361	761	1,580	768	661	710	645
1923	755	718	635	637	663	653	508	496	520	540	511	514	595
1924	536	505	451	517	528	520	524	875	662	467	454	523	554
1925	584	574	582	613	522	480	842	674	600	552	520	512	586
1926	530	492	514	655	689	684	518	513	558	456	492	476	547
1927	503	486	582	585	618	488	489	369	432	389	470	461	489
1928	475	476	486	634	727	717	711	1,110	821	611	650	634	671
1929	690	723	709	748	764	688	711	998	736	654	620	662	725
1930	680	607	620	623	605	418	456	372	340	406	361	444	494
1931	439	436	547	547	589	508	458	513	490	584	559	568	520
1932	542	501	590	555	605	562	407	432	486	426	503	446	505
1933	572	499	455	441	462	486	800	814	660	652	663	607	593
1934	574	607	575	659	652	609	608	736	641	571	517	531	606
1935	658	571	524	661	789	784	719	716	663	716	701	607	675
1936	574	564	586	696	682	1,421	2,817	688	655	660	674	716	892
1937	699	623	665	729	751	654	841	1,583	850	748	753	679	781
1938	641	581	661	706	776	659	625	658	622	586	671	664	653
1939	672	689	625	888	742	702	864	1,100	720	646	740	712	742
1940	735	673	606	750	717	492	373	764	930	781	720	611	680
1941	778	706	739	721	676	665	569	548	489	296	267	233	557
1942	241	235	223	209	252	189	285	407	442	575	569	606	353
1943	675	666	687	758	752	700	450	386	587	596	675	651	630
1944	665	712	784	863	877	741	575	676	665	633	605	516	692
1945	611	603	634	695	769	679	688	1,346	1,302	788	759	704	798
1946	897	820	867	1,000	980	834	535	611	799	611	668	715	777
1947	712	677	681	727	699	749	766	869	921	831	789	806	769
1948	703	661	621	556	439	343	546	317	649	589	530	459	534
1949	378	366	434	525	565	519	530	554	706	394	387	393	478
1950	517	437	288	247	261	338	337	516	576	587	580	563	438

## Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1920	-	-	1.11	0.69	1.35	4.51	9.96	3.61	1.17	0.75	-0.07	0.94	-
1921	1.19	1.14	4.61	1.34	1.21	5.52	3.77	1.11	.38	.46	-.84	-.16	19.73
1922	-.04	.69	1.39	.73	.93	4.24	5.86	4.25	4.08	1.20	.36	.12	23.80
1923	-.06	.14	-.02	1.37	1.00	1.07	8.21	4.30	.82	-.17	-.01	.19	16.84
1924	.41	.62	2.17	1.74	1.52	1.43	6.68	3.85	.47	-.50	.59	1.45	20.63
1925	-.32	.42	.45	1.08	2.45	6.82	4.05	1.15	.70	.70	-.57	.12	17.05
1926	.57	1.84	1.49	1.73	.95	1.37	5.50	2.42	.74	.42	-.32	.13	16.84
1927	.30	2.67	1.01	.79	.93	3.77	2.93	2.65	1.17	.38	.56	.04	17.20
1928	.60	2.50	2.35	2.03	1.78	2.05	5.05	3.67	1.85	1.21	1.03	.95	25.07
1929	.63	.29	1.50	2.18	1.33	3.56	5.80	2.76	.81	-.11	-.07	-.07	18.61
1930	-.07	.39	.71	.92	.96	5.72	4.03	2.51	1.20	.71	.85	-.23	17.50

Note.--Runoff not previously published. Negative figures indicate that evaporation and seepage from Reservoirs exceeded inflow.

Monthly and yearly runoff, in inches (adjusted), of Presumpscot River at outlet of Sebago Lake, Maine--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	.18	1.61	1.51	1.05	2.51	.67	3.59	3.20	3.16	.77	-.31	.54	18.48
1932	.12	2.27	.99	2.11	.79	1.60	5.49	.83	.22	.29	.09	1.33	14.18
1933	.45	2.50	.60	.97	1.12	2.20	8.57	1.63	.30	.52	.26	.59	19.71
1934	1.59	.41	.87	1.08	1.14	2.26	8.00	1.78	.57	-.16	-.37	1.98	19.15
1935	.44	1.26	1.52	2.95	1.24	2.57	5.29	2.05	2.87	.98	.04	.82	22.03
1936	-.18	1.78	.88	2.68	1.64	13.93	5.19	1.29	.55	.01	-.15	.08	27.70
1937	.72	.34	3.85	2.03	2.61	3.16	6.26	5.46	1.98	.28	-.04	-.15	26.40
1938	1.06	3.55	2.80	3.02	1.69	2.73	3.72	1.70	1.24	1.18	.35	.88	23.94
1939	.90	.48	3.78	1.58	1.14	1.64	6.93	3.20	.62	.59	1.15	.20	22.21
1940	.21	.61	.94	.99	1.10	1.24	8.89	4.65	2.12	.81	-.37	.41	21.60
1941	-.08	1.53	1.05	1.36	1.83	1.64	2.39	1.28	.33	.11	-.10	.58	12.12
1942	-.48	.28	.76	.91	.98	3.27	4.46	1.38	4.23	.93	-.10	.24	16.86
1943	.20	.83	2.19	1.03	1.14	2.39	4.73	4.40	1.19	.78	.95	.23	20.01
1944	1.72	3.25	1.01	.75	1.14	2.13	6.59	2.35	2.02	.53	-.16	1.00	22.29
1945	.59	2.01	2.70	2.06	1.55	2.94	6.44	5.38	3.20	1.40	-.10	-.09	28.28
1946	1.75	2.32	2.96	1.83	1.10	4.51	2.74	2.63	1.04	.27	2.85	1.65	25.65
1947	1.44	1.02	1.11	1.52	2.32	3.64	4.65	3.99	2.36	.73	-.02	-.30	22.46
1948	-.36	.88	.80	.63	1.03	1.92	2.92	5.04	1.91	.57	-.37	-.62	14.15
1949	.25	1.76	1.88	3.67	1.00	2.86	3.67	1.88	.15	-.34	-.57	-.10	16.11
1950	.20	1.17	.90	.91	.96	2.57	7.03	1.67	.39	-.16	.63	-.14	16.13

Note.--Records for periods October 1930 to September 1932 and October 1940 to September 1950 not previously published. Records for period October 1932 to September 1940 revised. Negative figures indicate that evaporation and seepage from reservoirs exceeded inflow.

Yearly discharge, in cubic feet per second											
Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		Adjusted
		Maximum day		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1887	69	1,003	Mar. 18, 19, 1887	-	-	-	-	-	933	-	-
1888	69	1,667	Many days	816	962	-	-	-	937	-	-
1889	69	1,414	Mar. 21-27, 1889	695	932	-	-	-	939	-	-
1890	69	1,336	Many days	425	950	-	-	-	975	-	-
1891	69	1,670	Many days	514	1,018	-	-	-	987	-	-
1892	69	968	Oct. 12-17, 1891	595	788	-	-	-	723	-	-
1893	69	900	Many days	167	608	-	-	-	634	-	-
1894	69	867	Dec. 11, 1893	100	622	-	-	-	583	-	-
1895	69	783	Many days	133	563	-	-	-	545	-	-
1896	69	1,167	Many days	100	604	-	-	-	659	-	-
1897	69	1,433	Aug. 2-7, 1897	100	759	-	-	-	813	-	-
1898	69	2,000	Many days	83	917	-	-	-	880	-	-
1899	69	1,000	Oct. 3-8, 1898	200	652	-	-	-	613	-	-
1900	69	1,833	Many days	217	686	-	-	-	691	-	-
1901	69	933	June 3-6, 1901	15	612	-	-	-	611	-	-
1902	82	7,000	Apr. 7, 1902	133	965	-	-	-	972	-	-
1903	97	817	Oct. 27, 1902	67	635	-	-	-	642	-	-
1904	124	805	Aug. 30, 1904	0	589	-	-	-	580	-	-
1905	165	765	Nov. 15, 1904	215	491	-	-	-	443	-	-
1906	201	836	July 23, 1906	237	539	-	-	-	584	-	-
1907	241	768	Oct. 1-6, 1906	160	475	-	-	-	465	-	-
1908	241	893	Feb. 7, 1908	42	613	-	-	-	634	-	-
1909	261	817	Oct. 19-20, 1908	42	608	-	-	-	607	-	-
1910	281	723	Nov. 3, 1909	188	568	-	-	-	516	-	-
1911	301	615	Oct. 24, 1910	42	323	-	-	-	312	-	-
1912	321	687	Many days	33	456	-	-	-	516	-	-
1913	351	823	Feb. 6-7, 1913	90	618	-	-	-	610	-	-
1914	381	842	Nov. 3, 1913	113	578	-	-	-	580	-	-
1915	401	802	Oct. 13, 1914	8.3	459	-	-	-	448	-	-
1916	431	2,440	June 22-23, 1916	18	687	-	-	-	734	-	-
1917	451	2,730	June 24, 1917	45	828	-	-	-	818	-	-
1918	471	919	Feb. 7, 1918	65	602	-	-	-	552	-	-
1919	501	2,440	Apr. 18, 1919	12	647	-	-	-	684	-	-
1920	501	2,870	May 1, 1920	13	819	-	-	-	829	957	29.85
1921	521	2,370	Apr. 25, 1921	3	672	633	1.45	19.73	624	474	14.82
1922	541	3,210	June 24, 1922	12	645	764	1.75	23.80	695	701	21.83
1923	561	991	Oct. 23, 1922	9	595	541	1.24	16.84	543	641	19.98
1924	581	2,090	May 13, 1924	8	554	662	1.52	20.63	575	576	17.98
1925	601	1,630	Apr. 15, 1925	0	586	547	1.25	17.05	569	654	20.40
1926	621	981	Jan. 25, 1926	0	547	541	1.24	16.84	550	543	16.92
1927	641	783	Jan. 3, 1927	0	489	552	1.27	17.20	477	599	18.67
1928	661	2,770	May 24, 1928	0	671	803	1.84	25.07	728	706	22.04
1929	681	2,020	May 7, 1929	0	725	598	1.37	18.61	707	553	17.22
1930	696	826	Sept. 9, 1930	0	494	562	1.29	17.50	453	634	19.77
1931	711	1,160	June 17, 1931	0	520	598	1.37	18.48	537	531	16.56
1932	726	835	Nov. 11, 1931	0	505	454	1.04	14.18	495	523	16.35
1933	741	2,310	Apr. 30, 1933	0	593	633	1.45	19.71	612	611	19.03
1934	756	1,270	May 10, 1934	0	606	615	1.41	19.15	606	626	19.50
1935	781	924	July 17, 1935	0	675	707	1.62	22.03	673	684	21.29
1936	801	3,790	Apr. 3, 1936	2	892	867	2.03	27.70	917	968	30.13
1937	821	2,790	May 21, 1937	0	781	848	1.94	26.40	772	929	28.92
1938	851	1,570	May 17, 1938	0	653	768	1.76	23.94	662	696	21.67
1939	871	1,880	May 11, 1939	0	742	715	1.64	22.21	744	606	18.81
1940	891	1,840	June 1, 1940	0	680	697	1.60	21.60	697	719	22.34

Note.--Adjusted runoff for period 1921-32 not previously published. Adjusted runoff for period 1933-40 revised.

## PRESUMPSCOT RIVER BASIN

Yearly discharge, in cubic feet per second, of Presumpscot River at outlet of Sebago Lake, Maine--Continued

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed	Adjusted	
		Maximum day		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1941	921	1,020	Dec. 1, 1940	0	557	390	.894	12.12	429	328	10.18
1942	951	809	July 22, 1942	0	353	542	1.24	16.86	465	626	19.49
1943	971	899	Sept. 12, 1943	0	630	843	1.47	20.01	641	732	22.80
1944	1001	993	Dec. 22, 1943	0	692	713	1.64	22.29	666	692	21.61
1945	1031	2,790	June 27, 1945	0	798	907	2.08	28.28	660	963	30.01
1946	1051	1,200	Jan. 20, 1946	0	777	824	1.89	25.65	734	712	22.19
1947	1081	1,130	June 15, 1947	0	769	721	1.65	22.46	762	650	20.21
1948	1111	905	July 4, 1948	0	534	453	1.04	14.15	467	536	16.72
1949	1141	827	June 22, 1949	0	478	518	1.19	16.11	484	466	14.49
1950	1171	682	July 22, 1950	0	438	518	1.19	16.13	-	-	-

Note.--Adjusted runoff not previously published.

## SACO RIVER BASIN

100. Saco River near Conway, N. H. 1/

Location.--Lat 43°59'25", long. 71°05'30", at Odell Falls  $1\frac{1}{2}$  miles downstream from Swift River and Conway, Carroll County.

Drainage area.--386 sq mi. Prior to June 1912, 388 sq mi (revised).

Supplemental records available.--January 1910 to June 1912, gage heights and discharge measurements only.

Gage.--Water-stage recorder. Datum of gage is 417.86 ft above mean sea level, preliminary adjustment of 1928. Prior to June 1912, chain gage at site three-quarters of a mile downstream at different datum.

Average discharge.--27 years (1903-9, 1929-50), 888 cfs.

Extremes.--1903-9, 1929-50: Maximum discharge, 40,600 cfs Mar. 19, 1936 (gage height, 16.45 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).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	-	-	-	-	-	-	-	-	284	-
1904	550	4316	4343	4257	4247	41,631	2,615	3,680	451	250	276	411	4941
1905	754	4409	4240	4456	4256	41,134	2,088	1,214	821	835	774	1,531	4877
1906	646	583	4800	41,110	4492	4374	1,950	2,150	1,320	521	261	157	4865
1907	404	4357	4291	4406	4257	4767	2,020	2,630	750	446	242	555	4763
1908	1,290	2,490	41,130	4678	4892	4960	2,290	2,530	657	363	557	174	41,150
1909	184	211	4220	4489	4604	4692	3,490	2,580	690	267	160	302	4822
1910	326	327	274	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	1,170	3,090	3,100	545	268	150	128	-
1930	268	272	211	384	401	898	2,590	1,730	1,650	468	684	250	818
1931	242	799	533	211	188	284	2,380	2,210	1,840	510	249	301	812
1932	307	446	424	988	494	371	2,820	1,440	373	430	399	747	787
1933	1,300	1,680	463	382	322	268	3,060	2,530	456	240	370	232	926
1934	485	444	331	264	189	424	3,446	1,750	388	220	164	692	749
1935	548	947	810	769	403	536	2,240	1,883	1,300	546	240	329	880
1936	210	588	368	378	316	5,968	2,500	1,847	353	205	129	152	1,092
1937	769	489	1,013	1,124	793	540	2,373	4,602	940	449	250	230	1,140
1938	1,226	1,635	912	918	716	1,006	2,784	1,245	424	468	326	1,396	1,066
1939	567	514	1,648	366	349	318	1,934	3,168	538	278	274	165	848
1940	217	437	570	144	124	146	1,902	4,609	1,189	383	228	616	866
1941	222	1,119	546	540	488	292	1,857	614	338	520	282	208	583
1942	316	602	412	442	286	699	3,355	1,641	793	272	168	225	766
1943	340	970	543	249	321	664	1,692	3,533	669	459	724	586	900
1944	994	2,015	517	300	248	318	1,592	3,097	1,344	625	229	352	969
1945	426	510	541	679	280	1,947	2,867	2,531	1,530	722	281	368	1,060
1946	930	700	734	475	361	2,350	1,698	1,769	806	311	921	513	970
1947	1,009	809	603	444	928	861	2,404	3,128	1,434	662	245	154	1,058
1948	114	363	213	160	197	1,186	2,242	2,260	762	297	186	102	674
1949	175	974	760	1,479	408	1,168	1,916	1,382	412	180	153	292	777
1950	298	614	666	752	458	709	3,019	1,795	937	281	177	253	829

\* Revised.

† Corrected.

‡ Not previously published; estimated on basis of weather records and records for nearby stations.

1/ Published as "at Center Conway" prior to 1912.



Monthly and yearly runoff, in inches, of Saco River near Conway, N. H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903													0.98
1904	1.64	*0.91	*1.02	*0.76	*0.69	*4.84	8.10	10.93	1.29	0.74	0.82	1.18	\$32.92
1905	2.24	*1.17	*.71	*1.36	*.69	*3.37	6.00	3.61	2.36	2.48	2.29	4.41	\$30.69
1906	1.91	1.67	*2.38	*3.30	*1.32	*1.11	5.61	6.39	3.79	1.54	.78	.45	\$30.25
1907	1.20	*1.03	*.86	*1.21	*.69	*2.28	5.81	7.82	2.15	1.33	.72	1.60	\$26.70
1908	3.83	7.16	*3.36	*2.02	*2.48	*2.85	6.58	6.93	1.89	1.08	1.66	.50	*40.34
1909	.55	.61	*.85	*1.45	*1.62	*2.05	10.03	7.87	1.99	.79	.48	.87	*28.76
1910	.97	.94	.81	-	-	-	-	-	-	-	-	-	-
1929	-	-	-	-	-	3.49	8.94	9.26	1.57	.80	.45	.37	-
1930	.86	.79	.63	1.15	1.08	2.69	7.49	5.16	4.76	1.40	2.04	.72	28.77
1931	.72	2.31	1.59	.63	.51	.85	6.88	6.61	5.32	1.52	.74	.87	28.55
1932	.92	1.29	1.27	2.95	1.38	1.11	8.16	4.30	1.08	1.28	1.19	2.16	27.09
1933	3.88	4.85	1.38	1.14	.87	.79	8.85	6.96	1.32	.72	1.11	.67	32.54
1934	1.45	1.28	.99	.79	.51	1.27	9.96	5.22	1.13	.66	.49	2.58	26.33
1935	1.63	2.73	2.42	2.29	1.08	1.60	6.47	5.63	3.76	1.84	.72	.95	30.92
1936	.63	1.70	1.10	1.13	.88	17.87	7.23	5.51	1.02	.61	.39	.44	38.51
1937	2.29	1.41	3.08	3.36	2.14	1.61	8.86	13.72	2.72	1.34	.75	.84	40.00
1938	3.67	4.73	2.72	2.74	1.35	3.01	8.04	3.72	1.23	1.40	.97	.40	39.20
1939	1.70	1.48	4.92	1.09	.94	.95	5.95	9.46	1.55	.83	.82	.48	29.81
1940	.65	1.28	1.11	.43	.55	.44	5.50	13.76	3.44	1.14	.68	1.78	30.54
1941	.66	3.24	1.64	1.61	1.31	.87	5.37	1.83	.98	1.56	.84	.60	20.51
1942	.94	1.74	1.23	1.33	.77	2.09	9.70	4.90	2.29	.81	.50	.65	26.95
1943	1.02	2.80	1.63	.74	.87	1.98	4.89	10.55	1.93	1.37	2.17	1.70	31.65
1944	2.94	5.82	1.54	.90	.69	.95	4.80	9.25	3.88	1.87	.68	1.02	34.17
1945	1.27	1.47	1.61	2.03	.76	5.81	8.29	7.56	4.42	2.16	.84	1.06	37.28
1946	2.78	2.02	2.19	1.42	.97	7.02	4.91	5.28	2.33	.93	2.76	1.48	34.09
1947	3.01	2.34	1.80	1.33	2.51	2.63	6.95	9.34	4.15	1.98	.73	.45	37.22
1948	.34	1.05	.64	.48	.55	3.54	6.48	6.74	2.20	.89	.56	.29	23.76
1949	.52	2.81	2.27	4.42	1.10	3.49	5.53	4.13	1.19	.54	.46	.84	27.30
1950	.89	1.77	1.99	2.25	1.24	2.12	8.72	5.36	2.71	.84	.53	.73	29.15

\* Revised.

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1904	124	\$11,400	Apr. 30, 1904*	\$120	\$941	\$2.43	\$32.92	\$955	\$55.47
1905	165	\$15,300	July 31, 1905*	\$168	\$877	\$2.26	\$30.69	\$930	\$32.53
1906	201	\$8,200	Apr. 16, 1906*	\$108	\$855	\$2.23	\$30.25	\$782	\$27.38
1907	241	\$11,500	May 1, 1907*	\$133	\$763	\$1.97	\$25.70	\$1,080	\$37.96
1908	241	\$29,100	Nov. 3, 1907*	\$144	*\$1,150	\$2.96	\$40.34	\$792	\$27.80
1909	261	\$16,800	Apr. 14, 1909*	\$129	*\$822	\$2.12	\$28.76	\$848	\$29.67
1929	681	-	-	-	-	-	-	-	-
1930	696	15,800	Apr. 7, 1930	99	818	2.12	28.77	885	31.11
1931	711	15,400	June 9, 1931	120	812	2.10	28.55	779	27.41
1932	726	16,400	Sept. 17, 1932	128	767	1.99	27.09	956	33.72
1933	741	11,900	Apr. 18, 1933	113	926	2.40	32.54	744	26.15
1934	756	15,900	Apr. 13, 1934	99	749	1.94	26.33	836	29.39
1935	781	*8,640	Dec. 2, 1935*	161	880	2.28	30.92	782	27.57
1936	801	40,600	Mar. 19, 1936	93	1,092	2.83	38.51	1,186	41.80
1937	821	18,800	May 7, 1937	102	1,140	2.95	40.06	1,264	44.46
1938	851	20,800	Sept. 21, 1938	149	1,086	2.81	38.20	1,000	35.18
1939	871	11,200	Dec. 6, 1938	102	848	2.20	29.81	703	24.73
1940	891	20,000	May 3, 1940	112	866	2.24	30.54	937	33.06
1941	921	7,100	Apr. 16, 1941	140	583	1.51	20.51	537	18.88
1942	951	8,780	Apr. 26, 1942	105	766	1.98	26.95	810	28.49
1943	971	9,950	May 12, 1943	159	900	2.33	31.65	1,039	36.53
1944	1001	21,000	Nov. 9, 1943	153	869	2.51	34.17	800	28.19
1945	1031	12,500	Mar. 30, 1945	182	1,060	2.75	37.28	1,135	39.92
1946	1051	12,200	Aug. 5, 1946	162	970	2.51	34.09	974	34.25
1947	1081	10,600	Apr. 12, 1947	118	1,058	2.74	37.22	912	32.10
1948	1111	12,800	Apr. 2, 1948	79	874	1.75	23.76	776	27.33
1949	1141	11,300	Dec. 31, 1948	80	777	2.01	27.30	749	26.35
1950	1171	19,600	Apr. 21, 1950	102	829	2.15	29.15	-	-

\* Revised.

\* Not previously published.

## 101. 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.

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

Average discharge.--8 years (1942-50), 649 cfs.

Extremes.--1942-50: Maximum discharge, 3,900 cfs Mar. 31, Apr. 1, 1945 (gage height, 8.28 ft); minimum, 10 cfs Oct. 9, 10, 1944; minimum daily, 11 cfs Oct. 10, 1944.

Remarks.--Flow regulated by Ossipee and Silver Lakes and Pine River Pond (combined capacity, 1,430,000,000 cu ft).

Monthly and yearly mean discharge, in cubic feet per second, of Ossipee River  
at Effingham Falls, N. H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1943	223	326	415	363	313	625	1,369	1,884	478	407	556	471	621
1944	298	1,017	583	302	278	347	1,593	1,433	678	674	263	382	653
1945	266	490	390	688	606	1,257	1,859	1,819	1,144	642	414	415	833
1946	374	574	871	691	569	1,497	1,149	1,045	662	313	545	455	730
1947	685	478	523	556	878	935	1,741	1,412	1,160	392	297	252	774
1948	113	171	155	158	347	832	1,373	1,457	585	285	218	178	450
1949	197	214	454	1,302	589	731	1,323	663	395	230	161	219	539
1950	221	196	391	703	725	436	2,115	683	636	196	194	166	551

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1943	971	2,640	Apr. 29, 1943	165	621	1.88	25.55	699	28.74	
1944	1001	2,610	Apr. 27, 1944	182	653	1.98	26.94	591	24.37	
1945	1031	3,900	Mar. 31, 1945	11	833	2.52	34.25	890	36.59	
1946	1051	2,390	Mar. 30, 1946	189	730	2.21	30.04	719	29.59	
1947	1081	3,040	Apr. 1, 1947	112	774	2.35	31.82	669	27.50	
1948	1111	2,940	May 21, 1948	90	490	1.48	20.20	526	21.68	
1949	1141	2,880	Jan. 8, 1949	101	539	1.63	22.19	535	21.99	
1950	1171	3,870	Apr. 22, 1950	158	551	1.67	22.68	-	-	

## 102. 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, and  $1\frac{1}{4}$  miles upstream from mouth.

Drainage area.--453 sq mi.

Gage.--Water-stage recorder. Datum of gage is 276.1 ft above mean sea level, datum of 1929 (prior to Oct. 1, 1942, at datum 1.00 ft higher). Prior to Aug. 21, 1929, chain gage at same site and datum 1 ft higher than present datum.

Average discharge.--34 years (1916-50), 843 cfs.

Extremes.--1916-50: 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.--Flow partly regulated by power plants at Kezar Falls and by Ossipee and Silver Lakes, Pine River, and Bickford and Colcord Ponds (combined capacity, 1,600,000,000 cu ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	-	-	-	-	-	-	-	-	-	-	646	541	-
1917	469	522	925	634	464	817	2,650	1,530	2,630	891	532	423	1,040
1918	402	442	305	263	256	624	1,910	989	492	439	445	590	596
1919	841	961	1,100	1,290	661	1,810	1,930	1,730	690	421	352	395	1,020
1920	553	1,230	1,010	495	411	1,660	3,830	2,170	858	436	501	369	1,130
1921	621	704	1,970	900	666	2,600	2,190	905	422	331	224	196	980
1922	221	364	647	422	375	1,430	3,300	2,030	2,090	1,210	356	369	1,070
1923	332	219	192	298	239	313	2,970	2,240	548	346	228	179	676
1924	263	514	1,410	915	610	631	2,960	2,120	543	293	335	400	915
1925	375	496	622	459	1,040	1,800	2,350	908	317	445	474	403	805
1926	385	984	993	690	659	585	1,920	1,820	534	356	339	190	788
1927	239	890	635	516	502	1,350	1,480	990	494	456	454	367	697
1928	386	1,260	1,300	941	891	800	2,330	1,750	1,050	629	604	528	1,040
1929	278	348	372	846	535	1,280	2,530	2,110	522	390	241	243	809
1930	256	238	280	346	574	1,690	1,940	636	749	418	706	402	686
1931	270	448	433	400	345	405	2,050	1,110	1,450	387	364	259	658
1932	299	380	334	979	793	691	2,570	767	330	374	348	424	686
1933	546	1,160	661	656	638	591	3,800	1,470	466	285	215	267	893
1934	415	420	419	398	377	702	3,239	1,006	332	332	233	321	691
1935	619	526	853	1,010	804	1,058	2,272	1,413	1,157	565	454	438	927
1936	290	461	887	692	667	5,552	3,018	1,072	412	309	194	175	1,148
1937	241	517	1,099	1,149	990	2,604	3,146	911	462	303	248	1,057	
1938	265	1,045	1,461	1,066	1,299	1,192	2,085	776	545	387	529	716	943
1939	645	670	1,436	598	703	664	2,534	1,837	556	351	322	324	887
1940	320	461	433	297	221	288	3,096	2,558	1,225	392	424	432	844
1941	265	480	444	761	758	599	1,234	436	300	336	210	194	497
1942	202	399	336	467	325	923	2,218	843	596	362	321	204	599
1943	244	413	565	455	473	923	1,770	2,225	624	499	712	534	789
1944	392	1,236	725	378	350	550	2,179	1,649	836	784	285	515	822
1945	380	655	640	949	796	1,736	2,396	2,385	1,438	793	473	461	1,093
1946	480	739	1,211	989	817	2,020	1,445	1,264	789	367	719	585	955
1947	877	606	661	803	1,186	1,256	2,096	1,705	1,401	519	353	318	979
1948	146	245	198	201	389	1,108	1,618	1,797	808	344	252	193	608
1949	222	308	593	1,617	718	995	1,650	844	466	248	166	224	671
1950	241	263	493	875	895	682	2,628	857	705	220	212	208	685

Yearly discharge, in cubic feet per second, of Ossipee River at Cornish, Maine

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1917	451	*6,820	June 18, 1917	300	1,040	2.30	31.15	974	29.21
1918	471	*2,740	Apr. 4, 1918	240	596	1.52	17.88	745	22.29
1919	501	*4,710	Mar. 29, 1919	219	1,020	2.25	30.51	1,010	30.23
1920	501	*4,930	Apr. 24, 1920	219	1,130	2.49	33.84	1,170	35.15
1921	521	*4,560	Dec. 15, 1920	80	980	2.16	29.40	806	24.18
1922	541	*5,590	Apr. 13, 14, 1922	147	1,070	2.36	32.00	1,030	30.77
1923	561	*6,910	Apr. 30, 1923	80	675	1.49	20.26	797	23.89
1924	581	*4,460	Apr. 23, 1924	108	916	2.02	27.52	857	25.76
1925	601	*6,140	Mar. 29, 1925	199	805	1.78	24.09	877	26.26
1926	621	*4,830	Apr. 26, 1926	124	788	1.74	23.60	737	22.09
1927	641	*2,740	Mar. 21, 1927	137	697	1.54	20.87	797	23.85
1928	661	*4,250	Apr. 9, 1928	268	1,040	2.30	31.16	874	26.28
1929	681	*3,610	May 5, 1929	65	809	1.79	24.24	791	23.69
1930	696	3,370	Apr. 9, 1930	150	686	1.51	20.54	717	21.47
1931	711	3,840	June 12, 1931	191	658	1.45	19.72	646	19.36
1932	726	4,900	Apr. 12, 1932	114	686	1.51	20.64	800	24.05
1933	741	7,440	Apr. 19, 1933	170	893	1.97	26.77	800	23.99
1934	756	5,470	Apr. 13, 1934	176	681	1.50	20.42	742	22.25
1935	781	2,960	Apr. 16, 1935	223	927	2.05	27.75	898	26.90
1936	801	17,200	Mar. 21, 1936	116	1,148*	2.53	34.54	1,167	35.08
1937	821	4,400	May 15, 1937	144	1,057	2.33	31.69	1,134	33.98
1938	851	3,150	Dec. 7, 1937	140	943	2.08	28.23	942	28.21
1939	871	5,400	Apr. 25, 1939	74	887	1.96	26.58	757	22.68
1940	891	5,700	May 5, 1940	180	844	1.86	25.35	841	25.25
1941	921	1,920	Apr. 19, 1941	106	497	1.10	14.91	477	14.51
1942	951	2,900	Apr. 10, 1942	112	599	1.32	17.96	623	18.69
1943	971	3,170	May 13, 1943	166	789	1.74	23.62	882	26.43
1944	1001	5,260	Apr. 25, 1944	192	822	1.81	24.70	766	23.03
1945	1031	5,130	Apr. 5, 1945	89	1,093	2.41	32.74	1,157	34.64
1946	1051	2,900	Mar. 20, 1946	188	955	2.11	28.58	931	27.88
1947	1081	3,390	Apr. 14, 15, 1947	188	979	2.16	29.35	847	25.40
1948	1111	3,390	May 19, 1948	95	608	1.34	18.28	653	19.64
1949	1141	3,450	Jan. 6, 1949	140	671	1.48	20.08	660	19.77
1950	1171	4,510	Apr. 22, 1950	158	685	1.51	20.54	-	-

\* Revised.

## 103. Saco River at Cornish, Maine

Location.--Lat 43°48'30", long. 70°46'55", 300 ft upstream from highway bridge at Cornish, York County, and half a mile downstream from Ossipee River.

Drainage area.--1,298 sq mi.

Gage.--Water-stage recorder. Datum of gage is 263.48 ft above mean sea level, datum of 1929. Prior to October 30, 1919, chain gage at highway bridge at datum 1.17 ft lower.

Average discharge.--34 years (1916-50), 2,599 cfs.

Extremes.--1916-50: Maximum discharge, 45,000 cfs (revised) Mar. 21, 22, 1936 (gage height, 21.90 ft, from floodmarks); minimum, 90 cfs Oct. 1, 1921 (gage height, 0.03 ft, chain gage datum).

Remarks.--Flow partly regulated by power plants 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).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	-	-	-	-	-	-	-	-	-	3,760	1,730	1,520	-
1917	1,440	1,420	2,720	1,710	1,280	2,000	7,800	5,850	8,740	3,090	1,470	1,200	3,220
1918	1,160	1,880	777	652	615	1,640	5,980	3,600	1,640	1,640	1,220	1,720	1,880
1919	3,040	3,010	2,770	2,600	1,600	4,510	6,100	5,040	2,350	1,170	866	1,190	2,860
1920	1,460	3,340	2,550	1,270	1,150	3,750	11,300	7,320	2,810	1,170	1,050	942	3,170
1921	1,840	1,800	4,880	1,950	1,440	7,050	7,570	3,040	1,060	829	600	501	2,720
1922	602	1,200	1,900	1,090	1,020	3,610	9,990	6,110	6,100	4,110	1,230	1,010	3,170
1923	895	760	564	970	726	997	8,000	7,960	2,130	962	627	514	2,100
1924	713	1,520	4,160	2,590	1,560	1,670	7,090	8,350	2,400	994	733	1,940	2,800
1925	1,780	1,710	2,040	1,110	2,970	4,810	7,800	3,180	1,180	1,380	1,280	1,050	2,520
1926	1,300	3,600	3,420	1,630	1,560	1,490	4,810	6,710	2,450	1,120	787	603	2,460
1927	809	2,990	1,880	1,250	1,220	5,270	4,720	3,850	1,960	1,390	1,230	1,470	2,170
1928	1,850	5,240	4,410	2,530	2,520	2,590	7,620	7,110	4,380	2,350	2,110	1,800	3,710
1929	1,010	1,100	1,270	2,430	1,590	3,650	7,020	7,010	1,950	1,120	647	621	2,460
1930	757	739	642	1,130	1,200	4,190	6,360	3,050	3,320	1,420	1,780	1,020	2,130
1931	772	1,740	1,460	1,000	880	1,220	6,260	4,930	5,120	1,310	846	790	2,190
1932	781	1,150	1,070	2,430	1,980	1,520	7,820	3,490	1,090	996	927	1,610	2,060
1933	2,290	4,040	2,030	1,590	1,480	1,550	9,920	5,810	1,470	810	857	2,720	2,720
1934	1,455	1,281	1,175	1,069	997	1,778	9,620	4,595	1,237	802	672	1,521	2,180
1935	1,568	1,987	2,484	2,816	2,043	2,506	6,491	5,261	3,635	1,965	1,100	1,136	2,749

Monthly and yearly mean discharge, in cubic feet per second, of Saco River at Cornish, Maine--Con.													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	799	1,309	2,242	1,816	1,420	16,220	8,503	4,168	1,023	748	510	548	3,372
1937	1,099	1,494	2,839	3,482	2,639	2,585	6,969	11,720	3,362	1,429	917	818	3,286
1938	1,532	3,456	4,072	2,469	3,197	2,986	7,697	3,722	1,581	1,161	1,435	2,360	2,982
1939	1,928	1,596	4,565	1,775	1,355	1,600	6,294	7,497	1,964	930	963	800	2,607
1940	809	1,295	1,136	801	700	805	7,714	9,961	3,841	1,237	983	1,434	2,559
1941	817	2,046	1,298	2,036	1,974	1,495	4,130	1,707	996	1,146	785	646	1,582
1942	715	1,304	980	1,591	1,114	2,864	7,010	4,088	2,734	1,214	801	683	2,090
1943	816	1,708	1,755	1,085	1,249	2,535	4,665	8,548	2,370	1,381	1,933	1,562	2,476
1944	1,820	4,907	2,060	1,240	1,176	1,466	5,633	6,821	2,605	2,678	988	1,219	2,717
1945	1,262	1,682	1,976	2,365	1,689	4,451	8,672	7,216	4,549	2,675	1,158	1,182	3,246
1946	1,920	2,137	3,330	2,235	1,855	5,686	4,985	4,354	2,638	1,033	2,454	1,742	2,872
1947	3,031	2,094	1,775	2,005	3,276	3,363	6,366	6,655	4,321	1,772	996	741	3,027
1948	406	722	560	528	752	3,001	5,580	6,029	2,926	1,073	672	463	1,893
1949	533	1,669	1,619	5,209	1,977	2,594	5,657	3,441	1,344	662	424	675	2,150
1950	723	1,253	1,422	2,354	2,176	1,990	8,409	4,384	2,418	823	541	821	2,267

Yearly discharge, in cubic feet per second									
Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1917	471	*17,600	June 18, 1917	635	3,220	2.48	33.72	3,050	32.14
1918	451	*7,800	Apr. 7, 1918	350	1,880	1.45	19.61	2,500	24.02
1919	501	13,500	Mar. 31, 1919	530	2,860	2.20	29.90	2,730	28.57
1920	501	14,100	Apr. 25, 1920	634	3,170	2.44	33.27	3,280	34.38
1921	521	12,600	Mar. 28, 1921	330	2,720	2.10	28.49	2,320	24.20
1922	541	18,000	Apr. 14, 1922	365	3,170	2.44	33.11	3,040	31.82
1923	561	23,000	May 2, 1923	250	2,100	1.62	21.90	2,450	25.57
1924	581	12,800	May 4, 1924	275	2,800	2.16	29.27	2,720	28.51
1925	601	15,900	Apr. 1, 1925	733	2,520	1.94	26.30	2,750	28.71
1926	621	12,600	May 6, 1926	490	2,460	1.90	25.70	2,240	23.39
1927	641	7,800	Mar. 23, 1927	500	2,170	1.67	22.67	2,660	27.79
1928	661	13,600	Apr. 11, 1928	815	3,710	2.86	38.88	3,030	31.77
1929	681	10,800	May 6, 1929	462	2,460	1.90	25.67	2,350	24.55
1930	696	9,550	Apr. 11, 1930	495	2,130	1.64	22.29	2,290	23.91
1931	711	11,700	June 13, 1931	480	2,190	1.69	22.90	2,110	22.06
1932	726	13,800	Apr. 15, 1932	471	2,060	1.59	21.63	2,510	26.30
1933	741	19,500	Apr. 21, 1933	488	2,720	2.10	26.45	2,350	24.58
1934	756	14,200	Apr. 17, 1934	444	2,180	1.68	22.78	2,358	24.66
1935	781	9,570	May 2, 1935	500	2,749	2.12	28.74	2,607	27.26
1936	801	*45,000	Mar. 21, 22, 1936	423	3,372	2.60	35.36	3,464	36.31
1937	821	16,900	May 10, 1937	466	3,286	2.53	34.34	3,588	37.51
1938	851	11,900	Apr. 23, 1938	614	2,962	2.28	30.98	2,876	30.09
1939	871	14,100	Apr. 26, 1939	530	2,607	2.01	27.27	2,204	23.05
1940	891	21,500	May 6, 1940	610	2,559	1.97	26.81	2,635	27.61
1941	921	6,290	Apr. 19, 21, 1941	350	1,582	1.22	16.57	1,486	15.86
1942	951	10,200	Apr. 29, 1942	505	2,090	1.61	21.87	2,198	23.00
1943	971	11,900	May 15, 1943	570	2,476	1.91	25.89	2,850	29.79
1944	1001	12,100	May 8, 1944	665	2,717	2.09	28.49	2,398	25.15
1945	1031	15,800	Apr. 5, 1945	846	3,246	2.50	33.93	3,454	36.12
1946	1051	9,460	Mar. 19, 1946	648	2,872	2.21	30.04	2,831	29.61
1947	1081	11,400	May 9, 1947	540	3,027	2.33	31.67	2,588	27.07
1948	1111	9,870	May 22, 1948	295	1,893	1.46	19.84	2,071	21.71
1949	1141	12,600	Jan. 4, 1949	302	2,150	1.66	22.49	2,115	22.13
1950	1171	17,100	Apr. 24, 1950	420	2,267	1.75	23.72	-	-

\* Revised.

## 104. Little Ossipee River near South Limington, Maine

Location.--Lat 43°41'15", long. 70°40'05", just upstream from highway bridge, 2 miles east of South Limington, York County, and 4 miles upstream from mouth.

Drainage area.--161 sq mi.

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

Average discharge.--10 years (1940-50), 244 cfs.

Extremes.--1940-50: Maximum discharge, 2,100 cfs Jan. 1, 1949 (gage height, 4.83 ft), from recorded range in stage; minimum, 7.3 cfs July 23, 1941 (gage height, 1.30 ft). Maximum discharge known, 8,530 cfs Mar. 19, 1936, at Ledgemere power plant 4 miles upstream.

Remarks.--Flow regulated by Little Ossipee Lake and Balch Pond (combined capacity, 351,000,000 cu ft) and by power plants above station.

Monthly and yearly mean discharge, in cubic feet per second, of Little Ossipee River near South Limington, Maine

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	-	167	-
1941	103	154	133	219	350	263	361	146	77.3	43.8	31.8	52.1	160
1942	55.5	54.4	68.6	102	69.6	520	559	185	314	119	98.9	96.9	187
1943	77.1	113	247	174	241	384	552	575	192	105	140	128	244
1944	140	285	158	107	143	364	857	299	164	124	70.1	218	243
1945	167	224	404	359	280	720	580	680	533	278	116	114	370
1946	141	264	359	423	246	675	402	346	207	91.3	307	198	306
1947	289	163	172	228	393	497	616	485	388	174	93.3	85.5	298
1948	55.4	100	67.1	67.8	131	398	563	513	315	125	72.1	31.8	189
1949	70.0	238	171	571	329	409	436	254	116	68.2	37.6	37.6	227
1950	49.1	129	123	223	243	367	897	257	147	68.4	48.2	79.5	218

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	921	-	-	-	-	-	-	-	-
1941	921	1,020	Feb. 10, 1941	8.3	160	-	-	142	-
1942	951	1,290	Mar. 23, 1942	9.4	187	-	-	209	-
1943	971	1,140	May 14, 1943	13	244	-	-	256	-
1944	1001	1,270	Apr. 13, 1944	13	243	-	-	261	-
1945	1031	1,440	May 14, 1945	27	370	-	-	368	-
1946	1051	1,220	Mar. 16, 1946	26	306	-	-	294	-
1947	1081	1,050	May 5, 1947	27	298	-	-	266	-
1948	1111	1,440	May 19, 1948	18	189	-	-	208	-
1949	1141	2,100	Jan. 1, 1949	33	227	-	-	213	-
1950	1171	1,570	Apr. 6, 1950	36	218	-	-	-	-

## 105. Saco River at West Buxton, Maine

Location.--Lat 43°40'00", long. 70°36'05", at hydroelectric plant of Central Maine Power Co. at West Buxton, York County, and 6 miles downstream from Little Ossipee River.

Drainage area.--1,572 sq mi.

Gage.--Staff gages. Altitude of gage is 68 ft (from topographic map).

Average discharge.--30 years (1907-16, 1919-40), 3,079 cfs.

Remarks.--Discharge computed from records of flow over dam, through waste gates, and through wheels of power plant, determined by hourly gage readings. Flow partly regulated by power plant above station and by Watchic, Balch, and Little Ossipee Ponds, and ponds and lakes above Cornish (combined capacity, 3,800,000,000 cu ft).

Cooperation.--Records furnished by Central Maine Power Co.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1908	#3,600	6,980	4,260	3,130	2,840	3,640	6,800	7,590	2,850	1,140	1,220	711	#3,730
1909	697	639	671	1,340	1,410	2,790	12,000	7,490	2,890	1,210	799	686	2,710
1910	1,260	874	1,130	1,170	1,160	5,660	8,180	4,990	3,100	1,040	1,170	930	2,560
1911	709	1,030	792	1,420	880	995	6,640	5,450	1,870	894	634	576	1,820
1912	1,310	1,680	2,160	1,580	1,110	3,010	9,720	6,120	3,450	1,230	1,400	1,120	2,790
1913	1,550	2,950	1,830	2,830	1,960	6,220	8,140	3,710	2,410	999	682	931	2,850
1914	3,300	4,610	2,470	1,690	1,910	5,750	10,200	7,120	2,040	1,390	1,080	925	3,550
1915	692	861	907	1,380	2,780	4,720	5,120	3,660	1,340	4,240	2,820	1,710	2,540
1916	1,550	1,780	1,910	2,380	2,780	3,460	9,690	8,180	8,440	4,750	1,980	1,730	4,060
1919	-	-	-	2,940	1,980	5,780	7,700	6,180	2,960	1,300	950	1,410	-
1920	1,650	3,660	3,000	1,400	1,220	5,230	14,500	9,050	5,720	1,470	1,360	1,340	3,960
1921	2,380	2,270	4,980	1,980	1,660	8,870	9,220	3,740	1,360	1,040	736	615	3,240
1922	709	1,530	2,190	1,260	1,200	4,780	11,800	7,600	7,340	4,830	1,440	1,250	3,820
1923	1,110	948	686	1,260	930	1,400	10,200	9,920	2,360	964	762	614	2,600
1924	868	1,760	4,190	2,670	1,890	2,360	9,190	9,910	1,520	1,200	947	1,290	3,310
1925	2,020	1,760	2,280	1,510	3,650	6,130	9,210	3,450	2,460	1,560	1,580	2,170	2,960
1926	1,540	3,850	3,700	2,030	1,810	1,840	6,280	7,560	2,600	1,290	894	758	2,850
1927	961	3,530	2,210	1,430	1,470	4,450	5,320	4,130	2,170	1,580	1,370	1,830	2,540
1928	2,120	5,710	5,110	2,980	2,930	5,010	8,300	7,600	4,620	2,460	2,280	1,880	4,070
1929	1,150	1,270	1,500	2,630	1,890	4,320	6,710	6,420	2,220	1,180	788	722	2,570
1930	873	868	774	1,330	1,450	4,480	5,150	3,300	3,740	1,640	1,970	1,210	2,230
1931	1,020	2,100	1,800	1,200	1,070	1,610	7,620	5,660	5,150	1,630	1,090	1,000	2,580
1932	1,000	1,320	1,280	2,720	2,340	6,910	3,990	1,230	1,140	1,070	1,790	2,230	2,330
1933	2,530	4,210	2,430	1,940	1,950	2,280	11,300	7,450	1,720	902	971	1,120	3,230
1934	1,998	1,545	1,398	1,249	1,131	2,281	13,120	5,712	1,388	901	748	1,872	2,774
1935	1,828	2,413	2,962	3,456	2,492	3,586	6,891	5,916	4,071	2,251	1,214	1,379	3,188
1936	966	1,553	2,726	2,229	1,665	19,800	11,500	4,950	1,185	895	579	689	4,078
1937	1,331	1,839	3,855	4,283	3,697	3,562	8,193	10,043	3,592	1,594	975	920	3,657
1938	1,689	4,496	5,511	2,832	3,591	3,786	7,797	3,816	1,872	1,481	1,664	2,618	3,428
1939	2,117	1,888	5,580	2,164	1,672	2,047	8,103	8,631	2,143	1,154	1,398	936	3,164
1940	961	1,587	1,344	941	884	1,127	10,670	12,430	5,157	1,537	1,234	1,638	3,290

\* Not previously published; estimated on basis of weather records and records for station at Conway, N. H.

Yearly discharge, in cubic feet per second, of Saco River at West Buxton, Maine

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Maximum day		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1908	241	13,500	May 4, 1908	255	3,730	2.37	32.28	2,660	23.02
1909	261	20,800	Apr. 18, 1909	264	2,710	1.72	23.42	2,820	24.34
1910	281	13,100	Apr. 27, 1910	454	2,560	1.63	22.08	2,490	21.55
1911	301	11,020	May 4, 1911	190	1,820	1.16	15.75	2,030	17.52
1912	321	13,000	Apr. 20, 1912	250	2,790	1.77	24.11	2,900	25.09
1913	351	15,800	Mar. 29, 1913	291	2,850	1.81	24.61	3,190	27.53
1914	381	18,000	Apr. 23, 1914	553	3,550	2.28	30.63	2,890	24.92
1915	401	8,290	Feb. 27, 1915	393	2,540	1.62	21.92	2,770	23.94
1916	431	14,100	Apr. 27, 1916	767	4,060	2.58	35.02	-	-
1919	501	-	-	-	-	-	-	3,300	28.47
1920	501	17,400	Apr. 24, 1920	607	3,960	2.52	34.32	4,070	35.23
1921	521	15,600	Apr. 26, 1921	247	3,240	2.06	27.97	2,790	24.11
1922	541	19,800	Apr. 14, 1922	395	3,820	2.43	32.92	3,690	31.84
1923	561	27,800	May 2, 1923	131	2,600	1.65	22.45	2,940	25.44
1924	581	14,400	May 5, 1924	151	3,310	2.11	28.64	3,250	28.07
1925	601	19,100	Apr. 1, 1925	356	2,960	1.88	25.58	3,210	27.75
1926	621	13,300	May 6, 7, 1926	154	2,850	1.81	24.59	2,650	22.86
1927	641	9,490	Mar. 23, 1927	523	2,540	1.62	21.95	3,070	26.47
1928	661	13,600	Apr. 12, 1928	650	4,070	2.59	35.27	3,320	28.76
1929	681	10,600	May 6, 1929	121	2,570	1.63	22.18	2,450	21.16
1930	696	8,200	Apr. 11, 1930	137	2,230	1.42	19.30	2,430	21.03
1931	711	10,400	June 12, 13, 1931	454	2,580	1.64	22.25	2,470	21.31
1932	726	11,000	Apr. 14, 1932	431	2,230	1.42	19.32	2,690	23.35
1933	741	25,600	Apr. 21, 1933	497	3,230	2.05	27.88	2,880	24.82
1934	756	18,600	Apr. 16, 1934	208	2,774	1.76	23.95	2,963	25.59
1935	781	9,660	May 3, 1935	396	3,188	2.03	27.54	3,025	26.12
1936	801	a58,200	Mar. 22, 1936	140	4,078	2.59	35.32	4,229	36.62
1937	821	12,800	May 10, 1937	331	3,657	2.33	31.55	4,054	34.99
1938	851	10,400	Dec. 8, 1937	571	3,428	2.18	29.60	3,248	28.05
1939	871	16,000	Apr. 27, 1939	339	3,164	2.01	27.31	2,681	23.14
1940	891	25,600	May 6, 1940	481	3,290	2.09	28.50	-	-

\* Not previously published.  
a Instantaneous maximum.

## 106. Saco River at Salmon Falls, Maine

Location.--Lat 43°35'50", long. 70°33'00", on left bank at Salmon Falls, York County, 500 ft upstream from highway bridge.

Drainage area.--1,595 sq mi.

Gage.--Water-stage recorder. Datum of gage is 109.5 ft above mean sea level, datum of 1929.

Average discharge.--10 years (1938-48), 3,031 cfs.

Extremes.--1938-48: Maximum discharge, 23,300 cfs May 6, 1940 (gage height, 18.40 ft); minimum, 209 cfs Jan. 23, Dec. 9, 1939.

Remarks.--Flow partly regulated by power plants above station and by Watchic, Balch, and Little Ossipee Ponds, and ponds and lakes above station at Cornish (combined capacity, 3,800,000,000 cu ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	2,155	1,951	5,505	2,275	1,796	2,281	8,550	8,611	2,141	1,516	1,353	978	3,239
1940	991	1,644	1,426	1,007	883	1,036	10,150	11,100	4,559	1,423	1,128	1,704	3,084
1941	1,000	2,359	1,548	2,516	2,751	2,150	4,790	2,063	1,194	1,248	857	732	1,922
1942	828	1,456	1,187	1,876	1,300	3,750	8,179	4,660	3,489	1,560	1,053	858	2,516
1943	1,015	2,035	2,391	1,471	1,674	3,201	5,546	9,763	2,718	1,590	2,291	1,783	2,966
1944	2,070	5,422	2,599	1,429	1,428	2,079	7,152	7,524	2,883	3,028	1,117	1,757	3,197
1945	1,692	2,266	2,736	3,171	2,101	5,846	10,040	8,615	5,597	3,346	1,402	1,360	4,021
1946	2,318	2,774	2,933	2,957	2,367	6,952	5,802	4,982	3,039	1,222	3,031	2,139	3,469
1947	3,596	2,490	2,130	2,412	3,943	4,319	7,739	7,890	5,079	2,144	1,241	925	3,652
1948	530	1,074	763	688	921	3,704	6,250	6,899	3,477	1,297	812	566	2,249

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches
		Discharge	Date				
1939	871	18,100	Apr. 26, 1939	510	3,239	2.03	27.59
1940	891	23,300	May 6, 1940	620	3,084	1.93	26.33
1941	921	7,500	Apr. 20, 1941	470	1,922	1.21	16.36
1942	951	10,900	Apr. 29, 1942	430	2,516	1.58	21.42
1943	971	13,700	May 16, 1943	555	2,966	1.86	25.26
1944	1001	14,000	May 7, 1944	680	3,197	2.00	27.21
1945	1051	18,700	Apr. 6, 1945	600	4,021	2.52	34.23
1946	1051	13,200	Mar. 19, 1946	675	3,469	2.17	29.52
1947	1081	13,900	May 9, 1947	605	3,652	2.29	31.06
1948	1111	14,000	May 18, 1948	390	2,249	1.41	19.20

## 107. Square Pond near Acton, Maine

Location.--Lat 43°33'45", long. 70°52'10", near Acton, York County.

Drainage area.--5.0 sq mi.

Gage.--Staff gage. Datum of gage is 516 ft above mean sea level (from topographic map).

Remarks.--Storage capacity, 212,000,000 cu ft.

Cooperation.--Records furnished by Sanford Mills.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1940	-	-	-	-	-	-	-	-	-	-	-	157
1941	144	133	140	148	131	117	130	119	99.0	82.0	61.0	39.0
1942	11.7	28.0	30.1	28.4	28.4	81.7	104	97.4	92.2	73.0	55.7	31.8
1943	28.4	35.5	48.9	76.4	94.0	103	131	164	151	126	110	90.4
1944	106	88.7	85.4	85.4	128	128	166	175	153	131	104.5	110
1945	111.5	140	160	171	157	153	175	175	203	168	140	122.5
1946	110	169	179	168	131	140	157	153	151	153	146	140
1947	124	103	108	128	146	160	203	197	166	160	108	90.4
1948	80.0	80.0	80.0	80.0	81.7	104.5	124	158.5	164	138	115	92.2
1949	71.0	103	92.0	135	106	75.0	124	142	89.0	89.0	92.0	95.7
1950	71.2	66.0	71.2	81.7	99.2	128	166	171	153	142	110	86.9

## 108. Mousam Lake at Emery Mills, Maine

Location.--Lat 43°29'40", long. 70°50'50", at Emery Mills, York County.

Drainage area.--31.0 sq mi.

Gage.--Staff gage. Datum of gage is 471 ft above mean sea level (from topographic map).

Remarks.--Storage capacity, 412,000,000 cu ft in top 10 ft of pond.

Cooperation.--Records furnished by Sanford Mills.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1940	-	-	-	-	-	-	-	-	-	-	-	214
1941	166	190	199	222	196	36.0	106	151	143	127	123	81.0
1942	66.1	58.7	83.1	118	174	316	305	298	316	296	276	241
1943	209	211.	272	265	269.5	230.5	256.5	361	294	241	199	170
1944	196.5	274	267	252	239	269.5	363.5	307	320	298	259	329
1945	216	325	329	269.5	158	343	274	325	339	283	228	199
1946	199	276	334	325	254	276	263	289	254	224	281	259
1947	209	203	207	246	235	216	272	309.5	267	239	203	166
1948	143	147	141	131	127	276	256.5	343	316	289	246	194
1949	154	207	211	272	211	166	263	294	272	228	182	158
1950	123	121	137	201	235	318	396	332	307	265	233	186

## 109. Estes Pond near Sanford, Maine

Location.--Lat 43°25'20", long. 70°40'00", at dam on Mousam River, 6 miles southeast of Sanford, York County.

Drainage area.--104 sq mi.

Gage.--Staff gage. Datum of gage is approximately at mean sea level (from topographic map).

Remarks.--Storage capacity, 210,000,000 cu ft.

Cooperation.--Records furnished by Sanford Mills.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1941	-	-	-	-	-	-	-	-	-	-	-	51.0
1942	63.6	62.8	115	189	168	190	200	200	200	200	155	107.9
1943	87.7	182	189	189	192.2	194.3	192.2	194.3	191.1	166.3	166.3	181
1944	191.1	192.1	189	189	189	192.1	192.1	189	189	184	70.5	189
1946	-	-	-	-	-	-	-	-	-	-	-	196.5
1947	189	192.2	190.1	191.1	192.2	194.3	196.5	191.1	191.1	189	112.3	57.2
1948	30.1	117.4	89.5	77.5	102.8	196.5	191.1	192.2	189	127.7	172	167.2
1949	167.2	191.1	192.2	191.1	192.2	191.1	192.2	191.1	102.8	83.5	117.4	133.3
1950	125.3	191.1	191.1	194.3	197.5	194.3	192.1	191.1	179	182	191.1	184

Note.--Records of contents prior to Sept. 30, 1941, and for period Oct. 31, 1944, to Aug. 31, 1946, not available.

## 110. Mousam River near West Kennebunk, Maine

Location--Lat 43°25'05", long. 70°39'35", 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.

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

Average discharge--11 years (1939-50), 153 cfs.

Extremes--1939-50: Maximum discharge, 2,090 cfs Apr. 13, 1940 (gage height, 5.05 ft); minimum, 1.1 cfs Aug. 22, 1941.

Remarks--Flow regulated by reservoirs and power plants above station. Runoff adjusted for change in contents in Square Pond, Mousam Lake, and Estes Pond (see preceding page).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	59.9	65.0	61.1	84.3	60.4	115	826	367	260	85.7	64.2	58.4	175
1941	58.1	99.1	104	128	270	230	224	81.9	54.9	51.3	23.9	30.2	112
1942	22.9	26.2	27.1	48.0	45.9	424	325	93.5	150	95.6	53.7	50.4	114
1943	50.2	46.9	227	110	113	250	317	362	142	74.1	93.0	81.4	156
1944	72.1	211	107	71.4	74.7	266	523	166	107	77.6	75.6	112	155
1945	155	154	280	245	188	428	318	341	269	142	83.8	81.6	224
1946	86.4	174	233	241	171	443	227	185	129	75.3	165	83.0	185
1947	151	102	91.9	130	238	362	354	290	247	112	82.0	59.3	184
1948	42.2	34.8	55.9	57.7	54.2	227	237	261	204	86.9	28.4	36.2	111
1949	52.1	121	126	349	239	290	275	133	100	53.5	30.5	27.3	149
1950	42.0	46.7	81.0	146	120	238	392	131	62.2	31.0	33.2	50.9	114

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	0.39	1.10	1.21	1.53	2.50	1.81	2.72	1.04	0.47	0.43	0.16	0.28	13.64
1942	.13	.32	.62	.97	.60	5.54	3.54	.97	1.65	.89	.25	.10	15.58
1943	.32	.91	2.84	1.29	1.23	2.63	3.58	4.54	1.17	.40	.77	.73	20.41
1944	1.01	2.49	1.11	.72	.90	3.06	6.10	1.60	1.11	.65	.10	1.99	20.84
1945	1.24	2.20	3.17	2.49	1.35	5.44	3.19	3.95	3.04	1.19	.58	.68	28.52
1946	.90	2.41	2.84	2.56	1.25	4.99	2.43	2.12	1.22	.71	2.02	.77	24.22
1947	1.36	.99	1.04	1.67	2.40	3.97	4.17	3.50	2.35	1.08	.22	.19	22.71
1948	.22	.74	.47	.54	.63	3.57	2.50	3.37	2.06	.49	.22	.06	14.87
1949	.32	1.73	1.36	4.27	2.00	2.87	3.53	1.66	.39	.33	.30	.27	19.03
1950	.18	.74	.98	1.92	1.42	3.07	4.63	1.20	.44	.13	.14	.22	15.07

Note.--Runoff for period October 1944 to September 1946 does not include adjustment for change in contents in Estes Pond.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed	Adjusted	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1940	891	2,090	Apr. 13, 1940	8.5	175	-	-	-	181	-	-
1941	921	1,010	Feb. 8, 1941	1.2	112	106	1.01	13.64	96.2	92.9	12.01
1942	951	1,480	Mar. 10, 1942	5.5	114	121	1.15	15.58	135	144	18.58
1943	971	1,400	Dec. 2, 1942	1.2	156	158	1.50	20.41	161	162	20.95
1944	1001	855	Apr. 25, 1944	2.9	155	161	1.53	20.84	172	176	22.84
1945	1031	1,140	Dec. 1, 1944	6.9	224	220	2.10	28.52	216	217	28.06
1946	1051	952	Nov. 23, 1945	7.2	185	198	1.79	24.22	172	166	21.46
1947	1081	915	Mar. 16, 1947	10.0	184	175	1.67	22.71	167	161	20.75
1948	1111	1,220	Mar. 23, 1948	3.0	111	115	1.10	14.87	124	130	16.85
1949	1141	1,180	Jan. 1, 1949	4.2	149	147	1.40	19.03	138	135	17.52
1950	1171	789	Apr. 6, 1950	3.9	114	116	1.10	15.07	-	-	-

## PISCATAQUA RIVER BASIN

## 111. Great East Lake near Milton Mills, N. H.

Location--Lat 43°34'10", long. 70°58'25", above Milton Mills, Strafford County.

Drainage area--12.0 sq mi.

Gage--Staff gage. Datum of gage is 474 ft above mean sea level (from topographic map).

Remarks--Storage capacity, 515,000,000 cu ft.

Cooperation--Records furnished by Public Service Co. of New Hampshire.



## PISCATAQUA RIVER BASIN

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Month-end contents, in millions of cubic feet, of Great East Lake near Milton Mills, N. H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1929	-	-	-	-	-	-	-	543.7	531.4	482.6	325.0	239.0
1930	212.1	215.9	281.8	277.9	305.3	470.4	551.9	556.0	539.6	506.9	417.8	333.0
1931	373.2	297.4	223.6	153.2	142.6	274.0	385.4	450.2	490.7	511.0	474.5	430.0
1932	405.6	345.0	317.2	345.0	393.5	365.2	547.8	531.4	511.0	438.0	341.0	373.2
1933	393.5	478.6	494.8	458.3	450.2	523.2	535.5	531.4	506.9	486.4	454.2	281.8
1934	317.2	305.3	289.6	254.5	178.6	235.1	498.8	523.2	515.0	462.4	341.0	321.1
1935	281.8	301.4	258.4	309.2	174.9	270.1	438.0	474.5	539.6	506.9	393.5	341.0
1936	277.9	227.4	171.2	235.1	215.9	556.0	478.6	506.9	478.6	413.8	321.1	227.4
1937	118.1	84.6	219.7	289.6	413.8	490.7	486.6	535.5	494.8	462.4	385.4	274.0
1938	246.8	377.0	474.5	397.6	373.2	482.6	547.8	523.2	515.0	531.4	439.0	377.3
1939	321.1	285.7	385.4	353.0	185.9	235.1	478.6	506.9	523.2	486.6	385.4	215.9
1940	135.5	118.1	91.1	60.0	15.0	81.4	425.9	482.6	511.0	502.8	401.6	274.0
1941	170.2	178.6	215.9	262.3	208.3	142.6	227.4	254.5	254.5	223.5	139.0	81.4
1942	54.4	65.8	71.9	101.0	132.0	266.2	413.8	442.1	482.6	466.4	421.8	325.0
1943	242.8	223.5	242.8	171.2	132.0	227.4	369.2	515.0	523.2	486.6	401.6	258.4
1944	200.8	254.5	239.0	121.6	97.7	185.9	401.6	438.0	450.2	438.0	266.2	262.3
1945	274.0	341.0	393.5	321.1	189.6	361.1	482.6	527.3	531.4	506.9	458.3	353.0
1946	254.5	254.5	329.0	333.0	223.5	393.5	458.3	539.6	515.0	434.0	425.9	301.4
1947	212.1	204.5	146.1	118.1	178.6	297.4	427.3	535.5	535.5	515.0	369.2	197.0
1948	78.2	51.8	65.8	75.0	101.0	219.7	297.4	438.0	486.7	454.2	385.4	242.8
1949	128.5	101.0	111.2	219.7	289.6	349.0	446.2	474.5	462.4	458.3	297.4	189.6
1950	118.1	71.9	78.2	132.0	182.2	281.8	450.2	466.4	458.3	393.5	313.2	219.7

## 112. Horn Pond near Milton Mills, N. H.

Location.--Lat 43°33'25", long. 70°57'15", at Milton Mills, Strafford County.

Drainage area.--16.9 sq mi.

Gage.--Staff gage. Datum of gage is 454 ft above mean sea level (from topographic map).

Remarks.--Storage capacity, 48,900,000 cu ft.

Cooperation.--Records furnished by Public Service Co. of New Hampshire.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1929	-	-	-	-	-	-	-	18.3	26.5	11.9	7.6	17.1
1930	45.4	36.2	45.4	6.2	7.6	6.5	7.6	15.9	28.6	18.7	6.2	3.5
1931	3.9	3.9	6.2	5.4	1.0	3.9	2.4	19.9	15.1	5.4	5.4	1.0
1932	2.4	4.3	5.4	41.4	36.7	9.5	38.4	46.6	47.1	2.8	6.2	24.0
1933	41.0	47.1	41.9	27.3	29.0	43.2	40.2	45.4	46.2	29.9	9.5	8.0
1934	25.7	5.0	6.5	7.3	8.8	7.3	37.2	44.5	44.5	10.7	10.3	7.3
1935	2.1	48.0	34.1	44.0	44.0	6.5	46.2	43.6	43.2	29.4	6.5	17.9
1936	1.0	20.7	5.8	16.7	11.9	50.6	39.3	46.6	33.7	8.4	5.8	4.6
1937	1.8	1.8	42.4	41.0	33.3	9.5	37.2	26.5	47.1	50.2	16.3	6.2
1938	3.5	40.6	45.8	40.6	29.9	33.7	45.4	45.8	46.6	17.9	8.0	35.8
1939	7.3	6.2	44.5	22.3	10.3	0	15.1	24.4	42.4	23.2	8.4	7.3
1940	1.0	1.0	3.5	4.3	2.4	1.0	45.8	47.6	48.0	30.3	20.3	15.9
1941	7.3	15.9	15.9	21.9	9.9	7.3	28.2	37.2	44.0	4.3	7.3	2.8
1942	0	0	0	0	0	43.6	45.8	45.4	45.8	24.0	9.2	5.4
1943	5.4	5.4	25.7	20.3	5.0	26.5	47.1	48.9	45.4	29.4	29.4	21.5
1944	14.7	46.6	15.1	6.9	4.6	7.3	44.5	48.0	42.4	8.8	11.1	31.6
1945	17.5	19.5	29.0	23.2	13.5	43.2	51.5	49.7	50.2	43.6	9.5	8.0
1946	6.9	24.4	39.3	21.5	9.9	43.6	48.9	47.1	47.6	39.8	28.2	20.3
1947	12.7	6.2	16.7	4.3	2.1	39.3	48.0	51.0	48.0	30.3	16.3	14.3
1948	2.8	3.2	1.8	.7	1.8	32.4	48.8	48.9	48.4	32.8	17.5	6.2
1949	4.6	12.3	7.6	12.7	13.5	32.8	45.8	48.9	43.6	38.4	17.9	9.5
1950	2.8	6.0	0	7.3	7.3	17.5	48.9	46.2	47.1	13.5	11.9	9.5

## 113. Wilson Lake near Milton Mills, N. H.

Location.--Lat 43°33'35", long. 70°56'55", above Milton Mills, Strafford County.

Drainage area.--15.5 sq mi.

Gage.--Staff gage. Datum of gage is 474 ft above mean sea level (from topographic map).

Remarks.--Storage capacity, 23,100,000 cu ft.

Cooperation.--Records furnished by Public Service Co. of New Hampshire.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1929	-	-	-	-	-	-	-	12.6	10.9	5.7	0	0
1930	1.1	2.3	5.7	7.4	9.2	12.6	12.0	19.0	23.1	17.8	5.2	.6
1931	13.2	7.4	6.3	4.6	4.6	9.8	10.3	18.4	18.4	13.8	6.3	1.1
1932	4.6	5.7	3.4	9.2	13.2	11.5	19.6	23.1	16.7	4.0	3.4	16.7
1933	22.5	27.7	21.9	17.3	23.1	32.3	24.8	22.5	19.0	14.4	8.0	5.7
1934	19.6	17.3	8.0	9.8	7.4	15.5	20.2	23.6	20.2	7.4	2.3	9.2
1935	8.0	11.5	11.5	13.8	10.3	16.1	14.9	21.3	19.0	12.0	4.6	5.7
1936	5.2	11.5	9.2	16.1	8.0	31.2	17.8	24.2	14.9	5.7	0	0
1937	7.4	8.6	20.2	13.2	22.5	17.3	19.6	22.5	19.6	20.2	9.8	6.3
1938	11.5	18.4	19.6	18.4	16.7	17.3	16.1	26.0	23.1	23.1	10.9	14.9
1939	11.5	9.2	16.1	14.4	16.1	16.1	26.0	27.7	23.1	23.1	13.8	9.8
1940	8.0	11.5	13.2	13.2	12.6	13.2	18.4	19.0	21.9	12.6	5.7	8.6

## PISCATAQUA RIVER BASIN

Month-end contents, in millions of cubic feet, of Wilson Lake near Milton Mills, N. H.--Continued												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1941	4.6	13.2	12.6	14.4	13.2	12.6	17.9	23.1	23.1	13.2	2.8	0
1942	0	2.9	2.9	6.9	4.0	20.2	16.1	19.0	21.3	19.0	5.7	1.1
1943	0	6.9	6.9	4.6	8.6	12.6	13.8	24.8	23.1	9.8	3.4	0
1944	4.0	10.3	2.3	1.1	0	9.2	13.8	22.5	21.3	4.0	0	5.7
1945	5.2	11.5	6.3	5.2	7.4	19.0	23.1	23.1	27.1	23.6	16.7	6.3
1946	8.0	12.0	12.0	8.6	9.2	14.4	23.1	24.8	23.1	11.5	9.8	5.7
1947	5.7	5.7	6.9	8.6	7.4	12.6	21.9	24.2	23.6	12.6	4.6	1.1
1948	0	2.8	4.0	1.7	4.6	15.5	17.3	26.5	24.2	14.4	6.9	1.1
1949	1.7	12.6	17.3	12.6	12.6	13.8	23.6	27.7	24.8	8.0	3.4	4.0
1950	4.6	8.0	8.0	10.3	10.3	14.9	18.4	24.2	23.1	8.0	5.7	1.1

## 114. Three Ponds at Milton Mills, N. H.

Location.--Lat 43°25'00", long. 70°59'05", at Milton Mills, Strafford County.

Drainage area.--105 sq mi.

Gage.--Staff gage. Datum of gage is 315 ft above mean sea level (from topographic map).

Remarks.--Dam at outlet of Milton Pond controls North East, Town House, and Milton Ponds. Storage capacity, 580,000,000 cu ft.

Cooperation.--Records furnished by Public Service Co. of New Hampshire.

Month-end contents, in millions of cubic feet												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1929	-	-	-	-	-	-	-	573.9	427.0	362.6	188.3	161.0
1930	226.0	259.9	192.9	360.2	410.7	567.8	443.4	479.8	321.6	252.6	304.0	209.4
1931	172.2	294.2	329.2	299.1	211.7	342.0	537.7	580.0	540.7	391.8	339.4	321.6
1932	252.6	264.8	474.2	570.8	347.2	207.0	580.0	438.0	296.6	299.1	284.4	558.7
1933	537.7	580.0	488.4	502.6	418.8	511.3	552.7	573.9	485.5	349.8	306.5	381.2
1934	18.5	370.6	479.8	505.5	250.1	402.6	564.8	485.5	440.7	373.2	279.5	362.8
1935	520.0	567.8	570.8	499.8	347.2	429.7	514.2	523.0	567.8	427.0	321.0	240.4
1936	143.4	279.5	378.6	537.7	221.2	540.7	543.7	491.2	408.0	334.3	286.8	207.0
1937	255.0	296.6	595.5	570.8	589.3	511.3	586.2	595.5	549.7	402.6	309.0	284.4
1938	314.0	395.5	534.8	573.9	485.5	586.2	573.9	580.0	514.2	491.2	375.9	429.7
1939	402.6	496.9	558.7	416.1	272.2	355.0	514.2	580.0	463.0	329.2	360.2	349.8
1940	286.8	272.2	279.5	226.0	202.3	183.7	582.0	543.7	468.6	408.0	291.8	402.6
1941	334.3	496.9	485.5	463.0	416.1	284.4	482.6	435.2	304.0	238.0	207.0	238.0
1942	238.0	279.5	299.1	402.6	362.8	543.7	499.8	471.4	482.6	347.2	211.7	190.6
1943	190.6	229.1	454.6	386.5	368.0	334.3	555.7	561.7	408.0	355.0	435.2	365.4
1944	421.5	580.0	477.0	402.6	321.6	505.5	525.9	543.7	505.5	389.2	291.8	555.7
1945	523.0	540.7	463.0	365.4	272.2	570.8	649.4	573.9	534.8	549.7	375.9	269.7
1946	402.6	570.8	525.9	375.9	240.4	558.7	528.9	573.9	494.0	432.5	360.2	279.5
1947	402.6	294.2	329.2	463.0	238.0	373.2	549.7	564.8	508.4	421.5	311.5	291.8
1948	183.7	216.4	103.3	56.5	103.3	552.7	528.8	567.8	525.9	440.7	324.1	250.1
1949	240.4	443.4	508.4	549.7	413.4	368.0	568.7	525.9	402.6	304.0	211.7	256.0
1950	230.8	294.2	274.6	424.2	211.7	479.8	543.7	496.9	381.2	284.4	269.7	279.5

## 115. Lovell Lake at Sanbornville, N. H.

Location.--Lat 43°33'10", long. 71°01'05", at Sanbornville, Carroll County.

Drainage area.--10.0 sq mi.

Gage.--Staff gage. Datum of gage is 470 ft above mean sea level (from topographic map).

Remarks.--Storage capacity, 113,000,000 cu ft.

Cooperation.--Records furnished by Public Service Co. of New Hampshire.

Month-end contents, in millions of cubic feet												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1929	-	-	-	-	-	-	-	110.7	109.6	103.8	93.4	88.8
1930	90.8	62.4	38.5	23.1	23.1	79.6	101.5	109.6	111.8	108.4	90.0	59.0
1931	24.2	13.2	13.2	9.9	25.3	67.0	88.8	110.7	110.7	110.7	77.4	80.8
1932	80.8	85.4	99.2	110.7	70.4	47.4	113.0	111.8	108.4	106.1	90.0	108.4
1933	109.6	107.2	107.2	79.6	62.4	92.3	108.4	115.4	108.4	103.8	88.8	91.2
1934	108.4	114.2	95.8	46.3	0	25.3	103.8	113.0	107.2	105.0	90.0	57.8
1935	41.8	44.0	41.8	71.6	44.0	59.0	101.5	102.6	110.7	108.4	76.2	82.0
1936	57.8	44.0	52.0	72.8	53.2	94.6	105.0	114.2	111.8	107.2	75.0	56.6
1937	40.7	15.4	55.5	76.2	87.7	110.7	110.7	109.6	108.4	111.8	98.0	55.5
1938	41.8	67.0	109.6	99.2	106.1	110.7	108.4	111.8	115.4	115.4	107.2	92.3
1939	91.2	102.6	115.4	100.4	65.8	41.8	107.2	108.4	110.7	109.6	106.1	78.5
1940	46.3	46.3	44.0	40.7	38.5	11.0	110.7	107.2	113.0	110.7	93.4	70.4

Month-end contents, in millions of cubic feet, of Lovell Lake at Sanbornville, N. H.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1941	46.6	46.6	64.7	76.2	63.6	30.8	48.6	53.2	53.2	49.8	39.6	35.2
1942	22.0	25.3	33.0	46.3	59.0	108.4	116.6	111.8	110.7	110.7	103.8	84.2
1943	68.2	70.4	90.0	84.2	35.2	73.9	106.1	117.8	115.4	119.0	101.5	71.6
1944	82.4	91.2	98.0	60.1	28.6	60.1	108.4	115.4	115.4	105.0	73.9	96.9
1945	105.8	115.4	90.0	88.8	55.5	84.2	117.8	117.8	121.4	113.0	106.1	101.5
1946	69.3	79.6	111.8	84.2	39.6	68.2	90.0	116.6	111.8	117.8	103.8	39.6
1947	39.6	47.4	63.6	84.2	77.4	73.9	120.2	121.4	110.7	120.2	95.8	69.3
1948	40.7	40.7	46.3	52.0	40.7	72.8	99.2	121.4	119.0	116.6	108.4	73.9
1949	60.1	53.2	72.8	108.4	85.4	83.1	101.5	114.2	115.4	111.8	94.6	78.5
1950	53.2	56.3	35.2	57.8	78.5	110.7	120.2	121.4	115.4	105.0	102.6	83.1

116. Salmon Falls River near South Lebanon, Maine 1/

Location.--Lat 43°19'40" long. 70°55'40", at Stair Falls 1½ miles south of South Lebanon, York County, and 2½ miles upstream from Little River.

Drainage area.--147 sq mi.

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

Average discharge.--21 years (1929-50), 220 cfs.

Extremes.--1929-50: Maximum discharge, 5,490 cfs Mar. 19, 1936 (gage height, 12.31 ft); minimum, 4.7 cfs Aug. 28, 1950 (gage height, 1.37 ft).

Remarks.--Flow partly regulated by power plants and lakes and ponds above station. Runoff adjusted for change in contents in Great East Lake (see p. 126), Horn Pond (see p. 127), Wilson Lake (see p. 127), Three Ponds (see preceding page), and Lovell Lake (see preceding page).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	130	175	220	538	365	132	95.6	73.4	68.5	-	-
1930	67.8	69.1	69.2	96.6	152	535	367	153	151	126	93.3	85.8	164
1931	79.4	85.6	90.2	96.9	117	198	475	206	441	136	97.6	82.1	175
1932	78.6	96.1	131	288	321	301	559	169	80.4	71.5	66.9	102	188
1933	112	308	184	185	273	354	1,400	188	111	87.0	91.0	79.0	279
1934	147	120	106	141	113	362	743	211	105	86.0	88.9	107	194
1935	125	168	280	407	339	431	474	195	234	140	111	112	251
1936	89.4	103	120	238	323	1,763	641	163	96.6	84.9	72.9	87.1	316
1937	95.9	79.2	294	302	516	393	650	546	249	131	116	109	288
1938	105	303	424	405	409	303	358	198	126	109	111	142	248
1939	139	122	406	245	239	266	872	212	110	92.6	116	112	244
1940	110	111	113	106	77.3	113	1,061	386	306	121	100	96.8	224
1941	108	140	166	193	353	247	216	117	78.6	57.9	34.4	26.4	143
1942	30.4	36.8	40.4	63.9	70.1	525	446	136	132	127	96.2	59.7	147
1943	61.0	90.2	180	200	220	309	414	487	188	118	140	134	212
1944	140	230	170	149	148	257	678	177	152	109	98.7	158	205
1945	136	183	347	327	273	624	369	563	485	150	134	109	309
1946	139	235	341	389	313	496	282	285	209	112	201	176	265
1947	154	151	128	179	357	398	463	420	424	188	129	117	258
1948	114	110	89.9	57.8	66.8	305	284	356	259	96.2	91.7	84.1	163
1949	81.4	144	159	352	309	346	240	184	109	74.7	78.3	72.1	177
1950	75.1	86.3	91.2	129	220	270	562	163	133	91.6	65.3	65.2	162

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	0.56	1.08	1.31	5.30	2.72	1.38	0.55	0.34	-0.46	0.20	-
1930	0.71	0.56	0.51	1.08	1.31	5.30	2.72	1.38	0.69	0.64	0.47	0.01	15.38
1931	.57	.74	.60	.45	.57	2.47	4.57	2.08	3.34	.65	.39	.42	16.85
1932	.36	.61	1.60	2.78	1.73	1.72	6.17	.89	.11	.18	.16	1.82	18.13
1933	.95	2.74	1.19	1.24	1.64	3.42	10.78	1.56	.48	.09	.43	.31	24.83
1934	.34	1.86	1.03	.94	-.31	3.54	7.22	1.56	.61	.18	.01	.91	17.89
1935	1.27	1.63	2.03	3.25	1.47	3.85	4.57	1.68	2.11	.52	.04	.52	22.94
1936	*.11	*1.07	*1.04	*2.64	*1.29	*16.06	*4.60	*1.28	*.33	*.15	*.05	*.09	*28.71
1937	*.34	.35	.84	2.54	4.11	2.98	5.31	4.43	1.69	.52	.24	.26	*27.01
1938	.80	3.59	3.69	3.02	2.55	3.02	2.90	1.53	.73	.75	.17	1.11	23.86
1939	.75	1.13	3.83	1.29	.65	2.36	8.06	1.97	.59	.17	.62	.23	21.65
1940	.33	.76	.83	.58	.35	.94	10.61	3.14	2.21	.66	.05	.61	21.07
1941	.24	1.62	1.42	1.64	2.12	1.26	2.60	.91	.23	.01	-.12	.08	12.01
1942	.11	.46	.42	.94	.50	5.36	3.70	1.06	1.16	.48	.13	.02	14.34
1943	.19	.77	2.25	1.12	1.21	2.79	4.56	4.34	.98	.59	1.01	.27	19.88
1944	1.06	2.57	.89	.47	.68	2.94	6.10	1.60	1.06	.50	-.11	2.10	19.66
1945	.98	1.70	2.58	2.04	1.18	6.48	3.53	4.32	3.60	1.10	.26	.16	27.91
1946	1.08	2.36	2.90	2.48	1.34	5.52	2.34	2.69	1.26	.42	1.27	.51	24.17
1947	1.29	.81	1.02	1.74	2.02	3.98	4.71	3.57	3.01	1.11	.13	.23	23.62
1948	.11	.86	.43	.35	.68	4.27	2.44	3.72	1.98	.33	.09	-.15	15.11
1949	.23	1.64	1.52	3.31	1.93	2.81	2.79	1.34	.40	.21	-.25	.29	16.22
1950	.22	.68	.65	1.71	1.14	3.33	5.06	1.20	.63	.07	.22	.17	15.10

\* Revised.

Note.--Adjusted runoff for periods June 1929 to September 1935 and October 1939 to September 1950 not previously published. Negative figures indicate that evaporation and seepage from reservoirs exceeded inflow.

1/ Published as "near Lebanon" prior to 1935.

Yearly discharge, in cubic feet per second, of Salmon Falls River near South Lebanon, Maine

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1929	681	-	-	-	-	-	-	-	201	-	-
1930	696	*1,780	Mar. 27, 1930	13	164	167	1.14	15.38	168	168	15.51
1931	711	*1,400	June 10, 1931	12	175	182	1.24	16.85	179	189	17.51
1932	726	1,750	Apr. 13, 1932	9	188	196	1.33	18.13	213	221	20.44
1933	741	*4,090	Apr. 19, 1933	13	278	269	1.83	24.83	260	261	23.18
1934	754	1,590	Apr. 13, 1934	11	194	194	1.32	17.89	211	212	19.59
1935	781	1,200	Jan. 11, 1935	16	251	249	1.69	22.94	229	219	20.23
1936	801	5,490	Mar. 19, 1936	9	316	*310	*2.11	*28.71	329	*339	*31.42
1937	821	3,930	Feb. 23, 1937	12	288	*292	*1.99	*27.01	319	327	30.16
1938	851	2,620	Nov. 29, 1937	13	248	258	1.76	23.86	235	233	21.49
1939	871	1,760	Apr. 20, 1939	22	244	235	1.60	21.65	215	193	17.86
1940	891	3,100	Apr. 13, 1940	16	224	228	1.55	21.07	231	242	22.43
1941	921	1,080	Feb. 8, 1941	6.4	143	130	.884	12.01	118	106	9.72
1942	951	1,580	Mar. 9, 1942	8.2	147	155	1.05	14.34	166	179	16.56
1943	971	1,390	Dec. 2, 1942	17	212	216	1.47	19.68	229	229	21.19
1944	1001	1,060	Apr. 14, 1944	23	205	212	1.44	19.66	216	221	20.40
1945	1031	2,320	June 22, 1945	50	309	302	2.05	27.91	313	314	28.99
1946	1051	1,100	Dec. 8, 1945	45	265	262	1.78	24.17	241	227	20.95
1947	1081	1,130	May 4, 1947	28	259	256	1.74	23.62	248	237	21.90
1948	1111	1,320	May 19, 1948	20	163	185	1.11	15.11	169	185	17.10
1949	1141	1,400	Jan. 7, 1949	22	177	176	1.20	16.22	166	156	14.38
1950	1171	1,350	Apr. 6, 1950	13	182	164	1.12	15.10	-	-	-

\* Revised.

Note.--Adjusted records for periods 1930-35, 1940-50 not previously published.

## 117. Oyster River near Durham, N. H.

Location.--Lat 43°08'55", long. 70°58'00", on left bank 2½ miles west of Durham, Strafford County, and 7 miles upstream from mouth.

Drainage area.--12.1 sq mi.

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

Average discharge.--16 years (1934-50), 17.3 cfs.

Extremes.--1934-50: Maximum discharge, 548 cfs Mar. 19, 1936 (gage height, 7.45 ft), by computation of flow over dam; minimum, 0.39 cfs Aug. 9-11, 1949.

## Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	*12.1	*16.9	*16.9	30.9	22.2	63.4	40.0	15.5	18.9	3.22	1.17	3.43	*20.4
1936	1.43	7.36	10.2	34.2	15.9	122	45.9	11.9	2.9	1.16	.916	.820	21.3
1937	2.17	2.38	31.3	33.4	37.9	46.5	50.4	28.2	14.6	2.11	1.44	1.49	20.9
1938	4.75	25.6	44.9	26.7	31.0	30.6	29.4	19.0	9.20	33.7	19.9	21.2	24.6
1939	15.1	14.9	36.7	13.8	8.69	41.7	80.0	17.4	8.45	1.77	2.85	1.11	20.2
1940	1.42	5.89	7.21	8.80	7.00	27.6	97.6	23.1	19.8	8.84	2.10	2.66	17.6
1941	1.45	15.4	19.9	15.7	29.5	19.7	21.5	11.0	2.69	.905	.694	.654	11.5
1942	.892	1.72	4.32	7.55	8.59	63.5	31.5	10.7	6.53	6.82	3.05	1.09	12.2
1943	1.78	9.77	29.2	12.2	14.1	36.0	37.0	35.0	7.34	1.99	5.84	1.04	16.0
1944	5.10	20.6	6.40	3.11	6.03	38.5	49.9	13.9	10.5	5.20	1.00	8.35	14.0
1945	6.20	17.9	26.6	16.7	12.6	67.9	27.5	50.2	26.6	13.9	4.42	3.09	22.9
1946	5.84	19.5	28.0	22.6	13.5	57.0	24.0	28.2	13.6	1.74	9.59	3.09	19.0
1947	8.12	5.42	5.54	11.9	16.5	51.0	32.9	2.8	12.6	6.30	1.76	1.6	16.3
1948	1.00	8.03	4.97	4.29	8.57	51.5	30.7	33.6	31.8	8.97	1.57	.820	15.5
1949	1.58	13.1	8.32	24.9	27.3	25.3	30.0	12.2	2.54	.645	.610	1.37	12.2
1950	1.52	7.34	9.17	20.3	13.9	46.5	35.4	9.07	5.38	.731	.928	1.81	12.7

\* Not previously published; estimated on basis of weather records and records for nearby stations.

## Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	*1.15	*1.56	*1.61	2.94	1.91	6.04	3.69	1.48	1.74	0.31	0.11	0.32	*22.86
1936	.14	.68	.97	3.26	1.41	11.64	4.23	1.13	.19	.11	.09	.08	23.93
1937	.21	.22	2.99	3.18	3.26	4.43	4.65	2.89	1.35	.29	.34	.14	23.46
1938	.45	2.36	4.28	2.55	2.67	2.92	2.71	1.81	.85	3.22	1.89	1.95	27.66
1939	1.44	1.37	3.49	1.31	.75	3.98	7.38	1.66	.78	.17	.27	.10	22.70
1940	.14	.54	.69	.84	.62	2.63	9.00	2.20	1.83	.84	.20	.25	19.78
1941	.14	1.42	1.90	1.50	2.54	1.88	1.98	1.05	.25	.09	.07	.06	12.88
1942	.08	.16	.41	.72	.74	6.05	2.91	1.02	.60	.65	.29	.10	13.73
1943	.17	.90	2.78	1.16	1.21	3.43	3.41	3.33	.69	.19	.56	.10	17.92
1944	.49	1.89	.61	.30	.54	3.67	4.60	1.32	.97	.50	.10	.77	15.76
1945	.59	1.65	2.54	1.60	1.08	6.47	2.54	4.79	2.46	1.35	.42	.29	25.75
1946	.56	1.80	2.66	2.15	1.16	5.43	2.21	2.69	1.25	.17	.91	.29	21.28
1947	.77	.50	.53	1.13	1.42	4.86	3.03	2.35	2.04	1.20	.31	.16	18.30
1948	.10	.74	.47	.41	.76	4.91	2.83	3.20	2.93	.86	.15	.08	17.44
1949	.15	1.21	.79	2.37	2.35	2.41	2.77	1.17	.23	.06	.06	.13	13.70
1950	.15	.68	.87	1.94	1.20	4.43	3.26	.86	.50	.07	.09	.17	14.22

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Yearly discharge, in cubic feet per second, of Oyster River near Durham, N. H.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1935	801	345	Jan. 10, 1935	#0.8	#20.4	#1.69	#22.86	18.1	20.33
1936	801	548	Mar. 19, 1936	.5	21.3	1.76	23.93	22.7	25.56
1937	821	369	Feb. 22, 1937	.9	20.9	1.73	23.46	24.2	27.13
1938	851	422	Dec. 7, 1937	.9	24.6	2.03	27.66	24.0	26.87
1939	871	162	Apr. 7, 1939	.7	20.2	1.67	22.70	15.8	17.77
1940	991	354	Apr. 15, 1940	.74	17.6	1.45	19.78	19.4	21.87
1941	921	#250	Feb. 8, 1941	.53	11.5	.950	12.88	8.97	10.07
1942	951	#380	Mar. 9, 1942	.70	12.2	1.01	13.73	15.1	16.93
1943	971	355	Dec. 2, 1942	.68	16.0	1.32	17.92	15.2	17.06
1944	1001	165	Mar. 24, 1944	.55	14.0	1.16	15.76	15.6	17.55
1945	1031	217	May 16, 1945	1.45	22.9	1.89	25.75	23.2	25.99
1946	1051	#215	Mar. 9, 1946	.83	19.0	1.57	21.28	16.1	18.06
1947	1081	#300	Mar. 15, 1947	1.05	16.3	1.35	18.50	15.9	17.81
1948	1111	300	Mar. 22, 1948	.61	15.5	1.28	17.44	16.2	18.28
1949	1141	144	Apr. 19, 1949	.39	12.2	1.01	13.70	11.8	13.25
1950	1171	384	Mar. 23, 1950	.46	12.7	1.05	14.22	-	-

\* Not previously published.

## 118. 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.

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

Average discharge.--16 years (1934-50), 257 cfs.

Extremes.--1934-50: Maximum discharge, 5,490 cfs Mar. 20, 1936 (gage height, 14.88 ft), from rating curve extended above 2,500 cfs on basis of computation of flow over dam at gage height 14.69 ft; minimum daily, about 1 cfs Oct. 21, 1935.

Remarks.--Flow regulated by Pawtuckaway and Mendums Ponds (combined capacity, about 600,000,000 cu ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1934	-	-	-	-	-	-	-	-	-	-	47.6	173	-
1935	183	219	227	417	262	803	638	205	307	117	79.4	60.7	293
1936	18.3	74.4	127	371	238	1,866	703	*213	*79.3	*91.1	*50.0	*38.1	*324
1937	47.9	46.2	420	461	524	464	669	449	*214	*60.6	*139	*95.8	*298
1938	96.1	45.5	675	416	440	491	434	289	213	599	621	396	428
1939	292	219	552	217	186	470	1,192	263	139	70.9	80.5	46.4	311
1940	16.5	58.7	77.1	80.0	65.6	222	1,380	372	282	187	108	52.2	242
1941	20.1	149	210	280	412	259	298	136	48.7	88.3	38.3	32.3	163
1942	11.9	15.9	45.9	92.8	94.2	778	409	155	96.6	153	125	47.1	170
1943	20.4	118	416	202	203	476	467	551	158	122	162	15.0	243
1944	46.9	237	112	46.4	87.8	474	742	247	211	160	59.7	134	216
1945	108	189	349	243	191	985	462	755	335	209	148	147	345
1946	66.4	230	350	317	235	731	307	372	219	114	150	81.7	265
1947	98.3	64.6	65.6	148	249	599	566	421	273	214	104	77.1	240
1948	11.1	98.3	64.8	51.0	109	667	415	495	428	151	115	70.8	223
1949	12.7	128	99.2	323	324	335	412	233	97.9	74.8	50.6	20.4	175
1950	13.1	56.8	103	228	181	498	592	181	95.5	43.8	76.0	65.7	177

\* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1934	-	-	-	-	-	-	-	-	-	-	0.30	1.05	-
1935	1.15	1.34	1.43	2.63	1.49	5.06	3.89	1.29	1.87	0.74	.50	.37	21.76
1936	.12	.45	.80	2.34	1.40	11.76	4.28	*1.24	*.48	*.57	*.32	*.23	*23.99
1937	.30	.28	2.65	2.90	2.98	2.93	4.08	2.82	*1.30	*.38	*.88	*.58	*22.08
1938	.61	2.78	4.25	2.62	2.50	3.09	2.64	1.82	1.29	3.77	3.91	2.41	31.69
1939	1.84	1.34	3.48	1.37	1.06	2.96	7.26	1.66	.85	.45	.51	.28	23.08
1940	.10	.36	.49	.50	.49	1.40	8.41	2.34	1.72	1.18	.68	.32	17.99
1941	.13	.91	1.32	1.77	2.35	1.63	1.82	.85	.30	.56	.24	.20	12.08
1942	.09	.10	.29	.54	.49	4.90	2.49	.98	.59	.96	.79	.29	12.59
1943	.13	.72	2.62	1.27	1.15	3.00	2.85	3.47	.96	.77	1.02	.09	18.05
1944	.30	1.45	.71	.29	.52	2.99	4.52	1.55	1.29	1.01	.63	.82	16.08
1945	.68	1.15	2.20	1.53	1.09	6.20	2.82	4.76	2.04	1.32	.93	.90	25.62
1946	.42	1.40	2.21	2.00	1.34	4.61	1.87	2.35	1.33	.72	.94	.50	19.69
1947	.62	.59	.41	.93	1.41	3.77	3.45	2.65	1.66	1.55	.66	.47	17.77
1948	.07	.60	.41	.32	.64	4.20	2.33	3.12	2.61	.95	.73	.43	16.61
1949	.08	.78	.63	2.05	1.85	2.11	2.51	1.47	.60	.47	.32	.12	12.97
1950	.08	.35	.65	1.44	1.03	3.14	3.61	1.14	.58	.28	.48	.40	13.18

\* Revised.

Yearly discharge, in cubic feet per second, of Lamprey River near Newmarket, N. H.

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1934	781	-	-	-	-	-	-	-	-	-
1935	781	1,820	Jan. 11, 1935	20	293	1.60	21.76	259	19.21	
1936	801,1231	5,490	Mar. 20, 1936	1	*324	*1.77	*23.99	*349	*25.85	
1937	821,1231	1,940	Feb. 24, 1937	13	*298	*1.63	*22.08	*357	*26.49	
1938	851	3,530	July 31, 1938	10	428	2.34	31.69	414	30.71	
1939	871	1,890	Apr. 20, 1939	11	311	1.70	25.06	234	17.35	
1940	891	2,520	Apr. 14, 1940	8	242	1.32	17.99	261	19.40	
1941	921	*1,080	Feb. 11, 1941*	7	163	.891	12.08	137	10.19	
1942	951	*1,700	Mar. 11, 1942*	6	170	.929	12.59	210	15.59	
1943	971	1,620	Dec. 4, 1942	-6	243	1.33	18.05	230	17.04	
1944	1001	1,300	Mar. 29, 1944	8.4	216	1.18	16.08	237	17.65	
1945	1031	1,950	Mar. 23, 1945	30	345	1.89	25.62	345	25.62	
1946	1051	1,570	Mar. 11, 1946	7.8	265	1.45	19.69	230	17.08	
1947	1081	1,280	Mar. 17, 1947	20	240	1.31	17.77	235	17.43	
1948	1111	2,800	Mar. 23, 1948	7.3	223	1.22	16.61	229	17.02	
1949	1141	884	Jan. 8, Apr. 19	3.6	175	.956	12.97	169	12.56	
1950	1171	1,720	Mar. 30, 1950	8.3	177	.967	13.18	-	-	

\* Revised.

\* Not previously published; estimated on basis of gage-height record adjusted for ice effect.

## MERRIMACK RIVER BASIN

## 119. Pemigewasset River at North Woodstock, N. H.1/

Location.--Lat 44°02'20", long. 71°41'15", on right bank in forebay of concrete dam about half a mile upstream from post office at North Woodstock, Grafton County, and about 0.9 mile above Moosilauke Brook.

Drainage area.--28.6 sq mi.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 860 ft (from topographic map). Prior to Apr. 4, 1912, staff gage at same site and datum.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1912	133	103	124	33.1	†19.9	*35.0	292	292	104	21.7	71.4	74.1	109
1913	111	-	-	-	-	-	-	-	-	-	-	-	-

† Corrected.

\* Not previously published; partly estimated on basis of weather records and records for nearby station.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1912	5.36	4.02	5.00	1.34	†0.75	*1.41	11.38	11.76	4.06	0.88	2.88	2.89	51.73
1913	4.34	-	-	-	-	-	-	-	-	-	-	-	-

† Corrected.

\* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1912	321	-	-	13	109	3.81	51.73	-	-
1913	321	-	-	-	-	-	-	-	-

## 120. East Branch Pemigewasset River near Lincoln, N. H.

Location.--Lat 44°08'40", long. 71°37'00", on right bank 1 1/8 miles downstream from Hancock Branch and 2 1/2 miles northeast of Lincoln, Grafton County.

Drainage area.--104 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 1,020 ft (from topographic map).

Average discharge.--22 years (1928-50), 294 cfs.

Extremes.--1928-50: Maximum discharge, 17,000 cfs Mar. 19, 1936 (gage height, 9.80 ft), by computation of flow over dam at gage height 9.80 ft; maximum gage height, 10.51 ft Mar. 9, 1942 (ice jam); minimum daily discharge, 13 cfs Feb. 7-12, 1948.

1/ Published as Middle Branch Pemigewasset River at North Woodstock, N. H.

Monthly and yearly mean discharge, in cubic feet per second, of East Branch Penigewasset River near Lincoln, N. H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*110	*150	130	240	76.9	320	902	1,130	306	139	68.1	51.0	*303
1930	91.4	109	147	319	214	252	704	745	542	200	218	80.0	302
1931	65.9	208	118	44.8	39.3	64.3	626	696	412	179	65.8	167	224
1932	153	229	236	430	176	117	748	708	178	282	226	282	314
1933	552	525	176	154	105	56.3	770	979	256	90.3	155	118	327
1934	188	193	133	132	72.7	176	1,059	885	195	74.3	68.9	251	286
1935	225	413	309	269	97.9	128	538	739	551	138	75.9	130	302
1936	82.4	222	124	140	64.22	2023	674	529	124	69.5	49.0	73.5	350
1937	405	239	329	264	127	107	533	1,490	361	187	117	109	359
1938	447	421	384	208	174	324	822	404	142	139	147	919	360
1939	206	176	587	122	103	119	727	1,224	242	127	136	77.9	323
1940	141	199	146	37.0	30.9	35.4	353	1,503	313	119	63.7	204	263
1941	86.0	410	145	119	101	57.3	691	245	145	201	130	94.6	202
1942	230	266	191	147	51.0	178	915	622	234	75.9	45.2	120	255
1943	137	364	120	65.1	69.5	156	337	1,474	346	185	322	201	318
1944	366	518	85.5	50.0	47.9	72.9	305	1,099	364	177	66.8	135	274
1945	182	150	87.4	164	76.3	558	848	666	408	224	99.1	171	302
1946	445	275	218	137	106	643	442	705	249	96.7	311	188	320
1947	308	291	221	152	211	184	569	1,138	509	272	94.4	53.7	354
1948	43.0	77.3	44.0	21.4	27.4	326	766	709	270	110	94.0	39.0	211
1949	63.6	416	286	383	88.1	293	630	630	148	79.6	76.1	149	271
1950	131	190	269	248	118	138	790	698	380	115	86.1	135	275

\* Not previously published; estimated on basis of records for nearby stations.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*1.22	*1.61	1.44	2.66	0.77	3.55	9.68	12.56	3.28	1.54	0.75	0.55	*39.61
1930	1.01	1.17	1.63	3.53	*2.15	2.79	7.55	8.26	5.81	2.22	2.42	.86	39.40
1931	1.73	2.23	1.31	.50	.39	.71	6.72	7.71	4.42	1.99	.73	1.79	29.23
1932	1.70	2.46	2.62	4.76	1.82	1.29	8.02	7.63	1.91	3.12	2.50	5.02	43.08
1933	6.12	5.63	1.95	1.71	1.05	.62	8.26	10.85	2.53	1.00	1.72	1.26	42.70
1934	2.09	2.08	1.48	1.46	.73	1.95	11.38	9.81	2.10	.82	.76	2.69	37.35
1935	2.49	4.43	3.42	2.99	.98	1.42	5.77	8.20	5.91	1.53	.84	1.40	39.38
1936	.91	2.38	1.37	1.56	.67	22.48	7.23	5.87	1.33	.77	.54	.79	45.90
1937	4.47	2.57	3.64	2.93	1.27	1.19	5.71	16.49	4.08	2.08	1.29	1.17	46.89
1938	4.96	4.52	2.04	2.31	1.74	3.60	8.61	4.47	1.55	1.54	1.63	9.86	47.01
1939	2.28	1.89	6.50	1.35	1.03	1.31	7.80	13.60	2.60	1.41	1.51	.84	42.12
1940	1.56	2.14	1.62	.41	.32	.39	3.79	16.66	3.35	1.32	.71	2.19	34.46
1941	.98	4.40	1.61	1.32	1.01	.64	7.41	2.71	1.57	2.23	1.44	1.01	26.33
1942	2.55	2.85	2.11	1.63	.51	1.97	9.81	6.90	2.51	.84	.50	1.08	33.26
1943	1.52	3.90	1.34	.72	.70	1.73	3.61	16.34	3.71	2.05	3.57	2.36	41.55
1944	4.06	5.56	.95	.55	.50	.81	3.27	12.18	3.91	1.96	.74	1.45	35.94
1945	2.02	1.40	.97	1.82	.76	6.18	9.10	7.38	4.38	2.48	1.10	1.84	39.43
1946	4.94	2.95	2.41	1.52	1.06	7.12	4.74	7.81	2.67	1.07	3.45	2.01	41.75
1947	3.41	3.12	2.45	1.69	2.12	2.04	6.11	12.62	5.46	3.01	1.05	.58	43.66
1948	.48	.83	.49	.24	.28	3.62	8.22	7.86	2.89	1.22	1.04	.42	27.59
1949	.70	4.47	3.17	4.24	.88	3.25	6.76	6.98	1.59	.88	.84	1.60	35.36
1950	1.45	2.04	2.98	2.75	1.18	1.53	8.47	7.74	4.08	1.28	.95	1.45	35.90

† Corrected.

\* Not previously published; estimated on basis of records for nearby stations.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year				
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1929	681	*9,800	May 3, 1929	-	*303	*2.91	*39.61	300	39.15		
1930	696	4,080	Apr. 7, 1930†	.44	302	2.90	39.40	305	39.86		
1931	711	3,540	July 22, 1931	32	224	2.15	29.23	243	31.74		
1932	726	*5,580	Sept. 17, 1932	65	314	3.02	41.05	367	47.97		
1933	741	*5,840	Oct. 7, 1932	48	327	3.14	42.70	265	34.65		
1934	756	*5,320	Apr. 24, 1934	45	286	2.75	37.35	322	42.04		
1935	781	3,680	Dec. 1, 1934	50	302	2.90	39.38	258	33.70		
1936	801	17,000	Mar. 19, 1936	34	350	3.37	45.90	396	51.92		
1937	821	7,470	May 7, 1937	48	359	3.45	46.89	366	47.75		
1938	851	16,300	Sept. 21, 1938	50	350	3.46	47.01	354	46.16		
1939	871	7,350	Apr. 19, 1939	53	323	3.11	42.12	282	36.77		
1940	891	9,100	May 3, 1940	28	263	2.53	34.46	276	36.13		
1941	921	4,240	Nov. 12, 1940	49	202	1.94	26.33	206	26.85		
1942	951	3,620	June 15, 1942	27	255	2.45	33.26	249	32.51		
1943	971	5,160	May 17, 1943	48	318	3.06	41.55	347	45.36		
1944	1001	10,500	Nov. 9, 1945	42	274	2.63	35.94	227	29.76		
1945	1031	4,580	Mar. 29, 1945	55	302	2.90	39.43	347	45.34		
1946	1051	7,150	Oct. 2, 1945	46	320	3.08	41.75	310	40.43		
1947	1081	4,730	May 6, 1947	36	334	3.21	43.66	279	36.48		
1948	1111	6,950	Apr. 1, 1948	13	211	2.03	27.59	261	34.13		
1949	1141	5,460	Jan. 6, 1949	32	271	2.61	35.36	257	33.49		
1950	1171	7,270	Apr. 20, 1950	46	275	2.64	35.90	-	-		

\* Revised.

† Corrected.

\* Not previously published.

## 121. 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.

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

Average discharge.--11 years (1939-50), 495 cfs.

Extremes.--1939-50: Maximum discharge, 17,600 cfs Nov. 9, 1943 (gage height, 11.03 ft), from rating curve extended above 9,800 cfs by logarithmic plotting; minimum daily, 42 cfs Feb. 11, 1948.

Remarks.--Some diurnal fluctuation caused by power plant above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	247	346	257	69.9	57.3	65.7	767	2,384	503	207	105	406	453
1941	145	800	293	231	190	118	1,141	403	234	342	213	153	354
1942	398	448	308	271	115	332	1,902	1,048	490	111	76.1	201	475
1943	264	678	235	125	143	335	786	2,337	536	348	573	395	566
1944	638	990	172	105	95.6	145	790	1,753	596	283	104	227	492
1945	346	232	166	298	148	1,095	1,491	1,269	781	406	155	334	562
1946	853	579	494	232	158	1,195	818	1,121	379	147	473	295	566
1947	557	585	392	268	355	341	1,150	2,056	907	559	156	91.4	620
1948	65.9	122	77.7	55.9	69.0	665	1,417	1,336	408	357	148	64.4	383
1949	90.3	742	472	671	156	606	1,178	959	236	130	140	305	475
1950	250	399	536	491	224	258	1,474	1,121	646	189	142	244	498

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	1.47	2.00	1.54	0.42	0.32	0.39	4.43	14.24	2.91	1.24	0.63	2.34	31.93
1941	.86	4.62	1.75	1.38	1.03	.71	6.60	2.41	1.35	2.04	1.27	.88	24.90
1942	2.38	2.59	1.84	1.62	.62	1.99	11.00	6.26	2.83	.66	.45	1.16	33.40
1943	1.58	3.92	1.40	.74	.77	2.00	4.55	13.96	3.10	2.08	3.43	2.28	39.81
1944	3.81	5.72	1.03	.63	.52	.87	4.57	10.47	3.45	1.69	.62	1.31	34.69
1945	2.07	1.34	.99	1.78	.80	6.54	8.62	7.58	4.52	2.43	.93	1.93	39.53
1946	5.09	3.35	2.95	1.39	.85	7.14	4.73	6.69	2.19	.89	2.83	1.71	39.80
1947	3.33	3.38	2.34	1.60	1.91	2.04	6.65	12.28	5.24	3.34	.93	.53	43.57
1948	.39	.70	.46	.33	.39	3.97	8.19	7.98	2.36	.93	.88	.37	26.95
1949	.54	4.29	2.82	4.01	.84	3.62	6.81	5.73	1.36	.78	.84	1.76	33.40
1950	1.49	2.31	3.20	2.93	1.21	1.54	8.52	6.70	3.73	1.13	.85	1.41	35.02

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1940	891	15,500	May 3, 1940	52	453	2.35	31.93	484	34.15		
1941	921	8,470	Nov. 12, 1940	88	354	1.83	24.90	348	24.46		
1942	951	11,000	June 15, 1942	52	475	2.46	33.40	476	33.49		
1943	971	6,800	May 12, 1943	93	566	2.93	39.81	618	43.47		
1944	1001	17,600	Nov. 9, 1943	72	492	2.55	34.69	405	28.53		
1945	1031	7,700	Mar. 29, 1945	91	562	2.91	39.53	661	46.52		
1946	1051	12,700	Oct. 2, 1945	77	566	2.93	39.80	532	37.46		
1947	1081	9,800	July 23, 1947	68	620	3.21	43.57	513	36.07		
1948	1111	13,400	Apr. 1, 1948	42	383	1.98	26.95	469	33.05		
1949	1141	8,600	Dec. 30, 1948	53	475	2.46	33.40	465	32.75		
1950	1171	14,100	Apr. 20, 1950	76	498	2.58	35.02	-	-		

## 122. Baker River at Wentworth, N. H.

Location.--Lat 43°52'05", long. 71°54'35", on left bank 50 ft downstream from highway bridge in Wentworth, Grafton County, and 0.2 mile upstream from Pond Brook.

Drainage area.--58.8 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 580 ft (from topographic map).

Average discharge.--10 years (1940-50), 105 cfs.

Extremes.--1940-50: Maximum discharge, 12,000 cfs June 14, 1942, by slope-area method; maximum gage height, 14.82 ft June 14, 1942; minimum discharge, 5.2 cfs Mar. 1, 1944, Sept. 15, 1948.



Monthly and yearly mean discharge, in cubic feet per second, of Baker River at Wentworth, N. H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	33.4	201	89.3	56.9	67.3	30.7	250	69.6	40.4	110	30.5	24.8	83.2
1942	48.6	63.6	70.7	58.8	22.1	121	488	161	289	27.8	12.3	31.9	116
1943	39.5	123	68.6	31.8	44.2	112	263	351	107	63.2	151	57.2	118
1944	127	168	38.6	23.2	22.2	48.2	296	198	92.5	41.2	11.4	27.5	90.9
1945	65.0	48.8	61.1	62.0	32.8	311	246	289	174	91.1	28.3	59.7	123
1946	169	170	156	56.5	39.7	322	179	189	90.4	23.4	93.3	65.5	130
1947	120	122	70.1	70.5	87.0	151	303	285	200	56.6	18.8	10.5	123
1948	6.83	55.5	15.4	10.3	15.4	219	270	251	62.8	25.5	16.4	7.90	78.2
1949	12.9	109	101	129	37.5	186	229	126	34.6	18.7	30.1	50.6	88.9
1950	48.0	96.2	114	95.5	46.3	86.2	401	135	97.1	17.7	14.8	32.2	98.5

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	0.66	3.81	1.73	1.12	1.19	0.60	4.74	1.36	0.77	2.16	0.60	0.47	19.21
1942	.95	1.21	1.33	1.15	.39	2.38	9.27	3.17	5.48	.55	.24	.60	26.76
1943	.78	2.33	1.34	.62	.78	2.20	4.99	6.87	2.03	1.24	2.97	1.09	27.24
1944	2.50	3.18	.76	.45	.41	.94	5.61	3.88	1.76	.81	.22	.52	21.04
1945	1.28	.93	1.20	1.22	.58	6.10	4.66	5.67	3.29	1.79	.55	1.13	28.40
1946	3.32	3.22	3.06	1.11	.70	6.32	3.40	3.71	1.72	.46	1.83	1.24	30.09
1947	2.36	2.32	1.38	1.38	1.54	2.56	5.76	5.60	3.80	1.11	.37	.20	28.36
1948	.17	.67	.30	.20	.25	4.29	5.12	4.93	1.19	.50	.32	.15	18.09
1949	.25	2.06	1.98	2.52	.66	3.64	4.34	2.48	.66	.37	.59	.96	20.51
1950	.94	1.83	2.23	1.87	.82	1.69	7.62	2.65	1.84	.35	.29	.61	22.74

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1941	921	1,820	Nov. 12, 1940	12	83.2	1.41	19.21	71.7	16.56
1942	951	12,000	June 14, 1942	7.2	116	1.97	26.78	120	27.68
1943	971	2,590	Aug. 5, 1943	16	118	2.01	27.24	127	29.23
1944	1001	3,240	Nov. 9, 1943	7.0	90.9	1.55	21.04	77.8	18.01
1945	1031	1,870	Mar. 29, 1945	14	123	2.09	28.40	150	34.59
1946	1051	2,200	Oct. 2, 1945	9.9	130	2.21	30.09	115	26.55
1947	1081	3,120	June 3, 1947	6.8	123	2.09	28.36	102	23.46
1948	1111	5,660	Apr. 1, 1948	5.5	78.2	1.33	18.09	91.8	21.24
1949	1141	2,110	Dec. 31, 1948	6.0	88.9	1.51	20.51	91.9	21.22
1950	1171	5,320	Apr. 20, 1950	6.0	98.5	1.68	22.74	-	-

## 123. 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 1½ miles southwest of Rumney, Grafton County.

Drainage area.--143 sq. mi.

Gage.--Water-stage recorder. Concrete control since Sept. 10, 1938. Altitude of gage is 495 ft (from topographic map).

Average discharge.--22 years (1928-50), 249 cfs.

Extremes.--1928-50: Maximum discharge, 21,400 cfs June 15, 1942 (gage height, 15.50 ft), from rating curve extended above 3,800 cfs on basis of slope-area determinations at gage heights 13.03, 14.49, and 15.50 ft; minimum, 6.5 cfs Dec. 4, 1947, caused by ice conditions upstream.

Maximum discharge known, 25,900 cfs Nov. 3, 1927 (gage height, 17.4 ft, from flood-marks), from rating curve extended above 3,800 cfs as described above.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1923	*108	*143	128	141	76.5	463	1,030	629	136	67.2	42.3	79.2	*254
1929	91.9	126	94.9	182	199	414	688	284	374	73.7	104	32.7	221
1931	44.0	108	82.0	44.5	41.4	131	626	386	243	226	63.1	86.1	173
1932	121	153	198	320	149	90.5	1,020	358	55.3	110	106	81.8	221
1933	293	452	117	109	85.0	118	1,150	362	85.5	21.8	89.6	64.5	245
1934	128	125	136	129	72.5	192	*1,464	348	94.6	45.1	24.2	96.5	*237
1935	99.1	299	199	434	122	289	752	350	270	183	38.6	66.8	259
1936	46.3	180	96.5	120	54.5	2,473	592	270	77.7	57.5	36.5	68.2	342
1937	287	219	301	260	239	147	866	876	264	130	43.7	25.6	305
1938	127	303	242	251	201	420	571	245	71.7	137	127	81.6	292
1939	186	160	539	125	102	164	1,034	654	109	69.2	75.9	28.5	271
1940	77.5	180	142	42.4	45.3	52.9	895	962	274	95.5	43.6	166	248
1941	60.2	363	180	142	166	89.3	554	141	75.7	283	71.5	51.6	181
1942	101	150	157	182	52.5	319	1,020	311	615	58.1	29.3	52.4	251
1943	74.4	267	148	75.2	109	305	679	750	199	120	324	120	265
1944	268	419	96.1	56.8	56.1	131	839	423	273	79.3	25.2	56.1	226
1945	150	106	164	158	90.8	763	602	699	401	202	65.7	108	294
1946	355	390	407	138	94.5	835	416	432	232	52.4	184	118	307
1947	262	234	144	163	218	334	842	632	428	98.2	39.3	20.8	284
1948	18.2	72.1	34.6	26.0	37.8	506	591	599	153	60.7	39.6	18.4	180
1949	26.5	230	211	326	105	461	549	254	69.8	32.9	52.0	93.7	201
1950	99.4	208	251	248	119	207	986	276	208	39.5	33.1	71.2	228

\* Revised.

\* Not previously published; partly estimated on basis of weather records and records for nearby stations.

## MERRIMACK RIVER BASIN

Monthly and yearly runoff, in inches, of Baker River near Rumney, N.H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*0.87	*1.12	1.03	1.13	0.56	3.74	8.02	5.07	1.06	0.54	0.34	0.62	*24.10
1930	.74	.98	.77	1.47	1.45	3.34	5.37	2.29	2.92	.59	.84	.26	21.02
1931	.35	.84	.66	.36	.30	1.06	4.88	3.11	1.90	1.83	.51	.67	16.47
1932	.98	1.19	1.59	2.58	1.11	.73	7.96	2.08	.43	.89	.85	.64	21.03
1933	2.36	3.53	.94	.88	.62	.95	8.97	2.92	.67	.18	.72	.50	23.24
1934	1.03	.98	1.10	1.04	.53	1.54	*11.43	2.80	.74	.36	.19	.75	*22.49
1935	.80	2.33	1.60	3.49	.89	2.33	5.87	2.82	2.11	1.48	.31	.52	24.55
1936	.37	1.41	.78	.97	.41	19.94	4.62	2.18	.61	.46	.29	.53	32.57
1937	2.32	1.71	2.42	2.10	1.74	1.19	6.76	7.07	2.06	1.05	.35	.20	28.97
1938	1.02	2.36	1.95	2.03	1.47	3.39	4.45	1.97	.56	1.10	1.02	6.37	27.69
1939	1.50	1.25	4.35	1.01	.74	1.33	8.07	5.27	.85	.56	.61	.22	25.76
1940	.62	1.41	1.14	.34	.34	.43	6.98	7.76	2.14	.77	.35	1.29	23.57
1941	.49	2.83	1.45	1.14	1.21	.72	4.32	1.14	.59	2.28	.58	.40	17.15
1942	.81	1.17	1.27	1.23	.38	2.57	7.96	2.50	4.80	.47	.24	.41	23.81
1943	.60	2.09	1.20	.61	.80	2.46	5.30	6.05	1.55	.96	2.62	.94	25.18
1944	2.16	3.27	.78	.46	.42	1.06	6.55	3.41	2.13	.64	.20	.44	21.52
1945	1.21	.83	1.32	1.27	.66	6.15	4.70	5.64	3.13	1.63	.53	.84	27.91
1946	2.87	3.05	3.28	1.11	.69	6.73	3.25	3.48	1.81	.42	1.48	.92	29.09
1947	2.11	1.83	1.16	1.31	1.59	2.70	6.37	5.10	3.34	.79	.32	.16	26.98
1948	.15	.56	.28	.21	.29	4.10	4.61	4.83	1.19	.49	.32	.14	17.17
1949	.21	1.79	1.70	2.63	.76	3.72	4.28	2.05	.54	.27	.42	.73	19.10
1950	.80	1.62	2.03	2.00	.87	1.67	7.69	2.23	1.63	.32	.27	.56	21.69

\* Revised.

\* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	681,1231	*4,650	May 3, 1929	24	*254	*1.78	*24.10	248	23.57
1930	696,1231	*8,000	Apr. 7, 1930	22	221	1.55	21.02	215	20.38
1931	711,1231	*4,320	July 22, 1931	21	173	1.21	16.47	194	18.38
1932	726,1231	*9,000	Apr. 12, 1932	18	221	1.55	21.03	254	24.10
1933	741,1231	*5,170	Nov. 20, 1932	16	245	1.71	23.24	206	19.52
1934	756,1231	14,200	Apr. 12, 1934	16	*237	1.66	*22.49	*254	*24.11
1935	781	3,600	Jan. 10, 1935	21	259	1.81	24.55	236	22.38
1936	801	19,100	Mar. 18, 19, 1936	17	342	2.39	32.57	383	36.46
1937	821	3,750	May 15, 1937	20	305	2.13	28.97	293	27.95
1938	851	15,900	Sept. 21, 1938	22	292	2.04	27.69	310	29.46
1939	871	5,350	Dec. 6, 1938	19	271	1.90	25.76	230	21.83
1940	891	4,820	May 3, 1940	24	248	1.73	23.57	264	25.17
1941	921	2,770	July 13, 1941	27	181	1.27	17.15	165	15.63
1942	951	21,400	June 15, 1942	18	251	1.76	23.81	257	24.45
1943	971	3,660	Aug. 5, 1943	31	265	1.85	25.18	290	27.50
1944	1001	5,860	Nov. 8, 1943	16	226	1.58	21.52	196	18.67
1945	1031	3,100	Mar. 29, 1945	31	294	2.06	27.91	355	33.75
1946	1051	4,960	Dec. 7, 1945	24	307	2.15	29.09	263	24.99
1947	1081	4,630	Apr. 12, 1947	15	284	1.99	26.98	241	22.87
1948	1111	4,530	Apr. 1, 1948	13	180	1.26	17.17	209	19.86
1949	1141	4,300	Dec. 31, 1948	15	201	1.41	19.10	209	19.85
1950	1171	8,400	Apr. 20, 1950	15	228	1.59	21.69	-	-

\* Revised.

\* Not previously published.

## 124. 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.

Gage.--Water-stage recorder since Oct. 1, 1926. Datum of gage is 457.07 ft above mean sea level, datum of 1929. Prior to Sept. 4, 1903, and from July 1, 1907, to Sept. 30, 1926, staff gage at site 200 ft upstream at present datum. Sept. 4, 1903, to June 30, 1907, chain gage at site 150 ft upstream at datum 1.11 ft lower.

Average discharge.--47 years (1903-50), 1,343 cfs.

Extremes.--1903-50: 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 computation 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.--Some diurnal fluctuation caused by power plants above station. Records for April 1886 to September 1903, published in Water-Supply Paper 124, have been found to be in error on the basis of re-study of the original data and comparison with records for nearby stations. Those records are not published herein and should not be used.

Monthly and yearly mean discharge, in cubic feet per second, of Pemigewasset River at Plymouth, N.H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1904	*493	*409	*548	*398	*378	*2,580	*4,360	*4,820	537	*343	*806	*1,110	*1,380
1905	*1,600	*542	*347	*642	*366	*2,400	*3,270	*1,650	*1,190	*882	*674	*2,590	*1,330
1906	*679	*605	*1,080	*1,480	*713	*562	*3,580	*3,730	*1,680	*846	*391	*206	*1,280
1907	*506	*536	*411	*624	*358	*1,220	*3,380	3,560	*1,020	*844	*300	*835	*1,120
1908	*2,410	*3,010	*2,030	*946	*1,240	*1,630	*4,050	*4,000	*725	*522	*898	*176	*1,800
1909	*213	*335	*318	*688	*858	*1,160	*6,480	*3,550	*1,070	*373	*266	488	*1,310
1910	*471	*493	*470	*987	*496	*3,000	*3,970	*1,550	*1,370	380	*791	*666	*1,220
1911	*421	*675	*481	*959	*376	*748	*4,380	*2,380	*695	*261	*339	*561	*1,020
1912	1,320	1,070	1,390	826	308	1,320	1,500	2,980	1,030	251	693	466	1,370
1913	1,380	1,600	1,110	1,970	685	*5,400	2,790	1,480	821	312	210	375	*1,500
1914	1,380	*1,400	710	603	602	*2,980	*5,170	2,750	495	336	290	251	*1,400
1915	203	354	391	1,060	2,590	2,560	2,720	1,230	548	2,050	1,360	535	1,290
1916	534	678	1,130	1,720	1,550	1,380	3,870	2,730	2,820	1,310	587	615	1,560
1917	656	895	1,040	639	431	*1,790	3,940	2,980	3,880	662	452	334	*1,480
1918	*983	815	375	277	462	1,700	3,760	1,940	875	513	534	1,290	*1,130
1919	1,640	1,430	1,580	1,040	494	2,820	2,790	3,060	846	247	155	863	1,400
1920	1,440	2,370	1,240	274	204	2,770	*5,730	3,480	970	518	399	627	*1,670
1921	1,190	1,050	*2,500	682	431	4,130	3,180	806	283	327	399	236	*1,280
1922	469	1,200	1,320	568	445	2,440	*5,390	2,570	3,450	1,440	495	362	*1,680
1923	372	335	265	778	312	654	*6,980	2,940	687	160	111	107	*1,140
1924	484	1,120	2,290	1,730	468	663	3,590	4,020	780	398	323	*3,690	*1,470
1925	*1,180	1,200	1,060	327	2,360	*3,010	2,960	1,750	839	1,480	564	773	*1,450
1926	1,560	2,300	1,440	645	500	521	2,720	3,570	1,090	610	283	288	1,290
1927	823	2,150	821	428	376	1,740	2,280	1,880	781	876	476	390	1,050
1928	1,260	4,580	1,990	1,140	767	1,470	3,800	3,350	1,610	978	1,100	640	1,890
1929	536	841	612	731	414	2,450	4,490	3,880	860	469	249	318	*1,330
1930	512	738	736	1,400	1,010	2,160	3,060	1,890	1,950	616	832	253	1,260
1931	256	645	477	148	138	454	2,590	1,970	1,560	856	274	504	823
1932	656	926	807	1,970	918	486	4,450	1,900	502	938	868	803	1,270
1933	1,970	2,230	836	527	456	605	5,080	2,620	616	241	487	380	1,320
1934	702	705	746	681	346	933	6,235	2,482	562	323	239	948	1,233
1935	779	1,560	1,220	1,830	521	1,162	3,146	2,262	1,546	484	266	455	1,271
1936	295	964	592	679	355	9,266	3,016	2,225	529	356	222	379	1,584
1937	1,786	1,162	1,424	1,407	860	636	3,545	4,925	1,405	767	364	278	1,552
1938	1,334	1,763	1,211	1,203	1,130	1,897	3,485	1,416	491	670	642	3,813	1,583
1939	1,049	910	2,661	804	598	751	4,387	3,955	712	461	448	241	1,418
1940	455	802	689	202	178	205	3,141	5,304	1,627	555	275	966	1,201
1941	336	1,905	989	730	735	439	2,754	826	497	1,235	468	338	926
1942	786	1,030	947	893	385	1,329	4,646	2,024	1,577	327	193	368	1,208
1943	535	1,602	832	426	514	1,217	2,617	4,919	1,179	851	1,469	900	1,446
1944	1,587	2,501	621	398	344	675	3,180	3,315	1,485	577	194	393	1,254
1945	756	553	658	912	485	3,438	3,405	3,245	2,175	1,064	411	632	1,484
1946	1,949	1,690	1,725	703	504	3,614	2,197	2,535	1,124	340	1,119	603	1,518
1947	1,503	1,379	923	829	1,189	1,415	3,549	4,026	2,134	1,049	346	191	1,544
1948	1,229	399	216	1,265	2,02	2,264	3,439	3,169	944	345	348	129	1,776
1949	174	1,313	1,165	1,974	523	1,936	4,837	1,832	525	267	298	611	1,141
1950	562	1,102	1,382	1,471	729	1,073	4,476	2,047	1,325	356	229	439	1,264

\* Revised.

† Corrected.

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1904	*0.91	*0.73	*1.01	*0.74	*0.66	*4.75	*7.83	*8.94	*0.96	*0.64	*1.12	*1.99	*30.28
1905	*2.96	*.97	*.64	*1.19	*.61	*4.46	*5.87	*3.05	*2.14	*1.63	*1.25	*4.29	*29.06
1906	*1.29	*1.09	*2.01	*2.74	*1.19	*1.04	*6.42	*6.91	*2.97	*1.20	*.73	*.37	*27.96
1907	*.94	*.96	*.76	*1.16	*.60	*2.27	*6.07	*6.60	*1.83	*1.19	*.56	*1.50	*24.44
1908	*4.47	*5.40	*3.75	*1.75	*2.15	*3.02	*7.26	*7.41	*1.30	*.97	*1.66	*.31	*39.45
1909	*.39	*.60	*.59	*1.27	*.61	*1.44	*2.14	*11.58	*6.57	*1.91	*.69	*.49	*28.55
1910	*.67	*.88	*.87	*1.63	*.83	*5.57	*7.12	*2.86	*2.46	*.70	*1.47	*1.20	*26.66
1911	*.78	*1.21	*.89	*1.78	*.63	*1.39	*7.86	*4.43	*1.25	*.48	*.63	*1.01	*22.34
1912	2.44	1.92	2.57	1.16	.53	2.45	9.15	5.30	1.84	.47	1.27	.84	29.94
1913	2.56	2.87	2.06	3.66	1.15	*10.02	5.00	2.74	1.11	.58	.39	.67	*32.81
1914	2.21	*2.51	1.32	1.12	1.01	5.52	*9.27	5.09	.89	.62	.54	.45	*30.55
1915	.38	.63	.72	1.97	4.33	4.74	4.98	2.28	.98	3.80	2.52	.96	28.19
1916	.99	1.22	2.10	3.18	2.68	2.56	6.95	5.06	4.70	2.43	1.09	1.10	34.06
1917	1.22	1.61	1.93	1.18	.72	*3.32	7.06	5.53	6.96	1.23	.84	.60	*32.20
1918	*1.82	1.46	.70	.51	.77	3.16	6.74	3.59	1.57	.95	.99	2.32	*24.58
1919	3.05	2.57	2.88	1.92	.81	5.22	4.99	5.67	1.16	.46	.29	1.55	30.57
1920	2.67	4.25	2.31	.51	.35	5.14	*10.28	6.44	1.74	.96	.74	1.12	*36.51
1921	2.21	1.88	*4.63	1.26	.72	7.66	5.70	1.49	.51	.61	.74	.42	*27.83
1922	2.45	2.15	*2.45	1.05	.74	4.53	*9.67	4.77	6.18	2.67	.92	.65	*36.65
1923	.69	.80	.49	1.44	.52	1.21	*12.52	5.44	1.23	.30	.21	.19	*24.84
1924	.90	2.01	4.25	3.21	.81	1.23	6.44	7.45	1.40	.73	.60	*3.04	*32.07
1925	*2.18	2.16	1.97	.61	3.95	*5.58	5.31	3.20	1.50	2.73	1.04	1.39	*31.62
1926	2.90	4.12	2.67	1.20	.84	.97	4.88	6.61	1.96	1.13	.44	.52	28.24
1927	1.53	3.86	1.15	.79	.63	3.22	4.09	3.11	1.40	1.62	.88	.70	22.98
1928	2.33	8.21	3.69	2.12	1.33	2.73	6.81	6.21	2.89	1.81	2.04	1.15	41.32
1929	.99	1.51	1.13	1.35	.68	4.56	8.06	7.19	1.54	1.87	.46	.57	29.91
1930	.95	1.32	1.36	2.60	1.70	4.01	5.49	3.51	3.50	1.14	1.54	.45	27.57

\* Revised.

† Corrected.

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Monthly and yearly runoff, in inches, of Pemigewasset River at Plymouth, N.H.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	.47	1.16	.88	.27	.23	.84	4.64	3.66	2.80	1.59	.51	.90	17.95
1932	1.21	1.66	1.68	3.66	1.60	.90	7.98	3.52	.90	1.74	1.61	1.44	27.90
1933	3.66	4.00	1.18	.98	.76	1.12	9.08	4.85	1.10	.45	.90	.68	28.76
1934	1.30	1.26	1.37	1.26	.58	1.73	11.16	4.60	1.04	.60	.44	1.52	26.86
1935	1.44	2.80	2.26	3.39	.87	2.16	5.64	4.20	2.78	.90	.49	.82	27.75
1936	.55	1.73	1.10	1.26	.62	17.18	5.41	4.13	.95	.66	.41	.68	34.68
1937	3.31	2.09	2.64	2.61	1.44	1.18	6.36	9.13	2.52	1.42	.67	.50	33.87
1938	2.47	3.16	2.62	2.22	1.90	3.52	6.25	2.63	1.89	1.24	1.19	6.84	34.55
1939	1.95	1.83	4.93	1.49	1.00	1.36	7.87	7.33	1.27	.85	.83	.43	30.94
1940	.84	1.44	1.28	.37	.31	.38	5.63	9.83	2.92	1.03	.51	1.73	26.27
1941	.62	3.42	1.65	1.35	1.23	.81	4.94	1.53	.89	2.29	.87	.61	20.21
1942	1.46	1.85	1.75	1.66	.65	2.46	8.33	3.75	2.83	.61	.36	.66	26.37
1943	.99	2.87	1.54	.79	.86	2.26	5.05	9.12	2.12	1.58	2.76	1.61	31.55
1944	2.57	4.49	1.15	.74	.60	1.25	5.70	6.14	2.66	1.07	.36	.70	27.43
1945	1.40	.99	1.22	1.69	.81	6.37	6.11	6.01	3.90	1.97	.76	1.13	32.36
1946	3.61	3.03	3.20	1.30	.84	6.70	3.94	4.70	2.02	.63	2.07	1.08	33.12
1947	2.79	2.47	1.71	1.54	1.99	2.62	6.37	7.46	3.83	1.95	.64	.34	33.71
1948	.24	.72	.40	.31	.35	4.20	6.17	5.87	1.89	.64	.55	.23	21.37
1949	.32	2.71	2.16	3.66	.88	3.59	5.09	3.40	.94	.49	.55	1.10	24.89
1950	1.04	1.98	2.56	2.73	1.22	1.99	8.03	3.79	2.38	.66	.42	.79	27.59

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1904	124,1231	\$15,000	May 17, 1904*	150	\$1,380	\$2.22	\$30.28	\$1,470	\$32.20
1905	201,1231	\$18,500	Mar. 29, 1905*	\$240	\$1,330	\$2.14	\$29.06	\$1,320	\$28.88
1906	201,1231	\$19,800	Apr. 16, 1906*	\$160	\$1,280	\$2.08	\$27.96	\$1,200	\$26.23
1907	241,1231	\$15,900	May 1, 1907*	\$124	\$1,120	\$1.80	\$24.44	\$1,620	\$35.40
1908	241,1231	\$22,400	Dec. 10, 1907*	\$124	\$1,800	\$2.89	\$39.45	\$1,250	\$27.41
1909	261,1231	\$25,400	Apr. 14, 1909*	\$124	\$1,310	\$2.11	\$28.55	\$1,360	\$29.59
1910	281,1231	\$12,900	Mar. 26, 1910*	\$270	\$1,220	\$1.96	\$26.66	\$1,230	\$26.92
1911	301,1231	\$17,400	Apr. 15, 1911*	\$80	\$1,020	\$1.64	\$22.34	\$1,210	\$26.39
1912	471	\$15,200	Apr. 23, 1912*	208	1,370	2.20	29.94	\$1,390	\$30.50
1913	471,1231	\$27,400	Mar. 28, 1913	60	\$1,500	\$2.41	\$32.81	\$1,440	\$31.36
1914	471,1231	\$31,500	Apr. 20, 1914*	186	\$1,400	\$2.25	\$30.55	\$1,200	\$26.24
1915	471	\$20,000	Feb. 25, 1915*	186	1,290	2.07	28.19	1,410	30.77
1916	471	\$17,000	May 18, 1916*	255	1,560	2.51	34.06	1,580	34.51
1917	471,1231	\$19,200	June 16, 1917*	212	\$1,480	\$2.38	\$32.20	\$1,440	\$31.42
1918	471,1231	\$20,300	Oct. 31, 1917*	150	\$1,130	\$1.82	\$24.58	1,330	29.10
1919	501,1231	\$22,000	Mar. 29, 1919*	78	1,400	2.25	30.57	1,430	31.30
1920	501,1231	\$22,600	Apr. 14, 1920	130	\$1,670	\$2.68	\$36.51	\$1,650	\$36.00
1921	521,1231	\$19,700	Oct. 1, 1920	122	\$1,280	\$2.06	\$27.83	1,130	24.58
1922	541,1231	\$24,600	Apr. 12, 1922	188	\$1,680	\$2.70	\$36.65	\$1,510	\$32.96
1923	(a)	\$34,600	Apr. 28, 1923	45	\$1,140	\$1.83	\$24.84	\$1,380	\$30.22
1924	581,1231	\$22,300	Sept. 10, 1924	60	\$1,470	\$2.36	\$32.07	\$1,430	\$31.22
1925	601,1231	\$27,300	Mar. 29, 1925*	138	\$1,450	\$2.33	\$31.62	\$1,600	\$35.00
1926	621,1231	\$17,800	May 4, 1926	136	1,290	2.07	28.24	1,150	25.09
1927	641,1231	\$11,500	Nov. 17, 1926	194	1,050	1.69	22.98	1,410	30.67
1928	661	\$0,900	Nov. 4, 1927	194	1,890	3.04	41.32	1,400	30.72
1929	681,1231	\$22,900	May 3, 1929	152	\$1,330	2.14	28.91	1,330	28.91
1930	696,1231	\$20,400	Apr. 8, 1930	183	1,260	2.03	27.57	1,210	26.45
1931	711,1231	\$14,500	June 9, 1931	89	823	1.32	17.95	914	19.99
1932	726	16,200	Apr. 13, 1932	192	1,270	2.04	27.90	1,470	32.28
1933	741	19,900	Apr. 18, 1933	148	1,320	2.12	28.76	1,090	23.85
1934	756	22,600	Apr. 13, 1934	153	1,233	1.98	26.86	1,350	29.43
1935	781	17,000	Jan. 10, 1935	174	1,271	2.04	27.75	1,127	24.63
1936	801	65,400	Mar. 19, 1936	127	1,584	2.55	34.68	1,797	39.34
1937	821	15,900	May 15, 1937	157	1,552	2.50	33.87	1,545	33.71
1938	851	\$0,900	Sept. 21, 1938	177	1,583	2.55	34.55	1,612	35.18
1939	871	21,900	Dec. 6, 1938	167	1,418	2.28	30.94	1,191	25.99
1940	891	25,400	Mar. 3, 1940	160	1,201	1.93	26.27	1,298	28.40
1941	921	9,580	Nov. 12, 1940	198	926	1.49	20.21	897	19.58
1942	951	25,500	June 15, 1942	128	1,208	1.94	26.37	1,224	26.71
1943	971	12,600	May 13, 1943	222	1,446	2.32	31.55	1,574	34.36
1944	1001	29,300	Nov. 9, 1943	99	1,254	2.02	27.43	1,044	22.83
1945	1031	16,100	Mar. 30, 1945	228	1,494	2.39	32.36	1,769	36.59
1946	1051	17,000	Oct. 2, 1945	175	1,518	2.44	33.12	1,386	30.25
1947	1081	17,700	Apr. 12, 1947	163	1,544	2.48	33.71	1,287	28.10
1948	1111	23,400	Apr. 2, 1948	93	976	1.57	21.37	1,152	25.20
1949	1141	22,600	Dec. 31, 1948	92	1,141	1.83	24.89	1,156	25.28
1950	1171	28,000	Apr. 21, 1950	141	1,264	2.03	27.59	-	-

\* Revised.

† Corrected.

\* Not previously published.

a In W.S.P. 561, 641, 1231.

## 125. 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.

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

Average discharge.--11 years (1939-50), 82.5 cfs.

Extremes.--1939-50: Maximum daily discharge, 277 cfs June 11, 1946; minimum daily, 14 cfs Feb. 4, 1940.

Remarks.--Flow completely regulated by Squam and Little Squam Lakes.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	66.9	72.9	76.1	69.4	56.0	55.5	66.4	78.6	85.8	84.0	82.4	70.3 79.1	72.8
1941	82.8	86.4	86.4	89.2	86.9	89.2	90.5	78.0	77.9	76.0	74.1	68.1	82.1
1942	49.3	34.2	34.2	42.5	53.0	55.3	70.2	80.0	77.8	73.9	73.2	70.8	59.6
1943	75.6	77.7	80.1	71.5	69.7	73.6	71.0	71.0	73.3	83.7	81.4	82.3	76.0
1944	79.1	80.1	78.5	79.6	82.4	85.3	92.1	91.0	83.2	84.6	81.7	76.1	82.8
1945	78.9	78.4	78.7	78.7	79.5	80.7	80.4	110	149	119	110	95.6	94.9
1946	84.2	76.9	82.5	85.5	91.6	125	158	171	194	102	105	92.5	114
1947	94.5	95.5	92.0	91.0	92.5	112	168	181	154	110	95.8	86.8	115
1948	76.5	71.7	72.9	79.6	75.6	76.7	75.8	72.3	77.2	75.2	76.3	69.9	75.0
1949	69.9	70.8	68.5	71.0	70.9	74.4	69.9	70.4	72.8	72.2	69.7	87.1	70.5
1950	66.2	66.8	66.1	69.4	66.6	64.8	60.1	65.8	63.1	62.2	61.5	59.5	64.4

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	891	-	-	-	-	-	-	-	-
1940	891	-	-	14	72.8	-	-	76.1	-
1941	921	-	-	27	82.1	-	-	70.5	-
1942	951	-	-	26	59.6	-	-	69.3	-
1943	971	-	-	57	76.0	-	-	76.3	-
1944	1001	-	-	65	82.8	-	-	82.7	-
1945	1031	-	-	63	94.9	-	-	95.6	-
1946	1051	-	-	72	114	-	-	117	-
1947	1081	-	-	37	115	-	-	109	-
1948	1111	-	-	43	75.0	-	-	74.0	-
1949	1141	-	-	54	70.5	-	-	69.7	-
1950	1171	-	-	30	64.4	-	-	-	-

## 126. Newfound Lake near Bristol, N.H.

Location.--Lat 43°37'05", long. 71°44'25", on Newfound River at outlet of Newfound Lake 1 2/3 miles north of Bristol, Grafton County.

Drainage area.--98 sq mi.

Gage.--Staff gage. Datum of gage is 581.88 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Remarks.--Lake is used for recreation and for storage of water for power, and has a usable capacity of 1,690,000,000 cu ft.

Cooperation.--Records furnished by Public Service Co. of New Hampshire.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1941	-	-	-	-	-	-	-	-	-	-	-	879.7
1942	798.5	877.9	994.6	1,101.8	1,016.7	1,564.9	1,611.7	1,635.2	1,592.2	1,368.8	1,053.6	845.4
1943	744.7	943.4	980.0	1,009.3	816.5	896.1	1,682.2	1,682.2	1,592.2	1,410.8	1,460.6	1,183.8
1944	1,511.8	1,666.5	1,221.3	1,009.3	816.5	896.1	1,682.2	1,682.2	1,643.0	1,323.2	980.0	870.7
1945	796.7	723.3	737.6	805.7	787.7	1,674.4	1,741.3	1,592.2	1,623.4	1,460.6	1,124.1	950.7
1946	1,072.1	1,487.5	1,514.5	1,323.2	972.7	1,522.2	1,487.5	1,729.5	1,449.1	1,198.8	1,109.2	1,183.8
1947	1,191.3	1,213.8	1,167.0	1,251.4	1,139.0	1,399.3	1,592.2	1,721.6	1,526.1	1,296.7	980.0	734.0
1948	567.9	691.3	648.8	666.5	680.7	1,701.9	1,701.9	1,643.0	1,545.5	1,306.2	1,024.1	776.9
1949	640.0	907.0	1,065.1	1,407.0	1,165.1	1,594.2	1,690.0	1,670.4	1,543.6	1,319.4	1,101.8	990.0
1950	825.5	899.7	967.2	1,183.8	847.2	1,064.7	1,757.1	1,694.0	1,598.1	1,347.9	1,131.5	930.7

## MERRIMACK RIVER BASIN

127. 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 1¼ miles southwest of Bristol, Grafton County.

Drainage area.--85.8 sq mi. Prior to Nov. 25, 1933, 83.6 sq mi.

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.--32 years (1918-50), 137 cfs.

Extremes.--1918-50: Maximum discharge, 8,100 cfs Mar. 19, 1936 (gage height, 16.09 ft, from floodmarks), by contracted-opening method; minimum daily, 2.7 cfs (revised) Aug. 2, 1933.

Remarks.--Some diurnal fluctuation caused by small mill above station; greater fluctuation prior to 1941.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1918	-	-	-	-	-	-	-	-	46.4	20.7	21.9	66.7	-
1919	103	101	205	146	49.4	*511	277	307	41.0	17.2	11.5	58.3	*152
1920	65.4	†283	205	47.5	30.4	373	547	282	76.3	38.9	24.6	26.4	167
1921	66.0	75.1	284	90.2	55.8	436	251	84.7	30.3	44.0	26.6	15.2	122
1922	24.9	85.8	129	63.7	77.0	*399	*604	206	*353	95.5	37.1	26.3	*175
1923	25.9	31.3	22.3	100	37.0	97.5	*709	*232	41.2	14.8	9.2	10.2	*111
1924	26.6	133	223	176	54.1	88.8	*604	268	39.5	26.3	30.2	111	*148
1925	†48.6	65.5	148	43.4	209	*488	284	118	66.4	132	52.3	44.5	*141
1926	91.3	198	246	93.6	41.0	102	*536	215	66.2	31.8	30.6	20.2	*139
1927	58.1	173	46.5	40.0	32.0	*358	223	127	51.7	*39.2	*40.8	*51.5	*104
1928	†17	379	209	119	91.6	*223	*470	267	130	81.1	52.5	51.6	*182
1929	42.4	52.6	*84.5	107	55.1	468	441	254	45.4	25.0	17.0	30.3	*136
1930	26.7	52.7	74.0	115	162	*362	243	112	102	*34.7	49.4	*18.4	*112
1931	*25.6	52.3	59.1	28.4	27.6	101	388	207	149	78.9	*27.6	*27.9	*97.7
1932	32.3	53.0	130	203	107	87.6	585	103	26.6	35.4	24.3	35.1	116
1933	86.6	234	82.4	87.8	83.8	96.9	792	146	44.5	17.4	35.3	27.3	144
1934	62.9	60.6	68.8	80.0	44.6	128	741	141	51.7	25.5	17.4	50.4	122
1935	50.8	118	96.4	224	73.2	213	346	139	154	101	31.4	34.0	132
1936	22.1	77.1	66.6	99.5	54.3	1,242	358	117	34.0	28.5	20.1	18.4	179
1937	60.9	88.2	197	179	189	90.9	535	454	135	90.3	34.6	18.1	172
1938	41.6	196	160	162	137	272	290	143	57.2	90.4	42.7	457	170
1939	114	35.2	294	102	80.0	126	696	225	57.0	22.2	15.2	13.2	153
1940	22.2	64.4	58.3	19.2	22.2	29.7	695	485	227	65.5	29.0	43.8	146
1941	20.9	121	*98.5	89.5	*155	69.5	*276	71.5	40.9	70.6	26.5	21.2	*87.6
1942	24.5	58.8	65.5	84.0	34.6	*261	*528	111	236	43.1	22.5	13.7	*123
1943	22.3	85.9	71.5	39.5	62.4	*226	*404	*375	85.8	33.1	*117	26.8	*129
1944	78.7	221	66.9	38.5	38.3	101	595	172	205	45.9	16.9	36.1	134
1945	59.7	56.7	99.5	107	67.9	517	348	397	205	101	31.1	40.5	170
1946	86.7	189	257	131	83.9	482	207	236	136	36.6	51.1	55.5	164
1947	113	81.4	57.2	87.3	139	262	516	268	218	56.3	26.0	11.2	153
1948	8.45	58.8	32.3	28.0	40.4	373	277	324	104	41.5	18.6	7.62	110
1949	11.4	78.1	69.0	222	103	254	239	114	36.1	11.7	8.79	18.4	97.1
1950	19.2	58.2	73.8	123	71.6	153	551	121	97.2	16.1	9.45	16.7	109

\* Revised.

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1918	-	-	-	-	-	-	-	-	0.62	0.29	0.30	0.89	-
1919	1.41	1.35	2.83	2.01	0.61	*7.05	3.69	4.23	.55	.24	.16	.51	*24.64
1920	.90	3.78	2.82	.66	.39	5.14	7.30	3.99	1.02	.54	.34	.35	27.15
1921	.91	1.00	3.92	1.24	.67	6.01	3.36	1.17	.40	.61	.37	.20	19.86
1922	.34	1.15	1.78	.88	.96	*5.50	*8.06	2.84	*4.71	1.32	.51	.35	*28.40
1923	.36	.42	.31	1.38	.46	1.34	*9.46	*3.20	.55	.20	.13	.14	*17.95
1924	.37	1.77	3.07	2.42	.70	1.22	*8.06	3.70	.53	.36	.42	1.49	*24.11
1925	.67	.87	2.03	.60	2.60	*6.73	3.80	1.62	.89	1.82	.72	.59	*22.94
1926	1.26	2.64	3.39	1.29	.51	1.40	*7.15	2.97	.88	.44	.42	.27	*22.62
1927	.80	2.31	1.64	.58	.40	*4.94	2.98	1.76	.69	*.54	*.56	*.68	*16.86
1928	*1.62	5.06	2.88	1.65	1.18	3.08	3.68	1.73	1.12	.72	.69	*26.69	
1929	.58	.70	*1.17	1.47	.69	6.45	.589	3.51	.61	.35	.23	.40	*22.05
1930	.37	.70	1.02	1.59	2.02	*4.99	3.24	1.54	1.36	*.48	.68	*.25	*18.24
1931	*.35	.70	†.81	.39	.34	†1.39	5.18	2.86	1.99	1.09	*.38	*.37	*15.85
1932	.44	.71	1.80	2.80	1.58	1.93	7.81	1.42	.35	.49	.34	.47	18.94
1933	1.20	3.12	1.14	1.21	1.04	1.34	10.57	2.02	.59	.24	.49	.36	23.32
1934	.87	.81	.92	1.07	.54	1.72	9.64	1.89	.67	.54	.23	.65	19.35
1935	.68	1.54	1.29	3.01	.89	2.66	4.50	1.87	2.00	1.36	.42	.44	20.86
1936	.30	1.00	.89	1.34	.68	16.72	4.65	1.57	.44	.38	.27	.24	28.48
1937	.82	1.15	2.65	2.41	2.29	1.22	6.93	6.10	1.73	1.21	.46	.24	27.21
1938	.56	2.58	2.14	2.18	1.67	3.63	3.77	1.92	.74	1.21	.57	5.95	26.92
1939	1.53	1.24	3.95	1.37	.97	1.70	9.05	3.02	.74	.30	.20	.17	24.24
1940	.30	.84	.79	.26	.28	.40	9.03	6.52	2.96	.88	.39	.57	23.21

\* Revised.

† Corrected.

Monthly and yearly runoff, in inches, of Smith River near Bristol, N.H.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	.28	1.58	*1.32	1.20	*1.83	.93	*3.59	.96	.53	.95	.36	.28	*13.86
1942	.33	.76	.88	1.13	.42	*3.51	*6.87	1.50	3.07	.58	.30	.18	*19.53
1943	.30	1.12	.96	.55	.76	*3.04	*5.25	*5.03	1.12	.44	*1.57	.35	*20.47
1944	1.06	2.87	.90	.52	.48	1.35	7.74	2.31	2.67	.62	.23	.47	21.22
1945	.80	.74	1.34	1.43	.82	6.95	4.52	5.33	2.66	1.36	.42	.53	26.90
1946	1.16	2.46	3.46	1.76	1.02	6.48	2.69	3.18	1.77	.49	.69	.72	25.88
1947	1.52	1.06	.77	1.17	1.68	3.52	6.71	3.61	2.84	.76	.35	.15	24.14
1948	.11	.77	.43	.38	.51	5.01	3.61	4.36	1.36	.56	.25	.10	17.45
1949	.15	1.02	.95	2.98	1.24	3.42	3.10	1.54	.47	.16	.12	.24	15.38
1950	.26	.76	.99	1.65	.87	2.06	7.17	1.63	1.26	.22	.13	.22	17.22

\* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1918	471	-	-	-	-	-	-	-	-
1919	501,1231	*2,320	Mar. 29, 1919	5.0	*152	*1.82	*24.64	*164	*26.55
1920	501	*1,820	Apr. 14, 1920	14	167	2.00	27.13	156	25.46
1921	521	*1,090	Dec. 14, 1920	12	122	1.46	19.86	107	17.30
1922	541,1231	*2,120	Apr. 12, 1922	16	*175	*2.09	*28.40	*161	*26.22
1923	561,1231	*2,220	Apr. 6, 1923	4.6	*111	*1.33	*17.95	*136	*22.07
1924	581,1231	*1,440	Apr. 19, 1924	4.0	*148	*1.77	*24.11	*138	*22.47
1925	601,1231	*2,560	Mar. 29, 1925*	6.8	*141	*1.69	*22.94	*164	*26.66
1926	621,1231	*2,020	Apr. 25, 1926	8.2	*139	*1.66	*22.62	*118	*19.08
1927	641,1231	*1,920	Mar. 15, 1927	*13	*104	*1.24	*16.86	*140	*22.67
1928	661,1231	5,800	Nov. 4, 1927	*9.4	*182	*2.18	*29.69	*139	*22.58
1929	681,1231	*1,750	Mar. 17, 1929	5.5	*136	*1.63	*22.05	134	21.69
1930	696,1231	*1,440	Mar. 9, 1930	*6.0	*112	*1.34	*18.24	*111	*18.01
1931	711,1231	*1,260	May 23, 1931	*7.4	*97.7	*1.17	*15.85	*104	*16.94
1932	726,1231	*2,020	Apr. 12, 1932	4.9	116	1.39	18.94	132	21.45
1933	741,1231	*2,220	Apr. 19, 1933	2.7	144	1.72	23.32	126	20.46
1934	781	3,500	Apr. 12, 1934	7.8	122	1.43	19.35	128	20.26
1935	781	1,240	Jan. 10, 1935	13	132	1.54	20.86	124	19.54
1936	801	8,100	Mar. 19, 1936	12	179	2.09	28.48	195	30.91
1937	821	1,720	May 15, 1937	14	172	2.00	27.21	176	27.87
1938	851	5,070	Sept. 22, 1938	12	170	1.98	26.92	179	28.36
1939	871	2,500	Apr. 20, 1939	2.8	153	1.78	24.24	123	19.44
1940	891	2,100	May 3, 1940	11	146	1.70	23.21	154	*24.47
1941	921,1231	*790	Feb. 8, 1941	4.1	*87.6	*1.02	*13.86	*79.9	*12.65
1942	951,1231	2,340	June 15, 1942	9.3	*123	*1.43	*19.53	*126	*19.94
1943	971,1231	1,150	Apr. 28, 1943	8.7	*129	*1.50	*20.47	*145	*22.92
1944	1001	1,790	Nov. 9, 1943	8.7	134	1.56	21.22	121	19.27
1945	1031	1,530	Mar. 22, 1945	14	170	1.98	26.90	197	31.10
1946	1051	1,770	Dec. 7, 1945	10	164	1.91	25.68	140	22.15
1947	1081	1,640	Apr. 13, 1947	5.8	153	1.78	24.14	140	22.10
1948	1111	1,960	Mar. 22, 1948	5.0	110	1.28	17.45	115	18.24
1949	1141	1,080	Jan. 1, 1949	5.1	97.1	1.13	15.38	96.6	15.29
1950	1171	1,570	Apr. 20, 1950	4.8	109	1.27	17.22	-	-

\* Revised.

\* Not previously published.

## 128. Franklin Falls Reservoir near Franklin, N.H.

Location.--Lat 43°28'10", long. 71°39'40", on Pemigewasset River 2 miles north of Franklin, Merrimack County.

Drainage area.--1,000 sq mi.

Gage.--Staff gage. Datum of gage is at mean sea level.

Remarks.--Completed in 1942, used for flood control, and has a usable capacity of 6,640,000,000 cu ft.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1942	-	-	-	-	-	144	265	119	121	119	115	212
1943	106	140	117	102	124	156	358	145	119	140	119	117
1944	349	180	102	113	106	147	93	122	152	124	117	158
1945	125	134	125	95	125	661	225	199	138	158	125	125
1946	96	105	102	89	78	270	162	222	95	91	93	272
1947	135	144	138	160	135	166	196	214	136	135	133	128
1948	136	136	129	138	126	237	153	164	133	136	128	151
1949	133	149	804	136	131	312	155	155	128	136	145	144
1950	145	158	157	153	129	178	224	162	128	136	151	136

a Contents by capacity table used beginning Oct. 1, 1946; contents Oct. 31, 1946, by capacity table used prior to Oct. 1, 1946, was 142,000,000 cu ft.

## 129. Merrymeeting Lake near Alton, N.H.

Location.--Lat 43°28'35", long. 71°10'45", on Merrymeeting River  $2\frac{1}{2}$  miles northeast of Alton, Strafford County.

Drainage area.--10 sq mi, approximately.

Gage.--Staff gage. Datum of gage is at sea level.

Remarks.--Lake is used for recreation and for storage of water for power. Usable capacity is about 368,000,000 cu ft.

Cooperation.--Records furnished by Public Service Co. of New Hampshire.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1942	-	-	-	-	-	-	-	-	-	-	-	2,507
1943	2,550	2,563	2,497	2,460	2,444	2,465	2,588	2,674	2,666	2,655	2,647	2,580
1944	2,555	2,566	2,512	2,478	2,447	2,463	2,604	2,642	2,674	2,642	2,583	2,622
1945	2,580	2,588	2,583	2,544	2,483	2,568	2,650	2,672	2,661	2,646	2,568	2,542
1946	2,518	2,531	2,538	2,520	2,469	2,566	2,620	2,663	2,635	2,590	2,571	2,542
1947	2,518	2,503	2,470	2,442	2,421	2,474	2,595	2,667	2,670	2,642	2,567	2,512
1948	2,471	2,473	2,393	2,323	2,286	2,360	2,424	2,527	2,570	2,566	2,539	2,502
1949	2,482	2,501	2,481	2,488	2,455	2,456	2,516	2,550	2,541	2,521	2,493	2,476
1950	2,457	2,448	2,406	2,390	2,355	2,351	2,458	2,478	2,481	2,455	2,446	2,418

## 130. Lake Wentworth at Wolfeboro Falls, N.H.

Location.--Lat 43°35'25", long. 71°12'05", at Wolfeboro Falls, Carroll County, above Lake Winnepesaukee.

Drainage area.--23 sq mi, approximately.

Gage.--Reference point at top of dam. Datum of gage is 534.83 ft above mean sea level, datum of 1929.

Remarks.--Lake used for recreation and for storage of water for power and has a usable capacity of 854,000,000 cu ft.

Cooperation.--Records furnished by O. P. Berry Co.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1942	-	-	-	-	-	-	-	-	-	-	-	623.8
1943	562.5	562.5	613.0	598.9	628.8	774.3	1,046.2	1,278.7	1,239.2	1,188.1	1,130.4	1,022.3
1944	983	1,087	1,049	999	961	1,008	1,172	1,176	1,222	1,100	910	901
1945	834	887	993	938	882	1,155	1,206	1,255	1,267	1,114	921	779
1946	742	828	977	1,029	975	1,111	1,092	1,188	1,133	1,020	985	907
1947	844	817	806	827	854	929	1,052	1,169	1,157	1,020	839	680
1948	570	560	521	487	446	726	839	1,128	1,133	972	809	635
1949	550	545	604	716	736	910	1,034	1,071	1,017	884	764	684
1950	-	-	-	-	-	-	-	-	-	-	-	-

Note.--Records not available for 1950 water year.

## 131. Lake Winnepesaukee at The Weirs, N.H.

Location.--Lat 43°36'20", long. 71°27'25", about 800 ft north of highway bridge at The Weirs, Belknap County.

Drainage area.--363 sq mi.

Gage.--Water-stage recorder. Datum of gage is 500.02 ft above mean sea level, datum of 1929. Prior to November 1938, staff and float gage at lake outlet at Lakeport at datum 0.53 ft higher.

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 when contents are below 14,430,000,000 cu ft between June 1 and Sept. 15. Stage regulated at outlet and by Wentworth (see p. 142), Merrymeeting (see p. 142), and other lakes.



Month-end contents, in millions of cubic feet, of Lake Winnepesaukee at The Weirs, N.H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1933	-	-	-	-	-	-	-	-	-	-	-	3,826
1934	3,532	3,042	3,430	3,532	3,042	3,826	7,060	6,864	6,570	6,178	4,904	4,943
1935	3,826	4,434	4,747	5,061	3,297	4,943	7,021	7,217	7,021	5,786	4,747	3,826
1936	3,042	3,630	3,140	3,532	2,358	6,629	8,002	6,629	5,727	5,178	4,198	3,179
1937	2,748	2,160	4,022	4,708	5,022	5,198	7,158	6,707	7,021	5,786	4,610	3,336
1938	2,768	15,210	15,920	16,560	15,560	16,880	18,340	18,360	17,960	17,660	16,720	17,140
1939	16,080	15,180	16,480	16,020	15,410	15,180	19,330	18,580	18,000	17,040	16,520	15,590
1940	14,510	13,780	13,840	13,560	13,660	13,930	19,100	19,080	17,940	17,720	16,440	15,710
1941	14,310	14,920	15,270	15,180	14,920	14,130	14,980	14,920	14,560	14,250	13,210	12,260
1942	11,470	11,340	11,640	12,420	12,710	15,650	18,120	18,320	18,280	17,800	16,360	15,190
1943	14,370	14,330	14,980	14,980	14,720	15,410	17,580	18,840	17,820	17,940	17,560	16,140
1944	15,390	16,080	14,900	14,190	14,070	15,140	18,520	18,040	18,920	17,740	16,880	16,940
1945	16,320	16,480	16,820	16,400	14,700	17,000	18,880	19,650	19,000	18,260	16,600	15,310
1946	14,560	14,900	16,060	15,810	13,890	16,920	18,320	18,780	18,000	16,900	17,120	16,360
1947	16,180	15,590	14,450	14,740	14,660	15,710	18,300	18,660	18,460	17,560	15,510	13,370
1948	12,530	12,790	12,710	12,680	12,710	15,390	17,080	19,100	18,460	17,180	15,710	14,130
1949	13,190	13,580	13,780	15,550	15,510	16,520	17,820	18,540	18,140	17,200	15,960	15,530
1950	14,560	14,210	13,820	14,960	14,900	15,960	18,700	18,520	18,120	17,140	16,760	15,880

a Contents by capacity table used beginning Nov. 1, 1937; contents Nov. 30, 1937, by capacity table used prior to Nov. 1, 1937, was 3,983,000,000 cu ft.

Note.--Due to variable draft and resultant changing slope in water surface between The Weirs and the lake outlet, the Lakeport gage does not reflect the true lake level at times of heavy draft and there are large probable errors in some contents shown prior to November 1937.

## 132. Lake Winnepesaukee Outlet at Lakeport, N. H.

Location.--Lat 43°32'55", long. 71°27'55", just upstream from highway bridge across Paugus Bay at Lakeport, Belknap County.

Drainage area.--363 sq mi.

Supplemental records available.--January 1860 to December 1911, monthly gage heights only.

Gage.--Water-stage recorder and Keeler deflection meter since May 24, 1944. Datum of gage is 500.55 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1936, staff gage and continuous recording current meter in measuring flume at same site and datum. Oct. 1, 1936, to May 23, 1944, power plant records obtained by the International Paper Company.

Average discharge.--17 years (1933-50), 487 cfs (adjusted).

Extremes.--1933-50: 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.--Flow regulated by Winnepesaukee (see p. 142), Wentworth (see p. 142), Merry-meeting (see p. 142), and other lakes, and mills just below.

Cooperation.--Records for period Oct. 1, 1936, to May 23, 1944, furnished by the International Paper Co. (System Properties, Inc.).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1933	-	-	-	-	-	-	-	-	-	373	338	328	-
1934	297	290	279	308	502	583	604	723	339	353	327	289	407
1935	341	276	295	732	1,137	950	399	503	781	571	424	568	576
1936	399	308	351	552	900	1,270	2,596	744	349	382	389	387	716
1937	343	322	324	461	808	623	721	1,654	865	487	438	381	618
1938	294	279	379	431	664	803	450	361	369	339	348	456	431
1939	559	571	587	632	653	676	617	873	432	360	342	367	557
1940	318	287	287	266	270	273	394	1,278	965	517	414	389	455
1941	321	292	315	454	686	731	345	274	188	217	215	209	352
1942	194	149	49.3	45.0	67.7	33.2	92.8	255	278	235	350	338	174
1943	283	203	184	252	458	468	274	789	650	268	490	419	394
1944	401	429	608	480	336	265	379	738	529	712	416	357	472
1945	345	350	431	905	1,331	663	476	1,418	1,373	758	613	554	764
1946	488	387	368	843	1,340	360	292	735	776	523	401	720	597
1947	363	441	806	555	725	686	437	995	1,209	474	702	743	677
1948	228	152	224	246	325	183	149	628	794	463	522	401	359
1949	314	310	316	273	561	385	274	290	339	313	376	252	332
1950	291	294	379	303	554	398	470	433	467	251	258	256	361

## MERRIMACK RIVER BASIN

Monthly and yearly runoff, in inches (adjusted), of Lake Winnepesaukee Outlet at Lakeport, N.H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1933	-	-	-	-	-	-	-	-	-	0.14	0.61	0.08	-
1934	0.59	0.31	1.35	1.10	0.86	2.78	5.69	2.06	0.70	.66	-.47	.89	18.52
1935	-.24	1.56	1.30	2.70	1.17	4.91	3.69	1.83	2.16	.35	.11	.65	20.19
1936	.34	1.64	.53	2.22	1.28	13.72	3.18	2.31	.77	.56	.07	-.02	26.60
1937	.58	.29	3.24	2.28	2.69	2.19	4.54	4.72	3.04	.08	-.003	-.34	23.31
1938	.26	2.30	2.04	2.22	1.79	2.92	3.08	1.23	.67	.73	.01	1.89	19.14
1939	.52	.69	3.44	1.46	1.14	1.88	6.82	1.88	.64	.005	.47	-.21	18.74
1940	-.03	.02	.98	.51	.92	1.19	7.34	4.03	1.62	.75	-.20	.33	17.46
1941	-.64	1.62	1.42	1.34	1.66	1.38	2.07	.80	.15	.32	-.55	-.48	9.09
1942	-.32	.30	.51	1.07	.54	3.59	3.21	1.05	.81	.18	-.60	-.35	9.99
1943	-.08	.58	1.36	.80	1.01	2.31	3.42	4.00	.79	.99	1.10	-.40	15.88
1944	.38	2.14	.53	.68	.86	2.11	5.17	1.77	2.67	.86	-.29	1.64	18.52
1945	.48	1.27	1.77	2.38	1.80	4.83	3.69	5.42	3.45	1.53	-.02	.17	26.77
1946	.66	1.59	2.54	2.38	1.57	4.74	2.56	2.88	1.46	.36	1.53	1.31	23.58
1947	.94	.66	1.21	2.11	1.99	3.42	4.42	3.59	3.48	.44	-.20	-.25	21.81
1948	-.27	.77	.62	.98	.76	3.76	2.46	4.39	1.69	-.06	-.09	-.64	14.37
1949	-.12	1.41	1.24	2.97	1.56	2.42	2.38	1.77	.57	-.12	-.27	.03	13.84
1950	.01	.49	.74	2.31	1.52	2.52	4.69	1.16	.96	-.37	.37	-.26	14.14

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

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Observed			Adjusted			Observed		
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean
		Discharge	Date							
1933	756	-	-	-	-	-	-	-	-	-
1934	756	-	-	82	407	441	1.21	16.52	411	452
1935	781	-	-	120	576	541	1.49	20.19	588	537
1936	801	-	-	33	716	709	1.95	26.60	710	751
1937	821	-	-	233	618	623	1.72	23.31	615	636
1938	851	-	-	211	431	512	1.41	19.14	496	513
1939	871	-	-	240	557	501	1.38	18.74	486	403
1940	891	-	-	178	455	465	1.28	17.46	458	504
1941	921	-	-	87	352	243	.689	9.09	307	192
1942	951	-	-	20	174	267	.736	9.99	198	304
1943	971	-	-	149	394	425	1.17	15.88	459	457
1944	1001	-	-	145	472	494	1.36	18.52	446	507
1945	1031	-	-	80	764	716	1.97	26.77	774	750
1946	1051	-	-	100	597	631	1.74	23.58	628	577
1947	1081	-	-	125	677	583	1.61	21.81	593	538
1948	1111	-	-	75	359	384	1.06	14.37	387	421
1949	1141	-	-	50	332	370	1.02	13.84	334	336
1950	1171	-	-	65	361	379	1.04	14.14	-	-

† Corrected.

## 133. Winnepesaukee River at Tilton, N.H.

Location.--Lat 43°26'30", long. 71°35'15", at Tilton, Belknap County, 0.3 mile upstream from Parker Brook.

Drainage area.--471 sq mi.

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

Average discharge.--13 years (1937-50), 633 cfs.

Extremes.--1937-50: Maximum discharge, 3,810 cfs Sept. 21, 1938 (gage height, 7.90 ft), by computation of flow over dam; minimum daily, 48 cfs Aug. 31, 1941.

Remarks.--Flow regulated by power plants and by Winnepesaukee (see p. 142), Winnisquam, Wentworth, Merrymeeting (see p. 142), and other lakes above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1937	-	-	-	698	1,167	834	1,226	2,293	1,201	673	557	428	-
1938	482	487	722	747	1,004	1,189	851	566	550	475	478	954	705
1939	747	757	1,095	795	794	884	1,308	1,198	670	439	410	435	794
1940	406	397	363	368	370	461	1,248	1,641	1,285	490	508	535	672
1941	452	501	497	654	899	880	611	387	264	225	218	227	482
1942	230	252	136	145	158	491	464	445	500	346	456	452	340
1943	413	387	420	439	673	878	756	1,203	865	384	708	520	637
1944	536	841	755	576	465	535	962	884	691	809	416	514	666
1945	420	446	527	1,014	1,512	1,170	769	1,722	1,608	909	577	548	931
1946	506	518	638	911	1,465	940	475	955	887	547	432	730	745
1947	461	494	842	674	817	1,136	799	1,170	1,559	551	704	764	830
1948	256	291	293	313	423	623	420	967	1,061	479	553	397	506
1949	337	300	401	488	663	651	518	395	402	338	358	323	430
1950	285	383	423	468	739	593	1,032	582	534	287	296	295	490

Yearly discharge, in cubic feet per second, of Winnepesaukee River at Tilton, N.H.

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean Runoff in inches
		Discharge	Date					
1937	821	3,120	May 17, 1937	-	-	-	-	896
1938	851	3,810	Sept. 21, 1938	212	705	-	-	781
1939	871	2,420	Dec. 7, 1938	180	794	-	-	673
1940	891	2,510	May 5, 1940	144	672	-	-	696
1941	921	1,380	Feb. 15, 1941	48	482	-	-	412
1942	951	1,220	Mar. 9, 1942	53	340	-	-	391
1943	971	1,760	May 18, 19, 1943	294	637	-	-	713
1944	1001	1,730	Sept. 15, 1944	221	666	-	-	604
1945	1031	2,530	May 19, 1945	262	931	-	-	954
1946	1051	1,770	Feb. 16, 1946	210	745	-	-	757
1947	1061	2,010	June 15, 1947	96	830	-	-	750
1948	1111	2,020	May 26, 1948	70	506	-	-	523
1949	1141	1,200	Jan. 7, 1949	100	430	-	-	434
1950	1171	1,510	Apr. 28, 29, 1950	67	490	-	-	-

## 134. 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 Winnepesaukee Rivers.

Drainage area.--1,507 sq mi.

Gage.--Water-stage recorder. Datum of gage is 250.4 ft above mean sea level, unadjusted. Prior to Sept. 13, 1923, chain gage 350 ft downstream at same datum.

Average discharge.--45 years (1905-50), 2,741 cfs.

Extremes.--1903-50: 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 velocity-area studies, slope-area determination, and computation of flow over dam; minimum daily, 225 cfs Oct. 23, 1948.

Remarks.--Flow regulated by power plants and by Franklin Falls Reservoir since March 1942 (see p. 141), and by Squam, Little Squam, Newfound (see p. 139), Winnepesaukee (see p. 142), Winnisquam, Wentworth (see p. 142), Merrymeeting (see p. 142), and other lakes.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	-	-	-	-	-	-	-	1,475	1,007	-
1904	1,345	1,155	1,412	-	-	-	7,825	7,754	1,866	1,203	1,650	1,951	-
1905	-	1,512	-	-	-	-	6,006	2,976	2,397	1,624	1,586	4,701	-
1906	1,785	1,763	2,484	2,950	1,980	1,830	6,610	5,930	4,210	2,140	1,500	1,130	2,860
1907	1,620	1,470	1,630	1,820	1,350	2,460	5,780	5,410	2,470	1,640	1,130	1,720	2,380
1908	4,180	5,440	940	1,980	2,930	3,660	5,680	6,410	2,190	1,460	2,180	968	3,390
1909	910	1,080	3,415	1,530	2,350	2,440	10,000	4,880	2,170	1,260	1,470	2,500	-
1910	1,570	1,090	1,060	2,040	1,680	5,430	5,810	3,450	2,880	1,320	1,480	1,170	2,420
1911	1,110	1,530	*1,020	1,240	1,000	1,570	7,110	4,050	1,590	965	1,090	1,470	*1,990
1912	2,750	2,500	2,650	1,800	1,850	*3,160	9,060	4,760	2,720	1,140	2,040	1,770	*2,930
1913	3,100	3,760	2,600	*3,079	*2,036	*7,007	*4,340	*3,151	*2,248	*1,102	*1,110	*1,328	*2,904
1914	2,160	2,700	1,860	1,500	1,580	4,120	8,840	4,930	1,870	1,520	1,390	1,270	2,610
1915	1,150	1,280	1,080	1,970	3,530	2,460	4,140	2,340	1,300	4,410	3,130	1,560	2,360
1916	1,710	1,780	2,300	2,220	2,830	2,590	6,830	5,270	6,950	3,400	1,880	1,680	3,280
1917	1,670	1,780	2,850	1,550	1,260	3,430	6,730	5,070	7,290	2,180	1,440	1,450	3,060
1918	2,220	1,970	1,100	950	1,230	2,660	6,390	3,240	1,890	1,410	1,490	2,570	2,260
1919	2,680	2,590	2,510	2,170	1,260	5,270	5,130	5,950	2,150	1,240	1,060	1,790	†2,830
1920	2,440	4,220	2,830	1,410	1,200	4,600	11,300	6,980	2,390	1,500	1,430	1,740	3,500
1921	2,530	2,260	5,320	2,750	1,840	7,740	6,080	2,530	1,170	1,290	1,290	1,010	3,000
1922	1,250	2,240	2,660	1,670	1,440	5,080	9,550	5,410	7,710	3,750	1,610	1,410	3,650
1923	1,440	1,360	1,220	1,680	930	1,490	9,750	5,180	1,480	1,030	989	912	2,290
1924	1,230	2,060	3,470	2,760	1,960	2,050	6,920	6,450	1,610	1,180	1,040	2,690	2,780
1925	2,120	2,110	1,910	1,360	4,160	5,660	5,500	3,120	1,840	2,600	1,570	1,660	2,790
1926	2,660	3,870	2,890	1,870	1,880	1,890	5,680	5,530	2,130	1,670	1,220	1,180	2,720
1927	1,760	3,620	1,700	1,520	1,420	4,060	3,960	3,080	1,790	1,920	1,510	1,450	2,320
1928	2,420	7,420	4,310	2,260	2,080	2,480	7,000	6,020	3,370	2,270	2,220	1,720	3,620
1929	1,510	1,700	1,490	1,740	1,300	4,120	7,830	7,210	2,040	1,360	1,100	1,080	2,710
1930	1,220	1,420	1,210	1,870	1,890	3,570	4,980	2,830	3,010	1,570	1,710	1,100	2,180
1931	967	1,510	1,250	811	794	1,520	4,950	3,480	3,250	1,700	1,090	1,280	1,880
1932	1,380	1,630	1,780	2,940	2,080	1,470	8,690	3,250	1,200	1,620	1,540	1,740	2,440
1933	2,870	3,660	1,780	1,710	1,540	1,690	11,200	5,640	1,770	914	1,170	1,000	2,940
1934	1,410	1,272	1,402	1,391	1,020	2,162	10,720	4,247	1,040	980	913	1,552	2,367
1935	1,491	2,445	2, - - 3	4,289	2,387	3,323	5,778	4,013	3,426	1,810	1,123	1,427	2,826
1936	1,069	1,840	1,544	2,025	1,681	15,650	9,048	4,408	1,546	1,237	1,091	1,170	3,537
1937	2,500	2,263	3,408	3,709	3,686	2,343	7,253	9,898	3,671	2,047	1,351	1,110	3,603
1938	2,178	3,139	2,963	3,052	2,052	4,346	5,699	2,758	1,561	1,634	1,567	6,810	3,223
1939	2,541	2,286	5,465	2,433	2,055	2,324	6,389	6,608	1,836	1,165	1,177	885	3,103
1940	1,109	1,566	1,458	811	754	921	7,375	8,689	3,950	1,442	1,075	1,680	2,602

\* Revised.

† Corrected.

## MERRIMACK RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Merrimack River at Franklin Junction, N.H.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	1,097	3,057	1,906	1,952	2,301	1,804	4,349	1,665	1,070	1,798	956	815	1,889
1942	1,175	1,531	1,327	1,437	793	2,779	7,030	3,094	2,892	1,055	940	1,017	2,089
1943	1,211	2,352	1,610	1,070	1,462	2,862	5,063	7,894	2,651	1,593	2,927	1,745	2,712
1944	2,272	4,481	1,940	1,303	1,120	1,648	6,161	5,198	3,108	1,888	933	1,255	2,604
1945	1,584	1,377	1,669	2,503	2,374	6,143	6,012	6,812	4,822	2,526	1,256	1,471	3,217
1946	2,887	2,802	3,427	2,216	2,422	6,515	3,879	4,674	2,955	1,327	2,093	1,730	3,085
1947	2,735	2,482	2,275	2,084	2,916	3,820	6,429	6,522	5,023	2,116	1,349	1,175	3,241
1948	555	1,013	759	714	905	3,914	5,118	5,697	2,712	1,196	1,179	763	2,046
1949	731	2,162	1,523	3,650	1,826	3,483	4,827	2,592	2,752	1,282	853	1,173	2,079
1950	1,115	1,849	2,210	2,523	1,322	2,279	7,599	3,553	2,497	859	756	963	2,320

## Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	-	-	-	-	-	-	-	1.13	0.75	-
1904	1.03	0.86	1.08	-	-	-	5.79	5.93	1.38	0.92	1.26	1.44	-
1905	-	.97	-	-	-	-	4.45	2.28	1.77	1.40	1.21	3.48	-
1906	1.37	1.30	1.90	2.26	1.37	1.40	4.89	4.54	3.12	1.63	1.15	.83	25.76
1907	1.24	1.09	1.25	1.39	.93	1.88	4.28	4.14	1.83	1.25	.86	1.27	21.41
1908	3.20	4.03	2.61	1.51	2.09	2.80	4.35	4.91	1.62	1.11	1.67	.72	30.62
1909	.70	.80	.72	1.17	1.62	1.86	7.41	3.73	1.61	.95	.89	1.09	22.55
1910	1.20	.81	.80	1.56	1.16	4.15	4.30	2.64	2.13	1.01	1.13	.87	21.76
1911	.85	1.14	*.78	1.09	.69	1.20	5.26	3.10	1.18	.74	.84	1.09	*17.96
1912	2.11	1.85	2.03	1.38	1.32	*2.42	5.98	3.64	5.01	.87	1.56	1.31	*26.48
1913	2.37	2.72	1.99	*2.38	*1.41	*5.36	*3.21	*2.41	*1.66	*.84	*.85	*.98	*26.16
1914	1.65	2.00	1.43	1.15	1.09	3.15	6.55	3.77	1.38	1.16	1.06	.94	25.33
1915	.88	.95	.82	1.51	2.44	1.90	3.07	1.79	.96	3.37	2.40	1.16	21.25
1916	1.30	1.32	1.76	1.70	2.03	1.98	5.06	4.03	5.14	2.60	1.44	1.24	29.60
1917	1.28	1.31	2.18	1.19	.87	2.62	4.98	3.88	5.40	1.67	1.10	1.09	27.57
1918	1.70	1.46	.84	.71	.85	2.03	4.73	2.48	1.40	1.08	1.14	1.90	20.32
1919	2.05	1.92	1.92	1.66	.87	4.03	3.80	4.56	1.59	.95	.81	1.32	25.48
1920	1.86	3.15	2.17	1.07	.86	3.52	6.35	5.34	1.77	1.15	1.10	1.29	31.61
1921	1.94	1.67	4.07	2.10	1.27	5.92	4.50	1.94	.87	.99	.99	.75	27.01
1922	.96	1.66	2.03	1.27	1.00	3.69	7.07	4.14	5.71	2.87	1.23	1.05	32.88
1923	1.10	1.01	.93	1.29	.64	1.14	7.22	3.96	1.10	.79	.76	.68	20.62
1924	.94	1.53	2.66	2.04	1.40	1.57	5.12	4.94	1.19	.90	.80	1.99	25.08
1925	1.62	1.56	1.46	1.04	2.88	4.33	4.07	2.39	1.36	1.99	1.20	1.23	25.13
1926	2.03	2.87	2.21	1.43	1.30	1.45	4.35	4.23	1.58	1.28	.95	.87	24.53
1927	1.35	2.68	1.30	1.16	.98	5.10	2.94	2.56	1.33	1.47	1.18	1.07	20.90
1928	1.85	5.49	3.30	1.73	1.49	1.90	5.18	4.60	2.49	1.74	1.69	1.27	32.73
1929	1.15	1.26	1.14	1.33	.90	3.15	5.79	5.52	1.51	1.04	.84	.80	24.43
1930	.93	1.05	.93	1.43	1.31	2.73	3.69	2.16	2.23	1.05	1.30	.81	20.26
1931	.74	1.12	.96	.62	.55	1.16	3.67	2.66	2.40	1.30	.83	.95	16.96
1932	1.05	1.21	1.37	2.25	1.49	1.13	6.43	2.49	.89	1.24	1.18	1.29	22.02
1933	2.13	2.86	1.36	1.31	1.07	1.45	8.28	4.32	1.31	.70	.90	.74	26.49
1934	1.08	.94	1.07	1.06	.70	1.65	7.93	3.25	1.04	.73	.70	1.15	21.30
1935	1.14	1.61	1.84	2.39	1.64	2.55	4.27	3.07	2.53	1.39	.86	1.06	25.44
1936	.82	1.36	1.18	1.54	1.21	11.99	6.69	3.38	1.15	.95	.83	.87	31.97
1937	1.91	1.67	2.61	2.84	2.55	1.79	5.37	7.57	2.72	1.57	1.03	.82	32.45
1938	1.66	2.32	2.27	2.34	1.99	3.32	4.36	2.11	1.16	1.24	1.20	5.04	29.01
1939	1.95	1.70	4.18	1.86	1.42	1.78	6.21	5.05	1.36	.89	.90	.65	27.95
1940	.85	1.17	1.12	.62	.54	.70	5.46	6.80	2.92	1.10	.82	1.39	23.49
1941	.84	2.26	1.46	1.49	1.59	1.38	3.22	1.27	.79	1.38	.75	.60	17.01
1942	.90	1.13	1.02	1.10	.55	2.13	5.20	2.37	2.14	.81	.72	.75	16.82
1943	.93	1.74	1.23	.82	1.01	2.19	3.75	6.04	1.97	1.22	2.24	1.29	24.43
1944	1.74	3.32	1.48	1.00	.80	1.26	4.56	3.98	2.30	1.44	.71	.93	23.52
1945	1.21	1.02	1.28	1.91	1.64	4.70	4.45	5.21	3.57	1.93	.96	1.09	28.97
1946	2.21	2.07	2.62	1.70	1.67	4.98	2.87	3.58	2.19	1.01	1.60	1.28	27.78
1947	2.09	1.84	1.74	1.59	2.01	2.92	4.76	4.99	3.72	1.62	1.03	.87	29.18
1948	.42	.75	.58	.65	.65	2.99	3.79	4.35	2.01	.92	.90	.57	18.49
1949	.56	1.60	1.17	2.79	1.26	2.66	3.43	2.11	.95	.65	.68	.87	18.73
1950	.85	1.37	1.69	1.93	1.33	1.74	5.63	2.57	1.85	.66	.58	.71	20.91

\* Revised.

## Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1903	124	-	-	-	-	-	-	-	-
1904	124	#21,200	May 1, 1904*	-	-	-	-	-	-
1905	124, 165	#19,900	Mar. 30, 1905*	-	-	-	-	-	-
1906	165, 201	#27,100	Apr. 16, 1906*	950	2,860	1.90	25.76	2,750	24.77
1907	201, 241	#17,500	May 1, 1907*	800	2,380	1.58	21.41	3,070	27.67
1908	241	#22,500	Nov. 3, 1907*	732	3,390	2.25	30.62	2,550	23.00
1909	241, 261	#30,000	Apr. 15, 1909*	750	2,500	1.66	22.55	#2,570	23.14
1910	261, 281	Not Determined	-	-	2,420	1.61	21.76	*2,410	*21.72

\* Revised.

† Corrected.

\* Not previously published.

Yearly discharge, in cubic feet per second, of Merrimack River at Franklin Junction, N.H.--Continued

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1911	281, 301	*14,200	May 2, 1911*	750	*1,990	*1.32	*17.96	2,350	21.18
1912	301, 321	*19,700	Apr. 8, 1912*	900	*2,930	*1.94	*26.48	*3,050	*27.57
1913	321, 351	*29,600	Mar. 28, 1913*	850	*2,904	*1.93	*26.16	*2,682	*24.16
1914	401	32,300	Apr. 21, 1914	850	2,810	1.86	25.33	2,540	22.90
1915	401	*30,700	Feb. 26, 1915*	-	2,360	1.57	21.25	2,550	22.98
1916	431, 1231	*22,700	May 18, 1916	1,330	3,280	2.18	29.60	3,320	29.99
1917	451, 1231	*24,500	June 18, 1917	1,080	3,060	2.03	27.57	2,970	26.80
1918	471	18,000	Oct. 31, 1917	-	2,260	1.50	20.32	2,470	22.21
1919	501, 1231	*28,300	May 23, 1919	-	*2,830	*1.88	25.48	2,970	26.75
1920	501	27,800	Apr. 14, 1920	800	3,500	2.32	31.61	3,560	32.13
1921	521	22,300	Dec. 15, 1920	830	3,000	1.99	27.01	2,660	23.98
1922	541, 1231	*31,100	Apr. 12, 1922	900	3,650	2.42	32.88	3,470	31.27
1923	561, 841	43,700	Apr. 30, 1923	630	2,290	1.52	20.82	2,520	22.71
1924	581	19,300	Sept. 11, 1924	720	2,780	1.84	25.08	2,720	24.59
1925	601	37,400	Feb. 13, 1925	840	2,790	1.85	25.13	3,060	27.60
1926	621	20,600	Apr. 26, 1926	875	2,720	1.80	24.53	2,530	22.75
1927	641	12,200	Nov. 17, 1926	974	2,320	1.54	20.90	2,910	26.21
1928	661	67,000	Nov. 5, 1927	680	3,620	2.40	32.73	2,840	25.64
1929	681	27,300	May 4, 1929	695	2,710	1.60	24.43	2,640	23.79
1930	696	23,300	Apr. 8, 1930	785	2,180	1.45	20.26	2,170	19.53
1931	711	18,900	June 10, 1931	720	1,880	1.25	16.96	1,970	17.77
1932	726	27,300	Apr. 13, 1932	785	2,440	1.62	22.02	2,740	24.80
1933	741	30,700	Apr. 19, 1933	460	2,940	1.95	26.49	2,571	23.17
1934	756	29,400	Apr. 13, 1934	420	2,367	1.57	21.30	2,556	23.00
1935	761	24,000	Jan. 11, 1935	804	2,826	1.88	25.44	2,666	24.01
1936	801	83,000	Mar. 19, 1936	616	3,537	2.35	31.97	3,651	34.80
1937	821	22,500	May 15, 1937	570	3,603	2.39	32.45	3,610	32.51
1938	851	59,200	Sept. 22, 1938	456	3,223	2.14	29.01	3,396	30.59
1939	871	26,800	Dec. 7, 1938	290	3,103	2.08	27.95	2,583	23.26
1940	891	31,400	May 3, 1940	398	2,602	1.73	23.49	2,760	24.91
1941	921	11,700	Nov. 15, 1940	466	1,889	1.25	17.01	1,721	15.50
1942	951	18,000	June 16, 1942	500	2,089	1.39	18.82	2,183	19.67
1943	971	16,000	May 13, 1943	711	2,712	1.80	24.43	3,005	27.07
1944	1001	17,000	Nov. 9, 1943	670	2,604	1.73	23.52	2,269	20.49
1945	1031	17,400	Mar. 30, 1945	847	3,217	2.13	28.97	3,594	32.36
1946	1061	18,000	Dec. 8, 1945	736	3,085	2.05	27.78	2,948	26.55
1947	1081	16,800	Apr. 13, 1947	372	3,241	2.15	29.18	2,806	25.26
1948	1111	17,600	Apr. 2, 1948	237	2,046	1.36	18.49	2,220	20.07
1949	1141	17,500	Jan. 1, 1949	225	2,079	1.38	18.73	2,144	19.31
1950	1171	20,200	Apr. 21, 1950	328	2,320	1.54	20.91	-	-

\* Revised.

† Corrected.

‡ Not previously published; estimated on basis of records for nearby stations.

## 135. Contoocook River at Peterboro, N.H.

Location.--Lat 42°51'45", long. 71°57'35", on left bank 1,100 ft downstream from mill dam, 1 mile south of Peterboro, Hillsboro County, and  $1\frac{1}{2}$  miles upstream from Nubanusit Brook.

Drainage area.--68.1 sq mi.

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

Average discharge.--5 years (1945-50), 103 cfs.

Extremes.--1945-50: Maximum discharge, 1,700 cfs Mar. 22, 1948 (gage height, 5.22 ft); minimum daily, 1.2 cfs Oct. 18, 19, 1947.

Flood in September 1938 reached a stage of about 15 ft, from information by local residents.

Remarks.--Flow regulated by mill and reservoirs above station.

## Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1945	-	-	-	-	-	-	-	-	-	-	70.3	52.4	-
1946	48.3	86.5	112	134	101	315	140	202	150	61.6	65.8	37.9	122
1947	69.6	39.3	35.9	55.2	119	188	360	174	111	42.6	26.6	22.9	103
1948	10.2	70.9	46.0	40.8	61.7	344	207	218	215	102	18.2	15.9	112
1949	19.8	54.8	53.3	188	143	194	176	112	48.5	31.1	16.2	32.0	88.8
1950	25.0	29.3	65.5	113	96.5	167	282	111	87.5	15.9	30.1	23.4	86.9

Monthly and yearly runoff, in inches, of Contooscook River at Peterboro, N.H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1945	-	-	-	-	-	-	-	-	-	-	1.19	0.86	-
1946	0.82	1.42	1.90	2.27	1.55	5.34	2.29	3.42	2.46	1.04	1.11	.62	24.24
1947	1.18	1.64	.61	.93	1.82	3.18	5.91	2.95	1.82	.72	.45	.37	20.58
1948	.17	1.16	.78	.69	.98	5.83	3.39	3.69	3.52	1.73	.27	.26	22.47
1949	.34	.90	.90	3.19	2.19	3.28	2.89	1.90	.80	.53	.27	.52	17.71
1950	.42	.48	1.11	1.92	1.48	2.83	4.62	1.88	1.43	.27	.51	.38	17.33

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1945	1051	-	-	-	-	-	-	-	-	-
1946	1051	1,090	Mar. 9, 1946	5.1	122	1.79	24.24	113	22.53	
1947	1081	750	Apr. 7, 1947	1.8	103	1.51	20.58	102	20.26	
1948	1111	1,700	Mar. 22, 1948	1.2	112	1.64	22.47	113	22.50	
1949	1141	1,080	Jan. 6, 1949	2.5	88.8	1.30	17.71	88.2	17.58	
1950	1171	740	Apr. 5, 1950	1.3	86.9	1.28	17.33	-	-	

## 136. MacDowell Reservoir at West Peterboro, N.H.

Location.--Lat 42°53'35", long. 71°59'15", on Nubanusit Brook 2 miles northwest of Peterboro, Hillsboro County.

Drainage area.--44 sq mi.

Gage.--Staff gage. Datum of gage is at mean sea level.

Remarks.--Reservoir completed in 1950, is used for flood control, and has a usable capacity of 558,000,000 cu ft.

Cooperation.--Records furnished by Corps of Engineers.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1950	-	-	-	-	-	24.1	18.7	16.7	2.7	0.8	6.8	6.4

## 137. Nubanusit Brook near Peterboro, N.H.

Location.--Lat 42°53'10", long. 71°58'25", on left bank  $1\frac{1}{2}$  miles downstream from MacDowell Reservoir, 1.3 miles northwest of Peterboro, Hillsboro County, and  $1\frac{1}{2}$  miles upstream from mouth.

Drainage area.--46.9 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 790 ft (from topographic map). Prior to Sept. 30, 1931, at site 550 ft downstream at different datum.

Average discharge.--16 years (1920-31, 1945-50), 78.9 cfs.

Extremes.--1920-31, 1945-50: Maximum discharge, 1,130 cfs Apr. 11, 1931 (gage height, 5.59 ft, site and datum then in use), from rating curve extended above 380 cfs; minimum daily, 0.5 cfs Aug. 1, 1926.

Remarks.--Flow regulated by mills and by Nubanusit Lake and other reservoirs above station since beginning of record and by MacDowell Reservoir (see above) since March 1950.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1921	*64.1	*54.3	219	88.8	61.9	285	177	156	34.8	67.6	39.1	24.5	*107
1922	27.2	33.7	84.9	51.8	55.0	238	317	127	198	84.5	41.1	33.3	198
1923	30.1	34.3	26.9	97.1	39.4	188	303	150	30.6	17.1	30.5	16.4	80.5
1924	36.3	112	183	92.6	94.7	71.4	317	152	30.7	19.7	28.8	34.0	97.4
1925	28.9	26.0	48.9	41.5	97.1	209	129	62.6	29.7	20.4	24.6	33.0	62.4
1926	29.1	32.1	84.5	43.1	65.1	154	257	70.1	37.7	30.4	29.1	*21.3	71.0
1927	26.0	79.4	55.4	49.5	39.3	220	76.2	78.0	56.1	30.3	33.1	32.9	64.9
1928	40.7	204	164	116	72.1	84.5	159	166	121	70.4	127	134	121
1929	68.5	40.5	48.7	86.8	74.1	212	251	202	34.8	24.4	21.6	18.9	86.6
1930	22.6	20.9	24.9	39.6	72.1	110	70.9	50.9	46.0	19.5	20.2	23.5	43.2

\* Corrected.

\* Not previously published; estimated on basis of records for nearby stations.

Monthly and yearly mean discharge, in cubic feet per second, of Nubanusit Brook near Peterboro, N.H.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	28.0	23.9	30.0	30.4	30.8	58.9	292	109	144	17.2	23.4	16.6	66.7
1945	-	-	-	-	-	-	-	-	-	-	43.5	39.1	-
1946	46.0	55.6	76.3	94.3	69.7	205	77.7	133	85.4	38.8	42.5	34.6	80.2
1947	41.0	34.0	24.3	37.0	86.9	133	240	113	71.6	28.2	22.6	21.9	70.8
1948	23.4	47.6	36.6	33.8	45.9	234	125	156	134	75.8	34.2	27.9	81.3
1949	19.1	36.5	32.3	125	94.8	120	97.9	71.0	32.5	21.3	25.3	26.2	58.1
1950	30.2	29.8	38.5	92.1	72.4	102	207	63.0	66.7	19.3	17.8	27.6	63.6

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1921	*1.57	*1.29	5.39	2.18	1.37	7.02	4.21	3.84	0.83	1.66	0.96	0.58	*30.90
1922	.67	.80	2.09	1.27	1.22	5.86	7.55	3.11	4.72	2.08	1.01	.79	31.17
1923	.74	.81	.86	2.39	.87	4.63	7.20	3.70	.73	.42	.75	.39	23.29
1924	.89	2.66	4.50	2.28	2.18	1.75	7.54	3.73	.73	.48	.71	.81	28.26
1925	.71	.62	1.20	1.02	2.16	5.14	3.06	1.54	.71	.50	.61	.78	18.05
1926	.72	.76	2.08	1.06	1.45	3.78	6.11	1.72	.90	.75	.71	.51	20.55
1927	.64	1.89	1.56	1.22	.87	5.40	1.81	1.92	1.34	.75	.81	.78	18.79
1928	1.00	4.84	4.02	2.86	1.66	2.08	3.78	4.07	2.87	1.73	3.12	3.20	35.23
1929	1.68	.96	1.20	2.13	.54	5.22	5.98	4.96	.83	.60	.53	.45	25.08
1930	.56	.50	.61	.97	1.60	2.69	1.69	1.25	1.10	.48	.50	.56	12.51
1931	.69	.57	.74	.75	.68	1.45	6.94	2.68	3.41	.42	.58	.39	19.30
1945	-	-	-	-	-	-	-	-	-	-	1.07	.93	-
1946	1.13	1.32	1.88	2.32	1.55	5.04	1.85	3.26	2.03	.95	1.04	.82	23.19
1947	1.01	.81	.60	.91	1.93	3.27	5.71	2.77	1.70	.69	.55	.52	20.47
1948	.57	1.13	.90	.83	1.06	5.74	2.98	3.83	3.18	1.86	.84	.66	23.58
1949	.47	.87	.79	3.07	2.10	2.95	2.33	1.75	.77	.52	.57	.62	16.81
1950	.74	.71	.95	2.26	1.61	2.51	4.93	1.55	1.59	.47	.44	.66	18.42

\* Not previously published; estimated on basis of records for nearby stations.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1921	521, 561	1,050	Mar. 10, 1921	-	*107	*2.28	*30.90	90.6	26.21
1922	541	832	June 22, 1922	4.0	108	2.30	31.17	103	29.82
1923	561	880	Apr. 6, 1923	1.3	80.5	1.72	23.29	101	29.13
1924	581	990	Apr. 8, 1924	2.1	97.4	2.08	28.26	78.4	22.74
1925	601	550	Mar. 31, 1925	1.1	62.4	1.33	18.05	65.9	19.08
1926	621	600	Apr. 26, 1926	.5	71.0	1.51	20.55	72.1	20.88
1927	641	734	Mar. 17, 1927	1.0	64.9	1.38	18.79	85.6	24.76
1928	661	1,010	Nov. 4, 1927	3.0	121	2.58	35.23	101	29.21
1929	681	655	Mar. 17, 1929	1.0	86.6	1.85	25.08	79.1	22.91
1930	696	*300	Feb. 22, 1930	1.5	43.2	.921	12.51	44.3	12.84
1931	711	1,130	Apr. 11, 1931	.9	66.7	1.42	19.30	-	-
1945	1051	-	-	-	-	-	-	-	-
1946	1051	657	Mar. 9, 1946	3.0	80.2	1.71	23.19	73.5	21.28
1947	1081	509	Apr. 7, 1947	3.3	70.8	1.51	20.47	71.4	20.65
1948	1111	992	Mar. 23, 1948	3.2	81.3	1.73	23.58	79.7	23.11
1949	1141	450	Jan. 7, 1949	5.0	58.1	1.24	18.81	59.1	17.08
1950	1171	475	Apr. 6, 1950	2.4	63.6	1.36	18.42	-	-

\* Not previously published.

## 138. Contoocook River near Elmwood, N. H.

Location.--Lat 42°57'20", long. 71°56'10", near center of span on upstream side of covered highway bridge 1,000 ft downstream from Kimball Brook and 1½ miles south of Elmwood, Hillsboro County.

Drainage area.--168 sq mi.

Gage.--Chain gage. Altitude of gage is 675 ft (from topographic map).

Average discharge.--7 years (1917-24), 296 cfs.

Extremes.--1917-24: Maximum discharge, 4,780 cfs Apr. 8, 1924 (gage height, 11.5 ft, from floodmarks), from rating curve extended above 2,400 cfs on basis of computation of peak flow over dam reduced for difference in drainage area; maximum gage height, 12.2 ft Mar. 10, 1921 (from graph based on gage readings); minimum discharge observed, 3 cfs July 26, 1924.

Remarks.--Some regulation by mills and by Nubanusit Lake and other reservoirs above station.

## MERRIMACK RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Contoocook River near Elmwood, N.H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1918	170	196	93.7	103	267	591	750	273	148	76.4	58.9	173	241
1919	102	137	31	293	136	696	396	634	138	73.3	66.3	96.5	260
1920	72.0	199	240	63.5	60.0	934	1,220	424	238	109	166	98.6	319
1921	198	241	908	281	190	936	553	471	108	199	104	62.8	357
1922	75.4	124	234	123	152	838	931	399	593	297	135	111	335
1923	94.4	104	81.2	290	185	607	1,040	360	91.8	69.3	66.0	56.8	254
1924	89.7	302	498	472	194	349	1,150	422	61.9	33.6	40.4	67.7	306

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1918	1.16	1.30	0.64	0.71	1.66	4.06	4.98	1.87	0.98	0.52	0.40	1.15	19.43
1919	.70	1.04	2.18	2.01	.84	4.77	2.63	4.35	.92	.50	.46	.64	21.04
1920	.49	1.32	1.65	.44	.38	6.41	8.10	2.90	1.58	.75	1.14	.65	25.81
1921	1.36	1.60	6.24	1.92	1.16	6.42	3.67	3.24	.72	1.36	.71	.42	28.84
1922	.52	.82	1.60	.84	.94	5.75	6.18	2.74	3.94	2.04	.93	.74	27.04
1923	.65	.69	.56	1.99	1.14	4.16	6.91	2.47	.61	.48	.45	.38	20.49
1924	.62	2.01	3.41	3.24	1.24	2.40	7.64	2.89	.41	.23	.28	.45	24.82

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1918	471	*2,500	Apr. 2, 1918	26	241	1.43	19.43	251	20.25	
1919	501	*2,890	May 23, 1919	26	260	1.55	21.04	255	20.58	
1920	501	*3,400	Mar. 28, 1920	-	319	1.90	25.81	390	31.55	
1921	521	*4,240	Mar. 10, 1921	30	357	2.12	28.84	279	22.58	
1922	541	*2,660	June 22, 1922	30	335	1.99	27.04	322	26.00	
1923	561	*3,220	Apr. 6, 1923	19	254	1.51	20.49	305	24.63	
1924	581	4,720	Apr. 8, 1924	4	306	1.82	-	-	-	

\* Revised.

## 139. 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 north-west of Antrim, Hillsboro County, and 6 miles upstream from mouth.

Drainage area.--54.8 sq mi.

Gage.--Water-stage recorder. Datum of gage is 882.38 ft above mean sea level (levels by Corps of Engineers). Prior to Jan. 7, 1941, float tape at same site and datum. Aug. 30, 1924, to Nov. 13, 1932, staff gage at same site and datum.

Average discharge.--26 years (1924-50), 96.0 cfs.

Extremes.--1924-50: Maximum discharge, 5,000 cfs (revised) 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.--Flow regulated by Highland Lake and several ponds above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	-	-	-	-	-	-	-	-	-	-	-	-	-
1925	15.6	23.9	17.1	11.5	207	255	207	66.7	26.4	23.5	12.5	12.1	72.0
1926	17.0	76.8	133	61.3	56.1	71.3	*318	154	32.1	31.0	28.8	22.4	*83.4
1927	30.3	115	57.9	48.7	45.6	198	151	113	49.1	25.8	28.8	21.2	73.6
1928	49.6	*276	190	116	81.2	109	287	252	178	77.7	101	92.1	*149
1929	48.6	35.4	61.4	85.2	52.9	261	354	234	33.9	16.1	10.8	7.00	100
1930	26.7	22.5	12.7	74.8	79.4	193	130	79.8	56.5	18.6	17.7	10.2	60.1
1931	11.0	38.4	40.3	21.3	22.5	53.5	424	135	195	28.9	9.81	11.1	82.1
1932	12.7	14.7	56.7	112	78.0	49.5	417	94.5	12.1	13.7	7.84	7.41	71.7
1933	87.5	197	57.9	71.0	68.9	78.7	*567	150	20.2	14.8	50.6	92.1	*121
1934	108	74.9	77.4	59.1	36.9	108	*500	96.2	68.6	14.0	6.74	60.0	*101
1935	62.0	97.1	125	*169	66.8	175	229	97.8	128	103	9.74	14.5	*107
1936	8.10	42.9	51.1	70.2	35.5	*735	261	45.8	8.77	5.99	4.11	35.6	*109
1937	15.2	26.4	182	201	114	59.0	325	346	130	59.0	46.6	33.5	128
1938	38.0	203	139	120	141	142	190	128	38.9	109	93.8	*574	*142
1939	76.3	83.1	214	71.9	63.3	95.5	*402	135	32.3	17.2	12.2	10.4	*101
1940	45.4	43.0	55.7	14.3	7.24	10.3	*491	*378	*159	42.4	7.21	12.8	*105
1941	25.1	84.4	73.0	76.8	151	66.4	185	55.4	22.3	11.6	7.10	4.59	62.7
1942	3.83	63.3	26.3	41.5	30.1	197	335	80.8	71.6	33.6	16.9	30.0	77.4
1943	33.5	70.3	94.7	50.2	53.0	154	257	235	46.1	13.3	24.4	25.3	88.2
1944	23.3	133	39.0	27.6	37.6	81.9	366	87.1	*66	36.0	6.61	91.3	*90.5
1945	45.4	54.3	108	91.5	120	356	253	312	191	96.2	23.2	16.1	139
1946	30.0	107	126	110	70.8	257	89.3	190	97.5	7.95	13.1	10.4	92.8
1947	48.3	53.5	42.3	37.0	127	183	373	148	90.0	23.8	5.73	31.0	96.3
1948	21.4	39.7	24.9	52.8	46.5	309	229	199	112	40.5	4.46	0.73	90.2
1949	5.62	78.1	52.3	212	99.2	143	159	78.2	18.2	4.98	4.33	25.7	73.1
1950	43.6	14.4	47.7	122	94.9	91.2	344	77.4	77.6	4.52	1.98	42.1	79.5

\* Revised.



Monthly and yearly runoff, in inches, of North Branch Contoocook River near Antrim, N.H.													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	-	-	-	-	-	-	-	-	-	-	-	0.25	-
1925	0.33	0.49	0.36	0.24	3.93	5.37	4.21	1.40	0.54	0.49	0.26	.19	17.81
1926	.36	1.56	2.79	1.29	1.07	1.50	*6.48	3.25	.65	.65	.61	.46	*20.67
1927	.64	2.34	1.22	1.03	.87	4.12	3.08	2.37	1.00	.54	.61	.43	18.25
1928	1.04	*5.61	3.99	2.45	1.60	2.28	5.44	5.30	3.62	1.64	2.12	1.98	*36.97
1929	1.02	.72	1.29	1.79	1.01	5.49	7.20	4.92	.69	.34	.23	.14	24.84
1930	.56	.46	.27	1.57	1.51	4.06	2.65	1.69	1.15	.39	.37	.21	14.88
1931	.23	.78	.85	.45	.43	1.13	8.63	2.84	3.98	.61	.21	.23	20.37
1932	.27	.30	1.19	2.37	1.54	1.04	8.48	1.78	.25	.29	.16	.15	17.82
1933	1.84	4.00	1.22	1.49	1.31	1.66	*11.54	3.15	.41	.31	1.06	1.88	*29.87
1934	2.27	1.53	1.63	1.24	.70	2.27	*10.18	2.03	1.40	.29	.14	1.22	*24.90
1935	1.30	1.98	2.63	*3.55	1.27	3.68	4.66	2.05	2.61	2.17	.21	.30	*26.41
1936	.17	.87	1.07	1.48	.70	*15.47	5.31	.96	.18	.13	.09	.73	*27.16
1937	.32	.54	3.93	4.23	2.17	1.24	6.62	7.29	2.64	1.24	.98	.68	31.77
1938	.80	4.13	2.93	2.52	2.68	2.99	3.87	2.70	.79	2.29	1.97	*7.61	*35.28
1939	1.60	1.70	4.51	1.51	1.21	2.01	*8.18	2.84	.66	.36	.26	.21	*25.05
1940	.95	.88	1.17	.30	.14	.22	*9.99	*7.96	*3.24	.89	.15	.26	*26.15
1941	.53	1.72	1.54	1.62	2.87	1.40	3.76	1.17	.45	.24	.15	.09	15.54
1942	.08	1.29	.55	.87	.57	4.15	6.82	1.70	1.46	.71	.36	.61	19.17
1943	.70	1.43	1.99	1.06	1.01	3.24	5.23	4.94	.94	.28	.51	.52	21.85
1944	.49	2.70	.82	.58	.74	1.72	7.45	1.83	*5.58	.76	1.4	1.86	22.47
1945	.96	1.11	2.27	1.93	2.28	7.48	5.15	6.56	3.99	2.02	.49	.33	34.47
1946	.63	2.18	2.66	2.31	1.34	5.41	1.82	3.99	1.98	.17	.27	.21	22.97
1947	1.02	1.09	.89	.78	2.42	3.85	7.60	3.11	1.83	.50	.12	.63	23.84
1948	.45	.81	.52	1.11	.91	6.51	4.67	4.18	2.28	.85	.09	.01	22.39
1949	.12	1.59	1.10	4.45	1.89	3.00	3.24	1.64	.37	.10	.09	.52	18.11
1950	.92	.29	1.00	2.56	1.80	1.92	7.01	1.63	1.58	.10	.04	.86	19.71

\* Revised.

Yearly discharge, in cubic feet per second									
Water year ending Sept. 30									
Year	W.S.P. no.	Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Calendar year	
		Discharge	Date					Mean	Runoff in inches
1924	601	-	-	-	-	-	-	-	-
1925	601,1231	*1,170	Feb. 14, 1925	4.0	72.0	1.31	17.81	86.2	21.34
1926	621,1231	*1,340	Apr. 26, 1926	4.9	*83.4	*1.52	*20.67	81.3	20.16
1927	641,1231	*615	Mar. 20, 1927*	12	73.6	1.34	18.25	99.6	24.69
1928	661,1231	*1,750	Nov. 5, 1927	11	*149	*2.72	*36.97	118	29.36
1929	681,1231	*717	Apr. 27, 1929*	4.5	100	1.82	24.84	93.2	23.10
1930	696,1231	*386	Mar. 26, 1930*	4.5	60.1	1.10	14.88	62.4	15.45
1931	711	1,060	Apr. 12, 1931	4.0	82.1	1.50	20.37	81.7	20.27
1932	726	908	Apr. 12, 1932	2.9	133	1.33	17.82	93.1	23.12
1933	741,1231	*1,850	Apr. 19, 1933	5.7	*121	*2.21	*29.87	114	29.24
1934	756,1231	*1,740	Apr. 13, 1934*	4.3	*101	*1.84	*24.90	*103	*25.38
1935	781,1231	*940	Jan. 11, 1935	5.5	*107	*1.95	*26.41	*91.4	*22.61
1936	(a)	*5,000	Mar. 19, 1936	1.8	*109	*1.99	*27.16	*120	*29.74
1937	821	970	May 16, 1937	3.1	128	2.34	31.77	141	34.94
1938	851,1231	*3,640	Sept. 22, 1938	4.8	*142	*2.59	*35.28	*142	*35.23
1939	871,1231	*985	Apr. 22, 1939*	2.1	*101	*1.84	*25.05	*81.6	*20.24
1940	891,1231	*1,320	May 4, 1940	3.0	*105	*1.92	*26.15	*108	*26.94
1941	921,1231	*440	Feb. 11, 1941*	1.6	62.7	1.14	15.54	55.2	15.67
1942	951	740	Apr. 9, 1942	2.0	77.4	1.41	19.17	86.3	21.37
1943	971	496	Mar. 29, 1943	3.1	88.2	1.61	21.85	87.7	21.74
1944	1001,1231	*1,130	June 26, 1944	2.4	*90.5	*1.65	*22.47	*91.7	*22.80
1945	1031	860	Mar. 22, 1945	6.1	139	2.54	34.47	144	35.60
1946	1051,1231	*550	Mar. 9, 1946*	1.6	92.8	1.69	22.97	82.8	20.50
1947	1081	960	Apr. 13, 1947	3.1	96.3	1.76	23.84	91.4	22.62
1948	1111	1,280	Mar. 23, 1948	.3	90.2	1.65	22.39	94.3	23.42
1949	1141	542	Jan. 7, 1949	.7	73.1	1.33	18.11	70.7	17.51
1950	1171	832	Apr. 6, 1950	.5	79.5	1.45	19.71	-	-

\* Revised.

\* Not previously published; estimated on basis of hydrographic comparisons.

a In W.S.P. 801, 851, 1231.

## 140. 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  $\frac{1}{2}$  miles west of Hillsboro, Hillsboro County.

Drainage area.--55.4 sq mi.

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

Average discharge.--5 years (1945-50), 81.0 cfs.

Extremes.--1945-50: Maximum discharge, 1,880 cfs Mar. 22, 1948; maximum gage height, 6.58 ft Jan. 8, 1946 (ice jam); minimum discharge, 1.1 cfs Oct. 3, 1948.

## MERRIMACK RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Beards Brook near Hillsboro, N.H.													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	#27.0	#117	139	111	59.7	293	106	184	72.5	12.5	18.9	11.0	#96.5
1947	26.1	27.4	26.0	55.5	114	189	378	158	93.4	37.2	8.12	6.77	92.7
1948	2.78	48.9	24.1	17.2	37.4	331	191	218	*103	44.9	8.88	1.78	#85.9
1949	3.62	38.5	40.6	177	104	152	133	79.1	14.8	10.2	6.07	11.2	67.9
1950	8.96	22.7	33.5	68.9	52.0	137	319	71.1	56.4	6.30	3.54	14.5	65.8

\* Revised.

# Not previously published; estimated on basis of records for nearby stations.

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	#0.56	#2.35	2.89	2.32	1.12	6.10	2.13	3.83	1.46	0.26	0.39	0.22	#23.63
1947	.54	.55	.54	1.15	2.15	3.93	7.61	3.29	1.88	.77	.17	.14	22.72
1948	.06	.94	.50	.36	.73	6.89	3.86	4.53	*2.08	.93	.18	.04	*21.10
1949	.08	.78	.84	3.68	1.95	3.16	2.67	1.85	.30	.21	.13	.22	15.67
1950	.19	.46	.70	1.43	.98	2.85	6.42	1.48	1.14	.13	.07	.29	16.14

\* Revised.

# Not previously published; estimated on basis of records for nearby stations.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1946	1051	954	Mar. 10, 1946	#3.0	#98.5	#1.74	#23.63	79.5	19.46
1947	1081	1,140	Apr. 12, 1947	3.4	92.7	1.67	22.72	92.2	22.59
1948	1111, 1231	1,880	Mar. 22, 1948	1.2	#85.9	*1.55	*21.10	*86.6	*21.30
1949	1141	908	Jan. 1, 1949	1.2	63.9	1.15	15.67	62.5	15.32
1950	1171	1,100	Apr. 5, 1950	1.4	65.8	1.19	16.14	-	-

\* Revised.

# Not previously published.

## 141. 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.

Gage.--Water-stage recorder. Altitude of gage is 475 ft (from topographic map).

Average discharge.--11 years (1939-50), 563 cfs.

Extremes.--1939-50: 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), by computation of flow over dam 0.8 mile above station.

Remarks.--Flow regulated by power plants and by Nubanusit Lake, MacDowell Reservoir (see p. 148) since March 1950, Highland Lake, Jackson Reservoir, and other reservoirs above station.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	129	288	270	151	147	172	3,384	1,882	1,026	311	159	162	670
1941	98.1	342	467	546	717	429	917	394	263	141	85.4	83.7	371
1942	75.7	169	189	288	214	1,508	1,532	411	403	262	207	201	456
1943	211	500	634	496	524	1,243	1,441	1,477	444	168	218	128	625
1944	176	684	394	215	177	642	2,231	540	1,274	278	201	533	607
1945	263	326	635	538	357	2,180	1,451	1,962	1,094	600	279	243	833
1946	213	470	673	682	490	1,671	647	1,062	674	192	271	175	604
1947	241	205	201	285	651	1,052	2,000	915	584	232	170	156	555
1948	96.5	263	215	196	305	1,854	1,228	1,286	908	410	183	103	568
1949	95.1	227	223	1,006	655	940	853	509	215	109	125	112	421
1950	149	176	259	556	568	847	1,713	511	463	83.6	98.7	164	465

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	0.40	0.87	0.85	0.47	0.43	0.54	10.26	5.90	3.11	0.97	0.50	0.49	24.79
1941	.31	1.04	1.46	1.71	2.03	1.35	2.78	1.24	.80	.44	.27	.25	13.68
1942	.24	.51	.59	.90	.61	4.72	4.64	1.29	1.22	.82	.65	.61	16.80
1943	.68	1.52	1.99	1.55	1.46	3.89	4.37	4.63	1.35	.53	.68	.39	23.04
1944	.55	2.07	1.20	.67	.52	2.01	6.76	1.89	3.86	.87	.83	1.62	22.45
1945	.89	.99	1.99	1.68	1.01	6.83	4.40	6.15	3.32	1.88	.87	.74	30.75
1946	.67	1.43	2.11	2.14	1.39	5.23	1.96	3.33	2.04	.60	.85	.53	22.28
1947	.75	.62	.63	.89	1.84	3.30	6.06	2.87	1.77	.73	.53	.47	20.46
1948	.30	.60	.67	.61	.89	5.81	3.73	4.03	2.75	1.28	.57	.31	21.74
1949	.30	.69	.70	3.15	1.85	2.95	2.59	1.60	.65	.34	.39	.34	15.55
1950	.47	.53	.81	1.74	1.61	2.65	5.19	1.60	1.46	.26	.31	.50	17.13

Yearly discharge, in cubic feet per second, of Contoocook River near Henniker, N.H.

Yearly discharge, in cubic feet per second, or Centocook river near Helmker, N.H.									
Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	891	8,020	Apr. 13, 1940	50	670	1.82	24.79	689	25.48
1941	921	1,910	Feb. 10, 1941	19	371	1.01	13.68	331	12.21
1942	951	3,670	Mar. 11, 1942	29	456	1.24	16.80	532	19.65
1943	971	2,780	Mar. 27, 1943	57	625	1.70	23.04	615	22.69
1944	1001	8,710	June 26, 1944	62	607	1.65	22.45	608	22.50
1945	1031	5,040	Mar. 22, 1945	87	833	2.26	30.75	842	31.09
1946	1051	4,080	Mar. 10, 1946	57	604	1.64	22.28	544	20.07
1947	1081	3,950	Apr. 8, 1947	51	555	1.51	20.46	549	20.23
1948	1111	7,590	Mar. 23, 1948	29	588	1.60	21.74	586	21.66
1949	1141	3,160	Jan. 7, 1949	40	421	1.14	15.55	425	15.67
1950	1171	3,720	Apr. 5, 1950	32	465	1.26	17.13	-	-

## 142. Contoocook River at West Hopkinton, N.H.

Location.--Lat 71°44'55", long. 43°11'30", on downstream side of covered wooden bridge in West Hopkinton, Hopkinton County, 6 miles upstream from the mouth of Warner River.

Drainage area.--410 sq mi.

Gage.--Chain gage. Altitude of gage is 360 ft (from topographic map).

Remarks.--No records obtained during winter months.

Monthly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	-	-	-	-	-	-	-	366	240	-
1904	488	-	-	-	-	-	3,751	2,231	516	418	340	467	-
1905	442	-	-	-	-	-	2,711	624	442	240	357	1,043	-
1906	303	361	-	-	-	-	2,500	1,430	1,170	583	265	164	-
1907	254	429	-	660	390	900	1,680	-	-	-	-	-	-

Monthly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	-	-	-	-	-	-	-	1.03	0.65	-
1904	1.37	-	-	-	-	-	10.2	6.27	1.41	1.18	.96	1.27	-
1905	1.24	-	-	-	-	-	7.38	1.75	1.20	.67	1.00	2.83	-
1906	.85	0.98	-	-	-	-	6.81	4.02	3.18	1.64	.74	.45	-
1907	.72	1.17	-	1.86	0.99	2.54	4.57	-	-	-	-	-	-

## 143. 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, 2½ miles northwest of Contoocook, and 2.4 miles upstream from mouth.

Drainage area.--146 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 380 ft (from topographic map). Prior to Dec. 21, 1939, chain gage at bridge 60 ft upstream at same datum.

Average discharge.--11 years (1939-50), 208 cfs.

Extremes.--1939-50: Maximum discharge, 3,950 cfs June 25, 1944 (gage height, 9.64 ft), from rating curve extended above 1,900 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.--Prior to 1948, slight diurnal fluctuation at low flow caused by mill above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	45.7	126	110	44.0	40.3	60.1	1,291	659	468	126	50.5	57.1	255
1941	33.0	178	171	199	289	162	370	112	87.6	37.3	20.9	25.4	139
1942	14.3	43.2	52.2	93.5	57.9	551	640	176	178	44.8	32.9	21.7	159
1943	37.1	148	175	140	163	442	630	605	170	46.0	114	54.7	226
1944	101	342	115	54.3	58.2	198	910	266	446	142	32.7	109	230
1945	93.9	98.3	200	194	168	848	560	728	372	209	78.5	41.8	301
1946	66.2	223	371	269	166	666	298	427	191	34.7	48.1	51.0	235
1947	107	77.3	75.2	145	266	445	802	396	285	79.8	29.2	24.9	227
1948	13.1	97.5	63.5	69.2	90.8	628	463	524	290	77.7	23.8	9.26	196
1949	19.3	97.0	67.3	409	242	362	381	212	49.2	15.1	6.36	22.4	156
1950	22.9	47.1	75.6	164	133	295	653	205	121	17.7	7.56	20.3	163

## MERRIMACK RIVER BASIN

Monthly and yearly runoff, in inches, of Warner River at Davisville, N.H.													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	0.36	0.96	0.87	0.35	0.30	0.47	9.86	5.21	3.58	1.00	0.40	0.44	23.80
1941	.26	1.36	1.35	1.57	2.06	1.28	2.83	.88	.67	.29	.17	.19	12.91
1942	.11	.33	.41	.74	.41	4.35	4.89	1.39	1.36	.35	.26	.17	14.77
1943	.29	1.13	1.38	1.11	1.16	3.49	4.82	4.78	1.30	.36	.90	.26	20.98
1944	.80	2.62	.91	.43	.43	1.56	6.95	2.10	3.41	1.12	.26	.83	21.42
1945	.74	.75	1.58	1.54	1.20	6.70	4.28	5.75	2.84	1.65	.62	.32	27.97
1946	.52	1.70	2.93	2.12	1.18	5.26	2.28	3.37	1.46	.27	.38	.39	21.86
1947	.84	.59	.59	1.15	1.90	3.52	6.13	3.13	2.17	.63	.23	.19	21.07
1948	.10	.75	.50	.55	.67	4.96	3.54	4.14	2.22	.61	.19	.07	18.30
1949	.15	.74	.53	3.23	1.72	2.86	2.91	1.67	.38	.10	.05	.17	14.51
1950	.18	.36	.60	1.29	.95	2.33	6.52	1.62	.92	.14	.06	.15	15.12

Yearly discharge, in cubic feet per second									
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	891	2,810	Apr. 13, 1940	20	255	1.75	23.80	264	24.58
1941	921	1,090	Feb. 8, 1941	12	139	.952	12.91	116	10.79
1942	951	1,440	Mar. 23, 1942	7.2	159	1.09	14.77	180	16.72
1943	971	1,330	Mar. 28, 1943	17	226	1.55	20.98	242	22.51
1944	1001	3,950	June 25, 1944	14	230	1.58	21.42	216	20.16
1945	1031	2,020	Mar. 22, 1945	28	301	2.06	27.97	323	30.05
1946	1051	1,860	Dec. 8, 1945	15	235	1.61	21.86	202	18.73
1947	1081	1,680	Apr. 13, 1947	15	227	1.55	21.07	219	20.40
1948	1111	2,790	Mar. 23, 1948	6.4	196	1.34	18.30	197	18.37
1949	1141	1,250	Jan. 6, 1949	4.4	158	1.07	14.51	153	14.23
1950	1171	1,960	Apr. 6, 1950	5.6	163	1.12	15.12	-	-

## 144. Blackwater Reservoir near Webster, N.H.

Location.--Lat 43°18'55", long. 71°43'20", on Blackwater River at Swett's Mills 1 mile south of Webster, Merrimack County.

Drainage area.--128 sq mi.

Gage.--Water-stage recorder. Datum of gage is at sea level.

Remarks.--Reservoir completed in 1941, used for flood control, has a usable capacity of 2,004,000,000 cu ft.

Cooperation.--Records furnished by Corps of Engineers.

Month-end contents, in millions of cubic feet												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1943	-	-	3.4	-	5.3	11.5	52.1	4.7	-	-	-	1.7
1944	3.4	3.5	1.7	0.8	.8	8.7	15.3	1.1	3.7	0.9	0.3	.9
1945	1.3	3.9	1.7	1.3	4.3	12.1	14.9	6.1	3.5	2.6	.9	.9
1946	1.0	2.8	2.5	2.1	1.7	9.0	5.9	14.6	1.0	.8	1.0	4.1
1947	1.5	1.5	1.6	3.5	1.7	7.6	6.3	6.3	2.1	1.1	.3	.2
1948	.2	1.0	.5	.4	.7	12.5	2.8	5.9	1.4	.6	.4	.2
1949	.2	1.3	2.8	1.1	2.2	14.6	2.9	2.5	.6	.2	.2	.5
1950	.3	.7	.5	2.3	.9	58.4	4.3	1.2	.4	.2	.1	.2

Note.--Prior to September 1943, stages below 519.0 ft (2 million cu ft) were not recorded.

## 145. Blackwater River near Webster, N. H. 1/

Location.--Lat 43°17'50", long. 71°41'40", on left bank 0.2 mile west of Dingit Corner,  $2\frac{1}{2}$  miles southeast of Webster, Merrimack County, and  $6\frac{1}{2}$  miles upstream from mouth.

Drainage area.--129 sq mi. Prior to Oct. 1, 1934, 134 sq mi.

Gage.--Water-stage recorder since Oct. 1, 1934. 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.--25 years (1918-20, 1927-50), 206 cfs (adjusted to present site).

Extremes.--1918-20, 1927-50: 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 determinations and critical-depth studies; minimum, 3 cfs Sept. 17, 1941 (gage height, 1.20 ft); minimum daily, 10 cfs Aug. 14, 1950.

Remarks.--High flow regulated by Blackwater Reservoir since 1941 (see above). Some regulation at low flow by mill above station.

<sup>1/</sup> Published as "near Contoocook" prior to 1935.

Monthly and yearly mean discharge, in cubic feet per second, of Blackwater River near Webster, N.H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1918	-	-	-	-	-	-	-	-	96.8	58.3	70.4	178	-
1919	150	178	256	235	103	674	421	553	*138	52.7	39.3	60.8	*240
1920	49.2	319	216	42.9	59.1	*739	*1,020	443	*154	80.5	89.5	80.5	*274
1927	-	-	-	-	-	*526	279	185	91.9	79.1	76.3	107	-
1928	178	583	431	244	287	274	646	460	253	172	128	117	314
1929	69.5	69.5	89.5	158	106	*680	*669	434	103	49.1	38.5	42.9	*210
1930	37.6	56.8	54.9	170	200	*530	307	158	145	53.6	70.6	49.0	*152
1931	36.7	94.3	71.4	48.5	51.2	155	*676	296	361	90.7	47.8	46.9	*164
1932	46.7	80.9	168	288	175	135	*843	172	66.1	43.4	31.4	49.4	*174
1933	135	352	130	156	130	208	1,330	278	86.3	39.5	52.6	46.2	241
1934	118	91.6	107	125	87.5	241	1,099	226	92.6	50.9	40.8	114	199
1935	103	188	181	365	164	402	475	215	248	177	54.4	60.2	220
1936	41.4	94.6	113	144	85.6	1,394	594	159	57.5	51.4	30.1	33.9	234
1937	75.9	102	290	259	328	172	642	228	243	115	80.3	37.6	255
1938	65.3	305	238	245	245	372	427	725	91.2	136	96.9	710	267
1939	193	155	405	168	126	222	931	333	102	51.8	41.9	28.1	230
1940	40.3	98.7	91.2	43.7	40.3	50.1	1,008	642	360	98.6	52.9	61.8	216
1941	39.8	163	125	169	246	127	355	110	75.9	40.8	24.3	18.2	123
1942	23.8	57.0	63.0	107	55.7	396	599	164	301	75.2	46.9	23.8	159
1943	32.2	126	130	86.9	101	310	555	532	158	56.4	156	42.4	191
1944	96.3	310	99.3	80.4	62.5	155	835	257	284	102	45.8	92.4	199
1945	96.9	99.4	172	159	110	675	524	593	291	156	70.3	52.4	251
1946	92.7	203	324	205	138	605	287	356	255	69.4	81.2	50.9	223
1947	130	91.9	75.0	124	197	344	730	365	318	103	56.2	31.6	213
1948	20.9	90.5	58.0	47.7	68.7	478	411	499	234	102	43.1	23.9	173
1949	23.5	93.0	62.8	319	173	310	321	201	79.3	36.7	17.8	32.3	139
1950	36.7	57.4	87.6	150	117	214	811	206	147	31.3	16.2	42.7	159

\* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1918	-	-	-	-	-	-	-	-	0.81	0.50	0.61	1.49	-
1919	1.29	1.49	2.20	2.02	0.80	5.80	3.50	4.76	*1.15	.45	.34	.51	*24.31
1920	.42	2.66	1.86	.37	.48	*6.36	*8.50	3.81	*1.28	.69	.77	.67	*27.87
1927	-	-	-	-	-	*4.53	2.32	1.59	.76	.68	.66	.89	-
1928	1.53	4.86	3.71	2.10	2.31	2.36	5.38	3.95	2.10	1.48	1.11	.97	31.86
1929	.60	.58	.77	1.36	.83	*5.85	*5.57	3.74	.86	.42	.33	.36	*21.27
1930	.32	.47	.47	1.46	1.55	*4.56	2.56	1.36	1.20	.46	.61	.41	*15.43
1931	.32	.79	.61	.42	.40	1.34	*5.63	2.55	3.00	.78	.41	.39	*16.64
1932	.40	.67	1.44	2.48	1.41	1.16	*7.02	1.48	.55	.37	.27	.41	*17.66
1933	.90	2.93	1.12	1.34	1.01	1.79	11.08	2.39	.72	.34	.45	.38	24.45
1934	1.02	.76	.92	1.08	.68	2.08	9.15	1.95	.77	.44	.35	.95	20.15
1935	.92	1.63	1.61	3.26	1.32	3.60	4.11	1.92	2.14	1.58	.49	.52	23.10
1936	.37	.82	1.01	1.29	.72	12.45	5.13	1.42	.50	.46	.27	.29	24.73
1937	.68	.88	2.59	2.32	2.64	1.53	5.56	6.49	2.10	1.03	.72	.32	26.86
1938	.59	2.63	2.66	2.20	1.98	3.32	3.69	2.01	.79	1.21	.87	.61	28.08
1939	1.73	1.34	3.62	1.50	1.02	1.98	8.06	2.97	.88	.46	.37	.24	24.17
1940	.36	.85	.82	.39	.34	4.45	8.72	5.73	3.29	.88	.47	.53	22.83
1941	.36	1.41	1.12	1.51	1.99	1.13	3.07	.98	.66	.36	.22	.16	12.97
1942	.21	.49	.56	.96	.45	3.54	5.18	1.47	2.60	.67	.42	.21	16.76
1943	.29	1.09	1.16	.78	.81	2.77	4.80	4.76	1.36	.50	1.40	.37	20.09
1944	.86	2.68	.89	.54	.52	1.39	7.22	2.29	2.46	.91	.41	.80	20.97
1945	.87	.66	1.54	1.42	.89	6.03	4.54	2.30	2.52	1.40	.63	.45	26.45
1946	.83	1.76	2.90	1.83	1.11	5.41	2.48	3.18	2.21	.62	.73	.44	23.50
1947	1.16	.80	.67	1.11	1.59	3.07	6.31	3.26	2.75	.92	.50	.27	22.41
1948	.19	.78	.52	.43	.57	4.27	3.56	4.46	2.02	.92	.38	.21	18.31
1949	.21	.80	.56	2.85	1.40	2.77	2.77	1.80	.69	.33	.16	.28	14.62
1950	.33	.50	.78	1.34	.94	1.92	7.01	1.84	1.27	.28	.14	.37	16.72

\* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1918	471	-	-	-	-	-	-	-	-	-
1919	501,1231	*2,480	Mar. 30, 1919	25	*240	*1.79	*24.31	*240	*24.27	-
1920	501,1231	*2,850	Mar. 28, 1920*	30	*274	*2.04	*27.87	-	-	-
1927	641,1231	*1,790	Mar. 18, 1927	-	-	-	-	-	-	-
1928	661,1231	*2,700	Nov. 6, 1927*	41	314	2.34	31.86	233	23.71	-
1929	681,1231	*1,680	Mar. 25, 1929	25	*210	*1.57	*21.27	*203	*20.58	-
1930	696,1231	*1,360	Mar. 11, 1930	22	*152	*1.13	*15.43	*157	*15.89	-
1931	711,1231	*1,560	Apr. 13, 1931	20	165	1.23	16.77	173	17.56	-
1932	726,1231	*2,080	Apr. 14, 1932	24	176	1.31	17.82	200	20.26	-
1933	741,1231	*2,950	Apr. 20, 1933*	32	241	1.80	24.45	219	22.20	-
1934	756,1231	*2,950	Apr. 14, 1934	24	199	1.49	20.15	213	21.60	-
1935	781	1,850	Jan. 12, 1935	33	220	1.71	23.10	201	21.14	-
1936	(a)	11,000	Mar. 19, 1936	22	234	1.81	24.73	*253	*26.68	-
1937	821	2,410	May 16, 1937	25	255	1.98	26.66	272	28.59	-
1938	851	6,880	Sept. 22, 1938	29	267	2.07	28.09	275	28.90	-
1939	871	2,230	Apr. 21, 1939	18	230	1.78	24.17	186	19.61	-
1940	891	2,180	May 4, 1940	24	216	1.67	22.83	224	23.69	-

\* Revised.

a In W.S.P. 821, 851, 1231.

## MERRIMACK RIVER BASIN

Yearly discharge, in cubic feet per second, of Blackwater River near Webster, N.H.--Continued									
Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1941	921	1,040	Feb. 10, 1941	11	123	.953	12.97	108	11.54
1942	951	1,930	June 18, 1942	12	159	1.23	16.76	171	18.04
1943	971	1,580	Apr. 30, 1943	21	191	1.48	20.09	209	21.98
1944	1001	1,610	Apr. 28, 1944	28	199	1.54	20.97	188	19.81
1945	1031	1,830	Apr. 1, 1945	36	251	1.95	26.45	272	28.67
1946	1051	1,390	Mar. 18, 1946	28	223	1.73	23.50	196	20.64
1947	1081	1,400	Apr. 14, 1947	21	213	1.65	22.41	202	21.27
1948	1111	1,250	Mar. 24-27, 1948	15	173	1.34	18.31	174	18.39
1949	1141	1,140	Jan. 2, 3, 1949	12	139	1.08	14.62	139	14.66
1950	1171	1,340	Apr. 7, 8, 22, 23	10	159	1.23	16.72	-	-

## 146. Contoocook River at Penacook, N.H.

Location.--Lat 43°17'10", long. 71°36'00", on right bank at Penacook, Merrimack County, 0.5 mile upstream from mouth.

Drainage area.--766 sq. mi.

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

Average discharge.--22 years (1928-50), 1,193 cfs.

Extremes.--1928-50: Maximum discharge, 46,800 cfs Mar. 20, 1936 (gage height, 14.26 ft. from floodmarks); minimum, 48 cfs Sept. 27, 1948; minimum daily, 81 cfs Aug. 19, 1950.

Remarks.--Flow regulated by mills and by Nubanusit Lake, MacDowell Reservoir since March 1950 (see p. 148), Highland Lake, Jackman Reservoir, Blackwater Reservoir since November 1941 (see p. 154), and other reservoirs above station.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*495	*517	623	936	*600	*3,280	3,740	2,740	835	401	246	278	*1,230
1930	223	346	319	828	898	2,450	1,530	915	737	338	276	246	758
1931	249	491	435	283	309	949	4,080	1,660	2,230	469	*269	*234	*968
1932	239	371	784	1,580	1,090	954	4,650	951	322	243	140	211	956
1933	666	2,020	906	1,140	1,070	1,720	7,310	1,480	482	264	345	587	1,490
1934	945	779	787	964	566	1,571	5,827	1,360	688	318	219	570	1,213
1935	560	1,017	982	1,626	1,000	2,304	2,652	1,272	1,607	1,172	396	385	1,248
1936	280	503	632	829	547	9,197	3,418	893	332	309	243	224	1,459
1937	388	582	1,737	2,070	1,751	1,314	3,553	3,775	1,465	723	434	362	1,511
1938	393	1,559	1,885	1,539	1,654	1,947	2,204	1,412	763	1,010	933	5,117	1,694
1939	1,406	1,067	2,677	1,075	898	1,533	5,600	1,659	657	338	292	225	1,452
1940	247	625	570	300	279	361	6,416	3,502	2,190	738	349	390	1,325
1941	226	898	935	1,140	1,489	896	1,900	791	519	265	158	144	773
1942	136	322	373	609	401	2,727	2,993	895	1,144	455	342	289	891
1943	328	937	1,118	884	919	2,294	3,016	2,987	909	329	590	250	1,215
1944	437	1,526	703	378	334	1,095	4,271	1,273	2,297	715	328	896	1,281
1945	580	648	1,206	1,056	734	4,131	2,907	3,676	2,098	1,204	548	409	1,625
1946	451	1,129	1,708	1,393	963	3,407	1,501	2,136	1,314	356	492	324	1,269
1947	598	463	425	657	1,252	2,101	3,742	1,908	1,435	578	332	289	1,144
1948	182	616	419	402	596	3,149	2,381	2,560	1,688	732	300	170	1,101
1949	177	497	404	1,950	1,235	1,884	1,860	1,097	397	189	171	204	837
1950	242	326	467	969	904	1,522	3,872	1,109	902	176	141	266	903

\* Revised.

\* Not previously published; estimated on basis of records for nearby stations.

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*0.75		0.94	1.41	*0.82	*4.94	5.44	4.13	1.22	0.60	0.37	0.40	*21.77
1930	.34	.50	.48	1.25	1.22	3.69	2.23	1.38	1.07	.51	.41	.36	13.44
1931	.37	.71	.65	.43	.42	1.43	*5.94	2.50	3.24	.71	*.41	*.34	*17.15
1932	.36	.54	1.18	2.38	1.54	1.44	6.78	1.43	.47	.37	.21	.31	17.01
1933	1.00	2.34	1.36	1.71	1.46	2.60	10.64	2.20	.70	.49	.52	.65	26.36
1934	1.42	1.14	1.19	1.45	.77	2.36	8.49	2.05	1.00	.48	.33	.83	21.51
1935	.84	1.48	1.48	2.44	1.36	3.47	3.86	1.91	2.34	1.76	.60	.56	22.10
1936	.42	.73	.95	1.24	.77	13.83	4.98	1.35	.48	.46	.37	.33	25.91
1937	.58	.85	2.82	3.11	2.38	1.98	5.18	5.68	2.13	1.09	.65	.53	26.78
1938	.59	2.28	2.84	2.32	2.25	2.93	3.21	2.12	1.11	1.52	1.41	7.45	30.03
1939	2.12	1.55	4.02	1.61	1.22	2.31	8.16	2.50	.96	.51	.44	.33	25.73
1940	.37	.91	.86	.45	.39	.54	9.34	5.27	3.19	1.11	.53	.57	23.53
1941	.34	1.31	1.41	1.72	2.02	1.35	2.77	1.19	.76	.40	.24	.21	13.72
1942	.21	.47	.56	.92	.55	4.10	4.36	1.35	1.67	.68	.52	.42	15.81
1943	.49	1.36	1.68	1.33	1.25	3.45	4.39	4.50	1.32	.50	.89	.36	21.52
1944	.66	2.22	1.06	.57	.47	1.65	6.22	1.92	3.35	1.08	.49	1.31	21.00
1945	.87	.94	1.81	1.59	1.00	6.22	4.23	5.83	3.06	1.81	.82	.60	28.78
1946	.68	1.64	2.57	2.10	1.31	5.13	2.19	3.22	1.91	.54	.74	.47	22.30
1947	.90	.67	.64	.99	1.70	3.16	5.45	2.87	2.09	.87	.50	.42	20.26
1948	.27	.90	.63	.61	.84	4.74	3.47	3.85	2.46	1.10	.45	.25	19.57
1949	.27	.72	.61	2.94	1.68	2.84	2.71	1.65	.58	.28	.26	.30	14.84
1950	.36	.47	.70	1.46	1.23	2.29	5.64	1.67	1.31	.26	.21	.39	15.99

\* Revised.

\* Not previously published; estimated on basis of records for nearby stations.

Yearly discharge, in cubic feet per second, of Contoocook River at Penacook, N.H.

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	681,1231	8,550	Mar. 24, 1929	*174	*1,250	*1.61	*21.77	*1,170	*20.65
1930	696	5,600	Mar. 27, 1930	178	758	.990	15.44	782	13.85
1931	711,1231	*8,750	Apr. 13, 1931	*147	*968	*1.26	*17.15	*987	*17.50
1932	726	11,400	Apr. 13, 1932	98	956	1.25	17.01	1,140	20.23
1933	741, 756	17,600	Apr. 20, 1933	175	1,490	1.85	26.38	1,400	24.85
1934	758	16,600	Apr. 14, 1934	98	1,213	1.58	21.51	1,217	21.56
1935	781	7,540	Jan. 11, 1935	198	1,248	1.65	22.10	1,152	20.40
1936	801	46,800	Mar. 20, 1936	167	1,459	1.90	25.91	1,568	27.86
1937	821	10,500	May 16, 1937	176	1,511	1.97	26.78	1,604	28.44
1938	851	42,400	Sept. 23, 1938	186	1,694	2.21	30.03	1,807	32.01
1939	871	10,900	Apr. 22, 1939	129	1,452	1.90	25.75	1,158	20.18
1940	891	13,100	Apr. 14, 1940	162	1,525	1.73	25.53	1,576	24.45
1941	921	*5,600	Jan. 15, 1941*	98	773	1.01	15.72	671	11.90
1942	951	5,420	Mar. 24, 1942	111	891	1.16	15.81	1,021	18.10
1943	971	5,420	Mar. 28, 1943	129	1,215	1.59	21.52	1,238	21.93
1944	1001	14,200	June 26, 1944	146	1,181	1.54	21.00	1,164	20.68
1945	1051	8,840	Mar. 22, 1945	295	1,625	2.12	26.78	1,696	30.05
1946	1051	*6,500	Mar. 11, 1946*	175	1,269	1.66	22.50	1,118	19.82
1947	1081	6,240	Apr. 9, 1947	181	1,144	1.49	20.26	1,121	19.65
1948	1111	15,500	Mar. 23, 1948	88	1,101	1.44	19.57	1,090	19.87
1949	1141	5,260	Jan. 8, 1949	119	837	1.09	14.84	853	14.77
1950	1171	7,150	Apr. 6, 1950	81	903	1.18	15.99	-	-

\* Revised.

\* Not previously published.

## 147. Merrimack River at Garvins Falls, N.H.

Location.--Lat 43°09'55", long. 71°30'35", at dam of the Manchester Traction, Light & Power Co. at Garvins Falls, Bow County, 3.5 miles below Concord, Concord County.

Drainage area.--2,427 sq mi (revised).

Gage.--Staff gage. Altitude of gage is 115 ft (from topographic map).

Average discharge.--11 years (1904-15), 3,820 cfs.

Remarks.--Discharge determined by computation of flow over dam and through turbines and wasteways.

Cooperation.--Records furnished by Manchester Traction, Light & Power Co.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1904	-	-	-	-	-	-	-	-	-	-	-	2,220	-
1905	2,860	2,000	1,660	2,190	1,610	6,400	10,400	3,910	2,730	1,950	1,920	6,260	3,660
1906	2,290	2,560	3,880	4,950	3,110	3,370	11,100	8,170	6,950	3,530	2,260	1,400	4,470
1907	1,900	2,250	1,940	3,110	2,070	4,370	9,070	6,890	3,500	2,290	1,490	2,210	3,430
1908	5,470	8,760	5,770	3,960	4,150	16,570	9,220	9,430	3,090	1,840	2,330	1,220	15,150
1909	1,170	1,300	1,250	2,270	3,450	4,080	14,200	6,890	2,880	1,290	1,060	1,260	5,390
1910	1,340	1,320	1,850	2,880	2,850	8,210	7,640	4,100	5,150	1,560	1,640	1,410	3,070
1911	1,170	1,640	1,160	2,100	1,300	2,450	10,000	4,780	1,940	1,090	1,240	1,580	2,540
1912	5,230	3,310	2,800	2,720	2,837	5,875	12,990	6,836	3,921	1,452	1,762	2,520	14,180
1913	2,284	2,206	1,844	6,320	3,818	10,792	7,856	4,780	3,893	1,834	1,345	1,464	14,040
1914	2,675	15,586	12,897	2,120	2,350	7,450	14,700	8,420	2,470	2,050	1,720	1,640	4,530
1915	1,400	1,660	1,720	2,980	5,490	4,710	6,370	3,750	1,870	7,260	5,670	2,440	5,770

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1904	-	-	-	-	-	-	-	-	-	-	-	1.02	-
1905	1.36	0.92	0.79	1.04	0.69	3.04	4.79	1.86	1.25	0.92	0.91	2.88	20.45
1906	1.09	1.17	1.84	2.35	1.33	1.60	5.10	3.89	3.19	1.67	1.07	.64	24.94
1907	.90	1.03	.92	1.48	.89	2.08	4.17	3.28	1.61	1.09	.71	1.02	19.18
1908	2.80	4.03	2.74	1.68	1.84	3.12	4.24	4.48	1.42	.87	1.11	.56	28.99
1909	.56	.60	.59	1.08	1.46	1.34	6.54	5.18	1.32	.67	.51	.58	18.99
1910	.64	.61	.64	1.37	1.01	3.90	3.51	1.95	1.45	.65	.78	.65	17.16
1911	.55	.75	.55	1.00	.56	1.16	4.61	2.27	.89	.52	.59	.73	14.18
1912	1.53	1.52	1.55	1.29	1.26	2.79	5.97	3.25	1.80	.69	.84	1.16	25.43
1913	1.08	1.01	.88	3.00	1.64	5.13	5.61	2.27	1.79	.87	.64	.67	22.59
1914	1.27	11.56	11.38	1.01	1.01	5.54	6.77	4.00	1.14	.97	.82	.75	24.22
1915	.66	.76	.82	1.42	2.35	2.24	2.93	1.78	.86	3.45	2.69	1.12	21.06

† Corrected.

Yearly discharge, in cubic feet per second, of Merrimack River at Garvins Falls, N. H.

	Water year ending Sept. 30							Calendar year	
Year	W.S.P. no.	Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1904	165	-	-	-	-	-	-	-	-
1905	165	-	-	1,090	3,660	1.51	20.45	3,940	21.48
1906	165, 201	-	-	1,210	4,470	1.84	24.94	4,240	23.69
1907	201, 241	-	-	666	3,430	1.41	19.18	4,590	25.70
1908	241	-	-	589	4,150	1.41	28.89	3,790	23.27
1909	241, 261	-	-	413	3,390	1.40	18.99	4,420	19.13
1910	261, 281	-	-	651	3,070	1.26	17.16	3,060	17.12
1911	281, 301	-	-	454	2,540	1.05	14.18	2,990	16.71
1912	301, 321	-	-	301	4,180	1.72	23.43	4,327	22.02
1913	321, 351	-	-	562	4,040	1.66	22.59	4,260	23.83
1914	401	-	-	840	4,330	1.78	24.22	3,980	22.25
1915	401	-	-	800	3,770	1.55	21.08	-	-

† Corrected.

## 148. 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.

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.--29 years (1918-20, 1921-27, 1929-50), 230 cfs.

Extremes.--1918-50: 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 on slope-area and contracted-opening determinations at gage height 15.27 ft; minimum, 0.4 cfs Sept. 4, 1926; minimum daily, 1.4 cfs Sept. 4, 1926.

Remarks.--Flow regulated by mills and reservoirs above station; regulation greater prior to 1949.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1918	-	-	-	-	-	732	-	-	79.9	80.2	78.4	128	-
1919	165	227	378	309	152	732	421	461	113	79.7	45.9	37.3	262
1920	35.1	217	270	101	80.4	1,150	960	405	161	80.7	113	233	*318
1921	-	-	-	-	-	-	-	-	-	103	52.2	64.6	-
1922	40.4	88.5	297	161	159	*1,005	*880	393	*451	206	98.0	79.7	*321
1923	56.3	45.5	36.6	146	90.0	258	1,110	434	91.0	72.4	19.4	21.8	198
1924	61.3	171	434	398	188	324	1,030	362	103	24.6	22.0	82.2	267
1925	40.0	48.0	139	61.0	671	965	498	170	104	81.9	54.8	23.7	235
1926	52.5	141	239	194	190	266	911	251	101	72.9	27.5	10.7	204
1927	26.9	232	163	152	128	709	253	176	104	105	117	148	193
1928	130	-	-	-	-	-	-	-	-	-	-	-	-
1929	-	-	145	168	107	894	571	463	114	85.0	40.1	21.4	-
1930	12.8	31.8	45.6	115	208	605	322	132	134	106	69.4	35.5	151
1931	15.0	51.2	59.7	39.4	39.7	238	580	201	315	103	67.6	16.6	144
1932	42.7	71.0	196	352	201	154	874	136	60.5	42.5	26.4	134	190
1933	86.3	384	171	194	182	378	1,500	185	115	69.1	40.7	61.5	279
1934	156	113	122	143	100	488	1,104	273	113	71.7	22.3	54.2	230
1935	109	142	214	419	229	645	538	237	356	121	78.5	63.4	263
1936	20.2	71.9	97.6	179	104	2,155	610	216	91.9	68.8	25.8	7.88	306
1937	44.6	45.0	441	356	594	329	717	495	258	76.8	62.1	51.7	287
1938	67.1	384	504	394	435	399	395	239	116	223	118	312	298
1939	218	216	533	214	120	301	1,133	311	108	46.1	116	62.4	282
1940	56.5	105	93.6	63.4	59.1	93.1	1,403	535	353	133	36.8	59.5	248
1941	44.4	159	195	216	326	208	347	149	41.1	21.5	18.7	12.5	143
1942	11.9	19.1	23.7	59.0	115	675	539	162	129	61.3	40.1	19.7	155
1943	24.6	91.2	211	139	139	139	429	557	157	65.3	172	60.1	226
1944	44.2	179	102	91.5	103	574	830	257	240	107	25.7	174	208
1945	131	132	265	246	173	762	472	638	387	160	47.7	53.3	290
1946	47.7	142	328	250	157	828	357	346	196	45.0	99.1	59.8	239
1947	99.7	110	101	157	230	458	683	440	399	109	53.4	33.7	239
1948	17.0	55.4	49.4	44.5	68.8	609	404	534	348	132	40.8	16.6	194
1949	9.35	73.6	69.3	375	228	344	512	231	71.7	38.0	24.9	22.8	150
1950	14.9	36.1	105	212	193	367	659	169	140	18.6	16.9	27.4	163

\* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1918	-	-	-	-	-	-	-	-	0.57	0.59	0.58	0.91	-
1919	1.21	1.62	2.78	2.27	1.01	5.37	2.99	3.39	.80	.59	.34	.26	22.63
1920	.26	1.54	1.98	.74	.55	*8.43	6.83	2.97	1.15	.59	.83	1.65	*27.53
1921	-	-	-	-	-	-	-	-	-	.76	.38	.46	-
1922	.30	.63	2.18	1.19	1.05	*7.38	*6.25	2.81	*3.20	1.51	.65	.57	*27.72
1923	.41	.32	1.27	1.07	.60	1.89	7.89	3.18	.65	.53	.14	.18	17.10
1924	.45	1.22	3.18	2.93	1.29	2.38	7.32	2.66	.73	.18	.16	.58	23.08
1925	.29	.34	1.02	.45	4.45	7.09	3.54	1.24	.74	.60	.40	.17	20.33

\* Revised.

† Corrected.



Monthly and yearly runoff, in inches, of Suncook River at North Chichester, N. H.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	.38	1.00	1.75	1.43	1.28	1.95	6.47	1.84	.72	.53	.20	.08	17.61
1927	.20	1.65	1.20	1.12	.85	5.21	1.80	1.29	.74	.77	.86	1.05	16.74
1928	.95	-	-	-	-	-	-	-	-	-	-	-	-
1929	-	.23	1.07	1.23	.71	6.56	4.06	3.40	.81	.62	.29	.15	-
1930	.09	-	.33	.84	1.38	4.44	2.29	.97	.95	.78	.51	.25	13.06
1931	.11	.36	.44	.29	.26	1.75	4.12	1.48	2.24	.76	.50	.12	12.43
1932	.31	.50	1.44	2.58	1.38	1.13	6.21	1.00	.43	.31	.19	.95	16.43
1933	.63	2.73	1.26	1.43	1.21	2.78	10.66	1.36	.82	.51	.30	.44	24.13
1934	1.15	.80	.90	1.05	.66	3.58	7.84	2.01	.80	.53	.16	.38	19.86
1935	.80	1.01	1.57	3.08	1.52	4.74	3.83	1.74	2.53	.89	.58	.45	22.74
1936	.15	.51	.72	1.31	.71	15.79	4.34	1.59	.65	.50	.19	.06	26.52
1937	.33	.32	3.24	2.62	3.94	2.42	5.10	3.63	1.83	.56	.46	.37	24.82
1938	.49	2.73	3.70	2.89	2.88	2.93	2.81	1.75	.82	1.64	.87	2.22	25.73
1939	1.60	1.54	3.91	1.57	.80	2.21	8.06	2.28	.77	.34	.85	.44	24.37
1940	.41	.74	.62	.47	.41	.68	9.97	3.93	2.51	.98	.27	.42	21.48
1941	.33	1.13	1.43	1.58	2.17	1.53	2.47	1.09	.29	.16	.14	.09	12.41
1942	.09	.14	.17	.43	.76	4.96	3.83	1.19	.91	.45	.29	.14	13.56
1943	.18	.65	1.55	1.02	1.32	3.15	3.96	4.39	1.12	.48	1.27	.43	19.52
1944	.32	1.27	.75	.67	.71	2.74	5.90	1.89	1.70	.78	.19	1.24	18.16
1945	.96	.94	1.95	1.81	1.15	5.59	3.35	4.69	2.75	1.17	.35	.38	25.09
1946	.35	1.01	2.41	1.83	1.04	6.08	2.54	2.54	1.39	.33	.73	.42	20.67
1947	.73	.78	.74	1.15	1.52	3.36	4.85	3.23	2.84	.80	.39	.24	20.63
1948	.12	.39	.36	.33	.47	4.47	2.87	3.92	2.47	.97	.30	.12	16.79
1949	.07	.52	.51	2.75	1.51	2.53	2.22	1.69	.51	.28	.18	.16	12.93
1950	.10	.26	.77	1.56	1.28	2.70	4.68	1.24	1.00	.14	.12	.19	14.04

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1918	471	-	-	-	-	-	-	-	-
1919	501,1231	*1,800	Mar. 29, 1919	12	262	1.67	22.63	241	20.80
1920	501,1231	*2,350	Mar. 27, 28, 1920	9	*318	*2.03	*27.52	-	-
1921	521	-	-	-	-	-	-	-	-
1922	541,1231	*2,130	June 22, 1922	10	*321	*2.04	*27.72	*293	*26.54
1923	561, 781	6,580	Apr. 7, 1923	5.5	198	1.26	17.10	246	20.95
1924	581,1231	*3,940	Apr. 7, 1924	3.0	267	1.70	23.08	230	19.88
1925	601	2,780	Mar. 30, 1925	3.7	235	1.50	20.33	252	21.81
1926	621	1,920	Apr. 26, 1926	1.4	204	1.30	17.61	203	17.53
1927	641	2,620	Mar. 18, 1927	7.0	193	1.23	16.74	-	-
1928	641	-	-	-	-	-	-	-	-
1929	681	2,350	Mar. 16, 1929	-	-	-	-	214	18.48
1930	696	2,020	Mar. 26, 1930	6.0	151	.962	13.06	154	13.32
1931	711	1,530	Mar. 29, 1931	3.5	144	.917	12.43	159	13.77
1932	726	2,430	Apr. 13, 1932	11	190	1.21	16.43	217	18.80
1933	741,1231	*3,930	Apr. 19, 1933	5.3	279	1.78	24.13	258	22.55
1934	756,1231	*4,160	Apr. 1, 1934	3.5	230	1.46	19.86	236	20.39
1935	781	2,200	Jan. 10, 1935	12	263	1.68	22.74	240	20.74
1936	801	12,900	Mar. 19, 1936	3.2	306	1.95	26.52	335	29.03
1937	821	4,670	Feb. 23, 1937	7.0	287	1.83	24.82	322	27.85
1938	851	2,460	Nov. 29, 1937	6.1	298	1.90	25.73	299	25.86
1939	871	2,130	Apr. 20, 1939	24	282	1.80	24.37	222	19.16
1940	891	4,090	Apr. 13, 1940	13	248	1.58	21.48	260	22.53
1941	921	*1,160	Feb. 9, 1941*	4.7	143	.911	12.41	115	9.92
1942	951	*2,200	Mar. 10, 1942*	5.0	155	.987	13.36	177	15.34
1943	971	1,420	Dec. 2, 1942	7.6	226	1.44	19.52	225	19.48
1944	1001	1,470	Sept. 15, 1944	9.1	209	1.33	18.16	227	19.67
1945	1031	1,960	Mar. 22, 1945	12	290	1.85	25.09	289	25.01
1946	1051	*2,100	Mar. 10, 1946*	6.7	239	1.52	20.67	222	19.15
1947	1081	*1,200	Apr. 7, 1947*	6.2	239	1.52	20.33	223	19.25
1948	1111	*3,900	Mar. 22, 1948	5.0	194	1.24	16.79	196	17.02
1949	1141	1,300	Jan. 6, 1949	4.4	150	.955	12.93	150	12.96
1950	1171	1,430	Apr. 6, 1950	3.5	163	1.04	14.04	-	-

\* Revised.

\* Not previously published; estimated on basis of gage-height record and records for nearby stations.

## 149. Merrimack River at Manchester, N. H.

Location.--Lat 43°00'10", long. 71°28'10", at Amoskeag Dam at Manchester, Hillsboro County, 2 miles upstream from Piscataquog River and 9½ miles downstream from Suncook River.

Drainage area.--2,854 sq. mi.

Average discharge.--26 years (1924-50), 4,638 cfs.

Remarks.--Discharge computed from flow over dam and through wheels and gates by cooperating parties (reduced to three significant figures by Geological Survey). Flow regulated by power plants and by Franklin Falls Reservoir since March 1942 (see p. 141), Squam, Little Squam, Newfound (see p. 139), Winnepesaukee (see p. 142), Winnisquam, Wentworth (see p. 142) Merrymeeting (see p. 142), and other lakes, and by MacDowell Reservoir since March 1950 (see p. 148), and Blackwater Reservoir since November 1941 (see p. 154).

Cooperation.--Records furnished by Public Service Co. of New Hampshire. Prior to October 1937, records furnished by Amoskeag Manufacturing Co.

## MERRIMACK RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Merrimack River at Manchester, N. H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	-	-	-	4,690	2,470	4,040	15,700	9,890	2,170	1,320	1,160	3,090	
1925	2,220	2,250	2,290	1,190	5,420	10,700	9,690	4,420	2,310	2,900	1,770	1,680	3,890
1926	2,760	4,860	4,910	2,940	2,300	3,490	13,700	7,890	2,530	1,790	1,230	1,090	4,120
1927	1,880	5,240	2,570	2,200	2,310	8,760	5,980	4,550	2,380	2,400	1,980	2,210	3,540
1928	3,280	10,800	7,800	4,670	4,790	5,300	12,000	10,500	5,870	3,450	3,390	2,990	6,220
1929	2,080	2,170	2,210	3,200	2,340	8,430	12,700	11,600	2,820	1,680	1,290	1,280	4,330
1930	1,380	1,860	1,600	2,840	3,100	8,730	8,800	4,050	4,060	1,770	2,030	2,280	3,460
1931	1,050	1,980	1,650	1,060	996	3,160	13,800	6,280	6,730	2,390	1,420	1,490	3,490
1932	1,660	2,200	2,310	6,120	3,700	3,140	19,000	5,800	1,630	1,900	1,650	2,260	4,350
1933	3,960	7,270	3,100	3,360	5,250	5,330	24,000	7,890	2,580	1,160	1,610	1,610	5,000
1934	2,742	2,285	2,485	2,575	1,908	5,041	20,410	6,324	2,442	1,318	1,118	1,222	4,310
1935	2,312	3,665	4,152	6,986	4,332	8,179	10,480	6,472	6,556	3,278	1,485	1,868	4,991
1936	1,346	2,386	2,600	3,347	2,700	30,990	14,590	5,834	1,983	1,464	1,126	1,163	5,819
1937	2,757	4,847	6,656	7,507	7,041	4,652	15,170	16,480	5,592	2,992	1,813	1,407	6,038
1938	2,794	5,836	6,984	5,427	5,908	7,497	9,253	4,970	2,703	3,656	3,116	13,210	5,926
1939	4,683	4,122	7,970	5,504	3,318	5,170	18,010	9,759	2,912	1,683	1,689	1,242	5,577
1940	1,460	2,469	2,308	1,326	1,274	1,763	19,180	15,010	7,433	2,611	1,736	2,462	4,906
1941	1,457	4,737	3,280	3,875	4,621	3,811	7,407	2,958	1,754	2,140	1,187	980	3,153
1942	1,534	1,984	1,780	2,246	1,407	7,877	12,300	4,630	4,737	1,798	1,498	1,411	3,582
1943	1,708	3,665	3,625	2,637	3,011	7,027	10,020	13,740	4,113	2,134	3,681	2,151	4,823
1944	2,811	7,132	3,011	1,933	1,872	4,064	14,070	7,980	6,790	3,102	1,857	2,609	4,744
1945	2,461	2,389	3,647	4,285	3,743	12,720	10,640	13,710	8,419	4,440	2,155	2,025	5,889
1946	3,599	4,927	6,980	4,799	4,248	12,780	6,630	8,098	5,138	1,803	2,892	2,090	5,315
1947	3,871	3,155	2,882	3,215	5,375	8,155	13,390	10,230	7,927	3,078	1,890	1,637	5,387
1948	800	2,077	1,477	1,347	1,782	9,179	9,389	10,940	5,811	2,500	1,606	982	4,042
1949	941	2,976	2,003	4,792	4,048	6,653	7,718	4,756	2,038	1,162	1,120	1,519	3,517
1950	1,405	2,300	2,859	4,129	3,623	5,080	14,440	5,325	3,987	1,077	960	1,315	3,885

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	-	-	-	1.89	0.93	1.63	6.13	3.99	0.85	0.53	0.47	1.21	-
1925	0.90	0.88	0.93	.48	1.98	4.31	3.79	1.78	.90	1.17	.71	.66	18.49
1926	1.11	1.90	1.98	1.19	.84	1.41	5.36	3.19	.99	.72	.50	.43	19.62
1927	.76	2.05	1.04	.89	.84	3.54	2.34	1.84	.93	.97	.80	.86	16.86
1928	1.32	4.21	3.15	1.89	1.81	2.14	4.70	4.23	2.29	1.39	1.37	1.17	29.67
1929	.84	.85	.89	1.29	.86	3.40	4.97	4.70	1.10	.67	.52	.48	20.57
1930	.56	.73	.65	1.15	1.13	3.53	3.44	1.64	1.59	.72	.82	.50	16.46
1931	.42	.78	.67	.43	.36	1.27	5.40	2.53	2.63	.97	.57	.58	16.61
1932	.67	.86	1.34	2.47	1.40	1.27	7.43	2.34	.64	.77	.67	.88	20.74
1933	1.60	2.84	1.25	1.36	1.18	2.15	9.38	3.19	1.01	.47	.62	.63	25.68
1934	1.11	.98	1.00	1.04	.70	2.04	7.98	2.55	.95	.53	.45	.87	20.11
1935	.93	1.47	1.67	2.82	1.60	3.31	4.10	2.62	2.57	1.33	.60	.73	23.75
1936	.54	.93	1.05	1.35	1.02	12.57	5.70	2.35	.78	.59	.46	.45	28.79
1937	1.11	1.11	2.69	2.87	2.57	1.88	5.14	6.65	2.19	1.21	.73	.55	28.70
1938	1.13	2.28	2.82	2.19	2.16	3.03	3.62	2.03	1.06	1.48	1.26	5.17	28.21
1939	1.89	1.61	3.94	1.82	1.21	2.09	7.04	3.91	1.14	.68	.68	.49	26.52
1940	.59	.97	.93	.54	.48	.71	7.50	6.06	2.91	1.05	.70	.96	23.40
1941	.59	1.85	1.32	1.57	1.69	1.38	2.90	1.19	.69	.86	.48	.38	14.90
1942	.54	.78	.72	.91	.51	3.18	4.81	1.87	1.85	.73	.60	.55	17.05
1943	.69	1.45	1.46	1.07	1.10	2.84	3.92	5.55	1.61	.86	1.57	.84	22.94
1944	1.14	2.79	1.22	.78	.71	1.64	5.66	3.22	2.85	1.25	.55	1.02	22.63
1945	.99	.93	1.47	1.73	1.57	5.14	4.09	5.54	3.29	1.79	.87	.79	28.00
1946	1.45	1.77	2.82	1.94	1.55	5.16	2.59	3.27	2.01	.73	1.17	.82	25.28
1947	1.56	1.23	1.16	1.30	1.96	3.29	5.24	4.13	3.10	1.24	.76	.64	25.61
1948	.32	.81	.60	.54	.67	3.93	3.67	4.42	2.27	1.01	.65	.38	19.27
1949	.38	1.16	.81	2.96	1.48	2.69	3.02	1.92	.80	.47	.45	.59	16.73
1950	.57	.91	1.15	1.69	1.32	2.04	5.65	2.15	1.56	.44	.39	.51	18.38

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1924	601	-	-	-	-	-	-	4,270	20.34
1925	601	-	-	718	3,890	1.36	18.49	4,370	20.77
1926	621	-	-	761	4,120	1.44	19.62	3,880	18.48
1927	641	-	-	951	3,540	1.24	16.86	4,560	21.69
1928	661	-	-	1,010	6,220	2.18	29.67	4,940	23.57
1929	681	-	-	275	4,530	1.52	20.57	4,190	19.93
1930	696	-	-	534	3,460	1.21	16.46	3,440	16.39
1931	711	-	-	419	3,490	1.22	16.61	3,700	17.61
1932	726	-	-	449	4,350	1.52	20.74	4,940	23.56
1933	741	-	-	590	5,400	1.89	25.68	4,834	22.99
1934	756	-	-	118	4,230	1.48	20.11	4,457	21.18
1935	781	-	-	794	4,991	1.75	23.75	4,664	22.20
1936	801	-	-	527	5,619	2.04	27.79	6,319	30.18
1937	821	-	-	433	6,038	2.10	28.70	6,314	30.02
1938	851	-	-	385	5,925	2.06	28.21	6,183	29.42
1939	871	-	-	542	5,577	1.95	28.52	4,534	21.57
1940	891	-	-	700	4,906	1.72	23.40	5,174	24.67

Yearly discharge, in cubic feet per second, of Merrimack River at Manchester, N. H.--Continued

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Runoff in inches
		Discharge	Date					
1941	921	-	-	488	3,132	1.10	14.90	2,768
1942	951	-	-	578	3,583	1.26	17.05	3,910
1943	971	-	-	453	4,823	1.69	22.94	5,150
1944	1001	-	-	671	4,744	1.66	22.63	4,580
1945	1031	-	-	1,140	5,889	2.06	28.00	6,444
1946	1051	-	-	658	5,315	1.86	25.28	4,877
1947	1081	-	-	343	5,387	1.89	25.61	4,918
1948	1111	-	-	144	4,042	1.42	19.27	4,172
1949	1141	-	-	175	5,517	1.23	16.73	3,576
1950	1171	-	-	251	5,865	1.35	18.39	-

## 150. 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.

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

Average discharge.--10 years (1940-50), 143 cfs.

Extremes.--1940-50: 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.--Some diurnal fluctuation at low flow caused by mill above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	21.8	24.4	-
1941	16.9	112	153	131	257	137	224	78.0	54.5	13.8	8.55	5.69	98.0
1942	11.0	27.7	61.6	101	35.8	490	279	96.5	239	136	59.7	38.6	132
1943	49.0	167	205	153	170	379	362	352	75.2	23.5	39.9	10.9	166
1944	62.9	175	75.9	35.7	49.5	258	552	133	366	64.7	19.3	122	157
1945	57.0	73.3	156	135	131	605	337	501	281	158	62.5	39.5	211
1946	40.9	122	234	211	144	499	198	250	132	25.9	63.8	25.0	163
1947	78.1	44.5	42.3	94.8	194	303	443	222	149	50.2	18.4	16.2	137
1948	8.74	154	72.2	62.1	116	575	282	375	240	62.0	14.5	4.61	164
1949	9.97	75.4	56.3	194	200	237	248	136	26.6	10.4	10.1	14.0	101
1950	17.4	30.7	59.7	135	94.4	277	397	117	55.8	8.45	9.63	46.1	104

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	0.24	0.26	-
1941	0.19	1.20	1.70	1.45	2.57	1.52	2.41	0.86	0.58	0.15	.09	.06	12.78
1942	.12	.30	.68	1.11	.34	5.43	2.99	1.06	2.57	1.51	.66	.41	17.18
1943	.54	1.79	2.27	1.69	1.71	4.20	3.88	3.90	.61	.26	.44	.12	21.61
1944	.70	1.88	.84	.40	.51	2.64	5.92	1.48	3.93	.72	.21	1.31	20.54
1945	.63	.79	1.73	1.50	1.31	6.71	3.61	5.56	3.02	1.53	.69	.42	27.50
1946	.45	1.31	2.60	2.34	1.44	5.54	2.12	2.77	1.41	.29	.71	.27	21.25
1947	.87	1.48	.47	1.05	1.94	3.36	4.75	2.46	1.59	.56	.20	.17	17.90
1948	.10	1.66	.80	.69	1.20	6.37	3.03	4.14	2.59	.69	.16	.06	21.47
1949	.11	.81	.65	2.15	2.00	2.63	2.66	1.51	.99	.12	.11	.15	13.19
1950	.19	.33	.66	1.49	.94	3.07	4.26	1.30	.60	.09	.11	.49	13.53

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Runoff in inches
		Discharge	Date					
1940	921	-	-	-	-	-	-	-
1941	921	\$1,600	Feb. 8, 1941	3.4	98.0	0.942	12.78	82.8
1942	951	3,550	June 15, 1942	5.2	132	1.27	17.18	159
1943	971	1,060	Mar. 28, 1943	7.6	166	1.60	21.61	157
1944	1001	4,100	June 25, 1944	9.6	157	1.51	20.54	155
1945	1031	1,800	Mar. 22, 1945	21	211	2.03	27.50	220
1946	1051	\$1,700	Mar. 9, 1946	8.0	163	1.57	21.25	143
1947	1081	1,050	Apr. 7, 1947	8.2	137	1.32	17.90	143
1948	1111	2,650	Mar. 22, 1948	5.7	164	1.58	21.47	156
1949	1141	968	Jan. 6, 1949	4.5	101	1.371	13.19	98.0
1950	1171	1,350	Mar. 30, 1950	4.5	104	1.00	13.53	-

\* Not previously published; estimated on basis of hydrographic comparisons.

## 151. 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.

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.--11 years (1939-50), 273 cfs.

Extremes.--1939-50: 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 dams at gage heights 16.03 and 17.52 ft; minimum daily, 7.0 cfs Mar. 14, 1948, and Sept. 30, 1950.

Maximum discharge known, 21,900 cfs Sept. 21, 1938 (gage height, 17.52 ft, from floodmarks), by computation of flow over dam.

Remarks.--Flow regulated by power plant above station.

Monthly and yearly mean discharge, in cubic feet per second													The year
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1940	31.9	103	108	67.2	71.9	144	1,721	687	446	179	57.0	49.6	304
1941	32.2	218	263	254	408	269	383	139	95.7	22.8	18.7	13.3	174
1942	19.8	72.4	112	140	81.9	850	551	167	528	252	114	76.7	248
1943	97.4	341	401	291	313	674	720	653	141	48.6	76.7	23.6	315
1944	105	338	162	65.8	94.1	429	1,080	266	665	130	44.4	221	298
1945	109	159	330	284	272	1,118	651	952	496	248	127	71.7	403
1946	68.6	225	451	395	271	946	369	492	252	56.0	123	41.7	309
1947	158	78.7	69.6	170	370	574	856	435	304	97.3	36.4	46.1	263
1948	274	278	141	113	214	963	573	704	474	110	30.0	11.7	303
1949	17.0	171	92.9	354	399	467	444	263	56.1	22.5	19.0	25.4	193
1950	26.7	67.0	100	241	209	502	774	231	112	16.0	18.9	78.0	197

Monthly and yearly runoff, in inches													The year
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1940	0.18	0.57	0.62	0.38	0.38	0.82	9.50	3.92	2.46	1.02	0.33	0.27	20.45
1941	.18	1.20	1.50	1.45	2.10	1.53	2.11	.79	.53	.13	.11	.07	11.70
1942	.11	.40	.64	.80	.42	4.74	3.04	.95	2.92	1.44	.65	.42	16.53
1943	.56	1.88	2.29	1.66	1.61	3.85	3.98	3.73	.78	.27	.44	.13	21.18
1944	.60	1.87	.92	.38	.50	2.45	5.97	1.52	3.67	.74	.25	1.22	20.09
1945	.62	.88	1.88	1.62	1.40	6.58	3.59	5.43	2.74	1.42	.72	.40	27.08
1946	.39	1.24	2.57	2.25	1.40	5.40	2.04	2.81	1.39	.32	.70	.23	20.74
1947	.90	1.43	.40	.97	1.91	3.27	4.62	2.45	1.68	.56	.21	.25	17.68
1948	.16	1.53	.80	.64	1.14	5.50	3.17	4.02	2.62	.63	.17	.06	20.44
1949	.10	.94	.53	2.02	2.06	2.66	2.45	1.50	.51	.13	.11	.14	12.95
1950	.15	.37	.57	1.37	1.08	2.87	4.28	1.32	.62	.09	.10	.43	13.25

Yearly discharge, in cubic feet per second									
Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	891	4,920	Apr. 13, 1940	9.8	304	1.50	20.45	326	21.96
1941	921	1,780	Feb. 8, 1941	12	174	.861	11.70	149	9.97
1942	951	6,760	June 15, 1942	12	246	1.22	16.53	299	20.11
1943	971	1,920	Mar. 28, 1943	9.4	315	1.56	21.18	295	19.84
1944	1001	6,530	June 25, 1944	8.1	298	1.48	20.09	298	20.08
1945	1051	3,170	Mar. 22, 1945	12	403	2.00	27.08	415	27.90
1946	1051	2,800	Mar. 10, 1946	9.8	309	1.53	20.74	272	18.27
1947	1081	2,040	Apr. 7, 1947	8.0	263	1.30	17.68	274	18.44
1948	1111	4,650	Mar. 22, 1948	7.0	303	1.50	20.44	290	19.52
1949	1141	1,480	Jan. 6, 7, 1949	7.5	193	.955	12.95	186	12.47
1950	1171	2,430	Mar. 30, 1950	7.0	197	.975	13.25	-	-

† Corrected.

## 152. 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 Goffs Falls, Hillsboro County, and 2.3 miles downstream from Piscataquog River.

Drainage area.--3,092 sq mi.

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

Average discharge.--14 years (1936-50), 5,841 cfs.

Extremes.--1936-50: Maximum discharge, 150,000 cfs Mar. 20, 1936 (gage height, 35.19 ft), from rating curve extended above 48,000 cfs on basis of computation of flow over dam at gage heights 25.87 ft and 35.19 ft; minimum daily, 154 cfs Sept. 5, 1949.

Remarks.--Flow regulated by power plants and by Franklin Falls Reservoir since 1942 (see p. 141), Squam, Little Squam, Newfound (see p. 139), Winnepesaukee (see p. 142), Winnisquam, Wentworth (see p. 142), Merrymeeting (see p. 142), and other lakes, and by MacDowell Reservoir since March 1950 (see p. 148), and Blackwater Reservoir since 1941 (see p. 154).

Monthly and yearly mean discharge, in cubic feet per second, of Merrimack River near Goffs Falls, below Manchester, N.H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1937	*3,370	*3,432	*7,255	*8,292	*8,125	*5,568	13,680	*16,060	*6,590	*3,242	*2,128	*1,679	*6,609
1938	2,844	6,580	7,538	6,249	6,924	8,155	10,180	5,658	3,234	4,178	3,677	14,500	6,619
1939	5,306	4,568	10,480	5,240	4,045	6,429	16,150	9,952	3,247	1,829	1,935	1,382	6,055
1940	1,619	2,762	2,499	1,466	1,459	2,141	19,250	14,630	7,970	3,027	1,977	2,740	5,132
1941	1,611	5,084	3,722	4,325	5,395	3,855	8,096	3,282	2,013	2,351	1,337	1,082	3,491
1942	1,363	2,010	1,868	2,328	1,460	8,611	12,140	4,658	5,125	2,025	1,616	1,489	3,727
1943	1,804	3,951	3,936	2,792	3,310	7,567	10,600	13,890	4,109	2,163	3,959	2,122	5,029
1944	2,845	6,958	3,099	1,995	1,916	4,446	14,550	7,853	7,292	3,169	1,480	2,904	4,858
1945	2,571	2,488	3,913	4,595	3,996	14,050	11,480	14,380	8,820	4,704	2,373	2,229	6,320
1946	3,567	4,655	6,962	5,194	4,432	13,650	6,929	8,517	5,300	1,937	3,052	2,228	5,552
1947	3,879	3,163	2,929	3,334	5,666	8,249	13,550	10,400	8,042	3,130	1,939	1,701	5,485
1948	905	2,336	1,572	1,410	1,939	10,270	9,780	10,880	6,115	2,562	1,655	1,031	4,210
1949	1,000	3,078	2,008	7,217	4,378	6,745	7,949	4,853	2,038	1,212	1,232	1,533	3,597
1950	1,409	2,317	2,852	4,233	3,672	5,346	14,350	5,294	3,855	1,117	1,031	1,366	3,888

\* Revised.

\* Not previously published; estimated on basis of weather records and records for nearby stations.

#### Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1937	*1.26	*1.24	*2.71	*3.09	*2.74	*2.08	*4.94	*5.99	*2.38	*1.21	*0.79	*0.61	*29.04
1938	1.06	2.58	2.81	2.33	2.33	3.04	3.67	2.11	1.17	1.56	1.37	5.23	29.06
1939	1.98	1.65	3.91	1.95	1.36	2.40	6.55	3.71	1.17	.89	.72	.50	26.58
1940	.60	1.00	.93	.55	.51	.80	6.95	5.53	2.88	1.13	.74	.99	22.61
1941	.60	1.83	1.39	1.61	1.82	1.44	2.92	1.22	.73	.88	.50	.39	15.33
1942	.51	.73	.70	.87	.49	3.21	4.38	1.74	1.85	.76	.60	.54	16.38
1943	.67	1.43	1.47	1.04	1.11	2.82	3.82	5.18	1.48	.81	1.48	.77	22.08
1944	1.06	2.51	1.16	.74	.67	1.66	5.25	2.93	2.63	1.18	.55	1.05	21.39
1945	.96	.90	1.46	1.71	1.35	5.24	4.14	5.36	3.18	1.75	.88	.80	27.73
1946	1.33	1.68	2.60	1.94	1.49	5.09	2.50	3.18	1.91	.72	1.14	.80	24.38
1947	1.45	1.14	1.09	1.24	1.91	3.08	4.89	3.88	2.90	1.17	.72	.61	24.08
1948	.34	.84	.59	.53	.68	3.83	3.53	4.06	2.21	.96	.62	.37	18.56
1949	.37	1.11	.75	2.69	1.47	2.51	2.87	1.81	.74	.45	.46	.55	15.78
1950	.53	.84	1.06	1.58	1.24	1.99	5.18	1.97	1.39	.42	.38	.49	17.07

\* Revised.

\* Not previously published; estimated on basis of weather records and records for nearby stations.

#### Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year				
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1936	851	150,000	Mar. 20, 1936	-	-	-	-	-	-	-	-
1937	821,1231	*33,700	May 16, 1937	-	*450	*6,609	*2.14	*29.04	*6,847	*30.08	
1938	851	102,500	Sept. 23, 1938	536	6,619	2.14	29.06	6,913	30.35		
1939	871	36,500	Apr. 21, 1939	426	6,055	1.96	26.58	4,915	21.57		
1940	891	41,800	Apr. 14, 1940	554	5,132	1.66	22.61	5,425	23.90		
1941	921	15,200	Nov. 16, 1940	686	3,491	1.13	15.33	3,060	13.45		
1942	951	24,200	June 16, 1942	663	3,727	1.21	16.38	4,100	18.01		
1943	971	23,600	May 14, 1943	392	5,029	1.63	22.08	5,293	23.24		
1944	1001	35,000	June 26, 1944	691	4,858	1.57	21.39	4,538	19.98		
1945	1031	30,300	Mar. 22, 1945	1,100	6,320	2.04	27.73	6,842	30.02		
1946	1051	30,400	Dec. 9, 1945	833	5,552	1.80	24.38	5,114	22.45		
1947	1081	27,700	Apr. 14, 1947	453	5,485	1.77	24.08	5,049	22.17		
1948	1111	36,200	Mar. 23, 1948	217	4,210	1.36	18.56	4,316	19.02		
1949	1141	22,000	Jan. 2, 1949	154	3,597	1.16	15.78	3,641	15.98		
1950	1171	28,200	Apr. 22, 1950	180	3,888	1.26	17.07	-	-		

\* Revised.

#### 153. Tower Hill Pond near Auburn, N.H.

Location.--Lat 43°01'50", long. 71°21'35", on Maple Falls Brook 2½ miles north of Auburn, Rockingham County.

Drainage area.--12.5 sq mi.

Gage.--Staff gage. Datum of gage is 268.95 ft above mean sea level.

Remarks.--Reservoir completed in 1939, used for storage of water for municipal supply and for power, and has a usable capacity of 182,000,000 cu ft.

Cooperation.--Records furnished by Manchester Water Works.

Month-end contents, in millions of cubic feet, of Tower Hill Pond near Auburn, N.H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1940	3.3	9.4	18.8	18.4	25.4	59.8	173.5	181.5	175.3	176.7	173.5	146.5
1941	52.7	46.3	58.6	52.7	68.2	49.7	48.0	61.8	71.4	76.9	62.3	22.6
1942	.9	3	.9	.9	9.0	152.4	182.5	181.5	180.7	181.5	177.1	178.9
1943	169.1	61.1	38.4	27.9	57.3	147.3	183.4	182.9	180.7	139.2	121.2	117.1
1944	117.1	120.4	63.0	9.9	17.0	113.2	183.4	178.1	183.4	177.1	141.6	115.5
1945	110.2	100.5	121.2	81.0	46.8	173.5	183.8	173.5	160.3	155.9	105.1	70.7
1946	48.5	51.5	48.0	94.6	46.8	174.5	173.5	173.5	169.1	96.9	86.8	86.8
1947	87.4	20.7	27.9	42.2	85.3	154.1	173.5	184.2	180.7	179.8	163.0	102.8
1948	21.7	19.8	23.0	19.8	28.5	167.4	182.5	184.2	183.4	179.8	175.3	145.7
1949	67.5	36.8	43.8	94.0	128.1	160.3	182.5	178.1	149.9	151.6	131.0	91.0
1950	39.4	3.1	2.1	49.7	88.9	163.8	183.4	177.1	155.1	109.3	66.2	5.7

154. 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.

Gage.--Water-stage recorder and concrete control. Datum of gage is 252.60 ft above mean sea level (city of Manchester bench mark).

Average discharge.--12 years (1938-50), 35.7 cfs (adjusted).

Extremes.--1938-50: Maximum discharge, 355 cfs Apr. 13, 1940 (gage height, 2.14 ft); no flow Oct. 5-8, 1939, Dec. 4, 1941.

Remarks.--Runoff adjusted for change in contents in Tower Hill Pond (capacity, 1,365,000,000 gal) since November 1939 (see preceding page). Some diurnal fluctuation caused by mill above station.

Monthly and yearly mean discharge, in cubic feet per second, (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1938	-	-	-	52.9	61.8	59.4	69.0	49.4	38.8	63.6	60.6	60.6	-
1939	46.9	36.7	85.2	39.3	31.8	81.2	176	40.9	21.5	9.33	4.20	1.85	47.9
1940	1.53	8.00	7.21	10.2	9.91	19.7	172	63.8	36.3	24.7	4.31	14.1	30.8
1941	33.8	28.5	35.1	41.0	56.7	47.8	56.1	15.3	5.75	3.20	5.07	13.8	28.3
1942	10.3	6.63	9.51	11.1	21.5	81.5	59.9	28.3	19.7	17.5	11.7	4.64	22.5
1943	9.94	67.4	71.0	41.9	21.6	50.5	64.9	86.1	16.2	18.4	28.8	6.71	40.5
1944	6.57	31.6	34.8	30.5	14.5	44.8	107	39.3	42.1	17.9	13.1	31.5	34.4
1945	16.8	26.7	47.1	57.2	48.2	104	64.6	125	54.9	47.5	38.8	21.0	54.5
1946	23.4	35.3	67.6	41.3	47.5	91.5	53.4	66.3	38.8	33.8	26.4	7.19	44.5
1947	22.2	34.5	11.2	20.3	31.9	68.8	77.4	64.5	44.6	23.3	10.6	24.0	36.0
1948	28.7	20.5	8.01	10.1	17.0	66.0	69.2	65.4	65.9	21.0	8.58	6.84	34.2
1949	26.4	27.6	13.3	28.3	41.2	41.3	55.3	38.1	20.9	3.70	5.54	16.6	26.2
1950	20.3	22.8	15.4	24.7	18.1	40.6	93.1	30.2	18.4	16.0	18.1	27.0	28.7

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1938	-	-	-	2.20	2.31	2.46	2.77	2.05	1.56	2.64	2.51	2.43	-
1939	1.95	1.47	3.53	1.63	1.19	3.37	7.04	1.70	.86	.39	.17	.07	23.37
1940	.06	.41	.45	.42	.49	1.35	8.67	2.77	1.36	1.05	.13	.15	17.31
1941	-.05	1.05	1.65	1.61	2.36	1.70	2.22	.85	.38	.22	-.02	-.06	11.91
1942	.12	.26	.40	.46	.46	5.60	2.87	1.09	.78	.74	.42	.21	13.41
1943	.26	1.03	2.59	1.57	1.27	3.49	3.16	3.56	.62	.12	.92	.21	18.80
1944	.27	1.32	.65	.45	.67	3.35	5.39	1.55	1.77	.65	-.006	.86	16.82
1945	.61	.92	2.28	1.75	1.27	6.29	2.75	5.00	2.00	1.90	.82	.31	25.90
1946	.63	1.46	2.75	2.44	1.04	5.77	2.13	2.75	1.49	.29	.94	.29	21.98
1947	.93	.35	.57	1.06	1.86	3.92	3.41	2.84	1.74	.95	.18	.03	17.84
1948	-.07	.79	.38	.37	.80	4.89	3.01	3.69	2.63	.82	.29	-.18	17.42
1949	-.12	.63	.66	1.95	2.04	2.24	2.48	1.51	.40	.18	-.09	.05	11.93
1950	.07	.35	.62	1.76	1.29	2.84	4.04	1.15	.40	-.04	.08	.15	12.71

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

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30										Calendar year		
		Observed					Adjusted					Observed		Adjusted
		Momentary maximum		Minimum			Per square mile		Runoff in inches			Mean		Mean
		Discharge	Date	day	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean
1938	851	290	July 30, 1938	-	-	-	-	-	-	57.1	-	57.1	-	27.88
1939	891	*310	Apr. 20, 1939	0.2	47.9	-	1.72	23.37	35.0	35.0	35.0	35.0	35.0	17.34
1940	891	355	Apr. 13, 1940	0	30.8	35.3	1.27	17.31	37.6	38.8	38.8	38.8	38.8	119.04
1941	921	140	Feb. 9, 1941	0.2	28.3	24.4	.878	11.91	22.4	20.6	20.6	20.6	20.6	10.04
1942	951	227	Mar. 10, 1942	1.7	22.5	27.4	.986	13.41	32.6	33.8	33.8	33.8	33.8	16.51
1943	971	217	Dec. 3, 1942	1.3	40.5	38.5	1.38	18.80	34.2	34.9	34.9	34.9	34.9	17.06
1944	1001	187	Apr. 17, 1944	1.0	34.4	34.4	1.24	16.82	35.9	37.8	37.8	37.8	37.8	18.49
1945	1031	242	May 19, 1945	8.1	54.5	53.1	1.91	25.90	57.5	55.2	55.2	55.2	55.2	26.93
1946	1051	178	Mar. 9, 1946	2.1	44.5	45.0	1.62	21.98	39.5	38.9	38.9	38.9	38.9	18.99
1947	1081	150	Mar. 16, 17, 1947	5.1	35.0	36.6	1.32	17.84	35.2	35.0	35.0	35.0	35.0	17.09
1948	1111	246	Mar. 23, 1948	1.0	34.2	35.6	1.28	17.42	35.0	35.7	35.7	35.7	35.7	17.49
1949	1141	125	Apr. 20, 1949	1.4	26.2	24.5	.881	11.93	25.5	24.2	24.2	24.2	24.2	11.80
1950	1171	162	Apr. 21, 22, 1950	6.8	28.7	26.0	.935	12.71	-	-	-	-	-	-

\* Revised.

† Corrected.

## 155. Massabesic Lake near Manchester, N.H.

Location.--Lat 42°57'45", long. 71°23'40", on Cohas Brook 2½ miles southeast of Manchester, Hillsboro County.

Drainage area.--43 sq mi.

Gage.--Float gage. Datum of gage is 100.93 ft above mean sea level.

Remarks.--Lake is used for storage of water for municipal supply and has a capacity of 724,000,000 cu ft.

Cooperation.--Records furnished by Manchester Water Works.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1941	-	-	-	-	-	-	-	-	-	-	-	255
1942	241	249	282	327	360	745	656	579	501	466	299	253
1943	257	466	544	440	320	317	581	750	423	427	390	351
1944	279	312	280	367	316	467	754	524	610	411	328	417
1945	323	303	368	458	381	618	631	767	700	614	392	342
1946	357	440	479	403	318	481	592	834	560	496	594	463
1947	582	318	358	444	497	610	695	648	515	454	263	263
1948	286	357	376	394	349	685	673	841	669	408	345	232
1949	313	422	456	536	506	579	713	669	547	450	394	420
1950	441	486	532	565	522	705	800	557	539	495	488	506

## 156. 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.

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.--41 years (1909-50), 277 cfs.

Extremes.--1909-50: Maximum discharge, 16,900 cfs Mar. 19, 1936 (gage height, 16.2 ft), from rating curve extended above 7,200 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.--Some diurnal fluctuation caused by mill above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1909	-	-	-	-	-	-	-	-	-	-	39.2	35.2	-
1910	38.4	38.5	69.1	267	206	1,420	496	263	226	41.9	41.2	34.9	263
1911	39.8	61.4	59.3	130	50.9	456	497	140	123	37.3	40.0	58.4	141
1912	252	293	393	235	191	832	790	389	124	44.7	47.5	43.7	303
1913	57.0	237	257	435	175	707	498	261	97.0	48.6	65.8	63.5	243
1914	215	216	251	176	260	936	1,020	510	88.2	68.0	41.3	30.7	318
1915	21.8	27.3	46.1	263	478	280	278	189	49.0	591	769	97.5	240
1916	109	166	330	436	467	466	1,080	540	602	192	115	102	382
1917	66.3	88.0	137	173	151	727	639	401	445	132	89.0	71.2	260
1918	104	140	95.9	89.3	278	637	627	199	148	59.0	46.4	185	216
1919	86.0	129	†260	291	145	869	504	552	122	52.3	32.6	78.1	262
1920	46.9	344	326	87.2	100	1,210	1,140	512	271	80.4	70.9	56.1	354
1921	204	225	786	315	186	790	536	544	74.3	164	87.0	38.7	331
1922	40.2	160	395	164	215	982	797	533	561	375	133	94.3	372
1923	108	109	81.2	320	210	598	1,020	400	104	†56.1	39.4	37.6	257
1924	86.6	289	555	466	185	370	1,180	567	111	44.1	33.6	38.6	327
1925	27.6	39.2	76.9	25.3	371	737	475	205	74.6	92.8	59.7	39.7	184
1926	†82.5	253	545	147	151	446	907	229	98.0	40.1	30.2	22.2	246
1927	52.1	253	167	145	236	851	276	241	97.8	44.9	92.0	181	218
1928	164	689	629	362	393	359	599	531	401	357	326	351	428
1929	119	114	143	*206	*144	*835	916	569	131	52.4	26.3	24.0	*274
1930	26.2	46.7	45.1	139	222	533	320	204	134	70.8	32.4	22.6	149
1931	39.6	136	89.7	57.9	87.1	434	1,140	404	536	79.4	66.5	45.6	259
1932	55.3	64.1	201	442	278	342	939	177	56.0	31.5	22.0	70.2	222
1933	310	583	223	331	300	686	1,660	247	86.3	36.2	46.8	150	387
1934	169	144	148	219	111	643	1,242	332	151	49.2	33.9	239	290
1935	197	236	269	598	289	731	543	235	489	167	42.1	85.6	343
1936	45.4	120	128	241	171	2,278	752	166	87.3	39.4	33.0	32.1	323
1937	104	84.3	532	620	413	383	737	567	343	123	63.7	55.9	335
1938	85.7	699	512	420	446	380	425	289	281	405	289	799	418
1939	253	223	544	303	232	542	1,119	255	92.4	39.7	47.0	29.8	307
1940	35.6	85.4	84.6	72.7	85.8	155	1,518	563	383	112	40.0	34.0	262

\* Revised.

† Corrected.

Monthly and yearly mean discharge, in cubic feet per second, of Souhegan River at Merrimack, N.H.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	27.6	146	254	200	413	228	375	166	90.9	28.4	21.3	19.3	162
1942	20.2	58.0	98.9	181	110	912	496	175	299	201	127	72.4	230
1943	92.2	259	330	216	295	584	523	625	182	58.8	84.3	26.5	273
1944	113	332	150	75.1	108	464	802	232	613	141	47.4	190	270
1945	81.2	126	295	249	228	1,000	444	733	355	201	123	70.6	327
1946	61.5	190	351	378	246	815	519	498	304	79.0	123	71.1	287
1947	157	72.7	78.4	153	331	512	688	389	239	154	64.1	46.5	240
1948	27.8	302	132	104	179	878	460	555	421	162	41.3	21.4	274
1949	28.9	132	114	328	379	386	491	236	69.2	42.3	28.3	41.6	188
1950	39.1	67.7	114	266	200	457	607	198	108	31.3	32.5	44.7	180

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1909	-	-	-	-	-	-	-	-	-	-	0.26	0.23	-
1910	0.26	0.25	0.47	1.80	1.25	9.56	3.23	1.77	1.47	0.28	.28	.23	20.85
1911	.27	.40	.40	.87	.31	3.08	3.24	.94	.81	.24	.27	.38	11.21
1912	1.70	1.07	2.58	1.58	1.21	5.61	5.16	2.63	.81	.30	.32	.29	24.10
1913	.38	1.54	1.73	2.93	1.77	4.76	3.25	1.76	.63	.33	.44	.41	19.23
1914	1.45	1.41	1.69	1.19	1.58	6.31	6.63	3.44	.58	.46	.28	.20	25.22
1915	.15	.18	.31	1.77	2.91	1.89	1.82	1.27	.32	2.64	5.18	.64	19.08
1916	.74	1.08	2.23	2.94	2.95	3.14	7.03	3.64	3.93	1.29	.78	.67	30.42
1917	.45	.57	.92	1.17	.92	4.90	4.17	2.70	2.90	.89	.60	.46	20.65
1918	.70	.92	.65	1.60	1.69	4.30	4.09	1.34	.97	.40	.31	1.21	17.18
1919	.58	.84	1.75	1.96	.88	5.86	3.29	3.72	.80	.35	.22	.51	20.76
1920	.32	2.24	2.20	.59	.63	8.15	7.45	3.45	1.77	.54	.48	.37	28.19
1921	1.38	1.47	5.30	2.12	1.13	5.26	3.50	3.67	.48	1.11	.59	.25	26.26
1922	.27	1.04	2.66	1.11	1.31	6.62	5.20	3.59	3.68	2.53	.89	.62	29.50
1923	.73	.71	.55	2.16	1.28	4.03	6.66	2.70	.68	.38	.27	.25	20.40
1924	.58	1.89	3.74	3.14	1.16	2.49	7.68	3.82	.72	.30	.23	.25	26.00
1925	.19	.26	.52	.17	2.26	4.97	3.10	1.38	.49	.63	.40	.26	14.63
1926	.56	1.65	3.67	.99	.92	3.00	5.92	1.55	.64	.27	.20	.15	19.52
1927	.35	1.68	1.12	.98	1.32	5.74	1.80	1.63	.64	.30	.62	1.18	17.33
1928	1.11	4.50	4.24	2.44	2.48	2.42	3.91	3.58	2.61	2.27	2.20	2.29	34.05
1929	.80	.74	.97	*1.39	*.87	*5.63	5.98	3.83	.85	.35	.19	.16	*21.76
1930	.18	.30	.30	.93	1.35	3.60	2.09	1.38	.88	.48	.22	.15	11.86
1931	.27	.89	.61	.39	.53	2.93	7.43	2.72	3.50	.54	.45	.30	20.56
1932	.37	.42	1.36	2.97	1.76	2.31	6.12	1.20	.36	.21	.15	.46	17.69
1933	2.09	3.80	1.50	2.24	1.82	4.62	10.83	1.66	.56	.24	.32	.98	30.66
1934	1.14	.94	1.00	1.46	.68	4.34	8.10	2.24	.99	.33	.23	1.56	23.03
1935	1.33	1.55	1.81	3.97	1.76	4.92	3.55	1.58	3.19	1.13	.28	.56	25.63
1936	.31	.78	.86	1.63	1.08	15.33	4.91	1.12	.57	.27	.22	.21	27.29
1937	.70	.55	3.58	4.18	2.52	2.58	4.81	3.83	2.24	.83	.43	.36	26.61
1938	.58	4.56	3.45	2.84	2.72	2.56	2.78	1.95	1.83	2.73	1.95	5.21	33.16
1939	1.71	1.45	3.67	2.04	1.42	3.66	7.30	1.72	.60	.27	.32	.19	24.35
1940	.24	.56	.57	.49	.54	1.05	9.90	3.60	2.50	.76	.27	.22	20.90
1941	.19	.95	1.71	1.35	2.51	1.54	2.45	1.12	.59	.19	.14	.13	12.87
1942	.14	.38	.67	1.22	.67	6.15	3.23	1.18	.95	1.36	.86	.47	18.28
1943	.62	1.69	2.22	1.46	1.80	3.94	3.41	4.22	1.19	.40	.57	.17	21.69
1944	.76	2.17	1.01	.51	.66	3.13	5.23	1.56	4.00	.95	.32	1.24	21.54
1945	.55	.82	1.99	1.68	1.39	6.74	2.90	4.94	2.32	1.36	.83	.46	25.98
1946	.41	1.24	2.37	2.55	1.50	5.49	2.08	3.36	1.98	.53	.83	.46	22.80
1947	1.06	.47	.53	1.03	2.02	3.45	4.49	2.63	1.56	1.04	.43	.30	19.01
1948	.19	1.97	.69	.70	1.15	5.92	3.00	3.74	2.75	1.10	.28	.14	21.81
1949	.19	.86	.77	2.21	2.31	2.60	3.20	1.59	.45	.28	.19	.27	14.92
1950	.26	.44	.77	1.60	1.22	3.08	3.96	1.34	.71	.21	.22	.29	14.30

\* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1909	431	-	-	-	-	-	-	-	-	-
1910	431	*4,550	Mar. 1, 1910*	21	263	1.54	20.85	264	20.94	
1911	431	*2,810	Mar. 28, 1911*	21	141	.825	11.21	206	16.33	
1912	431	*2,450	Mar. 30, 1912*	28	303	1.77	24.10	271	21.56	
1913	351, 431	*3,250	Mar. 28, 1913	21	243	1.42	19.23	254	20.13	
1914	(a)	*3,680	Mar. 3, 1914	22	318	1.86	25.22	268	21.31	
1915	431, 1231	*6,000	Aug. 5, 1915	20	240	1.40	19.08	283	22.49	
1916	431	*4,740	Feb. 27, 1916*	45	382	2.23	30.42	355	28.31	
1917	451, 1231	*3,290	Mar. 28, 1917	30	260	1.52	20.65	264	20.98	
1918	471	1,830	Mar. 26, 1918	32	216	1.26	17.18	228	18.08	
1919	501, 1231	*3,200	Mar. 29, 1919	24	262	1.53	20.76	281	22.35	
1920	501, 1231	*3,920	Mar. 28, 1920	25	354	2.07	28.19	397	31.58	
1921	521, 1231	*5,410	Dec. 15, 1920	31	331	1.94	26.26	278	22.08	
1922	541, 1231	*3,980	May 6, 1922	33	372	2.18	29.50	346	27.52	
1923	561, 1231	*3,450	Apr. 6, 1923	20	257	1.50	20.40	310	24.62	
1924	581, 781	9,260	Apr. 8, 1924	18	327	1.91	26.00	261	20.76	
1925	601	2,050	Mar. 30, 1925	16	184	1.08	14.63	246	19.54	

\* Revised.

\* Not previously published.

a In W.S.P. 381, 431, 1231.



Yearly discharge, in cubic feet per second, of Souhegan River at Merrimack, N.H.--Continued									
Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1926	621	2,590	Dec. 5, 1925	14	246	1.44	19.52	211	16.76
1927	641,1231	*2,870	Mar. 15, 1927	20	218	1.27	17.33	303	24.06
1928	661,1231	*6,180	Nov. 5, 1927	43	428	2.50	34.05	336	26.71
1929	681,1231	*2,290	Apr. 22, 1929	20	*274	*1.60	*21.76	*253	*20.03
1930	696,1231	*2,530	Mar. 9, 1930	15	149	.871	11.86	162	12.85
1931	711,1231	*3,490	June 10, 1931	14	259	1.51	20.56	264	20.94
1932	726,1231	*3,520	Apr. 1, 1932	15	222	1.30	17.69	288	22.95
1933	741,1231	*3,210	Apr. 18, 1933	21	387	2.26	30.66	332	26.35
1934	756,1231	*7,500	Apr. 13, 1934	23	290	1.70	23.03	310	24.64
1935	761	3,260	Jan. 10, 1935	29	323	1.89	25.63	288	22.89
1936	801	16,900	Mar. 19, 1936	20	343	2.01	27.29	379	30.17
1937	821	3,450	Dec. 21, 1936	26	335	1.96	26.61	362	30.37
1938	851	10,800	Sept. 21, 1938	24	418	2.44	33.16	395	31.40
1939	871	2,280	Apr. 20, 1939	22	307	1.80	24.35	238	18.89
1940	891	4,250	Apr. 13, 1940	25	262	1.53	20.90	281	22.38
1941	921	2,370	Feb. 9, 1941	14	162	.947	12.87	141	11.21
1942	951	3,880	Mar. 10, 1942	14	230	1.35	18.28	272	21.62
1943	971	1,730	Dec. 3, 1942	19	273	1.60	21.69	266	21.10
1944	1001	7,830	June 25, 1944	21	270	1.58	21.54	263	20.96
1945	1031	2,430	Mar. 22, 1945	41	327	1.91	25.98	356	26.64
1946	1051	2,750	Mar. 10, 1946	39	287	1.68	22.80	263	20.84
1947	1081	1,680	Apr. 7, 1947	30	240	1.40	19.01	252	20.00
1948	1111	3,990	Mar. 23, 1948	19	274	1.60	21.81	259	20.58
1949	1141,1231	*2,100	Jan. 7, 1949*	18	188	1.10	14.92	184	14.57*
1950	1171	2,180	Mar. 30, 1950	21	180	1.05	14.30	-	-

\* Revised.

\* Not previously published.

## 157. North Nashua River near Leominster, Mass.

Location.--Lat 42°30'06", long. 71°43'23", on right bank 1 1/3 miles upstream from Wekepeke Brook, 2 1/2 miles southeast of Leominster, Worcester County, and 6.1 miles upstream from confluence with South Branch Nashua River.

Drainage area.--107 sq mi.

Gage.--Water-stage recorder. Datum of gage is 270.04 ft above mean sea level, datum of 1929.

Average discharge.--15 years (1935-50), 181 cfs.

Extremes.--1935-50: 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.--Flow regulated by mills above station. Records include flow diverted from 2.1 sq mi of Squamaccock River Basin to North Nashua River Basin for municipal supply of Fitchburg.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	46.7	86.5	94.6	231	145	1,289	444	137	81.5	42.9	49.5	47.2	226
1937	86.4	75.3	356	415	266	250	364	304	198	88.4	58.2	69.8	213
1938	74.9	348	298	356	294	230	231	185	200	392	286	595	290
1939	192	207	346	234	241	368	559	180	109	51.1	43.8	39.4	214
1940	45.2	63.0	66.9	74.3	88.8	190	775	351	234	84.1	47.9	49.6	172
1941	47.3	105	138	146	225	172	188	120	72.7	49.5	38.1	42.6	111
1942	39.4	54.9	74.5	110	109	509	203	114	185	124	66.1	55.8	137
1943	61.6	137	214	166	268	410	278	404	131	57.3	57.8	58.2	188
1944	82.0	190	105	73.6	106	283	366	137	393	104	56.0	112	165
1945	71.3	97.6	164	177	202	533	260	372	238	152	97.0	64.7	201
1946	77.2	108	213	281	230	469	190	311	270	81.9	86.3	74.7	200
1947	94.6	69.5	82.2	162	243	332	334	257	138	67.3	56.3	64.5	158
1948	48.7	182	111	106	166	493	281	342	301	122	50.6	43.3	187
1949	49.7	120	103	248	272	227	304	163	70.3	43.0	40.8	47.1	140
1950	41.9	44.4	69.7	151	146	297	328	149	85.1	45.6	47.0	46.0	121

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	0.50	0.92	1.02	2.49	1.47	13.83	4.63	1.48	0.85	0.48	0.53	0.49	28.67
1937	.93	.79	3.84	4.47	2.59	2.70	4.00	3.27	2.06	.95	.63	.73	26.96
1938	.81	3.63	3.22	3.64	2.86	2.48	2.41	1.99	2.09	4.22	3.08	6.20	36.83
1939	2.06	2.15	3.72	2.53	2.54	3.97	5.82	1.94	1.14	.55	.47	.41	27.10
1940	.49	.66	.72	.80	.89	2.05	8.08	3.79	2.44	.91	.52	.52	21.87
1941	.51	1.10	1.49	1.57	2.19	1.86	1.96	1.29	.76	.53	.41	.44	14.11
1942	.42	.57	.60	1.19	1.06	5.49	2.11	1.23	1.93	1.33	.71	.58	17.42
1943	.66	1.43	2.30	1.79	2.61	4.41	2.90	4.36	1.36	.62	.62	.40	23.46
1944	.68	1.98	1.13	.79	1.07	2.83	3.81	1.48	4.10	1.12	.60	1.17	20.96
1945	.77	1.02	1.76	1.91	1.97	5.75	2.71	4.01	2.48	1.43	1.05	.67	25.53
1946	.83	1.12	2.29	3.02	2.24	5.06	1.99	3.35	2.82	.88	.93	.78	25.31
1947	1.02	.72	.89	1.74	2.26	3.57	3.48	2.77	1.44	.73	.61	.67	20.00
1948	.52	1.90	1.20	1.15	1.67	5.31	2.93	3.69	3.14	1.31	.54	.45	23.81
1949	.54	1.26	1.11	2.67	2.85	2.44	3.17	1.76	.73	.46	.44	.49	17.72
1950	.45	.46	.74	1.63	1.44	3.20	3.42	1.60	.89	.49	.51	.50	15.33

Yearly discharge, in cubic feet per second, of North Nashua River near Leominster, Mass.										
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1936	801	16,300	Mar. 18, 1936	22	226	2.11	28.67	250	31.79	
1937	821	2,570	Dec. 20, 1936	31	213	1.99	28.96	229	29.06	
1938	851	10,300	Sept. 21, 1938	32	290	2.71	36.83	293	37.10	
1939	871	1,180	Dec. 6, 1938	24	214	2.00	27.10	166	21.04	
1940	891	2,380	Apr. 13, 1940	27	172	1.61	21.87	182	23.10	
1941	921	1,080	Feb. 8, 1941	27	111	1.04	14.11	101	12.80	
1942	951	2,960	Mar. 9, 1942	27	137	1.28	17.42	158	20.02	
1943	971	1,240	Dec. 2, 1942	26	185	1.73	23.46	182	23.06	
1944	1001	8,100	June 25, 1944	30	165	1.54	20.96	161	20.52	
1945	1031	1,010	Mar. 22, 1945	44	201	1.88	25.53	207	26.22	
1946	1051	1,600	Mar. 9, 1946	43	200	1.87	25.31	187	23.70	
1947	1081	1,080	Mar. 15, 1947	38	158	1.48	20.00	165	20.99	
1948	1111	1,800	Mar. 20, 1948	29	187	1.75	23.81	182	23.10	
1949	1141	1,120	Jan. 6, 1949	27	140	1.51	17.72	130	16.46	
1950	1171	1,070	Mar. 23, 1950	27	121	1.13	15.33	-	-	

## 158. Rocky Brook near Sterling, Mass.

Location.--Lat 42°26'57", long. 71°48'10", 150 ft downstream from bridge on Beaman Road, 0.7 mile upstream from mouth, and 2½ miles west of Sterling, Worcester County.

Drainage area.--2.28 sq mi.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 505 ft (from topographic map).

Extremes.--1946-50: Maximum discharge, 73 cfs Mar. 20, 1948 (gage height, 3.54 ft); minimum, 0.01 cfs several days in August and September 1949, Aug. 16-19, Sept. 10, 1950.

Monthly and yearly mean discharge, in cubic feet per second												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1947	2.19	1.45	1.79	3.80	5.05	7.99	6.29	5.18	2.04	0.331	0.060	0.138
1948	.083	3.53	1.75	1.66	3.45	14.3	5.81	8.39	6.16	2.21	.331	.058
1949	.137	2.99	2.28	4.79	6.96	5.64	6.62	2.77	.356	.033	.018	.032
1950	.045	.234	.761	1.99	1.83	5.35	4.35	2.22	.624	.128	.037	.024

Monthly and yearly runoff, in inches												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1947	1.11	0.71	0.81	1.92	2.30	4.04	3.08	2.62	1.00	0.17	0.03	0.07
1948	.04	1.73	.89	.84	1.63	7.25	2.84	4.24	3.01	1.12	.17	.03
1949	.07	1.46	1.15	2.42	3.18	2.85	3.24	1.40	.17	.02	.009	.02
1950	.02	.11	.38	1.00	.84	2.71	2.13	1.12	.31	.06	.02	.01

Yearly discharge, in cubic feet per second										
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1947	1081	58	Mar. 14, 1947	0.02	3.01	1.32	17.96	3.00	17.89	
1948	1111	73	Mar. 20, 1948	.02	3.98	1.75	23.79	3.99	23.81	
1949	1141	31	Nov. 20, 1948	.01	2.69	1.18	15.99	2.32	13.82	
1950	1171	36	Mar. 23, 1950	.01	1.46	.640	8.71	-	-	

## 159. 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. 108.84 sq mi from January 1914 to June 1937; 118.19 sq mi from January 1908 to December 1913; 119.00 sq mi from October 1896 to December 1907.

Gage.--Venturi meter since 1911. Prior to 1898, water-stage recorder and measuring flume at unused dam at Clinton. 1898 to 1911, water-stage recorder and weir in aqueduct.

Average discharge.--54 years (1896-1950), 181 cfs (adjusted to present drainage area).

Remarks.--Flow regulated by Wachusett Reservoir and several ponds. Runoff 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.

Monthly and yearly mean discharge, in cubic feet per second (adjusted), of South Branch Nashua River at Clinton, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1896	-	-	-	-	-	-	-	-	-	61.8	55.6	84.1	-
1897	146	168	172	147	171	508	300	214	217	266	165	70.0	213
1898	44.9	236	419	288	301	569	374	256	153	61.2	244	124	256
1899	278	400	380	385	201	511	622	159	103	65.2	43.4	46.1	266
1900	45.1	79.1	66.0	147	747	686	291	255	106	40.0	36.2	23.4	207
1901	52.0	161	289	95.6	500	918	502	181	87.8	94.2	58.9	251	251
1902	119	95.1	595	318	250	739	397	200	91.5	60.4	58.0	48.0	245
1903	156	124	321	233	393	630	412	105	392	115	87.3	69.0	255
1904	127	117	176	121	171	554	549	276	140	91.5	65.3	91.0	206
1905	64.0	63.1	80.9	233	83.3	553	298	81.9	99.7	67.2	59.1	226	159
1906	67.5	81.4	187	208	189	342	388	282	218	134	109	51.0	188
1907	97.6	158	146	269	127	315	264	178	142	61.6	16.0	149	158
1908	254	468	361	318	317	491	232	259	73.7	40.3	81.0	16.0	235
1909	28.9	22.9	70.8	108	467	389	443	222	118	42.6	35.4	38.0	163
1910	16.4	66.4	98.2	338	337	483	189	111	151	11.3	34.0	26.5	154
1911	12.5	64.8	71.5	141	114	245	255	84.2	64.2	10.3	34.4	33.2	93.9
1912	131	189	195	143	170	518	417	329	60.5	24.6	22.9	16.3	185
1913	26.5	80.7	145	259	159	414	381	190	51.2	3.50	10.9	40.0	146
1914	124	121	175	167	199	528	437	286	53.4	55.5	43.9	-1.98	182
1915	22.9	35.5	62.7	347	330	96.5	156	76.6	38.4	182	279	26.6	137
1916	65.1	83.8	229	222	306	318	556	286	346	183	47.8	49.4	223
1917	23.6	54.0	77.4	116	154	416	247	222	207	44.5	52.1	14.1	135
1918	93.4	52.7	65.5	81.6	341	436	271	113	68.0	47.1	26.8	102	141
1919	57.5	98.0	178	226	134	531	288	371	77.8	67.3	44.1	184	188
1920	83.4	309	218	109	122	789	588	549	324	136	55.1	90.9	264
1921	69.0	219	436	238	180	423	325	349	80.8	172	41.3	19.2	213
1922	26.7	133	214	99.9	370	563	401	331	374	252	134	87.0	233
1923	73.0	69.0	93.2	297	169	517	512	221	104	50.0	24.9	15.5	180
1924	72.3	164	289	316	154	286	708	332	75.6	22.1	42.4	53.9	208
1925	10.8	46.4	66.3	53.1	264	378	242	119	66.7	39.4	32.7	58.2	114
1926	73.6	154	273	160	140	318	406	139	68.2	43.5	42.4	33.8	153
1927	65.2	147	110	206	187	393	163	153	72.4	94.1	27.1	204	172
1928	186	441	430	251	304	216	359	278	349	154	111	109	265
1929	67.0	75.8	113	202	241	464	483	364	99.5	25.0	11.9	26.5	181
1930	40.3	61.5	69.8	109	146	203	161	98.1	75.4	76.3	37.6	39.6	96.7
1931	61.8	79.1	62.4	83.2	115	429	390	213	301	65.5	102	50.4	163
1932	46.0	53.2	114	285	192	304	413	119	57.1	36.1	47.5	85.9	146
1933	256	389	181	219	257	442	813	183	72.4	37.9	53.2	29.5	265
1934	138	101	131	255	137	477	596	285	160	54.4	23.2	157	210
1935	132	171	206	379	244	465	387	188	225	84.1	34.7	66.1	215
1936	33.3	107	79.9	312	143	1,193	437	212	89.2	51.0	60.0	56.9	232
1937	97.8	169	384	400	263	263	392	295	166	55.0	66.8	65.7	210
1938	89.8	386	296	330	353	287	258	190	227	407	144	566	293
1939	179	172	411	217	256	461	606	174	109	50.6	54.5	38.3	237
1940	54.6	78.5	102	121	127	262	884	323	177	93.1	34.2	45.9	191
1941	32.1	138	167	132	199	190	227	116	67.4	51.1	50.6	-1.98	113
1942	-51.9	50.9	79.3	136	118	591	210	153	172	125	68.2	53.7	142
1943	74.1	162	236	165	266	446	293	378	127	72.3	-25.5	17.6	134
1944	88.1	189	92.1	64.4	119	283	351	148	197	9.47	10.9	52.0	133
1945	54.9	119	171	185	191	536	270	363	233	61.5	98.0	21.3	194
1946	58.3	135	252	325	228	447	194	285	213	60.6	120	75.8	200
1947	110	61.1	119	185	214	348	318	265	121	28.8	42.3	47.0	155
1948	11.3	99.3	86.7	95.1	164	567	267	386	401	158	11.1	25.9	189
1949	2.31	153	113	247	298	243	266	161	57.3	-645	35.5	6.17	131
1950	-2.67	45.1	60.9	148	148	350	339	78.0	81.0	31.9	5.52	25.5	109

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

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1896	-	-	-	-	-	-	-	-	-	0.60	0.54	0.79	-
1897	-	1.57	1.67	1.42	1.50	4.92	2.82	2.08	2.04	2.57	1.60	.66	24.27
1898	.43	2.21	4.06	2.79	2.64	5.51	3.50	2.48	1.43	.59	2.36	1.17	29.17
1899	2.69	3.75	3.68	3.73	1.76	4.95	5.83	1.54	.97	.63	.42	.43	30.38
1900	.44	.74	.64	1.42	6.53	6.64	2.73	2.47	1.00	.39	.35	.22	23.57
1901	.50	1.51	2.80	.93	.57	4.85	8.60	4.87	1.70	.85	.91	.55	28.64
1902	1.15	.89	5.77	2.99	2.26	7.12	3.73	1.84	.71	.52	.53	.42	27.93
1903	1.70	1.10	3.30	2.26	3.44	6.11	3.86	1.02	3.68	1.11	.85	.65	29.08
1904	1.23	1.10	1.70	1.18	1.55	5.36	5.15	2.67	1.32	.89	.63	.85	25.63
1905	.62	.59	.78	2.26	.75	5.36	2.79	.79	.94	.65	.57	2.12	18.20
1906	.65	.76	1.82	2.02	1.65	3.32	3.64	2.73	2.04	1.30	1.05	.48	21.46
1907	.95	1.29	1.48	2.60	1.11	3.05	2.48	1.72	1.35	.80	.16	1.40	18.09
1908	2.47	4.38	3.50	3.10	2.90	3.91	2.19	2.52	.70	.39	.79	.15	27.00
1909	.28	.22	.69	1.06	4.12	3.80	4.18	2.16	1.09	.42	.35	.36	18.73
1910	.16	.63	.96	3.29	2.97	4.71	1.78	1.09	1.42	.11	.33	.25	17.70
1911	.12	.61	.70	1.38	1.01	2.39	2.40	.82	.61	.10	.34	.31	10.79
1912	1.28	1.79	1.90	1.39	1.55	5.05	3.94	3.21	.57	.24	.22	.15	21.29
1913	.26	.76	1.41	2.52	1.40	4.04	3.60	1.85	.48	.03	.11	.38	16.84
1914	1.21	1.14	1.70	1.70	1.90	5.60	4.48	3.03	.55	.59	.47	-.02	22.42
1915	.24	.36	.86	3.68	3.16	1.02	1.60	.81	.39	1.93	2.96	.27	17.08

Note.--Negative figure indicates that evaporation and seepage from reservoir exceeded inflow.

Monthly and yearly runoff, in inches (adjusted), of South Branch Nashua River at Clinton, Mass.--Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	.69	.86	2.42	2.35	3.03	3.37	5.70	3.03	3.55	1.94	.51	.51	27.96
1917	.25	.55	.82	1.22	1.48	4.41	2.53	2.35	2.12	.47	.55	.14	16.89
1918	.99	.54	.69	.86	3.26	4.61	2.78	1.20	.90	.50	.28	1.04	17.65
1919	.61	1.00	1.88	2.39	1.28	5.62	2.95	3.93	.80	.71	.47	1.89	23.53
1920	.88	3.17	2.31	1.15	1.21	8.36	6.03	3.69	3.32	1.44	.58	.93	33.07
1921	.73	2.25	4.62	2.52	1.72	4.48	3.33	3.70	.83	1.82	.44	.20	26.64
1922	.28	1.37	2.27	1.06	1.62	5.96	4.11	3.51	3.84	2.67	1.42	.89	29.00
1923	.77	.91	.99	3.15	1.62	5.48	5.24	2.34	1.06	.53	.26	.16	22.51
1924	.77	1.68	3.06	3.85	1.33	3.03	7.26	3.52	.77	.23	.45	.55	26.00
1925	.11	.48	.70	.56	2.52	4.00	2.48	1.26	.68	.42	.35	.60	14.16
1926	.78	1.38	2.90	1.70	1.34	3.37	4.16	1.47	.70	.46	.45	.35	19.06
1927	.69	1.51	1.16	2.18	1.78	4.17	1.67	1.62	.74	1.00	2.88	2.09	21.49
1928	1.97	4.52	4.55	2.66	3.01	2.29	3.68	2.95	3.58	1.63	1.18	1.12	33.14
1929	.71	.78	1.20	2.14	2.31	4.91	4.95	3.85	1.02	.26	.13	.27	22.53
1930	.43	.63	.74	1.16	1.40	2.15	1.65	1.04	.77	.31	.40	.41	11.59
1931	.65	.81	.66	.88	1.10	4.54	4.00	2.26	3.09	.69	1.08	.52	20.28
1932	.49	.55	1.21	3.02	1.91	3.22	4.23	1.26	.58	.38	.50	.88	18.23
1933	2.71	3.99	1.92	2.32	2.45	4.68	8.34	1.94	.74	.40	.56	3.02	33.07
1934	1.46	1.03	1.39	2.70	1.32	5.05	6.11	3.02	1.64	.58	.25	1.61	26.16
1935	1.40	1.76	2.18	4.01	2.33	4.93	3.97	2.00	2.31	.89	.37	.68	26.83
1936	.35	1.09	.85	3.30	1.41	12.68	4.47	2.25	.91	.54	.64	.58	29.07
1937	1.04	.71	4.07	4.24	2.51	2.78	4.03	3.12	1.71	.59	.71	.68	26.19
1938	.96	3.99	3.17	3.54	3.42	3.07	2.68	2.04	2.34	4.36	1.54	5.87	36.98
1939	1.92	1.78	4.40	2.32	2.48	4.93	6.28	1.87	1.13	.54	.58	.40	28.63
1940	.58	.81	1.09	1.29	1.27	2.80	9.16	3.46	1.84	1.00	.36	.48	24.14
1941	.34	1.43	1.79	1.41	1.92	2.03	2.35	1.24	.70	.55	.54	-.02	14.28
1942	-.56	.53	.85	1.45	1.14	6.32	2.18	1.64	1.78	1.33	.73	.76	17.95
1943	.79	1.68	2.53	1.76	2.58	4.77	3.04	4.04	1.32	.77	-.27	.18	23.19
1944	.94	1.95	.99	.69	1.19	3.03	3.63	1.58	2.05	.10	.12	.54	16.81
1945	.59	1.24	1.83	1.98	1.85	5.73	2.80	3.89	2.41	.87	1.05	.22	24.46
1946	.62	1.40	2.69	3.48	2.21	4.79	2.01	3.05	2.21	.65	1.28	.79	25.18
1947	1.18	.63	1.28	1.98	2.07	3.73	3.29	2.84	1.25	.31	.45	.49	19.50
1948	.12	1.03	.93	1.02	1.84	6.07	2.77	4.13	4.15	1.89	.12	.27	23.94
1949	.02	1.59	1.21	2.64	2.88	2.60	2.75	1.73	.59	-.01	.38	.06	16.44
1950	-.03	.47	.65	1.58	1.43	3.75	3.51	.84	.84	.34	.06	.26	13.70

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

Yearly discharge, in cubic feet per second (adjusted)

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1896	415	-	-	-	-	-	-	-	-
1897	415	-	-	-	213	1.79	24.27	230	26.31
1898	415	-	-	-	258	2.15	29.17	286	32.59
1899	415	-	-	-	266	2.24	30.39	194	22.08
1900	415	-	-	-	207	1.74	23.57	233	26.56
1901	415	-	-	-	251	2.11	28.64	277	31.64
1902	415	-	-	-	245	2.06	27.93	230	26.22
1903	415	-	-	-	255	2.14	29.08	237	27.01
1904	415	-	-	-	206	1.74	23.63	189	21.59
1905	415	-	-	-	159	1.34	18.20	170	19.44
1906	415	-	-	-	188	1.58	21.46	192	21.89
1907	415	-	-	-	158	1.33	18.09	217	24.78
1908	415	-	-	-	235	1.99	27.00	155	17.84
1909	415	-	-	-	163	1.38	18.73	168	19.29
1910	415	-	-	-	154	1.30	17.70	151	17.38
1911	415	-	-	-	93.9	.795	10.79	125	14.33
1912	415	-	-	-	185	1.56	21.29	163	18.75
1913	415	-	-	-	146	1.24	16.84	161	18.46
1914	415	-	-	-	182	1.65	22.42	157	19.63
1915	415	-	-	-	137	1.26	17.08	159	19.79
1916	431	-	-	-	223	2.05	27.96	205	25.61
1917	451	-	-	-	135	1.24	16.89	140	17.49
1918	471	-	-	-	141	1.30	17.65	152	18.92
1919	501	-	-	-	188	1.73	23.53	212	26.40
1920	501	-	-	-	264	2.43	33.07	274	34.31
1921	521	-	-	-	213	1.96	26.64	184	22.96
1922	541	-	-	-	233	2.14	29.00	223	27.75
1923	561	-	-	-	180	1.66	22.51	203	25.35
1924	581	-	-	-	208	1.91	26.00	174	21.78
1925	601	-	-	-	114	1.04	14.16	144	17.93
1926	621	-	-	-	153	1.40	19.06	139	17.86
1927	641	-	-	-	172	1.58	21.49	234	29.17
1928	661, 1051	-	-	-	265	2.43	33.14	198	24.79
1929	681	-	-	-	181	1.66	22.53	174	21.64
1930	696	-	-	-	92.7	.852	11.59	95.4	11.91
1931	711	-	-	-	163	1.49	20.28	164	20.41
1932	726	-	-	-	146	1.34	18.23	197	24.60
1933	741	-	-	-	265	2.44	33.07	227	28.33
1934	756	-	-	-	210	1.93	26.16	221	27.61
1935	781	-	-	-	215	1.98	26.83	191	25.78

Yearly discharge, in cubic feet per second (adjusted), of South Branch Nashua River at Clinton, Mass.--Continued

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1936	801	-	-	-	232	2.13	29.07	280	32.60
1937	821	-	-	-	210	1.93	26.19	228	28.49
1938	851	-	-	-	293	2.72	36.98	293	36.96
1939	871	-	-	-	227	2.10	28.63	183	23.01
1940	891	-	-	-	191	1.77	24.14	200	25.22
1941	921	-	-	-	113	1.05	14.28	91.5	11.54
1942	951	-	-	-	142	1.32	17.95	176	22.13
1943	971	-	-	-	184	1.71	23.19	175	22.07
1944	1001	-	-	-	133	1.23	16.81	131	16.59
1945	1031	-	-	-	194	1.80	24.46	203	25.51
1946	1051	-	-	-	200	1.85	25.18	187	23.56
1947	1081	-	-	-	155	1.44	19.50	147	18.49
1948	1111	-	-	-	189	1.76	23.94	195	24.68
1949	1141	-	-	-	131	1.21	16.44	117	14.71
1950	1171	-	-	-	109	1.01	13.70	-	-

160. 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.

Gage--Water-stage recorder. Datum of gage is 244.27 ft above mean sea level, datum of 1929.

Extremes--1949-50: Maximum discharge, 750 cfs Mar. 30, 1950 (gage height, 4.98 ft); minimum daily, 4.3 cfs Aug. 14, 1950, but may have been less during October 1949.

Remarks--Flow regulated by mill above station. Entire flow from 2.10 sq mi above outlet of Fitchburg Reservoir diverted for municipal supply of Fitchburg.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	11.0	16.8	30.1	87.3	72.0	188	205	80.8	39.7	12.2	8.18	11.9	63.5

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	0.20	0.30	0.55	1.60	1.19	3.46	3.64	1.48	0.71	0.22	0.15	0.21	13.71

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	1171	750	Mar. 30, 1950	-	63.5	1.01	13.71	-	-

161. Nashua River at East Pepperell, Mass.

Location--Lat 42°40'03", long. 71°34'32", on right bank 200 ft downstream from power plant of St. Regis Paper Co. (formerly Nashua River Paper Co.) at East Pepperell, Middlesex County.

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). Prior to July 1, 1937, flow diverted from 118 sq mi.

Gage--Water-stage recorder. Datum of gage is 169.04 ft above mean sea level, datum of 1929.

Average discharge--15 years (1935-50), 495 cfs (adjusted for wastage into Nashua River).

Extremes--1935-50: 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--Flow regulated by power plant above station. Runoff adjusted for water wasted in diverting drainage from basin of South Branch Nashua River for use of Boston metropolitan district and city of Worcester.

## MERRIMACK RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second (observed), of Nashua River at East Pepperell, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	140	265	265	768	389	3,930	1,674	468	253	151	150	164	719
1937	258	185	1,003	1,083	717	755	1,197	1,095	670	245	176	187	633
1938	217	729	1,049	830	1,006	746	723	536	540	566	966	1,671	863
1939	719	529	1,322	618	596	1,360	2,181	524	260	102	114	103	703
1940	96.5	190	180	208	252	528	2,329	972	696	250	154	125	496
1941	117	290	385	382	625	456	533	299	154	97.9	91.1	84.2	280.
1942	91.1	137	206	317	336	1,560	627	390	449	326	164	144	357
1943	155	332	590	515	685	1,185	836	1,131	405	180	149	108	522
1944	230	527	299	197	300	703	1,067	425	†982	284	150	302	455
1945	196	241	485	465	488	1,533	707	994	632	348	274	190	549
1946	184	298	568	769	566	1,301	580	818	797	233	265	182	548
1947	303	208	255	415	662	929	860	689	418	168	148	175	434
1948	119	453	313	298	454	1,429	869	1,022	1,068	368	159	115	555
1949	133	518	256	583	772	727	821	466	192	102	95.7	137	381
1950	123.	127	191	352	372	815	914	410	229	104	96.2	107	319

† Corrected.

## Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	0.49	0.92	0.95	2.80	1.32	12.22	4.95	1.63	0.88	0.54	0.46	0.56	27.72
1937	.96	.64	3.66	3.99	2.35	2.69	3.59	3.44	2.32	.86	.62	.64	25.76
1938	.77	2.56	3.80	2.90	2.79	2.49	2.34	1.78	1.72	4.07	3.36	4.24	32.81
1939	2.02	1.73	3.46	1.94	1.94	4.07	6.15	1.89	.90	.35	.40	.34	25.19
1940	.53	.65	.64	.74	.84	1.91	8.20	3.53	2.42	.89	.54	.42	21.11
1941	.41	1.01	1.39	1.38	2.05	1.65	1.87	1.08	.53	.34	.31	.28	12.30
1942	.31	.46	.73	1.14	1.09	5.67	2.20	1.41	1.57	1.17	.58	.49	16.82
1943	.55	1.15	2.14	1.86	2.24	4.30	2.93	4.10	1.41	.64	.52	.36	22.20
1944	.83	1.85	1.08	.70	1.01	2.55	3.75	1.53	3.45	1.02	.52	1.05	19.34
1945	.70	.84	1.76	1.76	1.60	5.58	2.48	3.61	2.21	1.25	.98	.65	23.42
1946	.66	1.04	2.06	2.79	1.85	4.72	1.99	2.97	2.56	.83	.95	.63	23.05
1947	1.04	.67	.75	1.50	2.17	3.56	3.02	2.50	1.45	.59	.47	.59	18.11
1948	.41	1.41	.90	.90	1.50	5.19	2.92	3.45	2.98	1.33	.56	.38	21.93
1949	.46	1.10	.91	2.11	2.53	2.64	2.88	1.68	.65	.34	.32	.46	16.08
1950	.42	.43	.64	1.27	1.18	2.96	3.21	1.47	.74	.35	.32	.35	13.34

## Yearly discharge, in cubic feet per second

Yearly Discharge, in cubic feet per second														
Year	W.S.P. no.	Water year ending Sept. 30										Calendar year		
		Observed					Adjusted					Observed		Adjusted
		Momentary		maximum	Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches		
		Discharge	Date											
1936	801	20,900	Mar. 20,	1936	9.5	719	641	2.03	27.72	786	707	30.82		
1937	821	5,530	Dec. 23,	1936	8.4	633	598	1.90	25.76	677	642	27.63		
1938	851	10,200	Sept. 23,	1938	6.8	863	763	2.41	32.81	913	766	32.89		
1939	871	3,040	Apr. 21,	1939	1.1	703	587	1.86	25.19	525	456	19.60		
1940	891	4,020	Apr. 2,	1940	5.6	496	490	1.55	21.11	523	518	22.30		
1941	921	2,260	Feb. 9,	1941	7.1	290	286	.905	12.30	260	256	10.99		
1942	951	4,710	Mar. 10,	1942	6.2	397	392	1.24	16.82	451	446	19.16		
1943	971	2,540	May 25,	1943	10	522	517	1.64	22.20	520	515	22.12		
1944	1001	7,100	June 26,	1944	7.2	454	449	1.42	19.34	443	438	18.88		
1945	1031	2,600	Mar. 23,	1945	11	549	545	1.72	23.42	560	555	23.88		
1946	1051	3,440	Mar. 11,	1946	7.2	548	536	1.70	23.05	524	506	21.75		
1947	1081	2,360	Mar. 17,	1947	6.8	434	421	1.33	18.11	444	427	18.37		
1948	1111	4,110	Mar. 23,	1948	5.2	555	509	1.61	21.93	541	503	21.68		
1949	1141	1,950	Feb. 21,	1949	3.5	381	374	1.18	16.08	358	351	15.10		
1950	1171	2,560	Mar. 31,	1950	7.0	319	311	.984	13.34	-	-	-		

## Merrimack River at Lowell, Mass.

Location.--Lat 42°38'55", long. 71°18'25", on right bank at Boott Mills in Lowell, Middlesex County, 1,100 ft upstream from Concord River, 5,000 ft downstream from Beaver Brook, and 7,600 ft downstream from Pawtucket Dam.

Drainage area.--Total above gage, 4,230 sq mi; net above gage, 4,112 sq mi (flow from 118 sq mi diverted for use of Boston metropolitan district since Mar. 7, 1898).

Records available.--Jan. 1, 1848, to May 31, 1861; March 1886 to Sept. 30, 1916, records of discharge for 10 hours each day only, determined from quantity of water flowing through the canals and water wheels, and leaking and wasting over Pawtucket Dam.

Gage.--Staff gage. Datum of gage is 5.20 ft above mean sea level, datum of 1929.

Extremes.--1848-61, 1866-1916: Maximum observed discharge, 108,000 cfs Apr. 23, 1852 (gage height, 64.20 ft); minimum, practically zero flow on nights, Sundays, and holidays during low-water seasons.

Remarks.--Monthly and yearly figures published in Water-Supply Papers 415 and 431, which are based on 10 hour flows, do not represent true means and are not considered reliable enough for republication.

Cooperation.--Records furnished by Proprietors of Locks and Canals on Merrimack River, Lowell, Mass.

## 162. 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.

Gage.--Water-stage recorder. Altitude of gage is 145 ft (from topographic map).

Average discharge.--9 years (1941-50), 143 cfs.

Extremes.--1941-50: Maximum discharge, 1,460 cfs Mar. 21, 1948 (gage height, 5.75 ft); minimum daily, 3.5 cfs Aug. 17, 1941.

Remarks.--Flow regulated by mills above station.

Water year	Monthly and yearly mean discharge, in cubic feet per second												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1941	-	-	-	-	-	-	-	-	-	-	18.2	19.4	-
1942	16.0	33.4	46.2	74.5	137	472	226	119	92.6	91.8	75.3	42.9	119
1943	44.8	114	233	197	247	443	243	326	128	40.2	39.5	22.7	173
1944	49.0	131	67.8	54.9	96.1	232	333	148	118	44.7	25.1	47.6	112
1945	30.9	69.5	173	167	131	548	228	329	229	*112	*62.6	45.2	*178
1946	39.2	*107	272	323	235	453	202	259	246	43.6	90.4	59.2	*194
1947	95.8	65.5	79.6	136	203	333	261	267	131	65.0	38.8	39.5	143
1948	22.4	98.3	52.7	52.1	125	513	274	251	356	144	63.3	26.5	163
1949	31.3	110	80.5	147	244	248	241	134	39.0	21.9	16.3	18.3	110
1950	17.9	22.1	35.6	91.1	107	290	267	150	58.4	22.8	28.4	26.0	92.9

\* Revised.

Water year	Monthly and yearly runoff, in inches												The year
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1941	-	-	-	-	-	-	-	-	-	-	0.18	0.19	-
1942	0.16	0.32	0.46	0.74	1.23	4.69	2.17	1.18	0.89	0.91	.73	.41	13.89
1943	.45	1.09	2.32	1.95	2.22	4.40	2.34	3.24	1.24	.40	.39	.22	20.26
1944	.49	1.26	.67	.55	.89	2.30	3.21	1.47	1.12	.44	.25	.46	13.11
1945	.31	.67	1.72	1.66	1.18	5.44	2.19	3.27	2.20	*1.12	*.62	.43	*20.81
1946	.39	*1.03	2.71	3.21	2.11	4.50	1.94	2.58	2.37	.43	.90	.57	*22.74
1947	.95	.63	.79	1.35	1.82	3.31	2.51	2.65	1.26	.65	.39	.38	16.69
1948	.22	.95	.52	.52	1.16	5.10	2.63	2.49	3.23	1.43	.63	.26	19.14
1949	.31	1.06	.80	1.46	2.19	2.47	2.32	1.33	.38	.22	.16	.18	12.88
1950	.18	.21	.35	.91	.96	2.88	2.57	1.49	.56	.23	.28	.25	10.87

\* Revised.

Yearly discharge, in cubic feet per second									
Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1941	951	-	-	5	-	-	-	-	-
1942	951	960	Mar. 19, 1942	5	119	1.03	13.89	144	16.81
1943	971	880	Mar. 21, 1943	9.5	173	1.49	20.26	161	18.82
1944	1001	643	Apr. 26, 1944	11	112	.966	13.11	114	13.39
1945	1031, 1231	919	Mar. 7, 1945	13	*178	*1.55	*20.81	190	*22.24
1946	1051, 1231	1,100	Mar. 9, 1946	15	*194	*1.67	*22.74	179	20.98
1947	1081	656	Mar. 5, 1947	17	143	1.23	16.69	137	16.01
1948	1111	1,460	Mar. 21, 1948	9.9	163	1.41	19.14	167	19.62
1949	1141	482	Feb. 24, 1949	6.4	110	.948	12.88	97.8	11.45
1950	1171	754	Mar. 25, 1950	11	92.9	.801	10.87	-	-

\* Revised.

## 163. Sudbury River at Framingham Center, Mass.

Location.--Lat 42°17'30", long. 71°26'40", at dam of Framingham Reservoir No. 1, half a mile upstream from outlet of Farm Pond and three-quarters of a mile southwest of Framingham Center, Middlesex County.

Drainage area.--75.2 sq mi since January 1881. 78.2 sq mi from January 1879 to December 1880; 77.8 sq mi from January 1875 to December 1878.

Average discharge.--75 years (1875-1950), 110 cfs (adjusted to present drainage area).

Remarks.--Records adjusted for change in reservoir contents, diversions, and wastage. En-tire flow, except wastage, diverted for use of Boston metropolitan district. Flow from Wachusett Reservoir on South Branch Nashua River is diverted into Sudbury Reservoir.

Cooperation.--Records furnished by water division of Metropolitan District Commission.

Monthly and yearly mean discharge, in cubic feet per second (adjusted), of Sudbury River at Framingham Center, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1875	-	-	-	12.4	180	193	367	143	105	38.7	47.6	25.0	-
1876	77.8	157	70.3	77.4	165	534	396	137	26.7	22.0	48.8	22.2	145
1877	28.1	131	54.6	79.3	114	579	288	168	71.9	24.3	14.5	7.16	130
1878	76.0	171	155	218	287	422	196	168	60.8	15.5	57.3	19.2	154
1879	62.2	204	382	84.7	207	282	135	50.0	19.0	47.8	17.0		155
1880	8.52	24.9	56.0	136	216	166	141	62.2	21.2	21.3	14.4	9.70	72.6
1881	12.3	24.9	21.2	48.3	180	466	180	112	156	32.2	17.2	22.9	106
1882	21.6	45.9	90.2	144	280	330	101	150	61.5	10.0	6.47	35.6	106
1883	34.8	24.4	36.6	39.0	120	187	157	109	34.9	13.4	9.17	10.6	64.4
1884	21.7	23.8	22.5	116	331	440	332	120	48.4	26.0	29.9	5.11	125
1885	9.70	20.4	108	144	158	183	211	155	49.6	7.22	28.0	14.1	90.2
1886	39.0	137	137	170	559	240	227	83.8	23.6	13.5	11.0	13.7	135
1887	16.9	78.3	119	301	329	334	305	117	48.1	13.4	24.9	12.9	140
1888	22.1	42.9	74.8	123	226	377	308	190	49.0	13.7	44.1	134	133
1889	233	321	354	324	139	156	164	102	76.0	73.7	167	95.8	184
1890	143	226	261	146	178	424	218	159	66.0	12.5	15.3	53.2	159
1891	264	141	116	351	406	518	279	67.8	48.1	17.4	19.0	23.6	186
1892	24.4	35.5	63.3	218	110	227	101	149	49.8	24.9	32.6	26.7	86.6
1893	14.7	81.1	56.4	50.5	179	378	247	335	51.1	18.3	21.1	12.6	118
1894	25.8	37.1	94.2	80.6	115	260	191	97.7	48.7	18.7	24.4	17.4	84.1
1895	43.5	97.2	83.3	120	62.9	280	293	74.0	20.2	26.8	26.6	10.4	95.1
1896	160	323	207	126	311	446	174	41.9	46.4	11.1	6.62	45.1	158
1897	68.9	76.7	76.5	98.3	124	298	176	106	112	76.6	68.7	21.2	109
1898	10.9	106	184	191	352	303	213	145	61.7	26.8	129	42.9	146
1899	135	231	209	266	161	489	293	59.4	7.67	2.26	-4.06	10.8	155
1900	13.5	35.6	25.6	92.4	442	425	157	153	36.8	-2.11	-5.91	7.60	113
1901	21.6	77.2	128	50.8	34.9	321	489	344	87.6	35.6	49.3	35.5	140
1902	47.9	55.2	314	205	195	489	219	86.4	35.3	7.60	15.7	20.8	141
1903	58.8	51.7	207	202	265	402	263	40.8	231	51.8	35.7	15.1	151
1904	57.2	42.2	67.8	55.5	103	349	383	203	48.7	7.20	19.7	46.2	115
1905	22.2	33.6	31.3	164	38.4	291	191	34.6	54.4	20.6	13.3	145	86.8
1906	18.4	32.4	103	131	121	280	227	123	82.2	46.3	21.0	2.26	99.0
1907	35.1	56.2	76.6	157	72.6	193	187	103	89.6	1.02	-12.1	62.9	85.1
1908	86.2	232	236	224	179	263	130	122	22.6	-1.64	11.8	8.92	125
1909	5.44	8.25	15.8	45.7	268	202	200	117	27.9	-14.1	-5.20	17.3	72.4
1910	-5.97	9.57	30.6	173	215	227	77.6	32.3	60.1	-11.9	-8.46	.57	65.8
1911	-5.90	20.5	25.7	60.3	81.5	133	166	37.0	24.8	-1.66	2.37	8.79	45.7
1912	34.4	69.0	106	84.7	139	350	260	168	17.2	-8.92	-3.43	-3.31	102
1913	-1.60	19.2	57.5	321	87.7	243	280	101	17.3	-7.25	-6.23	13.2	75.0
1914	56.3	55.8	85.1	108	117	352	274	180	53	12.4	18.1	-15.8	104
1915	-6.86	11.3	29.1	190	218	69.0	68.6	29.7	11.8	122	136	-4.47	72.8
1916	26.9	30.4	105	110	158	212	353	167	139	68.1	9.06	3.00	115
1917	-6.1	12.8	36.6	59.3	87.8	257	163	172	121	4.97	23.5	6.73	78.7
1918	56.1	51.0	44.3	31.7	210	254	171	74.4	21.5	11.2	-6.28	74.2	81.7
1919	32.0	56.8	109	152	107	321	199	150	13.1	34.8	10.7	82.9	108
1920	32.5	148	127	36.3	96.4	604	358	215	197	33.0	-4.59	7.42	152
1921	-3.03	77.8	140	114	98.3	264	133	193	19.9	119	6.85	-6.70	96.7
1922	-11.4	77.6	89.2	37.6	95.0	299	227	204	182	84.0	40.9	76.5	117
1923	31.7	43.1	47.6	181	109	369	283	137	45.0	7.75	-8.45	-6.69	103
1924	46.1	133	256	209	83.2	226	355	163	32.7	-6.10	13.5	47.6	130
1925	.75	19.3	31.9	21.4	216	254	173	67.6	25.2	27.9	6.67	4.60	69.6
1926	40.8	67.5	217	100	115	317	224	83.8	12.1	-7.94	27.1	-13.2	98.8
1927	13.2	93.4	78.0	151	170	239	80.5	89.3	25.0	15.1	110	152	101
1928	151	468	322	152	191	148	204	165	184	142	64.0	69.2	188
1929	61.4	68.6	97.8	153	176	310	342	209	26.5	-12.9	-6.82	-2.91	118
1930	6.33	29.6	41.1	72.6	109	169	115	47.1	5.22	-2.71	-9.61	-21.1	46.4
1931	3.41	58.0	16.4	54.2	119	402	226	138	229	36.3	15.0	-11.9	107
1932	-3.14	5.04	34.7	120	96.5	214	211	53.4	10.9	-11.4	3.65	147	73.1
1933	200	339	110	121	111	342	427	84.8	13.8	-13.4	-8.93	143	155
1934	62.2	70.7	198	54.2	312	318	318	149	53.3	-3.98	-3.78	95.1	113
1935	87.4	70.4	96.0	218	164	318	304	104	127	11.2	-9.82	12.6	125
1936	11.9	50.6	43.4	186	95.1	753	270	94.5	22.0	-11.0	1.38	28.1	127
1937	40.5	34.4	334	263	172	197	213	159	92.7	20.9	14.6	19.7	130
1938	41.2	157	223	214	196	165	137	108	153	401	133	265	183
1939	111	103	226	103	188	275	353	76.9	22.7	-10.3	-2.12	-1.91	120
1940	20.7	37.6	43.6	60.0	61.3	255	462	181	94.4	53.2	-17.3	-2.02	104
1941	-10.5	113	113	85.7	158	157	119	41.0	19.1	-5.80	-27.4	-28.3	60.4
1942	-24.4	1.71	21.6	51.5	86.2	354	132	53.4	12.8	40.2	11.5	-10.7	60.9
1943	12.4	77.6	225	116	170	273	135	196	28.6	-5.18	-19.2	-25.2	98.4
1944	18.3	64.0	13.8	19.8	42.5	140	199	36.8	28.0	-25.8	-39.0	11.2	42.0
1945	-10.4	55.6	117	113	118	354	126	205	147	53.4	22.2	7.05	109
1946	12.0	114	280	251	176	292	117	144	105	-38.5	63.4	27.1	129
1947	27.8	25.2	44.3	119	126	233	191	173	69.5	-4.77	-4.77	1.05	87.2
1948	9.51	67.2	41.3	39.9	119	408	205	173	194	73.1	-10.5	-42.1	105
1949	-8.41	75.5	45.8	87.1	180	150	141	70.3	-24.9	-36.7	-30.5	-18.1	51.7
1950	-12.1	7.64	28.8	84.7	103	236	186	84.5	7.39	-24.2	11.6	.19	56.3

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



Monthly and yearly runoff, in inches (adjusted), of Sudbury River at Framingham Center, Mass.												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
The year												
1875	-	-	-	0.18	2.41	2.86	5.27	2.12	1.50	0.57	0.71	0.36
1876	1.15	2.25	1.04	1.15	2.28	7.91	5.68	2.03	.58	.53	.72	.32
1877	.42	1.88	.81	1.17	1.53	8.59	4.13	2.48	1.03	.36	.22	.10
1878	1.13	2.45	2.30	3.23	3.97	6.26	2.81	2.49	.87	.23	.85	.28
1879	.92	2.92	5.67	1.25	2.76	4.16	5.38	1.99	.71	.28	.70	.24
1880	.13	.35	.83	2.00	2.98	2.45	2.02	.92	.30	.31	.21	.14
1881	.18	.35	.31	.74	2.49	7.14	2.67	1.72	2.31	.49	.26	.34
1882	.33	.68	1.38	2.21	3.87	5.06	1.50	2.30	.91	.15	.10	.53
1883	.53	.36	.56	.60	1.66	2.87	2.33	1.67	.52	.21	.14	.16
1884	.53	.35	.34	1.78	4.74	6.75	4.93	1.84	.72	.40	.46	.08
1885	.15	.30	1.85	2.20	2.18	2.81	3.13	2.38	.74	.11	.43	.21
1886	.60	2.03	2.09	2.61	7.73	3.67	3.36	1.28	.35	.21	.17	.20
1887	.26	1.16	1.82	4.62	4.56	5.12	4.52	1.80	.71	.21	.38	.19
1888	.54	.64	1.15	1.98	5.25	5.78	4.57	1.51	.73	.21	.68	1.39
1889	3.57	4.76	5.43	4.96	1.93	2.39	2.44	1.57	1.13	1.13	2.56	1.42
1890	2.19	3.35	4.00	2.24	2.46	6.50	3.24	2.44	.98	.19	.24	.79
1891	4.05	2.10	1.78	5.38	5.61	7.95	4.14	1.04	.71	.27	.29	.35
1892	.37	.53	.97	3.34	1.57	3.49	1.50	2.24	.74	.38	.50	.40
1893	.22	1.20	.86	.77	2.48	5.79	3.67	5.14	.76	.28	.32	.19
1894	.40	.55	1.44	1.24	1.60	3.99	2.83	1.50	.72	.29	.37	.26
1895	.67	1.44	1.28	1.84	.87	4.30	4.34	1.13	.30	.41	.41	.15
1896	2.46	4.79	3.18	1.93	4.47	6.84	2.58	.64	.69	.17	.10	.67
1897	1.06	1.14	1.17	1.51	1.72	4.58	2.62	1.63	1.66	1.17	1.05	.31
1898	.17	1.57	2.83	2.92	4.87	4.65	3.16	2.22	.92	.41	.97	.64
1899	2.07	3.43	3.21	4.08	2.22	7.50	4.35	.91	.11	.03	-0.06	.16
1900	.21	.53	.39	1.42	6.12	6.52	2.33	2.34	.55	-0.03	-0.06	.11
1901	.33	1.15	1.96	.78	.48	4.91	7.26	5.27	1.30	.55	.76	.53
1902	.73	.82	4.81	3.15	2.70	7.48	3.35	1.32	.52	.12	.24	.31
1903	.90	.77	3.17	3.10	5.67	6.16	3.90	.62	3.43	.79	.55	.22
1904	.88	.63	1.04	.85	1.47	5.35	5.69	3.11	.72	.11	.30	.68
1905	.35	.50	.48	2.52	.53	4.46	2.84	.53	.81	.32	.20	2.15
1906	.28	.48	1.58	2.01	1.68	4.30	3.36	1.89	1.22	.71	.32	.03
1907	.54	.83	1.17	2.41	1.00	2.96	2.77	1.58	1.31	.02	-1.19	.93
1908	1.32	3.45	3.62	3.43	2.58	4.03	1.93	1.87	.34	-0.03	.18	-1.14
1909	.08	.12	.24	.70	2.68	3.09	2.97	1.79	.41	-2.2	-0.08	.26
1910	-0.09	.14	.47	2.66	3.98	3.49	1.15	.49	.89	-1.8	-1.13	.008
1911	-0.09	.30	.39	.93	1.13	2.04	2.46	.57	.37	-0.03	.04	.13
1912	.53	1.02	1.62	1.30	2.00	5.52	3.86	2.58	.26	-1.14	-0.05	-0.05
1913	-0.02	.29	.88	1.86	1.21	3.73	3.85	1.55	.28	-1.11	-1.10	.15
1914	.86	.83	1.31	1.62	1.63	5.40	4.06	2.76	.008	.19	.28	-1.23
1915	-1.1	.17	.45	2.91	3.01	1.06	1.02	.45	.17	1.86	2.08	.07
1916	.41	.45	1.60	1.68	2.26	3.25	5.24	2.57	2.07	1.04	.14	.04
1917	-0.09	.56	.91	1.22	3.94	2.43	2.53	1.80	.88	.3	.3	.10
1918	.86	.76	.68	.49	2.91	3.90	2.53	1.14	.32	.17	-1.10	1.10
1919	.49	.84	1.67	2.33	1.48	4.92	2.96	2.30	.19	.53	.16	1.23
1920	.50	2.20	1.95	.56	1.24	9.26	5.02	3.29	2.93	.51	-0.07	.11
1921	-0.05	1.15	2.14	1.74	1.36	4.05	1.97	2.96	.30	1.82	.10	-1.10
1922	-1.17	1.15	1.37	.58	1.52	4.59	3.37	3.13	2.69	1.29	.63	1.14
1923	.49	.64	.73	2.78	1.51	5.66	4.20	2.10	.67	.12	-1.13	-1.10
1924	.71	1.97	3.92	3.20	1.19	3.46	5.27	2.50	.48	-0.09	.21	.71
1925	.01	.29	.49	.33	2.98	3.89	2.57	1.04	.37	.43	.10	.07
1926	.63	1.00	3.33	1.54	1.60	4.86	3.32	1.28	.18	-1.12	.41	-2.20
1927	.20	1.39	1.20	2.31	2.35	3.66	1.19	1.37	.37	.23	1.69	2.26
1928	2.31	6.95	4.93	2.33	2.75	2.27	3.04	2.52	2.74	2.17	.98	1.03
1929	.94	1.02	1.50	2.35	2.43	4.75	5.07	3.20	.39	-2.20	-1.10	-0.04
1930	.10	.44	.63	1.11	1.52	2.58	1.71	.72	.08	-0.04	-1.15	-1.31
1931	.05	.86	.25	.83	1.65	6.16	3.35	2.12	3.40	.56	.23	-1.18
1932	-0.05	.07	.53	1.83	1.38	3.29	3.13	.62	.16	-1.17	.06	2.18
1933	3.07	5.03	1.69	1.85	1.54	5.25	6.33	1.30	.20	-1.21	-1.14	2.12
1934	.95	.69	1.08	3.03	.75	4.78	4.72	2.28	.79	-0.06	-0.06	1.41
1935	1.34	1.04	1.47	3.34	2.27	4.88	4.52	1.59	1.88	.17	-1.15	.19
1936	-1.18	.75	.67	2.85	1.36	11.53	4.02	1.45	.33	-1.17	.02	.42
1937	.62	.51	5.12	4.04	2.38	3.01	3.16	2.42	1.37	.32	.22	.29
1938	.63	2.32	3.41	3.29	2.72	2.54	2.04	1.66	2.26	6.14	2.04	3.93
1939	1.71	1.53	3.47	1.57	2.61	4.21	5.23	1.18	.34	-1.16	-0.03	-0.03
1940	.52	.56	.67	.92	.88	3.91	6.85	2.77	1.40	.81	-2.27	-0.03
1941	-1.16	1.67	1.73	1.31	2.19	2.41	1.77	.63	.28	-0.09	-4.42	-4.42
1942	-1.37	.03	.33	.79	1.19	5.43	1.96	.82	.19	.62	.18	-1.16
1943	.19	1.15	3.45	1.77	2.35	4.18	2.00	3.00	.42	.08	-2.29	-3.37
1944	.28	.95	.21	.30	.61	2.14	2.95	.56	.41	-1.39	-6.80	.17
1945	-1.16	.82	1.80	1.73	1.64	5.43	1.87	3.14	2.18	.82	.34	.10
1946	.18	1.69	3.99	3.84	2.44	4.47	1.73	2.20	1.56	-1.14	.97	.40
1947	.43	.37	.79	1.82	1.75	3.57	2.84	2.66	1.03	.55	-0.07	-0.007
1948	-1.15	1.00	.68	.61	1.71	6.25	3.03	2.65	2.87	1.12	-1.16	-1.62
1949	-1.13	1.12	.70	1.33	2.50	2.30	2.10	1.08	-1.37	.56	-4.47	-2.27
1950	-1.19	-1.11	.44	1.30	1.42	5.62	2.46	1.30	.11	-1.37	.16	.003

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

Yearly discharge, in cubic feet per second (adjusted), of Sudbury River at Framingham Center, Mass.

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Runoff in inches
		Discharge	Date					
1875	415	-	-	-	-	-	-	117
1876	415	-	-	-	145	1.86	25.24	137
1877	415	-	-	-	130	1.67	22.72	146
1878	415	-	-	-	154	1.98	26.87	175
1879	415	-	-	-	154	1.99	26.98	108
1880	415	-	-	-	72.6	.928	12.64	70.0
1881	415	-	-	-	108	1.40	19.00	114
1882	415	-	-	-	106	1.40	19.02	100
1883	415	-	-	-	64.4	.856	11.61	62.0
1884	415	-	-	-	125	1.67	22.72	131
1885	415	-	-	-	90.2	1.20	16.29	105
1886	415	-	-	-	135	1.79	24.30	126
1887	415	-	-	-	140	1.87	25.35	134
1888	415	-	-	-	133	1.77	24.13	197
1889	415	-	-	-	184	2.45	33.29	161
1890	415	-	-	-	159	2.11	28.62	150
1891	415	-	-	-	186	2.48	33.67	153
1892	415	-	-	-	88.6	1.18	16.03	90.9
1893	415	-	-	-	118	1.57	21.68	121
1894	415	-	-	-	84.1	1.12	15.19	89.6
1895	415	-	-	-	95.1	1.26	17.14	134
1896	415	-	-	-	158	2.10	28.52	119
1897	415	-	-	-	109	1.45	19.62	115
1898	415	-	-	-	146	1.94	26.33	169
1899	415	-	-	-	155	2.06	28.01	113
1900	47	-	-	-	113	1.50	20.43	126
1901	65	-	-	-	140	1.86	25.28	156
1902	82	-	-	-	141	1.88	25.46	133
1903	97	-	-	-	151	2.01	27.28	138
1904	124	-	-	-	115	1.53	20.83	108
1905	165	-	-	-	86.8	1.15	15.69	92.5
1906	201	-	-	-	99.0	1.32	17.86	100
1907	241	-	-	-	85.1	1.13	15.33	117
1908	241	-	-	-	125	1.66	22.56	80.8
1909	261	-	-	-	72.4	.963	13.04	72.7
1910	281	-	-	-	65.8	.875	16.68	66.3
1911	301	-	-	-	45.7	.607	8.24	59.9
1912	321	-	-	-	102	1.36	18.45	90.7
1913	351	-	-	-	75.0	.998	13.55	85.3
1914	381	-	-	-	104	1.38	18.72	89.9
1915	401	-	-	-	72.8	.969	13.14	83.7
1916	431	-	-	-	115	1.53	20.75	105
1917	451	-	-	-	78.7	1.05	14.21	87.3
1918	471	-	-	-	81.7	1.09	14.76	85.7
1919	501	-	-	-	106	1.41	19.10	115
1920	501	-	-	-	152	2.02	27.50	144
1921	521	-	-	-	96.7	1.29	17.44	96.0
1922	541	-	-	-	117	1.55	21.09	114
1923	561	-	-	-	103	1.37	18.67	130
1924	581	-	-	-	130	1.73	23.53	97.8
1925	601	-	-	-	69.6	.928	12.57	92.7
1926	621	-	-	-	98.8	1.31	17.83	86.8
1927	641	-	-	-	101	1.34	18.22	164
1928	661	-	-	-	188	2.50	34.02	129
1929	681	-	-	-	118	1.57	21.31	105
1930	696	-	-	-	46.4	.617	8.39	46.4
1931	711	-	-	-	107	1.42	19.28	103
1932	726	-	-	-	73.1	.973	13.23	124
1933	741	-	-	-	155	2.06	28.03	116
1934	756	-	-	-	113	1.50	20.36	119
1935	781	-	-	-	125	1.66	22.54	110
1936	801	-	-	-	127	1.69	23.05	155
1937	821	-	-	-	130	1.73	23.48	131
1938	851	-	-	-	185	2.43	32.98	185
1939	871	-	-	-	120	1.59	21.63	91.2
1940	891	-	-	-	104	1.38	18.79	113
1941	921	-	-	-	60.4	.803	10.90	42.4
1942	951	-	-	-	60.9	.810	11.01	87.6
1943	971	-	-	-	98.4	1.31	17.77	79.9
1944	1001	-	-	-	42.0	.558	7.59	47.6
1945	1031	-	-	-	109	1.45	19.71	128
1946	1051	-	-	-	129	1.72	23.33	106
1947	1081	-	-	-	87.2	1.16	15.74	86.8
1948	1111	-	-	-	105	1.40	18.99	106
1949	1141	-	-	-	51.7	.689	9.33	43.1
1950	1171	-	-	-	56.3	.748	10.16	-

## 164. 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 1½ miles upstream from Sudbury River.

Drainage area.--17.40 sq mi since January 1937. 17.58 sq mi from January 1911 to December 1936; 17.80 sq mi from July 1909 to December 1910; 18.87 sq mi from January 1863 to June 1909.

Average discharge.--87 years (1863-1950), 24.6 cfs (adjusted to present drainage area).

Remarks.--Records adjusted for change in reservoir contents, diversions, and wastage. En-fire 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 and yearly mean discharge, in cubic feet per second (adjusted)												The year
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	
1863	-	-	-	31.3	56.5	60.8	74.6	23.6	11.2	48.2	25.2	16.7
1864	21.4	44.6	35.8	39.4	27.3	67.0	44.8	26.4	8.23	6.74	11.0	8.30
1865	23.2	21.0	19.2	33.7	31.9	76.3	45.7	77.8	5.62	7.47	7.81	7.49
1866	11.4	17.3	18.5	12.1	51.4	29.1	27.4	21.2	18.4	20.6	10.5	22.3
1867	15.3	16.5	25.4	17.9	94.9	56.9	48.4	35.7	11.2	9.17	34.3	5.26
1868	17.2	18.7	18.4	20.2	19.5	65.0	59.1	101	27.0	7.45	18.6	30.8
1869	15.5	33.6	19.2	29.8	33.8	54.5	42.0	35.5	17.7	12.1	9.88	18.8
1870	38.2	22.0	51.8	77.5	71.5	55.2	116	27.2	16.4	8.76	6.55	10.9
1871	15.7	13.5	12.8	16.8	41.4	41.5	26.6	52.7	14.8	7.04	11.4	4.81
1872	10.0	20.9	19.3	18.1	15.6	22.1	50.1	17.9	25.1	2.34	21.6	28.7
1873	27.6	33.8	19.8	50.6	28.5	63.7	103	43.6	7.66	10.1	22.9	13.2
1874	33.4	31.4	43.9	51.1	39.7	30.1	53.9	45.5	53.1	15.5	15.1	9.00
1875	8.57	9.83	8.32	2.17	53.0	43.6	53.3	22.8	25.0	4.15	10.2	10.1
1876	19.6	33.2	20.0	17.8	31.2	85.0	71.1	23.3	8.55	13.9	4.79	9.79
1877	5.91	31.4	16.1	19.6	24.9	111	54.9	33.3	15.5	10.6	10.7	6.83
1878	18.4	45.6	32.2	53.1	72.0	88.4	48.3	27.2	13.1	7.66	13.7	4.89
1879	12.0	35.0	66.1	21.1	42.2	54.0	75.8	23.0	13.0	5.34	15.5	10.3
1880	9.79	12.2	17.1	24.1	39.2	29.3	26.5	7.21	.982	5.34	3.81	4.09
1881	4.53	11.2	9.66	19.5	40.4	92.6	30.3	20.6	22.1	2.62	1.40	3.89
1882	3.00	14.2	25.0	30.1	54.4	60.1	15.8	25.4	10.5	.981	1.17	16.3
1883	13.8	19.81	15.0	15.8	28.8	33.4	28.1	20.6	1.13	2.88	1.19	7.40
1884	7.19	6.77	13.3	30.1	50.1	76.5	67.6	22.7	11.4	4.28	10.0	2.26
1885	5.55	10.5	29.7	31.0	36.2	36.2	39.9	26.4	7.23	.000	5.49	4.28
1886	12.9	34.7	26.8	37.4	144	57.5	42.7	17.8	3.25	4.09	2.21	5.02
1887	6.79	20.3	34.3	66.5	78.7	77.0	56.8	22.1	13.9	11.8	21.7	10.8
1888	8.08	11.7	15.8	18.6	48.5	77.9	58.3	38.8	9.02	7.68	15.4	39.1
1889	42.1	71.2	69.3	75.7	53.6	34.1	36.7	19.6	19.9	26.7	56.1	30.3
1890	31.2	49.9	53.4	31.4	36.9	96.1	37.7	30.3	23.8	8.56	7.59	23.7
1891	55.7	25.2	34.6	102	120	131	72.9	14.4	13.0	8.15	11.8	12.9
1892	12.9	14.0	20.6	49.6	27.3	49.4	15.2	33.2	8.34	5.40	9.11	10.2
1893	9.34	18.4	13.7	10.5	46.2	67.5	41.1	29.9	12.7	6.23	12.6	7.13
1894	17.4	14.1	24.2	19.9	30.3	41.7	36.4	14.9	7.60	6.13	6.77	7.68
1895	10.8	15.6	18.7	25.8	13.6	57.2	56.6	15.9	6.87	9.17	8.10	11.7
1896	32.3	59.3	39.3	28.2	64.5	90.4	34.1	10.2	12.1	6.13	7.74	17.4
1897	21.0	23.6	21.3	26.8	30.0	52.7	31.3	22.8	20.1	12.3	10.2	7.74
1898	7.08	28.5	35.3	37.2	73.5	50.9	45.6	30.5	13.2	6.06	21.3	5.25
1899	26.3	39.1	44.9	56.4	41.9	104	48.0	11.3	1.92	.528	1.49	8.47
1900	10.2	8.42	6.64	20.0	78.0	75.9	27.4	31.0	8.59	5.53	10.5	12.1
1901	13.0	20.5	28.3	15.8	11.9	92.6	87.7	69.9	19.2	14.9	20.8	19.1
1902	20.4	19.5	69.4	39.1	36.5	114	51.7	18.0	6.02	7.51	11.4	13.0
1903	15.4	13.4	38.7	41.2	51.6	81.3	58.6	13.0	40.2	10.4	7.70	2.45
1904	16.7	10.1	15.4	17.2	22.0	77.5	88.6	38.3	9.22	1.12	7.52	17.0
1905	6.86	14.3	13.2	34.4	7.96	59.0	38.9	10.0	12.1	3.39	10.8	31.1
1906	12.9	16.6	26.4	25.7	23.1	56.9	45.1	26.3	14.6	12.1	9.25	8.09
1907	13.9	13.6	13.3	31.0	17.0	38.9	37.1	23.4	17.0	2.03	4.76	18.0
1908	18.5	44.5	47.0	38.7	45.5	55.6	28.8	25.1	5.94	4.62	3.48	-.557
1909	2.04	2.32	7.31	12.0	60.2	40.1	40.5	23.0	11.3	3.41	8.18	12.4
1910	2.69	7.03	10.5	45.1	50.0	42.9	20.4	10.7	18.2	4.48	.240	1.79
1911	.624	6.74	9.01	13.6	20.6	30.5	34.2	4.41	2.05	.913	8.55	9.65
1912	13.8	16.8	27.4	17.2	31.3	74.9	53.2	39.5	7.33	1.09	2.08	6.17
1913	7.47	9.08	16.7	29.6	22.5	54.9	54.4	25.1	6.61	-.190	4.99	8.63
1914	15.2	13.3	23.4	27.5	28.6	84.9	59.6	38.8	3.80	4.85	3.65	25.9
1915	.524	5.61	9.54	50.5	59.9	17.4	15.8	6.18	2.47	28.5	28.2	2.64
1916	8.29	10.5	30.1	29.2	47.0	60.6	72.2	44.5	40.2	22.1	5.83	1.66
1917	1.81	3.72	7.57	13.4	21.7	54.4	35.0	38.4	29.7	4.71	6.02	2.49
1918	18.1	14.5	18.1	13.8	48.3	51.1	36.1	16.6	5.67	4.41	-.873	22.0
1919	9.02	5.3	28.5	36.9	29.5	63.2	40.3	37.5	7.26	8.83	6.27	28.3
1920	12.0	43.4	31.6	11.9	35.5	149	77.7	46.4	50.9	11.9	4.18	5.15
1921	2.62	21.9	40.5	35.9	29.4	59.7	35.5	47.0	9.90	37.5	8.59	3.07
1922	1.50	20.8	30.5	10.8	25.4	67.7	47.8	42.4	54.8	29.0	14.1	25.7
1923	15.1	13.4	13.1	49.7	31.2	85.7	55.3	25.7	10.7	4.40	.564	.320
1924	8.63	22.4	50.9	42.9	20.5	53.6	65.4	56.8	10.5	.070	6.04	13.7
1925	1.73	5.46	7.93	8.08	55.4	50.7	33.5	14.3	6.83	7.90	5.24	4.05

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

Monthly and yearly mean discharge, in cubic feet per second (adjusted), of Lake Cochituate Outlet at Cochituate, Mass.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	9.82	13.1	45.5	23.4	45.3	72.7	44.5	5.70	1.83	12.8	-0.088		24.4
1927	6.64	21.9	20.7	37.1	41.3	44.7	17.9	2.86	8.81	30.5	33.9		23.5
1928	31.5	45.0	63.6	33.4	44.6	30.0	45.5	33.6	29.3	15.1	15.8		35.3
1929	16.5	25.4	24.1	35.5	36.6	70.7	76.5	40.7	6.53	-1.489	-1.853		26.7
1930	2.63	5.63	12.5	21.4	27.9	32.9	23.0	8.11	3.50	1.60	-1.72	-1.36	11.2
1931	6.32	11.7	7.71	19.7	33.8	80.5	45.2	32.0	59.3	15.2	14.5	7.85	27.7
1932	9.73	5.44	11.3	27.0	18.3	45.4	40.4	12.8	5.29	-1.64	3.87	28.0	17.1
1933	45.9	73.5	29.6	30.3	37.4	97.7	98.5	23.9	7.72	1.94	1.79	39.2	40.4
1934	16.4	12.2	21.3	48.1	17.5	70.9	63.5	29.2	13.5	.913	-0.070	14.7	25.8
1935	13.1	17.4	19.9	50.7	45.5	67.3	75.2	24.8	27.4	4.25	.065	6.84	29.2
1936	.589	13.8	8.82	39.1	24.9	158	57.7	18.5	4.87	-1.569	3.73	11.3	28.4
1937	9.96	7.49	68.4	57.6	44.7	49.6	47.0	34.6	23.8	3.33	4.50	5.58	29.5
1938	6.61	28.1	42.1	53.2	44.0	38.7	31.5	31.2	30.0	116	34.1	53.6	42.4
1939	24.5	23.3	43.8	22.6	45.6	67.9	79.2	21.4	8.18	2.43	5.98	1.09	26.8
1940	7.73	13.5	13.7	16.7	17.7	66.0	82.1	36.8	16.4	11.0	-1.868	3.01	23.6
1941	.349	22.8	24.0	21.0	35.3	34.1	25.2	10.5	7.47	.419	-2.46	-3.82	14.4
1942	3.50	4.69	6.40	14.7	20.5	77.5	29.0	15.6	7.29	12.3	4.68	-1.088	16.4
1943	50.1	18.9	51.6	26.4	37.2	58.6	32.5	43.6	9.39	3.03	-5.33	-3.38	25.1
1944	6.27	12.7	4.05	7.20	12.9	30.1	60.0	14.1	12.6	4.48	-1.17	10.8	14.4
1945	4.55	26.5	35.9	28.3	32.9	78.2	26.9	39.8	32.2	9.00	5.72	-1.124	26.7
1946	3.17	25.1	59.2	47.8	50.6	64.6	27.8	31.0	24.1	-2.18	12.0	6.76	29.1
1947	4.27	3.57	12.3	22.6	18.8	45.9	44.0	40.5	8.77	5.81	-1.61	3.98	17.4
1948	-.693	19.6	9.65	13.1	33.1	82.5	42.6	34.0	37.0	13.7	.865	-2.94	23.5
1949	2.61	20.9	12.2	19.9	33.8	31.2	31.6	19.3	-2.08	-3.55	.303	1.68	13.8
1950	-1.05	2.58	5.43	18.5	22.1	47.8	30.1	18.9	1.32	-1.23	1.84	-3.34	11.9

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

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1863	-	-	-	1.91	3.12	3.71	4.41	1.44	0.66	2.94	1.54	0.99	-
1864	1.31	2.64	2.19	2.41	1.56	4.09	2.65	1.61	.49	.41	.67	.49	20.52
1865	1.42	1.24	1.17	2.06	1.76	4.66	2.71	4.75	.33	.46	.46	.44	21.48
1866	.69	1.02	1.13	.74	2.84	1.78	1.62	1.29	1.09	1.26	.64	1.32	15.42
1867	.94	.97	1.55	1.10	5.24	3.47	2.86	2.18	.66	.56	2.10	.31	21.94
1868	1.05	1.11	1.12	1.23	1.12	3.85	3.49	6.18	1.60	.46	1.15	1.82	24.18
1869	.95	1.99	1.17	1.82	1.87	3.53	2.48	2.17	1.05	.75	.59	1.11	19.28
1870	2.33	1.30	3.16	4.73	3.95	3.37	6.86	1.66	.97	.53	.40	.64	29.90
1871	.96	.80	.78	1.03	2.28	2.53	1.58	2.00	.87	.43	.70	.28	14.24
1872	.61	1.23	1.18	1.10	.89	1.35	2.96	1.10	1.48	.14	1.32	1.70	15.06
1873	1.70	1.99	1.20	3.10	1.58	3.90	6.08	2.66	.45	.61	1.43	.79	25.49
1874	2.02	1.86	2.69	3.12	2.20	1.84	3.18	2.79	1.96	.95	.92	.53	24.06
1875	.52	.57	.51	.15	2.93	2.66	3.17	1.39	1.50	.25	.61	.58	14.84
1876	1.21	1.98	1.22	1.08	1.77	5.20	4.21	1.43	.51	.85	.28	.58	20.32
1877	.36	1.85	1.00	1.20	1.37	6.81	3.24	2.04	.92	.64	.66	.40	20.49
1878	1.12	2.69	1.97	3.25	3.3	5.12	2.86	1.66	.76	.47	.84	.29	25.28
1879	.73	2.07	1.04	1.29	2.32	3.50	4.48	1.40	.77	.33	.95	.61	22.39
1880	.60	.72	1.04	1.47	2.24	1.79	1.57	.44	.06	.33	.23	.24	10.73
1881	.28	.66	.59	1.19	2.23	5.66	1.79	1.26	1.31	.16	.09	.23	15.45
1882	.18	.84	1.40	1.84	3.00	3.67	.93	1.55	.62	.06	.07	.97	15.13
1883	.84	.58	.92	.84	1.59	2.04	1.66	1.26	.07	.02	.07	.44	10.33
1884	.44	.40	.94	1.84	2.86	4.67	4.00	1.39	.67	.26	.61	.13	18.21
1885	.34	.62	1.82	1.90	2.00	2.21	2.36	1.61	.43	.00	.33	.25	13.87
1886	.79	2.05	1.64	2.28	7.93	3.51	2.52	1.09	.18	.25	.14	.30	22.68
1887	.42	1.20	2.10	4.06	4.34	4.70	3.36	1.35	.82	.72	1.33	.64	25.04
1888	.49	.70	.96	1.13	2.77	4.76	3.45	2.37	.53	.47	.94	2.31	20.88
1889	2.57	4.21	5.46	4.50	1.85	2.08	2.17	1.20	1.18	1.63	3.43	1.79	32.07
1890	1.91	2.95	3.26	1.92	2.04	5.87	2.23	1.85	1.41	.33	.46	1.40	25.63
1891	3.40	1.49	2.11	6.26	6.62	8.03	4.31	.88	.77	.50	.72	.76	35.85
1892	.79	.83	1.26	3.05	1.54	3.02	.90	2.03	.49	.39	.56	.60	15.39
1893	.57	1.09	.64	.61	2.55	4.12	2.42	1.83	.75	.38	.77	.42	16.39
1894	1.08	.83	1.48	1.21	1.67	2.55	2.15	.91	.45	.38	.41	.46	13.58
1895	.66	.92	1.14	1.58	.75	3.50	3.35	.97	.40	.55	.50	.69	15.01
1896	1.97	3.51	2.40	1.72	3.69	5.52	2.01	.62	.71	.38	.47	1.03	24.03
1897	1.28	1.40	1.31	1.64	1.65	3.22	1.85	1.39	1.19	.75	.63	.46	16.77
1898	.45	1.68	2.16	2.27	4.06	3.11	2.69	1.86	.78	.37	1.30	.31	21.02
1899	1.61	2.31	2.74	3.45	2.31	6.35	2.84	.69	.11	.05	.09	.50	25.05
1900	.63	.50	.41	1.22	4.31	4.64	1.82	1.89	.51	.34	.84	.71	17.42
1901	.79	1.21	.73	.97	.65	4.43	5.19	4.27	1.14	.91	1.27	1.13	23.69
1902	1.25	1.15	4.24	2.39	2.01	6.94	3.06	1.10	.36	.46	.70	.77	24.43
1903	.94	.79	2.37	2.52	2.85	4.97	3.46	.79	2.38	.64	.47	.14	22.32
1904	1.02	.60	.94	1.05	1.26	4.73	5.24	2.34	.55	.07	.46	1.00	19.26
1905	.42	.85	.80	2.10	.44	3.60	2.30	.61	.72	.21	.66	1.84	14.55
1906	.79	.98	1.61	1.57	1.28	3.48	2.66	1.61	.86	.74	.57	.48	16.63
1907	.85	.80	.61	1.90	.94	2.38	2.19	1.43	1.01	.12	.29	1.06	13.78
1908	1.13	2.63	2.87	2.36	2.60	3.40	1.71	1.54	.35	.28	.21	-.03	19.06
1909	.12	.14	.45	.73	3.32	2.45	2.39	1.40	.67	.22	.53	.78	13.20
1910	.17	.44	.68	2.80	2.92	2.78	1.28	.70	1.14	.29	.02	.11	13.33
1911	.04	.42	.58	.89	1.22	2.00	2.17	.29	.13	.06	.56	.61	8.97
1912	.91	1.19	1.79	1.13	1.92	4.93	3.38	2.59	.46	.07	.14	.39	18.68
1913	.49	.58	1.10	1.94	1.33	3.60	3.45	1.65	.42	-.01	.33	.55	15.45
1914	1.00	.84	1.53	1.80	1.70	5.57	3.78	2.55	.24	.32	.24	-1.16	19.41
1915	.03	.35	.63	3.31	3.55	1.14	1.00	.40	.16	1.87	1.85	.17	14.46

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

Monthly and yearly runoff, in inches (adjusted), of Lake Cochituate Outlet at Cochituate, Mass.--Con.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	.54	.67	1.98	1.91	2.88	3.98	4.58	2.92	2.55	1.45	.38	.10	23.94
1917	.12	.24	.50	.88	1.29	3.57	2.22	2.52	1.88	.31	.39	.16	14.08
1918	1.18	.92	1.19	.90	2.86	3.35	2.29	1.09	.36	.29	-.06	1.40	15.77
1919	.59	.97	1.87	2.42	1.75	4.14	2.56	2.46	.46	.58	.41	1.79	20.00
1920	.79	2.75	2.07	.78	2.18	9.78	4.93	3.05	3.23	.77	.28	.33	30.94
1921	.17	1.39	2.66	2.35	1.74	3.92	2.25	3.08	.63	2.46	.56	.19	21.40
1922	.10	1.32	2.00	.71	1.50	4.44	3.02	2.78	3.46	1.91	.92	1.63	23.81
1923	.99	.85	.86	3.26	1.85	5.62	3.51	1.68	.68	.29	.04	.02	19.65
1924	.57	1.42	3.33	2.81	1.25	3.51	4.15	2.42	.67	.005	.39	.87	21.40
1925	.11	.35	.52	.53	3.28	3.33	2.13	.94	.43	.52	.34	.26	12.74
1926	.64	.83	2.98	1.54	2.56	4.77	2.82	1.41	.36	.12	.82	-.006	18.84
1927	.44	1.39	1.36	2.43	2.45	2.93	1.14	1.09	.18	.58	2.00	2.15	18.14
1928	2.07	2.86	4.17	2.19	2.74	1.97	2.89	2.20	2.34	1.92	.89	1.00	27.34
1929	1.08	.98	1.58	2.33	2.17	4.64	4.86	2.67	.41	-.03	-.06	-.04	20.59
1930	.17	.36	.82	1.41	1.65	2.16	1.46	.53	.21	.11	-.11	-.09	8.68
1931	.41	.74	.50	1.29	2.00	5.28	2.87	2.10	3.76	1.00	.95	.50	21.40
1932	.84	.34	.74	1.77	1.12	2.98	2.56	.84	.34	-.11	.25	1.78	13.25
1933	3.01	4.66	1.94	1.99	2.22	6.41	6.25	1.56	.49	.13	.12	2.45	31.21
1934	1.08	.78	1.40	3.15	1.04	4.65	4.03	1.92	.86	.06	-.005	.93	19.30
1935	.86	1.11	1.51	3.33	2.70	4.41	4.77	1.82	1.74	.28	.004	.43	22.56
1936	.04	.88	.58	2.57	1.53	10.36	3.68	1.21	.31	-.04	.24	.72	22.08
1937	.59	.47	4.47	3.82	2.66	3.23	3.02	2.51	1.53	.22	.30	.36	22.98
1938	.44	1.80	2.79	3.53	2.64	2.56	2.02	2.06	1.93	7.66	2.26	3.44	33.13
1939	1.62	1.49	2.90	1.50	2.73	4.50	5.08	1.42	.52	.16	.40	.07	22.39
1940	.51	.86	.91	1.11	1.10	4.38	5.27	2.44	1.05	.73	-.06	.19	18.49
1941	.02	1.46	1.59	1.39	2.11	2.26	1.61	.70	.48	.03	-.16	-.24	11.25
1942	.23	.30	.42	.97	1.23	5.13	1.86	1.03	.47	.82	-.31	-.006	12.76
1943	.33	1.21	3.42	1.75	2.22	3.88	2.09	2.89	.60	.20	-.35	-.22	18.02
1944	.42	.82	.27	.48	.80	2.00	3.85	.94	.81	.30	-.08	-.69	11.30
1945	.30	1.70	2.38	1.87	1.97	5.18	1.73	2.64	2.06	.60	.38	-.008	20.80
1946	.21	1.61	3.92	3.17	3.03	4.28	1.78	2.06	1.54	-.14	.80	.43	22.69
1947	.28	.23	.82	1.50	1.13	3.04	2.82	2.58	.56	.38	-.11	.26	15.59
1948	-.05	1.26	.84	.87	2.05	5.47	2.73	2.25	2.37	.91	.04	-.19	18.35
1949	.17	1.34	.81	1.32	2.02	2.07	2.03	1.28	-.13	-.24	.02	.11	18.90
1950	-.07	.17	.36	1.22	1.53	3.16	1.97	1.25	.08	-.09	.12	-.21	9.29

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

Yearly discharge, in cubic feet per second (adjusted)

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1863	35	-	-	-	-	-	-	37.4	26.86
1864	35	-	-	-	28.5	1.51	20.52	25.2	18.22
1865	35	-	-	-	29.9	1.58	21.48	28.5	20.49
1866	35	-	-	-	21.5	1.14	15.42	22.3	16.04
1867	35	-	-	-	30.5	1.62	21.94	30.2	21.76
1868	35	-	-	-	33.5	1.78	24.18	34.6	25.07
1869	35	-	-	-	25.8	1.42	19.28	30.5	21.96
1870	35	-	-	-	41.6	2.20	29.80	35.7	25.65
1871	35	-	-	-	19.8	1.05	14.24	20.5	14.72
1872	35	-	-	-	20.9	1.11	15.06	23.5	16.93
1873	35	-	-	-	35.4	1.88	25.49	37.7	27.17
1874	35	-	-	-	33.4	1.77	24.06	26.6	19.09
1875	35	-	-	-	20.6	1.09	14.84	24.5	17.65
1876	35	-	-	-	28.1	1.49	20.32	26.5	19.12
1877	35	-	-	-	28.5	1.51	20.49	32.1	23.06
1878	35	-	-	-	35.1	1.86	25.28	36.8	26.34
1879	35	-	-	-	31.0	1.64	22.29	24.8	17.81
1880	35	-	-	-	14.9	.788	10.73	13.7	9.90
1881	35	-	-	-	21.5	1.14	15.45	22.7	16.34
1882	35	-	-	-	21.1	1.12	15.13	20.9	15.55
1883	35	-	-	-	14.3	.760	10.33	13.6	9.77
1884	35	-	-	-	25.2	1.34	18.21	26.6	19.21
1885	35	-	-	-	19.3	1.02	15.87	21.6	15.57
1886	35	-	-	-	31.5	1.67	22.68	30.5	21.92
1887	35	-	-	-	34.8	1.84	25.04	32.6	23.47
1888	35	-	-	-	28.9	1.53	20.88	42.9	30.97
1889	35	-	-	-	44.6	2.35	32.07	38.9	27.85
1890	35	-	-	-	35.6	1.89	26.53	34.1	24.51
1891	35	-	-	-	50.4	2.67	35.85	44.1	31.73
1892	35	-	-	-	21.3	1.13	15.38	20.8	15.00
1893	35	-	-	-	22.8	1.21	16.38	24.0	17.27
1894	35	-	-	-	18.9	.999	13.58	17.9	12.91
1895	35	-	-	-	20.9	1.11	15.01	28.0	20.17
1896	35	-	-	-	33.3	1.77	24.03	27.9	20.14
1897	35	-	-	-	23.3	1.24	16.77	23.7	17.05
1898	35	-	-	-	29.2	1.55	21.02	32.6	23.41
1899	35	-	-	-	32.0	1.70	23.03	24.9	17.91
1900	47	-	-	-	24.2	1.28	17.42	27.3	19.61
1901	65	-	-	-	32.9	1.75	23.69	37.0	26.60
1902	82	-	-	-	32.2	1.71	24.43	30.4	21.69
1903	97	-	-	-	31.0	1.64	22.32	28.9	20.78
1904	124	-	-	-	26.8	1.42	19.26	26.0	18.77
1905	165	-	-	-	20.2	1.07	14.55	22.1	15.86

## MERRIMACK RIVER BASIN

Yearly discharge, in cubic feet per second (adjusted), of Lake Cochituate Outlet at Cochituate, Mass.--Continued

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1906	201	-	-	-	23.1	1.22	16.63	21.8	15.71
1907	241	-	-	-	19.2	1.02	13.78	24.9	17.95
1908	241	-	-	-	26.4	1.40	19.05	18.2	13.13
1909	261	-	-	-	18.2	.973	13.20	18.9	13.78
1910	281	-	-	-	17.5	.982	13.33	17.2	13.08
1911	301	-	-	-	11.6	.661	8.97	15.3	11.82
1912	321	-	-	-	24.4	1.39	18.88	22.2	17.16
1913	351	-	-	-	20.0	1.14	15.43	21.5	16.63
1914	381	-	-	-	25.1	1.43	19.41	22.1	17.05
1915	401	-	-	-	18.7	1.07	14.46	21.6	16.64
1916	431	-	-	-	30.9	1.76	23.94	27.9	21.61
1917	451	-	-	-	18.2	1.04	14.08	21.4	16.51
1918	471	-	-	-	20.4	1.17	15.77	20.6	15.91
1919	501	-	-	-	25.9	1.47	20.00	28.7	22.18
1920	501	-	-	-	40.0	2.28	30.94	38.2	29.55
1921	521	-	-	-	27.7	1.58	21.40	26.7	20.60
1922	541	-	-	-	30.7	1.75	23.81	29.9	23.09
1923	561	-	-	-	25.4	1.45	19.65	28.8	22.27
1924	581	-	-	-	27.6	1.57	21.40	22.0	17.06
1925	601	-	-	-	16.5	.939	12.74	21.0	16.21
1926	621	-	-	-	24.4	1.39	18.84	22.8	17.58
1927	641	-	-	-	23.5	1.34	18.14	31.2	24.05
1928	661	-	-	-	35.3	2.01	27.34	28.3	21.88
1929	681	-	-	-	26.7	1.52	20.59	23.7	18.30
1930	696	-	-	-	11.2	.639	8.68	11.6	8.98
1931	711	-	-	-	27.7	1.58	21.40	27.8	21.47
1932	726	-	-	-	17.1	.975	13.25	27.3	21.14
1933	741	-	-	-	40.4	2.30	31.21	32.2	24.86
1934	756	-	-	-	25.8	1.46	19.90	25.8	19.92
1935	781	-	-	-	29.2	1.66	22.56	26.9	20.78
1936	801	-	-	-	28.4	1.62	22.08	33.7	26.11
1937	821	-	-	-	29.5	1.69	22.98	28.8	22.48
1938	851	-	-	-	42.4	2.44	33.13	45.7	34.11
1939	871	-	-	-	28.8	1.66	22.39	23.9	18.66
1940	891	-	-	-	23.6	1.36	18.49	24.6	19.28
1941	921	-	-	-	14.4	.828	11.25	11.7	9.13
1942	951	-	-	-	16.4	.941	12.76	21.5	16.77
1943	971	-	-	-	23.1	1.33	18.02	18.7	14.57
1944	1001	-	-	-	14.4	.828	11.30	18.1	14.17
1945	1031	-	-	-	26.7	1.53	20.80	28.4	22.16
1946	1051	-	-	-	29.1	1.67	22.69	23.4	18.28
1947	1081	-	-	-	17.4	1.00	13.59	18.1	14.11
1948	1111	-	-	-	23.5	1.35	18.35	24.1	18.82
1949	1141	-	-	-	13.8	.795	10.80	11.5	8.94
1950	1171	-	-	-	11.9	.685	9.29	-	-

## 165. Concord River at Lowell, Mass.

Location.--Lat 42°37'40", long. 71°17'55", 0.4 mile upstream from River Meadow Brook, near Lawrence Street Bridge at Lowell, Middlesex County.

Drainage area.--Total above gage, 381 sq mi (382 sq mi prior to July 1909); net above gage, 288 sq mi (flow diverted from 94.1 sq mi prior to July 1909, from 93.0 sq mi July 1909 to December 1910, and from 92.8 sq mi January 1911 to September 1916).

Gage.--Staff gage.

Remarks.--Discharge is summation of flow over dam and through water wheels. No records obtained for Sundays and holidays. Flow regulated by mills above station. Discharge includes water wasted in diverting drainage from basins of Sudbury River and Lake Cochituate for use of Boston metropolitan district.

Cooperation.--Records furnished by Arthur T. Safford, hydraulic engineer, for the owners of the water power taken from Wamesit Canal.

## Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1901	-	-	-	295	199	907	1,878	1,444	761	256	508	255	-
1902	318	317	797	951	509	2,147	1,002	448	238	160	199	182	608
1903	333	363	652	774	971	1,456	1,256	336	880	554	255	177	665
1904	274	301	323	235	263	982	1,038	1,085	309	226	230	234	459
1905	226	242	154	545	236	854	817	301	268	165	149	560	375
1906	251	246	396	547	474	1,011	1,252	456	636	364	322	138	507
1907	174	343	278	689	352	717	675	402	350	176	77.4	225	371
1908	500	873	901	1,091	742	1,092	760	535	296	111	201	92.1	600
1909	77.7	205	218	249	804	826	829	618	342	116	80.0	103	369
1910	156	208	269	624	727	1,391	446	360	343	150	88.3	55.6	399
1911	57.6	200	192	280	298	493	671	263	205	37.7	116	126	244
1912	225	364	480	384	453	1,592	1,242	739	401	156	138	115	507
1913	134	275	329	680	406	875	1,180	523	376	104	93.5	146	426
1914	264	335	437	406	676	1,185	1,098	847	233	194	169	119	496
1915	85.7	155	216	758	857	543	291	248	107	479	647	215	382
1916	259	274	439	512	560	734	1,406	915	751	371	246	204	554

Yearly discharge, in cubic feet per second, of Concord River at Lowell, Mass.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1901	415	-	-	-	-	-	-	646	-
1902	415	-	-	74	608	-	-	601	-
1903	415	-	-	136	665	-	-	627	-
1904	415	-	-	27	459	-	-	434	-
1905	415	-	-	57	375	-	-	399	-
1906	415	-	-	27	507	-	-	499	-
1907	415	-	-	11	371	-	-	495	-
1908	415	-	-	25	600	-	-	451	-
1909	415	-	-	23	369	-	-	380	-
1910	415	-	-	25	399	-	-	385	-
1911	415	-	-	115	244	-	-	295	-
1912	415	-	-	169	507	-	-	479	-
1913	415	-	-	18	426	-	-	451	-
1914	415	-	-	61	496	-	-	447	-
1915	415	-	-	56	382	-	-	430	-
1916	431	-	-	-	554	-	-	-	-

† Corrected.

166. Concord River below River Meadow Brook, at Lowell, Mass.

Location.--Lat 42°38'12", long. 71°18'09", on right bank at Lowell, Middlesex County, 300 ft downstream from Rogers Street Bridge, 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 (diversions as needed from 92.6 sq mi for use of Boston metropolitan district).

Gage.--Water-stage recorder. Datum of gage is 67.41 ft above mean sea level, datum of 1929.

Average discharge.--14 years (1936-50), 419 cfs (adjusted to net drainage area).

Extremes.--1936-50: 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.--Runoff adjusted for 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.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1937	4242	4210	4152	1,156	934	991	993	945	545	211	106	167	4635
1938	177	460	1,137	908	1,581	874	790	567	532	1,512	1,208	1,151	889
1939	835	553	1,080	542	653	1,448	1,985	638	255	124	131	91.2	695
1940	90.1	290	230	273	318	901	2,189	971	600	304	107	100	529
1941	105	464	495	518	769	633	698	283	160	91.7	66.2	55.5	358
1942	58.3	114	158	245	437	1,491	876	380	284	234	278	109	387
1943	135	325	808	705	756	1,384	778	965	477	127	136	78.9	556
1944	139	410	232	181	355	714	1,040	591	298	236	90.1	196	372
1945	131	253	704	569	434	1,668	729	964	631	394	200	125	569
1946	122	360	919	1,049	736	1,468	630	660	851	144	321	246	626
1947	324	167	291	450	710	1,088	780	902	430	205	155	152	470
1948	81.5	540	253	237	442	1,567	1,153	681	982	505	197	71.8	540
1949	64.9	355	315	473	734	897	773	458	173	50.0	36.6	64.5	365
1950	59.4	91.1	146	334	403	844	960	536	189	76.2	100	105	319

\* Not previously published; estimated on basis of records for nearby streams.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1937	#0.74	#0.54	#3.21	3.24	2.29	2.70	2.79	2.88	1.54	0.65	0.33	0.44	#21.35
1938	.53	1.25	3.26	2.35	3.60	2.51	2.43	1.70	1.35	3.71	3.90	3.11	29.70
1939	2.74	1.63	3.15	1.58	1.56	3.82	5.51	2.10	.79	.40	.32	.27	23.87
1940	.31	.87	.78	.82	.78	2.67	6.47	3.05	1.80	.95	.37	.32	19.19
1941	.33	1.32	1.46	1.62	1.95	1.84	2.08	.94	.52	.31	.20	.18	12.75
1942	.13	.39	.50	.79	1.26	4.47	2.73	1.23	.35	.75	.88	.35	14.40
1943	.44	.33	2.34	2.14	2.05	4.25	2.44	2.39	1.51	.42	.46	.25	20.22
1944	.46	1.33	.79	.63	1.11	2.24	2.99	1.95	.99	.78	.33	.65	14.25
1945	.46	.79	2.15	1.70	.87	5.15	2.25	2.93	1.82	1.22	.64	.39	20.37
1946	.36	.98	2.48	3.06	1.90	4.29	1.85	2.00	2.51	.48	1.01	.64	21.56
1947	.93	.48	.70	1.27	1.78	3.16	2.21	2.54	1.28	.63	.45	.42	15.85
1948	.28	1.01	.77	.65	1.07	4.35	3.11	2.04	2.82	1.50	.60	.23	18.43
1949	.28	.97	.85	1.30	1.67	2.56	2.11	1.33	.53	.16	.11	.20	12.28
1950	.20	.29	.48	.97	1.09	2.28	2.64	1.49	.57	.23	.27	.30	10.81

\* Not previously published; estimated on basis of records for nearby streams.

Yearly discharge, in cubic feet per second, of Concord River below River Meadow Brook,  
at Lowell, Mass.

at Lowell, Mass.											
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year			
		Observed				Adjusted		Observed		Adjusted	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1937	821	1,900	Dec. 23, 1936	-	\$635	\$490	\$1.57	\$21.35	649	503	21.90
1938	851	3,790	July 29, 1938	23	889	683	2.19	29.70	948	740	32.18
1939	871	2,380	Apr. 4, 1939	23	895	549	1.76	23.87	537	421	18.31
1940	891	2,570	Apr. 4, 1940	29	529	440	1.41	19.19	567	466	20.34
1941	921	1,180	Feb. 12, 1941	16	358	293	.939	12.75	295	244	10.65
1942	951	2,320	Mar. 21, 1942	15	387	331	1.06	14.40	468	393	17.08
1943	971	2,020	Mar. 22, 1943	22	556	465	1.49	20.22	514	438	19.09
1944	1001	1,330	Apr. 29, 1944	24	372	327	1.05	14.25	399	346	15.07
1945	1031	2,320	Mar. 8, 1945	57	569	468	1.50	20.37	596	478	20.79
1946	1051	2,600	Mar. 11, 1946	54	626	496	1.59	21.56	574	456	19.85
1947	1081	1,680	Mar. 8, 1947	66	470	364	1.17	15.85	460	363	15.80
1948	1111	3,200	Mar. 24, 1948	33	540	422	1.35	18.43	547	423	18.48
1949	1141	1,320	Feb. 28, 1949	13	365	283	.907	12.28	327	256	11.14
1950	1171	1,710	Mar. 29, 1950	22	519	249	.798	10.81	-	-	-

\* Not previously published.

167. 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). Prior to July 1, 1937, net above gage, 4,424 sq mi (diversions as needed from 211 sq mi for use of Boston metropolitan district and city of Worcester).

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; discharge record included Concord River.

Average discharge.--27 years (1923-50), 6,910 cfs.

Extremes.--1923-50: Maximum discharge, 173,000 cfs Mar. 20, 1936 (gage height, 68.4 ft, from floodmarks); minimum daily, 199 cfs Sept. 23, 1923.

Remarks.--Flow regulated by power plants, and by Franklin Falls Reservoir since 1942 (see p. 141), and by Squam, Little Squam, Newfound (see p. 139), Merrymeeting (see p. 142), Wentworth (see p. 142), Winnipessaukee (see p. 142), Winnisquam, and other lakes, and by MacDowell Reservoir since March 1950 (see p. 148), and Blackwater Reservoir since 1941 (see p. 154). Runoff adjusted for wastage by Boston metropolitan district and city of Worcester from 210 sq mi (prior to July 1, 1937, 211 sq mi) in basins of South Branch Nashua and Sudbury Rivers and Lake Cochituate to obtain runoff from net area.

Cooperation.--Gage-height record (Boott Mills gage) prior to Mar. 7, 1934, furnished by Proprietors of Locks and Canals, Lowell, Mass.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1923	-	-	-	-	-	-	-	-	3,568	2,002	1,823	1,446	-
1924	2,394	5,742	11,770	9,493	4,980	8,719	24,240	15,270	4,018	2,086	1,638	3,843	7,847
1925	2,841	2,782	3,281	1,621	9,191	16,890	14,650	6,788	3,426	3,991	2,544	2,229	5,826
1926	3,646	6,747	8,713	5,234	4,271	9,144	19,210	10,610	3,954	2,397	1,796	1,541	6,355
1927	2,372	7,392	4,385	4,547	4,905	15,710	9,183	7,066	3,680	2,935	3,394	5,015	5,986
1928	5,729	17,690	13,550	6,586	8,690	8,731	15,960	14,820	10,140	6,743	6,220	5,732	10,200
1929	3,526	3,581	4,176	6,120	5,873	17,290	19,900	17,000	4,555	2,566	1,723	1,583	7,336
1930	1,768	2,253	2,127	4,316	4,863	11,620	10,540	6,008	5,211	2,332	2,290	1,566	4,569
1931	1,354	2,962	2,411	1,833	2,105	7,795	17,710	9,365	10,760	3,432	2,311	2,099	5,336
1932	2,115	2,878	4,698	9,032	6,547	6,966	22,260	6,762	2,398	2,391	2,115	3,302	5,933
1933	6,234	11,840	5,677	6,572	6,427	12,070	35,020	11,110	3,933	1,798	2,281	3,984	8,880
1934	4,991	4,119	4,224	5,562	3,619	10,860	28,640	10,380	4,135	1,900	1,682	3,693	6,992
1935	4,204	5,702	6,373	10,830	7,268	13,820	15,140	8,607	9,940	4,974	2,205	2,744	7,646
1936	1,972	3,266	4,218	6,440	4,592	45,780	20,720	7,750	3,082	2,043	1,580	1,846	6,645
1937	3,574	3,605	10,700	11,900	10,640	8,526	17,140	20,090	8,503	3,835	2,551	2,343	8,609
1938	3,500	9,510	11,880	9,376	10,930	11,060	13,120	7,825	5,198	8,611	7,547	19,650	9,820
1939	7,885	6,546	15,080	7,413	6,087	10,720	26,440	12,190	4,203	2,251	2,332	1,726	8,580
1940	1,908	3,552	3,735	2,746	2,421	4,132	28,460	18,890	10,490	3,935	2,242	2,953	7,012
1941	1,879	5,991	5,042	6,065	7,957	5,824	10,180	4,093	2,427	2,482	1,425	1,249	4,519
1942	1,556	2,394	2,569	3,420	2,811	14,310	15,030	6,473	6,871	3,340	2,612	2,017	5,290
1943	2,440	5,450	6,930	5,339	5,839	12,420	13,800	18,130	6,190	2,826	4,796	2,606	7,244
1944	4,594	9,089	4,405	2,697	3,136	7,439	18,840	9,990	9,858	4,500	1,943	3,923	6,595
1945	3,367	3,513	6,449	6,831	5,848	20,570	14,850	18,880	11,460	6,379	3,572	2,751	8,736
1946	4,266	6,049	10,070	8,835	7,165	19,230	9,896	11,870	8,536	2,695	4,181	2,844	7,989
1947	5,296	4,062	3,970	4,932	8,629	12,590	17,210	13,600	10,100	4,462	2,560	2,322	7,433
1948	1,257	3,902	2,678	2,306	3,569	15,720	13,780	14,520	10,390	4,106	2,300	1,400	6,356
1949	1,366	4,269	2,964	9,564	7,482	9,973	11,610	7,010	2,954	1,696	1,406	1,940	5,159
1950	1,739	2,860	3,582	6,146	5,559	8,568	18,400	7,315	4,846	1,477	1,290	1,836	5,281



Monthly and yearly runoff, in inches (adjusted), of Merrimack River below Concord River, at Lowell, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1923	-	-	-	-	-	-	-	-	0.89	0.52	0.47	0.36	-
1924	0.62	1.42	3.01	2.42	1.20	2.23	6.00	3.91	1.00	.54	.42	.96	23.73
1925	.74	.70	.84	.42	2.11	4.35	3.66	1.75	.86	1.03	.66	.56	17.68
1926	.94	1.68	2.23	1.34	.96	2.06	4.80	2.74	.99	.62	.46	.39	19.21
1927	.61	1.84	1.12	1.15	1.12	4.05	2.30	1.82	.92	.76	.86	1.24	17.79
1928	1.46	4.37	3.48	2.21	2.08	2.25	3.99	3.80	2.47	1.72	1.60	1.43	30.86
1929	.90	.89	1.07	1.56	1.34	4.43	4.86	4.31	1.14	.67	.45	.40	22.02
1930	.46	.56	.54	1.10	1.12	3.00	2.63	1.56	1.30	.61	.59	.39	13.86
1931	.35	.74	.62	.47	.49	1.99	4.44	2.42	2.68	.88	.60	.53	16.21
1932	.55	.72	1.22	2.34	1.59	1.78	5.57	1.74	.60	.62	.55	.80	18.08
1933	1.59	2.91	1.45	1.67	1.48	2.99	8.54	2.87	.98	.47	.59	.97	26.51
1934	1.28	1.03	1.08	1.41	.88	2.76	7.03	2.64	1.03	.49	.44	.92	20.39
1935	1.07	1.42	1.64	2.76	1.64	3.48	3.70	2.19	2.48	1.29	.57	.68	22.92
1936	.51	.81	1.08	1.64	1.09	11.53	5.08	1.99	.77	.53	.41	.46	25.90
1937	.92	.89	2.71	3.03	2.45	2.14	4.22	5.15	2.11	.39	.66	.58	25.85
1938	.90	2.36	3.05	2.56	2.47	2.81	3.27	1.95	1.26	2.10	1.91	4.76	29.18
1939	1.98	1.62	3.77	1.88	1.38	2.82	6.45	3.16	1.05	.58	.59	.43	25.51
1940	.47	.88	.62	.60	.57	1.03	7.08	4.88	2.62	1.01	.58	.74	21.28
1941	.48	1.49	1.29	1.56	1.83	1.48	2.54	1.06	.61	.64	.37	.31	13.66
1942	.40	.60	.66	.88	.85	3.65	3.76	1.67	1.73	.86	.67	.50	16.03
1943	.63	1.36	1.76	1.36	1.34	3.17	3.45	4.68	1.54	.73	1.24	.65	21.91
1944	.93	2.28	1.14	.70	.75	1.91	4.70	2.58	2.48	1.16	.50	.98	20.11
1945	.87	.88	1.65	1.75	1.33	5.29	3.72	4.87	2.86	1.64	.92	.69	26.47
1946	1.10	1.50	2.56	2.24	1.65	4.93	2.46	3.06	2.10	.70	1.07	.70	24.07
1947	1.36	1.01	.99	1.26	1.99	3.22	4.30	3.49	2.53	1.07	.65	.57	22.44
1948	.32	.96	.67	.57	.83	3.99	3.39	3.73	2.52	1.12	.59	.55	19.04
1949	.35	1.05	.75	2.46	1.72	2.54	2.88	1.80	.74	.41	.36	.49	15.55
1950	.45	.72	.93	1.58	1.29	2.17	4.58	1.87	1.21	.38	.33	.46	15.97

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1923	781	-	-	-	-	-	-	-	-	-	-
1924	781	\$55,700	Apr. 8, 1924*	227	7,847	7,710	1.74	23.73	6,923	6,810	20.96
1925	781	\$55,000	Mar. 31, 1925*	234	5,826	5,757	1.30	17.68	6,682	6,595	20.25
1926	781	\$39,300	Apr. 27, 1926*	318	6,355	6,261	1.42	19.21	5,932	5,849	17.93
1927	781	\$34,300	Mar. 17, 1927*	284	5,886	5,800	1.31	17.79	7,795	7,668	23.53
1928	781	76,800	Nov. 5, 1927	795	10,200	10,030	2.27	30.86	8,063	7,934	24.41
1929	781	\$37,000	May 5, 1929*	407	7,336	7,175	1.62	22.02	6,903	6,754	20.72
1930	781	\$29,000	Apr. 9, 1930*	310	4,569	4,529	1.02	13.86	4,614	4,577	14.01
1931	781	\$35,900	June 11, 1931*	364	5,336	5,280	1.19	16.21	5,590	5,535	16.99
1932	781	\$50,700	Apr. 14, 1932*	498	5,933	5,877	1.33	18.08	7,099	6,999	21.54
1933	781	\$72,600	Apr. 20, 1933*	488	8,880	8,631	1.95	26.51	8,016	7,796	23.95
1934	781	\$59,600	Apr. 14, 1934*	505	6,992	6,837	1.55	20.99	7,238	7,080	21.73
1935	781	49,500	Jan. 11, 1935	600	7,646	7,471	1.69	22.92	7,073	6,907	21.19
1936	801	173,000	Mar. 20, 1936	541	8,645	8,428	1.91	25.90	9,357	9,112	28.02
1937	821	39,800	May 16, 17, 1937	680	8,609	8,429	1.91	25.85	9,188	9,007	27.62
1938	851	121,100	Sept. 23, 1938	469	9,820	9,515	2.15	29.18	10,220	9,866	30.26
1939	871	48,600	Apr. 21, 1939	574	8,580	8,318	1.88	25.51	6,807	6,623	20.31
1940	891	55,800	Apr. 14, 1940	452	7,012	6,917	1.56	21.28	7,376	7,269	22.37
1941	921	19,900	Feb. 10, 1941	297	4,519	4,449	1.01	13.66	3,968	3,930	12.06
1942	951	27,000	June 17, 1942	286	5,290	5,229	1.18	16.03	5,987	5,907	18.12
1943	971	27,400	May 14, 1943	423	7,244	7,145	1.61	21.91	7,427	7,343	22.51
1944	1001	49,200	June 26, 1944	405	6,595	6,543	1.48	20.11	6,292	6,232	19.16
1945	1031	39,500	Mar. 22, 1945	521	8,736	8,628	1.95	26.47	9,328	9,203	28.23
1946	1051	36,100	Dec. 9, 1945	408	7,989	7,845	1.77	24.07	7,395	7,258	22.27
1947	1081	31,300	Apr. 14, 1947	474	7,433	7,312	1.65	22.44	6,967	6,852	21.03
1948	1111	51,700	Mar. 23, 1948	262	6,356	6,190	1.40	19.04	6,420	6,256	19.24
1949	1141	24,600	Jan. 8, 1949	262	5,159	5,068	1.15	15.55	5,127	5,043	15.50
1950	1171	34,800	Apr. 22, 1950	270	5,281	5,201	1.18	15.37	-	-	-

\* Not previously published.

## 168. Merrimack River at Lawrence, Mass.

Location.--Lat 42°42'20", long. 71°09'10", at dam of Essex Co. in Lawrence, Essex County.

Drainage area.--Total above dam, 4,672 sq mi; net above dam, 4,462 sq mi (flow diverted from 210 sq mi for use of Boston metropolitan district and city of Worcester). Prior to July 1909, total area was 4,673 sq mi. In July 1909, Dug Pond in Lake Cochituate basin was diverted to Charles River, thus artificially reducing drainage area 1 sq mi. Prior to Jan. 1, 1881, the net drainage area was 4,576 sq mi; Jan. 1, 1881, to Mar. 6, 1898, 4,579 sq mi; Mar. 7, 1898, to July 1, 1937, 4,461 sq mi.

Extremes.--1879-1950: Maximum discharge, 174,000 cfs Mar. 20, 21, 1936 (gage height, 48.0 ft). Maximum discharge previously known, 108,000 cfs Apr. 23, 1852 (gage height, 44.12 ft).

Remarks.--Discharge determined by computation of flow over dam and through wheels and gates. Flow regulated by power plants, and by Squam, Little Squam, Newfound (see p. 139), Merrymeeting (see p. 142), Wentworth (see p. 142), Winnepesaukee (see p. 142), Winnisquam, and other lakes, and Blackwater Reservoir since November 1941, Franklin Falls Reservoir since March 1942, and MacDowell Reservoir since March 1950. Runoff adjusted for wastage by Boston metropolitan district and city of Worcester from 210 sq mi (prior to Jan. 1, 1881, 97 sq mi; Jan. 1, 1881, to Mar. 6, 1898, 94 sq mi; Mar. 7, 1898, to July 1, 1937, 211 sq mi) in basins of South Branch Nashua and Sudbury Rivers and Lake Cochituate to obtain runoff from net area.

Comparison with records for station at Lowell since June 1923 shows Lawrence records to be in error at times.

Cooperation.--Records furnished by Essex Co., R. A. Hale and J. R. Baldwin, Chief Engineers (water-year means computed by Geological Survey).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1880	2,445	4,338	7,038	7,475	12,449	10,620	10,878	5,557	3,183	2,952	2,555	2,241	5,976
1881	1,773	4,244	2,649	2,504	4,792	17,106	16,197	14,249	5,131	3,447	2,794	2,613	6,433
1882	2,494	5,301	8,407	7,432	9,456	16,248	10,405	10,728	9,013	3,142	2,151	3,716	7,374
1883	3,099	2,310	2,161	2,024	2,944	4,090	15,535	8,540	5,040	3,127	1,933	1,219	4,355
1884	1,975	2,868	2,355	4,662	9,609	15,742	26,199	11,922	4,091	2,293	2,118	1,949	7,149
1885	1,832	2,391	4,716	5,317	4,428	3,543	18,323	8,548	4,222	2,850	5,445	2,891	5,376
1886	3,425	9,186	6,982	13,200	17,991	12,033	22,774	6,821	3,267	2,275	1,999	1,986	8,494
1887	2,154	7,032	5,969	7,822	13,217	8,424	22,189	13,814	8,193	6,674	8,566	4,197	9,021
1888	3,122	4,418	6,138	6,417	8,480	10,273	24,905	20,921	5,639	2,512	2,645	7,135	8,550
1889	12,368	13,528	14,920	12,295	6,271	11,037	11,142	6,623	5,390	3,609	5,102	3,498	8,822
1890	5,711	8,976	13,125	6,955	7,721	15,667	17,244	14,285	7,881	3,161	3,486	8,397	9,377
1891	12,314	8,871	6,573	13,298	13,499	23,616	21,519	7,347	4,542	2,895	2,480	2,544	9,956
1892	2,137	2,469	4,113	8,524	4,302	7,750	8,150	10,233	5,819	4,757	4,807	3,944	5,549
1893	2,135	6,494	3,931	2,949	4,995	10,723	15,563	19,504	4,404	2,389	2,582	2,782	6,538
1894	3,614	3,366	5,350	3,022	4,274	14,375	11,085	6,992	6,033	2,278	1,695	1,631	5,324
1895	2,254	3,549	3,033	2,887	2,319	5,857	19,840	6,233	3,038	2,583	2,180	1,673	4,621
1896	4,010	9,558	9,404	6,546	9,109	21,054	18,234	4,438	3,518	2,042	2,019	3,122	7,754
1897	5,186	6,662	4,359	3,409	4,571	10,571	17,612	10,117	12,708	10,799	5,072	7,759	7,019
1898	2,207	5,827	10,376	7,594	7,797	18,612	15,228	10,996	6,464	2,660	3,799	2,910	7,856
1899	6,429	9,697	8,779	7,857	8,882	11,948	26,438	9,528	2,980	2,461	2,086	1,994	7,941
1900	1,769	2,792	2,797	3,560	16,461	16,245	16,500	10,034	3,957	1,618	1,876	1,513	6,764
1901	2,517	5,849	6,783	3,581	2,452	9,510	26,025	15,612	7,521	2,891	4,449	2,657	7,471
1902	4,128	3,050	9,756	10,454	5,620	27,884	17,392	10,168	5,292	4,327	3,763	3,452	8,774
1903	7,162	5,748	8,119	7,699	9,309	27,675	15,587	4,365	10,295	4,648	3,338	2,371	8,860
1904	3,709	2,998	3,720	2,642	2,944	12,318	20,704	17,426	4,667	2,797	2,575	2,913	6,618
1905	5,636	2,697	1,819	3,871	2,272	10,563	16,185	5,216	4,164	2,674	2,702	7,631	5,286
1906	3,261	3,388	5,687	7,664	5,108	7,684	16,159	10,140	10,114	4,951	3,314	1,885	6,613
1907	2,451	3,167	2,558	6,400	3,054	7,799	13,141	9,124	5,351	3,341	1,927	2,965	5,106
1908	6,388	13,066	9,812	8,824	7,487	11,400	11,967	11,575	4,193	2,329	2,986	1,693	7,643
1909	1,474	1,590	1,866	3,025	7,118	7,718	15,315	8,790	4,247	1,999	1,862	1,652	4,708
1910	1,886	1,745	2,265	4,759	4,493	16,311	10,986	6,751	4,876	1,786	2,042	1,771	4,973
1911	1,341	2,063	1,511	2,814	2,164	5,584	13,591	6,064	2,462	1,190	1,467	1,942	3,515
1912	4,095	4,687	5,752	3,594	3,186	12,601	19,454	10,461	5,832	1,836	2,250	2,162	6,325
1913	5,269	5,533	4,790	8,007	4,465	15,204	11,503	6,486	4,032	1,757	1,372	1,735	5,684
1914	3,552	4,352	4,735	3,581	4,424	14,722	22,356	12,996	5,292	2,505	1,946	1,991	6,698
1915	1,358	1,614	1,976	4,972	7,974	6,678	7,987	5,039	2,189	8,158	9,303	2,936	5,015
1916	2,959	3,944	5,902	6,910	7,736	7,950	19,556	12,339	13,965	6,869	4,129	4,337	8,025
1917	3,563	3,336	5,178	4,617	3,497	10,527	14,543	9,629	13,643	4,578	2,818	2,465	6,536
1918	2,780	4,007	2,608	2,114	3,786	9,050	14,973	6,925	3,594	2,478	2,101	3,828	4,837
1919	3,446	5,087	6,752	5,984	3,945	15,301	11,479	12,351	4,612	2,422	1,804	2,992	6,448
1920	5,146	7,464	6,165	2,738	2,962	18,844	27,262	15,999	7,331	3,568	5,031	3,042	8,445
1921	4,704	4,169	14,756	7,790	4,650	16,729	12,190	8,994	2,675	4,691	3,072	1,900	7,193
1922	2,141	4,752	7,535	3,735	4,031	17,633	22,284	13,229	13,724	9,618	3,479	3,498	8,804
1923	3,009	2,911	2,302	5,133	4,129	9,067	22,460	13,231	3,289	1,952	1,776	1,362	5,885
1924	2,016	5,349	10,777	8,924	4,433	8,055	22,934	14,143	4,135	2,072	1,578	3,388	7,332
1925	2,744	2,409	3,215	1,610	8,588	15,399	13,959	6,071	3,093	3,207	2,329	2,034	5,360
1926	3,519	4,871	7,207	4,662	3,736	7,566	17,678	9,722	3,770	2,350	1,832	1,524	5,684
1927	2,283	6,292	3,958	4,400	4,803	14,254	8,200	6,374	3,523	2,866	3,249	4,548	5,383
1928	6,145	16,958	13,636	9,186	9,364	9,213	15,417	14,293	10,604	7,444	6,664	6,745	10,482
1929	4,410	4,417	5,045	6,979	6,269	16,588	18,395	15,696	4,366	2,605	1,787	1,633	7,396
1930	1,826	2,237	2,214	3,910	6,797	10,097	9,140	5,248	4,709	2,330	2,319	1,668	4,164

## MERRIMACK RIVER BASIN

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Monthly and yearly mean discharge, in cubic feet per second (observed), of Merrimack River at Lawrence, Mass.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	1,390	2,520	2,321	1,895	2,163	7,296	16,437	8,518	9,987	3,412	2,527	2,104	5,025
1932	2,102	2,772	4,549	8,079	5,847	6,207	20,002	5,933	2,210	2,239	2,155	3,111	5,397
1933	5,584	11,131	5,285	6,106	5,926	11,270	33,955	9,651	3,672	1,819	2,273	4,464	8,393
1934	6,155	5,204	5,567	6,710	5,624	11,112	27,665	10,611	4,316	2,143	2,012	4,225	7,581
1935	5,469	6,637	7,173	13,806	9,221	13,959	15,228	9,233	10,364	5,398	2,507	2,760	8,454
1936	1,903	3,878	5,155	7,704	6,438	47,822	20,586	8,434	3,176	2,146	1,609	1,878	9,263
1937	4,010	4,364	10,575	11,946	11,289	9,499	16,810	19,455	9,519	4,364	2,582	2,372	8,888
1938	3,727	9,407	12,211	9,741	11,237	11,266	13,034	8,459	6,045	9,848	8,663	19,289	10,217
1939	8,705	7,450	15,559	8,047	7,000	11,372	26,271	12,446	4,568	2,199	2,509	1,651	8,954
1940	1,786	3,834	3,090	2,200	2,262	5,273	28,555	18,810	10,944	4,242	2,531	3,177	7,187
1941	1,835	6,736	6,057	7,067	8,546	6,564	10,632	4,279	2,425	2,403	1,327	1,195	4,890
1942	1,459	2,372	2,678	4,098	3,329	14,510	14,823	7,221	7,208	3,944	3,006	2,029	5,563
1943	2,506	5,467	7,870	6,215	6,710	12,525	13,304	17,155	6,806	2,827	4,650	2,516	7,353
1944	3,426	9,639	5,361	3,589	3,845	17,173	16,586	10,513	9,606	4,871	1,922	3,779	6,146
1945	3,291	3,437	6,307	7,130	5,773	20,379	14,650	18,438	11,650	6,227	3,269	2,545	8,620
1946	3,936	5,930	10,956	9,760	8,128	19,479	10,343	11,986	8,842	2,567	4,034	2,850	8,249
1947	5,055	3,801	3,840	4,838	9,166	12,879	16,894	13,982	10,613	4,316	2,505	2,254	7,489
1948	1,168	4,371	3,720	3,153	4,524	17,039	14,206	14,531	11,117	4,852	2,519	1,358	6,864
1949	1,309	4,211	2,915	10,215	8,309	10,841	12,000	7,875	3,120	1,477	1,220	1,768	5,399
1950	1,580	2,764	3,572	5,974	5,531	9,137	18,371	8,246	5,395	1,349	1,096	1,730	5,376

Note.--Records since October 1945 not previously published.

## Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1880	0.61	1.06	1.78	1.87	2.89	2.64	2.62	1.40	0.78	0.74	0.64	0.55	17.58
1881	.45	1.03	.67	.56	1.06	4.18	3.90	3.56	1.22	.86	.70	.61	18.82
1882	.63	1.29	2.11	1.84	2.09	4.01	2.52	2.68	2.19	.79	.54	.90	21.59
1883	.76	.56	.54	.51	.66	.99	3.77	2.13	1.23	.79	.49	.30	12.75
1884	.50	.70	.59	1.18	2.21	3.84	6.29	2.97	.99	.58	.53	.47	20.85
1885	.46	.58	1.18	1.30	.97	.85	4.43	2.11	1.02	.72	1.37	.70	15.69
1886	.86	2.21	1.72	3.29	3.95	2.97	5.49	1.70	.79	.57	.50	.48	24.53
1887	.54	1.72	1.49	1.89	2.94	2.04	5.33	3.46	1.99	1.68	2.14	1.02	26.24
1888	.73	1.08	1.53	1.60	1.85	2.45	5.39	5.22	1.37	.63	.66	.72	25.93
1889	3.06	3.66	3.66	3.01	1.40	2.74	2.68	1.65	1.29	.90	1.24	.83	25.67
1890	1.41	2.14	3.24	1.72	1.72	3.83	4.15	3.56	1.91	.80	.86	2.04	27.38
1891	3.04	2.13	1.64	3.25	2.97	5.80	5.18	1.84	1.10	.73	.62	.62	28.92
1892	.54	.60	1.04	2.11	1.00	1.80	1.98	2.55	1.42	1.20	1.21	.96	16.41
1893	.54	1.58	.99	.74	1.12	2.63	3.74	4.83	1.07	.60	.65	.68	19.17
1894	.91	.82	1.34	.76	.97	3.58	2.68	1.75	1.46	.57	.43	.45	15.72
1895	.57	.86	.76	.72	.53	1.45	4.78	1.57	.74	.65	.55	.41	13.59
1896	.99	2.28	2.33	1.64	2.09	5.19	4.42	1.12	.86	.51	.51	.76	22.70
1897	1.30	1.62	1.10	.86	1.04	2.64	4.27	2.54	3.08	2.71	1.27	.67	23.10
1898	.55	1.42	2.61	1.86	1.70	4.65	3.69	2.76	1.57	.67	.89	.71	23.08
1899	1.58	2.33	2.16	1.90	1.07	2.85	6.42	2.44	.74	.64	.54	.50	23.17
1900	.46	.70	.72	.86	3.66	3.95	4.55	2.51	.98	.47	.48	.38	19.72
1901	.65	1.45	1.71	.87	.57	2.38	6.20	3.85	1.64	.74	1.14	.65	22.05
1902	1.64	.73	2.02	2.61	1.23	2.96	5.32	2.53	1.32	1.14	.97	.86	26.00
1903	1.84	.43	2.02	1.94	2.06	6.94	3.76	1.13	2.46	1.19	.84	.59	26.22
1904	.95	.74	.95	.67	.69	3.12	5.01	4.43	1.13	.72	.66	.73	19.80
1905	.94	.67	.47	.98	.52	2.70	4.03	1.35	1.04	.69	.70	1.90	15.99
1906	.64	.85	1.46	1.96	1.18	1.92	3.99	2.61	2.52	1.27	.85	.47	19.92
1907	.83	.79	.65	1.63	.69	1.98	3.26	2.34	1.33	.86	.50	.74	15.40
1908	1.65	3.25	2.50	2.24	1.77	2.87	2.96	2.95	1.04	.60	.77	.42	23.02
1909	.38	.59	.48	.78	1.62	1.95	3.79	2.25	1.06	.52	.43	.41	14.06
1910	.49	.43	.58	1.20	1.01	4.15	2.72	1.74	1.19	.46	.53	.44	14.94
1911	.34	.51	.39	.72	.50	1.44	3.39	1.57	.61	.31	.38	.48	10.64
1912	1.06	1.17	1.48	.92	.76	3.19	4.81	2.64	1.45	.47	.57	.54	19.06
1913	.84	1.58	1.23	2.04	1.03	3.88	2.78	1.66	1.00	.45	.35	.43	17.07
1914	.91	1.08	1.20	.84	1.00	3.74	5.51	3.31	.82	.64	.50	.50	20.05
1915	.35	.40	.50	1.24	1.81	1.71	1.99	1.29	.54	2.09	2.38	.73	15.03
1916	.76	.97	1.50	1.75	1.80	1.99	4.81	3.15	3.45	1.76	1.06	1.08	24.08
1917	.92	.83	1.33	1.19	.80	2.66	3.62	2.44	3.38	1.18	.72	.61	19.67
1918	.71	.98	.65	.54	.85	2.28	3.72	1.78	.84	.64	.54	.94	14.47
1919	1.14	1.25	1.72	1.51	.91	3.90	2.83	3.16	1.13	.62	.46	.73	19.36
1920	.80	1.83	1.53	.66	.67	4.69	6.68	4.08	1.78	.86	.78	.76	25.12
1921	1.21	1.03	3.75	1.94	1.03	4.24	3.00	2.25	.66	1.19	.79	.47	21.56
1922	.55	1.17	1.90	.96	.92	4.48	5.46	3.32	3.35	2.43	.89	.65	26.28
1923	.75	.88	.57	1.25	.89	2.25	5.52	3.34	.81	.50	.45	.34	17.54
1924	.56	1.30	2.73	1.25	1.05	2.03	5.62	3.58	1.02	.53	.40	.84	21.92
1925	.70	.60	.62	.41	1.96	3.93	3.46	1.56	.77	.82	.60	.51	16.14
1926	.85	1.18	1.81	1.18	.63	1.89	4.38	2.49	.94	.61	.47	.38	17.01
1927	.59	1.55	1.00	1.10	1.09	3.63	2.03	1.63	.87	.74	.81	1.06	16.10
1928	1.56	4.16	3.47	2.34	2.23	2.35	3.83	3.63	2.57	1.88	1.79	1.67	31.48
1929	1.12	1.09	1.28	1.76	1.54	2.20	4.45	3.94	1.08	.67	.46	.41	22.00
1930	.47	.56	.56	.99	.99	4.58	2.26	1.35	1.17	.60	.60	.42	12.55
1931	.36	.63	.60	.49	.50	1.84	4.08	2.18	2.46	.87	.60	.52	15.13
1932	.54	.69	1.12	2.07	1.40	1.57	4.96	1.52	.55	.57	.56	.75	16.30
1933	1.41	2.71	1.33	1.53	1.34	2.75	8.20	2.47	.91	.47	.59	1.08	24.79
1934	1.57	1.29	1.37	1.69	1.30	2.80	6.73	2.68	1.07	.55	.52	1.04	22.61
1935	1.40	1.64	1.83	3.50	2.07	3.48	3.69	2.34	2.56	1.38	.59	.68	25.16
1936	.49	.96	1.31	1.95	1.52	12.00	5.00	2.16	.79	.55	.41	.46	27.60
1937	1.02	1.08	2.66	3.02	2.57	2.39	4.11	4.95	2.34	1.12	.66	.58	26.50
1938	.95	2.32	3.09	2.44	2.51	2.85	3.21	2.14	1.46	2.35	2.19	4.64	30.15
1939	2.18	1.83	3.82	2.03	1.59	2.77	6.35	3.19	1.13	.56	.58	.41	26.44
1940	.46	.95	.79	.55	.52	1.31	7.04	4.82	2.71	1.08	.60	.79	21.62

Monthly and yearly runoff, in inches (adjusted), of Merrimack River at Lawrence, Mass.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	.47	1.66	1.53	1.81	1.95	1.66	2.63	1.10	.60	.62	.34	.30	14.67
1942	.37	.59	.68	1.05	.76	3.68	3.68	1.86	1.80	1.01	.77	.50	16.75
1943	.59	1.35	1.98	1.57	1.53	3.17	3.30	4.38	1.64	.73	1.20	.63	22.07
1944	.88	2.40	1.38	.87	.94	2.09	4.60	2.70	2.40	1.24	.49	.94	20.93
1945	.85	.85	1.60	1.81	1.30	5.19	3.64	4.72	2.88	1.59	.84	.63	25.90
1946	1.01	1.46	2.77	2.47	1.85	4.95	2.56	3.07	2.15	.66	1.03	.69	24.67
1947	1.28	.94	.95	1.22	2.09	3.26	4.18	3.55	2.63	1.10	.63	.55	22.36
1948	.30	1.07	.93	.79	1.06	4.30	3.47	3.70	2.68	1.22	.59	.33	20.44
1949	.33	1.03	.73	2.61	1.90	2.70	2.96	2.01	.77	.38	.31	.44	16.17
1950	.41	.69	.92	1.52	1.27	2.31	4.54	2.10	1.34	.34	.27	.43	16.14

Note.--Records since October 1945 not previously published.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30										Calendar year		
		Observed					Adjusted					Observed		
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date											
1880	415	29,200	Apr. 6, 1880	55	5,976	5,927	1.30	17.58	5,546	5,498	16.28			
1881	415	31,400	Mar. 12, 1881	52	6,433	6,353	1.39	18.82	7,061	6,978	20.70			
1882	415	38,800	Mar. 4, 1882	358	7,374	7,296	1.59	21.59	6,655	6,580	19.44			
1883	415	36,400	Apr. 15, 1883	30	4,355	4,303	.940	12.75	4,304	4,304	12.66			
1884	415	60,200	Mar. 29, 1884	58	7,149	7,048	1.54	20.85	7,294	7,189	21.28			
1885	415	25,600	Apr. 24, 1885	140	5,376	5,304	1.16	15.69	6,623	6,174	18.26			
1886	415	59,400	Feb. 15, 1886	132	8,494	8,363	1.83	24.53	8,124	8,010	23.49			
1887	415	51,200	Apr. 13, 1887	53	9,021	8,896	1.94	26.24	8,898	8,774	25.89			
1888	415	48,700	May 1, 1888	140	8,550	8,443	1.84	25.03	10,812	10,629	31.56			
1889	415	43,700	Dec. 19, 1888	380	8,822	8,646	1.89	25.67	7,738	7,590	22.53			
1890	415	38,300	Mar. 24, 1890	590	9,377	9,230	2.02	27.38	9,373	9,242	27.40			
1891	415	52,100	Mar. 25, 1891	580	9,956	9,773	2.13	28.92	8,370	8,220	24.29			
1892	415	32,100	May 26, 1892	280	5,549	5,501	1.20	16.41	5,869	5,821	17.34			
1893	415	57,700	May 6, 1893	225	6,538	6,463	1.41	19.17	6,517	6,443	19.13			
1894	415	29,200	Mar. 9, 1894	104	5,324	5,298	1.16	15.72	5,035	5,007	14.84			
1895	415	89,900	Apr. 16, 1895	71	4,621	4,585	1.00	13.59	5,798	5,729	17.00			
1896	415	105,000	Mar. 3, 1896	183	7,754	7,647	1.67	22.70	7,191	7,117	21.12			
1897	415	52,800	July 16, 1897	1,044	7,819	7,794	1.70	23.10	8,002	7,975	23.66			
1898	415	44,400	Mar. 15, 1898	176	7,856	7,654	1.70	23.08	8,413	8,104	24.57			
1899	415	47,800	Apr. 17, 1899	69	7,941	7,812	1.71	23.17	6,464	6,245	18.98			
1900	415	63,500	Feb. 15, 1900	36	6,764	6,556	1.47	19.72	7,411	7,188	21.65			
1901	415	84,500	Apr. 9, 1901	246	7,471	7,236	1.62	22.05	7,619	7,334	22.38			
1902	415	73,100	Mar. 4, 1902	512	8,774	8,506	1.91	26.00	9,115	8,883	27.15			
1903	415	53,600	Mar. 13, 1903	304	8,860	8,610	1.93	26.22	7,976	7,748	23.57			
1904	415	60,600	May 1, 1904	260	6,818	6,480	1.45	19.80	6,426	6,297	19.24			
1905	415	51,800	Mar. 30, 1905	128	5,286	5,253	1.18	15.99	5,634	5,599	17.06			
1906	415	48,700	May 30, 1906	76	6,613	6,554	1.47	19.92	6,266	6,205	18.84			
1907	415	31,300	Apr. 1, 1907	115	5,106	5,052	1.13	15.40	6,864	6,817	20.73			
1908	415	42,000	Nov. 8, 1907	70	7,643	7,545	1.69	23.02	5,617	5,534	16.87			
1909	415	46,500	Apr. 17, 1909	88	4,708	4,650	1.04	14.06	4,787	4,728	14.31			
1910	415	34,500	Mar. 3, 1910	90	4,973	4,906	1.10	14.94	4,890	4,824	14.68			
1911	415	25,200	Mar. 31, 1911	51	3,515	3,499	.784	10.64	4,318	4,301	13.11			
1912	415	35,400	Apr. 9, 1912	116	6,325	6,252	1.40	19.06	6,247	6,175	18.80			
1913	415	49,100	Mar. 29, 1913	99	5,664	5,599	1.26	17.07	5,585	5,512	16.81			
1914	415	42,700	Apr. 22, 1914	124	6,888	6,586	1.48	20.05	8,047	7,952	18.11			
1915	415	49,100	Feb. 27, 1915	69	5,015	4,948	1.11	15.03	5,670	5,593	17.01			
1916	431	42,800	May 19, 1916	554	8,025	7,898	1.77	24.08	7,989	7,870	23.93			
1917	451	38,500	Mar. 29, 1917	289	6,536	6,462	1.45	19.67	6,309	6,224	18.93			
1918	471	30,800	Apr. 4, 1918	31	4,837	4,762	1.07	14.47	5,411	5,335	16.24			
1919	501	48,700	Mar. 30, 1919	131	6,448	6,354	1.42	19.36	6,464	6,355	19.41			
1920	501	59,500	Mar. 29, 1920	329	8,445	8,238	1.85	25.12	9,017	8,815	26.95			
1921	521	47,900	Dec. 16, 1920	209	7,193	7,043	1.58	21.56	6,426	6,284	19.19			
1922	541	47,400	Apr. 13, 1922	202	8,804	8,624	1.93	26.28	8,288	8,100	24.67			
1923	561	66,200	May 1, 1923	59	5,885	5,706	1.28	17.34	6,728	6,547	19.92			
1924	581	55,200	Apr. 9, 1924	103	7,332	7,195	1.61	21.92	6,502	6,369	19.45			
1925	601	58,500	Mar. 31, 1925	163	5,360	5,293	1.19	16.14	5,970	5,883	17.86			
1926	621	38,800	Apr. 27, 1926	162	5,684	5,590	1.25	17.01	5,448	5,365	16.31			
1927	641	34,800	Mar. 17, 1927	308	5,383	5,297	1.19	16.10	7,398	7,271	22.15			
1928	661	78,900	Nov. 6, 1927	875	10,462	10,315	2.31	31.48	8,592	8,443	25.78			
1929	681	36,800	May 5, 1929	214	7,396	7,235	1.62	22.00	6,756	6,607	20.10			
1930	698	28,700	Apr. 9, 1930	256	4,164	4,124	.924	12.55	4,164	4,127	12.55			
1931	711	35,600	June 11, 1931	120	5,025	4,969	1.11	15.13	5,280	5,225	15.89			
1932	726	50,900	Apr. 14, 1932	421	5,397	5,341	1.20	16.30	6,480	6,380	19.40			
1933	741	76,200	Apr. 20, 1933	302	9,393	9,144	1.83	24.79	7,988	7,768	23.57			
1934	756	60,800	Apr. 14, 1934	255	7,581	7,426	1.66	22.61	7,808	7,650	23.25			
1935	1105	46,500	Jan. 11, 1935	532	8,454	8,279	1.86	25.16	7,768	7,602	23.05			
1936	1105	174,000	Mar. 20, 21, 1936	216	9,263	9,046	2.03	27.60	9,897	9,652	29.60			
1937	1105	40,500	May 17, 1937	557	8,888	8,708	1.95	26.50	9,432	9,251	28.10			
1938	1105	116,000	Sept. 23, 1938	509	10,217	9,912	2.22	30.15	10,759	10,404	31.62			
1939	1105	48,400	Apr. 21, 1939	117	8,985	8,689	1.95	26.44	7,048	6,863	20.81			
1940	1105	56,800	Apr. 14, 1940	261	7,187	7,092	1.59	21.62	7,702	7,596	23.06			

Note.--All momentary maximums except for 1896 and 1936 not previously published.

Yearly discharge, in cubic feet per second, of Merrimack River at Lawrence, Mass.--Continued

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1941	1105	19,300	Feb. 10, 1941	171	4,890	4,820	1.08	14.67	4,247	4,192	12.25
1942	1105	28,300	Mar. 11, 1942	105	5,583	5,502	1.23	18.75	6,318	6,238	19.03
1943	1105	28,200	May 14, 1943	494	7,353	7,254	1.63	22.07	7,578	7,495	22.81
1944	1105	49,100	June 26, 1944	485	6,914	6,861	1.54	20.93	6,485	6,425	19.57
1945	1105	40,800	Mar. 23, 1945	668	8,620	8,512	1.91	25.90	9,275	9,150	27.84
1946	-	37,800	Dec. 9, 1945	619	8,249	8,106	1.82	24.67	7,564	7,427	22.60
1947	-	31,200	Apr. 14, 1947	528	7,489	7,368	1.65	22.38	7,195	7,079	21.51
1948	-	54,200	Mar. 24, 1948	39	6,864	6,697	1.50	20.44	6,795	6,631	20.23
1949	-	25,500	Jan. 9, 1949	83	5,399	5,308	1.19	16.17	5,359	5,281	16.10
1950	-	35,200	Apr. 23, 1950	66	5,376	5,297	1.19	16.14	-	-	-

Note.--Records since October 1945 and all momentary maximums not previously published.

## PARKER RIVER BASIN

169. 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.

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.--5 years (1945-50), 28.4 cfs.

Extremes.--1945-50: Maximum discharge, 352 cfs Mar. 23, 1948 (gage height, 4.81 ft); minimum daily, 0.17 cfs Aug. 14, 1949.

Remarks.--Diurnal fluctuation caused by mill above station.

## Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	3.89	19.2	81.3	76.4	52.8	104	44.9	46.8	47.8	4.09	16.4	9.74	42.3
1947	8.66	4.40	9.05	23.1	34.0	78.7	48.1	61.1	19.1	4.36	3.69	2.06	24.7
1948	.935	10.9	10.9	9.65	24.1	137	76.6	49.9	60.9	26.0	5.31	1.16	34.5
1949	.479	11.0	11.6	22.9	47.5	48.6	53.5	24.9	8.55	.972	.529	1.40	18.9
1950	2.23	7.74	13.8	31.8	34.6	76.5	61.0	21.1	7.99	1.21	.377	.736	21.5

\* Not previously published; estimated on basis of records for nearby streams.

## Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	0.21	0.99	4.34	4.08	2.54	5.54	2.32	2.50	2.47	0.22	0.87	0.50	26.58
1947	.46	.23	.48	1.23	1.64	4.20	2.49	3.26	.99	.23	.20	.11	15.52
1948	.05	.56	.58	.51	1.20	7.34	3.96	2.67	3.15	1.39	.28	.06	21.75
1949	.03	.57	.62	1.22	2.29	2.49	2.76	1.33	.44	.05	.03	.07	11.90
1950	.12	.40	.74	1.70	1.67	4.08	3.15	1.13	.41	.06	.02	.04	13.52

\* Not previously published; estimated on basis of records for nearby streams.

## Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1946	1051	293	Mar. 10, 1946	-	42.3	1.96	26.58	35.3	22.21	
1947	1061	154	Mar. 4, 1947	1.5	24.7	1.14	15.52	24.7	15.54	
1948	1111	352	Mar. 23, 1948	.37	34.5	1.60	21.75	34.5	21.78	
1949	1141	100	Feb. 25, 1949	.17	18.9	.875	11.90	19.0	11.94	
1950	1171	220	Mar. 25, 1950	.22	21.5	.995	13.52	-	-	

\* Not previously published.

## 170. 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.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 45 ft (from topographic map).

Average discharge.--12 years (1938-50), 60.5 cfs (adjusted for diversions).

Extremes.--1938-50: Maximum discharge, 646 cfs Mar. 21, 1948 (gage height, 5.895 ft); minimum, 0.4 cfs Nov. 24, 1941.

Remarks.--Runoff adjusted for diversions for municipal supplies of Reading, Lynn, and Peabody. Regulation at low flow by mill above station.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1938	-	-	-	-	-	-	-	-	59.7	195	95.5	103	-
1939	70.3	68.4	123	52.1	75.7	167	261	72.5	35.3	7.33	2.46	1.72	77.9
1940	5.82	20.4	8.53	13.1	14.7	120	267	100	67.5	24.8	3.43	5.32	54.1
1941	6.14	37.1	38.2	45.1	67.7	79.1	90.5	30.8	11.4	2.33	.955	.987	35.4
1942	1.78	1.56	8.79	23.9	49.9	139	103	44.9	9.13	14.4	3.43	2.64	38.6
1943	3.29	15.4	67.3	59.0	94.4	173	83.3	123	28.3	2.54	2.00	1.29	54.3
1944	6.87	26.2	14.5	12.5	28.1	93.9	132	43.1	26.1	13.3	5.45	24.3	35.4
1945	14.1	36.1	113	73.7	49.3	232	78.7	112	70.1	34.6	19.5	6.00	70.4
1946	10.3	41.2	160	142	97.5	213	89.1	86.0	90.6	8.09	38.8	16.6	82.9
1947	20.9	10.3	14.8	33.3	49.0	135	98.5	113	58.6	13.6	8.71	6.14	45.2
1948	4.85	28.9	12.7	5.84	35.8	248	132	82.6	118	55.1	6.46	1.56	61.1
1949	4.03	24.7	14.0	28.1	60.4	94.5	102	54.4	19.0	2.25	.835	7.82	35.6
1950	8.89	11.9	12.3	47.6	46.7	116	94.2	35.2	11.2	2.28	1.87	3.30	32.7

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1938	-	-	-	-	-	-	-	-	1.56	5.21	2.56	2.68	-
1939	1.89	1.78	3.30	1.41	1.83	4.46	6.74	1.96	.94	.23	.10	.07	24.71
1940	.18	.55	.82	.72	.75	3.76	7.29	2.84	1.76	.69	.12	.16	19.44
1941	.19	1.17	1.53	1.68	2.14	2.13	2.35	1.17	.35	.12	.09	.08	13.00
1942	.09	.28	.53	1.10	1.75	5.80	2.95	1.70	.77	.75	.34	.15	16.19
1943	.29	.96	2.28	1.89	2.29	4.82	2.31	3.86	1.17	.31	.29	.08	20.35
1944	.32	1.28	.83	.76	1.23	3.02	3.77	1.70	1.07	.58	.19	.92	15.67
1945	.68	1.48	3.52	2.19	1.20	6.19	2.38	3.17	2.02	.95	.55	.18	24.51
1946	.30	1.27	4.46	4.19	2.37	5.67	2.32	2.31	2.48	.26	1.06	.45	27.14
1947	.58	.33	.68	1.50	1.64	3.80	2.56	3.28	1.06	.53	.34	.19	16.49
1948	.16	1.13	.85	1.75	1.48	6.78	3.62	2.46	3.18	1.50	.21	.08	22.20
1949	.17	.97	.86	1.34	2.42	2.64	2.65	1.48	.54	.11	.06	.23	13.47
1950	.28	.63	.89	1.83	1.70	3.66	3.00	1.26	.53	.11	.09	.12	14.10

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30										Calendar year		
		Observed					Adjusted					Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date											
1938	851	608	July 24, 1938	-	-	-	-	-	-	-	-	-	-	-
1939	871	400	Apr. 3, 1939	0.95	77.9	79.0	1.82	24.71	58.8	61.0	19.09			
1940	891	387	Apr. 2, 1940	.7	54.1	62.0	1.43	19.44	58.0	66.9	20.98			
1941	921	194	Mar. 30, 1941	.5	35.4	41.6	.959	13.00	29.7	35.2	11.01			
1942	951	*333	Mar. 19, 1942*	.45	38.6	51.8	1.19	16.19	44.8	60.2	18.82			
1943	971	280	May 23, 1943	1.0	54.3	65.0	1.50	20.35	51.0	61.5	19.25			
1944	1001	224	Mar. 28, 1944	1.25	35.4	50.0	1.15	15.67	45.2	60.4	18.92			
1945	1031	347	Mar. 7, 1945	4.4	70.4	78.4	1.81	24.51	74.5	79.5	24.56			
1946	1051	490	Mar. 9, 1946	4.1	82.9	86.8	2.00	27.14	68.9	72.6	22.70			
1947	1081	297	Mar. 6, 1947	3.6	45.2	52.7	1.21	16.49	45.2	54.5	17.04			
1948	1111	646	Mar. 21, 1948	.6	61.1	70.8	1.63	22.20	60.8	70.3	22.06			
1949	1141	171	Feb. 25, 28, 1949	.5	35.6	43.1	.993	13.47	34.8	42.4	13.27			
1950	1171	329	Mar. 24, 1950	.55	32.7	45.1	1.04	14.10	-	-	-			

\* Revised.

## 171. Ipswich River near Ipswich, Mass. 1/

Location.--Lat 42°39'35", long. 70°53'39", on left bank 200 ft downstream from Willowdale Dam,  $\frac{1}{2}$  miles downstream from Howlett Brook, and 4 miles upstream from Ipswich, Essex County.

Drainage area.--124 sq mi.

Gage.--Water-stage recorder and concrete control. Datum of gage is 20.63 ft above mean sea level, datum of 1929.

Average discharge.--20 years (1930-50), 187 cfs (adjusted for diversions).

Extremes.--1930-50: Maximum discharge, 2,610 cfs Mar. 15, 1936 (gage height, 7.70 ft); minimum, 1.4 cfs Aug. 9, 1934.

Remarks.--Runoff adjusted for diversions for municipal supplies of Reading, Lynn, Peabody, Danvers, Salem, and Beverly.

## Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	-	-	-	-	19.4	14.4	4.95	-
1931	14.4	58.1	48.4	94.2	165	576	460	255	320	130	38.6	31.2	182
1932	23.6	32.3	66.0	225	199	335	406	113	26.7	11.1	26.7	48.8	126
1933	197	525	176	212	215	719	872	232	68.8	23.2	11.1	200	287
1934	185	114	103	284	110	582	668	219	83.9	20.6	5.20	27.3	201
1935	66.2	80.0	99.0	296	209	639	584	209	188	79.2	11.5	23.4	207
1936	16.4	51.9	87.6	254	140	1,045	497	176	46.5	18.9	8.61	16.6	197
1937	40.0	31.5	295	361	259	305	332	287	158	37.0	11.8	33.0	177
1938	54.3	134	454	269	413	315	299	215	137	518	356	320	288
1939	181	170	326	150	207	446	743	215	104	23.6	9.63	6.47	225
1940	10.5	49.6	43.8	50.0	61.4	335	788	277	203	82.5	15.5	17.0	161
1941	15.9	95.8	116	158	245	203	257	126	37.4	14.9	8.23	5.07	106
1942	6.42	15.5	46.0	78.6	187	573	337	170	68.1	62.1	31.3	12.6	132
1943	22.2	68.4	209	203	226	482	232	325	121	23.0	18.9	6.30	163
1944	25.8	94.4	68.9	50.5	112	255	366	163	75.0	56.2	14.7	59.1	111
1945	44.0	98.4	374	211	127	667	238	323	199	139	69.5	21.4	211
1946	31.5	120	503	413	279	592	255	228	261	27.2	101	50.0	239
1947	49.3	31.3	54.0	106	158	362	260	347	116	37.5	29.4	16.5	131
1948	10.0	89.2	56.0	55.2	116	735	403	242	329	166	25.2	6.18	186
1949	17.4	76.3	66.9	102	227	291	294	162	65.0	9.29	3.62	25.5	111
1950	23.7	49.0	62.5	139	172	369	301	118	38.7	6.71	8.70	8.64	108

## Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	-	-	-	-	0.21	0.16	0.07	-
1931	0.18	0.78	0.62	1.15	1.51	5.42	4.16	2.40	2.90	1.22	.39	.31	21.04
1932	.24	.31	.82	2.29	1.76	3.15	3.67	1.14	.27	.13	.27	.49	14.54
1933	2.01	4.83	1.66	1.99	1.83	6.70	7.87	2.19	.65	.24	.13	1.93	32.03
1934	1.74	1.05	.98	2.66	.95	5.45	6.03	2.24	.85	.22	.08	.27	22.52
1935	.70	.90	1.03	2.78	1.78	5.97	5.28	2.19	1.74	.77	.14	.23	23.51
1936	.18	.51	.90	2.52	1.28	9.74	4.50	1.66	.45	.21	.11	.17	22.23
1937	.40	.31	3.09	3.41	2.20	2.86	3.00	2.70	1.34	.40	.14	.32	20.17
1938	.53	1.28	4.13	2.52	3.49	2.95	2.72	2.03	1.26	4.83	3.34	2.90	31.98
1939	1.71	1.55	3.06	1.42	1.76	4.16	6.70	2.03	.95	.25	.12	.08	23.79
1940	.12	.47	.56	.66	.74	3.51	7.25	2.65	1.85	.79	.17	.17	18.94
1941	.17	.95	1.27	1.64	2.18	1.91	2.33	1.33	.42	.18	.12	.08	12.58
1942	.09	.24	.60	1.10	2.01	5.53	3.15	1.77	.84	.72	.39	.16	16.60
1943	.29	.83	2.17	2.01	1.92	4.50	2.34	3.24	1.26	.32	.27	.09	19.24
1944	.30	1.07	.81	.64	1.17	2.85	3.48	1.72	.83	.62	.17	.65	14.31
1945	.53	1.19	3.76	2.06	1.09	6.23	2.28	3.08	1.88	1.32	.67	.22	24.31
1946	.32	1.17	4.78	4.00	2.36	5.53	2.32	2.14	2.42	.29	.97	.48	26.78
1947	.48	.32	.52	1.34	1.62	5.33	2.37	3.33	1.08	.23	.33	.18	22.51
1948	.12	.96	.73	.74	1.39	6.94	3.77	2.40	3.02	1.57	.27	.09	22.00
1949	.20	.83	.82	1.31	2.22	2.77	2.67	1.57	.63	.15	.07	.26	13.48
1950	.25	.61	.85	1.74	1.71	3.78	2.93	1.30	.47	.12	.12	.11	13.99

## Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30								Calendar year		
		Observed				Adjusted				Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches		Mean	Mean	Runoff in inches
		Discharge	Date									
1930	696	-	-	-	-	-	-	-	-	-	-	-
1931	711	948	Mar. 31, 1931	1.5	182	192	1.55	21.04	183	190	20.83	
1932	726	792	Apr. 1, 1932	3.1	126	132	1.06	14.54	190	198	21.67	
1933	741	1,540	Apr. 20, 1933	6.1	287	292	2.35	32.03	246	249	27.30	
1934	756	1,580	Mar. 7, 1934	2.1	201	206	1.66	22.52	187	195	21.37	
1935	781	1,240	Apr. 15, 1935	5	207	215	1.73	23.51	199	205	22.47	
1936	801	2,610	Mar. 15, 1936	5.5	197	203	1.64	22.23	215	223	24.44	
1937	821	8590	Dec. 23, 1936	5.8	177	184	1.08	20.17	199	204	22.51	
1938	851	1,700	July 26, 1938	16	288	292	2.35	31.98	293	296	32.35	
1939	871	1,120	Apr. 4, 1939	3.3	215	217	1.75	23.79	166	170	18.62	
1940	891	1,180	Apr. 2, 1940	7.3	161	173	1.40	18.94	171	184	20.18	

\* Not previously published.

1/ Published as "at Willowdale" prior to 1931.

## IPSWICH RIVER BASIN

Yearly discharge, in cubic feet per second, of Ipswich River near Ipswich, Mass.--Continued

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1941	921	489	Mar. 28, 29, 1941	1.6	106	115	.927	12.58	92.4	101	11.12
1942	951	877	Mar. 20, 1942	1.5	132	152	1.23	16.60	152	173	18.96
1943	971	710	Mar. 21, 22, 1943	3.8	163	176	1.42	19.24	154	166	18.13
1944	1001	506	Mar. 27, 28, 1944	6.4	111	130	1.05	14.31	139	160	17.61
1945	1031	1,020	Mar. 8, 1945	16	211	222	1.79	24.31	222	229	25.10
1946	1051	1,420	Mar. 10, 1946	11	239	245	1.98	26.78	195	200	21.93
1947	1081	688	May 6, 1947	11	131	143	1.15	15.63	132	146	16.02
1948	1111	1,810	Mar. 23, 1948	3.6	186	201	1.62	22.00	187	201	22.04
1949	1141	500	Mar. 2, 1949	2.1	111	123	.992	13.48	109	122	13.34
1950	1171	919	Mar. 26, 1950	2.4	108	128	1.03	13.99	-	-	-

## MYSTIC RIVER BASIN

172. 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.

Gage.--Water-stage recorder and concrete control. Datum of gage is at mean sea level, datum of 1929.

Average discharge.--11 years (1939-50), 22.1 cfs.

Extremes.--1939-50: Maximum discharge, 358 cfs Mar. 20, 1948 (gage height, 12.44 ft); maximum gage height, 13.05 ft Mar. 1, 1945 (backwater from construction); minimum discharge, 0.2 cfs Sept. 22, 1950.

Remarks.--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.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	1.37	1.35	1.59	10.1	13.0	81.8	99.3	42.1	21.7	9.13	1.31	2.99	23.8
1941	.87	13.6	23.6	27.0	47.1	36.4	26.7	15.5	4.41	.88	.68	.74	16.3
1942	.48	.59	.63	8.47	33.2	88.7	44.8	19.8	8.07	4.67	1.45	.88	17.6
1943	.81	4.72	36.9	28.1	46.3	64.2	32.9	50.9	16.1	2.93	1.51	.64	23.8
1944	3.29	11.8	6.84	14.4	25.4	42.7	49.3	18.8	10.8	2.60	.75	5.52	15.9
1945	3.75	14.7	48.8	33.2	30.2	95.3	33.6	45.3	29.7	10.2	5.18	1.38	29.4
1946	1.97	15.5	80.5	69.3	50.7	81.0	26.6	28.5	27.5	2.45	24.9	7.14	34.7
1947	6.17	2.86	11.9	28.4	23.8	58.5	34.8	46.0	14.6	4.70	3.34	4.50	20.0
1948	.629	17.9	9.45	10.0	38.9	125	53.1	31.9	47.7	22.8	2.49	.848	30.0
1949	.697	10.2	9.72	18.1	42.7	42.9	46.4	22.7	3.89	.860	.697	1.87	16.5
1950	.789	3.20	6.02	19.2	26.9	63.0	38.7	13.2	3.39	.689	1.01	.557	14.7

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	871	-	-	-	-	-	-	-	-
1940	891	308	Mar. 15, 1940	0.8	23.8	-	-	26.6	-
1941	921	202	Feb. 8, 1941	.4	16.3	-	-	13.2	-
1942	951	250	Mar. 17, 18, 1942	.3	17.6	-	-	21.0	-
1943	971	233	Dec. 31, 1942	.5	23.8	-	-	22.0	-
1944	1001	168	Sept. 15, 1944	.5	15.9	-	-	19.8	-
1945	1031	215	Mar. 7, 1945	.65	29.4	-	-	32.0	-
1946	1051	310	Dec. 7, 1945	.6	34.7	-	-	28.2	-
1947	1081	306	Mar. 3, 1947	.6	20.0	-	-	20.6	-
1948	1111	358	Mar. 20, 1948	.55	30.0	-	-	29.4	-
1949	1141	112	Apr. 6, 1949	.5	16.5	-	-	15.6	-
1950	1171	246	Mar. 23, 1950	.35	14.7	-	-	-	-



173. Mystic Lake near Medford, Mass.

Location.--Lat 42°25'50", long. 71°08'55", at pumping plant at outlet of Upper Mystic Lake 1½ miles west of Medford, Middlesex County.

Drainage area.--26.9 sq mi.

Average discharge.--19 years (1878-97), 39.1 cfs (adjusted for change in Mystic Lake contents).

Remarks.--Discharge based on quantity pumped for municipal supply of city of Charlestown and adjusted for change in Mystic Lake contents. No allowance made for the slip of the pumps, the flow in a fishway, or change in contents of other reservoirs in the basin.

Cooperation.--Records furnished by Metropolitan Water and Sewerage Board of Boston.

Monthly and yearly mean discharge, in cubic feet per second (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1878	-	-	-	82.9	102	115	53.3	50.3	18.8	11.3	25.8	13.4	-
1879	16.7	42.2	84.7	28.2	60.3	77.2	95.8	45.5	23.4	12.6	16.4	11.6	42.8
1880	7.80	10.8	16.1	39.5	63.5	45.5	36.0	22.3	12.4	15.6	12.6	10.8	24.5
1881	8.34	10.5	13.7	19.1	55.4	158	52.5	35.2	49.5	20.2	8.07	7.53	36.6
1882	6.72	12.1	20.2	32.0	78.3	97.6	28.0	43.0	19.6	8.07	5.11	12.9	30.4
1883	13.4	9.42	13.2	16.4	36.9	43.8	39.5	28.0	12.6	6.99	5.11	4.30	19.1
1884	9.15	10.2	10.2	34.7	97.1	127	92.8	34.4	20.4	13.4	14.0	5.65	39.0
1885	6.19	8.34	30.1	41.7	46.8	47.9	49.0	50.8	20.7	11.0	12.6	8.07	27.7
1886	15.9	56.1	55.7	53.8	199	91.2	78.0	29.6	13.2	9.68	5.92	7.80	51.4
1887	8.88	21.3	33.4	73.7	93.3	83.9	90.4	44.1	30.7	20.2	31.5	11.6	45.2
1888	13.2	17.2	21.3	33.4	82.9	99.8	78.8	67.2	20.2	9.15	12.6	31.5	40.6
1889	64.0	122	119	105	47.3	37.4	54.6	50.8	45.5	30.9	47.9	25.6	62.4
1890	28.2	60.0	71.3	48.4	57.6	125	70.7	69.9	46.3	9.95	10.8	14.0	51.1
1891	60.8	47.1	58.1	147	154	168	82.6	32.5	24.5	9.68	10.2	10.2	67.0
1892	13.4	13.4	20.4	58.1	43.8	70.7	32.0	49.0	28.2	15.3	11.6	13.4	30.7
1893	10.5	25.8	20.4	17.5	55.1	105	65.6	103	25.0	11.0	16.1	9.95	38.7
1894	12.9	17.2	29.6	32.0	48.4	71.3	54.6	30.7	22.1	11.6	8.88	8.61	29.1
1895	13.4	22.1	21.0	36.0	22.6	73.7	71.0	26.4	12.9	14.0	18.6	8.61	28.2
1896	34.2	57.0	49.5	43.0	84.7	105	78.5	18.0	18.0	9.15	7.80	25.6	44.1
1897	20.7	26.9	28.8	32.5	36.0	80.7	51.6	42.8	52.7	11.6	22.1	9.95	54.7
1898	9.15	24.5	45.7	-	-	-	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1878	-	-	-	3.55	3.97	4.91	2.21	2.16	0.78	0.48	1.11	0.56	-
1879	0.71	1.75	3.63	1.21	2.33	3.31	3.97	1.95	.97	.54	.70	.48	21.55
1880	.34	.45	.69	1.70	2.54	1.95	1.50	.96	.51	.67	.54	.45	12.30
1881	.36	.44	.59	.82	2.14	6.79	2.17	1.51	2.05	.87	.35	.31	18.40
1882	.29	.50	.87	1.37	3.03	4.19	1.16	.81	.35	.22	.53	.22	15.17
1883	.58	.39	.57	1.70	1.43	1.88	1.83	1.20	.52	.30	.22	.18	9.60
1884	.39	.42	.44	1.49	3.89	5.42	3.85	1.48	.85	.68	.60	.23	19.64
1885	.27	.35	1.17	1.79	1.81	2.05	2.03	2.18	.86	.47	.54	.34	13.86
1886	.68	2.41	2.39	2.31	7.70	3.91	3.24	1.27	.55	.41	.25	.32	25.44
1887	.38	.88	1.43	3.16	3.61	3.60	3.75	1.89	1.27	.87	1.35	.48	22.67
1888	.57	.71	.91	1.45	5.32	4.28	3.27	2.88	.84	.39	.54	1.31	20.45
1889	2.74	5.06	5.08	4.51	1.85	1.60	2.27	2.18	1.89	1.33	2.05	1.06	31.58
1890	1.21	2.49	3.06	2.07	2.23	5.37	2.93	3.00	1.92	.43	.46	.58	25.75
1891	2.61	1.95	2.49	6.29	5.97	7.21	3.43	1.40	1.01	.42	.44	.42	33.64
1892	.58	.56	.87	2.49	1.76	3.03	1.33	2.10	1.17	.66	.49	.56	15.60
1893	.45	1.07	.87	.75	2.14	4.52	2.72	4.42	1.04	.47	.69	.41	19.55
1894	.55	.71	1.27	1.37	1.87	3.05	2.27	1.31	.91	.49	.38	.36	14.54
1895	.58	.91	.90	1.55	.87	3.16	2.95	1.13	.54	.60	.80	.36	14.35
1896	1.46	2.37	2.12	1.85	3.40	4.50	3.26	.77	.75	.39	.34	1.06	22.27
1897	.89	1.11	1.23	1.39	1.40	3.46	2.14	1.83	2.19	.50	.95	.41	17.50
1898	.39	1.02	1.96	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second (adjusted)

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1878	35, 415	-	-	-	-	-	-	51.2	25.82
1879	35, 415	-	-	-	42.8	1.59	21.55	33.6	16.94
1880	35, 415	-	-	-	24.5	.91	12.30	24.1	12.21
1881	35, 415	-	-	-	36.6	1.36	18.40	37.0	18.67
1882	35, 415	-	-	-	30.4	1.13	15.17	29.8	15.05
1883	35, 415	-	-	-	19.1	.71	9.60	18.4	9.31
1884	35, 415	-	-	-	39.0	1.45	19.64	39.9	20.18
1885	35, 415	-	-	-	27.7	1.03	13.86	34.8	17.55
1886	35, 415	-	-	-	51.4	1.91	25.44	44.9	22.65
1887	35, 415	-	-	-	45.2	1.68	22.67	43.9	22.17
1888	35, 415	-	-	-	40.6	1.51	20.45	61.5	31.12
1889	35, 415	-	-	-	62.4	2.32	31.58	50.5	25.48
1890	35, 415	-	-	-	51.1	1.90	25.75	51.6	26.04
1891	35, 415	-	-	-	67.0	2.40	33.64	56.7	28.60
1892	35, 415	-	-	-	30.7	1.14	15.60	31.6	15.98
1893	35, 415	-	-	-	38.7	1.44	19.55	39.0	19.69
1894	35, 415	-	-	-	29.1	1.00	14.54	28.5	14.40
1895	35, 415	-	-	-	28.2	1.05	14.35	35.5	17.91
1896	35, 415	-	-	-	44.1	1.64	22.27	38.6	19.55
1897	35, 415	-	-	-	34.7	1.29	17.50	35.0	17.64

## 174. 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, and 0.8 mile downstream from Noanet Brook.

Drainage area.--184 sq mi.

Gage.--Water-stage recorder and concrete control. Datum of gage is 89.76 ft above mean sea level, datum of 1929.

Average discharge.--13 years (1937-50), 270 cfs (adjusted for diversions).

Extremes.--1937-50: Maximum discharge, 3,110 cfs July 27, 1938 (gage height, 9.00 ft); minimum, 1.9 cfs Oct. 14, 1941 (gage height, 0.25 ft).  
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.--Runoff adjusted for diversions for municipal supply of Wellesley and Needham.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1938	114	253	558	475	544	417	363	285	335	1,060	611	364	449
1939	290	274	459	255	411	696	844	300	140	63.4	66.2	44.7	319
1940	52.7	193	142	178	163	597	1,024	417	261	153	49.9	38.7	272
1941	39.0	188	200	221	375	304	321	204	152	73.1	58.8	28.6	179
1942	18.1	56.6	89.9	159	285	789	398	194	105	114	112	39.6	196
1943	81.6	184	427	391	433	650	361	513	193	71.6	63.2	23.2	284
1944	79.1	151	75.3	80.0	143	339	497	265	140	62.6	30.1	150	167
1945	116	229	500	385	286	875	357	469	354	211	91.0	65.8	329
1946	76.1	240	685	662	478	670	296	311	406	77.2	215	124	351
1947	114	77.7	145	250	255	477	412	468	253	119	63.5	94.6	227
1948	47.2	270	164	164	357	993	610	362	468	264	97.5	37.2	319
1949	75.9	233	186	291	419	416	412	238	84.2	25.2	20.5	59.2	203
1950	43.9	76.3	112	195	265	504	420	253	118	62.4	43.4	45.8	178

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1938	0.73	1.55	3.52	3.00	3.09	2.63	2.22	1.81	2.05	6.66	3.85	2.22	33.33
1939	1.83	1.68	2.89	1.61	2.34	4.38	5.13	1.90	.87	.42	.44	.29	23.78
1940	.35	1.19	.91	1.13	.97	5.76	6.23	2.63	1.60	.98	.34	.26	20.35
1941	.26	1.16	1.27	1.40	2.13	1.91	1.96	1.29	.94	.47	.38	.19	13.36
1942	.13	.36	.58	1.01	1.62	4.96	2.42	1.23	.65	.73	.71	.25	14.65
1943	.52	1.13	2.69	2.46	2.46	4.09	2.32	3.23	1.18	.47	.41	.16	21.12
1944	.51	.93	.49	.52	.85	2.14	3.03	1.68	.86	.41	.21	.93	12.56
1945	.74	1.40	3.15	2.43	1.63	5.50	2.18	2.96	2.16	1.34	.59	.42	24.50
1946	.49	1.47	4.31	4.16	2.72	4.22	1.91	1.97	2.48	.51	1.36	.77	26.27
1947	.74	.49	.93	1.58	1.46	3.01	12.52	2.95	1.55	.77	.42	.59	17.01
1948	.32	1.65	1.04	1.05	2.11	6.24	3.72	2.29	2.86	1.66	.64	.25	23.85
1949	.50	1.43	1.19	1.85	2.39	2.63	2.52	1.51	.54	.19	.16	.38	15.29
1950	.30	.48	.72	1.25	1.52	3.18	2.57	1.61	.74	.42	.30	.30	13.39

† Corrected.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year					
		observed				Adjusted		Observed		Adjusted			
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches		
		Discharge	Date										
1938	851	3,110	July 27, 1938	37	449	452	2.46	33.33	457	460	33.93		
1939	871	1,000	Apr. 7, 1939	31	319	323	1.76	23.78	266	269	19.83		
1940	891	1,200	Apr. 4, 1940	31	272	275	1.49	20.35	275	278	20.59		
1941	921	685	Feb. 12, 1941	16	179	181	.984	13.36	157	159	11.74		
1942	951	1,140	Mar. 22, 1942	2.3	196	199	1.06	14.65	241	243	17.92		
1943	971	861	Mar. 11, 12, 1943	13	284	286	1.55	21.12	251	254	18.71		
1944	1001	795	Apr. 29, 1944	15	167	170	.924	12.56	212	215	15.92		
1945	1031	1,280	Mar. 8, 1945	45	329	332	1.80	24.50	343	345	25.48		
1946	1051	1,240	Dec. 11, 1945	49	351	356	1.93	26.27	297	300	22.16		
1947	1081	765	Mar. 7, 1947	41	227	230	1.25	17.01	239	242	17.86		
1948	1111	2,060	Mar. 22, 1948	30	319	322	1.75	23.85	320	324	23.96		
1949	1141	616	Feb. 23, 1949	13	203	207	1.12	15.29	181	185	13		
1950	1171	857	Mar. 28, 1950	19	178	182	.989	13.39	-	-	-		

## 175. 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.

Gage.--Float gage. 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.--19 years (1931-50), 81.9 cfs.

Extremes.--1931-50: Maximum discharge, 909 cfs July 28, 29, 1938 (gage height, 91.84 ft, from graph based on gage readings); no flow Sept. 12 to Nov. 1, 1941, several days August to October 1943, August, September 1944, July, August, October 1949, and August, September 1950.

Remarks.--Mother Brook is a diversion from Charles River to Neponset River through Dedham and Hyde Park.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1932	14.0	14.9	30.3	93.9	78.0	121	169	55.2	23.0	10.6	9.82	51.1	55.6
1933	94.6	215	83.4	99.2	99.2	267	333	109	39.3	18.4	9.53	93.6	121
1934	61.5	42.1	59.7	160	48.5	220	242	120	47.5	14.9	9.42	17.0	87.3
1935	30.5	35.7	82.6	158	117	255	259	60.6	63.6	20.3	8.97	15.7	92.1
1936	5.79	23.4	35.7	101	64.8	490	253	80.8	23.2	9.15	5.93	57.8	96.1
1937	53.3	37.6	233	199	154	157	150	134.4	22.1	14.5	38.3	105	105
1938	28.5	78.5	189	146	194	140	121	94.4	110	339	244	100	149
1939	72.8	63.8	130	56.9	113	221	278	83.5	33.0	8.84	10.1	4.40	89.4
1940	6.67	56.3	42.2	56.3	49.9	196	328	144	80.9	42.8	5.18	1.66	84.0
1941	1.94	52.4	56.5	69.1	128	93.1	102	57.2	38.1	12.9	8.04	.53	51.1
1942	0	6.97	20.5	44.8	92.4	250	135	51.8	18.8	19.5	23.2	2.44	55.4
1943	12.6	41.3	133	112	128	199	114	150	59.1	8.85	8.44	.10	80.4
1944	9.33	33.6	13.5	13.9	34.4	88.3	153	86.6	28.4	13.2	1.25	41.4	42.9
1945	20.4	43.6	151	98.3	74.9	285	97.6	121	92.8	62.5	15.4	7.96	89.6
1946	9.45	60.5	216	212	144	214	85.6	88.3	126	11.3	53.8	30.7	104
1947	22.4	12.8	31.1	67.1	75.7	138	115	139	72.5	23.7	9.87	17.7	60.4
1948	2.88	71.8	45.1	41.4	94.8	309	202	104	142	80.0	20.8	.77	92.7
1949	8.89	60.8	48.5	76.6	118	126	124	62.1	17.3	.24	0	4.40	53.4
1950	1.15	12.2	24.2	50.4	77.1	150	135	74.9	25.3	6.81	2.48	2.17	46.6

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1932	726	*236	Apr. 3, 1932*	2.9	55.6	-	-	83.4	-
1933	741	451	Apr. 19-21, 1933	5.2	121	-	-	102	-
1934	756	385	Mar. 10, 11, 1934	3.0	87.3	-	-	86.1	-
1935	781	467	Apr. 17, 1935	3.3	92.1	-	-	85.0	-
1936	801	900	Mar. 19, 1936	.4	96.1	-	-	118	-
1937	821	388	Dec. 21, 22, 1936	1.8	105	-	-	103	-
1938	851	909	July 28, 1938	9.0	149	-	-	146	-
1939	871	327	Apr. 7, 1939	.3	89.4	-	-	75.7	-
1940	891	362	Apr. 25, 1940	.3	84.0	-	-	84.5	-
1941	921	222	Feb. 16, 1941	0	51.1	-	-	44.2	-
1942	951	368	Mar. 23, 1942	0	55.4	-	-	69.8	-
1943	971	247	Mar. 13, 14, 1943	0	80.4	-	-	69.3	-
1944	1001	229	Apr. 30, 1944	0	42.9	-	-	56.3	-
1945	1031	451	Mar. 9, 1945	3.2	89.6	-	-	95.6	-
1946	1051	376	Dec. 12, 1945	3.4	104	-	-	85.8	-
1947	1081	216	Mar. 10, 1947	3.4	60.4	-	-	64.7	-
1948	1111	626	Mar. 24, 1948	.2	92.7	-	-	92.6	-
1949	1141	184	Mar. 1, 1949	0	53.4	-	-	46.6	-
1950	1171	257	Mar. 30, 1950	0	46.6	-	-	-	-

\* Revised.

## 176. 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 (not including 23.6 sq mi drained by Stony Brook, runoff from which is diverted for municipal supply of Cambridge).

Supplemental records available.--October 1903 to October 1909, figures of average weekly discharge equivalent to records of unadjusted discharge at present site (published in W.S.P. 415).

Gage.--Water-stage recorder and concrete control. Datum of gage is 20.02 ft above mean sea level, datum of 1929.

Average discharge.--19 years (1931-50), 351 cfs (adjusted for diversions, wastage, and leakage).

Extremes.--1931-50: Maximum discharge, 2,540 cfs Mar. 19, 1936 (gage height, 4.79 ft); minimum 0.1 cfs Oct. 1, 12, 1943.

Remarks.--Low flow completely regulated by Boston Edison Co. power plant above station. Runoff adjusted for wastage from Stony Brook Reservoir, wastage and leakage from Norumbega Reservoir, diversions from Lake Cochituate to Charles River, diversion to Mother Brook, and diversions for municipal supply of Wellesley, Needham, Dedham, Brookline, Newton, and Waltham.

Monthly and yearly mean discharge, in cubic feet per second (observed), of Charles River at Waltham, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	-	-	-	-	-	-	-	-	-	-	-	69.9	-
1932	36.9	58.7	75.5	252	204	336	476	135	56.5	35.0	22.3	128	149
1933	256	631	254	306	300	862	1,050	343	111	49.6	29.7	281	372
1934	173	119	155	459	165	669	766	374	132	45.9	27.7	52.2	262
1935	151	136	216	440	346	747	795	375	290	104	56.4	57.5	309
1936	26.7	45.8	97.9	280.	180	1,329	781	252	82.0	39.1	20.9	162	275
1937	151	120	575	541	417	455	434	412	211	74.9	55.8	108	296
1938	89.0	224	488	405	524	393	348	266	267	915	603	324	494
1939	281	268	467	261	351	656	860	291	132	47.3	52.1	35.0	306
1940	41.8	153	122	146	140	564	922	595	228	128	40.0	55.4	242
1941	31.8	148	163	188	340	270	304	180	126	64.2	48.6	19.9	156
1942	24.5	48.6	80.1	144	266	698	396	169	84.1	91.6	99.7	24.4	177
1943	65.6	143	402	347	371	616	333	446	195	58.2	52.2	31.2	255
1944	55.7	132	75.6	81.0	118	268	441	264	114	83.9	28.8	137	150
1945	99.5	198	460	322	206	838	334	433	303	214	72.6	61.1	297
1946	71.1	190	623	627	434	647	276	294	372	70.5	209	128	329
1947	101	73.1	117	205	236	403	348	446	243	116	69.9	92.5	204
1948	40.7	226	151	139	294	858	575	314	433	239	89.5	31.4	282
1949	64.8	210	185	253	336	377	361	213	90.0	26.7	14.6	77.8	183
1950	40.9	76.4	109	178	234	415	391	234	109	52.8	46.0	48.3	161

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	-	-	-	-	-	-	-	-	-	-	-	0.57	-
1932	0.37	0.37	0.64	1.83	1.43	2.35	3.19	1.08	0.51	0.35	0.28	.99	13.39
1933	1.83	4.06	1.78	2.13	1.82	5.38	6.39	2.39	.86	.47	.31	1.89	29.31
1934	1.30	.88	1.20	3.09	1.07	4.40	4.74	2.49	.99	.45	.30	.45	21.36
1935	1.04	.95	1.63	3.09	2.17	4.97	5.00	2.26	1.81	.75	.47	.47	24.61
1936	.28	.45	.79	2.05	1.27	9.12	4.95	1.76	.64	.37	.25	1.19	23.12
1937	1.15	.88	4.16	3.77	2.68	3.15	2.89	2.81	1.47	.61	.48	.63	24.88
1938	.71	1.58	3.49	2.79	3.32	2.72	2.35	1.88	1.98	6.23	4.31	2.09	33.45
1939	1.90	1.72	2.99	1.67	2.14	4.48	5.49	1.96	.92	.43	.44	.31	24.45
1940	.36	1.14	.95	1.15	1.01	3.89	6.05	2.82	1.63	.99	.37	.30	20.66
1941	.29	1.10	1.23	1.42	2.22	1.92	2.10	1.34	.93	.53	.42	.23	13.73
1942	.15	.58	.63	1.08	1.76	4.81	2.70	1.26	.63	.89	.75	.25	15.09
1943	.52	1.02	2.76	2.43	2.38	4.16	2.30	3.10	1.39	.49	.45	.28	21.28
1944	.45	.94	.58	.61	.85	1.94	3.01	1.92	.83	.57	.25	.96	12.91
1945	.74	1.31	3.23	2.26	1.41	5.78	2.25	2.92	2.07	1.54	.58	.47	24.56
1946	.54	1.36	4.23	4.29	2.65	4.06	1.90	2.01	2.55	.57	1.39	.91	26.46
1947	.76	.54	.87	1.50	1.51	2.81	2.38	3.00	1.68	.85	.54	.66	17.10
1948	.34	1.58	1.12	1.03	1.96	5.96	3.93	2.25	2.82	1.68	.71	.29	23.67
1949	.50	1.45	1.31	1.80	2.20	2.51	2.51	1.53	.66	.26	.19	.50	15.42
1950	.31	.53	.78	1.26	1.52	2.95	2.66	1.69	.78	.43	.34	.31	13.56

Yearly discharge, in cubic feet per second

Year	W.S.F. no.	Water year ending Sept. 30							Calendar year				
		Observed				Adjusted			Observed		Adjusted		
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches		
		Discharge	Date										
1931	726	-	-	-	-	-	-	-	-	-	-	-	-
1932	726	-	890	Apr. 1, 1932	1	149	223	0.982	13.39	251	328	19.68	-
1933	741, 781	1,520	Apr. 19, 1933	1.4	372	490	2.18	29.31	314	418	25.02	-	-
1934	756	1,020	Mar. 10, 1934	2.2	262	358	1.58	21.36	267	361	21.60	-	-
1935	781	1,370	Apr. 14, 1935	1.0	309	411	1.81	24.61	281	376	22.51	-	-
1936	801	2,540	Mar. 19, 1936	.9	275	386	1.70	23.12	332	464	27.79	-	-
1937	821	1,020	Dec. 20, 1936	7.2	296	416	1.83	24.88	292	409	24.47	-	-
1938	851	2,180	July 26, 29, 1938	4.6	404	559	2.46	33.45	422	573	34.28	-	-
1939	871	1,020	Apr. 5, 7, 1939	14	308	409	1.80	24.45	249	339	20.29	-	-
1940	891	1,600	Apr. 22, 1940	4.3	242	344	1.52	20.66	245	347	20.83	-	-
1941	921	555	Feb. 15, 1941	2.5	156	230	1.01	13.73	140	205	12.27	-	-
1942	951, 971	1,470	Mar. 23, 1942	4.7	177	252	1.11	15.09	215	305	18.23	-	-
1943	971	1,180	Mar. 12, 1943	1.0	255	356	1.57	21.28	226	317	18.95	-	-
1944	1001	1,000	Jan. 14, 1944	.2	150	215	.947	12.91	191	271	16.22	-	-
1945	1031	1,240	Mar. 12, 1945	5.9	297	411	1.81	24.56	307	425	25.41	-	-
1946	1051	1,360	Jan. 14, 1946	5.3	329	442	1.95	26.46	278	376	22.50	-	-
1947	1081	692	May 7, 1947	18	204	286	1.26	17.10	215	301	17.97	-	-
1948	1111	1,730	Mar. 22, 1948	4.4	282	395	1.74	23.67	286	398	23.89	-	-
1949	1141	575	Feb. 20, 1949	4.8	183	257	1.13	15.42	163	230	15.78	-	-
1950	1171	869	Mar. 28, 1950	1.6	161	227	1.00	13.56	-	-	-	-	-

† Corrected.

## 177. 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 & 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.

Gage.--Water-stage recorder. Datum of gage is 44.04 ft above mean sea level, unadjusted.

Average discharge.--11 years (1939-50), 41.8 cfs.

Extremes.--1939-50: Maximum discharge, 414 cfs Dec. 7, 1945 (gage height, 10.38 ft);

minimum daily, 2.3 cfs Oct. 23, 1949.

Maximum stage known, 11.05 ft July 24, 1938, from floodmarks.

Remarks.--Flow regulated by mills and reservoirs above station. Several diversions above station for municipal and industrial use.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	116.3	155.3	22.9	21.8	26.9	100	160	65.0	37.3	25.8	10.6	12.0	44.5
1941	9.59	30.9	28.0	29.8	51.5	49.9	48.2	32.8	21.9	16.4	12.7	10.8	28.4
1942	14.1	19.9	18.9	27.3	47.6	132	63.0	28.7	16.3	19.7	14.3	10.1	34.3
1943	18.4	34.8	61.5	56.4	85.7	88.2	53.3	88.8	29.3	11.1	10.2	8.20	45.2
1944	11.9	19.2	11.0	12.4	19.1	49.4	64.5	29.6	18.2	10.7	8.94	24.2	23.2
1945	14.7	42.3	76.5	73.5	62.0	134	56.0	75.7	52.5	31.3	16.5	15.0	54.3
1946	19.7	46.9	127	121	93.2	108	45.0	57.4	75.9	15.7	47.2	25.5	65.2
1947	20.1	21.5	29.6	42.8	36.4	69.5	63.1	76.7	51.6	25.9	15.8	26.2	40.0
1948	14.5	43.1	25.7	30.4	78.0	174	95.1	70.2	88.8	52.1	19.7	12.2	58.5
1949	29.4	50.5	34.2	49.4	73.8	73.1	74.5	39.4	12.5	6.73	8.09	10.5	38.2
1950	8.61	12.8	14.7	26.6	36.8	82.3	65.2	41.5	14.1	11.1	12.4	15.5	28.3

\* Not previously published; estimated on basis of weather records and records for nearby stations.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	891	226	Apr. 22, 1940	2.9	44.5	-	-	44.0	-
1941	921	240	Feb. 8, 1941	2.4	28.4	-	-	27.1	-
1942	951	304	Mar. 17, 1942	5.8	34.3	-	-	39.5	-
1943	971	230	May 15, 1943	5.8	45.2	-	-	39.0	-
1944	1001	200	Sept. 15, 1944	4.3	23.2	-	-	30.9	-
1945	1031	254	Mar. 7, 1945	3.7	54.3	-	-	59.4	-
1946	1051	414	Dec. 7, 1945	9.4	65.2	-	-	54.9	-
1947	1081	212	Mar. 3, 1947	7.4	40.0	-	-	40.9	-
1948	1111	398	Mar. 21, 1948	8.0	58.5	-	-	61.1	-
1949	1141	165	Apr. 8, 1949	2.7	39.2	-	-	31.7	-
1950	1171	178	Mar. 23, 1950	2.3	26.3	-	-	-	-

\* Not previously published.

## WESTPORT RIVER BASIN

## 178. Adamsville Brook at Adamsville, R. I.

Location.--Lat 41°33'30", long. 71°07'47", on right bank 0.2 mile upstream from mill dam at Adamsville, Newport County, and 0.7 mile upstream from mouth.

Drainage area.--8.6 sq mi.

Gage.--Water-stage recorder. Concrete control since Sept. 16, 1942. Altitude of gage is 15 ft (from topographic map).

Average discharge.--10 years (1940-50), 12.7 cfs.

Extremes.--1940-50: Maximum discharge, 241 cfs Aug. 8, 1946 (gage height, 5.72 ft);

minimum, 0.03 cfs Sept. 23, 24, 1950.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	4.78	18.6	18.5	24.6	22.0	23.7	13.6	6.27	16.9	4.25	0.94	0.38	12.8
1942	7.37	3.06	7.50	9.46	28.3	44.5	12.7	6.77	2.97	2.15	13.3	2.00	11.0
1943	7.55	20.0	25.7	15.6	29.3	26.4	15.2	20.2	3.84	.508	.374	.085	13.6
1944	.945	3.77	2.64	12.4	9.67	22.2	24.0	10.2	3.26	.316	.081	.735	7.51
1945	1.17	17.7	28.8	21.5	28.9	29.0	12.1	17.5	4.40	1.37	.711	.247	13.6
1946	1.78	16.8	44.4	34.3	18.2	23.7	11.3	20.2	11.8	1.65	31.0	8.11	18.7
1947	5.56	4.11	10.4	17.6	8.15	21.4	25.6	25.7	8.11	4.94	2.05	1.02	11.3
1948	1.59	20.1	12.7	23.1	32.1	35.4	28.6	36.8	23.1	3.67	.468	.067	18.1
1949	1.97	10.7	11.6	23.3	30.5	24.7	26.2	13.1	2.73	.132	.092	.105	12.0
1950	.141	.873	3.19	8.10	22.6	23.1	17.2	12.1	7.99	.681	.359	.074	7.93

## WESTPORT RIVER BASIN

Monthly and yearly runoff, in inches, of Adamsville Brook at Adamsville, R. I.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	0.64	2.42	2.48	3.30	2.67	3.18	1.76	0.84	2.19	0.57	0.13	0.05	20.23
1942	.05	.40	1.01	1.27	3.43	5.96	1.64	.91	.38	.29	1.78	.26	17.38
1943	1.01	2.59	3.44	2.09	3.55	3.53	1.97	2.71	.50	.07	.05	.01	21.52
1944	.13	.49	.35	1.66	1.21	2.98	3.12	1.37	.42	.04	.01	.10	11.88
1945	.16	2.30	3.87	2.89	3.50	3.88	1.57	2.35	.57	.18	.10	.03	21.40
1946	.24	2.18	5.95	4.59	2.20	3.17	1.47	2.71	1.53	.22	4.15	1.05	29.46
1947	.75	.55	1.40	2.35	.99	2.87	3.32	3.45	1.05	.66	.27	.13	17.77
1948	.21	2.60	1.71	3.09	4.02	4.75	3.71	4.94	2.99	.49	.06	.01	28.58
1949	.26	1.39	1.56	3.12	3.69	3.31	3.40	1.76	.35	.02	.01	.008	18.88
1950	.02	.11	.43	1.09	2.73	3.10	2.24	1.62	1.04	.09	.05	.01	12.53

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1941	921	154	Feb. 8, 1941	0.2	12.8	1.49	20.23	10.2	16.15
1942	951	117	Feb. 8, 17, 1942	.1	11.0	1.28	17.38	14.5	22.96
1943	971	119	Dec. 31, 1942	.06	13.6	1.58	21.52	9.78	15.45
1944	1001	121	Apr. 25, 1944	.05	7.51	.873	11.88	10.9	17.24
1945	1031	201	Nov. 30, 1944	.14	13.6	1.58	21.40	14.8	23.44
1946	1051	241	Aug. 8, 1946	.31	18.7	2.17	29.46	15.1	23.77
1947	1081	130	Mar. 3, 1947	.16	11.3	1.31	17.77	12.4	19.61
1948	1111	146	June 1, 1948	.07	18.1	2.10	28.58	17.2	27.27
1949	1141	85	Apr. 7, 1949	.05	12.0	1.40	18.88	10.3	16.23
1950	1171	103	Mar. 24, 1950	.04	7.93	.922	12.53	-	-

## TAUNTON RIVER BASIN

179. Taunton River at Titicut, near Bridgewater, Mass.

Location.--Lat 41°56'13", long. 70°56'13", at Summer Street Bridge between Bridgewater and Middleboro, Plymouth County, 0.9 mile upstream from confluence with Nemasket River.

Drainage area.--185 sq mi.

Gage.--Staff gage. Altitude of gage is 10 ft (from topographic map). Prior to Apr. 21, 1924, chain gage at same site and datum.

Average discharge.--5 years (1920-25), 302 cfs.

Extremes.--1920-25: Maximum discharge, approximately 5,150 cfs Mar. 19, 1920 (gage height, 15.5 ft, from floodmarks), from rating curve extended above 3,400 cfs on basis of velocity-area study; minimum, 23 cfs Aug. 10, Nov. 19, 1924, and Aug. 29, 1925.

Remarks.--Stage-discharge relation occasionally affected by backwater from dam at East Taunton.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1920	-	-	-	-	-	1,760	767	652	729	201	137	89.0	-
1921	127	180	248	293	200	566	460	608	223	906	198	158	349
1922	172	261	310	215	280	577	560	422	444	265	364	505	365
1923	208	170	150	648	324	726	584	425	154	96.7	102	98.0	308
1924	162	148	247	272	264	483	810	443	245	109	122	246	295
1925	112	59.3	118	135	572	592	309	190	144	151	103	83.7	195

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1920	-	-	-	-	-	10.96	4.63	4.06	4.40	1.26	0.85	0.54	-
1921	0.79	1.09	1.54	1.82	1.12	3.53	2.78	3.79	1.35	5.65	1.23	.95	25.64
1922	1.07	1.57	1.94	1.34	1.57	3.60	3.38	2.63	2.68	1.65	2.27	3.05	26.75
1923	1.30	1.03	.94	4.04	1.82	4.52	3.53	2.65	.93	.60	.64	.59	22.59
1924	1.01	.89	1.54	1.70	1.54	3.01	4.89	2.76	1.47	.69	.76	1.48	21.73
1925	.70	.36	.74	.84	3.22	2.44	1.86	1.19	.87	.94	.64	.50	14.30

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1920	501	5,150	Mar. 19, 1920	-	-	-	-	-	-
1921	521	3,520	July 12, 1921	83	349	1.89	25.64	365	26.80
1922	541	2,070	Aug. 29, 1922	92	365	1.97	26.75	347	25.44
1923	561	*1,970	Mar. 18, 1923	50	308	1.66	22.59	310	22.76
1924	581	*1,240	Oct. 24, 1923	26	295	1.59	21.73	273	20.09
1925	601	*1,420	Feb. 13, 1925	23	195	1.05	14.30	-	-

\* Revised.

## 180. 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  $\frac{3}{2}$  miles northwest of Middleboro.

Drainage area.--260 sq mi.

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.--21 years (1929-50), 443 cfs (adjusted for diversions).

Extremes.--1929-50: 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.--Flow regulated by reservoirs and small power plants above station. Runoff adjusted for diversions above station from Nemasket River for municipal supply of Taunton and New Bedford and for diversions from Silver Lake into Taunton River Basin above station for municipal supply of Brockton and other cities.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	92.7	216	344	563	673	590	431	272	221	88.7	78.8	63.9	301
1931	43.5	174	217	411	522	970	796	646	*827	303	219	206	*443
1932	125	155	236	668	586	699	700	346	195	114	166	148	344
1933	502	1,050	442	497	599	1,100	1,600	514	254	189	343	840	657
1934	450	321	414	862	425	1,083	1,024	475	243	84.0	28.0	44.3	455
1935	87.1	129	271	461	571	814	1,302	460	386	126	61.3	87.9	396
1936	68.0	205	246	650	420	1,592	986	415	185	99.8	77.6	429	448
1937	351	224	1,232	1,011	655	667	724	524	267	111	115	210	508
1938	236	477	681	706	685	763	588	409	507	1,021	323	312	576
1939	368	432	753	425	811	1,173	1,300	507	209	132	69.5	86.7	520
1940	94.8	300	227	289	403	1,083	1,515	707	433	251	84.0	87.5	455
1941	92.4	448	417	496	655	555	510	379	309	189.8	76.9	38.9	336
1942	36.9	63.6	109	209	456	1,126	566	250	124	146	112	59.0	271
1943	108	306	487	446	759	786	503	716	241	82.1	97.2	37.6	379
1944	86.7	210	112	162	204	495	641	279	194	85.2	34.8	194	224
1945	136	359	770	592	612	1,331	496	605	336	232	84.8	56.1	468
1946	105	459	1,614	1,166	704	925	480	484	526	120	516	273	616
1947	221	162	231	445	324	634	613	767	450	198	96.5	195	362
1948	94.6	462	329	552	905	1,398	896	866	987	446	265	82.4	606
1949	361	662	457	592	718	747	684	401	162	50.7	30.0	36.4	406
1950	42.7	68.5	104	211	405	538	461	301	164	75.5	92.1	112	213

\* Revised.

† Corrected.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	0.48	0.99	1.59	2.55	2.74	2.68	1.91	1.26	0.99	0.46	0.41	0.34	16.40
1931	.25	.80	1.02	1.88	2.15	4.36	3.47	2.92	*3.60	1.40	1.02	.95	*23.82
1932	.62	.73	1.11	3.02	2.47	3.15	3.05	1.58	.88	.55	.79	.69	18.64
1933	2.27	4.55	2.01	2.26	2.45	4.92	6.91	2.31	1.15	.89	1.59	3.66	34.97
1934	2.05	1.43	1.89	3.88	1.75	4.85	4.44	2.16	1.10	.44	.19	.24	24.42
1935	.44	.61	1.26	2.17	2.34	3.67	5.64	2.09	1.70	.62	.34	.44	21.32
1936	.37	.94	1.15	2.95	1.79	7.09	4.28	1.90	.84	.51	.41	1.90	24.13
1937	1.61	1.01	5.51	4.53	2.68	3.02	3.16	2.38	1.19	.55	.57	.96	27.17
1938	1.10	2.10	3.94	3.17	2.79	3.42	2.57	1.86	2.22	4.56	1.49	1.38	30.60
1939	1.68	1.91	3.39	1.92	3.29	5.26	5.62	2.31	.94	.63	.38	.43	27.76
1940	.48	1.35	1.05	1.34	1.71	4.85	6.54	3.18	1.91	1.16	.42	.42	24.41
1941	.46	1.97	1.90	2.25	2.67	2.51	2.24	1.74	1.38	.46	.41	.23	18.22
1942	.23	.33	.55	.99	1.89	5.05	2.49	1.17	.60	.72	.58	.32	14.92
1943	.55	1.38	2.24	2.06	3.11	3.57	2.23	3.25	1.12	.45	.52	.24	20.72
1944	.46	.98	.58	.80	.92	2.28	2.83	1.32	.92	.47	.26	.92	12.74
1945	.70	1.63	3.50	2.71	2.52	5.93	2.21	2.76	1.53	1.11	.46	.32	25.43
1946	.55	2.05	7.23	5.25	2.89	4.19	2.14	2.23	2.34	.62	2.38	1.26	33.13
1947	1.07	.78	1.11	2.06	1.37	2.90	2.71	3.48	2.01	.53	.94	.19	19.93
1948	.52	2.07	1.55	2.54	3.84	6.29	3.93	3.92	4.33	2.07	1.28	.46	32.80
1949	1.69	2.93	2.13	2.72	2.95	3.40	3.01	1.86	.80	.32	.24	.25	22.30
1950	.29	.39	.56	1.03	1.71	2.48	2.07	1.44	.81	.45	.54	.60	12.37

\* Revised.

## TAUNTON RIVER BASIN

Yearly discharge, in cubic feet per second, of Taunton River at State Farm, Mass.

Year	W.S.P. no.	Water year ending Sept. 30										Calendar year		
		Observed					Adjusted					Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Mean	Mean	Runoff in inches
		Discharge	Date											
1930	711,1201	*1,580	Feb. 14, 1930	21	301	314	1.21	16.40		282	295		15.41	
1931	711,1201	*2,430	June 12, 1931	14	*443	*456	*1.75	*23.82		*450	*463		*24.20	
1932	726, 801	1,920	Mar. 30, 1932	45	344	356	1.37	18.64		469	477		25.01	
1933	(a)	*2,890	Apr. 15, 1933	60	657	668	2.57	34.97		591	602		31.51	
1934	756, 781	2,460	Mar. 7, 1934	12	455	468	1.90	24.42		396	408		21.36	
1935	781,1201	*3,060	Apr. 14, 1935	35	396	408	1.57	21.32		398	411		21.47	
1936	801	3,020	Mar. 14, 1936	39	446	461	1.77	24.13		557	569		29.80	
1937	821	2,590	Dec. 13, 1936	54	508	520	2.00	27.17		489	501		26.18	
1938	851	2,480	July 25, 1938	61	576	586	2.25	30.60		573	583		30.44	
1939	871	2,040	Apr. 21, 1939	40	520	532	2.05	27.76		441	453		23.66	
1940	891	2,650	Apr. 14, 1940	26	455	467	1.80	24.41		483	494		25.86	
1941	921	2,080	Feb. 9, 1941	22	336	349	1.34	18.22		274	287		15.00	
1942	951	2,080	Mar. 18, 1942	20	271	286	1.10	14.92		329	345		17.98	
1943	971	1,540	Mar. 6, 1943	28	379	397	1.53	20.72		337	355		18.57	
1944	1001	1,430	Apr. 26, 1944	9	224	243	.935	12.74		296	316		16.55	
1945	1031	2,230	Mar. 7, 1945	43	468	487	1.87	25.43		545	564		29.43	
1946	1051	3,080	Dec. 8, 1945	57	616	635	2.44	35.13		484	503		26.26	
1947	1081	1,550	May 5, 1947	67	362	382	1.47	19.93		394	404		21.11	
1948	1111	2,480	Mar. 18, 1948	62	605	627	2.41	32.80		555	576		35.41	
1949	1141	1,740	Oct. 27, 1948	18	406	427	1.64	22.30		300	322		16.79	
1950	1171	1,250	Mar. 25, 1950	31	213	237	.912	12.37		-	-		-	

\* Revised.

a In W.S.P. 741, 1051, 1201.

## 181. 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.

Average discharge.--25 years (1925-50), 68.6 cfs (adjusted for diversion).

Extremes.--1925-50: 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.--Flow regulated by power plants and ponds above station. Occasional diversion above station for municipal supply of Attleboro.

Cooperation.--Records prior to October 1927 and gage-height records Oct. 1, 1927, to May 31, 1928, furnished by R. Loring Haywood.

## Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	-	-	24.3	9.70	7.43	11.2	-
1926	11.8	61.8	113	77.4	118	188	128	66.7	34.0	11.5	16.2	6.11	69.1
1927	15.3	69.6	76.0	119	116	122	57.2	41.6	29.3	16.1	79.5	103	70.1
1928	66.9	102	147	93.9	113	94.4	98.8	104	76.4	66.4	26.8	23.6	84.4
1929	29.3	32.1	49.1	111	92.8	181	184	140	36.2	18.5	6.56	6.26	73.7
1930	6.67	17.6	36.9	79.3	95.5	96.0	67.3	55.5	28.5	8.05	5.07	1.76	39.5
1931	6.21	19.0	24.1	58.4	81.2	180	124	118	182	45.4	23.4	17.1	73.1
1932	8.12	12.6	24.8	85.6	68.9	116	127	47.8	18.7	11.1	14.7	21.0	46.2
1933	53.5	161	67.1	72.5	90.4	213	250	59.1	37.4	14.7	9.70	73.1	91.3
1934	54.3	43.8	61.3	148	52.2	165	187	83.5	39.1	15.3	6.55	9.78	72.2
1935	19.2	30.6	64.6	127	110	160	170	68.3	67.0	30.8	15.5	20.2	73.2
1936	7.16	28.4	36.9	123	89.2	354	177	61.5	27.1	8.42	5.80	20.0	78.3
1937	22.1	19.1	189.7	142	100	112	123	83.9	46.4	22.9	26.5	43.2	77.6
1938	41.9	93.0	169	125	118	102	85.0	68.2	101	225	70.5	65.7	105
1939	55.5	62.0	111	60.6	116	184	200	55.9	26.3	12.1	7.22	7.02	74.4
1940	7.13	35.2	30.6	49.6	52.7	191	249	99.4	64.9	32.4	7.73	5.86	68.7
1941	7.45	54.9	53.1	64.6	95.7	76.3	68.8	51.3	42.8	19.4	14.3	8.56	46.1
1942	7.41	11.9	21.6	37.3	86.8	235	82.4	41.8	20.1	25.3	20.5	9.93	50.2
1943	17.5	51.3	111	94.4	112	135	85.3	115	41.9	12.5	11.8	6.75	66.0
1944	10.3	24.1	14.1	17.0	28.4	88.5	120	56.9	32.5	12.5	4.58	32.6	36.7
1945	29.7	83.6	149	106	86.2	221	73.0	106	76.9	60.4	26.5	16.9	86.5
1946	20.3	93.0	257	170	107	141	68.3	72.5	83.7	13.7	56.4	25.7	92.5
1947	18.6	13.1	30.9	57.6	45.9	103	89.4	118	74.9	32.7	14.6	25.1	52.1
1948	12.5	61.5	51.7	60.5	113	264	145	120	142	87.5	36.3	14.3	92.1
1949	25.7	30.2	73.1	90.1	112	99.6	109	64.0	20.6	7.34	4.20	3.66	67.9
1950	4.51	10.3	20.5	32.8	67.4	110	88.7	54.3	21.3	7.25	8.19	7.28	35.8



Monthly and yearly runoff, in inches (adjusted), of Wading River near Norton, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1925	-	-	-	-	-	-	-	-	0.64	0.26	0.20	0.29	-
1926	0.32	1.63	3.08	2.11	2.90	5.11	3.37	1.81	.89	.31	.44	.16	22.13
1927	.42	1.83	2.06	3.24	2.85	3.32	1.51	1.13	.77	.44	2.17	2.71	22.45
1928	1.82	2.69	4.00	2.55	2.88	2.57	2.60	2.82	2.01	1.81	.73	.62	27.10
1929	.77	.84	1.34	3.02	2.28	4.92	4.84	3.80	.95	.51	.18	†.18	†23.63
1930	†.19	.46	1.00	2.16	2.34	2.61	1.77	.96	.75	.22	.14	.05	†12.65
1931	.19	.52	.68	1.61	2.02	4.92	3.29	3.24	4.82	1.26	.66	.47	23.68
1932	.24	.35	.69	2.35	1.77	3.18	3.35	1.31	.51	.32	.42	.57	15.06
1933	1.46	4.24	1.82	1.97	2.22	5.79	6.58	1.60	.98	.41	.27	1.93	29.27
1934	1.48	1.16	1.67	4.02	1.30	4.48	4.94	2.27	1.04	.38	.19	.26	23.19
1935	.49	.81	1.76	3.46	2.73	4.35	4.47	1.86	1.76	.85	.44	.53	23.51
1936	.20	.76	1.02	3.37	2.29	9.63	4.65	1.68	.72	.24	.17	.53	25.26
1937	.60	.50	5.14	3.86	2.48	3.04	5.24	2.28	1.22	.52	.72	1.14	24.82
1938	1.14	2.44	4.50	3.40	2.78	2.23	1.86	2.66	6.12	1.91	1.73	35.77	
1939	1.51	1.63	3.02	1.65	1.85	5.00	5.27	1.52	.89	.33	.20	.19	23.86
1940	.19	.93	.83	1.35	1.34	5.20	6.55	2.70	1.71	.88	.21	.15	22.04
1941	.20	1.44	1.44	1.76	2.35	2.08	1.81	1.39	1.13	.53	.39	.23	14.75
1942	.20	.31	.59	1.01	2.13	6.39	2.17	1.14	.53	.77	.56	.26	16.06
1943	.48	1.35	3.02	2.57	2.75	3.68	2.24	3.12	1.10	.34	.32	.18	21.15
1944	.28	.63	.38	.46	.72	2.41	3.16	1.55	.86	.34	.12	.86	11.77
1945	.81	2.20	4.06	2.89	2.12	6.01	1.92	2.87	2.02	1.64	.72	.44	27.70
1946	.55	2.45	6.99	4.63	2.62	3.82	1.80	1.97	2.20	.37	1.53	.68	29.61
1947	.51	.35	.84	1.57	1.13	2.81	2.35	3.21	1.97	.89	.40	.66	16.69
1948	.34	1.62	1.41	1.64	2.87	7.17	3.76	3.27	3.75	2.38	.99	.38	29.58
1949	.70	2.37	1.99	2.45	2.74	2.71	2.87	1.74	.54	.20	.11	.13	18.55
1950	.16	.29	.58	.91	1.66	2.99	2.33	1.48	.56	.20	.22	.19	11.57

† Corrected.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30										Calendar year		
		Observed					Adjusted					Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date											
1925	661	-	-	-	-	-	-	-	-	-	-	-	-	-
1926	661	350	Mar. 8, 1926	0.3	69.1	-	1.63	22.13	66.9	-	21.41	-	-	21.41
1927	661	*322	Sept. 2, 1927†	1.6	70.1	-	1.65	22.45	68.1	-	26.65	-	-	26.65
1928	661	270	Dec. 9, 1927	9.5	84.4	-	1.99	27.10	67.1	-	21.54	-	-	21.54
1929	681	*505	Mar. 7, 1929	2.6	73.7	73.8	1.74	†23.63	69.7	69.8	22.33	-	-	22.33
1930	696	*358	Feb. 14, 1930	.4	39.5	39.6	.934	†12.65	38.5	38.7	12.39	-	-	12.39
1931	711	*843	June 11, 1931	.8	73.1	73.9	1.74	23.68	72.8	73.6	23.57	-	-	23.57
1932	726	*503	Mar. 29, 1932	2.2	46.2	46.9	1.11	15.06	65.9	66.4	21.30	-	-	21.30
1933	741	*646	Apr. 13, 1933	3.3	91.3	91.4	2.16	29.27	81.3	81.3	26.06	-	-	26.06
1934	756	506	Mar. 6, 1934	2.5	72.2	72.4	1.71	23.19	68.3	68.5	21.94	-	-	21.94
1935	781	480	Apr. 14, 1935	5.8	73.2	73.4	1.73	23.51	69.8	70.0	22.43	-	-	22.43
1936	801	1,030	Mar. 12, 13, 1936	3.0	78.3	78.7	1.86	25.26	91.8	92.0	29.52	-	-	29.52
1937	821	487	Dec. 21, 1936	5.2	77.6	77.6	1.83	24.82	83.7	-	26.76	-	-	26.76
1938	851	714	July 25, 1938	12	105	-	2.48	33.77	99.1	-	31.75	-	-	31.75
1939	871	361	Apr. 7, 1939	3.3	74.4	-	1.75	23.86	61.3	-	19.65	-	-	19.65
1940	891	472	Mar. 16, 1940	2.5	68.7	-	1.62	22.04	72.2	-	23.17	-	-	23.17
1941	921	339	Feb. 8, 1941	3.9	46.1	-	1.09	14.75	39.8	-	12.77	-	-	12.77
1942	951	472	Mar. 10, 1942	3.9	50.2	-	1.18	16.06	61.9	-	19.81	-	-	19.81
1943	971	406	Dec. 31, 1942	4.5	66.0	-	1.56	21.15	54.9	-	17.59	-	-	17.59
1944	1001	319	Apr. 26, 1944	2.4	36.7	-	.866	11.77	54.6	-	17.55	-	-	17.55
1945	1031	391	(a)	7.6	86.5	-	2.04	27.70	95.7	-	30.62	-	-	30.62
1946	1051	682	Dec. 8, 1945	7.0	92.5	-	2.18	29.61	66.6	-	21.32	-	-	21.32
1947	1081	325	May 4, 1947	8.5	52.1	-	1.23	16.69	57.3	-	18.36	-	-	18.36
1948	1111	619	Mar. 17, 1948	7.7	92.1	-	2.17	29.58	97.4	-	31.27	-	-	31.27
1949	1141	200	Apr. 7, 1949	2.2	57.9	58.0	1.37	18.55	45.0	45.4	14.52	-	-	14.52
1950	1171	256	Mar. 24, 1950	3.5	35.8	36.2	.854	11.57	-	-	-	-	-	-

\* Revised.

† Corrected.

‡ Not previously published.

a Dec. 1, 1944, Mar. 6, 1945.

## PROVIDENCE RIVER BASIN

182. Blackstone River at Worcester, Mass.

Location.--Lat 42°13'55", long. 71°50'07", on right bank 75 ft downstream from Webster Street Bridge in Worcester, Worcester County, and 1 mile upstream from Beaver Brook. Drainage area, --31.3 sq mi.

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.--27 years (1923-50), 50.1 cfs (adjusted for diversion).

Extremes.--1923-50: 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.--Runoff adjusted for diversion from about 7.0 sq mi above station for municipal supply of city of Worcester. Flow regulated by reservoirs above station. Runoff may not represent natural flow because of regulation.

Monthly and yearly mean discharge, in cubic feet per second (observed), of Blackstone River at Worcester, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1923	-	-	-	-	-	-	-	-	-	-	-	8.82	-
1924	12.5	35.7	87.4	91.4	29.0	70.3	148	79.9	23.0	12.2	10.3	13.9	51.0
1925	13.8	12.8	15.3	9.73	70.2	96.4	66.4	29.0	14.4	12.9	9.98	8.48	29.7
1926	10.7	18.0	42.3	31.8	25.5	101	85.6	31.5	10.6	9.41	11.2	8.97	32.3
1927	10.8	26.8	22.3	41.2	43.0	75.4	25.4	29.2	25.3	10.5	30.1	27.9	30.6
1928	58.6	97.8	111	60.1	78.5	36.3	73.2	57.2	69.4	43.7	28.9	27.7	60.0
1929	18.5	18.4	22.5	35.7	51.1	84.5	121	99.9	28.0	14.1	8.84	7.77	42.4
1930	8.66	14.4	17.5	25.5	32.7	43.0	30.5	16.3	11.8	9.73	6.09	5.16	18.4
1931	4.32	9.84	6.77	10.3	22.2	106	70.8	41.3	97.2	17.3	14.4	10.8	34.2
1932	10.4	7.82	12.8	27.6	27.4	54.9	72.8	26.6	15.7	11.7	11.8	35.6	26.2
1933	61.0	119	40.2	47.7	58.2	115	195	30.3	24.5	11.8	12.1	59.5	64.3
1934	54.8	27.7	32.3	73.1	29.5	105	119	69.8	31.4	19.5	14.2	56.8	51.2
1935	60.4	45.8	58.6	115	57.4	113	91.9	46.0	53.5	22.2	15.8	22.2	58.9
1936	10.5	20.7	24.5	76.7	33.7	303	105	41.2	18.9	9.43	9.82	15.4	56.1
1937	19.2	15.9	96.6	99.0	61.8	58.8	78.7	64.9	28.0	15.7	17.8	16.3	47.7
1938	23.6	83.5	71.7	84.7	76.0	58.7	54.8	36.6	37.6	153	47.6	138	72.1
1939	49.9	48.6	98.9	49.2	71.1	119	124	35.3	19.2	11.8	13.0	9.60	54.0
1940	9.01	22.9	18.9	25.9	25.2	73.2	197	54.3	52.2	23.3	14.7	11.9	43.8
1941	10.8	28.6	35.6	27.8	49.9	43.4	38.4	20.4	14.1	8.56	11.7	9.53	24.7
1942	7.22	1.87	13.5	21.8	27.7	121	39.5	20.4	14.9	13.8	10.2	10.5	26.0
1943	13.6	24.7	48.3	36.5	61.2	107	58.3	104	26.1	14.5	13.0	11.7	43.2
1944	14.1	25.9	12.8	9.78	20.8	54.3	76.4	26.1	30.4	11.9	10.5	16.6	25.7
1945	12.5	20.6	38.3	43.3	40.2	114	53.1	106	60.9	20.6	18.3	14.7	45.3
1946	16.7	24.3	51.7	69.8	52.0	99.7	33.8	51.5	58.6	13.9	23.8	16.2	42.7
1947	18.3	16.3	17.3	35.8	46.0	76.6	68.5	54.6	29.1	18.0	17.8	24.0	35.1
1948	15.1	27.8	17.1	15.1	41.4	132	75.6	81.7	106	56.5	24.0	16.0	50.7
1949	13.4	34.0	24.5	57.9	64.7	53.6	53.0	30.6	11.2	6.99	9.25	9.40	30.5
1950	3.89	7.13	12.3	23.5	31.1	76.5	66.8	38.3	21.7	8.55	13.1	14.5	26.4

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1923	-	-	-	-	-	-	-	-	-	-	-	0.67	-
1924	0.82	1.54	3.56	3.72	1.34	2.95	5.63	3.32	1.20	-0.87	0.77	.86	26.58
1925	.88	.64	.66	.46	2.53	3.91	2.72	1.44	.87	.71	.49	.40	15.71
1926	.50	.90	1.83	1.52	1.19	4.09	3.50	1.67	.76	.77	.80	.69	18.22
1927	.53	1.10	1.18	1.89	1.68	3.01	1.20	1.40	1.23	.73	1.45	1.33	16.73
1928	1.78	3.83	4.42	2.55	3.06	1.72	2.97	2.50	2.87	2.03	1.50	1.41	30.64
1929	1.10	1.05	1.22	1.71	2.05	3.50	4.68	4.09	1.41	.95	.71	.53	23.00
1930	.48	.65	.80	1.24	1.42	1.89	1.37	.89	.62	.53	.35	.32	10.56
1931	.27	.46	.36	.62	1.06	4.23	2.92	1.90	3.85	.95	.85	.68	18.15
1932	.68	.55	.73	1.31	1.28	2.40	2.96	1.35	.83	.70	.84	1.43	14.86
1933	2.46	4.53	1.74	2.08	2.23	4.56	7.27	2.44	1.15	.62	.62	2.30	31.00
1934	1.50	1.24	1.46	3.04	1.35	4.23	4.60	2.94	1.44	1.01	.76	2.25	25.82
1935	2.52	1.91	2.42	4.53	2.21	4.50	3.60	2.02	2.19	1.09	.87	1.04	28.90
1936	.62	.97	1.19	3.12	1.48	11.53	4.10	1.84	1.01	.64	.64	.80	27.94
1937	.95	.88	3.86	4.01	2.42	2.57	3.24	2.78	1.38	.99	1.03	.92	25.03
1938	1.19	3.27	2.97	3.45	2.82	2.50	2.28	1.68	1.68	6.01	2.12	5.28	35.25
1939	2.17	2.06	3.98	2.16	2.68	4.72	4.78	1.66	1.06	.77	.73	.58	27.35
1940	.54	1.01	.90	1.16	1.13	3.08	7.42	2.40	2.26	1.18	.85	.69	22.60
1941	.66	1.25	1.58	1.31	1.98	1.99	1.76	1.15	.87	.68	.64	.48	14.55
1942	.38	.46	.74	1.08	1.06	4.89	1.80	.93	.74	.74	.64	.62	14.08
1943	.73	1.09	2.07	1.62	2.32	4.31	2.45	4.21	1.36	.84	.73	.64	22.37
1944	.73	1.12	.69	.57	.89	2.21	3.05	1.34	1.35	.74	.70	.83	14.22
1945	.68	.94	1.74	1.99	1.69	4.59	2.27	4.27	2.54	1.16	1.14	.92	23.93
1946	.97	1.08	2.26	2.96	2.05	4.05	1.59	2.27	2.47	.87	1.17	.88	22.62
1947	1.01	.89	.94	1.62	1.88	3.22	2.85	2.44	1.45	.89	.91	1.10	19.20
1948	.80	1.18	.83	.74	1.66	5.17	2.99	3.33	4.17	2.51	1.32	.84	25.54
1949	.72	1.44	1.24	2.48	2.48	2.44	2.34	1.59	.75	.51	.61	.53	17.13
1950	.33	.38	.58	1.14	1.32	3.08	2.80	1.77	1.10	.57	.85	.87	14.79

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30										
		Observed					Adjusted			Calendar year		
		Momentary		Maximum	Minimum	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date	day								
1923	561	-	-	-	-	-	-	-	-	-	-	-
1924	581	740	Apr. 7, 1924	2.4	51.0	61.1	1.95	26.58	43.3	52.5	22.84	
1925	601	450	Feb. 12, 1925	2.6	29.7	36.3	1.16	15.71	32.1	38.7	16.76	
1926	621	400	Mar. 25, 1926	5.0	32.3	42.0	1.34	18.22	31.4	41.1	17.80	
1927	641	230	Nov. 8, 1926	.8	30.6	38.6	1.23	16.73	46.3	55.2	23.95	
1928	661	790	Nov. 4, 1927	8.0	60.0	70.4	2.25	30.64	44.3	55.1	28.98	
1929	681	473	Apr. 16, 1929	.9	42.4	53.0	1.69	23.00	40.8	49.7	21.56	
1930	696	116	Mar. 9, 1930	1.0	18.4	24.3	.776	10.56	16.7	22.4	9.72	
1931	711	935	June 10, 1931	1.2	34.2	41.9	1.34	18.15	35.0	43.9	19.02	
1932	726	404	Sept. 17, 1932	1.1	26.2	34.2	1.09	14.86	41.9	49.7	21.63	
1933	741	586	Nov. 11, 1932	1.6	64.3	71.4	2.28	31.00	53.8	61.0	26.47	
1934	756	570	Apr. 13, 1934	9.1	51.2	59.6	1.91	25.82	57.1	65.7	28.47	
1935	781	1,020	Jan. 10, 1935	5.0	58.9	67.0	2.14	28.90	49.7	57.6	24.85	

Yearly discharge, in cubic feet per second, of Blackstone River at Worcester, Mass.--Continued

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1936	801	2,520	Mar. 18, 1936	5.0	56.1	64.2	2.05	27.94	62.6	71.0	30.85
1937	821	429	Dec. 9, 1936	1.1	47.7	57.8	1.85	25.03	51.6	61.8	26.77
1938	851	1,300	Sept. 21, 1938	8.2	72.1	81.2	2.59	35.25	73.8	83.0	36.03
1939	871	337	Mar. 1, 1939	5.6	54.0	63.0	2.01	27.35	41.6	49.7	21.57
1940	891	500	Apr. 1, 1940	4.8	43.8	52.0	1.66	22.60	45.9	54.4	23.64
1941	921	219	Feb. 8, 1941	5.0	24.7	33.0	1.05	14.35	20.9	28.6	12.44
1942	951	540	Mar. 10, 1942	3.0	26.0	32.5	1.04	14.08	30.8	37.8	16.39
1943	971	237	May 22, 1943	7.2	43.2	51.6	1.65	22.37	40.3	48.5	21.02
1944	1001	291	Apr. 25, 1944	5.5	25.7	32.7	1.04	14.22	27.3	34.6	15.04
1945	1031	312	Jan. 2, 1945	8.5	45.3	55.2	1.76	23.93	47.1	57.4	24.88
1946	1051	396	Mar. 8, 1946	6.7	42.7	52.1	1.66	22.62	39.3	48.8	21.15
1947	1081	213	Mar. 15, 1947	9.4	35.1	44.3	1.42	19.20	35.8	44.2	19.17
1948	1111	593	Mar. 22, 1948	8.9	50.7	59.7	1.99	25.54	51.7	60.1	23.13
1949	1141	162	Jan. 7, 1949	5.2	30.5	39.5	1.26	17.13	26.4	34.6	15.02
1950	1171	195	Mar. 24, 1950	2.6	26.4	34.1	1.09	14.79	-	-	-

## 183. 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 in North Grafton, Worcester County, and 0.3 mile upstream from Bummet Brook.

Drainage area.--25.5 sq mi.

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.--11 years (1939-50), 34.4 cfs.

Extremes.--1939-50: Maximum discharge, 249 cfs Apr. 26, 1950 (gage height, 2.93 ft); maximum gage height, 2.96 ft June 18, 1943; minimum daily discharge, 0.3 cfs Oct. 14-17, 1942.

Remarks.--Some regulation by Lake Quinsigamond and ponds above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	9.61	20.7	19.4	25.6	28.6	60.5	132	67.3	56.4	31.6	16.8	9.84	39.7
1941	11.4	27.1	33.3	34.5	46.2	43.0	30.7	21.6	19.5	12.6	4.73	2.01	23.7
1942	1.74	1.80	07	9.85	57.4	104	53.7	28.0	23.8	24.7	21.3	7.08	25.7
1943	1.22	10.6	67.5	49.5	47.4	91.9	59.5	64.8	45.2	14.9	12.3	4.97	39.9
1944	11.2	34.2	26.8	16.3	26.0	50.1	56.8	43.3	24.6	20.3	5.82	10.5	27.1
1945	9.46	14.8	36.8	44.5	32.1	96.4	57.4	66.5	70.2	43.4	20.5	11.0	43.7
1946	10.0	21.1	52.5	75.8	59.3	87.5	37.8	55.9	63.6	18.4	25.3	14.7	43.5
1947	22.0	13.5	17.5	31.4	49.8	67.7	65.0	68.3	45.1	19.7	17.5	14.1	35.9
1948	4.33	21.0	18.2	17.3	54.3	112	49.8	62.3	101	58.5	25.4	7.21	44.1
1949	10.9	22.6	33.7	47.9	56.2	61.1	59.8	42.2	18.0	5.23	2.31	4.29	30.3
1950	5.63	6.28	11.2	15.4	32.8	58.4	76.8	46.7	20.8	8.59	9.32	10.3	25.0

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	0.43	0.91	0.88	1.18	1.21	2.73	5.76	3.04	2.47	1.43	0.76	0.43	21.21
1941	.51	1.18	1.51	1.56	1.89	1.95	1.34	.98	.85	.57	.21	.09	12.64
1942	.08	.08	.14	.45	1.20	4.68	2.35	1.27	1.04	1.12	.96	.31	13.68
1943	.06	.46	3.05	2.24	2.34	4.15	2.56	2.93	1.98	.67	.56	.22	21.22
1944	.51	1.50	1.21	.74	1.10	2.26	2.49	1.96	1.07	.92	.26	.46	14.48
1945	.43	.65	1.66	2.01	1.51	4.36	2.51	3.91	3.07	1.56	.93	.48	23.28
1946	.45	.92	2.37	3.43	2.42	3.95	1.65	2.53	2.78	.83	1.14	.64	23.11
1947	1.00	.59	.79	1.42	2.03	3.06	2.84	3.09	1.97	.89	.79	.62	19.09
1948	.20	.92	.82	.78	2.30	5.08	2.18	2.81	4.42	2.64	1.06	.32	23.53
1949	.49	.99	1.52	2.17	2.38	2.76	2.62	1.91	.79	.24	.10	.19	16.16
1950	.16	.27	.51	.69	1.34	2.64	3.37	2.11	.91	.39	.45	.45	13.29

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean
		Discharge	Date					
1940	891	167	Apr. 2, 1940		1.6	39.7	1.56	21.21
1941	921	66	Feb. 9, 1941		.6	23.7	.929	12.64
1942	951	199	Mar. 19, 1942		.7	25.7	1.01	13.68
1943	971	212	June 18, 1943		.3	39.9	1.56	21.22
1944	1001	158	Apr. 25, 1944		2.7	27.1	1.06	14.48
1945	1031	152	Mar. 7, 1945		4.9	43.7	1.71	23.28
1946	1051	152	Mar. 11, 1946		7.3	43.5	1.71	23.11
1947	1081	104	Aug. 4, 1947		5.6	35.9	1.41	19.09
1948	1111	233	Mar. 22, 1948		2.3	44.1	1.73	23.53
1949	1141	86	Feb. 23, 1949		.5	30.3	1.19	16.16
1950	1171	249	Apr. 26, 1950		1.8	25.0	.980	13.29

## 184. Blackstone River at Northbridge, Mass.

Location--Lat 42°09'13", long. 71°39'09", on left bank 800 ft downstream from Paul Whittin Co. dam at Northbridge, Worcester County, and 3 miles downstream from Quinsigamond River.

Drainage area--139 sq mi.

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

Average discharge--11 years (1939-50), 192 cfs (adjusted for diversion).

Extremes--1939-50: Maximum discharge, 1,840 cfs (revised) Jan. 15, 1940 (gage height, 8.13 ft); minimum daily discharge, 2 cfs Aug. 29, 1941, Sept. 5, 1942.  
Maximum discharge known, 7,510 cfs Mar. 19, 1936 (gage height, 13.7 ft, from flood-marks), by computation of flow over dam 800 ft above station.

Remarks--Flow regulated by mills above station. Runoff adjusted for diversion from Nashua River Basin to Blackstone River Basin for municipal supply of city of Worcester.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	#85.8	#168	#132	175	159	428	920	370	316	170	95.8	97.0	#259
1941	82.2	187	216	178	280	250	211	123	119	93.8	69.3	61.3	155
1942	53.5	67.7	86.9	133	206	615	261	152	127	117	103	84.2	167
1943	95.1	165	342	242	351	502	295	430	209	114	91.8	56.8	241
1944	90.9	175	119	93.8	153	292	391	190	174	99.8	87.0	110	184
1945	78.9	125	214	268	223	554	288	492	358	167	150	104	252
1946	92.1	141	336	422	332	504	283	306	320	119	146	108	254
1947	134	97.6	128	211	270	389	359	321	202	126	125	131	207
1948	81.8	154	130	117	261	654	373	380	503	312	147	102	268
1949	115	211	183	300	354	329	332	217	122	62.0	75.9	82.6	197
1950	56.4	70.1	92.9	156	200	403	398	248	146	72.6	95.4	89.1	169

\* Not previously published; estimated on basis of weather records and records for nearby station.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	#0.50	#1.10	#0.95	1.32	1.13	3.51	7.36	2.99	2.46	1.32	0.62	0.54	#23.80
1941	.49	1.39	1.62	1.40	2.01	1.90	1.67	.87	.73	.52	.31	.24	13.15
1942	.29	.39	.55	.91	1.40	4.93	1.96	1.06	.81	.78	.68	.53	14.29
1943	.53	1.16	2.81	1.89	2.46	4.11	2.24	3.53	1.57	.76	.52	.37	21.62
1944	.60	1.15	.81	.55	.96	2.22	3.06	1.42	1.23	.59	.43	.68	13.70
1945	.40	.72	1.58	2.16	1.56	4.60	2.17	3.97	2.80	1.22	1.14	.67	22.99
1946	.54	.94	2.74	3.41	2.40	4.09	1.65	2.41	2.47	.77	1.03	.61	23.06
1947	.95	.58	.86	1.57	1.98	3.13	2.82	2.55	1.50	.77	.76	.79	18.26
1948	.38	1.05	.84	.75	1.91	5.30	2.88	3.05	3.97	2.46	1.09	.49	24.17
1949	.69	1.47	1.36	2.43	2.52	2.61	2.53	1.62	.80	.23	.26	.39	16.93
1950	.23	.46	.56	1.11	1.42	3.21	3.14	1.95	1.05	.41	.58	.51	14.63

\* Not previously published; estimated on basis of weather records and records for nearby station.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1940	891	*1,840	Jan. 15, 1940	-	#259	#243	*1.75	#23.80	267	253	24.75
1941	921	1,560	Feb. 8, 1941	2	155	135	.971	13.15	132	111	10.88
1942	951	1,800	Mar. 9, 1942	2	167	146	1.05	14.29	200	178	17.43
1943	971	1,600	Dec. 2, 1942	9	241	221	1.59	21.62	222	203	19.81
1944	1001	1,400	Sept. 15, 1944	9.5	164	140	1.01	15.70	167	141	13.84
1945	1031	1,440	Jan. 2, 1945	10	252	235	1.69	22.99	265	251	24.51
1946	1051	1,210	Feb. 14, 1946	12	254	236	1.70	23.06	236	217	21.23
1947	1081	1,460	Mar. 3, 1947	43	207	187	1.35	18.26	208	186	18.14
1948	1111	1,620	Mar. 17, 1948	13	268	247	1.76	24.17	260	260	25.44
1949	1141	768	Feb. 23, 1949	5.9	197	173	1.24	16.93	173	150	14.64
1950	1171	1,280	Aug. 20, 1950	8.7	169	149	1.07	14.63	-	-	-

\* Revised.

\* Not previously published.

## 185. Mumford River at East Douglas, Mass.

Location--Lat 42°04'24", long. 71°42'58", on right bank 100 ft upstream from Manchaug Road Bridge in East Douglas, Worcester County, and 0.1 mile downstream from Southwick Brook.

Drainage area--27.8 sq mi.

Gage--Water-stage recorder. Datum of gage is 367.01 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge--11 years (1939-50), 43.8 cfs.

Extremes--1939-50: Maximum discharge, 420 cfs Mar. 22, 1948 (gage height, 5.10 ft); minimum, 2.2 cfs Feb. 1, 2, Aug. 28, 1944; minimum daily, 3.0 cfs Aug. 12, 1942.

Remarks--Runoff in inches may not represent natural flow because of regulation by mills and by Manchaug, Stevens, and Willis Ponds.

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Monthly and yearly mean discharge, in cubic feet per second, of Mumford River at East Douglas, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	39.4	40.5	43.9	49.2	43.8	55.7	110	71.6	61.1	36.4	32.8	31.6	51.0
1941	30.5	38.1	38.5	36.9	50.6	41.6	41.5	31.5	21.9	14.6	15.8	14.4	31.2
1942	21.6	18.6	22.4	36.4	52.9	93.6	60.5	44.3	40.1	27.6	11.6	24.3	37.7
1943	26.9	38.1	62.8	47.1	63.5	96.5	62.1	99.1	43.8	26.7	26.3	26.8	51.6
1944	32.2	40.8	30.0	9.27	15.3	33.0	58.0	41.5	37.6	26.4	19.7	34.8	31.5
1945	29.2	44.5	75.2	85.7	84.0	106	51.6	93.0	62.6	32.9	27.6	24.1	59.5
1946	27.6	33.5	59.9	84.1	74.6	111	48.9	54.1	61.6	23.2	31.0	31.1	55.0
1947	34.0	25.9	29.7	51.8	62.7	69.8	69.2	86.4	45.8	25.0	25.7	23.2	43.9
1948	18.8	24.3	22.4	41.1	49.4	139	71.2	83.5	78.9	44.9	31.3	20.3	52.2
1949	21.9	22.8	25.7	46.4	58.6	66.3	44.9	46.4	24.1	17.4	19.3	21.1	34.5
1950	17.0	15.3	16.6	26.8	29.3	65.3	88.1	57.5	31.4	16.4	20.2	22.7	33.9

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	1.63	1.63	1.82	2.04	1.70	2.31	4.40	2.97	2.45	1.51	1.36	1.27	24.98
1941	1.27	1.53	1.59	1.53	1.90	1.73	1.67	1.30	.88	.60	.65	.58	15.23
1942	.90	.75	.93	1.51	1.98	3.68	2.43	1.84	1.61	1.15	.48	.98	18.44
1943	1.12	1.53	2.60	1.95	2.39	4.00	2.49	4.11	1.76	1.11	1.09	1.07	25.21
1944	1.34	1.64	1.24	.38	.59	1.37	3.33	1.72	1.51	1.09	.82	1.40	15.43
1945	1.21	1.79	3.12	3.47	3.15	4.40	2.07	3.86	2.51	1.36	1.14	.97	29.05
1946	1.14	1.34	2.48	3.49	2.80	4.62	1.96	2.24	3.27	.96	1.29	1.25	26.84
1947	1.41	1.04	1.23	2.15	2.35	2.85	2.78	2.75	1.84	1.04	1.07	.93	21.44
1948	.78	.98	.93	1.70	1.92	5.78	2.86	3.46	5.17	1.86	1.30	.82	25.56
1949	.91	.92	1.07	1.93	2.19	2.76	1.80	1.93	.97	.72	.80	.85	16.85
1950	.71	.61	.69	1.11	1.10	2.71	3.54	2.39	1.26	.68	.84	.91	16.55

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	891	-	-	-	-	-	-	-	-
1940	891	312	Apr. 25, 1940	9	51.0	1.83	24.98	49.6	24.29
1941	921	258	Feb. 8, 1941	4.0	31.2	1.12	15.23	27.5	13.42
1942	951	297	Mar. 9, 1942	3.0	37.7	1.36	18.44	43.2	21.11
1943	971	335	Dec. 2, 1942	4.5	51.6	1.86	25.21	49.5	24.18
1944	1001	362	Sept. 15, 1944	3.1	31.5	1.13	15.43	35.4	17.33
1945	1031	225	Jan. 1, 1945	4.8	59.5	2.14	29.05	57.1	27.89
1946	1051	305	Mar. 8, 1946	4.8	55.0	1.98	26.84	52.3	25.56
1947	1081	197	Mar. 3, 1947	8.8	43.9	1.58	21.44	41.9	20.45
1948	1111	420	Mar. 22, 1948	7.3	52.2	1.88	25.56	52.6	25.77
1949	1141	114	May 23, 1949	8.8	34.5	1.24	16.85	32.6	15.96
1950	1171	183	Mar. 23, 1950	6.7	33.9	1.22	16.55	-	-

186. 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 mill dam in Forestdale, Providence County, 1 mile east of Slatersville, and 1.6 miles upstream from mouth.

Drainage area.--93.3 sq mi.

Supplemental records available.--September to December 1909, January 1912 to July 1913, gage heights only. Published as "at Branch Village".

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.--10 years (1940-50), 141 cfs.

Extremes.--1940-50: Maximum discharge, 2,120 cfs Dec. 2, 1942 (gage height, 7.69 ft); 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.--Flow regulated by mills and reservoirs above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	124	266	588	213	188	97.8	42.6	39.4	-
1941	44.9	100	131	139	228	169	164	123	96.8	55.8	47.6	29.6	110
1942	30.5	54.1	61.4	105	169	491	161	101	79.4	72.5	48.9	31.4	117
1943	48.7	93.0	326	208	267	364	192	290	97.6	48.7	38.0	27.2	167
1944	47.2	86.8	47.9	46.3	75.3	178	298	120	89.8	29.7	27.1	117	96.8
1945	62.9	168	302	220	192	429	183	291	140	91.9	35.2	32.0	179
1946	36.7	118	354	324	252	295	143	206	209	45.4	111	71.4	180
1947	99.0	65.4	101	167	186	261	235	197	153	84.9	37.5	87.2	159
1948	55.9	130	111	103	238	547	283	290	299	117	60.3	39.0	189
1949	43.1	109	111	209	249	219	229	148	58.4	21.7	26.9	42.5	121
1950	27.7	45.2	78.2	122	186	305	235	158	100	26.4	44.2	26.7	112

Monthly and yearly runoff, in inches, of Branch River at Forestdale, R. I.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	1.43	3.29	7.03	2.63	2.25	1.21	0.53	0.47	-
1941	0.56	1.20	1.62	1.72	2.55	2.09	1.96	1.52	1.16	.69	.59	.35	16.01
1942	.38	.65	.76	1.29	1.88	6.07	1.92	1.25	.95	.90	.60	.58	17.03
1943	.60	1.11	4.03	2.57	2.98	4.49	2.30	3.59	1.17	.60	.47	.33	24.24
1944	.58	1.04	.59	.57	.91	2.29	3.57	1.49	1.07	.37	.33	1.40	14.12
1945	.78	2.00	3.74	2.72	2.14	5.30	2.19	3.60	1.68	1.14	.41	.38	26.08
1946	.45	1.41	4.37	4.01	2.81	3.81	1.71	2.55	2.50	.56	1.37	.85	26.20
1947	1.22	.78	1.25	2.06	2.08	3.22	2.81	2.43	1.82	1.05	.46	1.04	20.22
1948	.69	1.56	1.37	1.28	2.75	6.76	3.38	3.58	3.57	1.45	.75	.47	27.61
1949	.53	1.30	1.37	2.59	2.78	2.71	2.74	1.82	.70	.27	.33	.51	17.65
1950	.34	.54	.97	1.51	2.08	3.77	2.81	1.96	1.20	.33	.55	.32	16.38

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	891	1,530	Apr. 1, 1940	-	-	-	-	-	-
1941	921	1,480	Feb. 8, 1941	11	110	1.18	16.01	99.0	14.42
1942	951	1,970	Mar. 10, 1942	14	117	1.25	17.03	144	20.98
1943	971	2,120	Dec. 2, 1942	18	167	1.79	24.24	142	20.71
1944	1001	1,300	Apr. 25, 1944	13	96.8	1.04	14.12	126	18.43
1945	1031	1,160	Jan. 2, 1945	17	179	1.92	26.08	177	25.79
1946	1051	1,080	Dec. 7, 1945	11	180	1.93	26.20	160	23.22
1947	1081	782	Mar. 3, 1947	17	139	1.49	20.22	142	20.59
1948	1111	1,800	Mar. 17, 1948	6.5	189	2.03	27.61	186	27.19
1949	1141	532	Feb. 21, 1949	5.2	121	1.30	17.65	112	16.30
1950	1171	966	Mar. 24, 1950	9.9	112	1.20	16.38	-	-

187. Blackstone River at Woonsocket, R. I.

Location.--Lat 42°00'22", long. 71°30'13", on right bank in Woonsocket, Providence County, 50 ft downstream from Peters River.

Drainage area.--416 sq mi.

Gage.--Water-stage recorder. Datum of gage is 107.42 ft above mean sea level, datum of 1929.

Average discharge.--21 years (1929-50), 666 cfs (adjusted for diversion).

Extremes.--1929-50: 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.--Flow regulated by power plants and reservoirs above station. 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 is included, excepting an average of 4 cfs flowing in Hamlet Trench prior to November 1936 which was not included in total flow.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	1,480	1,750	1,200	397	234	190	195	-
1930	207	224	296	529	624	792	625	303	181	156	129	130	346
1931	136	224	218	298	494	1,760	1,190	824	1,510	405	318	240	634
1932	128	127	193	580	555	740	1,180	436	250	147	182	533	419
1933	838	1,720	674	717	868	1,830	2,520	598	394	191	192	625	927
1934	455	353	499	1,114	426	1,539	1,924	1,040	501	240	224	403	728
1935	659	557	754	1,532	879	1,492	1,479	711	831	419	244	296	822
1936	165	245	364	946	499	4,063	1,622	700	280	171	201	367	806
1937	423	414	1,824	1,608	1,048	991	1,096	845	472	276	283	368	904
1938	328	1,113	1,560	1,405	1,176	952	830	681	1,036	2,453	933	1,427	1,141
1939	885	747	1,289	765	1,089	1,643	1,851	593	363	193	229	252	823
1940	190	433	413	487	458	1,190	2,518	978	817	412	197	209	690
1941	211	530	619	608	975	792	714	487	376	243	167	143	485
1942	137	200	269	439	707	1,955	802	477	379	356	250	163	511
1943	226	438	1,175	842	1,095	1,547	890	1,249	484	246	192	121	708
1944	225	456	280	236	364	816	1,223	574	426	213	154	405	446
1945	269	511	1,039	910	795	1,882	655	1,364	939	482	291	232	798
1946	235	555	1,380	1,395	1,095	1,479	707	937	1,032	253	486	308	821
1947	401	268	404	688	799	1,132	1,026	940	630	321	247	307	595
1948	174	496	394	408	873	2,198	1,242	1,135	1,322	675	305	166	781
1949	208	495	450	843	1,077	1,003	988	631	263	129	142	199	532
1950	142	195	284	478	691	1,276	1,159	756	439	211	229	192	500

Monthly and yearly runoff, in inches (adjusted), of Blackstone River at Woonsocket, R. I.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	-	-	-	-	-	4.10	4.63	3.33	1.04	0.60	0.50	0.46	-
1930	0.51	0.52	0.77	1.44	1.54	2.16	1.67	.79	.38	.32	.29	.23	10.62
1931	.32	.58	.53	.80	1.21	4.88	3.19	2.28	4.15	1.10	.86	.60	20.50
1932	2.28	.34	.47	1.80	1.43	2.03	3.15	1.20	.63	.35	.46	1.40	13.34
1933	2.29	4.61	1.87	1.97	2.17	5.06	6.76	1.64	1.01	.50	.45	1.66	29.99
1934	1.23	.90	1.38	3.06	1.05	4.24	5.16	2.86	1.32	.61	.59	1.06	23.45
1935	1.80	1.47	2.06	4.24	2.19	4.13	4.02	1.95	2.20	1.12	.63	.74	26.55
1936	.41	.60	.97	2.62	1.27	11.24	4.34	1.90	.73	.40	.49	.93	25.90
1937	1.11	1.05	5.05	4.46	2.62	2.72	2.93	2.34	1.23	.74	.73	.96	25.94
1938	.85	2.99	3.77	3.90	2.95	2.62	2.21	1.87	2.73	6.79	2.56	3.82	37.06
1939	2.46	2.00	3.57	2.12	2.69	4.55	4.96	1.63	.94	.46	.56	.60	26.54
1940	.46	1.08	1.10	1.30	1.15	3.28	6.75	2.68	2.17	1.11	.49	.48	22.05
1941	.52	1.38	1.66	1.66	2.41	2.14	1.91	1.30	.93	.59	.38	.30	15.18
1942	.33	.48	.69	1.15	1.72	5.36	2.11	1.25	.95	.92	.83	.39	15.98
1943	.54	1.12	3.20	2.29	2.69	4.27	2.34	3.45	1.26	.62	.45	.23	22.46
1944	.57	1.08	.72	.58	.92	2.19	3.25	1.54	1.09	.51	.33	1.02	13.80
1945	.66	1.28	2.82	2.50	1.95	5.22	2.24	3.74	2.49	1.28	.77	.57	25.52
1946	.57	1.42	3.81	3.83	2.71	4.07	1.85	2.55	2.73	.63	1.28	.74	26.19
1947	1.06	.65	1.05	1.84	1.99	3.11	2.73	2.57	1.62	.80	.59	.74	18.75
1948	.38	1.27	1.01	1.06	2.22	6.05	3.29	3.11	3.52	1.93	.80	.34	24.88
1949	.49	1.25	1.20	2.32	2.65	2.74	2.61	1.69	.65	.26	.27	.44	16.57
1950	.31	.49	.72	1.26	1.70	3.49	3.04	2.00	1.14	.52	.56	.44	15.67

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30									Calendar year		
		Observed				Adjusted					Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches			Mean	Mean	Runoff in inches
		Discharge	Date										
1929	681	4,570	Mar. 7, 1929	-	-	-	-	-	-	-	-	-	-
1930	696	1,970	Mar. 9, 1930	42	346	326	0.784	10.62		334	315	10.25	
1931	(a)	8,220	June 11, 1931	36	634	625	1.51	20.50		624	615	20.18	
1932	726	4,530	Sept. 17, 1932	47	419	408	.981	13.34		650	643	21.02	
1933	741	5,780	Nov. 11, 1932	30	927	919	2.21	29.99		767	758	24.73	
1934	756	6,560	Mar. 6, 1934	21	728	719	1.73	23.45		784	774	25.27	
1935	781	7,500	Jan. 10 or 11	84	822	813	1.95	26.55		722	711	23.20	
1936	801	15,000	Mar. 19, 1936	50	806	792	1.90	25.90		965	951	31.13	
1937	821	6,340	Dec. 21, 1926	51	804	795	1.91	25.94		814	807	26.34	
1938	851, 871	15,100	July 24, 1938	36	1,141	1,135	2.73	37.06		1,152	1,147	37.48	
1939	871	3,840	Feb. 16, 1939	52	823	813	1.95	26.54		664	648	21.15	
1940	891	5,660	Apr. 1, 1940	48	690	674	1.82	22.05		717	702	22.97	
1941	921	4,480	Feb. 8, 1941	42	485	465	1.12	15.18		422	402	15.12	
1942	951	5,330	Mar. 10, 1942	48	511	490	1.18	15.98		615	593	19.34	
1943	971	5,310	Dec. 3, 1942	45	708	688	1.85	22.46		632	612	19.97	
1944	1001	3,830	Apr. 25, 1944	45	446	422	1.01	13.80		520	494	16.19	
1945	1031	3,410	Jan. 2, 1945	92	799	782	1.88	25.52		829	815	26.56	
1946	1051	3,830	Dec. 8, 1945	105	821	803	1.93	26.19		729	710	23.15	
1947	1081	3,150	Mar. 3, 1947	136	595	574	1.38	18.75		593	572	18.65	
1948	1111	5,810	Mar. 17, 1948	66	781	761	1.83	24.88		789	769	25.16	
1949	1141	2,030	Feb. 24, 1949	85	532	508	1.22	16.57		487	464	15.15	
1950	1171	3,620	Mar. 24, 1950	72	500	480	1.15	15.67		-	-	-	

a In W.S.P. 711, 781, 1051.

## 188. Blackstone River at Albion, R. I.

Location.--Lat 41°57'15", long. 71°27'15", on right bank 40 ft above dam of Valley Falls Co. in Albion, Providence County, 2½ miles below Aldrich Brook, and about 5 miles below the Massachusetts-Rhode Island State line.

Drainage area.--433 sq mi.

Gage.--Water-stage recorder. Datum of gage is 85 ft (from topographic map). Prior to Aug. 3, 1915, staff gage 15 ft downstream at same datum.

Extremes.--1914-16: Maximum discharge, 6,970 cfs Feb. 26, 1916 (gage height, 4.0 ft), from rating curve extended above 2,500 cfs.

Remarks.--Flow regulated by power plants above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1915	365	296	253	1,090	1,570	771	568	340	296	465	637	168	562
1916	149	149	535	679	1,090	1,230	1,800	1,010	1,120	612	327	233	743

Monthly and yearly runoff, in inches, of Blackstone River at Albion, R. I.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1915	0.97	0.76	0.67	2.90	3.78	2.05	1.46	0.90	0.76	1.23	1.70	0.43	17.61
1916	.39	.38	1.42	1.81	2.72	3.27	4.64	2.69	2.89	1.63	.87	.60	23.31

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1915	401	\$5,760	Jan. 19, 1915*	-	562	1.30	17.61	555	17.40	-
1916	431	\$6,970	Feb. 26, 1916*	-	743	1.72	23.31	-	-	-

\* Not previously published.

## 189. Woonasquatucket River at Centerdale, R. I.

Location.--Lat 41°51'38", long. 71°29'16", on right bank at Centerdale, Providence County, 75 ft downstream from bridge on U. S. Highway 44 and 6½ miles upstream from mouth.

Drainage area.--38.3 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 95 ft (from topographic map).

Average discharge.--9 years (1941-50), 58.3 cfs.

Extremes.--1941-50: Maximum discharge, 543 cfs Mar. 17, 1948 (gage height, 4.88 ft); minimum daily, 3.4 cfs Oct. 13, 19, 1941.

Flood of March 1936 reached a discharge of 1,000 cfs, by computation of flow over dam three-quarters of a mile below station.

Remarks.--Flow regulated by mills and reservoirs above station. Discharge includes leakage through bypass canal.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	-	-	-	-	-	-	-	-	-	-	29.9	23.1	-
1942	20.4	22.1	23.3	38.2	67.8	161	78.8	48.8	44.6	49.7	34.8	27.6	51.4
1943	29.2	38.1	72.9	103	102	110	82.9	98.0	47.1	30.5	29.4	23.3	63.8
1944	20.9	26.8	28.7	23.0	31.2	54.1	71.7	56.2	39.9	30.9	25.8	24.1	36.1
1945	30.0	50.3	83.8	101	91.7	177	74.8	107	55.0	40.1	31.0	30.6	72.8
1946	27.9	33.5	96.4	140	106	124	57.2	61.5	79.8	29.3	46.1	36.6	69.7
1947	33.6	29.2	32.0	46.3	49.6	89.7	99.5	98.2	59.6	36.3	31.5	34.2	53.3
1948	26.8	50.8	45.8	52.8	64.1	218	134	128	137	52.5	34.2	29.6	81.2
1949	29.4	50.1	52.5	71.7	93.5	94.6	102	57.0	38.0	25.2	25.6	24.5	55.1
1950	17.8	21.7	23.5	29.3	50.0	83.4	82.9	64.9	44.9	25.6	26.4	28.0	41.4

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	-	-	-	-	-	-	-	-	-	-	0.90	0.67	-
1942	0.61	0.64	0.70	1.15	1.84	4.83	2.30	1.47	1.30	1.50	1.05	.81	18.20
1943	.88	1.11	2.19	3.11	2.78	3.32	2.41	2.95	1.37	.92	.88	.68	22.60
1944	.63	.78	.86	.69	.88	1.63	2.09	1.69	1.16	.93	.78	.70	12.82
1945	.90	1.47	2.52	3.05	2.49	5.33	2.18	3.22	1.60	1.21	.93	.89	25.79
1946	.84	.97	2.90	4.20	2.89	3.73	1.67	1.85	2.32	.88	1.39	1.07	24.71
1947	1.01	.85	.96	1.39	1.35	2.70	2.90	2.95	1.74	1.09	.95	1.00	18.89
1948	.81	1.48	1.38	1.59	1.81	6.58	3.90	3.87	3.99	1.58	1.03	.86	26.85
1949	.89	1.46	1.58	2.16	2.54	2.85	2.98	1.72	1.11	.76	.77	.71	19.53
1950	.54	.63	.71	.68	1.36	2.51	2.42	1.95	1.31	.77	.80	.82	14.70

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1941	921	-	-	-	-	-	-	-	-	-
1942	951	414	Mar. 22, 1942	-	3.4	51.4	1.34	18.20	57.6	20.43
1943	971	370	Dec. 30, 1942	-	6.8	63.8	1.67	22.60	58.4	20.69
1944	1001	268	Sept. 14, 1944	-	6.1	36.1	.943	12.82	43.5	15.44
1945	1031	409	Nov. 30, 1944	-	12	72.8	1.90	25.79	72.3	25.61
1946	1051	258	Jan. 10, 1946	-	7.0	69.7	1.82	24.71	64.4	22.82
1947	1081	322	Mar. 3, 1947	-	6.3	53.3	1.59	18.89	55.7	19.74
1948	1111	543	Mar. 17, 1948	-	81.2	2.12	28.85	81.9	29.11	-
1949	1141	208	Apr. 6, 1949	-	5.9	55.1	1.44	19.53	49.3	17.48
1950	1171	349	Mar. 23, 1950	-	4.0	41.4	1.08	14.70	-	-



## 190. Pawtuxet River at Fiskeville, R. I.

Location.--Lat 41°45'10", long. 71°35'05", at outlet of Scituate Reservoir 2 miles northwest of Hope, Providence County, and about 3 miles upstream from Fiskeville.

Drainage area.--92.8 sq mi. Prior to October 1925, 101.8 sq mi.

Gage.--Venturi meter. Prior to October 1925, water-stage recorder and wooden control at site about 3 miles downstream at datum of 152.70 ft above mean sea level (levels by Providence Water Supply Board).

Average discharge.--35 years (1915-50), 166 cfs (adjusted for storage and diversions, and to present drainage area).

Extremes.--1915-50: Maximum discharge, 3,330 cfs Apr. 7, 1924 (gage height, 3.23 ft), caused by failure of Jackson Dam 0.4 mile upstream; minimum daily, 1.2 cfs Aug. 29, 1920.

Remarks.--Runoff adjusted for change in contents in several small reservoirs having a combined capacity of 441 million cu ft (385 million cu ft prior to April 1919) and Scituate Reservoir since October 1925 having a usable capacity of 4.9 billion cu ft, and, prior to October 1925, for flow diverted from 1.3 sq mi immediately upstream from Fiskeville by the Pawtuxet Valley Water Company. Practically all flow diverted for city of Providence water supply since completion of Scituate Reservoir in November 1925.

Cooperation.--Records furnished by City of Providence Water Supply Board.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	-	-	-	222	325	349	420	315	313	238	142	77.6	-
1917	76.6	56.7	78.8	154	109	329	280	229	199	95.4	91.3	86.8	149
1918	136	156	142	157	332	258	293	198	121	84.4	95.6	130	174
1919	118	115	171	316	206	426	372	333	142	123	114	290	227
1920	156	193	227	137	152	775	443	330	380	141	82.0	39.1	255
1921	55.1	152	255	242	178	333	323	253	116	204	111	77.4	192
1922	53.8	112	218	132	161	362	354	307	205	306	312	416	245
1923	150	125	129	338	258	518	352	258	115	82.0	56.3	57.6	203
1924	106	146	368	391	197	278	507	297	116	55.9	62.5	82.0	217
1925	56.5	38.2	54.9	63.6	335	286	223	129	93.2	64.3	55.9	38.0	118

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	40.75	1.24	3.03	2.56	3.71	3.99	4.65	3.67	3.43	2.75	1.10	0.42	31.30
1917	.50	.52	.95	1.93	1.31	4.34	3.20	2.77	2.18	.80	.70	.63	19.83
1918	1.79	1.58	1.37	1.82	4.04	3.16	3.39	2.23	1.24	.47	.82	1.80	23.71
1919	1.02	1.34	2.37	3.81	2.28	5.00	4.42	3.85	1.26	1.35	.91	3.33	30.92
1920	1.44	2.25	2.72	1.16	1.68	9.61	5.11	3.73	4.15	1.37	.80	.34	34.38
1921	.35	1.73	3.22	2.79	1.69	4.19	3.68	2.85	.95	2.56	.93	.31	25.25
1922	.24	1.65	2.68	1.13	1.80	4.81	3.92	3.50	2.39	3.50	3.59	4.39	33.60
1923	1.66	1.26	1.37	4.16	2.46	6.10	4.06	2.68	1.15	.64	.40	.25	26.19
1924	1.27	2.01	4.57	4.52	1.88	3.43	5.70	3.38	1.05	.20	.56	.68	29.25
1925	.49	.48	.97	.91	3.65	3.41	2.46	1.46	.52	.58	.39	.32	15.84
1926	.61	1.48	3.25	2.23	3.11	4.38	3.00	1.70	.62	.40	.42	.17	21.37
1927	.76	2.15	2.09	3.34	2.64	3.05	1.71	2.03	1.44	.32	1.59	.64	21.76
1928	1.95	6.73	4.70	2.62	3.76	2.86	3.18	2.06	1.15	1.08	1.17	.80	32.05
1929	1.21	1.16	1.99	4.02	3.65	5.56	6.09	3.56	.48	.06	.07	-.09	27.76
1930	.07	.53	1.18	1.96	2.38	2.74	1.84	.88	.42	.09	.04	-.11	12.02
1931	.12	.63	.83	1.56	2.11	5.95	3.21	3.10	2.97	.69	.85	.10	22.12
1932	.07	.15	.91	3.35	2.16	4.10	3.08	1.35	.39	.07	.35	3.27	19.25
1933	3.48	6.29	2.26	2.24	2.70	6.28	6.88	1.93	1.57	.17	.25	1.52	35.57
1934	1.95	.82	1.82	3.78	1.18	5.48	6.08	2.88	1.47	.08	.14	1.40	26.08
1935	1.33	1.91	3.21	4.78	2.83	4.22	4.05	1.71	1.78	.62	-.14	.86	26.86
1936	-.13	1.09	.75	3.94	1.93	11.51	4.45	1.59	.44	.03	-.02	.82	26.40
1937	.46	.43	6.06	4.59	2.77	3.34	3.79	2.52	.75	.02	.60	.57	25.90
1938	.79	4.17	3.25	4.15	2.99	2.99	2.29	1.84	2.85	6.93	1.32	1.66	35.23
1939	1.22	1.90	3.62	2.11	4.12	5.24	4.90	1.08	.31	-.24	.22	.09	24.57
1940	.63	1.35	1.54	2.03	1.51	4.86	6.89	3.17	1.65	.84	-.14	-.04	24.29
1941	-.07	1.63	1.65	1.53	2.88	2.42	1.65	1.16	1.33	.54	.10	-.41	14.41
1942	-.15	.52	.86	1.87	2.54	7.14	1.75	1.06	.59	.86	.26	-.17	17.13
1943	.45	1.86	4.56	2.45	3.46	4.40	2.68	3.01	.36	.02	-.16	-.22	22.87
1944	.60	.95	.42	.73	1.23	3.24	3.53	1.08	.43	-.26	-.31	1.73	13.37
1945	.50	3.16	3.55	2.91	2.58	5.61	2.15	3.10	1.26	.15	-.12	-.15	24.70
1946	.06	1.88	4.59	3.93	2.98	3.70	1.43	2.50	1.65	0	2.35	.56	25.63
1947	.49	.30	1.19	2.16	1.52	4.01	3.31	2.86	1.09	.53	.12	.31	17.89
1948	.23	2.94	1.39	1.55	3.15	7.16	3.76	5.25	3.12	.56	.15	-.21	29.05
1949	.35	2.24	2.00	3.57	3.22	2.92	3.20	1.78	-.02	-.28	.02	.09	19.11
1950	.05	.57	1.26	2.03	2.42	4.16	3.01	2.20	1.00	-.11	.22	-.02	16.79

† Corrected.

\* Not previously published; estimated by City of Providence Water Supply Board.

Note.--Runoff figures since October 1925 not previously published. Negative figures indicate that evaporation and seepage from reservoir exceeded inflow.

## PAWTUXET RIVER BASIN

Yearly discharge, in cubic feet per second, of Pawtuxet River at Fiskeville, R. I.

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1916	501	#2,300	Feb. 26, 1916*	-	-	#234	#2.30	#31.50	217	211	28.25
1917	501	#1,070	Mar. 28, 1917*	11	149	149	1.46	#19.83	168	169	22.60
1918	501	#2,200	Feb. 26, 1918*	8.5	174	178	1.75	23.71	172	178	23.70
1919	501	#1,850	Apr. 17, 1919*	19.6	227	232	2.28	30.92	242	244	32.60
1920	501	#2,300	Mar. 14, 1920*	1.2	255	257	2.52	34.38	246	249	33.27
1921	521	#1,120	Jan. 15, 1921*	2.0	192	189	1.86	25.25	186	197	24.52
1922	541	#2,840	Sept. 5, 1922*	8.2	245	252	2.47	35.60	247	250	33.32
1923	561	#1,840	Mar. 17, 1923*	2.7	203	196	1.93	26.19	222	223	29.75
1924	581	#3,330	Apr. 7, 1924*	2.7	217	219	2.15	29.25	178	175	23.54
1925	601	#1,410	Feb. 13, 1925*	2.7	118	117	1.15	15.64	-	a143	a19.04
1926	-	-	-	-	-	146	1.57	21.37	-	144	21.03
1927	-	-	-	-	-	148	1.60	21.76	-	206	30.14
1928	-	-	-	-	-	218	2.35	32.05	-	157	23.03
1929	-	-	-	-	-	180	2.05	27.76	-	172	25.18
1930	-	-	-	-	-	82.2	.886	12.02	-	80.8	11.82
1931	-	-	-	-	-	151	1.63	22.12	-	148	21.67
1932	-	-	-	-	-	131	1.41	19.25	-	206	30.15
1933	-	-	-	-	-	243	2.62	35.57	-	186	27.13
1934	-	-	-	-	-	178	1.92	26.08	-	198	28.94
1935	-	-	-	-	-	182	1.96	26.56	-	149	21.82
1936	-	-	-	-	-	180	1.94	26.40	-	215	31.64
1937	-	-	-	-	-	177	1.91	25.90	-	186	27.16
1938	-	-	-	-	-	241	2.60	35.23	-	231	33.76
1939	-	-	-	-	-	168	1.81	24.57	-	146	21.35
1940	-	-	-	-	-	165	1.78	24.29	-	163	23.98
1941	-	-	-	-	-	98.4	1.06	14.41	-	85.0	12.43
1942	-	-	-	-	-	117	1.26	17.13	-	156	22.77
1943	-	-	-	-	-	156	1.68	22.87	-	122	17.97
1944	-	-	-	-	-	91.1	.982	13.37	-	127	18.61
1945	-	-	-	-	-	169	1.82	24.70	-	164	24.02
1946	-	-	-	-	-	175	1.89	25.63	-	144	21.08
1947	-	-	-	-	-	122	1.32	17.89	-	140	20.47
1948	-	-	-	-	-	198	2.13	29.05	-	199	29.08
1949	-	-	-	-	-	131	1.41	19.11	-	112	16.40
1950	-	-	-	-	-	115	1.24	16.79	-	-	-

† Corrected.

\* Not previously published.

a Adjusted to 101.8 sq mi drainage area.

Note---Records since October 1925 not previously published.

## 191. South Branch Pawtuxet River at Washington, R. I.

Location---Lat 41°41'24", long. 71°33'59" on right bank in Washington, Kent County, 150

ft downstream from highway bridge and 0.9 mile upstream from outlet of Tiogue Lake.

Drainage area---63.8 sq mi.

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

Average discharge---10 years (1940-50), 113 cfs (adjusted for storage and diversion).

Extremes---1940-50: Maximum discharge, 959 cfs June 1, 1948, from rating curve extended

above 440 cfs by logarithmic plotting; maximum gage height, 2.80 ft Mar. 10, 1942;

minimum daily discharge, 2.8 cfs Aug. 27, 1944.

Flood of March 1936 reached a discharge of 1,810 cfs, by computation of flow over

dam just above gage.

Remarks---Flow regulated by Flat River Reservoir and other reservoirs. Runoff adjusted

for diversion above station from Carr Pond for supply of Coventry, Warwick, and West

Warwick, and adjusted for change in contents in Flat River Reservoir.

## Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	69.5	91.2	105	107	171	134	114	90.6	109	77.7	63.8	50.8	98.1
1942	28.5	40.7	49.6	63.2	110	278	155	83.9	81.5	80.1	71.7	64.7	92.2
1943	57.7	82.2	135	192	187	231	158	178	112	49.8	42.1	36.1	120
1944	36.6	64.7	63.5	54.6	62.9	106	181	122	85.4	54.2	42.1	50.2	76.6
1945	69.6	127	227	225	174	272	134	182	113	89.7	64.3	36.1	143
1946	36.9	49.7	229	249	186	182	117	112	146	48.5	122	96.5	131
1947	81.9	62.4	60.3	74.8	86.1	187	206	197	108	86.1	63.7	54.7	106
1948	46.1	72.8	110	129	126	328	282	294	262	98.2	78.3	46.2	156
1949	44.7	59.0	111	134	197	192	134	133	79.4	43.0	48.7	39.6	107
1950	31.1	37.0	43.5	52.3	124	177	180	134	122	66.7	50.8	42.4	88.1

## Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	0.98	2.23	1.93	2.03	2.77	2.66	2.05	2.02	1.73	1.06	0.74	0.43	20.63
1942	.51	.76	1.21	1.58	2.39	5.34	2.48	1.54	1.05	1.19	1.32	.70	20.07
1943	.89	1.74	3.33	3.09	3.39	4.04	2.78	3.28	1.42	.64	.52	.35	25.47
1944	.94	1.32	.82	1.07	1.33	2.85	3.38	2.04	1.20	.50	.30	1.84	17.57
1945	1.13	2.98	3.94	3.40	2.98	5.32	2.53	3.20	1.76	1.13	.65	.52	29.54
1946	.63	1.83	4.70	4.07	3.02	3.70	1.90	2.27	2.02	.79	2.81	1.02	28.07
1947	1.09	.88	1.27	1.89	1.66	3.80	3.67	3.50	1.80	1.20	.74	.57	22.07
1948	.73	2.60	1.55	1.74	3.11	6.40	4.75	5.61	4.37	1.49	.92	.52	33.79
1949	.88	1.74	1.78	3.07	3.18	3.34	3.87	2.46	.85	.58	.46	.43	22.64
1950	.52	.86	1.10	1.52	2.48	3.42	3.18	2.42	1.82	.73	.68	.65	19.38

Yearly discharge, in cubic feet per second, of South Branch Pawtuxet River at Washington, R. I.

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1941	921, 951	299	Feb. 10, 1941	6.0	98.1	97.0	1.52	20.63	85.8	84.4	17.97
1942	951	665	Mar. 10, 1942	7.2	92.2	94.3	1.48	20.07	104	111	23.55
1943	971	507	Jan. 1, 1943	4.5	120	120	1.88	25.47	112	106	22.59
1944	1001	499	Apr. 26, 1944	2.8	76.6	82.3	1.29	17.57	98.4	106	22.54
1945	1031	731	Dec. 1, 1944	7.6	143	139	2.18	29.54	134	135	28.65
1946	1051	494	Dec. 8, 1945	8.2	131	135	2.12	28.76	122	117	24.84
1947	1081	620	Apr. 7, 1947	10	106	104	1.63	22.07	108	111	23.71
1948	1111	959	June 1, 1948	8.1	156	158	2.48	33.79	155	156	33.31
1949	1141	353	Apr. 20, 1949	8.7	107	106	1.66	22.64	98.6	97.4	20.72
1950	1171	616	Mar. 24, 1950	4.3	88.1	91.1	1.43	19.38	-	-	-

## 192. Pawtuxet River at Cranston, R. I.

Location.--Lat 41°45'03", long. 71°26'44", on left bank in Cranston, Providence County, 0.7 mile upstream from Pocasset River.

Drainage area.--200 sq mi.

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

Average discharge.--10 years (1940-50), 342 cfs (adjusted for storage and diversion).

Extremes.--1939-50: Maximum discharge, 2,150 cfs Jan. 15, 1940, Feb. 8, 1941, from rating curve extended above 800 cfs; maximum gage height, 8.25 ft Jan. 15, 1940; minimum daily discharge, 22 cfs Sept. 4, 1944.

Remarks.--Flow regulated by power plants, and by Scituate, Flat River, and other reservoirs (combined usable capacity of about 5 1/3 billion cu ft). Runoff adjusted for flow diverted above station from Scituate Reservoir for municipal supply of Providence, North Providence, Cranston, Johnston, Smithfield, and Warwick, and for change in contents of Scituate and Flat River Reservoirs.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	309	259	453	958	480	504	236	160	192	-
1941	178	263	274	284	393	323	255	223	269	245	215	162	256
1942	117	153	169	204	328	611	383	204	174	192	184	156	239
1943	157	185	349	489	589	614	404	360	224	152	127	119	313
1944	136	165	164	163	177	263	341	248	180	133	122	225	193
1945	175	288	444	489	499	656	367	497	264	215	173	134	350
1946	131	195	511	716	556	572	309	308	413	134	301	213	363
1947	199	157	168	216	225	433	522	480	237	191	170	150	262
1948	135	238	357	385	811	754	803	722	287	172	132	417	417
1949	134	183	244	359	568	431	495	280	171	112	122	153	266
1950	118	135	142	162	256	364	347	271	242	139	126	116	201

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	2.48	1.78	4.72	6.88	3.26	2.46	1.30	0.44	0.51	-
1941	0.53	2.05	1.90	1.99	3.01	2.56	1.86	1.60	1.77	1.27	.87	.28	19.69
1942	.33	.83	1.18	1.90	2.81	6.56	2.10	1.36	.85	1.13	.91	.37	20.33
1943	.78	1.80	4.09	2.86	3.56	4.09	2.77	3.13	.92	.48	.27	.16	24.91
1944	.81	1.09	.70	.98	1.34	3.03	3.32	1.59	.85	.24	.18	2.08	16.21
1945	.91	3.02	3.85	3.41	3.04	5.48	2.39	3.17	1.68	.83	.46	.34	28.58
1946	.42	1.80	4.87	4.62	3.37	4.06	1.91	2.52	2.07	.45	2.66	.89	29.64
1947	1.00	.65	1.27	2.12	1.65	4.03	3.45	3.27	1.43	.97	.67	.57	21.06
1948	.58	2.75	1.55	1.89	3.31	6.77	4.28	5.33	4.00	1.23	.65	.32	32.48
1949	.64	1.88	1.92	3.39	3.17	3.10	3.57	2.13	.52	.30	.34	.41	21.37
1950	.42	.75	1.15	1.77	2.37	3.82	3.04	2.27	1.44	.34	.53	.37	18.27

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1940	a b 921	2,150	Jan. 15, 1940	-	-	-	-	-	355	416	28.31
1941	a b 921	2,150	Feb. 8, 1941	34	256	290	1.45	19.69	233	258	17.55
1942	a b 951	1,430	Mar. 9, 1942	30	239	299	1.50	20.33	260	363	24.66
1943	b 971	1,450	Dec. 30, 1942	26	313	367	1.84	24.91	294	307	20.84
1944	b 1001	1,620	Sept. 15, 1944	22	193	238	1.19	16.21	230	314	21.39
1945	1031	1,640	Feb. 27, 1945	34	350	421	2.10	28.58	344	411	27.89
1946	1051	1,510	Feb. 7, 1946	39	363	437	2.18	29.64	336	375	25.45
1947	1081	1,320	Mar. 3, 1947	40	262	310	1.55	21.06	269	339	23.04
1948	1111	1,910	May 19, 1948	41	417	477	2.38	32.46	414	470	32.02
1949	1141	1,170	Apr. 6, 1949	42	266	315	1.58	21.37	252	284	19.25
1950	b 1171	1,140	Mar. 23, 1950	34	201	269	1.34	18.27	-	-	-

a In W.S.P. 971.

b In W.S.P. 1031.

## 193. Potowomut River near East Greenwich, R. I.

Location.--Lat 41°38'28", long. 71°26'45", on right bank above 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.

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

Average discharge.--10 years (1940-50), 36.8 cfs (unadjusted).

Extremes.--1940-50: Maximum discharge, 392 cfs Aug. 8, 1946; Maximum gage height, 2.70 ft Sept. 14, 1944 (backwater from hurricane tidal wave); 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.--Water diverted above station, chiefly from wells close to the river, for supply of East Greenwich, North Kingstown, Warwick, and U. S. Naval Establishments. Because of doubt that adjustments for these diversions would give a true indication of the yield, figures of second-feet per square mile and runoff in inches are omitted.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	-	13.1	-
1941	11.5	44.5	36.9	45.6	59.2	47.9	42.8	30.4	37.9	15.1	8.04	4.74	31.8
1942	5.80	9.35	13.2	20.6	71.3	118	60.9	32.6	16.3	15.8	28.5	11.9	33.5
1943	20.2	51.6	76.0	61.1	79.9	75.3	51.4	67.4	26.2	11.2	8.10	3.78	42.5
1944	5.27	9.53	6.35	15.2	17.5	47.8	53.3	33.1	18.5	6.33	3.18	14.5	19.2
1945	9.89	39.3	81.9	66.4	62.1	95.3	47.3	59.2	26.2	12.4	7.91	4.64	42.7
1946	7.19	23.7	85.5	97.0	70.6	80.5	46.5	51.0	49.3	17.5	65.1	25.7	51.6
1947	19.1	14.0	20.3	34.0	28.0	65.2	66.1	72.5	33.7	19.6	10.2	7.71	32.6
1948	7.92	40.8	28.2	35.3	75.4	120	98.1	109	92.5	25.2	11.2	6.00	54.0
1949	7.21	14.7	18.0	48.5	69.0	63.1	80.9	44.5	15.5	7.30	4.54	4.71	31.2
1950	4.80	8.05	13.7	25.5	52.1	75.4	64.4	48.0	32.6	11.8	9.76	6.44	29.2

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	921	-	-	-	-	-	-	-	-
1941	921	377	Feb. 8, 1941	2.9	31.8	-	-	26.4	-
1942	951	272	Feb. 17, 1942	3.1	33.5	-	-	41.9	-
1943	971	285	Dec. 31, 1942	.1	42.5	-	-	33.5	-
1944	1001	177	Apr. 25, 1944	1.0	19.2	-	-	28.4	-
1945	1051	304	Nov. 30, 1944	3.4	42.7	-	-	41.5	-
1946	1051	392	Aug. 8, 1946	3.2	51.6	-	-	46.3	-
1947	1081	294	Mar. 3, 1947	5.2	32.6	-	-	34.5	-
1948	1111	328	May 31, 1948	0	54.0	-	-	50.9	-
1949	1141	233	Apr. 6, 1949	2.5	31.2	-	-	30.1	-
1950	1171	269	Mar. 24, 1950	2.3	29.2	-	-	-	-

## PAWCATUCK RIVER BASIN

## 194. Pawcatuck River at Wood River Junction, R. I. 1/

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.

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

Average discharge.--10 years (1940-50), 164 cfs.

Extremes.--1940-50: Maximum discharge, 786 cfs (revised) Mar. 22, 1948 (gage height, 5.12 ft); minimum, 7.4 cfs Oct. 10, 1947; minimum daily, 15 cfs Oct. 11, 1947.

Remarks.--Flow regulated by power plant and mills above station.

1/ Published as Charles River at Wood River Junction prior to October 1943.

Monthly and yearly mean discharge, in cubic feet per second, of Pawcatuck River at Wood River Junction, R. I.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	#40.0	#175	#160	184	243	218	191	155	191	101	70.9	42.3	#147
1942	38.7	65.6	74.6	96.2	250	444	241	137	85.6	81.3	98.9	58.4	136
1943	73.0	111	261	279	320	319	229	282	142	75.6	61.5	37.9	180
1944	53.1	84.4	56.8	98.8	104	220	267	178	119	67.6	42.2	73.6	114
1945	57.6	164	347	294	228	430	224	258	144	80.9	64.3	41.0	195
1946	39.3	95.1	324	385	305	335	206	217	236	97.7	275	132	220
1947	100	75.7	83.2	135	135	264	289	289	155	102	70.1	49.6	146
1948	38.3	150	130	147	279	*529	463	411	*394	130	69.5	41.1	*231
1949	46.7	86.9	95.8	215	326	300	323	208	94.8	49.4	31.7	34.7	150
1950	51.1	44.6	72.1	102	186	257	263	190	158	76.9	55.0	35.2	122

\* Revised.

\* Not previously published; estimated on basis of a comparison of runoff data for several surrounding stations and a provisional discharge record computed on a basis of readings from a temporary staff gage about 150 ft downstream.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	#0.46	#1.95	#1.84	2.12	2.53	2.51	2.13	1.79	2.13	1.16	0.82	0.47	#19.91
1942	.45	.71	.86	1.11	2.60	5.12	2.69	1.58	.93	.94	1.14	.65	18.78
1943	.84	1.24	3.01	3.21	3.33	3.68	2.56	3.02	1.59	.87	.71	.42	24.48
1944	.61	.96	.68	1.14	1.12	2.54	2.98	2.02	1.33	.78	.49	.82	15.45
1945	.66	1.82	4.00	3.39	2.37	4.96	2.50	2.98	1.60	.93	.74	.46	26.41
1946	.45	1.06	3.74	4.44	3.18	3.86	2.29	2.50	2.63	1.13	3.17	1.47	29.92
1947	1.15	.84	.96	1.56	1.40	3.05	3.23	3.33	1.73	1.17	.81	.55	19.78
1948	.44	1.68	1.50	1.70	3.00	*6.10	5.17	4.73	*4.40	1.50	.80	.46	*31.48
1949	.54	.97	1.10	2.48	3.39	3.46	3.60	2.40	1.06	.57	.37	.39	20.33
1950	.36	.50	.83	1.18	1.94	2.97	2.94	2.19	1.76	.89	.61	.39	16.56

\* Revised.

\* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1941	921	566	Feb. 10, 1941	-	#147	#1.47	#19.91	130	17.68		
1942	951	601	Mar. 24, 1942	20	138	1.38	18.78	161	21.85		
1943	971	580	Jan. 1, 1943	29	180	1.80	24.48	159	21.62		
1944	1001	443	Apr. 27, 1944	22	114	1.14	15.45	145	19.70		
1945	1031	630	Mar. 2, 1945	35	195	1.95	26.41	185	25.18		
1946	1051	614	Aug. 9, 1946	33	220	2.20	29.92	204	27.62		
1947	1081	505	Mar. 5, 1947	30	146	1.46	19.78	151	20.45		
1948	1111, 1201	*786	Mar. 22, 1948	15	*231	*2.31	*31.48	*224	*30.47		
1949	1141	451	Apr. 9, 1949	21	150	1.50	20.33	143	19.41		
1950	1171	507	Mar. 25, 1950	24	122	1.22	16.56	-	-		

\* Revised.

\* Not previously published.

## 195. 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.

Supplemental records available.--August to December 1909, gage heights only.

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.--9 years (1941-50), 132 cfs.

Extremes.--1941-50: Maximum discharge, 819 cfs (revised) Mar. 17, 1948 (gage height, 5.77 ft); 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 flow over dam a quarter of a mile above station.

Remarks.--Some regulation at low flow by mills and ponds above station; regulation greater prior to 1948.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	-	-	-	-	-	-	127	121	111	75.8	53.5	33.8	-
1942	30.7	49.7	55.2	94.5	180	364	170	106	63.6	73.1	77.8	43.7	109
1943	58.1	99.4	205	198	225	229	174	228	105	55.0	46.7	29.5	137
1944	49.9	80.5	54.0	75.0	104	214	208	131	112	59.5	38.8	108	103
1945	73.2	183	261	220	176	333	180	217	114	67.2	47.6	38.6	159
1946	35.3	102	242	263	214	243	138	156	163	64.7	146	70.9	153
1947	70.4	56.4	71.5	112	111	217	111	222	123	78.7	59.8	46.5	115
1948	37.4	160	110	113	206	362	325	331	298	105	53.5	29.3	177
1949	40.2	96.8	94.9	202	229	227	252	165	72.9	40.6	31.6	32.2	123
1950	51.0	47.5	76.9	104	166	203	209	172	160	64.2	49.9	39.9	110

Monthly and yearly runoff, in inches, of Wood River at Hope Valley, R. I.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	-	-	-	-	-	-	1.96	1.93	1.72	1.21	0.85	0.52	-
1942	0.49	0.77	0.88	1.51	2.59	5.80	2.62	1.68	.98	1.16	1.24	.67	20.39
1943	.92	1.53	3.27	3.16	3.24	3.64	2.68	3.63	1.61	.88	.74	.45	25.75
1944	.79	1.24	.86	1.19	1.55	3.41	3.21	2.09	1.73	.95	.62	1.67	19.31
1945	1.16	2.83	4.16	3.50	2.52	5.30	2.77	3.46	1.76	1.07	.76	.59	29.88
1946	.66	1.57	3.86	4.19	3.09	3.87	2.13	2.48	2.51	1.03	2.32	1.09	28.70
1947	1.12	.87	1.14	1.78	1.59	3.46	3.28	3.54	1.30	1.25	.94	.72	21.56
1948	.60	2.47	1.78	1.79	3.10	5.76	5.00	5.27	4.60	1.67	.85	.45	33.32
1949	.64	1.49	1.51	3.21	3.29	3.62	3.88	2.63	1.12	.65	.50	.50	23.04
1950	.49	.73	1.22	1.65	2.38	3.23	3.22	2.73	2.47	1.02	.79	.61	20.54

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1941	921	-	-	-	-	-	-	-	-	-
1942	951	684	Mar. 10, 23, 1942	10	109	1.51	20.39	128	23.97	
1943	971	765	Dec. 31, 1942	14	137	1.89	25.75	122	22.92	
1944	1001	636	Sept. 15, 1944	18	103	1.42	19.31	131	24.57	
1945	1031	699	Jan. 2, 1945	20	159	2.20	29.88	148	27.72	
1946	1061	551	Dec. 27, 1945	24	153	2.11	28.70	138	25.84	
1947	1081	544	Mar. 3, 1947	23	115	1.59	21.56	124	23.26	
1948	1111	*619	Mar. 17, 1948	23	177	2.44	33.32	171	32.13	
1949	1141	485	Apr. 7, 1949	21	123	1.70	23.04	117	21.84	
1950	1171	460	Mar. 24, 1950	20	110	1.52	20.54	-	-	

\* Revised.

## 196. 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.

Gage.--Water-stage recorder. Altitude of gage is mean sea level (from topographic map).

Average discharge.--9 years (1941-50), 501 cfs (adjusted for diversion).

Extremes.--1940-50: Maximum discharge, 2,560 cfs Mar. 20, 1948; maximum gage height, 9.32 ft Sept. 14, 1944 (affected by tide); minimum daily discharge, 25 cfs Aug. 17, 1941.

Flood in March 1936 reached a discharge of 3,150 cfs, by computation of flow over dam  $1\frac{1}{2}$  miles above station. Maximum stage known, 15.0 ft Sept. 21, 1938 (due to hurricane tidal wave), from information by local residents.

Remarks.--Low flow regulated by mills above station. Runoff adjusted for diversion above station for municipal supply of Westerly.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	-	-	405	503	652	573	513	449	449	261	190	119	-
1942	105	175	222	331	790	1,367	673	385	210	207	261	152	404
1943	194	336	770	835	952	903	637	810	386	183	169	93.0	520
1944	144	264	175	317	380	787	839	529	407	190	110	295	369
1945	196	684	1,095	895	688	1,278	680	813	364	212	166	106	599
1946	103	286	983	1,144	894	994	556	612	652	250	763	301	628
1947	269	198	250	432	393	823	934	892	442	272	168	126	434
1948	102	538	406	463	870	1,591	1,335	1,274	1,119	333	165	82.2	688
1949	123	291	293	781	1,014	954	972	609	249	135	96.4	86.5	462
1950	87.2	135	233	354	634	762	779	617	592	212	165	115	388

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	-	-	1.59	1.97	2.31	2.25	1.95	1.76	1.71	1.03	0.75	0.46	-
1942	0.42	0.67	.87	1.30	2.79	5.35	2.55	1.51	.80	.82	1.03	.58	18.69
1943	.76	1.27	3.02	3.27	3.37	3.54	2.42	3.17	1.47	.72	.67	.36	24.04
1944	.57	1.01	.69	1.24	1.39	3.08	3.18	2.08	1.55	.75	.44	1.12	17.10
1945	.77	2.59	4.29	3.50	2.44	5.00	2.58	3.19	1.58	.84	.66	.41	27.65
1946	.41	1.09	3.85	4.48	3.16	3.89	2.11	2.40	2.47	.99	2.99	1.15	28.99
1947	1.06	.76	.98	1.70	1.39	3.22	3.54	3.49	1.68	1.07	.67	.49	20.05
1948	.41	2.04	1.59	1.82	3.19	6.23	5.06	4.99	4.24	1.31	.66	.32	31.86
1949	.49	1.11	1.15	3.06	3.59	3.66	3.68	2.39	.95	.54	.39	.34	21.35
1950	.35	.52	.92	1.39	2.24	2.98	2.95	2.42	2.25	.84	.66	.44	17.96

Yearly discharge, in cubic feet per second, of Pawcatuck River at Westerly, R. I.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Observed			Adjusted			Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean
		Discharge	Date							
1941	921	1,670	Feb. 8, 1941	25	-	-	-	-	349	351
1942	951	2,080	Mar. 23, 1942	38	404	406	1.58	18.69	472	473
1943	971	2,240	Dec. 31, 1942	33	520	522	1.77	24.04	460	462
1944	1001	1,610	Apr. 25, 1944	38	369	371	1.26	17.10	485	487
1945	1031	2,180	Dec. 1, 1944	62	599	601	2.04	27.65	549	551
1946	1051	1,930	Aug. 8, 1946	70	628	630	2.14	28.99	573	575
1947	1081	1,540	Mar. 5, 1947	66	454	456	1.48	20.05	461	463
1948	1111	2,560	Mar. 20, 1948	45	688	690	2.34	31.86	660	662
1949	1141	1,460	Apr. 8, 1949	43	462	464	1.57	21.35	441	443
1950	1171	1,460	Mar. 24, 1950	50	398	390	1.32	17.96	-	-

## POQUONOCK RIVER BASIN

## 197. Great Brook at Poquonock Bridge, Conn.

Location.--Lat 41°20'57", long. 72°02'17", in mid-channel on upstream side of weir gate structure, 800 feet below dam of Groton Reservoir, a quarter of a mile upstream from highway bridge at head of Poquonock River, and a quarter of a mile northwest of Poquonock Bridge, New London County.

Drainage area.--14.3 sq mi.

Gage.--Point gage and three sharp-edged chisel-shaped weirs to measure wastage. Venturi meters at filter plant to measure diversion and wash water. Staff gages on Groton Reservoir and Smith Lake to determine changes in contents. Datum of point gage is 2.78 ft above mean sea level, datum of 1929.

Remarks.--Records at weirs represent wastage. Discharge data is summation of wastage, diversion for water supply, and wash water used in operation of rapid sand filters, adjusted for change in contents in Groton Reservoir and Smith Lake.

Cooperation.--Venturi-meter records and gage readings furnished by the borough of Groton, Department of Utilities.

Monthly and yearly mean discharge, in cubic feet per second (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	47.7	37.6	43.2	21.4	28.6	26.9	6.70	17.3	5.31	-
1947	4.39	3.99	6.78	12.7	12.1	31.4	42.2	36.4	15.1	6.41	2.69	3.50	14.8
1948	2.74	25.2	20.6	23.2	41.6	107	61.6	59.3	42.4	9.53	3.11	2.58	33.3
1949	2.94	7.52	8.32	37.8	53.7	45.6	43.3	24.9	7.41	3.74	2.27	3.56	19.8
1950	3.71	6.83	19.5	28.9	43.6	39.5	36.1	42.4	37.9	10.6	7.02	3.43	23.4

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	3.85	2.74	3.48	1.67	2.31	2.10	0.54	1.40	0.41	-
1947	0.55	0.31	0.55	1.02	1.88	2.54	3.29	2.94	1.18	.52	.22	.27	14.07
1948	.22	1.96	1.68	1.87	3.14	8.62	4.81	4.78	3.31	.77	.25	.19	31.58
1949	.24	.59	.67	3.04	3.92	3.68	3.38	2.01	.58	.30	.18	.28	18.67
1950	.30	.69	1.57	2.33	3.18	3.18	2.81	3.42	2.96	.85	.57	.27	22.13

Yearly discharge, in cubic feet per second (adjusted)

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches
		Discharge	Date				
1946	1171	-	-	-	-	-	20.7
1947	1171	-	-	-	14.8	1.03	14.07
1948	1171	-	-	-	33.3	2.33	31.58
1949	1171	-	-	-	19.8	1.58	18.67
1950	1171	-	-	-	23.4	1.64	22.13

## THAMES RIVER BASIN

## 198. Willimantic River near South Coventry, Conn.

Location.--Lat 41°45'00", long. 72°16'00", on left bank 700 ft upstream from highway bridge, 2 miles southeast of South Coventry, Tolland County, and 3 miles upstream from Hop River.

Drainage area.--121 sq mi.

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.--19 years (1931-50), 202 cfs.

Extremes.--1931-50: Maximum discharge, 15,500 cfs Sept. 21, 1936 (gage height, 18.08 ft, from floodmarks), by computation of flow over dam at Eagleville, 3 miles above 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.--Flow regulated by mills and reservoirs above station.

Monthly and yearly mean discharge, in cubic feet per second, of Willimantic River near South Coventry, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1932	24.6	29.0	61.9	149	140	212	316	143	79.0	51.5	67.8	91.8	114
1933	166	352	184	194	230	408	560	167	95.4	*39.7	*53.4	195	219
1934	92.4	89.4	116	285	91.8	526	465	323	167	67.5	60.5	*187	207
1935	230	232	282	290	249	450	309	175	177	108	42.3	60.3	217
1936	28.6	67.4	74.4	222	129	1,050	438	271	104	50.7	48.4	94.6	216
1937	145	99.4	*434	511	343	327	361	240	148	90.7	91.0	110	*242
1938	28.4	395	310	400	327	287	264	239	278	421	211	176	370
1939	*263	208	415	224	386	462	540	161	*77.0	*48.1	*56.3	*59.0	*241
1940	*75.3	175	188	*214	130	*349	*897	*325	*378	151	*55.0	*44.5	*248
1941	48.3	182	197	134	*272	201	201	205	161	95.1	75.0	36.9	150
1942	32.4	76.0	113	165	176	*550	243	169	119	100	67.4	*34.7	*154
1943	69.7	222	314	230	324	509	302	372	145	60.9	43.6	22.8	217
1944	45.4	151	66.1	60.0	109	237	365	173	206	80.6	41.6	120	156
1945	71.0	167	265	240	197	491	315	427	225	103	74.3	59.8	218
1946	53.0	126	239	318	264	366	204	265	234	79.2	108	57.1	193
1947	90.9	72.9	88.2	173	180	304	329	230	141	93.4	56.3	55.4	151
1948	33.2	225	122	91.3	206	654	427	364	401	174	62.8	28.2	232
1949	31.9	107	102	299	299	292	264	231	76.3	30.0	24.6	23.5	147
1950	20.1	30.9	87.0	140	168	321	309	294	250	79.3	90.1	54.2	153

\* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1932	0.23	0.27	0.59	1.42	1.25	2.02	2.91	1.36	0.73	0.49	0.65	0.85	12.77
1933	1.58	3.25	1.75	1.84	1.98	3.88	5.17	1.59	.88	.38	.51	1.80	24.61
1934	.88	.82	1.11	2.72	.79	5.02	4.28	3.08	1.54	1.64	.58	*1.73	*23.19
1935	2.19	2.14	2.69	2.77	2.14	4.29	2.84	1.67	1.63	1.03	.40	.56	24.35
1936	.27	.62	.71	2.11	1.15	10.01	4.04	2.58	.96	.48	.46	.87	24.26
1937	1.38	.92	*4.14	4.86	2.95	3.11	3.32	2.28	1.36	.86	.87	1.01	*27.06
1938	1.37	3.64	2.95	3.82	2.61	2.73	2.43	2.28	2.57	4.01	2.01	10.84	41.46
1939	*2.50	1.92	3.95	2.13	5.32	4.40	4.98	1.53	.71	*4.6	*5.4	*5.4	*26.98
1940	.72	1.62	1.79	*2.04	1.35	*3.32	*8.27	*3.10	*3.48	1.44	.52	*.41	*27.86
1941	.46	1.67	1.88	1.28	*2.34	1.91	1.85	1.95	1.48	.91	.71	.34	*16.78
1942	.31	.70	1.08	1.57	1.51	*5.25	2.24	1.61	1.10	.95	.64	.32	*17.28
1943	.66	2.04	3.00	2.19	2.79	4.85	2.79	3.54	1.34	.58	.42	.21	24.41
1944	.43	1.20	.63	.57	.97	2.26	3.37	1.65	1.90	.77	.40	1.11	15.26
1945	.68	1.54	2.52	2.28	1.70	4.68	2.90	4.07	2.08	.98	.71	.37	24.51
1946	.50	1.16	2.28	3.03	2.27	3.48	1.89	2.52	2.15	.76	1.03	.53	21.60
1947	.87	.67	.84	1.65	1.55	2.89	3.04	2.19	1.30	.89	.54	.51	16.94
1948	.32	2.08	1.16	.87	1.83	6.23	3.94	3.47	3.69	1.66	.60	.26	26.11
1949	.30	.99	.97	2.85	2.57	2.78	2.43	2.20	.70	.29	.23	.22	16.53
1950	.19	.28	.83	1.34	1.45	3.06	2.84	2.80	2.31	.76	.86	.50	17.22

\* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1932	726,1201	*1,160	Mar. 28, 1932	10	114	0.942	12.77	162	16.26
1933	741,1201	*1,260	Nov. 10, 1932	*7.8	219	1.81	24.61	186	20.84
1934	(a)	4,420	Mar. 6, 1934	*6.4	207	1.71	*23.19	244	*27.40
1935	781, 851	2,220	Jan. 10, 1935	8	217	1.79	24.35	169	18.93
1936	801, 851	7,880	Mar. 12, 1936	6.2	216	1.79	24.26	*259	*29.10
1937	621,1201	*1,660	Dec. 20, 1936	14	*242	*2.00	*27.06	255	28.58
1938	851	15,500	Sept. 21, 1938	8.8	370	3.06	41.46	*373	*41.87
1939	871,1201	2,100	Feb. 16, 1939	*12	*241	*1.99	*26.98	203	*22.74
1940	891,1201	*3,400	Jan. 15, 1940	*11	*248	*2.05	*27.86	*247	*27.74
1941	921,1201	*2,660	Feb. 8, 1941	11	150	1.24	*16.78	133	*14.86
1942	951,1201	*1,860	Mar. 9, 1942	*8.4	*154	*1.27	*17.28	*186	*20.89
1943	971	2,040	Dec. 31, 1942	10	217	1.79	24.41	187	20.97
1944	1001	2,120	June 25, 1944	8.2	136	1.12	15.26	158	17.74
1945	1031	1,510	Jan. 2, 1945	17	218	1.80	24.51	211	23.71
1946	1051	945	Jan. 7, 1946	7.1	193	1.60	21.60	179	20.04
1947	1081	1,020	Mar. 15, 1947	5.4	151	1.25	16.94	161	18.12
1948	1111	2,240	Mar. 21, 1948	3.8	232	1.92	26.11	221	24.81
1949	1141	1,070	Jan. 6, 1949	2.5	147	1.21	16.53	139	15.57
1950	1171	858	May 26, 1950	3.6	153	1.26	17.22	-	-

\* Revised.

a In W.S.P. 756, 851, 1201.



## 199. 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 miles upstream from mouth.

Drainage area.--76.2 sq mi.

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.--18 years (1932-50), 123 cfs.

Extremes.--1932-50: Maximum discharge, 6,450 cfs Sept. 21, 1938 (gage height, 16.25 ft, from floodmarks), by computation of 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. 8, 1936.

Remarks.--Infrequent regulation at low flow.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1933	97.1	279	114	121	157	309	340	76.3	37.8	10.6	23.4	94.1	138
1934	37.5	41.1	69.9	191	44.9	304	324	201	70.0	22.4	15.2	93.1	118
1935	125	125	175	173	170	282	161	82.8	87.3	44.7	15.9	32.0	123
1936	31.6	40.5	39.6	157	81.7	587	265	196	73.3	15.8	14.6	50.5	130
1937	89.2	58.2	307	330	196	212	208	133	94.1	33.6	48.6	58.7	147
1938	115	286	193	267	213	185	151	133	138	301	106	606	224
1939	155	117	236	149	278	301	313	73.9	29.0	16.3	17.8	16.0	141
1940	65.3	106	121	128	73.6	260	510	180	218	73.0	13.7	21.8	147
1941	25.7	143	140	101	208	123	112	100	109	46.1	34.0	10.3	95.2
1942	10.5	44.9	63.1	103	114	359	115	92.4	45.1	56.4	15.2	13.7	87.2
1943	48.8	195	257	161	244	323	175	203	60.3	14.9	13.1	15.8	142
1944	22.2	79.2	26.1	22.3	39.6	157	259	95.3	132	36.9	10.8	93.8	80.7
1945	65.5	134	213	158	144	321	186	260	102	34.2	19.5	10.0	137
1946	28.8	84.3	186	204	160	229	118	182	130	27.6	51.8	20.9	119
1947	35.8	51.2	55.1	113	89.2	179	184	128	55.2	29.0	16.7	27.8	80.2
1948	36.0	172	71.4	49.9	124	389	246	260	193	56.4	15.2	6.89	135
1949	22.8	53.7	61.3	192	202	188	176	144	22.4	6.08	4.80	6.41	89.4
1950	7.62	13.8	41.2	63.7	94.0	199	150	160	120	24.0	22.8	14.8	75.7

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1933	1.46	4.08	1.73	1.83	2.14	4.68	4.98	1.15	0.55	0.16	0.35	1.37	24.48
1934	.57	.60	1.06	2.69	.61	4.80	4.74	3.04	1.03	.34	.23	1.36	21.07
1935	1.89	1.83	2.65	2.62	2.32	4.27	2.35	1.26	1.28	.68	.24	.47	21.86
1936	.48	.59	.60	2.38	1.15	8.88	3.88	2.96	1.07	.24	.22	.74	23.19
1937	1.35	.85	4.65	4.99	2.68	3.20	3.05	2.02	1.37	.51	.74	.86	26.27
1938	1.74	4.18	2.92	4.04	2.92	2.80	2.21	2.02	2.02	4.55	1.60	8.87	39.87
1939	2.34	1.72	3.57	2.26	3.80	4.55	4.59	1.12	.43	.25	.27	.23	25.13
1940	.99	1.55	1.83	1.94	1.04	3.93	7.46	2.72	3.19	1.10	.21	.32	26.28
1941	.39	2.10	2.12	1.53	2.84	1.86	1.64	1.51	1.60	.70	.51	.15	16.95
1942	.16	.66	.95	1.56	1.56	5.43	1.68	1.40	.66	.58	.70	.20	15.54
1943	.74	2.86	3.88	2.43	3.33	4.89	2.57	3.07	.88	.23	.20	.23	25.31
1944	.34	1.16	.40	.34	.56	2.38	3.79	1.44	1.93	.56	.16	1.37	14.43
1945	.99	1.96	3.23	2.39	1.97	4.85	2.72	3.93	1.50	.52	.30	.15	24.51
1946	.44	1.24	2.81	3.09	2.19	3.47	1.73	2.76	1.91	.42	.78	.31	21.15
1947	.54	.75	.83	1.71	1.22	2.71	2.69	1.94	.81	.44	.25	.41	14.30
1948	.54	2.52	1.08	.76	1.76	5.88	3.80	3.93	2.82	.85	.23	.10	24.07
1949	.34	.79	.93	2.90	2.76	2.85	2.58	2.18	.33	.09	.07	.09	15.91
1950	.12	.20	.62	.96	1.28	3.01	2.20	2.42	1.75	.36	.34	.22	13.48

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1933	741, 781	1,970	Nov. 10, 1932	6.8	138	1.81	24.48	109	19.44
1934	756	1,700	Mar. 6, 1934	7.7	118	1.55	21.07	142	25.21
1935	781	*1,500	Jan. 10, 1935	7.1	123	1.61	21.86	96.3	17.16
1936	801	*3,640	Mar. 12, 1936	6.0	130	1.71	23.19	159	28.37
1937	821	1,720	Dec. 20, 1936	8.2	147	1.93	26.27	159	28.26
1938	851	8,450	Sept. 21, 1938	18	224	2.94	59.87	217	39.86
1939	871	1,600	Feb. 16, 1939	4.0	141	1.85	25.13	123	21.87
1940	891	2,330	Jan. 15, 1940	8.6	147	1.93	26.28	149	26.52
1941	921	2,880	Feb. 8, 1941	4.3	95.2	1.25	16.95	79.3	14.11
1942	951	1,660	Mar. 9, 1942	5.4	87.2	1.14	15.54	119	21.25
1943	971	2,180	Dec. 31, 1942	8.2	142	1.86	25.31	111	19.73
1944	1001	2,580	June 25, 1944	4.8	80.7	1.06	14.43	105	18.71
1945	1031	1,480	Jan. 2, 1945	7.5	137	1.80	24.51	128	22.82
1946	1051	815	June 3, 1946	6.6	119	1.56	21.15	105	18.78
1947	1081	795	Apr. 6, 1947	8	80.2	1.05	14.30	91.6	16.32
1948	1111	1,700	Mar. 17, 1948	4.7	135	1.77	24.07	123	21.99
1949	1141	960	Jan. 6, 1949	2.6	89.4	1.17	15.91	83.1	14.79
1950	1171	900	Mar. 23, 1950	3.6	75.7	.993	13.48	-	-

\* Revised.

## 200. 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 highway bridge, 1½ miles south of Warrenville, Windham County, and 3¼ miles southwest of Ashford.

Drainage area.--29.1 sq mi.

Gage.--Water-stage recorder. Datum of gage is 335.57 ft above mean sea level, datum of 1929.

Average discharge.--10 years (1940-50), 43.7 cfs.

Extremes.--1940-50: Maximum discharge, 950 cfs Feb. 8, 1941, and Sept. 15, 1944, from rating curve extended above 420 cfs by logarithmic plotting; maximum gage height, 7.00 ft Feb. 8, 1941; minimum discharge, 0.8 cfs Sept. 27, 28, 1943.  
Flood of September 1938 reached a stage of about 14.5 ft, from floodmarks.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	4.79	10.0	-
1941	7.84	52.4	57.8	34.4	75.3	53.8	49.0	65.0	42.4	20.4	13.2	5.27	39.5
1942	6.53	20.9	31.9	46.5	51.5	159	54.0	35.5	20.3	14.6	17.9	4.97	38.7
1943	14.1	49.7	88.0	56.5	87.6	132	76.3	88.9	19.6	6.19	4.55	1.35	52.0
1944	13.3	39.5	14.4	12.2	26.8	84.6	108	35.5	33.9	8.99	2.66	33.0	34.3
1945	16.1	56.0	75.0	67.1	54.0	181	80.3	104	49.8	14.8	9.00	3.01	55.1
1946	7.05	30.4	76.0	89.0	63.2	99.2	47.7	72.9	51.7	12.2	37.2	14.3	50.1
1947	18.5	14.7	23.4	42.1	41.0	87.2	82.7	50.3	25.8	18.5	8.87	12.0	35.4
1948	10.2	71.3	30.9	22.2	75.7	189	106	94.1	73.2	21.2	7.27	17.4	58.4
1949	5.09	25.0	29.5	77.4	81.6	72.6	64.7	50.2	8.78	2.09	1.95	3.89	35.0
1950	3.94	7.64	23.5	44.8	50.3	104	75.2	79.6	44.7	9.10	11.3	6.13	38.3

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	0.19	0.38	-
1941	0.31	2.01	2.29	1.36	2.70	2.13	1.87	2.57	1.63	0.81	.52	.20	18.40
1942	.26	.80	1.27	1.84	1.34	1.53	2.08	1.41	.78	.58	.71	.19	18.06
1943	.56	1.91	3.48	2.24	3.13	5.22	2.92	3.52	.75	.25	.18	.05	24.21
1944	.53	1.52	.57	.48	.99	3.36	4.14	1.41	1.29	.36	.10	1.26	16.01
1945	.64	2.14	2.97	2.66	1.94	5.19	3.08	4.12	1.91	.59	.36	.11	25.71
1946	.28	1.16	3.01	3.53	2.26	3.93	1.83	2.89	1.99	.48	1.48	.55	23.39
1947	.73	.56	.93	1.67	1.47	3.46	3.17	1.99	.99	.73	.35	.46	16.51
1948	.40	2.73	1.22	.89	2.80	7.48	4.06	3.72	2.81	.84	.29	.07	27.30
1949	.20	.96	1.16	3.07	2.32	2.87	2.48	1.99	.34	.08	.08	.15	16.50
1950	.16	.29	.93	1.76	1.80	4.12	2.98	3.16	1.72	.36	.45	.24	17.87

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	921	-	-	-	-	-	-	-	-
1941	921	950	Feb. 8, 1941	2.7	39.5	1.36	18.40	34.6	16.12
1942	951	814	Mar. 9, 1942	3.2	38.7	1.33	18.06	46.5	21.68
1943	971	814	Dec. 30, 1942	.8	52.0	1.79	24.21	44.8	20.88
1944	1001	950	Sept. 15, 1944	.9	34.3	1.18	16.01	41.0	19.14
1945	1031	767	Jan. 1, 1945	2.0	55.1	1.89	25.71	52.3	24.41
1946	1051	469	Dec. 26, 1945	2.6	50.1	1.72	23.39	45.3	21.16
1947	1081	486	Mar. 14, 1947	3.6	35.4	1.22	16.51	40.0	18.64
1948	1111	767	Mar. 20, 1948	1.3	58.4	2.01	27.30	54.0	25.27
1949	1141	444	Jan. 6, 1949	.9	35.0	1.20	16.30	32.9	15.36
1950	1171	646	Mar. 9, 1950	2.2	38.3	1.32	17.87	-	-

## 201. 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, 1 mile northeast of Willimantic, Windham County, and 1.7 miles upstream from mouth.

Drainage area.--169 sq mi.

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.--20 years (1930-50), 288 cfs.

Extremes.--1930-50: Maximum discharge, 32,000 cfs Sept. 21, 1938 (gage height, 16.39 ft, from floodmarks), by computation of 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.--City of Willimantic diverts an average of about 1 million gallons of water a day for municipal supply from reservoir 2 miles above station. Operation of water wheels at this location causes diurnal fluctuations at low flow.

Monthly and yearly mean discharge, in cubic feet per second, of Natchaug River at Willimantic, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	#19.3	69.4	72.3	106	172	702	495	408	400	85.5	75.4	32.9	#220
1932	24.1	51.0	70.0	270	221	392	498	198	74.6	41.8	110	126	171
1933	577	687	295	301	366	667	922	245	137	40.1	59.9	267	364
1934	129	125	201	507	184	703	732	486	206	60.1	48.6	219	299
1935	309	260	419	472	361	658	431	229	247	95.3	36.3	59.7	298
1936	27.4	84.3	93.5	369	188	1,681	623	327	125	35.4	41.8	119	311
1937	254	142	772	725	459	436	495	305	151	78.9	123	191	345
1938	248	745	507	571	458	418	354	298	327	887	275	1,523	550
1939	325	274	553	315	553	694	792	215	84.2	58.8	117	103	359
1940	133	349	323	336	186	508	1,248	407	432	193	39.2	48.8	349
1941	52.3	324	313	213	449	304	302	355	239	116	79.2	33.8	230
1942	38.4	115	172	252	294	917	324	207	128	104	112	35.0	225
1943	88.9	322	517	363	507	766	442	526	141	50.3	35.0	11.2	313
1944	69.8	220	78.5	72.3	143	415	612	245	213	76.8	20.9	193	196
1945	96.7	305	478	374	311	763	444	602	275	102	60.3	27.4	321
1946	42.3	179	401	506	366	569	280	399	308	75.6	203	68.5	283
1947	142	91.0	135	245	221	462	466	295	154	88.3	53.0	71.7	202
1948	40.3	375	171	130	309	1,030	624	541	456	160	59.9	18.9	325
1949	32.6	149	142	454	460	434	385	286	62.7	16.1	15.5	25.9	204
1950	21.6	44.9	123	226	274	531	455	439	263	65.5	74.1	41.1	213

\* Not previously published, partly estimated on basis of records for Shetucket River at South Windham.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	#0.13	0.46	0.49	0.72	1.06	4.78	3.27	2.78	2.64	0.58	0.51	0.22	#17.64
1932	.16	.20	.48	1.84	1.41	2.68	3.29	1.35	.49	.28	.75	.83	13.76
1933	2.57	4.54	2.02	2.05	2.26	4.55	6.09	1.67	.90	.27	.41	1.90	29.23
1934	.88	.83	1.37	3.46	.95	4.80	4.83	3.32	1.36	.41	.33	1.45	23.99
1935	2.11	1.72	2.86	3.22	2.23	4.48	2.84	1.57	1.63	.65	.25	.39	23.95
1936	.19	.56	.64	2.51	1.20	11.47	4.12	2.22	.83	.24	.28	.79	25.05
1937	1.73	.94	5.27	4.95	2.83	2.97	3.27	2.08	1.00	.54	.84	1.26	27.68
1938	1.70	4.92	3.46	3.90	2.82	2.85	2.33	2.03	2.15	6.05	1.88	10.05	44.14
1939	2.21	1.81	3.77	2.14	3.40	4.74	5.23	1.46	.56	.40	.80	.68	27.20
1940	.91	2.31	2.20	2.29	1.19	3.47	8.23	2.78	2.86	1.31	.27	.32	28.14
1941	.36	2.14	2.13	1.45	2.77	2.08	2.00	2.42	1.57	.79	.54	.22	18.47
1942	.26	.76	1.18	1.72	1.81	6.26	2.14	1.41	.84	.71	.76	.23	18.08
1943	.61	2.13	3.53	2.48	3.12	5.22	2.92	3.58	.95	.34	.24	.07	25.17
1944	.48	1.45	.53	.49	.91	2.84	4.04	1.67	1.41	.52	.14	1.27	#15.75
1945	.67	2.01	3.26	2.55	1.92	5.20	2.93	4.10	1.82	.70	.41	.18	26.75
1946	.29	1.18	2.73	3.45	2.26	3.88	1.85	2.72	2.03	.52	1.38	.45	22.74
1947	.97	.60	.92	1.66	1.36	3.15	3.08	2.02	1.02	.60	.36	.47	16.21
1948	.27	2.48	1.16	.89	1.93	7.02	4.12	3.69	3.01	1.09	.41	.12	26.19
1949	.22	.98	.97	3.10	2.83	2.96	2.54	1.95	.41	.11	.11	.17	16.35
1950	.15	.30	.84	1.54	1.69	3.62	3.00	3.00	1.74	.45	.50	.27	17.10

† Corrected.

\* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1931	711	2,520	Mar. 30, 1931	10	#220	#1.50	#17.64	217	17.40
1932	726	2,680	Mar. 29, 1932	10	171	1.01	13.76	274	22.05
1933	741	3,270	Nov. 11, 1932	9.5	364	2.15	29.23	289	23.18
1934	756	*4,150	Mar. 6, 1934	5	299	1.77	23.99	343	27.60
1935	781	*4,670	Jan. 10, 1935	12	298	1.76	23.95	232	18.65
1936	801	14,200	Mar. 18, 1936	7.2	311	1.84	25.05	392	31.60
1937	821	*4,050	Dec. 20, 1936	2.9	345	2.04	27.68	371	29.82
1938	851	32,000	Sept. 21, 1938	38	550	3.25	44.14	521	41.85
1939	871	2,530	Feb. 16, 1939	5.0	339	2.01	27.20	309	24.83
1940	891	4,900	Jan. 15, 1940	5.8	349	2.07	28.14	339	27.35
1941	921	4,790	Feb. 8, 1941	3.3	230	1.36	18.47	200	16.04
1942	951	4,470	Mar. 10, 1942	3.7	225	1.33	18.08	276	22.15
1943	971	3,680	Dec. 31, 1942	2.3	313	1.85	25.17	266	21.36
1944	1001	3,150	Apr. 25, 1944	3.5	196	1.16	*15.75	239	19.23
1945	1031	2,930	Jan. 2, 1945	4.0	321	1.90	25.75	288	24.01
1946	1051	1,610	June 3, 1946	5.1	283	1.67	22.74	262	21.03
1947	1081	1,710	Apr. 6, 1947	4.7	202	1.20	16.21	219	17.63
1948	1111	4,100	Mar. 21, 1948	4.5	325	1.92	26.19	304	24.45
1949	1141	1,720	Jan. 7, 1949	2.9	204	1.21	16.35	192	15.47
1950	1171	1,760	Mar. 9, 1950	2.5	213	1.26	17.10	-	-

\* Revised.

† Corrected.

\* Not previously published.

## 202. Shetucket River near Willimantic, Conn.1/

Location.--Lat 41°42'01", long. 72°10'57", on left bank downstream from Bingham Bridge, 1.3 miles downstream from confluence of Willimantic and Natchaug Rivers, and 1½ miles southeast of Willimantic, Windham County.

Drainage area.--401 sq mi. October 1928 to September 1933, 406 sq mi.

Gage.--Water-stage recorder at present site after Dec. 5, 1933. Datum of gage is 131.40 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Apr. 4, 1904, to Dec. 31, 1905, chain gage at same datum at present site.

Nov. 14, 1919, to Sept. 30, 1921, Sept. 1, 1928, to Dec. 5, 1933, water-stage recorder at site at South Windham, 1½ miles downstream. Datum of gage was 125.00 ft above mean sea level, datum of 1929.

Average discharge.--25 years (1904-5, 1919-21, 1928-50), 679 cfs.

Extremes.--1904-5, 1919-21, 1928-50: Maximum discharge, 52,200 cfs Sept. 21, 1938 (gage height, 27.6 ft, from floodmarks), by computation of 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.

Remarks.--Flow regulated by mills on Willimantic River and on Natchaug River by pumping for municipal supply of city of Willimantic.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1904	-	-	-	-	-	-	1,805	920	326	221	373	428	-
1905	396	381	*608	*1,317	*385	1,937	1,254	455	565	*175	*200	*500	*684
1906	*300	384	902	-	-	-	-	-	-	-	-	-	-
1920	*500	*900	992	370	502	*3,167	2,060	1,570	1,390	602	423	331	*1,070
1921	528	836	1,620	*1,045	*622	1,690	1,310	1,140	279	664	270	144	*850
1929	342	308	416	906	912	1,690	1,860	1,630	305	185	168	130	737
1930	151	217	334	489	809	908	770	401	303	190	140	115	384
1931	*70	177	170	250	367	*1,415	*1,095	*934	*918	*200	*200	*95	*491
1932	*70	*85	*195	*588	551	*828	*1,088	440	223	*125	*245	*300	*393
1933	693	1,420	639	675	838	1,540	1,980	546	306	109	149	602	788
1934	285	280	426	1,092	314	1,704	1,778	1,134	500	148	126	510	694
1935	740	673	944	1,072	812	1,495	976	537	543	260	101	167	693
1936	97.5	205	231	829	442	3,949	1,522	919	355	128	126	308	763
1937	543	330	1,649	1,728	1,096	1,108	1,189	760	448	227	303	397	815
1938	546	1,501	1,140	1,358	1,105	961	845	727	802	1,755	655	5,571	1,243
1939	828	674	1,690	754	1,289	1,585	1,756	514	220	140	208	192	784
1940	307	724	698	743	423	1,221	2,914	966	1,159	467	123	129	822
1941	133	697	697	492	1,041	689	676	715	595	284	210	90.7	519
1942	90.5	254	373	557	646	2,005	746	522	322	267	247	96.6	511
1943	221	786	1,180	839	1,178	1,745	999	1,193	392	138	103	56.8	734
1944	145	455	190	168	339	899	1,353	557	598	213	82.9	448	452
1945	249	636	1,061	854	685	1,695	991	1,369	619	254	165	85.8	722
1946	123	394	880	1,111	842	1,251	644	913	729	196	381	153	635
1947	293	232	305	565	539	997	1,076	727	393	239	153	178	474
1948	117	799	410	311	720	2,233	1,386	1,248	1,135	414	148	61.0	748
1949	94.5	320	306	1,060	1,056	985	930	737	174	58.7	47.2	57.3	482
1950	54.2	93.8	276	459	573	1,157	989	972	710	191	216	151	485

\* Revised.

\* Not previously published; estimated on basis of records for nearby stations.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1904	-	-	-	-	-	-	*5.02	2.64	0.91	0.64	1.07	1.19	-
1905	1.14	1.06	*1.75	*3.78	*1.00	5.57	3.43	1.30	1.57	*5.50	*5.58	*1.40	*23.14
1906	*.86	1.01	2.59	-	-	-	-	-	-	-	-	-	-
1920	*1.42	*2.48	2.81	1.05	1.34	8.99	5.66	4.46	3.82	1.71	1.20	.91	*35.85
1921	1.50	2.30	4.61	*2.96	*1.59	4.80	3.60	3.24	.77	1.89	.77	.40	*28.43
1929	.97	.85	1.18	2.57	2.34	4.80	5.11	4.62	.84	.53	.48	.36	24.65
1930	.43	.60	.95	1.38	1.56	2.58	2.12	1.14	.63	.54	.40	.52	12.85
1931	*.20	.49	.48	.71	.94	*4.02	*3.01	*2.65	*2.52	*.57	*.57	*.26	*16.42
1932	*.20	*.23	*.55	*1.67	1.47	*2.34	*2.99	1.24	.61	*.36	*.70	*.82	*13.18
1933	1.97	3.90	1.81	1.91	2.14	4.37	5.44	1.54	.84	.31	.42	1.65	26.30
1934	.62	.78	1.22	3.14	.82	4.90	4.94	3.26	1.40	.43	.36	1.42	23.49
1935	2.13	1.87	2.71	3.06	2.10	4.50	2.71	1.54	1.51	.75	.29	.46	23.45
1936	.28	.57	.66	2.39	1.19	11.36	4.24	2.64	.99	.37	.36	.86	25.91
1937	1.56	.92	4.74	4.97	2.84	3.18	3.31	2.19	1.25	.85	.87	1.10	27.58
1938	1.57	4.17	3.27	3.91	2.87	2.77	2.35	2.09	2.23	5.05	1.88	9.94	42.10
1939	2.38	1.87	3.71	2.17	3.34	4.55	4.89	1.48	.61	.40	.60	.53	26.53
1940	.88	2.02	2.01	2.13	1.15	3.50	8.11	2.84	3.22	1.34	.35	.36	27.89

\* Revised.

\* Not previously published; estimated on basis of records for nearby stations.

1/ Published as "at South Windham" from 1919 to 1933.

Monthly and yearly runoff, in inches, of Shetucket River near Willimantic, Conn.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	.58	1.84	2.01	1.42	2.71	1.98	1.89	2.05	1.55	.82	.60	.25	17.60
1942	.26	.71	1.07	1.80	1.68	5.76	2.08	1.50	.80	.77	.71	.27	17.31
1943	.64	2.19	3.39	2.41	3.06	5.02	2.78	3.44	1.09	.40	.30	.16	24.88
1944	.42	1.26	.55	.48	.91	2.58	3.76	1.80	1.66	.61	.24	1.25	15.32
1945	.72	1.77	3.08	2.40	1.78	4.88	2.76	3.93	1.72	.73	.47	.24	24.46
1946	.35	1.10	2.52	3.19	2.19	3.60	1.80	2.63	2.03	.56	1.10	.43	21.50
1947	.84	.65	.88	1.63	1.40	2.87	2.99	2.09	1.09	.89	.44	.50	16.07
1948	.34	2.22	1.18	.89	1.94	6.42	3.86	3.58	3.16	1.19	.43	.17	25.38
1949	.27	.89	.88	3.04	2.74	2.84	2.59	2.12	.48	.17	.14	.16	16.32
1950	.16	.26	.79	1.51	1.49	3.53	2.76	2.79	1.98	.55	.62	.36	16.40

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1904	124, 165	-	-	-	-	-	-	-	-
1905	165	#5,240	Apr. 6, 1905*	-	#684	*1.71	#23.14	#699	#25.65
1920	501, 1201	*11,000	Mar. 14, 1920*	-	*1,070	*2.64	*35.85	*1,121	*37.55
1921	521, 1201	8,900	Dec. 15, 1920	61	*850	*2.09	*28.43	-	-
1929	681	6,110	Feb. 8, 1929	72	737	1.82	24.65	706	23.63
1930	696, 1201	3,710	Mar. 26, 1930	47	384	.946	12.85	*360	*12.04
1931	711, 1201	*5,140	Mar. 30, 1931	*40	*491	*1.21	*16.42	*485	*16.23
1932	726, 1201	*5,620	Mar. 29, 1932	*35	*395	*.968	*13.18	*593	*19.88
1933	741	7,000	Nov. 11, 1932	25	788	1.94	26.30	642	21.44
1934	756	*9,720	Mar. 6, 1934	35	694	1.73	23.49	809	27.58
1935	781, 801	*8,600	Jan. 10, 1935	26	693	1.73	23.45	540	18.25
1936	801	23,900	Mar. 12, 1936	36	763	1.90	25.91	931	31.62
1937	821	*7,140	Dec. 20, 1936	46	815	2.03	27.58	868	29.37
1938	851	52,200	Sept. 21, 1938	76	1,243	3.10	42.10	1,212	41.05
1939	871	4,890	Dec. 7, 1939	48	784	1.96	26.53	694	23.48
1940	891	9,240	Jan. 15, 1940	60	822	2.05	27.89	805	27.31
1941	921	10,000	Feb. 8, 1941	40	519	1.29	17.60	452	15.31
1942	951	8,160	Mar. 10, 1942	41	511	1.27	17.31	634	21.49
1943	971	8,610	Dec. 31, 1942	35	734	1.83	24.88	617	20.89
1944	1001	6,590	Apr. 25, 1944	31	452	1.13	15.32	549	18.64
1945	1051	6,030	Jan. 2, 1945	54	722	1.80	24.46	676	22.88
1946	1051	3,670	June 3, 1946	66	635	1.58	21.50	587	19.90
1947	1081	3,670	Apr. 6, 1947	43	474	1.18	16.07	515	17.44
1948	1111	7,570	Mar. 21, 1948	25	748	1.87	25.38	698	23.68
1949	1141	3,850	Jan. 7, 1949	19	482	1.20	16.32	457	15.49
1950	1171	3,740	Mar. 24, 1950	19	485	1.21	16.40	-	-

\* Revised.

\* Not previously published.

## 203. 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 1 $\frac{1}{4}$  miles west of Southbridge.

Drainage area--93.8 sq mi.

Gage--Water-stage recorder. Datum of gage is 537.66 ft above mean sea level, unadjusted (levels by Corps of Engineers).

Average discharge--11 years (1939-50), 141 cfs.

Extremes--1939-50: Maximum discharge, 1,500 cfs Mar. 22, 1948 (gage height, 6.93 ft); minimum daily, 2.2 cfs June 26, 1949.

Remarks--Flow regulated by mills and reservoirs above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	-	-	48.8
1940	52.6	95.0	105	131	101	196	799	245	240	115	57.2	57.1	182
1941	35.3	92.1	118	114	194	152	156	96.7	100	51.6	62.2	54.0	101
1942	37.7	45.8	63.8	79.6	101	463	176	117	86.4	98.9	66.6	63.0	116
1943	52.9	124	181	198	219	446	210	333	130	65.8	56.9	55.6	171
1944	44.5	110	90.2	52.1	72.2	179	329	149	124	64.8	43.0	65.6	110
1945	65.1	76.2	158	179	145	420	206	348	215	105	87.2	72.2	174
1946	67.9	91.5	199	268	213	313	147	198	213	76.2	82.3	72.3	162
1947	97.9	68.2	70.6	125	179	265	263	201	135	68.3	49.9	61.1	131
1948	40.6	121	86.1	72.9	105	497	318	277	443	204	72.3	34.7	189
1949	30.5	92.4	72.5	235	207	203	197	141	67.5	23.1	24.8	24.1	109
1950	27.0	21.4	44.2	81.1	121	256	267	191	135	64.2	49.2	44.6	108

Monthly and yearly runoff, in inches, of Quinebaug River at Westville, Mass.												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
The year												
1939	-	-	-	-	-	-	-	-	-	0.61	0.58	-
1940	0.65	1.13	1.29	1.61	1.16	2.44	9.50	3.01	2.96	1.41	.70	.68
1941	.43	1.10	1.46	1.40	2.15	1.87	1.86	1.19	1.19	.63	.78	.64
1942	.46	.54	.78	.98	1.12	5.69	2.09	1.44	1.03	1.09	.82	.75
1943	.65	1.48	2.22	2.43	2.43	5.49	2.50	4.09	1.55	.81	.70	.42
1944	.55	1.31	1.11	.64	.83	2.21	3.92	1.83	1.48	.80	.53	.78
1945	.80	.91	1.95	2.19	1.61	5.16	2.44	4.28	2.56	1.29	1.07	.86
1946	.83	1.09	2.45	3.30	2.36	3.85	1.75	2.44	2.54	.94	1.01	.86
1947	1.20	.81	.87	1.54	1.99	3.26	3.12	2.46	1.58	.84	.61	.73
1948	.50	1.44	1.06	.90	1.20	6.11	3.78	3.40	5.27	2.51	.89	.41
1949	.38	1.10	.89	2.88	2.30	2.50	2.34	1.74	.80	.28	.31	.29
1950	.53	.25	.54	1.00	1.34	3.14	3.18	2.35	1.60	.79	.60	.53

Yearly discharge, in cubic feet per second									
Year	W.S.P. no.	Water year ending Sept. 30.					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	891	-	-	-	-	-	-	-	-
1940	891	1,450	Apr. 13, 1940	18	182	1.94	26.44	182	26.36
1941	921	559	Feb. 8, 1941	20	101	1.08	14.68	93.2	13.47
1942	951	820	Mar. 10, 1942	16	116	1.24	16.79	134	19.36
1943	971	740	Mar. 20, 21, 1943	12	171	1.82	24.77	162	23.39
1944	1001	748	Apr. 26, 1944	8.5	110	1.17	15.99	115	16.68
1945	1031	546	Mar. 7, 1945	31	174	1.86	25.12	179	25.83
1946	1051	712	Mar. 9, 1946	34	162	1.73	23.42	152	21.93
1947	1081	625	Mar. 16, 1947	35	151	1.40	19.01	132	19.15
1948	1111	1,500	Mar. 22, 1948	16	189	2.01	27.47	185	26.84
1949	1141	497	Jan. 7, 1949	2.2	109	1.16	15.81	101	14.56
1950	1171	569	Mar. 30, 1950	9.6	108	1.15	15.65	-	-

## 204. Quinebaug River at Quinebaug, Conn.

Location.--Lat 42°01'20" long. 71°57'22" on right bank at Quinebaug, Windham County, 500 ft upstream from bridge on State Highway 197, a quarter of a mile downstream from Massachusetts-Connecticut State line, and 7.8 miles upstream from French River.

Drainage area.--157 sq mi.

Gage.--Water-stage recorder. Datum of gage is 341.52 ft above mean sea level, datum of 1929.

Average discharge.--19 years (1931-50), 258 cfs.

Extremes.--1931-50: 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; minimum daily, 2 cfs Aug. 21, 28, Sept. 4, 1932; minimum gage height, 1.74 ft Aug. 12, 1940.

Remarks.--Flow regulated by mills above station.

Monthly and yearly mean discharge, in cubic feet per second												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
The year												
1932	55.3	49.4	86.9	207	211	304	477	152	90.6	51.6	60.9	115
1933	202	483	226	265	331	559	892	200	123	64.5	64.8	340
1934	189	156	200	375	135	528	620	343	222	76.4	71.0	192
1935	267	284	332	469	282	602	455	245	314	157	82.1	88.6
1936	35.5	72.4	88.4	325	177	1,669	575	287	112	60.7	53.2	79.9
1937	141	115	557	592	378	374	456	329	159	107	132	168
1938	173	496	468	486	388	324	306	256	342	700	329	1,296
1939	302	236	444	260	379	540	650	192	*79.6	*49.1	*98.7	*91.0
1940	86.0	208	212	*259	*184	361	1,239	378	*375	183	*75.9	*76.6
1941	*49.6	*181	*238	*212	*339	*273	*278	*167	*135	*91.2	*82.6	*64.5
1942	*40.0	66.5	127	*190	*240	784	266	167	134	118	*82.7	*66.1
1943	69.3	219	336	*327	380	709	343	529	182	70.2	58.7	*40.2
1944	65.6	214	118	73.9	125	334	574	238	192	84.5	51.1	123
1945	100	151	300	327	228	689	347	563	307	142	105	73.9
1946	71.8	139	338	458	361	541	244	310	354	*98.4	153	109
1947	187	101	121	244	314	461	439	333	*193	*107	96.7	108
1948	59.3	240	168	149	256	817	497	432	643	312	96.6	40.8
1949	37.6	142	*142	410	364	342	319	*199	*80.3	*27.7	29.7	30.7
1950	30.7	54.4	84.0	176	216	445	462	300	191	85.1	71.9	59.0

\* Revised.

Monthly and yearly runoff, in inches, of Quinebaug River at Quinebaug, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1932	0.41	0.35	0.64	1.52	1.44	2.24	3.59	1.12	0.64	0.38	0.45	0.82	13.40
1933	1.49	3.44	1.66	1.95	2.20	4.10	6.34	1.46	.87	.47	.48	2.42	26.88
1934	1.38	1.11	1.46	2.76	.90	3.87	4.41	2.51	1.57	.56	.52	1.36	22.41
1935	1.96	2.02	2.43	3.45	1.87	4.42	3.22	1.80	2.23	1.15	.60	.63	25.78
1936	.26	.51	.65	2.39	1.22	12.22	4.08	2.11	.80	.45	.39	.57	25.65
1937	1.04	.82	4.09	4.35	2.51	2.74	3.24	2.42	1.13	.79	.97	1.19	25.29
1938	1.27	3.53	3.58	3.57	2.57	2.38	2.18	1.86	2.43	5.14	2.42	9.20	40.15
1939	2.21	1.67	3.26	1.91	2.51	3.97	4.62	1.41	*.57	*.36	*.73	*.65	*23.87
1940	.63	1.47	1.56	*1.90	*1.26	2.65	8.80	2.78	*2.67	1.35	*.56	*.54	*26.17
1941	*.36	*1.28	*1.75	*1.56	*2.25	*2.01	*1.98	*1.22	*.95	*.67	*.61	*.46	*15.11
1942	*.29	.47	.93	*1.40	*1.59	5.75	2.03	1.22	.95	.85	*.61	*.47	*16.56
1943	.51	1.55	2.47	*2.40	2.52	5.21	2.43	3.88	1.29	.32	.43	*.29	*23.50
1944	.48	1.52	.87	.54	.86	2.46	4.08	1.75	1.36	.62	.37	.87	15.78
1945	.73	1.07	2.20	2.40	1.51	5.06	2.47	4.14	2.19	1.04	.77	.53	24.11
1946	.53	.99	2.48	3.37	2.40	3.98	1.73	2.27	2.51	.72	1.12	.77	22.87
1947	1.37	.72	.89	1.79	2.08	3.39	3.12	2.44	*1.37	*.79	.71	.75	*19.42
1948	.44	1.71	1.23	1.09	1.76	6.00	3.54	3.17	4.57	2.29	.71	.29	26.80
1949	.28	1.01	*1.04	5.01	2.42	2.51	2.26	*1.46	*.57	*.20	.22	.22	*15.20
1950	.23	.24	.62	1.29	1.44	3.26	3.28	2.20	1.35	.62	.53	.42	15.49

\* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1932	741	1,280	Apr. 1, 1932	2	155	0.987	13.40	214	18.59
1933	741	1,800	Sept. 17, 1933	3	311	1.98	26.88	281	24.24
1934	756	2,310	Mar. 5, 1934	5	260	1.66	22.41	288	24.87
1935	781	2,140	Jan. 10, 1935	3	298	1.90	25.78	240	20.79
1936	801, 851	10,500	Mar. 18, 1936	6	296	1.89	25.65	348	30.18
1937	821	2,280	Dec. 20, 1936	14	292	1.86	25.29	321	27.72
1938	851	14,100	Sept. 21, 1938	13	464	2.96	40.15	450	38.91
1939	871, 1201	1,700	Feb. 15, 1939	*13	*276	*1.76	*23.87	*236	*20.39
1940	891, 1201	2,550	Mar. 31, 1940	*21	*302	*1.92	*26.17	*302	*26.17
1941	921, 1201	*1,210	Feb. 8, 1941	18	*175	*1.11	*15.11	*155	*13.41
1942	951, 1201	2,110	Mar. 9, 1942	*7	*192	*1.22	*16.56	*225	*19.40
1943	971, 1201	1,340	Dec. 31, 1942	11	*272	*1.73	*23.50	*253	*21.84
1944	1001	1,460	Apr. 25, 1944	12	182	1.16	15.78	195	16.91
1945	1031	1,560	Jan. 1, 1945	27	279	1.78	24.11	279	24.11
1946	1051	1,490	Sept. 30, 1946	30	265	1.69	22.87	253	21.85
1947	1081, 1201	1,380	Mar. 15, 1947	*24	*225	*1.43	*19.42	*229	*19.42
1948	1111	2,370	Mar. 22, 1948	11	309	1.97	26.80	*297	*25.75
1949	1141, 1201	1,020	Jan. 6, 1949	12	*176	*1.12	*15.20	161	*13.96
1950	1171	1,020	Mar. 29, 1950	15	179	1.14	15.49	-	-

\* Revised.

## 205. 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.

Gage.--Water-stage recorder. Datum of gage is 457.00 ft above mean sea level, unadjusted [levels by Corps of Engineers].

Average discharge.--11 years (1939-50), 40.2 cfs.

Extremes.--1939-50: Maximum discharge, 516 cfs (revised) Apr. 13, 1940 (gage height, 5.35 ft); minimum, 0.5 cfs Nov. 28, 29, 1949, July 30, 1950; minimum daily, 0.5 cfs Nov. 28, 1949.

Remarks.--Flow regulated by mill above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	17.3	11.2	-
1940	10.3	50.6	31.8	47.3	33.1	63.6	*243	76.1	55.8	32.6	10.7	8.02	*55.0
1941	5.75	30.5	37.9	42.5	45.1	42.1	51.9	27.3	18.4	13.5	9.53	7.73	27.5
1942	5.33	8.58	13.7	23.5	25.6	148	57.8	26.4	22.3	17.8	14.1	20.4	32.0
1943	11.2	32.1	52.9	41.7	55.9	119	72.9	94.6	37.5	14.8	12.8	6.77	46.0
1944	7.62	35.2	33.4	8.01	16.1	51.5	99.2	39.9	37.8	12.0	4.21	23.6	26.7
1945	13.5	28.6	51.7	60.3	48.8	136	64.7	105	64.6	21.3	12.5	4.92	51.1
1946	4.52	27.3	57.1	83.6	62.1	115	40.8	*51.9	64.9	15.3	26.1	7.03	46.3
1947	17.7	12.4	22.0	44.3	58.6	-81.2	80.1	67.9	41.3	19.1	7.01	16.7	38.9
1948	5.29	39.8	27.7	24.4	47.3	*153	89.7	71.6	103	56.6	10.3	8.05	*53.0
1949	5.69	27.5	22.9	71.9	77.1	63.8	55.5	33.3	9.64	6.71	3.83	2.38	31.4
1950	2.43	2.82	9.15	26.0	38.5	85.4	86.1	55.2	30.5	11.6	14.6	12.1	31.0

\* Revised.

Monthly and yearly runoff, in inches, of Little River at Buffumville, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	0.72	0.45	-	-
1940	0.43	2.04	1.32	1.97	1.29	2.65	*9.79	3.17	2.25	1.36	.45	.32	*27.04
1941	.24	1.23	1.58	1.77	1.69	1.75	2.09	1.14	.74	.56	.40	.31	13.50
1942	.22	.35	.57	.98	.96	6.14	2.33	1.10	.90	.74	.59	.82	15.70
1943	.47	1.29	2.20	1.73	2.10	4.94	2.93	3.94	1.51	.61	.54	.27	22.53
1944	.32	1.34	.58	.33	.63	2.14	4.00	1.66	1.52	.50	.18	.95	14.13
1945	.56	1.15	2.15	2.51	1.84	5.67	2.61	4.36	2.60	.88	.52	.20	25.05
1946	.19	1.10	2.38	3.48	2.33	4.80	1.64	2.16	2.62	.64	1.09	.28	22.71
1947	.74	.50	.91	1.84	2.20	3.38	3.22	2.83	1.66	.79	.29	.67	19.03
1948	.22	1.60	1.15	1.01	1.84	*6.39	3.61	2.98	4.15	2.36	.43	.32	*26.06
1949	.24	1.11	.95	2.39	2.90	2.66	2.23	1.38	.39	.28	.16	.10	15.39
1950	.10	.11	.38	1.04	1.45	3.55	3.47	2.30	1.23	.48	.61	.49	15.21

\* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1939	891	-	-	-	-	-	-	-	-	-
1940	891,1201	*516	Apr. 13, 1940	0.9	*55.0	*1.99	*27.04	*53.5	*26.30	-
1941	921	168	Feb. 9, 1941	.9	27.5	.995	13.50	23.7	11.59	-
1942	951	502	Mar. 10, 1942	.9	32.0	1.16	15.70	37.8	18.52	-
1943	971	264	Dec. 4, 1942	1.4	45.0	1.68	22.53	42.4	20.79	-
1944	1001	337	Apr. 25, 1944	1.7	28.7	1.04	14.13	32.1	15.77	-
1945	1031	331	Jan. 2, 1945	1.1	51.1	1.84	25.05	50.7	24.86	-
1946	1051	334	Mar. 8, 1946	1.1	46.3	1.67	22.71	43.2	21.19	-
1947	1081	255	Mar. 15, 1947	1.3	38.9	1.40	19.03	40.6	19.85	-
1948	1111,1201	*448	Mar. 22, 1948	1.4	*53.0	*1.91	*26.06	*51.7	*25.39	-
1949	1141	181	Jan. 7, 1949	.8	31.4	1.13	15.39	27.9	13.68	-
1950	1171	208	Apr. 21, 1950	.5	31.0	1.12	15.21	-	-	-

\* Revised.

## 206. 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.

Gage.--Water-stage recorder. Datum of gage is 406.74 ft above mean sea level, datum of 1929.

Extremes.--1949-50: Maximum discharge, 516 cfs Mar. 30, 1950 (gage height, 6.67 ft); minimum daily, 4.5 cfs July 2, 1949.

Maximum discharge known, 4,700 cfs Mar. 19, 1936, by computation of flow over dam about half a mile upstream.

Remarks.--Flow regulated by mills and by Lake Chaubunagungamaug (estimated usable capacity, 207,000,000 cu ft), and other smaller reservoirs above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1949	-	-	-	188	220	205	186	120	52.9	29.8	32.3	27.8	-
1950	26.3	27.2	36.2	77.9	117	222	234	149	94.9	46.4	50.4	41.3	93.3

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1949	-	-	-	2.54	2.69	2.77	2.44	1.63	0.69	0.40	0.44	0.36	-
1950	0.36	0.36	0.49	1.05	1.43	3.00	3.07	2.01	1.24	.63	.68	.54	14.86

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1949	1141	506	Jan. 8, 1949	-	-	-	-	95.2	15.17	-
1950	1171	516	Mar. 30, 1950	4.8	93.3	1.09	14.86	-	-	-



## 207. Quinebaug River at Putnam, Conn.

Location.--Lat 41°54'34", long. 71°54'48", on left bank at Putnam, Windham County, 600 ft downstream from Little River and 3 miles downstream from French River.

Drainage area.--331 sq mi.

Gage.--Water-stage recorder. Datum of gage is 216.76 ft above mean sea level, datum of 1929.

Average discharge.--21 years (1929-50), 534 cfs.

Extremes.--1929-50: Maximum discharge, 20,900 cfs Sept. 21, 1938 (gage height, 19.45 ft, from floodmarks), by computation of flow over dam 1 mile upstream and over dam on Little River 2 miles upstream from its mouth; minimum, 8.5 cfs Oct. 26, 1935; minimum daily, 11 cfs Oct. 5, 12, 1930.

Remarks.--City of Putnam diverts an average of less than 1 million gallons per day from Little River for municipal supply. Large diurnal fluctuation, particularly during low flow, is 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.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	#95	#130	#240	386	457	613	554	282	216	114	77.8	72.3	#269
1931	65.7	101	115	146	245	1,050	1,010	622	883	247	192	141	400
1932	130	108	182	443	438	683	963	340	200	134	152	295	338
1933	499	1,070	486	564	697	1,220	1,910	483	281	182	149	662	680
1934	438	322	405	835	318	1,180	1,370	796	443	179	163	388	571
1935	623	580	729	1,074	683	1,275	1,031	535	629	312	166	216	654
1936	127	161	225	708	435	3,627	1,410	654	257	150	127	208	677
1937	345	263	1,258	1,289	847	815	936	655	357	238	248	343	633
1938	381	1,059	1,047	1,097	911	748	683	509	700	773	686	2,276	988
1939	750	580	1,049	602	864	1,245	1,420	448	195	113	197	161	634
1940	173	439	436	570	377	846	2,788	887	797	415	162	156	668
1941	118	472	515	444	678	543	588	380	293	212	181	129	376
1942	87.1	165	231	357	457	1,657	651	355	259	231	192	144	399
1943	167	450	771	652	825	1,408	756	1,092	379	163	136	89.5	573
1944	141	408	224	144	265	693	1,103	470	353	156	90.4	273	359
1945	187	338	623	668	500	1,440	680	1,090	633	250	184	143	563
1946	133	301	672	917	749	1,098	480	653	736	187	383	214	543
1947	322	210	270	509	822	976	905	692	435	237	172	201	462
1948	119	516	349	315	593	1,831	1,076	880	1,200	580	185	98.6	645
1949	97.6	317	283	793	807	781	720	472	171	61.4	68.5	72.3	384
1950	69.5	89.1	171	361	488	941	979	675	422	168	176	139	389

\* Not previously published; estimated on basis of records for nearby streams.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	#0.33	#0.44	#0.84	1.35	1.44	2.13	1.86	0.98	0.73	0.40	0.27	0.24	#11.01
1931	.23	.34	.40	.51	.77	3.58	3.40	2.17	2.98	.86	.67	.48	16.39
1932	.45	.36	.63	1.54	1.42	2.38	3.25	1.19	.67	.47	.53	.99	13.88
1933	1.74	3.60	1.70	1.96	2.20	4.25	6.44	1.68	.95	.63	.52	2.23	27.90
1934	1.52	1.09	1.41	2.90	1.00	4.10	4.62	2.77	1.50	.62	.57	1.30	23.40
1935	2.17	1.95	2.54	3.74	2.14	4.44	3.47	1.87	2.12	1.09	.58	.73	26.64
1936	.44	.54	.78	2.47	1.41	12.68	4.75	2.28	.87	.52	.44	.70	27.88
1937	1.20	.89	4.38	4.48	2.67	2.84	3.16	2.28	1.20	.83	.86	1.16	25.95
1938	1.33	3.57	3.64	3.82	2.86	2.61	2.30	1.78	2.35	6.18	2.39	7.68	40.51
1939	2.62	1.95	3.66	2.10	2.72	4.34	4.79	1.56	.66	.39	.69	.54	26.02
1940	.60	1.48	1.52	1.98	1.23	2.95	9.39	3.09	2.69	1.44	.56	.53	27.46
1941	.41	1.60	1.80	1.54	2.14	1.89	1.92	1.33	.99	.74	.63	.44	15.43
1942	.30	.56	.80	1.24	1.44	5.78	2.20	1.23	.87	.80	.67	.49	16.38
1943	.58	1.52	2.69	2.27	2.59	4.90	2.54	3.77	1.28	.57	.47	.30	23.48
1944	.49	1.37	.78	.50	.86	2.41	3.72	1.64	1.19	.54	.31	.92	14.73
1945	.65	1.14	2.17	2.33	1.57	5.02	2.29	3.79	2.13	.87	.64	.48	23.08
1946	.46	1.01	2.34	3.19	2.35	3.83	1.62	2.27	2.48	.65	1.34	.72	22.26
1947	1.12	.71	.94	1.78	1.96	3.40	3.05	2.41	1.46	.83	.60	.68	18.94
1948	.42	1.74	1.21	1.10	1.95	6.38	3.63	3.07	4.05	2.02	.84	.33	26.52
1949	.34	1.07	.99	2.77	2.54	2.72	2.43	1.65	.56	.21	.24	.24	15.78
1950	.24	.30	.60	1.26	1.53	3.27	3.50	2.35	1.42	.59	.61	.47	15.94

\* Not previously published; estimated on basis of records for nearby streams.

Yearly discharge, in cubic feet per second, of Quinebaug River at Putnam, Conn.									
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	696	1,330	Mar. 26, 1930	-	#269	#0.813	#11.01	253	10.37
1931	711, 871	*3,930	June 11, 1931	11	400	1.21	16.39	412	16.86
1932	726, 871	*2,640	Apr. 2, 1932	21	338	1.02	13.88	474	19.48
1933	741, 871	*4,130	Sept. 18, 1933	24	680	2.05	27.90	608	24.88
1934	756, 871	6,830	Mar. 6, 1934	16	571	1.75	23.40	636	26.04
1935	781	*5,600	Jan. 10, 1935	16	554	1.98	26.84	555	21.94
1936	801	17,200	Mar. 19, 1936	14	677	2.05	27.88	791	32.59
1937	821	4,350	Dec. 20, 1936	38	633	1.91	25.95	683	28.02
1938	851	20,900	Sept. 21, 1938	71	988	2.98	40.51	980	40.20
1939	871	3,190	Feb. 16, 1939	32	634	1.92	26.02	521	21.39
1940	891	5,710	Apr. 1, 1940	33	668	2.02	27.46	673	27.67
1941	921	2,790	Feb. 8, 1941	30	376	1.14	15.43	323	13.28
1942	951	4,450	Mar. 9, 1942	13	399	1.21	16.36	476	19.51
1943	971	3,600	Dec. 31, 1942	19	573	1.73	23.48	521	21.33
1944	1001	2,950	Apr. 25, 1944	16	359	1.08	14.73	391	16.05
1945	1051	2,790	Jan. 2, 1945	59	563	1.70	23.08	560	22.93
1946	1051	2,490	Mar. 9, 1946	50	543	1.64	22.26	517	21.22
1947	1061	2,200	Mar. 15, 1947	75	462	1.40	18.94	476	19.54
1948	1111	5,290	Mar. 22, 1948	47	645	1.95	26.52	621	25.55
1949	1141	1,820	Jan. 6, 1949	26	364	1.16	15.78	354	14.52
1950	1171	1,950	Mar. 9, 1950	29	389	1.18	15.94	-	-

\* Revised.

# Not previously published.

## 208. Five Mile River at Killingly, Conn.

Location.--Lat 41°50'14" long. 71°53'09", on left bank at northwest abutment of New York, New Haven & Hartford Railroad bridge, five-eighths of a mile south of Killingly, Windham County, and 3.2 miles upstream from mouth.

Drainage area.--58.2 sq mi.

Gage.--Water-stage recorder. Datum of gage is 222.22 ft above mean sea level, datum of 1929.

Average discharge.--13 years (1937-50), 98.4 cfs.

Extremes.--1937-50: Maximum discharge, 2,480 cfs July 24, 1938 (gage height, 8.52 ft); minimum, 3.8 cfs Aug. 24, 1941 (gage height, 0.44 ft); minimum daily, 5.6 cfs Aug. 13, 1939, Aug. 24, 1941, Nov. 24, 1949.

Peak discharge of Mar. 12, 1936, 1,600 cfs, by computation of flow over dam at Danielson.

Remarks.--Flow regulated by dams and reservoirs above station.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1938	#58.1	128	198	175	161	134	119	98.2	154	378	127	192	#160
1939	109	104	174	118	162	237	281	106	66.2	42.0	35.8	29.7	122
1940	28.4	78.7	68.8	82.6	64.8	111	350	151	122	84.8	47.3	35.0	102
1941	25.9	69.6	82.9	78.9	122	102	108	79.2	70.2	53.1	43.9	31.9	71.9
1942	21.5	29.7	36.8	62.9	90.7	254	114	66.8	55.8	56.7	46.0	36.9	72.5
1943	41.8	79.1	172	141	157	234	130	180	73.4	45.6	35.7	26.3	110
1944	28.1	55.3	39.5	31.4	41.9	100	162	95.0	51.9	38.1	30.6	55.4	60.7
1945	45.5	75.6	141	133	111	265	121	186	104	60.7	42.4	32.5	110
1946	31.7	54.6	146	192	150	187	85.9	125	148	45.0	52.8	37.1	104
1947	66.6	45.1	54.2	91.0	106	163	146	130	90.1	42.9	35.2	48.8	84.9
1948	34.3	78.4	69.9	70.1	102	321	208	183	175	76.8	40.6	31.3	116
1949	30.0	63.4	52.4	125	141	139	125	96.4	48.0	29.3	28.3	28.6	75.0
1950	23.5	32.1	53.1	74.1	109	174	166	132	88.7	34.8	39.4	33.7	79.8

\* Not previously published; estimated on basis of records for Quinebaug River at Putnam and Moosup River at Moosup.

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1938	#1.15	2.46	3.92	3.47	2.88	2.65	2.28	1.95	2.96	7.48	2.51	3.68	#37.39
1939	2.16	2.00	3.45	2.34	2.90	4.69	5.39	2.10	1.27	.83	.71	.57	28.41
1940	.56	1.51	1.36	1.64	1.20	2.20	6.70	2.99	2.54	1.68	.94	.67	23.79
1941	.51	1.34	1.64	1.57	2.19	2.02	2.08	1.57	1.35	1.05	.87	.61	16.80
1942	.43	.57	.73	1.24	1.62	5.03	2.19	1.28	1.07	1.12	.91	.71	16.90
1943	.83	.52	3.41	2.79	2.81	4.64	2.49	3.56	1.41	.90	.71	.50	25.57
1944	.56	1.06	.78	.62	.78	1.98	3.10	1.88	1.00	.76	.61	1.06	14.19
1945	.90	1.45	2.79	2.64	1.99	5.25	2.32	3.69	2.00	1.20	.84	.62	25.69
1946	.63	1.05	2.89	3.80	2.69	3.70	1.65	2.48	2.83	.89	1.05	.71	24.37
1947	1.31	.86	1.07	1.80	1.90	3.23	2.80	2.57	1.73	.85	.70	.94	19.76
1948	.68	1.51	1.38	1.38	1.89	6.36	3.98	3.62	3.36	1.52	.80	.60	27.08
1949	.59	1.22	1.04	2.48	2.52	2.76	2.40	1.91	.92	.58	.56	.55	17.53
1950	.47	.62	1.05	1.46	1.95	3.45	3.18	2.62	1.70	.69	.78	.65	18.62

\* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Five Mile River at Killingly, Conn.

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1938	921	2,480	July 24, 1938	#10	#160	#2.75	#37.39	161	37.47
1939	921, 951	552	Apr. 20, 1939	5.6	122	2.10	28.41	104	24.23
1940	921, 951	552	Apr. 13, 1940	9.2	102	1.75	23.79	102	23.85
1941	921, 951	534	Feb. 8, 1941	5.6	71.9	1.24	16.80	64.3	15.04
1942	951	570	Mar. 10, 1942	6.8	72.5	1.25	16.90	89.7	20.93
1943	971	706	Dec. 2, 1942	11	110	1.89	25.57	95.4	22.21
1944	1001	530	Apr. 25, 1944	7.4	60.7	1.04	14.19	72.4	16.93
1945	1031	451	Mar. 7, 1945	10	110	1.89	25.69	108	25.12
1946	1051	378	Jan. 8, 1946	5.8	104	1.79	24.37	98.9	23.04
1947	1081	352	Apr. 7, 1947	5.9	84.9	1.46	19.76	86.2	20.09
1948	1111	832	Mar. 22, 1948	6.6	116	1.99	27.08	113	26.36
1949	1141	308	Mar. 24, 1949	6.3	75.0	1.29	17.53	72.0	16.82
1950	1171	378	Mar. 24, 1950	5.6	79.8	1.37	18.62	-	-

\* Not previously published.

## 209. 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 & Hartford Railroad bridge and 4 miles upstream from mouth.

Drainage area.--83.5 sq mi.

Gage.--Water-stage recorder. Datum of gage is 196.64 ft above mean sea level, datum of 1929.

Average discharge.--18 years (1932-50), 156 cfs.

Extremes.--1932-50: 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 1,000 cfs on basis of computation of flow over dam a quarter of a mile above station at gage heights 6.9 and 8.2 ft; minimum, 0.1 cfs Feb. 8, 1934; minimum daily discharge, 1.1 cfs Aug. 24, 1949.

Remarks.--Low flow completely regulated by mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1933	#255	418	173	177	224	409	439	143	135	36.1	31.5	101	#209
1934	96.6	89.6	129	233	74.4	334	405	223	91.0	30.8	26.1	115	154
1935	132	124	268	350	224	297	269	132	109	56.3	18.9	35.0	168
1936	22.8	53.2	55.6	219	89.3	762	341	128	62.2	29.6	19.9	60.2	154
1937	65.3	51.5	376	320	232	242	261	187	91.1	39.4	50.5	68.1	165
1938	70.5	271	270	264	234	225	195	144	177	571	189	157	231
1939	122	159	270	178	313	383	383	121	51.9	26.1	34.7	63.8	175
1940	67.7	178	171	182	121	310	489	226	177	94.4	41.8	32.4	174
1941	35.4	150	138	128	229	167	143	107	104	48.5	38.7	17.3	108
1942	15.4	37.6	120	126	439	151	91.7	67.2	102	65.2	30.2		114
1943	57.4	149	358	204	298	312	194	228	69.9	34.6	24.9	12.5	161
1944	40.8	98.4	55.9	60.0	105	245	268	129	82.1	31.5	15.3	122	104
1945	67.4	216	276	218	199	406	185	254	115	64.8	30.6	20.1	171
1946	22.9	113	309	289	231	268	127	180	148	36.0	148	56.8	161
1947	83.5	46.7	85.3	147	135	280	254	224	97.9	55.8	29.6	38.9	123
1948	27.6	188	102	108	253	477	314	354	244	78.8	46.4	19.6	184
1949	52.0	131	132	253	237	238	235	180	46.8	19.3	17.3	34.9	127
1950	25.0	57.1	150	199	259	235	183	122	26.7	36.9	30.3		119

\* Not previously published; estimated on basis of records for station on Yantic River at Yantic, Conn.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1933	#3.24	5.59	2.39	2.44	2.79	5.65	5.87	1.97	1.81	0.50	0.43	1.35	#33.98
1934	1.34	1.19	1.78	3.22	.93	4.61	5.41	3.08	1.22	.43	.36	1.54	25.11
1935	1.82	1.66	3.70	4.83	2.79	4.10	3.59	1.82	1.46	.78	.26	.47	27.28
1936	.31	.71	.77	3.02	1.15	10.53	4.55	1.76	.83	.41	.27	.80	25.11
1937	.90	.69	5.19	4.42	2.90	3.34	5.49	2.59	1.22	.54	.70	.91	26.88
1938	.97	3.63	3.72	3.64	2.92	3.10	2.61	1.98	2.36	7.89	2.61	2.10	37.53
1939	1.68	2.12	3.72	2.46	3.90	5.29	5.12	1.67	.69	.39	.48	.65	28.37
1940	.94	2.38	2.36	2.51	1.56	4.28	6.54	3.12	2.36	1.30	.58	.43	28.36
1941	.49	2.01	1.90	1.76	2.85	2.31	1.91	1.46	1.40	.67	.53	.23	17.54
1942	.18	.50	.82	1.66	2.45	6.06	2.02	1.27	.90	1.41	.90	.40	18.57
1943	.79	1.99	4.90	2.81	3.72	4.31	2.59	3.12	.93	.48	.34	.17	26.15
1944	.56	1.32	.77	.83	1.36	3.38	5.58	1.78	1.10	.43	.21	1.65	16.95
1945	.93	2.89	3.82	3.01	2.48	5.80	2.48	3.50	1.54	.89	.42	.27	27.83
1946	.32	1.51	4.27	3.99	2.88	3.70	1.70	2.49	1.98	.50	2.04	.76	26.14
1947	1.15	.62	1.18	2.03	1.69	3.86	3.39	3.09	1.30	.77	.41	.52	20.01
1948	.38	2.51	1.41	1.49	3.27	6.58	4.20	4.89	3.28	1.09	.64	.28	29.98
1949	.44	1.75	1.82	3.49	2.96	3.29	3.14	2.21	.65	.27	.24	.47	20.73
1950	.34	.76	1.58	2.08	2.48	3.57	3.14	2.52	1.63	.40	.51	.40	19.41

\* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second, of Moosup River at Moosup, Conn.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1933	741, 851	1,600	Nov. 11, 1932	#3.5	#209	#2.50	#33.98	167	27.12
1934	756, 851	1,630	Apr. 12, 1934	1.7	154	1.84	25.11	172	27.98
1935	781, 851	2,550	Jan. 10, 1935	2.2	168	2.01	27.28	135	21.89
1936	851	4,260	Mar. 12, 1936	3.0	154	1.84	25.11	185	30.10
1937	851	1,460	Dec. 20, 1936	5.5	165	1.98	26.88	175	28.42
1938	851	4,160	July 24, 1938	9.2	231	2.77	37.53	226	36.73
1939	871	845	Apr. 7, 1939	4.0	175	2.10	28.37	163	26.53
1940	891	1,290	Jan. 15, 1940	2.7	174	2.08	28.36	166	27.08
1941	921	1,560	Feb. 8, 1941	1.4	108	1.29	17.54	90.1	14.64
1942	951	1,350	Mar. 9, 1942	1.4	114	1.37	18.57	152	24.75
1943	971	2,250	Dec. 2, 1942	2.4	161	1.93	26.15	130	21.12
1944	1001	1,080	Sept. 15, 1944	2.1	104	1.25	16.95	134	21.94
1945	1031	1,050	Jan. 2, 1945	4.4	171	2.05	27.83	162	26.29
1946	1051	900	Dec. 8, 1945	4.9	161	1.93	26.14	141	22.99
1947	1081	740	Apr. 7, 1947	8.3	123	1.47	20.01	132	21.36
1948	1111	1,660	Mar. 17, 1948	2.8	184	2.20	29.98	182	29.69
1949	1141	740	May 23, 1949	1.1	127	1.52	20.73	119	19.40
1950	1171	805	Mar. 24, 1950	1.7	119	1.43	19.41	-	-

\* Not previously published.

## 210. Quinebaug River at Jewett City, Conn.

Location.--Lat 41°35'52", long. 71°59'05", on left bank at Jewett City, New London County, 570 ft downstream from outlet of canal from Slater Mills at mouth of Pachaug River and 1,000 ft downstream from railroad bridge.

Drainage area.--711 sq mi.

Gage.--Water-stage recorder. Datum of gage is 63.07 ft above mean sea level, datum of 1929.

Average discharge.--32 years (1918-50), 1,201 cfs.

Extremes.--1918-50: Maximum discharge, 29,200 cfs Mar. 19, 1936 (gage height, 24.0 ft, from floodmarks), by computation of flow over three nearby dams; minimum daily, 18 cfs Aug. 28, Dec. 11, 1949.

Remarks.--Flow regulated by many ponds and reservoirs above station, the largest of which are Lake Chaubunagungamaug and Pachaug Pond.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1918	-	-	-	-	-	-	-	-	-	-	537	902	-
1919	674	863	1,200	1,840	1,230	3,220	2,710	1,970	792	683	1,410	1,410	1,430
1920	810	1,290	1,820	719	917	5,080	3,200	2,410	2,190	1,010	625	420	1,710
1921	559	954	2,040	1,530	1,060	2,570	1,970	1,690	792	1,230	723	500	1,310
1922	329	701	1,410	827	970	2,500	2,390	1,820	1,350	1,390	1,020	1,740	1,340
1923	804	679	820	1,940	1,160	3,050	2,390	1,780	712	475	418	304	1,200
1924	549	927	2,190	2,110	1,050	1,500	3,290	1,780	751	373	362	407	1,270
1925	308	273	447	315	1,510	1,800	1,310	854	508	484	486	347	715
1926	418	705	1,200	998	1,380	2,260	1,890	996	564	337	439	245	950
1927	367	1,050	993	1,630	1,580	2,020	1,120	1,080	822	409	799	622	1,040
1928	1,080	2,910	2,910	1,660	2,190	1,540	1,840	1,500	1,160	1,100	721	682	1,600
1929	610	610	786	1,590	1,550	2,710	2,830	2,410	738	384	275	201	1,220
1930	207	282	496	932	1,140	1,360	1,180	620	460	238	151	143	598
1931	132	241	281	449	714	2,240	2,040	1,550	1,730	561	453	334	893
1932	227	235	429	1,123	1,105	1,524	2,174	849	470	298	363	861	802
1933	1,370	2,750	1,220	1,320	1,570	2,870	3,790	1,170	790	334	316	1,110	1,540
1934	814	683	864	1,858	795	2,640	3,178	1,915	976	379	350	778	1,272
1935	1,195	1,077	1,779	2,579	1,723	2,578	2,096	1,094	1,162	621	338	399	1,366
1936	237	315	528	1,498	960	6,930	2,913	1,255	611	354	297	487	1,371
1937	611	550	2,683	2,791	1,900	1,899	2,071	1,447	831	508	562	763	1,384
1938	737	1,987	2,251	2,210	1,995	1,656	1,495	1,102	1,421	4,110	1,624	3,502	2,007
1939	1,423	1,249	2,226	1,353	2,129	2,964	3,239	1,075	560	333	375	418	1,441
1940	413	1,026	942	1,108	815	1,891	4,869	1,798	1,614	916	400	345	1,341
1941	329	1,012	1,069	964	1,585	1,220	1,221	902	760	488	431	299	851
1942	190	346	510	787	1,185	3,597	1,375	785	595	582	478	307	895
1943	416	972	2,090	1,684	2,015	2,838	1,642	2,100	809	361	341	229	1,290
1944	309	763	468	357	631	1,542	2,190	1,098	804	408	222	653	784
1945	493	1,014	1,700	1,617	1,274	3,186	1,512	2,228	1,257	641	410	317	1,307
1946	279	683	1,702	2,122	1,724	2,244	1,047	1,409	1,530	448	865	482	1,210
1947	670	414	573	1,008	1,158	1,867	1,844	1,489	908	463	373	432	932
1948	284	1,100	797	765	1,434	3,871	2,550	2,380	2,439	1,103	463	246	1,450
1949	259	744	718	1,801	1,873	1,849	1,754	1,250	499	186	198	245	940
1950	183	293	532	957	1,315	2,031	2,067	1,621	1,139	415	450	332	940

Monthly and yearly runoff, in inches, of Quinebaug River at Jewett City, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1918	-	-	-	-	-	-	-	-	-	-	0.87	1.42	-
1919	1.09	1.35	1.95	2.99	1.80	5.22	4.25	3.19	1.24	1.11	.82	2.21	27.22
1920	1.31	2.02	2.95	1.16	1.39	8.23	5.02	3.91	3.44	1.64	1.01	.66	32.74
1921	.91	1.50	3.31	2.48	1.55	4.16	3.09	2.74	1.24	1.99	1.18	.78	24.93
1922	.53	1.10	2.28	1.02	1.42	4.06	3.75	2.63	2.12	2.25	1.65	2.73	25.54
1923	1.30	1.07	1.01	3.15	1.70	4.95	3.75	2.88	1.12	.77	.68	.48	22.86
1924	.89	1.45	3.55	3.42	1.60	2.43	5.17	2.88	1.18	.61	.59	.64	24.41
1925	.50	.43	.73	.51	2.21	2.92	2.05	1.38	.80	.79	.79	.54	15.65
1926	.68	1.11	1.95	1.61	2.02	3.67	2.97	1.61	.88	.55	.71	.38	18.14
1927	.59	1.65	1.61	2.64	2.31	3.27	1.76	1.75	1.29	.66	1.29	.98	19.80
1928	1.75	4.56	4.72	2.69	3.32	2.50	2.69	2.43	1.82	1.79	1.16	1.07	30.70
1929	.99	.96	1.28	2.58	2.27	4.39	4.44	3.81	1.16	.62	.45	.32	23.37
1930	.34	.44	.80	1.51	1.67	2.20	1.85	1.01	.72	.59	.24	.22	11.39
1931	.21	.38	.46	.73	1.04	3.63	3.20	2.51	2.71	.91	.73	.52	17.03
1932	.37	.37	.70	1.82	1.67	2.47	3.41	1.37	.74	.48	.59	1.35	15.34
1933	2.22	4.32	1.98	2.14	2.30	4.66	5.95	1.90	1.24	.54	.51	1.74	29.50
1934	1.32	1.07	1.41	3.01	1.17	4.28	4.99	3.10	1.53	.61	.57	1.22	24.27
1935	1.94	1.68	2.88	4.18	2.52	4.18	5.29	1.78	1.82	1.01	.55	.63	26.46
1936	.38	.49	.86	2.43	1.46	11.24	4.57	2.04	.96	.57	.48	.76	26.24
1937	.99	.86	4.35	4.53	2.78	3.08	3.25	2.35	1.30	.82	.91	1.19	26.41
1938	1.20	3.11	3.66	3.58	2.93	2.69	2.54	1.79	2.23	6.66	2.63	5.50	39.32
1939	2.31	1.96	3.61	2.19	3.11	4.81	5.09	1.74	.88	.54	.61	.66	27.51
1940	.67	1.61	1.52	1.80	1.24	3.07	7.64	2.92	2.53	1.49	.65	.54	25.68
1941	.53	1.58	1.73	1.57	2.32	1.98	1.92	1.46	1.19	.79	.70	.47	16.24
1942	.31	.54	.83	1.28	1.74	5.83	2.15	1.27	.94	.94	.77	.48	17.08
1943	.67	1.53	3.39	2.73	2.95	4.80	2.58	3.40	1.27	.59	.55	.36	24.62
1944	.50	1.19	.76	.58	.98	2.50	3.44	1.78	1.26	.66	.36	1.02	15.01
1945	.80	1.60	2.76	2.62	1.86	5.16	2.38	3.61	1.98	1.04	.67	.50	24.98
1946	.45	1.07	2.76	3.44	2.52	3.64	1.64	2.28	2.40	.73	1.41	.76	23.10
1947	1.09	.65	.93	1.64	1.70	3.03	2.69	2.41	1.43	.75	.61	.68	17.61
1948	.43	1.73	1.29	1.24	2.18	6.27	4.00	3.86	3.83	1.79	.75	.39	27.76
1949	.42	1.17	1.16	2.92	2.74	3.00	2.76	1.99	.78	.50	.32	.39	17.95
1950	.50	.46	.86	1.56	1.93	3.50	3.25	2.63	1.78	.67	.70	.52	17.96

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1919	501	*7,350	Apr. 18, 1919	200	1,430	2.01	27.22	1,530	29.11
1920	501	*12,100	Mar. 14, 1920	225	1,710	2.41	32.74	1,680	32.18
1921	521	*6,250	Dec. 15, 1920	-	1,310	1.84	24.93	1,210	23.12
1922	541	*11,600	Mar. 8, 1922	60	1,340	1.88	25.54	1,310	25.01
1923	561	*7,610	Mar. 17, 1923	78	1,200	1.69	22.86	1,330	25.37
1924	581	*9,800	Apr. 8, 1924	49	1,270	1.79	24.41	1,050	20.18
1925	601	*7,090	Feb. 13, 1925	41	715	1.01	13.65	823	15.73
1926	621	*5,770	Mar. 8, 1926	50	950	1.54	18.14	957	18.25
1927	641	3,320	Mar. 22, 1927	48	1,040	1.46	19.60	1,420	26.98
1928	661	12,500	Nov. 5, 1927	135	1,600	2.25	30.70	1,200	22.90
1929	681	6,870	Mar. 7, 1929	50	1,220	1.72	23.37	1,140	21.72
1930	696	3,210	Feb. 14, 1930	28	598	.841	11.39	570	10.86
1931	711	5,550	Mar. 30, 1931	28	893	1.26	17.03	913	17.42
1932	726	6,310	Mar. 29, 1932	32	802	1.13	15.34	1,170	22.42
1933	741	6,750	Nov. 11, 1932	31	1,540	2.17	29.50	1,300	24.77
1934	756	9,800	Mar. 6, 1934	114	1,272	1.79	24.27	1,414	26.98
1935	781	13,100	Jan. 11, 1935	37	1,386	1.95	26.46	1,136	21.69
1936	801	29,200	Mar. 19, 1936	32	1,371	1.93	26.24	1,604	30.71
1937	821	8,520	Dec. 21, 1936	44	1,384	1.95	26.41	1,476	28.18
1938	851	25,000	July 24, 1938	130	2,007	2.82	38.32	2,002	38.23
1939	871	5,770	Mar. 1, 1939	20	1,441	2.03	27.51	1,227	23.43
1940	891	9,400	Apr. 14, 1940	20	1,341	1.89	25.68	1,343	25.72
1941	921	7,150	Feb. 8, 1941	20	851	1.20	16.24	737	14.08
1942	951	8,600	Mar. 10, 1942	20	895	1.26	17.08	1,100	20.99
1943	971	8,660	Dec. 2, 1942	24	1,290	1.81	24.62	1,126	21.48
1944	1001	6,370	Apr. 25, 1944	39	784	1.10	15.01	925	17.72
1945	1031	6,010	Jan. 2, 1945	53	1,507	1.84	24.98	1,262	24.10
1946	1051	4,870	Jan. 8, 1946	55	1,210	1.70	23.10	1,125	21.49
1947	1081	4,230	Apr. 7, 1947	135	932	1.31	17.61	973	15.59
1948	1111	9,460	Mar. 18, 1948	25	1,450	2.04	27.76	1,413	27.06
1949	1141	4,050	Jan. 7, 1949	18	940	1.32	17.95	881	16.82
1950	1171	4,250	Mar. 24, 1950	18	940	1.32	17.96	-	-

\* Revised.

## 211. Yantic River at Yantic, Conn.

Location.--Lat 41°38'31", long. 72°07'19", on left bank 700 ft downstream from stone-arch highway bridge at Yantic, New London County, and 1 mile downstream from Susquehuncut Brook.

Drainage area.--88.6 sq mi.

Gage.--Water-stage recorder. Datum of gage is 94.46 ft above mean sea level, datum of 1929.

Average discharge.--20 years (1930-50), 151 cfs.

Extremes.--1930-50: Maximum discharge, 13,500 cfs Sept. 21, 1938 (gage height, 14.66 ft, from floodmark), by computation of flow over two dams  $2\frac{1}{2}$  miles above and 3 miles below station, respectively; minimum, 2.3 cfs sometime during period July 21 to Aug. 11, 1949; minimum daily, 3.3 cfs Oct. 13, 1930.

Remarks.--Low flow completely regulated by mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	8.92	31.6	34.7	73.9	135	336	207	186	177	57.4	63.2	52.9	113
1932	40.0	37.5	74.7	208	155	231	256	93.7	82.9	29.8	16.7	42.8	105
1933	156	381	157	156	214	372	390	111	71.4	25.2	32.9	85.2	178
1934	69.6	64.3	95.4	223	65.3	354	446	230	125	44.5	68.1	130	160
1935	153	147	271	318	256	302	194	91.3	106	71.2	28.2	48.9	165
1936	40.8	46.5	50.1	220	97.4	761	383	128	82.3	22.5	15.5	66.2	160
1937	71.2	55.3	422	415	265	295	323	205	124	72.7	61.8	49.8	197
1938	99.9	315	238	333	250	224	175	130	144	553	194	718	281
1939	148	142	305	164	339	415	425	103	62.3	41.8	20.6	32.7	182
1940	43.9	115	112	158	85.7	344	502	202	187	115	48.8	38.2	163
1941	28.2	157	137	110	239	171	133	107	95.6	50.4	36.2	13.0	105
1942	8.15	33.9	70.2	104	205	536	153	80.8	34.9	48.1	55.6	40.9	114
1943	56.4	152	332	201	306	360	207	223	74.6	44.3	34.3	8.70	166
1944	28.1	78.0	28.5	47.8	97.5	279	301	102	64.5	21.4	27.5	68.5	94.9
1945	39.3	185	258	218	224	370	187	292	53.7	56.2	36.3	32.3	165
1946	16.5	77.8	217	258	207	282	130	201	154	39.7	107	47.2	145
1947	48.4	36.6	71.0	128	99.3	249	253	168	83.0	35.9	21.8	50.1	104
1948	27.5	166	93.3	106	257	518	360	333	219	70.0	41.7	20.4	184
1949	17.4	86.1	107	313	274	256	273	161	53.5	13.5	10.8	26.8	132
1950	20.7	30.4	67.1	95.5	185	276	210	227	128	28.9	28.3	23.2	110

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	0.12	0.40	0.45	0.96	1.58	4.37	2.61	2.42	2.23	0.75	0.82	0.67	17.38
1932	.52	.47	.97	2.71	1.89	3.01	3.22	1.22	1.04	.39	.22	.54	16.20
1933	2.03	4.80	2.04	2.03	2.52	4.84	4.91	1.44	.90	.33	.43	1.05	27.32
1934	.91	.81	1.24	2.90	.77	4.61	5.61	3.00	1.57	.58	.89	1.64	24.53
1935	1.99	1.85	3.53	4.14	3.01	3.93	2.44	1.19	1.34	.93	.37	.62	25.34
1936	.53	.59	.65	2.86	1.19	9.90	4.82	1.66	1.04	.29	.20	.83	24.56
1937	.93	.70	5.49	5.40	3.09	3.85	4.07	2.66	1.56	.95	.80	.63	30.13
1938	1.30	3.97	3.10	4.34	2.94	2.92	2.21	1.70	1.82	7.19	2.52	9.04	43.05
1939	1.92	1.78	3.97	2.13	3.99	5.40	5.36	1.34	.78	.54	.27	.41	27.89
1940	.57	1.45	1.45	2.05	1.04	4.47	6.33	2.63	2.35	1.50	.64	.48	24.96
1941	.37	1.98	1.79	1.43	2.81	2.22	1.67	1.40	1.20	.66	.47	.16	16.16
1942	.11	.43	.91	1.35	2.40	6.98	1.93	1.05	.44	.63	.72	.52	17.47
1943	.73	1.92	4.32	2.62	3.59	4.68	2.61	2.90	.94	.58	.45	.11	25.45
1944	.37	.98	.37	.62	1.19	3.63	3.79	1.33	.81	.28	.36	.86	14.59
1945	.51	2.33	3.36	2.84	2.64	4.82	2.35	3.80	1.05	.73	.47	.41	25.31
1946	.21	.98	2.82	3.36	2.44	3.67	1.64	2.62	1.94	.52	1.40	.59	22.19
1947	.63	.46	.92	1.66	1.17	3.24	3.19	2.19	1.05	.47	.28	.63	15.89
1948	.36	2.09	1.21	1.58	3.13	6.74	4.53	4.34	2.76	.31	.54	.26	28.25
1949	.23	1.08	1.40	4.07	3.22	3.33	5.44	2.10	.67	.18	.14	.34	20.20
1950	.27	.38	.87	1.24	2.18	3.60	2.64	2.95	1.61	.38	.37	.29	16.78

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1931	711,1051	2,320	Mar. 8, 1931	3.3	113	1.28	17.38	120	19.37
1932	726,1051	2,400	Mar. 28, 1932	4.8	105	1.19	16.20	150	23.11
1933	741,1051	2,560	Nov. 10, 1932	5.0	178	2.01	27.32	140	21.41
1934	756,1051	*2,000	Mar. 5, 1934*	5	160	1.81	24.53	189	28.94
1935	781,1051	3,100	Jan. 10, 1935	4.5	165	1.86	25.34	129	19.74
1936	801,1051	6,300	Mar. 12, 1936	5.0	160	1.81	24.56	195	29.91
1937	821	2,600	Dec. 20, 1936	9	197	2.22	30.13	205	31.58
1938	851	13,500	Sept. 21, 1938	12	281	3.17	43.05	276	42.35
1939	871	1,240	Apr. 7, 1939	4.9	182	2.05	27.89	155	23.69
1940	891	2,500	Mar. 15, 1940	5.6	163	1.84	24.96	167	25.63
1941	921	3,570	Feb. 8, 1941	7.1	105	1.19	16.16	88.0	13.47
1942	951	2,430	Mar. 9, 1942	5.6	114	1.29	17.47	150	22.99
1943	971	3,050	Dec. 30, 1942	5.6	166	1.87	25.45	132	20.20
1944	1001	1,720	Apr. 25, 1944	5.8	94.9	1.07	14.59	124	19.07
1945	1031	1,670	Jan. 2, 1945	6.5	165	1.86	25.31	151	23.12
1946	1051	1,560	Feb. 7, 1946	10	145	1.64	22.19	132	20.19
1947	1081	785	Apr. 6, 1947	10	104	1.17	15.89	117	17.54
1948	1111	1,790	Mar. 17, 1948	12	184	2.08	28.25	178	27.30
1949	1141	1,520	Dec. 31, 1948	7	132	1.49	20.20	124	19.01
1950	1171	1,710	Mar. 23, 1950	11	110	1.24	16.78	-	-

\* Revised.

## 212. First Connecticut and Second Connecticut Lakes, near Pittsburg, N. H.

First Connecticut and Second Connecticut Lakes on Connecticut River are operated as a unit for storage of water for power. The reservoirs in downstream order and usable capacity of each are as follows: Second Lake, 12 miles northeast of Pittsburg, N. H., 506,000,000 cu ft (979,000,000 cu ft prior to 1930); First Lake, 5 2/3 miles northeast of Pittsburg, N. H., 3,330,000,000 cu ft. Records of contents are available for First Connecticut Lake since October 1916 and for Second Connecticut Lake since October 1919. Records furnished by New England Power Co.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1917	1,160.8	791.6	527.2	273.4	176.7	246.7	705.8	2,341.5	2,504.3	2,156.5	2,267.1	2,059.2
1918	1,499.3	1,915.5	1,148.3	540.9	318.2	291.2	1,127.0	2,069.2	1,797.6	1,951.2	1,202.0	1,000.4
1919	2,095.6	2,466.8	2,492.1	2,156.5	1,063.3	866.3	1,785.9	2,168.7	1,635.5	989.9	608.1	574.4
1920	1,374.7	2,131.7	2,300.7	808.4	389.5	454.6	1,522.5	2,414.5	1,868.7	2,084.0	1,435.6	944.8
1921	709.9	1,016.1	1,481.4	1,593.5	1,166.1	2,355.3	2,446.1	1,685.9	1,514.7	1,363.5	550.1	402.0
1922	550.5	880.8	982.5	490.3	218.7	546.0	2,381.2	2,902.7	3,114.2	3,001.5	2,989.5	2,044.3
1923	1,005.8	658.8	744.5	837.1	331.8	271.4	1,515.2	2,856.3	2,738.9	2,323.7	1,617.1	809.2
1924	701.4	1,186.8	1,638.9	1,870.6	1,112.6	764.3	1,415.3	3,148.0	2,214.2	2,340.9	2,061.4	2,745.8
1925	1,856.9	1,544.9	1,691.8	446.1	731.0	1,323.7	2,422.2	2,342.5	2,797.8	2,825.5	2,496.7	2,401.7
1926	3,165.6	3,392.8	3,314.8	3,248.3	2,604.9	922.1	1,130.2	3,285.2	3,319.3	3,246.7	2,826.8	1,096.6
1927	1,516.3	2,051.9	2,090.8	1,130.7	317.7	555.3	1,747.0	2,747.0	3,100.5	3,254.9	2,628.3	1,470.2
1928	2,055.4	3,226.7	3,300.7	2,457.7	678.9	485.6	1,527.4	3,260.5	3,235.4	2,988.8	2,614.2	2,815.8
1929	3,237.1	2,935.0	1,584.8	1,466.9	437.0	490.3	1,985.8	2,829.4	2,849.2	2,090.1	1,090.2	598.6
1930	724.6	1,103.9	752.3	868.0	493.8	596.9	1,577.9	2,406.7	2,504.8	2,351.7	2,218.4	2,306.1
1931	2,041.9	2,178.9	1,485.0	703.8	186.1	122.8	1,425.3	2,370.4	2,705.8	2,918.5	3,076.6	3,551.7
1932	3,414.6	3,242.8	2,272.3	1,814.2	153.4	191.1	1,279.7	2,840.5	3,150.2	3,439.8	3,028.8	2,984.1
1933	2,971.3	3,121.0	1,728.3	1,092.2	122.8	139.6	1,413.4	3,703.5	3,417.8	3,553.2	3,651.4	3,323.2
1934	3,512.9	3,045.9	1,965.1	505.5	107.3	227.7	2,353.0	3,659.8	3,585.4	3,391.9	3,246.4	3,361.5
1935	3,335.3	3,489.1	2,243.4	1,450.6	103.2	101.9	1,246.2	2,871.5	3,730.4	3,558.4	3,257.1	3,276.0
1936	3,266.8	3,504.8	2,234.3	1,001.5	104.9	1,932.4	2,795.4	3,603.8	3,652.1	3,760.3	3,657.6	3,578.3
1937	3,785.3	3,275.0	2,326.1	2,240.2	854.2	187.4	1,144.4	3,257.7	3,642.8	3,710.0	3,699.5	3,610.5
1938	3,792.6	3,721.0	2,567.2	1,385.4	380.2	413.3	2,143.4	3,000.6	3,228.8	3,573.0	3,685.7	3,699.0
1939	2,639.3	2,267.3	2,172.7	624.8	84.1	67.7	706.8	3,054.5	3,534.4	3,598.7	3,503.5	3,334.0
1940	3,821.3	3,324.0	2,111.5	485.2	178.3	81.4	776.2	2,787.8	3,041.0	3,218.3	3,220.1	3,353.2
1941	2,767.6	3,345.0	1,511.4	1,301.8	1,011.0	81.4	1,769.2	2,099.4	2,282.1	2,445.0	2,615.1	2,555.7
1942	3,055.2	3,087.4	2,658.2	1,596.1	912.0	1,158.4	2,709.7	3,694.2	3,636.0	3,688.0	3,598.3	3,769.6
1943	3,574.4	3,242.5	2,054.8	1,271.2	911.0	874.4	1,467.4	3,221.4	3,440.8	3,420.3	3,486.6	3,328.6
1944	3,541.7	3,179.3	2,552.0	1,786.4	1,350.2	536.8	1,071.7	3,088.1	3,388.1	3,451.2	3,250.2	3,374.2
1945	3,461.0	3,051.6	1,865.3	1,399.4	631.4	1,508.3	3,287.2	4,730.1	3,513.3	3,484.8	3,515.2	3,715.0
1946	3,363.6	3,394.0	3,277.5	2,175.3	845.7	1,714.2	2,766.1	3,656.9	3,617.0	3,391.2	3,198.8	2,660.1
1947	3,167.1	3,660.0	3,053.9	1,678.3	1,227.1	1,059.5	1,967.5	3,625.2	3,536.0	3,679.0	2,501.6	1,816.6
1948	1,643.4	1,762.6	1,794.4	1,523.1	1,257.0	501.0	3,278.8	3,741.1	3,733.1	3,531.5	3,489.7	2,887.7
1949	2,849.2	3,562.2	2,932.6	2,907.2	2,280.4	1,886.1	3,148.1	3,453.4	3,671.0	3,289.8	2,707.9	2,714.1
1950	2,654.2	2,700.7	3,114.4	3,032.8	2,890.5	1,309.3	2,382.3	3,506.5	3,707.4	3,306.2	2,811.4	2,618.1

Note.--First Connecticut Lake only, prior to October 1919.

## 213. 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.

Gage.--Water-stage recorder. Altitude of gage is 1,560 ft (from topographic map). Prior to Jan. 1, 1918, discharge computed through gates at dam a quarter of a mile upstream. Jan. 1 to July 28, 1918, staff gage at same site and datum.

Average discharge.--33 years (1917-50), 198 cfs (adjusted for storage).

Extremes.--1917-50: 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 discharge, 2.8 cfs Mar. 16, 1929.

Remarks.--Flow regulated by First Connecticut and Second Connecticut Lakes. Runoff adjusted for change in contents in First Connecticut Lake since October 1916 and Second Connecticut Lake since October 1919 (see above).

## CONNECTICUT RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second (observed), of Connecticut River at First Connecticut Lake, near Pittsburg, N. H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1917	-	-	-	-	-	-	68.6	78.2	601	205	280	244	-
1918	359	133	366	292	140	70.9	13.0	178	268	256	368	272	228
1919	13.4	131	120	220	516	183	29.6	455	453	454	233	114	242
1920	108	20.7	72.1	542	197	108	35.0	306	316	208	343	340	217
1921	270	51.4	12.5	32.8	227	64.9	500	359	116	68.9	349	74.8	177
1922	39.6	56.5	48.2	213	151	*27.7	21.1	126	329	136	251	423	151
1923	476	271	23.2	36.3	243	67.2	29.6	208	340	257	329	*422	224
1924	194	21.6	15.9	17.3	371	165	21.9	92.0	463	128	238	119	153
1925	406	381	70.5	509	78.7	14.4	*46.2	*278	48.8	73.6	168	263	*196
1926	88.9	314	154	124	337	*727	93.6	104	278	124	272	657	*272
1927	45.0	147.4	58.7	459	343	46.3	12.9	52.8	43.7	61.9	288	474	158
1928	67.0	39.2	205	414	744	148	3.8	222	244	152	208	165	219
1929	277.0	474	709	200	468	87.9	13.8	597	205	412	413	251	344
1930	91.1	16.3	174	131	214	67.6	67.4	475	288	176	77.9	59.9	153
1931	142	65.0	339	343	261	69.7	8.74	11.8	13.0	13.1	14.1	15.8	108
1932	197	316	443	451	734	37.8	8.93	12.3	14.1	176	334	212	243
1933	86.3	200	613	351	460	51.4	8.65	66.2	253	39.3	82.3	186	188
1934	36.2	321	528	609	198	30.0	9.80	126	145	106	70.1	27.2	194
1935	87.3	259	667	471	620	64.7	7.17	12.0	53.6	132	150	97.7	216
1936	99.5	62.0	609	540	379	27.4	12.9	599	36.9	51.6	97.2	274	233
1937	275	395	483	333	683	284	7.29	11.9	14.9	50.9	85.4	61.9	221
1938	134	269	585	511	535	128	8.02	11.4	11.9	27.3	107	346	221
1939	459	484	284	283	626	281	57.3	36.0	10.2	44.6	96.7	181	204
1940	51.5	340	528	607	147	69.0	6.11	10.0	11.0	11.7	12.7	13.1	151
1941	243	58.9	849	156	152	374	12.3	10.5	11.0	11.4	11.0	34.0	162
1942	14.4	214	245	463	239	7.47	11.4	252	243	19.9	23.9	53.3	149
1943	180	322	518	341	192	87.2	9.68	320	423	83.1	121	139	228
1944	80.3	358	277	301	207	307	8.90	12.4	16.3	73.0	97.6	101	153
1945	238	281	458	262	261	126	13.0	239	255	180	86.7	69.1	206
1946	427	171	123	460	539	32.5	10.3	122	98.3	143	147	240	206
1947	43.9	94.0	453	536	302	156	17.1	415	311	147	510	229	269
1948	96.3	27.5	50.6	141	146	32.2	11.3	355	67.0	139	16.6	296	115
1949	37.2	16.6	284	119	276	246	95.5	181	69.6	172	207	62.7	146
1950	122	111	71.5	193	157	593	9.65	14.0	239	225	231	128	175

\* Revised.

† Corrected.

## Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1917	-	-	-	-	-	-	3.25	9.67	7.85	2.10	4.23	2.11	-
1918	2.11	3.97	1.08	0.87	0.63	0.83	4.52	7.29	2.21	4.37	1.20	2.62	31.70
1919	5.91	3.72	1.80	1.29	.74	1.53	5.18	8.34	3.28	2.93	1.25	1.38	37.35
1920	3.09	4.18	1.74	†-.02	.21	1.97	6.80	8.84	1.40	4.15	.91	1.52	†34.79
1921	2.66	2.13	2.64	.98	.62	8.06	6.85	1.10	.75	.16	†-.05	.23	†26.13
1922	1.48	2.94	.86	.16	.51	1.99	10.38	5.06	5.67	1.23	3.50	.17	33.95
1923	.68	1.67	.75	.96	.51	.60	7.75	9.88	4.11	1.45	1.02	†.72	†30.10
1924	2.13	2.31	2.78	1.42	.78	1.86	3.18	11.97	1.30	2.41	1.85	5.15	35.84
1925	1.23	2.59	1.41	.63	2.50	3.55	*6.99	*3.36	3.07	1.19	.74	2.86	*30.12
1926	5.38	5.56	1.57	1.45	1.05	*-.03	2.52	13.50	4.08	1.31	.72	†-.13	*36.98
1927	2.61	3.42	.98	.78	.51	1.78	6.46	6.85	2.67	1.64	.86	.28	28.44
1928	3.87	6.93	3.26	.38	.19	1.27	5.85	†13.11	3.17	.55	1.11	2.84	†42.50
1929	6.49	4.76	2.23	1.48	1.12	1.52	7.96	13.59	2.91	1.62	.38	.19	†44.25
1930	1.58	2.20	.98	2.34	.88	1.44	5.67	10.83	4.27	1.75	.41	1.28	35.61
1931	.60	1.58	1.14	.69	.58	.65	6.87	5.07	1.91	1.26	1.02	2.68	24.05
1932	2.64	2.35	1.51	3.57	1.15	.95	5.93	8.24	1.58	4.01	2.42	2.14	36.49
1933	1.66	3.09	1.65	1.57	.66	.93	7.12	12.33	1.99	1.29	1.56	.75	34.60
1934	1.56	2.05	1.25	1.05	.43	1.19	10.94	8.61	1.64	.45	.18	1.00	30.35
1935	1.08	4.47	2.61	2.46	.77	.89	5.98	8.62	5.19	.95	.53	1.42	34.97
1936	1.34	2.08	1.88	1.11	.23	10.16	5.05	11.84	.74	1.28	.89	3.21	39.61
1937	4.81	2.76	1.78	4.15	1.42	.48	5.05	11.12	2.19	1.05	1.13	.37	36.31
1938	2.83	3.22	2.14	.97	1.50	1.95	9.08	4.60	1.34	2.21	1.97	4.19	36.00
1939	1.81	1.80	3.30	.80	.71	.75	3.75	12.29	3.15	1.64	.99	1.05	32.04
1940	3.26	1.99	1.04	-.01	.32	.46	3.68	10.57	1.46	1.08	.19	.87	24.91
1941	.34	3.79	2.28	1.09	.40	.27	9.02	1.86	1.10	.99	.53	.67	22.34
1942	2.79	3.04	1.18	.40	.002	1.35	8.19	6.60	3.04	.49	.44	1.09	30.61
1943	1.49	2.61	1.03	.67	.54	1.02	3.21	13.55	6.82	1.05	2.02	1.04	35.05
1944	2.22	2.94	.59	.21	.42	.04	2.69	10.83	1.77	1.54	.32	2.00	25.37
1945	3.76	1.66	.21	1.22	.33	5.26	9.40	5.61	2.30	2.35	.35	3.00	35.45
1946	4.12	2.46	1.11	.66	-.14	4.95	5.59	6.31	1.11	.81	1.04	.43	28.47
1947	3.24	3.83	3.14	.31	1.45	1.29	4.94	14.36	3.73	2.78	-.06	.57	39.58
1948	.44	.99	.87	.55	.52	3.11	8.32	6.98	.86	.88	1.05	-.17	24.40
1949	.32	.92	.68	1.53	.22	1.37	6.83	4.10	2.07	.41	-.14	.74	23.05
1950	1.39	1.73	3.14	2.26	1.23	.04	5.70	6.02	4.25	1.04	.64	.72	28.16

\* Revised.

† Corrected.

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



Yearly discharge, in cubic feet per second, of Connecticut River at First Connecticut Lake,  
near Pittsburg, N. H.

Year	W.S.P. no.	Water year ending Sept. 30								Calendar year		
		Observed				Adjusted				Observed	Adjusted	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	
		Discharge	Date									
1917	451	-	-	-	-	-	-	-	-	-	-	
1918	471	4586	Oct. 18, 1917*	7	228	†194	2.34	31.70	177	220	35.97	
1919	501	*1,090	July 5, 1919*	10	242	228	2.75	37.35	237	214	34.93	
1920	501	*1,140	May 31, 1920*	7	217	212	2.55	*34.79	228	202	33.21	
1921	521,1231	*1,810	Apr. 9, 1921	5	177	160	1.93	*26.13	161	147	23.98	
1922	541,1231	*1,640	June 20, 1922	5	151	*208	*2.51	33.93	204	194	31.75	
1923	561,1231	*940	Apr. 27, 1923*	5	224	*184	*2.22	*30.10	179	209	34.22	
1924	581	714	June 4, 1924	8	153	219	2.64	35.84	205	206	33.85	
1925	601,1231	*1,990	May 13, 1925*	6	*196	*184	*2.22	*30.12	*170	*229	*37.40	
1926	621,1231	*1,370	Mar. 14, 1926	7	*272	*226	*2.72	*36.98	*238	*192	*31.48	
1927	641	757	Jan. 27, 1927	6.3	158	174	2.10	28.44	172	217	35.49	
1928	661	1,580	Feb. 2, 1928	9.4	219	259	3.12	*42.50	315	256	41.92	
1929	681	1,340	May 9, 1929	3.1	344	270	3.25	44.25	245	217	35.53	
1930	696	1,910	May 27, 1930	4.2	153	205	2.47	33.61	176	197	*32.17	
1931	1001	1,430	Nov. 16, 1930	5.8	108	147	1.77	24.05	142	166	27.23	
1932	1001	1,410	Feb. 5, 1932	6.6	243	222	2.67	36.49	239	222	36.39	
1933	1001	970	Nov. 29, 1932	6.2	198	212	2.55	34.60	196	202	33.06	
1934	1001	1,140	May 24, 1934	6.2	184	186	2.24	30.35	195	206	33.65	
1935	1001	1,260	Nov. 24, 1934	5.8	216	214	2.58	34.97	196	196	32.11	
1936	1001	1,260	Sept. 13, 1936	6.6	233	243	2.93	39.81	265	267	43.86	
1937	1001	1,230	Oct. 18, 24, 1936	5.8	221	222	2.67	36.31	207	215	35.15	
1938	1001	1,630	Sept. 21, 1938	5.2	221	220	2.65	36.00	226	212	34.72	
1939	1001	700	Oct. 22, 1938	6.4	204	196	2.56	32.04	196	195	31.95	
1940	891	1,580	Nov. 1, 1939	5.6	151	152	1.83	24.91	172	153	25.03	
1941	921	2,200	Sept. 18, 1941	5.7	162	137	1.65	22.34	104	140	22.94	
1942	951	1,880	June 15, 1942	7.1	149	187	2.25	30.61	195	176	28.73	
1943	971	7,200	June 16, 1943	9.3	228	214	2.58	35.05	202	218	35.67	
1944	1001	808	Sept. 10, 11, 1944	8.6	153	155	1.87	25.37	176	154	25.25	
1945	1031	826	May 19, 20, 1945	9.8	206	217	2.61	35.45	185	229	37.51	
1946	1051	1,160	Oct. 2, 3, 1945	7.8	208	174	2.10	28.47	197	190	30.99	
1947	1081	2,080	June 3, 1947	9.0	269	242	2.92	39.58	234	194	31.67	
1948	1111	920	May 18-20, 1948	8.2	115	149	1.80	24.40	129	165	27.02	
1949	1141	970	May 3, 4, 1949	9.9	146	141	1.70	23.05	143	149	24.39	
1950	1171	1,280	Mar. 16, 17, 1950	8.8	175	172	2.07	28.16	-	-	-	

\* Revised.

† Corrected.

\* Not previously published.

#### 214. Lake Francis at Pittsburg, N. H.

Location.--Lat 45°02'45", long. 71°23'00", 2,300 ft upstream from Back Lake Brook at Pittsburg, Coos County.

Drainage area.--170 sq mi.

Gage.--Staff gage. Datum of gage is at mean sea level.

Remarks.--Completed in March 1940, used for storage of water for power, and has a usable capacity of 4,326,000,000 cu ft.

Cooperation.--Records furnished by New Hampshire Water Resources Board.

#### Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1940	-	-	-	-	-	17.4	760.6	2,759.0	3,104.6	3,310.4	3,350.4	3,496.0
1941	3,594.3	3,928.6	3,455.5	2,448.3	1,170.5	683.2	2,114.4	2,462.9	2,729.0	2,911.0	2,721.5	2,059.0
1942	2,149.3	3,167.5	3,112.4	2,135.3	1,076.7	1,100.0	3,191.2	4,281.9	4,212.3	4,194.9	4,142.8	3,945.6
1943	4,073.8	3,760.0	2,926.4	2,065.9	1,814.8	933.6	883.8	3,793.6	3,928.6	3,903.1	3,877.7	3,785.2
1944	4,051.4	3,827.2	2,996.7	1,831.5	1,194.1	298.8	1,108.7	2,820.3	2,852.5	3,163.5	2,934.1	3,048.8
1945	4,005.1	3,651.6	2,768.7	1,868.4	856.5	1,387.9	2,951.0	4,283.9	3,920.1	3,962.6	3,806.2	4,234.0
1946	3,907.3	3,929.5	3,909.9	3,025.3	1,389.1	1,532.0	2,492.1	3,598.4	3,971.1	3,844.8	3,656.2	3,224.8
1947	3,672.9	4,139.3	3,755.2	2,706.8	2,025.9	660.3	1,969.9	4,164.4	4,134.1	4,225.3	2,988.0	2,613.4
1948	2,583.8	2,729.0	2,751.5	2,419.3	1,486.0	1,940.0	3,358.4	4,026.5	3,962.6	3,996.6	4,138.5	3,459.5
1949	3,238.7	3,831.4	2,907.2	2,543.3	1,328.3	1,021.6	2,796.7	3,941.3	4,190.5	3,954.1	3,492.0	3,431.2
1950	3,108.5	3,046.1	3,394.8	3,435.2	1,453.2	679.1	2,045.2	2,774.0	4,022.2	3,810.4	3,443.4	3,354.4

## 215. 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 Mulehgan River.

Drainage area.--799 sq mi.

Gage.--Water-stage recorder. Datum of gage is 880.17 ft above mean sea level, datum of 1929.

Average discharge.--20 years (1930-50), 1,570 cfs (adjusted for storage).

Extremes.--1930-50: 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.--Flow regulated by power plants and by First Connecticut and Second Connecticut Lakes, and by Lake Francis since Mar. 23, 1940. Runoff adjusted for change in contents in First Connecticut and Second Connecticut Lakes (see p. 229), and in Lake Francis since March 1940 (see p. 231).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	-	-	-	-	-	-	607	-
1931	533	891	930	615	489	612	3,950	1,930	987	830	766	1,410	1,160
1932	1,050	1,670	1,460	2,340	1,490	511	4,450	2,390	775	1,720	1,090	1,250	1,680
1933	1,300	2,220	1,400	1,100	914	437	6,110	3,850	978	643	1,070	519	1,710
1934	861	1,203	1,157	1,155	551	960	7,348	2,251	857	547	364	600	1,486
1935	644	2,621	1,901	2,174	1,111	1,082	4,001	2,806	2,393	804	400	538	1,687
1936	746	1,311	1,186	915	626	6,254	3,338	4,291	552	989	477	1,242	1,836
1937	2,452	1,686	1,654	2,321	1,519	780	4,215	4,851	1,174	605	484	322	1,844
1938	1,398	1,785	1,458	1,190	1,384	1,672	4,145	1,650	581	768	754	2,385	1,609
1939	1,290	1,146	2,268	1,119	748	613	3,927	4,803	1,399	930	997	522	1,653
1940	1,366	1,871	1,137	935	350	271	2,817	4,531	761	600	220	503	1,283
1941	680	2,204	1,965	1,242	1,048	840	3,629	920	600	577	379	536	1,214
1942	1,021	1,279	900	1,292	920	890	5,445	2,466	2,123	412	248	518	1,454
1943	851	1,945	1,393	949	804	1,531	3,075	4,131	3,724	820	1,182	1,163	1,798
1944	1,205	2,373	1,218	1,076	776	1,157	2,965	3,447	705	479	449	899	1,395
1945	1,699	1,635	1,335	1,400	1,084	4,027	3,319	2,520	1,847	1,600	466	1,443	1,869
1946	3,080	1,650	1,135	1,573	1,795	3,412	2,231	1,903	678	474	608	722	1,605
1947	1,225	1,790	2,215	1,794	1,582	1,821	3,642	4,939	2,674	1,512	1,449	950	2,136
1948	434	583	643	549	804	2,419	3,338	3,257	747	437	323	713	1,188
1949	355	1,399	1,346	1,444	1,149	2,294	3,190	1,387	894	632	583	357	1,251
1950	669	1,091	1,383	1,587	1,582	1,715	3,908	1,651	1,153	898	903	731	1,435

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	-	-	-	-	-	-	-	-	-	-	-	0.90	-
1931	0.63	1.32	0.97	0.46	0.36	0.85	6.22	3.30	1.56	1.31	1.19	2.22	20.39
1932	1.50	2.14	1.62	3.10	1.14	.78	6.82	4.29	1.23	2.64	1.34	1.27	28.27
1933	1.92	3.14	1.31	1.24	.66	.65	9.28	6.74	1.22	1.01	1.59	.54	29.28
1934	1.35	1.45	1.04	.90	.51	1.50	11.38	3.96	1.17	.69	.44	.90	25.28
1935	.91	3.76	2.05	2.71	.72	1.56	6.20	4.93	3.81	.78	.42	.76	28.61
1936	1.07	1.96	1.03	.66	.36	10.04	5.17	6.56	.80	1.49	.64	1.68	31.46
1937	3.64	2.09	1.87	5.30	1.24	.77	6.40	8.14	1.85	.91	.69	.46	31.56
1938	2.12	2.45	1.48	1.08	1.26	2.72	6.72	2.84	.92	1.30	1.14	3.28	27.32
1939	1.35	1.39	3.21	.79	.68	.86	5.82	8.19	2.22	1.37	1.28	.75	27.93
1940	2.24	2.54	.99	.47	.31	.35	4.71	8.70	1.39	1.07	.34	.85	23.76
1941	.72	3.57	1.59	1.14	.52	.44	6.76	1.69	1.08	1.02	.48	.41	19.42
1942	1.79	2.35	1.04	.71	.32	1.43	9.56	4.68	2.90	.61	.34	.66	26.39
1943	1.19	2.37	.92	.48	.72	1.71	4.59	8.47	5.39	1.16	1.73	1.49	30.22
1944	1.99	3.01	.97	.51	.47	.75	4.86	6.98	1.16	.89	.42	1.38	23.39
1945	3.01	1.87	.81	1.28	.56	6.46	6.43	4.59	2.27	2.32	.50	2.46	32.56
1946	4.08	2.30	1.56	1.20	.74	5.47	4.20	3.82	1.13	.49	.67	.49	26.15
1947	2.28	3.02	2.66	1.28	1.45	1.80	6.28	9.20	3.67	2.31	.68	.66	35.49
1948	.52	.96	.96	.47	.44	4.01	6.27	5.27	1.00	.54	.63	.20	21.27
1949	.37	2.66	1.10	1.87	.50	2.93	6.09	2.78	1.50	.58	.28	.47	21.13
1950	.76	1.52	2.41	2.27	.92	1.21	6.77	3.38	2.39	.97	.84	.87	24.31

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30										Calendar year		
		Observed					Adjusted					Observed		Adjusted
		Momentary		maximum	Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches		
		Discharge	Date											
1930	696	-	-	-	-	-	-	-	-	-	-	-		
1931	711	12,800	Apr. 12, 1931	230	1,160	1,200	1.50	20.39	1,310	1,340	22.73			
1932	726	10,200	Apr. 10, 1932	304	1,680	1,660	2.08	28.27	1,740	1,720	29.38			
1933	741	21,500	Apr. 18, 1933	197	1,710	1,720	2.15	29.28	1,570	1,570	28.75			
1934	756, 781	21,700	Apr. 25, 1934	212	1,486	1,488	1.86	25.28	1,647	1,658	28.16			
1935	781	11,000	Apr. 28, 1935	223	1,687	1,684	2.11	28.61	1,527	1,527	25.95			
1936	801	28,400	Mar. 19, 1936	238	1,836	1,846	2.31	31.46	2,051	2,054	35.00			
1937	821	13,700	Apr. 30, 1937	205	1,844	1,845	2.31	31.36	1,748	1,754	29.81			
1938	851	12,800	Sept. 22, 1938	198	1,609	1,609	2.01	27.32	1,616	1,603	27.22			
1939	871	13,700	May 8, 1939	154	1,653	1,645	2.06	27.93	1,623	1,622	27.55			
1940	891	19,500	May 3, 1940	119	1,283	1,394	1.74	23.76	1,322	1,413	24.07			

Yearly discharge, in cubic feet per second, of Connecticut River at North Stratford, N. H.--Con.											
Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed			Adjusted				Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1941	921	12,200	Apr. 16, 1941	115	1,214	1,143	1.43	19.42	1,077	1,102	18.72
1942	951	15,300	Apr. 26, 1942	129	1,454	1,552	1.94	26.39	1,536	1,511	25.69
1943	971	28,700	June 16, 1943	294	1,798	1,779	2.23	30.22	1,848	1,866	31.71
1944	1001	11,500	May 5, 1944	142	1,395	1,374	1.72	23.39	1,387	1,358	23.11
1945	1031	16,400	Mar. 29, 1945	205	1,869	1,917	2.40	32.56	1,969	2,050	34.81
1946	1051	9,820	Oct. 2, 1945	202	1,605	1,540	1.93	26.15	1,552	1,540	26.17
1947	1081	13,500	Apr. 13, 1947	309	2,136	2,090	2.62	35.49	1,836	1,764	29.97
1948	1111	10,400	Mar. 28, 1948	112	1,188	1,248	1.56	21.27	1,307	1,348	22.96
1949	1141	11,100	Mar. 28, 1949	138	1,251	1,245	1.56	21.13	1,256	1,277	21.69
1950	1171	14,900	Apr. 21, 1950	277	1,435	1,430	1.79	24.31	-	-	-

## 216. 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 2½ miles northeast of Groveton, Coos County.

Drainage area.--232 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 920 ft (from topographic map).

Average discharge.--10 years (1940-50), 456 cfs (adjusted for diversion).

Extremes.--1940-50: Maximum discharge, 7,580 cfs June 3, 1947 (gage height, 8.49 ft); minimum, 32 cfs Sept. 14, 1948.

Flood in March 1936 reached a stage of about 10.6 ft, from information by local residents.

Remarks.--Some regulation by pond on Nash Stream. Runoff adjusted for diversion above station for municipal supply of Berlin.

## Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	-	199	-
1941	142	578	262	209	129	74.4	1,321	402	222	276	171	161	328
1942	379	499	260	203	95.9	328	1,944	923	501	126	95.3	35.5	453
1943	133	315	181	81.9	112	339	987	1,929	721	249	484	369	485
1944	387	761	227	146	126	195	950	1,901	371	230	124	187	468
1945	421	358	197	161	121	1,374	1,622	1,223	429	294	114	264	550
1946	697	516	335	215	197	1,289	876	932	335	133	309	140	501
1947	404	490	472	295	308	427	1,431	1,693	1,115	435	196	121	616
1948	86.5	118	66.6	53.3	65.8	709	1,265	1,171	366	150	117	51.0	352
1949	69.7	407	250	523	175	590	1,313	689	286	129	79.6	96.0	384
1950	122	243	350	302	194	223	1,566	845	412	200	139	166	596

## Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	-	0.97	-
1941	0.72	2.79	1.32	1.05	0.59	0.38	6.37	2.01	1.08	1.39	0.86	.79	19.35
1942	1.90	2.41	1.30	1.02	.43	1.64	9.36	4.60	2.42	.64	.48	.46	26.66
1943	.67	1.52	.91	.42	.52	1.70	4.18	9.60	3.46	1.25	2.41	1.88	28.54
1944	1.93	3.67	1.14	.74	.59	.96	4.58	9.46	1.79	1.15	.63	.91	27.57
1945	2.10	1.73	.99	.81	.55	6.84	7.81	6.09	2.06	1.47	.58	1.28	32.33
1946	3.48	2.51	1.68	1.08	.90	6.42	4.23	4.65	1.62	.67	1.55	.69	29.48
1947	2.02	2.37	2.36	1.48	1.19	2.14	6.89	8.43	5.38	2.18	.99	.60	36.23
1948	.44	.56	.35	.26	.32	3.54	6.10	5.84	1.78	.76	.60	.26	20.85
1949	.36	1.97	1.26	2.61	.80	2.95	6.33	3.44	1.39	.65	.41	.48	22.65
1950	.62	1.16	1.75	1.51	.88	1.12	7.54	4.21	2.00	1.01	.70	.81	23.33

## Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed			Adjusted				Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1940	921	-	-	-	-	-	-	-	-	-	-
1941	921	5,040	Apr. 16, 1941	65	328	331	1.43	19.35	341	344	20.13
1942	951	5,220	Apr. 26, 1942	36	453	456	1.97	26.66	411	413	24.15
1943	971	4,740	May 13, 1943	63	485	488	2.10	28.54	548	550	32.18
1944	1001	6,350	May 5, 1944	70	468	470	2.03	27.57	435	437	25.65
1945	1031	6,850	Mar. 30, 1945	68	550	553	2.38	32.33	599	601	35.18
1946	1051	2,740	Mar. 30, 1946	71	501	504	2.17	29.48	485	488	28.56
1947	1081	7,580	June 3, 1947	7	619	619	2.67	36.23	524	527	30.95
1948	1111	3,690	Mar. 28, 1948	32	332	335	1.53	20.85	390	393	23.07
1949	1141	3,550	Mar. 29, 1949	39	384	387	1.67	22.65	384	387	22.61
1950	1171	4,750	Apr. 21, 1950	70	396	399	1.72	23.33	-	-	-

## 217. Israel River above South Branch, near Jefferson Highlands, N. H.

Location.--Lat 44°21'20", long. 71°22'45", on wooden bridge in town of Randolph, Coos County, 0.9 mile upstream from South Branch and 3.1 miles east of Jefferson Highlands railroad station.

Drainage area.--8.7 sq mi.

Gage.--Chain gage. Altitude of gage is 1,385 ft (from topographic map).

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1904	9.28	-	-	-	-	-	39.0	66.0	10.1	6.46	14.3	24.7	-
1905	26.4	17.5	-	-	-	-	-	48.4	31.1	19.6	42.5	41.5	-
1906	18.7	13.1	-	-	-	-	-	63.8	33.1	12.4	7.84	9.59	-

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1904	1.23	-	-	-	-	-	5.00	8.75	1.29	0.86	1.89	3.17	-
1905	3.49	2.24	-	-	-	-	-	6.41	3.98	2.59	5.64	5.32	-
1906	2.48	1.68	-	-	-	-	-	8.45	4.24	1.65	1.04	1.23	-

## 218. Israel River below South Branch, near Jefferson Highlands, N. H.

Location.--Lat 44°21'45", long. 71°23'55", on downstream truss of wooden highway bridge in town of Jefferson, Coos County, 0.3 mile below South Branch and 2 miles east of the Jefferson Highlands railroad station.

Drainage area.--21.2 sq mi.

Gage.--Chain gage. Altitude of gage is 1,310 ft (from topographic map).

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1904	17.0	-	-	-	-	-	86.5	152	25.0	17.4	30.4	57.4	-
1905	62.3	53.3	-	-	-	-	-	109	69.0	43.9	102	78.0	-
1906	35.3	†23.9	-	-	-	-	-	149	73.1	32.1	24.0	28.3	-
1907	26.5	28.3	-	-	-	-	122	-	-	-	-	-	-

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1904	0.92	-	-	-	-	-	4.55	8.27	1.32	0.95	1.65	3.02	-
1905	3.39	2.80	-	-	-	-	-	5.93	3.63	2.39	5.54	4.11	-
1906	1.92	†1.26	-	-	-	-	-	8.10	3.85	1.74	1.30	1.48	-
1907	1.44	1.48	-	-	-	-	6.42	-	-	-	-	-	-

## 219. Connecticut River near Dalton, N. H. 1/

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 1 1/4 miles downstream from Dalton, Coos County.

Drainage area.--1,514 sq mi. Prior to Oct. 1, 1935, at Waterford, Vt., 1,591 sq mi.

Gage.--Water-stage recorder. Datum of gage is 799.89 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1935, chain gage at bridge 10 1/2 miles downstream at mean sea level. Oct. 1, 1935, to June 29, 1937, chain gage at bridge 250 ft downstream at present datum.

Average discharge.--23 years (1927-50), 2,888 cfs (adjusted to drainage area at present site and for storage).

Extremes.--1927-50: Maximum discharge, 48,300 cfs Mar. 20, 1936 (gage height, 25.6 ft); minimum daily (revised), 115 cfs Oct. 3, 1937.

Remarks.--Flow regulated by power plants and by First Connecticut and Second Connecticut Lakes, Lake Francis, and other reservoirs. These reservoirs have a combined usable capacity of about 8 1/3 billion cu ft. Runoff adjusted for change in contents in First Connecticut and Second Connecticut Lakes (see p. 229) and Lake Francis since March 1940 (see p. 231).

1/ Published as "at Waterford, Vt." prior to Oct. 1, 1935.

Monthly and yearly mean discharge, in cubic feet per second (observed), of Connecticut River near Dalton, N. H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	-	-	-	-	-	-	-	-	-	-	-	-	-
1928	3,980	7,350	4,580	2,090	1,820	2,090	9,950	5,840	4,770	2,030	1,060	1,200	4,010
1929	3,570	3,500	2,440	2,060	1,260	3,370	10,100	9,690	2,120	1,730	1,270	1,080	3,550
1930	1,280	1,970	1,110	2,370	2,030	2,440	7,460	7,270	3,480	1,910	1,100	1,110	2,790
1931	1,030	1,820	1,340	809	653	1,190	7,210	4,020	2,180	1,260	1,210	2,200	2,070
1932	1,890	3,050	2,400	4,180	2,060	921	9,170	4,530	3,090	1,680	2,040	3,050	3,050
1933	2,160	4,130	2,110	1,790	1,340	876	12,800	7,900	1,830	844	2,050	890	3,220
1934	1,606	1,888	1,661	1,595	799	1,734	15,380	8,469	1,540	1,054	752	1,104	2,824
1935	1,077	4,070	2,887	3,432	1,561	1,926	7,469	6,527	5,182	1,264	844	968	3,099
1936	1,193	2,363	2,046	1,269	869	12,140	6,445	8,111	1,252	1,462	799	1,772	3,327
1937	3,594	3,075	2,786	4,100	2,289	1,423	7,594	10,740	2,814	1,307	948	743	3,460
1938	2,202	3,009	2,353	1,816	2,152	3,444	7,995	3,513	1,501	1,638	1,553	4,526	2,952
1939	2,308	2,110	4,633	1,621	1,261	1,174	7,421	9,430	2,610	1,638	1,515	829	3,058
1940	2,078	3,007	1,603	1,135	533	482	5,459	9,964	1,865	1,386	518	1,150	2,437
1941	1,121	4,126	2,617	2,079	1,539	1,078	7,091	1,951	1,152	1,430	870	954	2,160
1942	1,359	2,514	1,461	1,691	1,123	1,740	10,070	5,772	5,529	1,561	406	710	2,604
1943	1,318	2,782	1,893	1,381	1,228	2,573	6,844	8,916	5,673	1,555	2,669	2,507	3,121
1944	2,297	4,582	1,871	1,593	1,205	1,922	6,276	7,820	1,740	1,197	872	1,595	2,731
1945	3,075	2,673	1,746	2,214	1,500	6,822	7,405	5,521	3,161	2,345	794	2,041	3,283
1946	5,109	3,115	2,187	2,260	2,371	6,617	4,400	4,249	1,694	909	1,470	1,086	2,963
1947	2,305	3,108	3,376	2,592	2,541	3,088	7,513	9,044	5,915	2,595	1,918	1,500	3,777
1948	673	1,066	860	751	1,051	4,344	6,392	6,192	1,878	1,007	748	928	2,157
1949	854	2,843	1,752	3,072	1,577	5,710	6,310	3,098	1,573	983	819	730	2,259
1950	1,046	1,842	2,648	2,298	2,194	2,455	8,058	3,653	2,200	1,494	1,313	1,200	2,583

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1927	-	-	-	-	-	-	-	-	-	-	-	-	-
1928	3.04	5.47	3.34	1.23	0.74	1.47	7.26	6.46	2.22	0.61	1.20	1.56	34.60
1929	2.73	2.37	1.57	1.42	1.56	2.46	7.49	7.50	1.49	1.04	.64	.59	29.46
1930	.95	1.48	.73	1.74	1.24	1.79	5.48	5.49	2.46	1.35	.76	.80	24.27
1931	.67	1.31	.79	.37	.29	.84	5.41	3.17	1.62	.97	.92	1.67	18.03
1932	1.36	2.04	1.49	2.89	.96	.69	6.74	3.70	1.22	2.32	1.10	1.40	25.91
1933	1.59	2.92	1.17	1.12	.61	.65	9.34	6.32	1.21	.65	1.51	.53	27.62
1934	1.22	1.21	.89	.77	.42	1.30	11.35	3.89	1.06	.71	.49	.81	24.12
1935	.77	2.91	1.74	2.27	.66	1.40	5.55	5.17	3.87	.87	.53	.68	26.42
1936	.91	1.81	1.20	.62	.36	9.78	5.02	6.37	.94	1.14	.58	1.28	30.01
1937	2.79	2.13	1.85	3.10	1.18	.89	5.87	8.78	2.18	1.01	.72	.52	31.02
1938	1.73	2.20	1.46	1.05	1.19	2.63	6.38	2.92	1.02	1.35	1.21	3.31	26.45
1939	1.49	1.45	3.49	.80	.71	.89	5.65	7.85	2.06	1.26	1.07	.62	27.34
1940	1.72	2.07	.88	.40	.29	.34	4.43	8.73	1.54	1.16	.41	.93	22.90
1941	.71	3.30	1.34	1.24	.61	.41	6.12	1.68	.98	1.19	.63	.53	18.74
1942	1.64	2.15	.98	.68	.31	1.40	8.46	4.68	2.56	.58	.30	.49	24.23
1943	.89	1.87	.86	.43	.67	1.70	4.31	8.12	4.28	1.17	1.89	1.65	27.82
1944	1.88	3.22	1.01	.66	.55	.98	5.01	7.01	1.38	1.02	.54	1.10	24.36
1945	2.64	1.75	.74	1.30	.58	5.54	6.41	4.71	2.16	1.79	.51	1.74	29.87
1946	3.70	2.31	1.61	1.16	.79	5.33	3.81	3.80	1.34	.59	1.01	.52	25.97
1947	2.03	2.56	2.29	1.28	1.43	1.92	6.17	7.98	4.33	2.04	.72	.71	33.46
1948	.45	.86	.67	.40	.39	3.58	5.56	5.02	1.36	.72	.65	.26	19.92
1949	.42	2.47	.89	2.23	.56	2.63	5.51	2.77	1.29	.57	.33	.52	20.19
1950	.69	1.35	2.23	2.26	.90	1.18	6.63	3.29	2.03	.96	.75	.80	23.07

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30								Calendar year			
		Observed				Adjusted				Observed		Adjusted	
		Momentary		maximum	Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	
		Discharge	Date										
1927	661	-	-	-	-	-	-	-	-	-	-	-	-
1928	661	*44,300	Apr. 9, 1928	392	4,010	4,050	2.55	34.60	3,480	3,420	29.22	-	-
1929	681	*28,200	Apr. 10, 1929	480	3,530	3,450	2.17	29.46	3,090	3,070	26.15	-	-
1930	696	*17,100	Apr. 9, 1930	365	2,790	2,850	1.79	24.27	2,780	2,800	23.88	-	-
1931	711	*15,900	Apr. 13, 1931	310	2,070	2,110	1.33	18.03	2,340	2,360	20.15	-	-
1932	726	*20,200	Apr. 15, 1932	545	3,050	3,030	1.90	25.91	3,140	3,120	26.70	-	-
1933	741	*35,800	Apr. 20, 1933	200	3,220	3,240	2.04	27.62	2,850	2,860	25.26	-	-
1934	756	*31,500	Apr. 26, 1934	240	2,824	2,825	1.78	24.12	3,062	3,073	26.22	-	-
1935	781	*22,500	Apr. 30, 1935	200	3,099	3,096	1.95	26.42	a2,920	a2,920	a24.32	-	-
1936	801	48,300	Mar. 20, 1936	400	3,327	3,337	2.20	30.01	3,651	3,654	32.86	-	-
1937	821	19,600	May 1, 1937	140	3,460	3,461	2.29	31.02	3,299	3,307	29.64	-	-
1938	851	19,600	Sept. 22, 1938	115	2,952	2,951	1.95	26.45	3,080	3,067	27.49	-	-
1939	871	25,600	Apr. 23, 1939	320	3,058	3,050	2.01	27.34	2,855	2,854	25.58	-	-
1940	891	31,300	May 4, 1940	245	2,437	2,549	1.68	22.90	2,534	2,624	23.58	-	-
1941	921	19,300	Apr. 17, 1941	253	2,160	2,089	1.38	18.74	1,998	2,024	18.16	-	-
1942	951	23,100	Apr. 27, 1942	149	2,604	2,702	1.78	24.23	2,598	2,573	23.08	-	-
1943	971	21,400	June 18, 1943	358	3,121	3,102	2.05	27.82	3,562	3,580	30.31	-	-
1944	1001	20,400	May 7, 1944	221	2,751	2,709	1.79	24.36	2,630	2,601	23.38	-	-
1945	1031	24,900	Mar. 31, 1945	322	3,283	3,332	2.20	29.87	3,528	3,609	32.36	-	-
1946	1051	14,100	Oct. 2, 1945	226	2,963	2,897	1.81	25.97	2,827	2,815	25.23	-	-
1947	1081	21,800	June 4, 1947	373	3,777	3,731	2.46	33.46	3,257	3,185	26.56	-	-
1948	1111	16,800	Apr. 3, 1948	196	2,157	2,218	1.46	19.92	2,377	2,418	21.72	-	-
1949	1141	16,000	Mar. 29, 1949	146	2,259	2,253	1.49	20.19	2,286	2,307	20.68	-	-
1950	1171	21,300	Apr. 22, 1950	308	2,583	2,577	1.70	23.07	-	-	-	-	-

\* Revised.

† Corrected.

a Adjusted to drainage area at Waterford.

## 220. Comerford Station Pond

Location.--Lat 44°19'30", long. 72°00'05", on Connecticut River 4½ miles northeast of Barnet, Caledonia County, Vt.

Drainage area.--1,650 sq mi.

Gage.--Staff gage. Datum of gage is at mean sea level.

Remarks.--Reservoir completed in 1930 for storage of water for hydroelectric power development, has usable capacity of 1,279,000,000 cu ft since July 10, 1948; prior to that date, capacity was 1,180,000,000 cu ft.

Cooperation.--Records furnished by New England Power Co.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1931	518	652	828	797	836	326	492	980	1,107	927	935	1,221
1932	1,133	1,133	1,133	1,146	1,252	130	700	1,167	960	1,230	1,034	1,001
1933	1,180	1,073	993	1,212	1,107	146	1,307	997	1,001	972	891	1,103
1934	1,026	1,234	1,056	1,090	715	130	984	1,005	1,212	1,239	840	1,120
1935	1,172	1,039	1,124	864	555	366	1,208	1,073	1,212	1,257	1,018	1,216
1936	844	1,129	1,034	1,018	1,056	989	1,077	1,238	939	1,073	1,081	1,112
1937	1,146	1,051	915	1,244	1,244	394	1,176	1,257	1,099	1,137	1,216	1,190
1938	1,239	1,172	1,094	1,216	1,190	760	952	1,163	997	1,208	1,034	1,216
1939	1,203	1,216	1,129	1,116	1,212	545	1,142	1,185	960	1,198	1,208	1,266
1940	1,133	1,212	1,039	1,150	1,180	671	786	1,116	1,298	1,185	1,248	1,248
1941	1,208	1,129	1,244	1,146	1,051	741	1,120	1,190	1,129	1,167	1,167	1,107
1942	1,176	1,194	1,221	1,154	1,208	955	1,133	1,268	1,150	1,129	1,150	1,137
1943	1,234	1,176	1,180	1,271	1,248	555	1,030	1,230	1,221	1,280	1,120	1,022
1944	1,142	1,133	1,081	1,262	1,271	960	1,047	1,133	1,124	1,271	1,221	1,252
1945	1,234	1,129	1,212	1,203	1,185	1,056	1,185	1,176	1,068	1,112	1,262	1,103
1946	1,133	1,039	1,226	1,116	1,216	1,252	1,167	1,257	1,185	1,226	1,252	1,307
1947	1,124	1,185	1,198	1,064	1,086	1,198	1,198	1,172	1,244	1,185	1,266	1,146
1948	1,043	1,244	1,216	1,043	1,180	1,073	1,124	1,284	1,280	1,387	864	997
1949	1,221	1,344	1,344	1,344	1,512	1,349	1,086	1,335	1,275	1,382	1,280	1,203
1950	1,335	1,271	1,212	1,208	1,208	1,129	1,056	1,146	1,116	1,307	1,212	1,303

## 221. 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.

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.--8 years (1939-45, 1948-50), 97.1 cfs.

Extremes.--1939-45, 1948-50: Maximum discharge, 2,180 cfs May 28, 1940 (gage height, 6.21 ft); minimum, 14 cfs Oct. 1, 1948, Aug. 27, 1949.

Maximum stage known, about 12.6 ft sometime in November 1927, from information by local resident.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	48.8	53.7	-
1940	86.8	87.9	51.9	21.4	16.9	20.5	193	419	94.1	57.0	32.6	60.5	95.5
1941	49.9	127	85.8	77.5	49.9	34.7	234	93.5	49.3	47.8	34.0	31.2	76.0
1942	80.2	103	75.6	67.0	38.4	77.8	379	188	127	43.4	33.5	37.7	104
1943	56.7	96.7	59.3	32.8	28.9	55.1	194	332	167	74.3	105	72.1	107
1944	77.2	123	55.8	35.6	27.4	41.8	207	286	84.7	51.6	29.5	55.2	89.6
1945	97.5	92.9	47.5	71.4	44.5	233	284	194	119	114	37.9	130	122
1946	218	-	-	-	-	-	-	-	-	-	-	-	-
1949	24.4	89.8	55.5	89.7	46.7	116	243	124	81.6	39.3	30.2	38.4	81.5
1950	44.3	76.0	101	103	60.7	64.6	309	165	102	52.6	64.7	65.3	101

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	1.05	1.11	-
1940	1.86	1.82	1.11	0.46	0.34	0.44	4.01	8.98	1.95	1.22	.70	1.25	24.14
1941	1.07	2.64	1.84	1.66	.97	.74	4.84	2.00	1.02	1.03	.73	.65	19.19
1942	1.72	2.13	1.62	1.44	.74	1.67	7.85	4.04	2.64	.93	.72	.78	26.28
1943	1.21	2.01	1.27	.70	.56	1.18	4.03	7.11	3.46	1.59	2.25	1.50	26.87
1944	1.65	2.54	1.20	.76	.55	.90	4.30	6.13	1.76	1.11	.63	1.14	22.67
1945	2.09	1.93	1.02	1.53	.86	4.99	5.89	4.16	2.47	2.43	.81	2.70	30.88
1946	4.67	-	-	-	-	-	-	-	-	-	-	-	-
1949	.52	1.86	1.19	1.92	.90	2.49	5.04	2.65	1.69	.84	.65	.80	20.55
1950	.95	1.58	2.17	2.20	1.18	1.38	6.40	3.53	2.11	1.13	1.39	1.35	25.37

Yearly discharge, in cubic feet per second, of Passumpsic River near East Haven, Vt.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	891	-	-	-	-	-	-	-	-
1940	891	2,180	May 28, 1940	15	95.5	1.78	24.14	98.4	24.90
1941	921	975	Apr. 15, 1941	17	76.0	1.41	19.19	75.7	19.11
1942	951	1,610	June 15, 1942	16	104	1.93	26.28	100	25.30
1943	971	1,220	May 12, 1943	22	107	1.99	26.87	110	27.77
1944	1001	960	May 5, 1944	18	89.6	1.66	22.67	88.2	22.32
1945	1031	1,390	Mar. 29, 1945	25	122	2.27	30.88	-	-
1946	1031	-	-	-	-	-	-	-	-
1949	1141	825	June 20, 1949	15	81.5	1.51	20.55	85.9	21.68
1950	1171	1,970	Apr. 20, 1950	24	101	1.88	25.37	-	-

## 222. Passumpsic River at Pierce's Mills, near St. Johnsbury, Vt.

Location.--Lat 44°29'10", long. 72°00'35", on right bank at suspension bridge 200 ft below Pierce Dam, 2 miles below mouth of Sheldon Brook, 4.6 miles north of St. Johnsbury, Caledonia County, and 5.2 miles above mouth of Moose River.

Drainage area.--237 sq mi.

Gage.--Staff gage. Altitude of gage is 685 ft (from topographic map).

Average discharge.--6 years (1909-11, 1914-18), 393 cfs.

Extremes.--1909-19: Maximum discharge, 7,070 cfs (revised) Mar. 27, 1913 (gage height, 14.8 ft, from floodmark), from rating curve extended above 1,800 cfs by logarithmic plotting; minimum, zero flow at different times owing to water being held back by mills.

Remarks.--Small diurnal fluctuation caused by Pierce's Mills and other mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1909	-	-	-	-	-	-	-	-	272	127	108	154	-
1910	174	185	156	453	275	994	923	635	428	155	162	167	393
1911	174	199	140	190	100	185	1,370	620	200	135	149	200	305
1912	287	326	564	-	-	-	1,630	785	559	113	146	300	-
1913	319	449	399	-	-	-	892	373	240	164	100	84.1	-
1914	209	208	205	-	-	-	1,280	650	161	133	105	114	-
1915	105	146	145	170	270	298	718	313	178	482	436	264	294
1916	235	239	365	544	454	512	1,140	640	550	370	306	261	466
1917	300	408	414	253	217	470	1,240	687	622	369	482	259	477
1918	557	422	213	125	187	409	1,260	686	418	244	184	377	424
1919	829	649	478	445	196	746	1,080	596	269	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1909	-	-	-	-	-	-	-	-	1.28	0.62	0.53	0.73	-
1910	0.85	0.87	0.76	2.20	1.21	4.83	4.34	3.09	2.02	.75	.79	.79	22.50
1911	.85	.94	.68	.92	.44	.90	6.45	3.02	.94	.66	.73	.94	17.47
1912	1.40	1.54	2.74	-	-	-	7.68	3.86	2.63	.55	.71	1.42	-
1913	1.56	2.11	1.94	-	-	-	4.20	1.81	1.13	.80	.49	.40	-
1914	1.02	.98	1.00	-	-	-	6.02	3.16	.76	.65	.51	.54	-
1915	.51	.69	.71	.83	1.19	1.45	3.38	1.52	.84	2.34	2.12	1.24	16.82
1916	1.14	1.13	1.78	2.65	2.07	2.49	5.37	3.11	2.59	1.80	1.49	1.23	26.85
1917	1.46	1.92	2.02	1.23	.95	2.28	5.84	3.34	2.92	1.80	2.34	1.22	27.32
1918	2.71	1.99	1.04	.61	.82	1.99	5.94	3.33	1.96	1.19	.89	1.77	24.24
1919	4.04	3.06	2.33	2.17	.86	3.63	5.09	2.89	1.27	-	-	-	-

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1909	261	-	-	-	-	-	-	-	-
1910	281	#3,990	May 26, 1910*	-	393	1.66	22.50	393	22.49
1911	301	#2,890	Apr. 29, 1911*	-	305	1.29	17.47	361	20.68
1912	351	#5,600	Apr. 8, 1912*	-	-	-	-	-	-
1913	351, 381	#7,070	Mar. 27, 1913	-	-	-	-	-	-
1914	381	#4,820	Apr. 21, 1914	-	-	-	-	-	-
1915	401	#4,160	Apr. 12, 1915	-	294	1.24	16.82	330	18.96
1916	431	#3,210	Mar. 31, 1916	130	466	1.97	26.85	490	28.20
1917	451	#3,280	Nov. 30, 1916	100	477	2.01	27.32	483	27.66
1918	471	#2,720	Apr. 3, 1918*	75	424	1.79	24.24	468	27.95
1919	501	#3,820	Oct. 31, 1918	-	-	-	-	-	-

\* Revised.

\* Not previously published.

## 223. 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.

Gage.--Water-stage recorder. Altitude of gage is 1,120 ft (from topographic map).

Extremes.--1947-50: Maximum discharge, 2,940 cfs Apr. 21, 1950 (gage height, 10.89 ft), from rating curve extended above 1,400 cfs by logarithmic plotting; minimum, 3.7 cfs Sept. 16, 17, 1948.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1947	-	-	-	87.7	87.6	106	448	479	253	124	29.8	17.4	-
1948	14.1	35.9	21.8	12.7	19.0	238	407	300	110	44.0	37.2	8.34	104
1949	28.7	185	78.5	175	49.1	206	412	167	64.7	22.9	17.4	44.7	121
1950	61.0	108	158	143	62.2	82.8	522	215	130	50.2	54.5	58.5	137

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1947	-	-	-	1.35	1.22	1.64	6.66	7.36	3.77	1.91	0.46	0.26	-
1948	0.22	0.53	0.34	.20	.27	3.65	6.06	4.62	1.64	.68	.57	.12	18.90
1949	.44	2.76	1.21	2.70	.68	3.17	6.12	2.57	.96	.35	.27	.66	21.89
1950	.94	1.61	2.42	2.19	.86	1.27	7.76	3.30	1.93	.77	.84	.87	24.76

Yearly discharge, in cubic feet per second									
Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1947	1111	2,080	Apr. 13, 1947	-	-	-	-	142	25.72
1948	1111	1,670	Mar. 28, Apr. 2	3.7	104	1.39	18.90	122	22.22
1949	1141	1,480	Mar. 28, 1949	4.2	121	1.61	21.89	124	22.45
1950	1171	2,940	Apr. 21, 1950	12	137	1.83	24.76	-	-

## 224. 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.

Gage.--Water-stage recorder. Altitude of gage is 585 ft (from topographic map). Prior to Nov. 16, 1934, chain gage a quarter of a mile upstream at different datum.

Average discharge.--22 years (1928-50), 219 cfs.

Extremes.--1928-50: Maximum discharge, 5,800 cfs (revised) 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.--Slight diurnal fluctuation caused by power plant above station.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	-	-	-	164	-
1929	169	206	126	188	69.0	413	*1,120	*687	105	65.8	42.2	29.3	*269
1930	43.3	117	70.4	206	108	190	*655	389	213	188	81.1	62.5	*194
1931	55.6	90.0	55.0	39.4	40.0	116	514	229	192	64.3	35.8	140	131
1932	136	237	174	253	106	73.9	732	243	83.3	299	103	81.5	210
1933	157	384	106	91.1	55.0	49.2	1,340	505	77.0	26.4	108	37.9	242
1934	76.3	86.0	90.1	76.5	35.4	181	1,363	291	72.4	27.7	16.5	40.2	196
1935	47.9	236	185	355	85.3	177	996	560	383	72.8	47.4	69.9	268
1936	61.0	327	128	118	55.3	1,308	595	513	56.9	30.1	17.0	47.2	273
1937	250	190	203	273	144	69.1	854	887	201	62.6	50.7	22.1	268
1938	130	187	109	116	146	243	460	214	85.7	118	67.6	302	181
1939	149	167	397	96.8	78.3	98.7	745	713	199	96.3	58.6	59.0	239
1940	171	187	122	33.7	18.9	31.4	599	957	159	90.5	38.7	140	213
1941	81.1	382	182	139	67.4	45.5	501	150	72.4	97.2	61.7	65.4	153
1942	163	208	123	91.0	40.1	196	870	383	280	37.3	17.8	62.1	206
1943	89.4	218	94.8	48.4	60.5	183	546	697	348	107	175	153	227
1944	173	339	85.8	46.0	37.7	83.7	681	601	118	87.1	45.0	138	203
1945	244	166	85.1	115	66.6	522	653	595	327	195	35.3	156	266
1946	417	293	164	96.5	61.0	883	388	418	128	35.0	113	56.5	256
1947	217	255	209	120	127	209	719	729	489	187	49.1	27.9	279
1948	21.9	54.8	30.9	22.2	28.9	381	608	463	155	55.2	53.0	13.8	157
1949	41.7	300	129	299	88.9	347	552	231	74.7	36.0	27.0	58.0	182
1950	78.9	154	228	208	91.5	131	830	301	168	68.4	65.5	73.9	200

\* Revised.



Monthly and yearly runoff, in inches, of Moose River at St. Johnsbury, Vt.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	-	-	-	1.45	-
1929	1.54	1.82	1.15	1.72	0.57	3.78	*9.95	*6.28	0.93	0.60	0.39	.26	*28.99
1930	.40	1.04	.64	1.89	.89	1.74	*5.80	3.56	1.89	1.72	.74	.55	*20.86
1931	.51	.80	.50	.36	.33	1.06	4.55	2.10	1.70	.59	.33	1.24	14.07
1932	1.24	2.10	1.60	2.32	.91	.68	6.48	2.22	.74	2.73	.95	.72	22.69
1933	1.44	3.23	.97	.83	.45	.45	11.83	4.62	.68	.24	.99	.34	26.07
1934	.70	.76	.82	.70	.29	1.65	12.06	2.66	.64	.25	.17	.36	21.06
1935	.44	2.09	1.70	3.25	.69	1.62	8.82	5.12	3.39	.67	.43	.62	28.84
1936	.56	2.90	1.18	1.08	.47	11.99	5.27	4.69	.50	.28	.16	.42	29.50
1937	2.28	1.68	1.86	2.50	1.19	.63	7.56	8.12	1.78	.57	.46	.20	28.83
1938	1.19	1.65	1.00	1.06	1.21	2.22	4.07	1.96	.76	1.08	.62	2.68	19.50
1939	1.56	1.48	5.63	.89	.65	.90	6.59	6.52	1.76	.88	.54	.52	25.72
1940	1.57	1.65	1.12	.31	.16	.29	5.30	8.76	1.40	.83	.35	1.24	22.98
1941	.74	3.39	1.67	1.26	.56	.42	4.44	1.37	.64	.89	.56	.58	16.52
1942	1.49	1.84	1.12	.83	.33	1.79	7.71	3.51	2.48	.34	.16	.55	22.15
1943	.82	1.93	.87	.44	.50	1.67	4.84	6.38	3.08	.97	1.60	1.36	24.46
1944	1.59	3.00	.78	.42	.32	.77	6.03	5.50	1.05	.80	.41	1.22	21.89
1945	2.23	1.64	.78	1.05	.55	4.78	5.78	5.44	2.89	1.79	.32	1.39	28.64
1946	3.81	2.60	1.50	.88	.50	8.08	3.43	3.83	1.11	.32	1.04	.50	27.60
1947	1.98	2.26	1.91	1.10	1.05	1.91	6.36	6.67	4.42	1.71	.45	.25	30.07
1948	.20	.49	.28	.20	.25	3.49	5.38	4.23	1.37	.50	.48	.12	16.99
1949	.58	2.66	1.18	2.74	.73	3.17	4.89	2.12	.66	.33	.25	.51	19.62
1950	.72	1.36	2.09	1.90	.76	1.20	7.35	2.75	1.49	.63	.60	.65	21.50

\* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1928	661	-	-	-	-	-	-	-	-
1929	(a)	*5,800	Apr. 30, 1929	10	*269	*2.13	*28.99	*247	*26.56
1930	696, 1231	*1,450	Apr. 8, 1930	13	*194	*1.54	*20.86	*191	*20.59
1931	711, 1231	*2,360	Apr. 11, 1931	16	131	1.04	14.07	160	17.20
1932	726, 1231	*1,900	Apr. 12, 1932	20	210	1.67	22.69	216	23.39
1933	741, 1231	*4,670	Apr. 18, 1933	13	242	1.92	26.07	211	22.71
1934	756, 1231	*5,660	Apr. 25, 1934	8	196	1.56	21.06	214	23.01
1935	781	4,000	Jan. 10, 1935	20	268	2.13	28.84	271	*29.25
1936	801	4,780	Mar. 19, 1936	8.6	273	2.17	29.50	284	30.68
1937	821	2,350	Mar. 16, 1937	9.8	268	2.13	28.63	249	26.85
1938	851	2,030	Sept. 21, 1938	14	181	1.44	19.50	205	22.13
1939	871	2,030	Apr. 23, 24, 1939	19	239	1.90	25.72	219	23.59
1940	891	2,970	May 4, 1940	17	213	1.69	22.98	226	24.44
1941	921	*1,520	Apr. 17, 1941*	17	153	1.21	16.52	141	15.17
1942	951	2,250	June 15, 1942	9.2	206	1.63	22.15	198	21.32
1943	971	1,980	June 17, 1943	30	227	1.80	24.46	243	26.21
1944	1001	1,990	Nov. 10, 1943	17	203	1.61	21.89	196	21.17
1945	1031	2,020	Mar. 31, 1945	19	266	2.11	28.64	296	31.90
1946	1051	*2,020	Mar. 30, 1946*	12	256	2.03	27.60	240	25.84
1947	1081	3,270	June 4, 1947	16	279	2.21	30.07	231	24.89
1948	1111	2,490	Apr. 2, 1948	6.4	157	1.25	16.99	188	20.24
1949	1141	2,430	Mar. 29, 1949	6.5	182	1.44	19.62	182	19.57
1950	1171	4,700	Apr. 21, 1950	18	200	1.59	21.50	-	-

\* Revised.

† Corrected.

\* Not previously published; estimated on basis of records for nearby stations.

a In W.S.P. 661, 726, 1231.

## 225. 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.

Gage.--Water-stage recorder. Altitude of gage is 490 ft (from topographic map).

Average discharge.--22 years (1928-50), 725 cfs.

Extremes.--1928-50: 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 flow over dam at gage height 21.23 ft; minimum daily, 13 cfs Sept. 12, 1948.  
Maximum stage known, about 31.5 ft in November 1927, from information by local resident.

Remarks.--Flow regulated by power plants above station.

## CONNECTICUT RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Passumpsic River at Passumpsic, Vt.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*704	*739	527	519	236	1,130	*2,590	*1,850	628	379	249	178	*812
1930	245	518	351	834	577	1,120	1,900	1,130	680	520	281	253	700
1931	264	429	302	131	150	449	1,530	845	632	437	243	763	514
1932	491	702	599	1,000	508	346	2,740	802	364	809	379	537	755
1933	560	1,030	470	494	245	299	3,580	1,270	548	164	390	177	751
1934	342	355	392	277	202	877	3,931	941	339	190	122	270	684
1935	244	772	523	979	265	569	2,243	1,371	1,108	375	251	302	750
1936	290	778	427	309	177	4,013	2,008	1,463	300	182	154	244	864
1937	766	684	627	781	469	284	2,353	2,290	804	325	250	147	816
1938	452	638	433	441	523	943	1,766	755	328	379	249	995	657
1939	498	555	1,247	395	336	409	2,430	2,184	737	384	265	278	812
1940	534	596	456	153	124	161	1,924	2,818	608	370	189	429	696
1941	304	1,008	585	499	257	168	1,675	517	276	309	204	207	499
1942	444	661	446	384	192	796	2,886	1,129	871	211	153	214	698
1943	377	728	411	257	295	715	1,688	2,228	†1,175	†510	†730	†558	†808
1944	588	1,082	470	357	282	539	1,993	1,624	500	307	183	398	693
1945	699	608	344	485	290	1,978	1,968	1,735	950	720	196	672	890
1946	1,522	1,091	694	482	314	2,308	1,290	1,248	525	219	405	252	868
1947	867	851	745	605	558	1,477	1,602	1,447	894	271	177	177	953
1948	132	253	169	128	177	2,070	1,602	1,304	600	273	261	98.8	206
1949	184	799	476	796	355	959	1,598	783	317	173	143	195	565
1950	232	429	654	696	394	484	2,475	977	559	267	276	282	643

† Corrected.

\* Not previously published; estimated on basis of records for nearby station.

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1929	*1.86	*1.89	1.39	1.37	0.56	3.00	*6.63	*4.84	1.61	1.00	0.66	0.46	*25.27
1930	.65	1.33	.93	2.20	1.38	2.95	4.87	2.99	1.74	1.37	.74	.65	21.80
1931	.70	1.10	.80	.35	.36	1.19	3.93	2.23	1.62	1.16	.64	1.95	16.03
1932	1.30	1.80	1.58	2.65	1.26	.91	7.01	2.12	.93	2.14	1.00	.86	23.56
1933	1.48	2.64	1.24	1.31	.58	.79	9.17	3.35	.89	.43	1.03	.45	23.36
1934	.90	.91	1.01	.73	.48	2.32	10.06	2.49	.87	.50	.32	.69	21.28
1935	.65	1.97	1.38	2.59	.63	1.51	5.74	3.62	2.83	.99	.66	277	23.34
1936	.77	1.99	1.13	.82	.44	10.61	5.14	3.87	.77	.48	.35	.62	26.99
1937	2.03	1.75	1.66	2.07	1.12	7.65	6.02	6.06	2.06	.86	.66	.38	25.42
1938	1.19	1.63	1.14	1.17	1.25	2.49	4.52	2.00	.84	1.00	.66	2.55	20.44
1939	1.31	1.42	3.30	1.04	.80	1.08	6.21	5.78	1.89	1.02	.70	.71	25.26
1940	1.41	1.52	1.15	.40	.31	.42	4.92	7.45	1.56	.98	.50	1.10	21.72
1941	.80	2.58	1.55	1.32	.61	.44	4.29	1.37	.71	.82	.54	.53	15.56
1942	1.17	1.69	1.18	1.02	.46	2.10	7.39	2.99	2.23	.56	.40	.55	21.74
1943	1.00	1.86	1.09	.69	.70	1.89	4.32	5.69	3.01	†1.35	†1.93	†1.43	†25.15
1944	1.58	2.77	1.24	.94	.94	1.43	5.10	4.28	1.28	.81	.49	1.02	21.63
1945	1.85	1.56	.91	1.28	.69	5.23	5.04	4.59	2.43	1.90	.52	1.72	27.72
1946	4.03	2.79	1.84	1.28	.75	6.10	3.30	3.30	1.34	.58	1.07	.64	27.02
1947	1.76	2.17	1.97	1.60	1.30	2.05	5.79	5.78	3.70	2.36	.72	.45	29.65
1948	.35	.65	.45	.34	.44	2.83	4.10	3.45	1.54	.72	.69	.25	15.81
1949	.49	2.04	1.26	2.10	.85	2.54	4.09	2.07	.81	.46	.58	.50	17.59
1950	.61	1.10	1.73	1.84	.94	1.28	6.33	2.58	1.43	.71	.73	.72	20.00

† Corrected.

\* Not previously published; estimated on basis of records for nearby station.

Yearly discharge, in cubic feet per second													
Year	W.S.P. no.	Water year ending Sept. 30										Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches				
		Discharge	Date										
1929	681,1231	6,370	May 4, 1929	*95	*812	*1.86	*25.27	740	23.04				
1930	696	*5,250	Apr. 8, 1930	62	700	1.61	21.80	690	21.49				
1931	711	*4,350	Apr. 11, 1931	84	514	1.18	16.03	581	18.11				
1932	726	5,810	Apr. 13, 1932	120	755	1.73	23.56	777	24.24				
1933	741, 781	9,660	Apr. 19, 1933	51	751	1.72	23.56	669	20.82				
1934	756	8,550	Apr. 25, 1934	40	684	1.57	21.28	722	22.46				
1935	781	8,500	Jan. 10, 1935	89	750	1.72	23.34	746	23.23				
1936	801	16,000	Mar. 18, 1936	71	864	1.99	26.99	914	28.54				
1937	821	6,600	May 15, 1937	79	816	1.87	25.42	769	23.94				
1938	851	7,710	Sept. 22, 1938	105	657	1.51	20.44	723	22.51				
1939	871	8,040	Dec. 7, or 8, 1939	119	812	1.86	25.26	749	23.31				
1940	891	9,660	May 3, 1940	90	696	1.60	21.72	723	22.57				
1941	921	4,690	Apr. 16, 1941	46	499	1.14	15.56	471	14.67				
1942	951	8,490	June 15, 1942	45	698	1.60	21.74	695	21.65				
1943	971	5,690	May 12, 1943	123	†808	1.85	†25.15	860	26.77				
1944	1001	*5,200	Nov. 9, 1943	52	693	1.59	21.63	652	20.38				
1945	1031	7,090	Mar. 30, 1945	81	890	2.04	27.72	1,030	32.06				
1946	1051	5,160	Oct. 2, 1945	63	868	1.99	27.02	780	24.26				
1947	1081	8,540	June 3, 1947	86	953	2.19	29.65	809	25.20				
1948	1111	5,110	Mar. 28, 1948	13	506	1.16	15.81	581	18.15				
1949	1141	5,140	Mar. 28, 1949	34	565	1.50	17.59	553	17.24				
1950	1171	10,700	Apr. 21, 1950	59	643	1.47	20.00	-	-				

\* Revised.

† Corrected.

\* Not previously published.

## 226. Stevens River at West Barnet, Vt.

Location.--Lat 44°21'55", long. 72°08'20", on left bank 0.6 mile east of West Barnet, Caledonia County, and 0.9 mile upstream from mouth of Hollow Brook.

Drainage area.--22.2 sq mi.

Average discharge.--6 years (1939-45), 28.6 cfs.

Gage.--Water-stage recorder. Datum of gage is 841.98 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Extremes.--1939-45: Maximum discharge, 381 cfs Apr. 26, 1945; maximum gage height, 3.80 ft Mar. 8, 1943 (ice jam); minimum discharge, 0.5 cfs Aug. 23, 1944.

Remarks.--Flow regulated by Harvey Lake and several ponds.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	-	3.54	-
1940	9.30	17.0	12.5	-	5.45	7.49	104	126	30.8	17.4	9.65	14.6	30.0
1941	10.6	42.8	23.7	24.1	14.3	14.8	62.0	16.4	8.18	21.6	8.29	7.13	21.1
1942	11.3	21.4	16.7	16.7	8.00	33.9	107	39.4	30.0	6.64	2.14	5.84	24.8
1943	17.4	21.4	22.0	14.6	16.0	46.4	76.5	89.7	32.2	14.5	18.1	19.9	32.5
1944	13.9	37.3	24.7	16.2	11.9	15.6	90.9	55.2	23.3	9.65	4.24	9.16	25.9
1945	19.1	21.5	16.8	22.8	11.7	77.7	75.8	87.6	47.8	26.1	8.66	30.1	37.3
1946	72.0	-	-	-	-	-	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	-	0.18	-
1940	0.48	0.85	0.65	0.31	0.26	0.39	5.24	6.53	1.55	0.90	0.50	.73	18.39
1941	.55	2.15	1.23	1.25	.67	.77	3.11	.85	.41	1.12	.43	.36	12.90
1942	.59	1.08	.87	.87	.58	1.76	5.36	2.05	1.51	.34	.11	.29	15.21
1943	.90	1.07	1.14	.76	.75	2.41	3.85	4.66	1.62	.75	.94	1.00	19.85
1944	.72	1.87	1.28	.84	.58	.81	4.57	2.87	1.17	.50	.22	.46	15.89
1945	.99	1.08	.87	1.18	.55	4.04	3.81	4.55	2.40	1.36	.45	1.51	22.79
1946	3.74	-	-	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1939	891	-	-	-	-	-	-	-	-	-	-
1940	891, 951	366	May 3, 1940	3.0	30.0	1.35	18.39	33.2	20.34	-	-
1941	921	274	July 11, 1941	2.9	21.1	.950	12.90	18.8	11.51	-	-
1942	951	345	June 15, 1942	.9	24.8	1.12	15.21	25.8	15.78	-	-
1943	971	203	May 12, 1943	4.2	32.5	1.46	19.85	33.7	20.61	-	-
1944	1001	222	Nov. 9, 1943	.6	25.9	1.17	15.89	24.4	14.96	-	-
1945	1031	381	Apr. 26, 1945	2.5	37.3	1.68	22.79	-	-	-	-

## 227. Ammonoosuc River at Bretton Woods, N. H.

Location.--Lat 44°15'15", long. 71°27'00", on steel highway bridge near the Mount Pleasant House at Bretton Woods, Coos County, 500 ft northeast of the Bretton Woods railroad station, and 2 miles upstream from the mouth of Deception Brook.

Drainage area.--34 sq mi.

Gage.--Chain gage. Altitude of gage is 1,580 ft (from topographic map).

Extremes.--1903-7: Maximum discharge, 1,960 cfs Mar. 26, 1904 (gage height, 5.7 ft).

Remarks.--No records available during periods of ice effect.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	-	-	-	-	-	-	-	-	23.3	-
1904	42.5	34.1	-	-	-	-	245	362	37.5	25.5	35.6	80.5	-
1905	123	42.5	-	-	-	-	147	192	86.7	47.6	69.1	86.7	-
1906	41.0	29.1	-	-	-	-	132	290	122	59.6	34.6	32.5	-
1907	64.8	57.3	-	-	-	-	169	-	-	-	-	-	-

## CONNECTICUT RIVER BASIN

Monthly and yearly runoff, in inches, of Ammonoosuc River at Bretton Woods, N. H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	-	-	-	-	-	-	-	-	0.76	-
1904	1.44	1.12	-	-	-	-	8.04	12.28	1.23	0.86	1.21	2.64	-
1905	4.17	1.40	-	-	-	-	4.82	6.51	2.84	1.61	2.34	2.84	-
1906	1.40	.96	-	-	-	-	4.33	9.83	4.00	2.02	1.18	1.07	-
1907	2.20	1.89	-	-	-	-	5.54	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1903	124	-	-	-	-	-	-	-	-
1904	124	a1,960	Mar. 26, 1904*	-	-	-	-	-	-
1905	201	a1,350	Oct. 21, 1904*	-	-	-	-	-	-
1906	201	a1,400	May 27, 1906*	-	-	-	-	-	-
1907	241	-	-	-	-	-	-	-	-

\* Not previously published.

a Not previously published; mean daily gage height for Mar. 26, 1904, published erroneously in W.S.P. 124 as 7.60ft, corrected to 4.8 ft.

## Zealand River near Twin Mountain, N. H.

Location.--Lat 44°16'05", long. 71°30'40", on right bank 800 ft upstream from mouth and  $\frac{1}{2}$  miles east of Twin Mountain, Coos County.

Drainage area.--14 sq mi.

Gage.--Chain gage. Altitude of gage is 1,435 ft (from topographic map).

Remarks.--Records published in Water-Supply Papers 124, 165, 201, and 241, have been found to be in error on the basis of re-study of the original data and comparison with records for nearby stations. Those records are not published herein and should not be used.

## 228. 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.

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.--11 years (1939-50), 198 cfs.

Extremes.--1939-50: Maximum discharge, 6,040 cfs Apr. 20, 1950 (gage height, 8.94 ft); minimum, 21 cfs Nov. 22, 1947 (caused by anchor ice upstream), but may have been less during period of ice effect in February 1948.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	-	53.9	-
1940	107	163	92.8	40.7	41.1	47.3	294	1,051	214	143	69.5	173	204
1941	83.1	352	132	93.3	95.7	48.2	478	234	114	152	96.5	68.4	162
1942	116	142	99.2	78.0	42.0	137	782	435	196	53.6	42.3	92.8	183
1943	120	237	120	45.8	57.5	137	294	835	238	105	205	184	216
1944	294	374	84.9	53.1	47.7	66.1	353	739	239	121	56.6	117	212
1945	143	151	111	150	63.0	426	497	517	267	136	65.3	94.6	219
1946	268	213	190	116	83.6	459	308	424	197	70.7	221	106	223
1947	242	180	168	127	161	162	482	721	360	165	62.8	39.3	240
1948	34.1	79.0	44.9	30.9	40.5	244	474	518	186	68.3	59.7	32.5	151
1949	59.5	274	154	215	66.1	239	399	375	141	72.1	55.7	104	180
1950	119	168	197	191	90.1	133	551	357	204	63.8	59.4	94.7	187

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	-	0.69	-
1940	1.41	2.08	1.22	0.54	0.51	0.62	3.75	13.83	2.72	1.88	0.91	2.21	31.68
1941	1.09	4.48	1.74	1.23	1.14	.63	6.06	3.08	1.46	2.00	1.27	.87	25.05
1942	1.53	1.81	1.31	1.00	.50	1.80	9.96	5.47	2.50	.77	.56	1.18	28.39
1943	1.58	3.02	1.58	.60	.68	1.80	3.74	10.99	3.04	1.58	2.70	2.34	33.45
1944	3.87	4.76	1.12	.70	.59	.87	4.49	9.72	3.04	1.59	.75	1.49	32.99
1945	1.88	1.92	1.46	1.97	.75	5.61	6.34	6.80	3.40	1.79	.86	1.21	33.99
1946	3.52	2.71	2.50	1.52	.99	6.04	3.93	5.58	2.50	.93	2.91	1.35	34.48
1947	3.18	2.42	2.21	1.67	1.51	2.15	6.14	9.49	4.58	2.18	.85	.50	37.24
1948	.45	1.01	.59	.41	.50	3.21	6.03	6.81	2.37	.90	.79	.41	25.48
1949	.78	3.49	2.02	2.80	.79	3.15	5.08	4.93	1.79	.95	.73	1.33	27.64
1950	1.57	2.13	2.59	2.52	1.07	1.75	7.02	4.83	2.60	.84	.78	1.21	28.91

Yearly discharge, in cubic feet per second, of Ammonoosuc River at Bethlehem Junction, N. H.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	891	-	-	-	-	-	-	-	-
1940	891	5,620	May 3, 1940	38	204	2.33	31.68	221	34.28
1941	921	2,600	Nov. 12, 1940	42	162	1.85	25.05	144	22.39
1942	951	2,810	Apr. 16, 1942	28	183	2.09	28.39	193	29.92
1943	971	3,620	May 17, 1943	39	216	2.47	33.45	239	37.02
1944	1001	5,680	Nov. 9, 1943	37	212	2.42	32.99	185	28.50
1945	1031	2,710	Mar. 29, 1945	40	219	2.50	35.99	242	37.46
1946	1051	4,090	Aug. 3, 1946	34	223	2.55	34.48	217	33.56
1947	1081	3,580	June 3, 1947	28	240	2.74	37.24	203	31.48
1948	1111	3,970	Apr. 1, 1948	24	151	1.72	23.48	178	27.72
1949	1141	3,230	Dec. 31, 1948	29	180	2.05	27.84	180	27.84
1950	1171	6,040	Apr. 20, 1950	32	187	2.13	28.91	-	-

## 229. 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.

Gage.--Water-stage recorder. Altitude of gage is 460 ft (from topographic map).

Average discharge.--15 years (1935-50), 656 cfs.

Extremes.--1935-50: 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.--Diurnal fluctuation at low flow caused by small power plants above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	228	569	354	280	177	4,283	1,461	1,298	290	155	88.3	176	785
1937	609	647	794	750	411	270	1,642	2,464	844	337	208	144	764
1938	588	715	549	457	477	1,003	1,488	737	270	370	306	1,672	716
1939	522	499	1,462	368	286	414	2,399	1,749	457	254	148	118	725
1940	294	465	513	92.3	82.0	127	1,784	2,760	526	308	152	512	620
1941	241	1,189	461	336	279	157	1,457	614	272	491	261	211	498
1942	305	434	330	251	124	751	2,365	1,068	748	163	98.4	248	573
1943	367	601	433	158	228	625	1,194	2,219	684	283	560	441	669
1944	801	1,125	290	189	179	389	1,805	1,723	613	291	124	255	648
1945	445	465	364	414	181	1,583	1,594	2,016	900	495	175	338	752
1946	929	998	850	414	278	1,580	926	1,194	587	226	656	268	748
1947	823	656	555	578	694	816	1,682	1,492	519	492	185	99.3	832
1948	88.9	223	146	98.1	113	976	1,268	1,520	538	163	151	78.0	450
1949	134	757	431	752	276	737	1,154	992	300	134	136	259	506
1950	282	488	605	538	302	517	1,893	890	601	161	162	253	557

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	0.67	1.61	1.03	0.82	0.48	12.50	4.13	3.79	0.82	0.45	0.26	0.50	27.06
1937	1.78	1.85	2.32	2.19	1.08	.79	4.84	7.25	2.38	.98	.61	.41	26.26
1938	1.60	2.02	1.60	1.34	1.26	2.93	4.20	2.15	.76	1.08	.89	4.72	24.61
1939	1.52	1.41	4.27	1.07	.75	1.21	6.77	1.29	.74	.43	.43	.35	24.90
1940	.86	1.37	.91	.27	.22	.37	5.04	8.06	1.48	.90	.44	1.45	21.37
1941	.70	3.36	1.34	.98	.74	.46	4.12	1.79	.77	1.43	.82	.60	17.11
1942	.89	1.22	.96	.73	.33	2.19	6.68	3.12	2.11	.48	.29	.70	19.70
1943	1.07	2.26	1.26	.46	.60	1.82	3.37	6.48	1.93	.83	1.63	1.25	22.96
1944	2.34	3.18	.85	.55	.49	1.13	5.10	5.03	1.73	.85	.36	.72	22.33
1945	1.30	1.51	1.06	1.21	.48	4.62	4.50	5.89	2.54	1.45	.51	.96	25.83
1946	2.71	2.82	2.48	1.21	.73	4.61	2.62	3.48	1.66	.66	1.91	.81	25.70
1947	2.40	1.85	1.62	1.68	1.83	2.38	4.75	5.51	4.21	1.51	.54	.28	28.56
1948	.26	.63	.43	.29	.31	2.85	3.58	4.44	1.52	.54	.44	.22	15.51
1949	.39	2.14	1.26	2.19	.73	2.15	3.26	2.90	.85	.39	.40	.73	17.39
1950	.82	1.58	1.77	1.57	.80	1.51	6.55	2.60	1.70	.47	.47	.72	19.16

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1936	801	27,900	Mar. 18, 1936	58	785	1.99	27.06	861	29.68
1937	821	12,000	May 15, 1937	71	764	1.93	26.26	745	25.61
1938	851	26,800	Sept. 21, 1938	50	716	1.81	24.61	772	26.53
1939	871	14,700	Dec. 6, 1939	48	725	1.84	24.90	607	20.84
1940	891	12,900	Dec. 3, 1940	72	620	1.57	21.37	686	23.63
1941	921	6,000	Nov. 12, 1940	75	498	1.26	17.11	430	14.78
1942	951	9,320	June 15, 1942	52	573	1.45	19.70	618	21.22
1943	971	6,600	May 13, 1943	130	669	1.69	22.96	720	24.74
1944	1001	12,700	Nov. 9, 1943	71	648	1.64	22.33	570	19.63
1945	1031	7,330	May 19, 1945	85	752	1.90	25.83	878	30.17
1946	1051	8,270	Aug. 3, 1946	90	748	1.89	25.70	686	23.56
1947	1081	17,800	June 3, 1947	61	832	2.11	28.56	699	24.01
1948	1111	8,340	Apr. 1, 1948	50	450	1.14	15.51	521	17.98
1949	1141	8,670	Jan. 1, 1949	57	506	1.28	17.39	511	17.57
1950	1171	13,200	Apr. 21, 1950	68	557	1.41	19.16	-	-

## CONNECTICUT RIVER BASIN

## 230. 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.

Gage.--Water-stage recorder. Datum of gage is 399.75 ft above mean sea level, datum of 1929.

Extremes.--1949-50: Maximum discharge, 39,600 cfs Apr. 21, 1950 (gage height, 12.62 ft); minimum daily, 530 cfs July 30, 1950.

Remarks.--Flow regulated by power plants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Comerford Station Pond, and other reservoirs (combined usable capacity, about 9½ billion cu ft). Runoff adjusted for change in contents in First Connecticut and Second Connecticut Lakes (see p. 229), Lake Francis (see p. 231), and Comerford Station Pond (see p. 236).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	*1,621	*2,985	*4,461	4,904	3,202	3,934	14,290	6,399	3,820	2,000	1,852	1,892	4,273

\* Not previously published; estimated on basis of records for station at South Newbury.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1950	*0.67	*1.25	*2.06	2.13	0.92	1.32	6.42	3.11	1.84	0.80	1.65	0.77	21.94

\* Not previously published; estimated on basis of records for station at South Newbury.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year			
		Observed			Adjusted			Observed	Adjusted		
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1950	1171	39,600	Apr. 21, 1950	*530	*4,273	*4,270	*1.61	*21.94	-	-	-

\* Not previously published.

## 231. Wells River at Wells River, Vt.

Location.--Lat 44°09'05", long. 72°04'00" on right bank 800 ft upstream from railroad bridge, 0.8 mile west of village of Wells River, Orange County, and 1.5 miles upstream from mouth.

Drainage area.--98.4 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 520 ft (from topographic map).

Average discharge.--10 years (1940-50), 137 cfs.

Extremes.--1940-50: Maximum discharge, 2,220 cfs (revised) June 3, 1947 (gage height, 6.35 ft), from rating curve extended above 1,300 cfs on basis of computation of flow over dam at gage height 8.12 ft; minimum, 5.1 cfs Oct. 6, 1948; minimum daily, 11 cfs Aug. 27, 1949.

Remarks.--Some diurnal fluctuation at low flow caused by small power plant above station. Flow partly regulated by Groton and Ricker Ponds.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	-	50.5	-
1941	43.1	135	118	87.2	70.4	49.5	299	88.5	51.4	74.9	54.7	44.8	92.9
1942	70.5	110	82.8	68.9	28.9	192	543	234	190	51.6	25.8	50.5	137
1943	84.2	135	98.1	63.8	76.7	173	368	439	148	78.6	94.9	63.4	152
1944	97.7	179	76.2	48.0	43.3	79.7	450	314	98.4	61.7	31.0	48.5	127
1945	91.9	89.9	68.8	89.1	44.8	383	378	439	199	121.	58.3	107	173
1946	291	226	171	116	75.9	425	232	210	128	57.4	107	64.3	176
1947	133	139	123	126	142	184	494	383	364	79.5	43.4	21.0	185
1948	18.3	43.0	36.3	23.2	27.8	200	313	244	111	52.7	37.9	20.3	94.0
1949	31.4	118	95.9	142	74.2	196	290	165	49.2	28.3	33.5	36.8	105
1950	35.7	71.2	119	134	75.6	115	*518	185	108	40.0	32.3	42.1	*123

\* Revised.

Monthly and yearly runoff, in inches, of Wells River at Wells River, Vt.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	-	0.57	-
1941	0.50	1.54	1.39	1.02	0.75	0.58	3.39	1.04	0.58	0.88	0.64	.51	12.82
1942	.83	1.24	.97	.81	.31	2.25	6.16	2.74	2.16	.60	.30	.57	18.94
1943	.99	1.53	1.15	.75	.81	2.02	4.17	5.14	1.68	.92	1.11	.72	20.99
1944	1.14	2.03	.89	.56	.47	.93	5.10	3.68	1.12	.72	.36	.55	17.55
1945	1.08	1.02	.81	1.04	.47	4.48	4.28	5.14	2.25	1.41	.68	1.21	23.87
1946	3.41	2.57	2.00	1.36	.80	4.98	2.63	2.46	1.45	.67	1.25	.73	24.31
1947	1.56	1.57	1.44	.47	1.50	2.16	5.60	4.49	4.12	.93	.51	.24	25.59
1948	.21	.49	.43	.27	.31	2.34	3.55	2.86	1.25	.62	.44	.23	13.00
1949	.37	1.34	1.12	1.66	.78	2.30	3.29	1.93	.58	.33	.39	.42	14.49
1950	.42	.81	1.39	1.57	.80	1.34	*5.88	2.17	1.22	.47	.38	.48	*16.93

\* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	921	-	-	-	-	-	-	-	-
1941	921	773	Apr. 16, 1941	26	92.9	0.944	12.82	90.0	12.43
1942	951,1201	*1,940	June 15, 1942	15	137	1.39	18.94	142	19.57
1943	971	1,120	Apr. 28, 1943	31	152	1.54	20.99	155	21.38
1944	1001,1201	*1,450	Nov. 9, 1943	18	127	1.29	17.55	119	16.40
1945	1031,1201	*1,880	Apr. 26, 1945	32	173	1.76	23.87	210	28.94
1946	1051,1201	*1,450	Mar. 9, 1946	27	176	1.79	24.31	151	20.90
1947	1081,1201	*2,220	June 3, 1947	14	185	1.88	25.59	161	22.15
1948	1111,1201	*1,400	Apr. 1, 1948	12	94.0	.955	13.00	106	14.70
1949	1141,1201	*1,100	Dec. 31, 1948	11	105	1.07	14.49	104	*14.28
1950	1171,1201	*2,050	Apr. 21, 1950	14	*123	*1.25	*16.93	-	-

\* Revised.

† Corrected.

\* Not previously published.

## 232. Connecticut River at South Newbury, Vt.

Location.--Lat 44°02'45", long. 72°04'30", on right bank 75 ft downstream from bridge at South Newbury, Orange County, 2½ miles south of Newbury, and 4 miles upstream from Waits River.

Drainage area.--2,825 sq mi.

Gage.--Water-stage recorder. Datum of gage is 374.90 ft above mean sea level, unadjusted. Prior to Sept. 16, 1930, chain gage on bridge 75 ft upstream at same datum.

Average discharge.--32 years (1918-50), 4,993 cfs (adjusted for storage).

Extremes.--1918-50: Maximum discharge, 84,500 cfs (revised) Nov. 4, 1927 (gage height, 33.4 ft, from graph), from rating curve extended above 50,000 cfs by logarithmic plotting and adjusted for rate of change of stage; maximum gage height, 38.6 ft Mar. 19, 20, 1936, from floodmarks; minimum, 198 cfs Sept. 4, 1934 (gage height, 0.03 ft; minimum daily, 222 cfs Aug. 27, 1934).

Remarks.--Flow regulated by power plants and by lakes and reservoirs having a combined usable capacity of about 9½ billion cu ft. Runoff adjusted for change in contents in First and Second Connecticut Lakes (see p. 229), Lake Francis since March 1940 (see p. 231), and Comerford Station Pond since August 1930 (see p. 236).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1918	-	-	-	-	-	-	-	-	-	-	2,250	4,920	-
1919	9,630	9,160	5,950	4,070	2,240	8,450	14,000	8,510	3,290	1,560	1,090	2,510	5,880
1920	4,670	7,980	4,800	1,600	1,050	7,380	20,200	11,800	2,880	2,950	2,150	3,260	5,890
1921	4,280	4,680	8,620	3,120	1,940	15,600	9,950	3,060	1,470	895	1,470	627	4,670
1922	1,630	4,370	*4,090	*2,040	*1,660	*8,920	*21,900	*7,100	*8,390	*5,420	*2,580	2,100	*5,850
1923	2,250	2,240	1,820	3,940	1,490	2,830	17,400	12,400	4,930	1,670	1,100	1,370	4,380
1924	2,100	4,450	6,990	5,230	1,840	2,680	11,500	13,200	2,910	2,490	2,280	7,820	5,300
1925	2,720	4,710	3,600	1,630	7,050	9,250	10,500	5,560	3,980	4,050	1,730	3,380	4,820
1926	7,740	9,210	4,740	2,170	1,680	2,390	11,500	14,900	6,160	3,080	1,950	2,530	5,690
1927	5,210	6,250	3,440	2,140	1,910	7,250	8,070	6,880	3,110	1,670	1,750	1,660	4,120
1928	6,030	14,700	8,490	4,540	2,850	4,320	16,800	12,200	5,550	1,740	2,780	2,970	6,910
1929	4,320	4,190	3,560	2,900	1,820	6,310	15,300	14,200	3,420	2,440	1,630	1,350	5,140
1930	1,560	2,570	1,650	3,330	3,040	4,900	11,900	10,100	5,920	3,180	1,560	1,130	4,240
1931	1,460	2,520	1,940	1,220	1,060	2,710	11,000	6,620	3,830	2,320	1,710	3,110	3,290
1932	2,660	4,230	3,610	6,640	3,190	2,200	15,000	6,700	2,760	5,000	2,560	2,870	4,780
1933	3,960	7,160	3,410	2,790	2,150	2,100	21,300	11,300	3,010	1,420	3,160	1,460	5,260
1934	2,540	2,817	2,635	2,342	1,450	3,044	22,970	8,145	2,827	1,652	1,301	1,480	4,424
1935	1,722	6,160	4,361	5,552	2,361	3,261	11,620	10,640	7,794	2,123	1,576	1,672	4,903
1936	2,019	4,056	3,196	1,942	1,496	24,510	12,170	12,160	2,326	1,885	1,080	2,235	5,786
1937	5,290	5,094	4,306	5,723	3,720	2,613	13,010	18,050	5,410	2,566	1,633	1,175	5,727
1938	3,362	4,653	3,807	3,029	3,604	7,351	12,660	5,639	2,309	2,593	2,308	7,951	4,928
1939	3,717	3,517	8,932	2,931	2,186	2,584	14,020	15,370	4,494	2,575	2,028	1,187	5,315
1940	3,008	4,441	2,697	1,723	993	1,206	10,780	18,050	3,924	2,424	1,160	2,383	4,406

\* Not previously published; estimated on basis of comparison with records for nearby stations.

## CONNECTICUT RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second (observed), of Connecticut River at South Newbury, Vt.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	1,885	7,128	4,015	3,589	2,491	1,688	11,260	5,436	2,035	2,450	1,542	1,385	3,580
1942	2,842	4,050	2,363	2,868	1,743	3,838	17,110	8,865	6,228	1,587	778	1,365	4,444
1943	2,248	5,000	3,537	2,090	2,093	5,013	9,697	15,580	8,093	2,834	4,362	3,742	5,336
1944	4,141	7,593	3,078	2,242	1,822	3,194	12,090	12,740	3,260	1,982	1,354	2,170	4,634
1945	4,783	4,347	3,066	3,921	2,436	11,630	13,600	11,820	6,235	4,249	1,365	3,470	5,928
1946	9,172	6,448	4,638	3,705	3,341	12,730	8,249	8,229	3,765	1,549	3,142	1,912	5,597
1947	4,704	5,519	4,269	4,355	4,393	5,555	13,660	14,990	4,638	2,804	1,802	1,902	6,578
1948	1,060	1,621	1,245	1,117	1,450	7,113	10,520	9,984	3,458	1,608	1,457	1,106	3,482
1949	1,024	4,880	3,185	5,580	2,602	6,603	10,580	5,624	2,566	1,491	1,284	1,447	3,906
1950	1,737	3,182	4,413	5,101	3,336	4,129	14,470	6,447	3,928	2,085	1,368	2,040	4,395

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1918	-	-	-	-	-	-	-	-	-	-	0.90	1.91	-
1919	4.08	3.68	2.43	1.60	0.66	3.41	5.64	3.54	1.22	0.54	.39	.99	28.18
1920	1.96	3.27	1.98	.43	.33	3.03	8.18	4.93	1.05	1.24	.76	1.20	28.36
1921	1.72	1.90	3.60	1.29	.65	6.57	3.94	1.13	.58	.34	.45	.22	22.37
1922	.69	1.78	*1.87	*.75	*.57	*3.69	*8.93	*3.00	*5.35	*2.19	*1.10	.67	*28.39
1923	.74	.83	.78	.63	.48	1.19	7.07	5.27	1.54	.82	.34	.39	20.86
1924	.84	1.82	2.93	2.17	.58	1.04	4.62	5.72	1.00	1.04	.89	3.19	25.84
1925	.98	1.78	1.48	.48	2.64	3.87	4.34	2.25	1.64	1.66	.68	1.32	23.10
1926	3.29	3.68	1.91	.88	.53	.68	4.59	6.44	2.44	1.24	.71	.73	27.12
1927	2.18	2.56	1.41	.71	.59	2.99	3.37	2.97	1.29	.71	.61	.48	19.87
1928	2.55	6.00	3.48	1.70	.80	1.74	6.80	5.27	2.19	.67	1.09	1.19	33.48
1929	1.84	1.61	1.23	1.15	.52	2.58	6.28	5.96	1.35	.87	.51	.44	24.34
1930	.65	1.07	.63	1.37	1.07	2.02	4.85	4.24	2.35	1.28	.73	.61	20.87
1931	.52	1.07	.68	.57	.32	1.02	4.59	2.92	1.58	.95	.72	1.35	16.09
1932	1.07	1.62	1.34	2.63	.98	.74	6.20	3.04	1.10	2.12	.95	1.11	22.90
1933	1.66	2.82	1.18	1.07	.63	.71	8.77	4.90	1.15	.60	1.29	.56	25.34
1934	1.06	1.08	.87	.74	.42	1.18	9.52	3.53	1.14	.65	.45	.65	21.29
1935	.71	2.48	1.59	2.11	.62	1.30	4.89	4.56	3.24	.85	.56	.69	23.56
1936	.77	1.68	1.10	.60	.44	10.28	4.96	5.10	.87	.81	.43	.87	27.91
1937	2.19	1.92	1.59	2.38	1.18	.84	5.40	7.70	2.15	1.07	.67	.45	27.55
1938	1.41	1.82	1.36	1.07	1.17	2.94	5.29	2.47	.92	1.14	.93	3.16	23.68
1939	1.37	1.33	3.61	.96	.74	.95	5.72	6.64	1.82	1.10	.78	.48	25.50
1940	1.28	1.69	.89	.47	.34	.40	4.49	8.03	1.67	1.03	.49	.98	21.76
1941	.69	2.94	1.30	1.26	.66	.50	4.98	1.52	.86	1.06	.61	.44	16.82
1942	1.32	1.75	.89	.75	.40	1.57	7.34	3.95	2.42	.65	.32	.52	21.88
1943	.92	1.87	1.05	.62	.67	1.80	3.98	7.02	3.25	1.18	1.76	1.42	25.52
1944	1.78	2.91	1.03	.65	.53	1.00	4.99	5.78	1.34	.88	.48	.90	22.27
1945	2.11	1.58	.95	1.39	.65	4.91	5.90	5.09	2.36	1.74	.55	1.47	28.68
1946	3.64	2.54	1.90	1.19	.79	5.35	3.55	3.68	1.53	.58	1.23	.62	26.60
1947	2.04	2.34	2.00	1.38	1.45	2.06	5.73	6.70	4.43	1.92	.76	.56	31.36
1948	.39	.71	.51	.34	.39	3.03	4.62	4.28	1.35	.65	.56	.23	17.04
1949	.41	2.14	1.06	2.22	.67	2.59	4.60	2.56	1.08	.53	.35	.55	18.76
1950	.67	1.24	1.91	2.07	.91	1.31	6.08	2.93	1.77	.79	.65	.78	21.11

\* Not previously published; estimated on basis of comparison with records of nearby stations.

Yearly discharge, in cubic feet per second

		Yearly discharge, in cubic feet per second												
Year	W.S.P. no.	Water year ending Sept. 30										Calendar year		
		Observed					Adjusted					Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches			
		Discharge	Date											
1919	521	*27,400	Nov. 1, 1918*	640	5,880	5,870	2.08	28.18	5,270	5,240	25.20			
1920	521	*32,200	Mar. 29, 1920	900	5,890	5,880	2.08	28.36	5,910	5,880	28.37			
1921	521	*26,300	Mar. 22, 1921	500	4,670	4,650	1.65	22.37	*4,030	*4,020	*19.29			
1922	561	*52,000	Apr. 13, 1922*	-	*5,850	*5,910	*2.09	*28.39	*5,540	*5,530	*26.58			
1923	561	*51,000	May 1, 1923	540	4,380	4,340	1.54	20.86	4,990	5,020	24.12			
1924	581	*32,600	Sept. 13, 1924	800	5,300	5,360	1.90	25.84	5,080	5,090	24.49			
1925	601	*32,500	Mar. 30, 1925	900	4,820	4,800	1.70	25.10	5,710	5,770	27.74			
1926	621	*39,400	May 6, 1926*	715	5,690	5,640	2.00	27.12	5,120	5,070	24.39			
1927	641	*24,400	Mar. 18, 1927*	840	4,120	4,140	1.47	19.87	5,320	5,360	25.75			
1928	661	*84,500	Nov. 4, 1927*	800	6,910	6,950	2.46	33.48	5,480	5,420	26.13			
1929	681	31,600	Apr. 11, 1929	710	5,140	5,070	1.79	24.34	4,610	4,580	22.01			
1930	696	25,000	Apr. 8, 1930	600	4,240	4,340	1.54	20.87	4,250	4,320	20.79			
1931	711	20,100	Apr. 14, 1931	330	3,290	3,350	1.19	16.09	3,680	3,710	17.85			
1932	726	33,200	Apr. 13, 1932	692	4,780	4,750	1.68	22.90	5,110	5,090	24.53			
1933	741	49,900	Apr. 20, 1933	330	5,260	5,270	1.87	25.34	4,710	4,720	22.69			
1934	756	36,200	Apr. 21, 1934	222	4,424	4,426	1.57	21.29	4,776	4,788	23.02			
1935	781	28,900	May 1, 1935	474	4,903	4,903	1.74	23.56	4,657	4,654	22.37			
1936	801	77,800	Mar. 19, 20, 1936	342	5,786	5,793	2.05	27.91	6,242	6,241	30.06			
1937	821	31,200	May 16, 1937	458	5,727	5,731	2.03	27.55	5,485	5,498	26.44			
1938	851	43,700	Sept. 22, 1938	452	4,928	4,929	1.74	23.68	5,300	5,288	25.40			
1939	871	38,100	Apr. 23, 1939	320	5,315	5,308	1.88	25.50	4,801	4,798	23.05			
1940	891	45,500	May 5, 1940	354	4,408	4,517	1.60	21.76	4,643	4,740	22.83			

\* Revised.

† Corrected.

\* Not previously published.



Yearly discharge, in cubic feet per second, of Connecticut River at South Newbury, Vt.--Continued

Year	W.S.P. no.	Water year ending Sept. 30								Calendar year				
		Observed				Adjusted				Observed		Adjusted		
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	Runoff in inches		
		Discharge	Date											
1941	921	26,400	Apr. 18, 1941	354	3,580	3,505	1.24	16.82	3,266	4,503	15.85			
1942	951	29,700	Apr. 28, 1942	359	4,444	4,554	1.61	21.88	4,556	4,529	21.76			
1943	971	29,300	May 13, 1943	480	5,336	5,313	1.88	25.52	5,688	5,703	27.40			
1944	1001	28,800	May 7, 1944	310	4,634	4,619	1.64	22.27	4,421	4,396	21.19			
1945	1031	35,000	Mar. 31, 1945	540	5,928	5,972	2.11	28.68	6,607	6,688	32.12			
1946	1051	22,700	Oct. 3, 1945	528	5,597	5,538	1.96	26.60	5,194	5,181	24.90			
1947	1081	43,700	June 3, 1947	888	6,578	6,527	2.31	31.36	5,606	5,635	26.59			
1948	1111	25,900	Apr. 3, 1948	516	5,482	5,537	1.25	17.04	3,910	3,955	19.04			
1949	1141	23,400	Mar. 30, 1949	582	5,906	5,906	1.38	18.76	3,931	3,948	18.97			
1950	1171	34,400	Apr. 21, 1950	528	4,395	4,392	1.55	21.11	-	-	-			

† Corrected.

233. South Branch Waits River near Bradford, Vt.

Location.--Lat 44°01'05", long. 72°12'30", on left bank 50 ft upstream from highway bridge, 1½ miles upstream from mouth, and 4½ miles west of Bradford, Orange County.

Drainage area.--42.7 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 715 ft (from topographic map).

Average discharge.--11 years (1939-50), 64.4 cfs.

Extremes.--1939-50: Maximum discharge, 2,300 cfs June 3, 1947 (gage height, 4.57 ft), from rating curve extended above 310 cfs on basis of slope-area computation at gage height 4.57 ft; maximum gage height, 4.86 ft Mar. 9, 1946 (ice jam); minimum discharge, 3.7 cfs Aug. 16, 1950.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	18.0	28.0	27.0	12.0	11.0	16.0	249	256	77.3	26.2	10.8	23.6	62.9
1941	17.3	59.8	61.5	46.5	37.9	23.9	143	51.0	20.2	29.6	17.1	13.6	43.3
1942	21.2	36.4	42.6	46.4	19.5	93.7	249	105	69.9	27.8	9.83	21.9	61.9
1943	26.9	52.4	45.2	30.0	35.5	82.2	160	191	82.8	44.0	53.0	33.2	69.8
1944	65.0	96.2	44.5	26.9	21.4	40.7	201	132	46.7	31.7	9.64	17.9	61.1
1945	38.0	36.6	36.0	49.4	29.1	176	170	197	88.6	50.2	17.3	43.0	77.9
1946	107	104	85.1	65.9	40.5	219	119	95.4	53.6	22.6	49.3	31.0	82.9
1947	59.3	65.2	52.2	57.4	61.0	31.9	258	175	201	58.6	22.0	13.8	92.6
1948	9.05	31.4	20.4	16.6	122.7	114	172	110	57.2	29.3	17.6	9.39	50.7
1949	16.9	47.9	45.4	62.2	38.7	95.3	121	61.0	20.4	11.5	13.7	17.7	45.8
1950	16.2	25.8	44.0	61.5	41.6	68.4	262	103	53.1	13.1	10.7	14.8	59.3

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	0.49	0.73	0.73	0.32	0.28	0.43	6.50	6.92	2.02	0.71	0.29	0.62	20.04
1941	.47	1.56	1.66	1.26	.92	.65	3.73	1.38	.53	.80	.46	.36	13.78
1942	.57	.95	1.15	1.25	.48	2.53	6.51	2.83	1.93	.75	.27	.57	19.69
1943	.73	1.37	1.22	.81	.86	2.22	4.17	5.15	2.26	1.19	1.43	.97	22.18
1944	1.76	2.51	1.20	.73	.54	1.10	5.26	3.56	1.22	.86	.26	.47	19.47
1945	1.03	.96	.97	1.33	.71	4.74	4.45	5.33	2.31	1.35	.47	1.12	24.77
1946	2.88	2.71	2.30	1.78	.99	5.90	3.11	2.52	1.40	.61	1.33	.81	26.34
1947	1.60	1.70	1.41	1.55	1.49	2.48	6.70	4.73	5.24	1.58	.59	.36	29.43
1948	.24	1.82	1.55	.45	.57	3.09	4.48	2.97	1.49	.79	.47	.25	16.17
1949	.45	1.25	1.22	1.68	.94	2.52	3.17	1.65	.53	.31	.37	.46	14.55
1950	.44	.67	1.19	1.66	1.01	1.85	6.85	2.77	1.39	.35	.29	.39	18.86

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date							
1940	891	1,500	May 3, 1940	-	62.9	1.47	20.04	68.3		21.78
1941	921	470	July 28, 1941	6.4	43.3	1.01	13.78	40.1		12.76
1942	951	1,020	June 15, 1942	5.3	61.9	1.45	19.69	64.0		20.34
1943	971	521	May 12, 1943	13	69.8	1.63	22.18	76.5		24.33
1944	1001	878	May 8, 1944	5.0	61.1	1.43	19.47	53.2		16.96
1945	1031	1,560	Apr. 28, 1945	8.4	77.9	1.82	24.77	95.4		29.70
1946	1051	1,200	Mar. 9, 1946†	5.6	82.9	1.94	26.34	72.9		23.16
1947	1081	2,500	June 3, 1947	7.8	92.6	2.17	29.43	82.8		26.33
1948	1111	970	Apr. 1, 1948	4.6	50.7	1.19	16.17	54.9		17.48
1949	1141	700	Dec. 30, 1948†	3.8	45.8	1.07	14.55	43.8		13.93
1950	1171	979	Apr. 20, 1950	4.0	59.3	1.39	18.86	-		-

† Corrected.

\* Not previously published; estimated on basis of weather records and records for nearby stations.

## 234. Connecticut River at Orford, N. H.

Location.--Lat 43°54'25", long. 72°08'25", on upstream side of covered highway bridge at Orford, Orange County, 9 miles downstream from Waits River, and 22 miles upstream from White River.

Drainage area.--3,100 sq mi.

Gage.--Chain and inclined staff gages. Altitude of gage is 370 ft (from topographic map).

Average discharge.--21 years (1900-21), 5,440 cfs (unadjusted).

Extremes.--1900-21: Maximum discharge, 57,300 cfs Mar. 28, 1913 (gage height, 33.4 ft, from graph based on gage readings), from rating curve extended above 26,000 cfs; minimum daily, 288 cfs Sept. 28, 1908.

Remarks.--Flow regulated by power plants and by First Connecticut and Second Connecticut Lakes. Runoff adjusted for change in contents in First Connecticut and Second Connecticut Lakes since October 1916 (see p. 229).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1900	-	-	-	-	-	-	-	-	-	-	-	1,300	-
1901	4,400	7,560	5,170	2,930	2,220	5,400	23,200	9,030	5,240	†3,330	3,690	1,580	6,150
1902	2,250	1,710	8,800	3,810	2,810	20,500	15,000	10,600	9,590	4,250	4,390	3,430	6,950
1903	4,420	4,980	2,930	2,840	3,320	24,300	11,100	3,340	3,090	2,310	2,120	1,100	5,510
1904	1,300	1,480	1,540	785	830	5,240	12,800	14,400	3,010	1,420	1,980	3,690	4,050
1905	5,550	2,570	1,210	868	681	7,110	13,400	8,400	4,180	4,390	3,430	5,410	4,780
1906	2,620	3,050	5,660	7,060	3,030	2,240	11,800	14,200	6,580	2,630	1,790	1,600	5,200
1907	2,760	2,670	1,960	1,960	1,190	3,970	14,400	15,900	4,690	4,600	2,600	3,010	4,990
1908	8,940	7,810	9,320	4,410	4,830	7,580	12,800	12,700	4,450	1,530	1,690	627	6,400
1909	747	1,040	1,200	2,690	4,000	3,620	25,400	14,400	3,890	1,490	836	1,460	5,050
1910	2,360	2,390	2,070	3,130	2,000	12,800	14,500	9,080	6,050	1,630	2,430	1,740	5,020
1911	2,040	2,510	1,520	2,520	1,360	2,450	16,800	11,300	2,440	1,180	1,620	2,360	4,010
1912	4,310	4,340	8,250	3,110	1,420	3,840	21,800	10,800	9,570	1,390	2,220	4,100	6,250
1913	4,010	5,640	5,450	8,740	4,410	18,900	13,300	6,750	4,340	2,090	1,390	1,130	6,370
1914	3,130	4,170	3,680	1,390	1,250	4,580	18,300	11,300	2,360	1,940	1,410	1,550	4,600
1915	*1,630	*2,420	*1,990	2,160	4,910	5,560	9,250	5,110	2,400	7,000	4,950	2,540	*4,150
1916	3,000	4,510	4,450	4,420	5,190	3,540	17,200	9,550	8,640	5,190	3,330	2,100	5,910
1917	3,510	3,600	6,190	2,700	1,850	5,200	16,900	10,500	12,000	3,900	4,870	2,670	6,150
1918	5,190	5,910	2,040	1,510	1,840	4,730	15,600	9,860	3,910	2,500	2,380	5,120	5,050
1919	9,810	9,630	6,140	4,130	2,300	8,980	14,700	8,950	3,570	1,720	1,230	2,730	6,180
1920	4,650	8,220	4,990	1,670	1,090	8,210	22,700	12,500	3,120	3,170	2,300	3,280	6,320
1921	4,780	5,040	9,360	3,180	1,970	17,000	10,600	3,110	1,490	1,080	1,730	805	5,050

\* Revised.

† Corrected.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1900	-	-	-	-	-	-	-	-	-	-	-	0.47	-
1901	1.64	2.72	1.92	1.09	0.75	2.01	8.34	3.36	1.89	1.23	1.37	.57	26.89
1902	.84	.62	2.46	1.28	1.04	7.62	4.68	3.94	3.45	1.58	1.64	1.24	30.39
1903	1.65	1.80	1.09	1.06	1.11	9.04	3.99	1.24	1.11	.86	.79	.40	24.14
1904	.48	.53	.57	.29	.29	1.95	4.61	5.36	1.08	.53	.74	1.33	17.76
1905	2.06	.92	.45	.32	.23	2.64	4.92	3.12	1.51	1.64	1.28	1.95	20.94
1906	.97	1.10	2.11	2.63	1.02	.83	4.25	5.28	2.36	.98	.67	.58	22.78
1907	1.03	.96	.73	.73	.40	1.48	5.19	5.91	1.69	1.71	.97	1.08	21.87
1908	3.32	2.81	3.47	1.64	1.68	2.82	4.61	4.73	1.61	.57	.63	.23	28.12
1909	.28	.37	.45	1.00	1.34	1.35	9.14	5.36	1.40	.55	.31	.53	22.08
1910	.88	.86	.77	1.16	.67	4.78	5.22	3.38	2.18	.61	.90	.63	22.02
1911	.76	.90	.56	.94	.46	.91	6.05	4.21	.88	.44	.60	.85	17.56
1912	1.80	1.56	3.07	1.15	.49	1.43	7.84	4.01	3.45	.52	.83	1.47	27.42
1913	1.49	2.03	2.03	3.25	1.48	7.03	4.79	2.51	1.56	.78	.52	.41	27.88
1914	1.16	1.51	1.37	.52	.42	1.71	6.58	4.21	.85	.72	.52	.56	20.13
1915	*.61	*.87	*.74	.80	1.64	2.06	3.52	1.90	.86	2.61	1.64	.91	*18.16
1916	1.12	1.62	1.66	1.65	1.80	1.31	6.19	3.55	3.11	1.92	1.23	.76	25.92
1917	1.19	1.25	2.26	.97	.61	1.94	6.16	4.13	4.32	1.43	1.82	.93	27.01
1918	1.86	2.19	.65	.46	.59	1.75	5.72	3.79	1.37	.91	.76	1.82	21.91
1919	3.79	3.51	2.28	1.49	.62	3.31	5.43	3.39	1.20	.55	.41	.98	26.96
1920	1.77	3.07	1.88	.42	.32	3.07	8.34	4.76	1.05	1.18	.75	1.10	27.71
1921	1.75	1.95	3.55	1.20	.60	6.51	3.82	1.05	.51	.38	.51	.27	22.00

\* Revised.

Yearly discharge, in cubic feet per second, of Connecticut River at Orford, N. H.

Year	W.S.P. no.	Water year ending Sept. 30								Calendar year		
		Observed				Adjusted				Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches		Mean	Mean	Runoff in inches
		Discharge	Date									
1901	415	*\$2,800	Apr. 25, 1901*	1,100	6,150	-	1.98	26.89		5,600	-	24.55
1902	415	*\$44,500	Mar. 3, 1902*	1,280	6,950	-	2.24	30.39		7,090	-	31.01
1903	415	*\$40,600	Mar. 24, 1903*	640	5,510	-	1.78	24.14		4,840	-	21.18
1904	415	*\$23,800	May 19, 1904*	650	4,050	-	1.31	17.76		4,470	-	19.61
1905	415	*\$37,800	Mar. 30, 1905*	560	4,780	-	1.54	20.94		4,950	-	21.69
1906	415	*\$51,500	Apr. 16, 1906*	950	5,200	-	1.68	22.78		4,870	-	21.32
1907	415	*\$41,800	May 5, 1907*	980	4,990	-	1.61	21.87		6,570	-	28.75
1908	415	*\$37,200	Apr. 30, 1908*	288	6,400	-	2.06	28.12		4,470	-	19.62
1909	415	*\$51,000	Apr. 16, 1909*	550	5,050	-	1.63	22.08		5,370	-	23.49
1910	415	*\$24,600	Apr. 2, 1910*	755	5,020	-	1.62	22.02		4,960	-	21.73
1911	415	*\$35,000	May 3, 1911*	680	4,010	-	1.29	17.56		4,930	-	21.57
1912	415	*\$39,400	Apr. 8, 1912*	850	6,250	-	2.02	27.42		6,090	-	26.74
1913	415	*\$7,300	Mar. 28, 1913	550	6,370	-	2.05	27.88		6,020	-	26.37
1914	581,1231	*\$45,400	Apr. 22, 1914	880	4,600	-	1.48	20.13		*4,180	-	*18.31
1915	401,1231	*\$6,200	Feb. 26, 1915	750	*4,150	-	*1.54	*16.16		4,650	-	20.34
1916	431	32,300	Apr. 3, 1916	1,280	5,910	-	1.91	25.92		6,010	-	26.35
1917	451	29,500	Apr. 24, 1917	1,550	6,150	6,170	1.99	27.01		6,150	6,170	27.01
1918	471	29,300	Apr. 3, 1918	910	5,050	5,020	1.62	21.91		6,100	6,150	26.79
1919	501,1231	*\$9,700	Apr. 14, 1919	910	6,180	6,170	1.99	26.96		5,520	5,500	24.10
1920	501,1231	*\$6,700	Mar. 29, 1920	980	6,320	6,320	2.04	27.71		6,440	6,400	28.14
1921	521,1231	*\$28,900	Mar. 23, 1921	595	5,050	5,030	1.62	22.00		-	-	-

\* Revised.

\* Not previously published.

## 235. Union Village Reservoir

Location.--Lat 43°47'35", long. 72°15'25", on Ompompanoosuc River about 900 ft upstream from Avery Brook and 0.3 mile north of Union Village, Orange County.

Drainage area.--126 sq mi.

Gage.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers).

Remarks.--Reservoir completed in 1949 for flood control, has usable capacity of 1,650,000,000 cu ft.

Cooperation.--Records furnished by Corps of Engineers.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1950	-	-	0.0	10.1	8.1	7.6	4.0	2.6	1.3	0.9	1.1	1.3

## 236. 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.

Gage.--Water-stage recorder. Altitude of gage is 435 ft (from topographic map).

Average discharge.--10 years (1940-50), 194 cfs (adjusted).

Extremes.--1940-50: 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 at gage height 9.65 ft; 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.--Flow regulated by Union Village Reservoir since October 1949. Some regulation by Lake Fairlee. Runoff adjusted for change in contents in Union Village Reservoir since October 1949 (see above).

Monthly and yearly mean discharge, in cubic feet per second (observed), of Ompompanoosuc River at Union Village, Vt.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	38.3	146	163	150	151	78.3	365	122	40.8	93.4	41.5	75.2	121
1942	49.1	84.0	99.4	120	56.2	340	702	233	196	76.1	27.3	105	169
1943	64.7	173	143	71.1	107	317	536	497	177	112	215	114	211
1944	203	371	123	63.6	51.1	151	717	367	173	82.6	25.5	45.1	197
1945	106	107	123	156	100	667	505	583	284	195	70.5	123	253
1946	389	340	276	133	103	644	309	256	228	53.5	109	93.4	246
1947	218	185	133	159	191	310	762	444	606	143	50.3	19.3	268
1948	14.5	60.2	42.2	37.7	55.3	470	522	350	159	92.5	43.4	2.7	155
1949	30.2	194	164	252	166	377	370	151	47.3	27.6	28.0	32.6	153
1950	33.3	69.0	149	197	125	222	768	223	120	25.5	17.8	31.4	164

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	0.34	1.25	1.45	1.33	1.21	0.69	3.13	1.08	0.35	0.83	0.37	0.63	12.66
1942	.44	.72	.88	1.07	.45	3.02	6.03	2.07	1.68	.24	.39	.17	17.66
1943	.57	1.49	1.27	.63	.86	2.81	4.60	4.40	1.52	1.00	1.91	.98	22.04
1944	1.80	3.18	1.09	.56	.42	1.34	6.16	3.26	1.49	.73	.23	.39	20.65
1945	.94	.91	1.09	1.39	.80	5.91	4.34	5.17	2.44	1.73	.63	1.06	26.41
1946	3.45	2.91	2.45	1.18	.82	5.71	2.65	2.27	1.96	.47	.96	.80	25.63
1947	1.93	1.58	1.18	1.41	1.53	2.74	6.54	3.94	5.20	1.27	.45	.17	27.94
1948	.13	.52	.37	.35	.46	4.16	4.48	3.10	1.36	.82	.38	.15	16.24
1949	.27	1.66	1.46	2.24	1.33	3.34	3.17	1.34	1.41	.24	.25	.28	15.99
1950	.30	.59	1.32	1.78	.99	1.97	6.58	1.97	1.03	.23	.16	.27	17.19

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year			
		Observed			Adjusted			Observed		Adjusted	
		Momentary		Maximum	Minimum	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean
		Discharge	Date								
1941	921	1,260	July 28, 1941	18	121	-	0.931	12.66	112	-	11.66
1942	951	*2,680	June 15, 1942*	13	169	-	1.30	17.68	181	-	18.95
1943	971	1,880	Apr. 28, 1943	30	211	-	1.62	22.04	237	-	24.78
1944	1001	2,970	Nov. 9, 1943	13	197	-	1.32	20.65	167	-	17.62
1945	1031	3,300	Apr. 26, 1945	26	253	-	1.95	26.41	309	-	32.28
1946	1051	*2,200	Mar. 9, 1946*	18	246	-	1.89	25.63	206	-	21.51
1947	1081	4,800	June 3, 1947	13	268	-	2.06	27.94	232	-	24.27
1948	1111	3,240	Apr. 1, 1948	9.5	155	-	1.19	16.24	178	-	18.61
1949	1141	2,310	Mar. 28, 1949	9.7	153	-	1.18	15.99	142	-	14.81
1950	1171	2,350	Apr. 20, 1950	2.0	164	165	1.27	17.19	-	-	-

\* Not previously published; estimated on basis of weather records and records for nearby stations.

## 237. 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 1½ miles southwest of Bethel, Windsor County.Drainage area.--241 sq mi.Gage.--Water-stage recorder. Altitude of gage is 550 ft (from topographic map). Prior to Oct. 1, 1940, at datum 2 ft higher.Average discharge.--19 years (1931-50), 487 cfs.Extremes.--1931-50: Maximum discharge, 32,200 cfs Sept. 21, 1938 (gage height, 11.46 ft, present datum), from rating curve extended above 4,200 cfs on basis of slope-area determination at gage height 11.46 ft; maximum gage height, 13.20 ft Mar. 9, 1942\* (ice jam); minimum discharge, 28 cfs Aug. 3, 1933, Aug. 22, 1934.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	-	-	-	-	-	-	-	-	453	236	90.2	161	-
1932	153	280	430	715	366	262	1,750	499	183	352	176	77.3	436
1933	229	904	288	378	330	185	2,330	691	136	53.0	123	109	476
1934	156	321	304	333	157	476	2,011	448	241	75.2	47.5	77.9	386
1935	118	327	283	753	238	789	992	733	509	448	152	162	462
1936	179	653	361	305	156	2,667	1,276	663	169	179	139	284	586
1937	661	626	541	871	432	197	1,463	1,641	447	200	174	87.5	612
1938	199	536	430	425	712	1,000	803	416	131	213	466	262	547
1939	310	325	888	288	390	501	1,894	1,063	243	139	79.6	59.5	515
1940	156	260	177	88.8	77.7	128	1,650	2,150	413	158	78.2	201	462
1941	110	557	434	308	280	192	1,314	237	128	175	81.2	109	325
1942	156	406	224	270	134	707	1,850	387	266	86.2	54.1	101	384
1943	201	520	261	110	241	682	1,192	1,602	389	276	563	320	530
1944	405	831	275	169	141	382	1,723	875	306	167	69.1	114	453
1945	277	228	263	369	232	1,697	993	1,124	704	646	174	450	599
1946	1,169	774	400	493	286	1,355	572	753	444	188	263	167	575
1947	449	535	354	402	419	669	1,815	1,178	1,422	321	118	71.5	645
1948	48.4	156	124	106	242	1,498	954	805	327	314	168	58.3	400
1949	75.5	436	727	758	357	847	915	471	126	71.0	92.6	111	418
1950	129	224	586	585	368	490	1,617	531	378	104	70.3	132	432

Monthly and yearly runoff, in inches, of White River near Bethel, Vt.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	-	-	-	-	-	-	-	-	2.10	1.13	0.43	0.74	-
1932	0.73	1.30	2.06	3.42	1.64	1.25	8.09	2.39	.85	1.69	.84	.36	24.62
1933	1.10	4.18	1.38	1.81	1.43	.88	10.76	3.30	.63	.25	.59	.50	28.81
1934	.75	1.48	1.45	1.59	.88	2.28	9.30	2.14	1.12	.36	.23	.36	21.74
1935	.56	1.52	1.35	3.60	1.03	3.77	4.60	3.50	2.35	2.14	.73	.84	25.99
1936	.86	3.02	1.73	1.46	.70	12.80	5.90	3.17	.78	.86	.67	1.23	33.18
1937	3.16	2.90	2.58	4.16	1.86	.94	6.73	7.85	2.06	.96	.83	.40	34.43
1938	.95	2.48	2.05	2.03	3.07	4.78	3.72	1.99	.61	1.02	2.22	5.85	30.77
1939	1.49	1.51	4.24	1.38	1.69	2.40	8.77	5.08	1.13	.67	.38	.28	29.02
1940	.75	1.20	.85	.42	.35	.61	7.64	10.28	1.91	.75	.37	.93	26.06
1941	.53	2.58	2.08	1.47	1.21	.92	6.08	1.13	.59	.84	.39	.50	18.32
1942	.75	1.98	1.07	1.29	.58	3.39	8.47	1.85	1.23	.41	.26	.47	21.64
1943	.96	2.41	1.25	.53	1.04	3.25	5.47	7.66	1.80	1.32	2.69	1.48	29.87
1944	1.94	3.85	1.32	.81	.63	1.83	7.98	4.18	1.41	.80	.33	.53	25.61
1945	1.33	1.06	1.26	1.76	1.00	8.12	4.60	5.38	3.26	3.09	.83	2.08	33.77
1946	5.59	3.58	1.91	2.36	1.24	6.48	2.65	3.60	2.06	.90	1.26	.77	32.40
1947	2.15	2.48	1.69	1.92	1.81	3.20	8.40	5.64	6.58	1.54	.56	.33	36.30
1948	.23	.63	.59	.51	1.08	7.16	4.42	3.85	1.51	1.50	.80	.27	22.55
1949	.56	2.02	3.48	3.63	1.54	4.05	4.24	2.25	.58	.34	.44	.51	25.44
1950	.62	1.04	2.80	2.70	1.59	2.34	7.49	2.54	1.75	.50	.34	.61	24.32

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1931	711	-	-	-	-	-	-	-	-
1932	726	5,570	Apr. 12, 1932	47	436	1.81	24.82	481	27.19
1933	741, 801	12,200	Apr. 18, 1933	32	476	1.98	26.81	423	23.83
1934	756	7,600	Apr. 12, 1934	29	388	1.60	21.74	382	21.49
1935	781	11,000	Jan. 10, 1935	76	462	1.92	25.99	500	28.17
1936	801	16,100	Mar. 18, 1936	63	566	2.43	33.18	640	36.21
1937	821	13,000	May 15, 1937	68	612	2.54	34.43	556	31.27
1938	851	32,200	Sept. 21, 1938	65	547	2.27	30.77	578	32.53
1939	871	6,150	Apr. 20, 1939	38	515	2.14	29.02	436	24.58
1940	891	12,400	May 20, 1940	52	462	1.92	26.06	504	28.45
1941	921	5,620	Apr. 15, 1941	50	325	1.35	18.32	299	16.83
1942	951	#6,350	Apr. 8, 1942	36	384	1.59	21.64	400	22.56
1943	971	5,070	Apr. 26, 1943	76	530	2.20	29.87	575	32.36
1944	1001	8,930	Apr. 10, 1944	42	453	1.88	25.61	392	22.15
1945	1031	7,650	June 26, 1945	75	599	2.49	33.77	732	41.20
1946	1051	13,700	Oct. 2, 1945	69	575	2.39	32.40	491	27.64
1947	1081	20,200	June 3, 1947	51	645	2.68	36.30	558	31.43
1948	1111	10,500	Mar. 22, 1948	39	400	1.65	22.55	478	26.96
1949	1141	19,900	Dec. 31, 1949	41	415	1.73	23.44	591	32.04
1950	1171	8,470	Apr. 5, 1950	43	432	1.79	24.32	-	-

\* Not previously published; estimated on basis of weather records and records for nearby stations.

## 238. 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.

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.--11 years (1939-50), 46.5 cfs.

Extremes.--1939-50: Maximum discharge, 2,120 cfs Dec. 31, 1948 (gage height, 6.41 ft), from rating curve extended above 180 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.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	8.22	7.35	-
1940	10.9	17.6	17.2	9.45	8.27	14.0	208	155	51.0	16.6	5.21	24.3	44.6
1941	11.6	35.7	40.2	39.3	30.6	23.0	110	23.4	9.28	11.8	6.23	4.99	28.7
1942	9.88	26.3	22.3	28.3	16.1	79.3	213	41.5	34.3	11.5	4.72	10.2	41.4
1943	19.5	47.0	30.0	17.8	29.9	96.0	139	138	62.2	31.6	41.2	29.1	56.9
1944	38.4	86.2	33.0	17.5	13.9	32.5	211	78.8	26.8	21.1	6.47	8.80	47.7
1945	19.0	21.0	22.2	39.6	26.6	174	110	135	55.4	56.6	27.8	36.0	60.6
1946	102	68.9	44.3	43.5	29.8	144	52.1	53.5	42.4	14.9	23.1	20.2	53.5
1947	41.0	50.9	40.1	44.6	47.1	70.9	190	92.9	142	42.1	14.3	6.00	64.9
1948	4.65	17.1	11.9	10.8	16.9	120	94.4	71.7	37.6	18.3	15.6	6.05	35.4
1949	9.17	31.4	70.3	66.5	43.1	88.2	89.9	48.9	12.2	5.41	5.06	5.58	39.7
1950	6.27	11.9	29.4	44.4	30.6	47.9	194	52.4	23.7	6.05	5.69	9.49	38.3

## CONNECTICUT RIVER BASIN

Monthly and yearly runoff, in inches, of Ayers Brook at Randolph, Vt.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	0.31	0.27	-
1940	0.41	0.64	0.65	0.36	0.29	0.53	7.59	5.85	1.87	0.63	0.20	0.89	19.91
1941	.44	1.31	1.52	1.49	1.04	.87	4.01	.89	.54	.45	.24	.18	12.77
1942	.37	.96	.84	1.07	.55	3.00	7.80	1.57	1.26	.43	.18	.37	18.40
1943	.74	1.72	1.13	.67	1.02	3.63	5.09	5.21	2.28	1.20	1.56	1.06	25.31
1944	1.45	3.15	1.25	.66	.49	1.23	7.71	2.98	.98	.80	.24	.32	21.26
1945	.72	.77	.84	1.50	.91	6.57	4.02	5.10	2.03	2.14	1.05	1.32	26.97
1946	5.66	2.52	1.67	1.64	1.02	5.44	1.91	2.02	1.55	.56	.87	.74	23.80
1947	1.55	1.86	1.52	1.69	1.61	2.68	6.93	3.51	5.20	1.59	.54	.22	29.90
1948	.18	.62	1.45	.41	.60	4.52	3.45	2.71	1.37	.69	.59	.22	15.81
1949	.35	1.15	2.66	2.52	1.47	3.33	3.29	1.85	.45	.20	.19	.20	17.66
1950	.24	.43	1.11	1.68	1.03	1.81	7.11	1.98	.87	.23	.21	.35	17.05

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1940	891	965	May 21, 1940	2.7	44.6	1.46	19.91	48.1	21.48	
1941	921	302	Dec. 29, 1940	2.1	28.7	.941	12.77	26.2	11.67	
1942	951	640	Apr. 16, 1942	2.1	41.4	1.36	18.40	44.5	19.82	
1943	971	454	May 12, 1943	8.0	56.9	1.87	25.31	61.9	27.57	
1944	1001	1,040	Apr. 10, 1944	3.4	47.7	1.56	21.26	39.8	17.74	
1945	1031	722	Apr. 26, 1945	6.9	60.6	1.99	26.97	73.4	32.69	
1946	1051	718	Mar. 9, 1946	6.4	53.5	1.75	23.80	46.5	20.68	
1947	1081	1,310	June 3, 1947	4.2	64.9	2.13	28.90	56.7	25.22	
1948	1111	790	Mar. 22, 1948	3.5	35.4	1.16	15.81	41.9	18.72	
1949	1141	2,120	Dec. 31, 1948	1.4	39.7	1.30	17.66	34.4	15.28	
1950	1171	608	Apr. 5, 1950	1.8	38.3	1.26	17.05	-	-	

## 239. Second Branch White River at North Randolph, Vt.

Location.--Lat 43°58'10", long. 72°33'20", on right bank a quarter of a mile south of North Randolph, Orange County, about 200 ft downstream from school house, and 800 ft downstream from Snows Brook.

Drainage area.--27 sq mi, approximately.

Gage.--Staff gage. Altitude of gage is 635 ft (from topographic map).

Remarks.--Some diurnal fluctuation at low flow and possibly some regulation caused by saw-mill upstream.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1921	-	27.0	66.8	41.4	23.3	249	96.6	37.7	10.3	11.8	8.03	3.08	-

## 240. White River at Sharon, Vt.

Location.--Lat 43°45'40", long. 72°27'00", on left bank about 800 ft upstream from Central Vermont Railroad bridge, about 1,500 ft downstream from dam of Vermont Copper Co., and 1½ miles downstream from Sharon, Windsor County.

Drainage area.--654 sq mi. June 30, 1903, to Nov. 12, 1904, 643 sq mi.

Gage.--Staff gage. Altitude of gage is about 430 ft (from topographic map). June 30, 1903, to Nov. 12, 1904, chain gage on highway bridge about 2 miles upstream at datum about 20 ft higher.

Remarks.--Flow not seriously affected by regulation during 1903-4, but considerable regulation by power plants above and by dam of the Vermont Copper Co. during 1909-12.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	-	-	-	-	-	-	483	510	314	-
1904	472	364	325	225	200	1,160	3,070	1,730	395	200	217	759	758
1905	1,540	-	-	-	-	-	-	-	-	-	-	-	-
1909	-	-	-	-	-	-	-	-	644	230	189	163	-
1910	226	261	237	541	700	3,160	1,810	1,240	1,420	350	562	566	†921
1911	530	660	554	843	345	746	3,770	1,230	375	245	337	560	†652
1912	1,520	1,080	1,450	-	-	-	-	-	-	-	-	-	-

† Corrected.

Monthly and yearly runoff, in inches, of White River at Sharon, Vt.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	-	-	-	-	-	-	0.87	0.91	0.54	-
1904	0.85	0.63	0.58	0.40	0.34	2.08	5.33	3.10	0.68	.36	.39	1.32	16.06
1905	2.77	-	-	-	-	-	-	-	-	-	-	-	-
1909	-	-	-	-	-	-	-	-	1.44	.41	.33	.28	-
1910	.40	.45	.42	.95	1.11	5.57	3.09	2.19	2.42	.58	.99	.97	19.14
1911	.95	1.13	.98	1.58	.55	1.31	6.43	2.17	.64	.43	.59	.96	17.70
1912	2.68	1.84	2.56	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1904	424	-	-	-	758	1.18	16.06	-	-
1910	424	-	-	-	72	†921	19.14	1,010	20.91
1911	424	-	-	-	140	†852	17.70	1,050	21.74

† Corrected.

241. 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.

Gage.--Water-stage recorder. Datum of gage is 374.53 ft above mean sea level, datum of 1929. Prior to Oct. 30, 1927, inclined staff gage at same site and datum.

Average discharge.--35 years (1915-50), 1,191 cfs.

Extremes.--1915-50: Maximum discharge, 120,000 cfs Nov. 4, 1927 (gage height, 29.3 ft, from floodmarks); by slope-area method; minimum observed, about 35 cfs Aug. 4, 1918 (gage height, 2.22 ft); minimum daily, 64 cfs Aug. 4, 1918.

Remarks.--Some diurnal fluctuation at low flow caused by power plant above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1915	-	-	-	-	-	-	-	-	-	1,040	671	277	-
1916	280	421	684	1,480	1,180	1,110	3,770	1,770	1,500	714	217	193	1,110
1917	311	614	794	646	392	1,430	3,680	2,000	1,990	505	314	197	1,070
1918	839	736	347	248	657	1,690	3,960	1,550	579	338	239	649	983
1919	1,200	1,720	1,480	1,060	436	2,770	2,880	2,220	731	218	150	602	1,290
1920	854	1,670	1,200	222	212	2,800	5,580	1,920	615	556	223	203	1,340
1921	719	646	1,780	820	559	4,970	1,970	1,170	224	257	238	131	1,130
1922	279	894	306	568	489	3,350	5,800	1,700	1,540	1,050	345	257	1,430
1923	746	302	237	815	350	1,040	4,920	2,060	586	193	131	140	920
1924	422	673	2,530	1,390	398	668	4,830	3,410	568	303	207	574	1,310
1925	432	454	607	197	1,660	3,670	2,630	1,390	716	795	484	634	1,130
1926	1,320	2,090	1,240	680	602	786	4,610	2,970	950	606	355	269	1,370
1927	1,270	2,170	776	676	705	2,890	1,610	1,320	569	544	459	403	1,120
1928	†1,540	†4,870	†2,680	†1,530	†766	†1,730	†4,920	†3,050	†1,300	†462	†586	†590	†2,000
1929	332	472	547	743	354	3,110	5,120	2,710	858	525	244	363	1,280
1930	356	614	564	1,520	1,490	2,010	2,690	1,330	1,300	465	294	266	1,070
1931	216	595	509	269	319	825	4,090	1,740	1,300	746	290	360	936
1932	323	535	770	1,640	797	596	4,490	1,160	387	510	306	154	969
1933	426	1,960	921	877	674	497	6,080	1,520	372	139	230	205	1,140
1934	286	475	543	744	305	1,155	5,499	1,224	465	150	106	221	928
1935	271	726	629	1,713	563	2,056	2,724	1,687	1,004	765	301	321	1,066
1936	304	1,093	753	610	400	7,170	3,329	1,391	383	374	295	511	1,390
1937	1,120	1,350	1,284	2,127	1,272	549	3,945	4,043	1,340	704	420	195	1,529
1938	424	1,126	891	852	1,536	2,491	2,214	1,098	346	459	828	2,774	1,247
1939	868	791	2,335	744	1,021	1,291	5,247	2,498	613	345	193	136	1,339
1940	270	501	367	201	169	222	4,674	4,734	1,150	400	179	438	1,108
1941	231	1,068	906	720	630	455	2,888	634	288	370	190	192	711
1942	257	726	532	763	397	1,828	5,031	1,208	806	267	148	242	1,015
1943	429	1,111	705	412	760	1,973	3,082	3,597	1,124	686	1,218	731	1,318
1944	937	2,009	756	430	371	990	4,464	2,043	723	427	182	236	1,127
1945	552	550	585	815	564	4,135	2,605	3,141	1,609	1,325	475	875	1,443
1946	2,416	1,814	1,052	1,152	691	3,503	1,488	1,619	1,112	399	622	414	1,364
1947	1,054	1,208	862	1,061	1,116	1,785	4,515	2,755	3,459	892	319	173	1,595
1948	126	357	302	248	470	3,568	2,544	1,935	514	584	367	140	948
1949	188	872	1,594	1,745	951	2,104	2,299	1,195	321	166	189	221	970
1950	243	424	1,049	1,198	756	1,240	4,331	1,345	770	220	153	263	996

\* Not previously published; estimated on basis of records for Connecticut River at White River Junction.

Monthly and yearly runoff, in inches, of White River at West Hartford, Vt.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1915	-	-	-	-	-	-	-	-	-	1.74	1.12	0.45	-
1916	0.47	0.68	1.14	2.48	1.84	1.85	6.09	2.96	2.43	1.19	.36	.31	21.80
1917	.52	.99	1.35	1.08	.59	2.38	5.95	3.35	3.22	.84	.53	.32	21.10
1918	1.40	1.19	.58	.41	.99	2.83	6.40	2.59	.94	.56	.40	1.05	19.34
1919	2.00	2.78	2.48	1.77	.66	4.63	4.65	3.71	1.18	.37	.25	.97	25.45
1920	1.43	2.69	2.01	.37	.33	4.67	9.02	3.20	1.00	.93	.37	.34	26.36
1921	1.20	1.04	2.98	1.37	.84	8.31	3.19	1.96	.36	.43	.40	.21	22.29
1922	.47	1.45	1.51	.95	.74	5.62	9.39	2.83	2.48	1.75	.57	.42	28.18
1923	.46	.49	.40	1.38	.53	1.74	7.96	3.44	.95	.32	.22	.23	18.10
1924	.70	1.09	3.75	2.32	.62	1.12	7.82	5.70	.92	.51	.35	.93	25.83
1925	.72	.73	1.01	.33	2.50	6.12	4.25	2.32	1.16	1.33	.81	1.03	22.31
1926	2.21	3.38	2.08	1.13	.91	1.31	7.45	4.96	1.54	1.01	.59	.44	27.01
1927	2.11	3.51	1.30	1.13	1.06	4.83	2.61	2.20	.92	.91	.77	.65	22.00
1928	2.58	7.87	4.44	2.56	1.20	2.89	7.96	5.10	2.10	7.77	7.98	7.96	39.40
1929	.55	.76	.91	1.24	.53	5.19	8.27	4.52	1.39	.88	.41	.59	25.24
1930	.60	.99	.94	2.54	2.24	3.36	4.35	2.21	2.11	.78	.49	.43	21.04
1931	.36	.96	.85	.45	.48	1.38	6.62	2.90	2.11	1.25	.48	.58	18.42
1932	.54	.87	1.29	2.74	1.25	1.00	7.25	1.94	.63	.85	.51	.25	19.12
1933	.71	3.18	1.37	1.47	1.02	.83	9.83	2.54	.60	.23	.38	.33	22.49
1934	.48	.77	.91	1.24	.46	1.92	8.89	2.04	.75	.25	1.18	.36	18.25
1935	.45	1.17	1.05	2.86	.85	3.44	4.41	2.81	1.63	1.28	.50	.52	20.97
1936	.51	1.76	1.26	1.02	.63	11.99	5.38	2.33	.62	.63	.49	.83	27.45
1937	1.87	2.19	2.14	3.55	1.92	.92	6.58	6.76	2.16	1.18	.70	.32	30.09
1938	.71	1.82	1.49	1.42	2.32	4.18	3.58	1.85	.56	.77	1.38	4.48	24.52
1939	1.45	1.28	3.90	1.24	1.54	2.16	8.48	4.17	.99	.58	.32	.22	26.33
1940	.45	.61	.61	.34	.26	.37	7.56	7.91	1.86	.67	.30	.71	21.85
1941	.39	1.73	1.51	1.20	.95	.76	4.67	1.06	.47	.62	.32	.31	13.99
1942	.43	1.17	.89	1.28	.60	3.05	8.13	2.02	1.30	.45	.25	.59	19.96
1943	.72	1.80	1.18	.69	1.15	3.30	4.95	6.01	1.82	1.11	2.04	1.18	25.95
1944	1.57	3.25	1.26	.72	.58	1.65	7.22	3.41	1.17	.71	.30	.38	22.22
1945	.92	.89	.98	1.36	.85	6.91	4.21	5.25	2.60	2.21	.79	1.41	26.38
1946	4.04	2.93	1.76	1.92	1.04	5.85	2.41	2.71	1.80	.67	1.04	.67	26.84
1947	1.76	1.95	1.44	1.76	1.68	2.98	7.30	4.60	5.59	1.49	.53	.28	31.36
1948	.21	.58	.51	.41	.73	5.63	4.11	3.23	1.48	.98	.61	.23	18.71
1949	.31	1.41	2.33	2.91	1.44	3.51	3.72	1.98	.52	.28	.31	.36	19.08
1950	.41	.68	1.75	2.00	1.14	2.07	7.00	2.25	1.24	.37	.26	.42	19.59

\* Not previously published; estimated on basis of records for Connecticut River at White River Junction.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1915	401	-	-	-	-	-	-	-	-
1916	431	*11,800	Apr. 2, 1916	90	1,110	1.61	21.80	1,130	22.35
1917	451	*15,300	June 12, 1917	72	1,070	1.55	21.10	1,090	21.43
1918	471	*10,700	Apr. 3, 1918*	64	983	1.42	19.34	1,190	23.43
1919	501	*30,000	Mar. 28, 1919	106	1,290	1.87	25.45	1,240	24.32
1920	501	*18,600	Apr. 13, 1920	110	1,340	1.94	26.36	1,290	25.45
1921	521	*17,200	Mar. 21, 1921	86	1,130	1.64	22.29	1,040	20.50
1922	541	*35,500	Apr. 12, 1922	100	1,430	2.07	28.18	1,330	26.10
1923	561, 1031	*17,600	Apr. 6, 1923	100	920	1.33	18.10	1,130	22.29
1924	581	*15,200	Apr. 19, 1924	108	1,310	1.90	25.83	1,150	22.75
1925	601	*31,200	Mar. 29, 1925	122	1,130	1.64	22.31	1,400	27.52
1926	621	*19,700	Apr. 25, 1926	142	1,370	1.99	27.01	1,340	26.26
1927	641	*21,100	Mar. 14, 1927*	200	1,120	1.62	22.00	1,520	29.97
1928	641, 781	*120,000	Nov. 4, 1927	-	*2,000	*2.90	*39.40	*1,360	*26.73
1929	681	*12,800	Apr. 26, 1929*	130	1,280	1.86	25.24	1,300	25.55
1930	696	12,600	Jan. 9, 1930	132	1,070	1.55	21.04	1,050	20.68
1931	711	14,200	Apr. 11, 1931	141	936	1.36	18.42	963	18.95
1932	726	15,000	Apr. 12, 1932	74	969	1.40	19.12	1,100	21.68
1933	741	23,300	Apr. 18, 1933	86	1,140	1.65	22.49	986	19.39
1934	756	22,600	Apr. 12, 1934	88	928	1.34	18.25	955	18.76
1935	781	20,000	Jan. 10, 1935	150	1,066	1.54	20.97	1,110	21.83
1936	801	45,400	Mar. 18, 1936	129	1,390	2.01	27.45	1,526	30.12
1937	821	25,300	May 15, 1937	147	1,529	2.22	30.09	1,418	27.91
1938	851	47,600	Sept. 22, 1938	134	1,247	1.81	24.52	1,380	27.13
1939	871	15,900	Apr. 22, 1939	80	1,339	1.94	26.33	1,097	21.57
1940	891	19,200	May 21, 1940	116	1,108	1.61	21.85	1,196	23.61
1941	921	9,180	Apr. 15, 1941	101	711	1.03	13.99	653	12.85
1942	951	14,500	Apr. 8, 16, 1942	106	1,015	1.47	19.96	1,075	21.17
1943	971	9,950	Apr. 26, 1943	166	1,318	1.91	25.95	1,459	28.53
1944	1001	18,600	Apr. 10, 1944	86	1,127	1.63	22.22	960	18.95
1945	1031	15,200	Apr. 26, 1945	194	1,443	2.09	28.38	1,745	34.32
1946	1051	19,000	Oct. 2, 1945	173	1,364	1.98	26.84	1,382	23.26
1947	1081	31,100	June 3, 1947	109	1,595	2.31	31.36	1,599	27.51
1948	1111	19,800	Mar. 22, 1948	88	948	1.37	18.71	*1,088	21.46
1949	1141	31,000	Dec. 31, 1948	98	970	1.41	19.08	908	17.87
1950	1171	16,700	Apr. 5, 1950	94	996	1.44	19.59	-	-

\* Revised.

† Corrected.

\* Not previously published.



## 242. 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, 500 ft downstream from White River.

Drainage area.--4,092 sq mi.

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 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.--39 years (1911-50), 7,191 cfs (adjusted for storage).

Extremes.--1911-50: 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, 534 cfs Sept. 7, 1942.

Remarks.--Flow regulated by power plants and by lakes and reservoirs having a combined usable capacity of about 11½ billion cu ft. Runoff adjusted for change in contents in First and Second Connecticut Lakes (see p. 229), Lake Francis since March 1940 (see p. 231), Comerford Station Pond since August 1930 (see p. 236), and Union Village Reservoir since October 1949 (see p. 249).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1912	5,730	5,810	10,200	4,140	1,890	7,150	30,900	16,500	13,700	2,110	3,210	5,670	8,900
1913	7,440	8,840	6,850	10,700	5,010	22,800	18,300	9,850	6,830	3,350	1,920	1,580	8,650
1914	4,230	5,690	4,280	1,650	1,860	6,800	27,400	15,100	3,430	2,800	1,980	2,180	6,420
1915	1,820	2,710	2,910	2,870	6,530	5,810	13,000	6,910	3,010	10,000	6,760	2,860	5,430
1916	3,060	3,730	4,880	6,400	6,910	5,040	23,100	13,100	11,600	6,950	4,160	2,480	7,600
1917	4,100	4,500	7,790	3,630	2,430	7,190	22,600	14,300	15,600	5,150	6,170	3,420	8,080
1918	6,400	7,800	2,590	1,910	2,710	6,960	22,200	12,800	5,190	3,260	3,080	5,890	6,730
1919	11,500	12,500	8,010	5,630	2,970	12,900	19,300	12,700	4,330	1,970	1,360	3,540	8,080
1920	5,890	11,100	6,730	2,050	1,410	11,900	30,500	15,700	4,250	4,010	2,800	3,800	8,310
1921	5,700	5,580	10,900	4,360	2,740	22,900	14,100	4,940	1,950	1,390	2,240	1,010	6,510
1922	2,210	5,570	5,780	2,730	2,350	12,900	32,000	10,400	12,000	7,710	3,680	2,950	8,350
1923	3,010	3,170	2,420	5,380	2,270	4,400	25,700	18,700	5,390	2,280	1,590	1,820	6,350
1924	2,160	5,990	10,700	7,220	2,510	3,590	20,200	19,700	4,130	3,350	3,030	10,100	7,800
1925	4,920	6,040	5,020	2,150	10,800	15,100	16,200	8,550	5,340	6,370	3,060	4,680	7,250
1926	10,600	13,300	6,120	3,680	2,990	3,020	19,100	21,000	7,680	4,370	2,560	3,180	8,140
1927	6,840	10,400	4,850	3,150	2,950	11,900	11,800	9,790	4,490	2,570	2,550	2,660	6,160
1928	8,850	24,900	13,800	7,030	4,440	6,700	24,500	18,000	9,270	3,190	4,080	4,000	10,700
1929	5,450	5,760	4,720	4,300	2,200	11,800	23,600	19,800	5,070	3,450	2,190	2,150	7,570
1930	2,360	3,760	3,030	5,640	5,290	8,470	15,800	11,800	8,090	4,180	2,160	1,520	6,010
1931	1,830	3,640	3,060	1,910	1,720	3,740	16,600	9,560	6,220	4,100	2,260	3,740	4,880
1932	4,590	5,640	5,140	8,730	4,640	3,240	22,600	8,680	3,550	5,880	3,570	3,300	6,590
1933	4,970	10,300	4,940	4,530	3,280	3,120	31,100	13,800	3,720	1,620	3,560	1,940	7,220
1934	3,150	3,805	3,679	3,475	2,070	4,721	32,900	10,290	3,569	1,821	1,410	1,943	6,053
1935	2,301	7,635	5,675	7,510	3,500	6,087	16,510	13,700	9,499	3,179	2,213	2,377	6,693
1936	2,577	5,584	4,736	2,878	2,207	35,510	18,110	14,500	2,873	2,395	1,478	2,902	8,018
1937	6,882	7,444	7,037	9,967	6,186	3,966	19,620	24,930	7,862	4,049	2,328	1,503	7,493
1938	4,100	6,526	5,742	4,633	6,596	10,080	16,580	7,747	2,880	3,505	3,824	12,600	8,043
1939	5,689	5,192	13,300	4,633	4,329	5,187	22,560	19,900	5,722	3,339	2,494	1,511	7,839
1940	3,589	5,680	3,705	2,208	1,419	1,626	18,930	25,650	5,998	3,263	1,650	3,276	6,419
1941	2,501	9,074	5,571	5,459	4,091	2,885	15,620	4,745	2,819	3,648	2,268	2,009	5,040
1942	3,554	5,556	3,477	4,116	2,479	7,479	24,360	11,410	7,934	2,089	1,072	1,696	6,244
1943	3,037	7,002	4,738	2,856	3,198	8,277	14,610	21,190	9,802	4,020	6,445	4,877	7,523
1944	5,560	10,950	4,347	2,871	2,472	4,636	19,450	16,510	4,884	2,854	1,773	2,598	6,566
1945	5,737	5,323	4,195	5,723	3,429	18,220	18,890	17,540	9,284	6,584	2,252	4,659	8,499
1946	12,810	9,728	6,834	5,519	4,525	18,530	11,130	10,930	5,771	2,300	4,122	2,640	7,938
1947	6,570	7,386	6,746	6,110	6,504	8,812	20,710	19,320	16,870	5,949	3,456	2,180	9,212
1948	1,314	2,313	1,795	1,627	2,338	12,150	15,600	13,950	5,189	2,753	2,097	1,414	5,216
1949	1,423	6,410	4,851	6,832	4,349	9,748	14,730	7,452	3,204	1,890	1,564	1,865	5,525
1950	2,192	3,973	6,392	7,289	4,983	6,559	22,080	9,051	5,263	2,606	2,145	2,554	6,236

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1912	1.61	1.59	2.87	1.17	0.50	2.01	8.42	4.64	3.74	0.59	0.90	1.55	29.59
1913	2.10	2.41	1.93	3.01	1.27	6.42	5.00	2.78	1.86	.94	.54	.43	28.69
1914	1.19	1.55	1.20	.47	.42	1.86	7.46	4.25	.94	.79	.56	.60	21.29
1915	.51	.74	.82	.81	1.66	1.64	3.55	1.95	.82	2.82	1.91	.78	18.01
1916	.86	1.02	1.38	1.80	1.82	1.42	6.30	3.70	3.17	1.96	1.17	.68	25.28
1917	1.12	1.19	2.17	1.00	.61	2.03	6.21	4.20	4.26	1.44	1.75	.91	26.89
1918	1.74	2.17	.65	.47	.67	1.96	6.14	3.71	1.59	.93	.79	1.58	22.20
1919	3.35	3.44	2.26	1.55	.64	3.62	5.36	3.62	1.12	.49	.34	.96	26.75
1920	1.69	3.10	1.91	.42	.32	3.36	8.44	4.52	1.10	1.15	.71	.97	27.69
1921	1.58	1.55	3.11	1.24	.65	6.60	3.84	1.31	.51	.38	.50	.26	21.53
1922	1.64	1.56	1.63	.71	.57	3.66	8.94	2.99	3.30	2.16	1.03	.69	27.88
1923	.73	.83	.69	1.53	.53	1.23	7.17	5.41	1.46	.60	.38	.40	20.96
1924	.82	1.68	3.07	2.06	.58	.98	5.57	5.77	1.03	.96	.83	2.83	26.18
1925	1.07	1.60	1.42	.47	2.78	4.33	4.55	2.40	1.50	1.80	.83	1.26	24.01
1926	3.08	3.64	1.71	1.03	.70	.65	5.23	6.15	2.10	1.22	.66	.68	26.85
1927	1.91	2.89	1.37	.78	.67	3.39	3.33	2.88	1.27	.74	.65	.60	20.48
1928	2.55	6.91	3.89	1.87	.98	1.87	6.78	5.28	2.53	.87	1.11	1.10	35.74
1929	1.58	1.54	1.17	1.18	.46	3.33	6.58	5.70	1.38	.89	.51	.52	24.84
1930	.67	1.07	.82	1.65	1.31	2.40	4.40	3.41	2.21	1.16	.67	.52	20.29

Monthly and yearly runoff, in inches (adjusted), of Connecticut River at White River Junction, Vt.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	.46	1.04	.79	.45	.39	.99	4.67	2.85	1.74	1.18	.74	1.10	16.38
1932	1.28	1.50	1.35	2.41	1.06	.80	6.34	2.66	.97	1.72	.85	.88	21.82
1933	1.40	2.81	1.24	1.23	.72	.78	8.75	4.09	.99	.47	1.00	.51	23.99
1934	.90	1.01	.89	.83	.45	1.28	9.28	3.04	.99	.49	.54	.57	20.07
1935	.65	2.09	1.47	2.01	.72	1.69	4.71	4.02	2.70	.88	.57	.67	22.18
1936	.69	1.58	1.19	.68	.49	10.20	5.05	4.18	.75	.70	.41	.78	26.70
1937	1.96	1.97	1.87	2.83	1.43	.96	5.53	7.26	2.17	1.16	.66	.40	28.20
1938	1.18	1.76	1.49	1.19	1.57	2.80	4.72	2.50	.79	1.05	1.07	3.45	25.57
1939	1.50	1.38	3.73	1.14	1.05	1.39	6.28	5.86	1.59	.97	.67	.42	25.98
1940	1.05	1.50	.90	.46	.34	.40	5.32	7.68	1.72	.95	.48	.92	21.72
1941	.65	2.56	1.34	1.40	.87	.63	4.63	1.42	.81	1.07	.63	.48	16.49
1942	1.11	1.63	.93	.93	.46	2.11	6.99	3.45	2.14	.59	.30	.45	21.09
1943	.86	1.84	1.12	.64	.75	2.16	4.09	6.48	2.71	1.13	1.80	1.29	24.87
1944	1.63	2.93	1.07	.62	.54	1.09	5.45	5.05	1.37	.86	.45	.74	21.80
1945	1.72	1.36	.97	1.47	.70	5.25	5.51	5.13	2.46	1.80	.62	1.34	28.33
1946	3.54	2.65	1.93	1.33	.85	5.33	3.24	3.30	1.60	.62	1.12	.62	26.13
1947	1.93	2.12	1.80	1.45	1.54	2.33	5.88	5.85	4.59	1.69	.71	.49	30.38
1948	.34	.68	.51	.38	.50	3.51	4.57	4.05	1.41	.77	.57	.24	17.53
1949	4.40	1.90	1.20	2.45	.91	2.68	4.30	2.28	.92	.48	.32	.49	18.33
1950	.59	1.07	1.88	2.05	1.02	1.59	6.27	2.75	1.58	.69	.50	.68	20.67

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted				Observed	Adjusted
		Momentary		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1912	541	a69,800	Apr. 8, 1912	-	8,900	-	2.17	29.59	9,010	-	29.96
1913	601	b113,000	Mar. 27, 1913	560	8,650	-	2.11	28.69	7,900	-	26.19
1914	541	a68,800	Apr. 21, 1914*	-	6,420	-	1.57	21.29	5,850	-	19.42
1915	541	a44,400	Feb. 26, 1915*	-	5,430	-	1.35	18.01	5,790	-	19.20
1916	541	a41,800	Apr. 2, 1916*	-	7,600	-	1.86	25.28	8,000	-	26.60
1917	541	a40,000	Apr. 23, 1917*	-	8,080	-	1.98	26.89	8,110	8,330	26.97
1918	541	a48,400	Apr. 3, 1918*	1,030	6,730	†6,690	1.63	22.20	8,000	8,050	26.69
1919	541	a59,200	Mar. 28, 1919*	890	8,080	8,070	1.97	26.75	7,380	7,360	24.40
1920	541	a48,400	Apr. 24, 1920*	-	8,340	†8,330	2.04	27.69	8,220	8,200	27.23
1921	541	a40,500	Mar. 22, 1921*	820	6,510	6,490	1.59	21.53	5,780	5,760	19.12
1922	541	a69,500	Apr. 12, 1922*	995	8,350	8,410	2.06	27.88	7,940	7,950	26.30
1923	561	a66,000	May 1, 1923	820	6,350	6,310	1.54	20.96	7,280	7,310	24.28
1924	581	a41,800	May 2, 1924	820	7,800	7,870	1.92	26.18	7,420	7,420	24.70
1925	601	a68,600	Mar. 29, 1925	1,030	7,250	7,240	1.77	24.01	8,490	8,550	26.36
1926	621	a59,500	Apr. 25, 1926	880	8,140	†8,090	1.98	26.85	7,460	7,410	24.59
1927	641	a54,500	Mar. 20, 1927	680	6,160	6,170	1.51	20.48	8,290	8,340	27.68
1928	661	†781	136,000	Nov. 4, 1927	1,290	10,700	2.61	35.74	8,080	8,020	26.68
1929	681	39,400	May 6, 1929	875	7,570	7,490	1.83	24.84	7,000	6,970	23.11
1930	696	33,100	Apr. 8, 1930	960	6,010	6,120	1.50	20.29	5,960	6,040	20.02
1931	711	30,100	Apr. 11, 1931	745	4,880	4,940	1.21	16.38	5,460	5,490	18.22
1932	741	51,900	Apr. 12, 1932	962	6,590	6,560	1.60	21.82	6,980	6,960	23.14
1933	741	68,700	Apr. 19, 1933	608	7,220	7,240	1.77	23.99	6,430	6,440	21.34
1934	756	57,200	Apr. 12, 1934	566	6,053	6,055	1.48	20.07	6,465	6,477	21.48
1935	761	33,200	May 1, 1935	856	6,683	6,683	1.63	22.18	6,458	6,456	21.43
1936	801	120,000	Mar. 19, 1936	801	8,018	8,025	1.96	26.70	8,750	8,729	29.04
1937	821	51,500	May 15, 1937	1,020	8,493	8,496	2.08	28.20	8,071	8,084	26.83
1938	851	82,400	Sept. 22, 1938	990	7,043	7,044	1.72	23.37	7,711	7,698	25.55
1939	871	52,800	Apr. 26, 1939	812	7,839	7,832	1.91	25.98	6,883	6,880	22.82
1940	891	59,600	May 5, 1940	805	6,419	6,530	1.60	21.72	6,765	6,862	22.82
1941	921	32,000	Apr. 18, 1941	970	5,040	4,964	1.21	16.49	4,662	4,698	15.61
1942	951	39,500	Mar. 18, 1942	534	6,244	6,354	1.55	21.09	6,426	6,399	21.24
1943	971	37,400	Apr. 13, 1943	948	7,523	7,500	1.83	24.87	8,028	8,043	26.88
1944	1001	36,800	May 8, 1944	755	6,566	6,552	1.60	21.80	6,107	6,083	20.22
1945	1031	42,900	Mar. 22, 1945	1,100	8,499	8,542	2.09	28.33	9,685	9,767	32.40
1946	1051	a54,600	Oct. 2, 1946*	902	7,938	7,879	1.93	26.13	7,208	7,195	23.66
1947	1081	65,400	June 3, 1947	1,190	9,212	9,160	2.24	30.38	7,928	7,856	26.06
1948	1111	37,900	Mar. 25, 1948	799	5,216	5,272	1.29	17.53	5,620	5,665	19.50
1949	1141	45,000	Dec. 31, 1948	674	5,525	5,525	1.55	18.33	5,521	5,538	18.37
1950	1171	43,100	Apr. 22, 1950	1,040	6,236	6,234	1.52	20.67	-	-	-

\* Revised.

† Corrected.

\* Not previously published.

a Maximum observed; not previously published.

b Maximum observed.

## 243. Mascoma River at West Canaan, N. H.

Location.--Lat 43°39'00", long. 72°04'50", on right bank 45 ft downstream from Boston & 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.

Gage.--Water-stage recorder. Altitude of gage is 835 ft (from topographic map).

Average discharge.--11 years (1939-50), 115 cfs.

Extremes.--1939-50: Maximum discharge, 2,510 cfs June 15, 1942 (gage height, 7.30 ft);

minimum, 4.9 cfs July 7, 1941.

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 on basis of slope-area determination at gage height 9.6 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	34.6	16.1	-
1940	43.2	123	70.2	18.0	18.2	28.3	541	480	175	68.2	27.2	55.6	137
1941	22.3	143	97.2	83.5	97.4	51.1	265	72.4	27.6	192	47.5	29.3	93.7
1942	44.0	70.3	79.0	80.4	28.4	180	458	144	203	33.1	15.7	15.3	112
1943	22.3	94.9	60.7	25.4	48.5	159	341	340	93.8	53.5	176	54.8	123
1944	95.0	180	54.4	31.9	29.5	79.0	464	186	233	44.1	12.0	28.3	119
1945	66.3	47.1	70.0	75.6	45.0	376	315	318	175	85.5	27.0	38.1	137
1946	100	168	172	76.0	43.0	421	195	198	129	31.6	54.7	41.2	137
1947	112	76.5	49.2	76.0	99.7	179	410	269	198	36.7	17.5	7.42	127
1948	6.81	33.8	16.8	17.1	24.6	250	266	270	86.1	34.4	26.5	8.29	86.9
1949	12.7	78.1	61.3	169	77.7	197	234	105	45.8	19.4	24.6	39.0	88.5
1950	35.8	86.3	83.9	113	62.4	137	459	115	89.3	15.9	12.1	22.0	102

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	0.50	0.22	-
1940	0.82	1.71	1.01	0.26	0.24	0.41	7.50	6.87	2.42	0.98	.39	.77	23.18
1941	.32	1.99	1.39	1.20	1.26	.73	3.67	1.04	.38	2.75	.68	.41	15.82
1942	.63	.97	1.13	1.15	.34	2.58	6.35	2.06	2.82	.47	.22	.21	18.93
1943	.32	1.31	.87	.38	.83	2.27	4.73	4.87	1.30	.77	2.52	.76	20.71
1944	1.36	2.60	.78	.46	.39	1.13	6.42	2.67	3.22	.63	.17	.39	20.12
1945	.95	.65	1.00	1.08	.58	5.39	4.37	4.56	2.42	1.22	.39	.53	23.14
1946	1.44	2.33	2.46	1.09	.56	6.03	2.70	2.84	1.78	.45	.78	.57	23.03
1947	1.60	1.06	.70	1.09	1.29	2.57	5.68	3.86	2.75	.53	.25	.10	21.48
1948	.10	.47	.24	.25	.33	3.58	3.69	3.86	1.19	.49	.38	.11	14.69
1949	.18	1.08	.88	2.41	1.00	2.81	3.24	1.50	.63	.28	.35	.54	14.90
1950	.51	1.20	1.20	1.61	.81	1.97	6.36	1.65	1.24	.23	.17	.30	17.25

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1940	891	2,230	May 5, 1940		8.7	137	1.70	23.18	139	23.54
1941	921	880	July 13, 1941		5.3	93.7	1.16	15.82	88.0	14.85
1942	951	2,510	June 15, 1942		7.2	112	1.39	18.93	111	18.70
1943	971	1,070	Apr. 28, 1943		12	123	1.53	20.71	135	22.85
1944	1001	1,970	June 25, 1944		6.2	119	1.48	20.12	107	18.08
1945	1031	1,200	Apr. 26, 1945		12	137	1.70	23.14	159	26.77
1946	1051	1,380	Dec. 8, 1945		12	137	1.70	23.03	120	20.18
1947	1081	1,710	Apr. 12, 1947		5.0	127	1.58	21.48	112	18.93
1948	1111	1,340	Apr. 2, 1948		5.5	86.9	1.08	14.69	94.8	16.02
1949	1141	1,040	Jan. 1, 1949		6.9	88.5	1.10	14.90	93.1	15.67
1950	1171	1,910	Apr. 21, 1950		5.7	102	1.27	17.25	-	-

## 244. 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, 5½ 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, 5½ 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.

Month-end contents, in millions of cubic feet, of lakes and ponds in Mascoma River basin											
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept.
1920	742.0	878.2	827.7	547.5	394.8	736.5	1,220.6	1,214.0	1,183.5	1,096.2	724.3
1921	728.2	702.1	812.0	767.7	642.2	1,087.6	1,172.2	1,107.1	880.5	706.9	510.6
1922	225.4	422.3	592.2	473.0	415.8	901.6	1,203.9	1,191.8	1,251.3	1,192.4	1,033.3
1923	695.2	593.8	445.7	513.9	281.5	372.7	1,071.4	1,115.3	961.0	721.5	508.0
1924	352.5	502.8	705.2	710.3	534.4	443.4	1,029.3	1,102.5	971.5	783.2	567.2
1925	594.4	574.8	585.0	441.9	740.3	1,104.0	1,107.0	1,080.0	1,024.6	1,055.0	795.4
1926	897.4	961.4	913.7	825.0	650.8	489.8	1,088.9	1,141.8	1,089.0	984.3	774.5
1927	585.4	787.6	707.4	650.0	580.0	842.7	1,006.8	1,058.7	933.6	853.6	648.5
1928	670.9	1,049.9	1,145.5	1,071.7	964.2	983.9	1,253.0	1,275.2	1,195.4	1,054.2	1,031.3
1929	807.1	701.0	612.5	840.2	569.7	916.8	1,224.5	1,197.5	1,128.6	898.7	681.4
1930	369.5	427.3	428.4	579.2	720.2	935.3	1,019.2	1,140.0	1,169.3	1,040.3	797.5
1931	569.6	547.6	440.5	284.6	213.8	338.2	848.8	936.5	975.5	1,144.5	903.5
1932	669.5	695.4	710.3	866.4	764.6	719.9	1,170.1	1,077.3	873.0	774.9	633.5
1933	561.3	862.8	772.1	727.6	690.6	769.5	1,263.0	1,142.3	978.8	760.1	643.3
1934	504.1	497.1	502.3	507.2	439.1	673.7	1,192.4	1,118.7	1,040.5	814.0	616.5
1935	466.6	807.9	772.3	936.4	775.0	915.7	1,219.6	1,176.9	1,195.4	1,073.4	855.1
1936	600.4	633.3	667.9	672.8	547.2	1,185.2	1,142.1	1,157.0	943.9	769.9	568.4
1937	549.1	707.3	846.1	887.8	898.2	613.2	1,139.3	1,224.1	1,205.4	1,081.1	836.4
1938	493.7	687.5	755.5	834.5	844.8	965.3	1,139.0	1,161.8	1,108.1	1,122.3	1,015.3
1939	1,145.2	992.8	1,058.2	779.9	701.1	467.7	1,070.4	1,145.5	1,008.3	794.2	675.2
1940	497.3	712.4	745.6	646.6	528.4	332.1	1,057.7	1,209.2	1,153.3	1,140.1	1,000.2
1941	838.2	1,056.0	1,158.5	1,097.3	926.7	572.6	997.3	930.0	835.8	1,164.0	968.4
1942	775.7	781.4	788.3	795.4	655.4	1,004.9	1,163.0	1,180.8	1,167.6	1,007.7	830.4
1943	621.9	819.3	799.6	640.8	607.8	793.5	1,080.9	1,252.4	1,207.3	1,103.2	1,172.3
1944	1,070.7	1,222.9	1,115.8	885.7	689.8	623.7	1,133.5	1,168.5	1,268.4	1,077.2	851.2
1945	815.2	794.2	846.8	877.7	757.5	1,127.7	1,312.5	1,274.2	1,262.4	1,238.6	1,030.1
1946	1,075.9	1,259.1	1,194.0	1,100.9	899.7	1,233.9	1,260.2	1,295.3	1,147.5	993.6	970.4
1947	1,065.8	1,073.9	1,005.2	1,031.2	887.4	724.3	1,153.2	1,283.6	1,233.4	1,103.4	852.6
1948	376.3	373.3	299.4	257.0	219.4	852.8	976.2	1,158.5	1,126.7	1,010.5	881.8
1949	607.3	867.7	969.4	1,031.4	827.3	825.3	1,070.3	1,072.2	1,016.0	896.7	796.8
1950	815.1	970.0	1,067.4	985.4	668.7	634.1	1,029.5	1,120.2	1,027.6	860.8	728.0

## 245. 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.

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

Average discharge.--27 years (1923-50), 212 cfs (adjusted for storage since October 1928).

Extremes.--1923-50: 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.--Flow regulated by Mascoma and Crystal Lakes and Goose and Grafton Ponds (see preceding page). Runoff adjusted for change in contents in above Lakes and Ponds since October 1928.

Monthly and yearly mean discharge, in cubic feet per second (observed)												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1923	-	-	-	-	-	-	-	-	-	-	-	55.3
1924	47.4	63.3	150	174	138	160	833	414	127	104	88.5	169
1925	131	108	120	97.3	222	603	478	210	123	201	151	125
1926	155	298	200	139	155	151	629	417	109	114	102	88.6
1927	90.6	207	133	97.2	104	342	334	207	123	101	93.3	186
1928	94.7	560	394	217	206	216	675	470	242	142	134	129
1929	123	130	131	134	107	338	699	531	143	131	118	121
1930	96.7	92.2	88.2	106	110	395	396	181	237	121	118	109
1931	100	108	115	96.1	62.0	65.4	383	279	247	313	127	111
1932	114	124	142	275	184	136	786	224	116	89.4	88.2	84.7
1933	99.8	224	125	122	109	101	1,109	292	115	84.3	77.0	87.3
1934	75.6	83.4	102	95.3	90.7	121	1,116	292	118	102	79.0	81.2
1935	70.1	92.7	156	280	163	218	615	290	168	114	88.6	78.7
1936	70.4	71.8	108	109	115	1,222	600	175	114	100	91.1	91.6
1937	78.9	114	210	260	240	212	585	763	240	206	128	110
1938	86.8	110	158	166	216	327	378	226	109	238	134	591
1939	202	228	515	227	153	278	911	397	131	112	92.2	74.3
1940	72.4	100	114	61.9	76.0	135	781	741	349	125	96.4	87.8
1941	88.3	168	117	172	238	215	302	118	77.0	209	145	91.0
1942	86.4	103	104	121	103	264	732	236	339	103	78.9	81.2
1943	76.3	99.9	127	114	106	266	512	538	173	123	298	139
1944	124	271	137	137	135	182	708	305	329	140	85.9	84.8
1945	90.4	99.1	118	128	140	549	500	601	296	152	128	104
1946	132	254	357	200	194	646	341	356	275	109	98.1	87.1
1947	139	127	127	143	273	436	658	459	419	124	120	111
1948	75.6	56.2	54.8	46.1	53.6	297	439	429	164	106	89.5	766.6
1949	54.5	49.3	64.4	30.2	215	380	302	162	80.7	68.5	62.4	57.2
1950	56.7	67.5	117	228	243	242	660	163	174	83.0	66.5	63.8

Monthly and yearly runoff, in inches (adjusted), of Mascoma River at Mascoma, N. H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1923	-	-	-	-	-	-	-	-	-	-	-	0.40	-
1924	0.36	0.6	1.13	1.31	0.97	1.21	6.08	3.12	0.93	0.78	0.67	1.25	18.25
1925	.99	.79	.91	.73	1.51	4.55	3.48	1.58	.90	1.51	1.14	.91	19.00
1926	1.16	2.17	1.51	1.05	1.06	1.14	4.59	3.15	.80	.86	.77	.65	18.91
1927	.68	1.51	1.00	.73	.71	2.58	2.43	1.56	.90	.76	.70	.63	14.19
1928	.71	4.09	2.97	1.64	1.47	1.63	4.92	3.54	1.77	1.07	1.01	.94	25.76
1929	.69	.65	.70	1.16	.47	3.68	5.99	3.89	.81	.25	.28	.38	18.95
1930	.26	.95	.56	1.35	1.27	3.55	3.12	1.77	1.77	.43	.72	.23	15.98
1931	.09	.71	.52	.23	.22	1.22	4.15	2.38	1.85	2.74	.27	.47	14.85
1932	.59	.82	1.57	2.29	.93	1.03	7.00	1.29	.15	.39	.25	.25	16.56
1933	.85	2.71	.61	.75	.47	.99	9.77	1.70	.31	-.03	.28	.16	18.57
1934	.68	.49	.86	.78	.23	1.65	9.84	1.97	.61	.04	.02	.25	17.42
1935	.33	1.87	1.02	2.62	.54	2.73	4.82	2.04	1.30	.38	-.007	.25	17.91
1936	-.03	1.00	.71	.92	.36	11.25	4.22	1.23	.18	.26	.14	-.03	20.21
1937	1.11	1.44	2.10	1.99	1.59	.56	6.11	5.95	1.72	1.08	.22	.02	23.89
1938	1.36	1.66	1.53	1.49	1.42	2.90	3.26	1.71	.62	1.85	.67	4.99	22.24
1939	1.43	1.19	4.08	.74	.82	1.42	8.60	3.20	.55	.14	.34	.02	22.53
1940	.52	1.44	.95	.18	.06	.55	7.83	6.02	2.39	.91	.31	.64	21.70
1941	.20	1.99	1.18	1.13	1.12	.65	3.31	.78	.29	2.52	.53	.16	13.86
1942	.55	.76	.80	.93	.31	2.98	5.79	1.83	2.44	.33	.09	.17	16.96
1943	.31	1.28	.90	.41	.63	2.53	4.54	4.53	1.13	.63	2.44	.60	19.93
1944	1.06	2.39	.75	.39	.39	1.18	6.60	2.40	2.68	.53	.01	.38	18.76
1945	.81	.67	1.03	1.05	.62	5.18	4.17	4.42	2.12	1.08	.37	.54	22.06
1946	1.34	2.36	2.50	1.24	.76	5.81	2.56	2.78	1.59	.39	.67	.81	22.81
1947	1.14	.95	.80	1.11	1.45	2.83	5.98	3.85	2.92	.57	.20	.02	21.82
1948	.02	.35	.13	.28	.25	4.12	3.55	3.74	1.10	.48	.31	-.04	14.29
1949	.01	1.25	.77	2.45	.89	2.86	2.89	1.23	.43	.18	.19	.48	13.63
1950	.41	.92	1.16	1.49	.69	1.80	5.93	1.48	1.01	.16	.13	.23	15.41

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

Yearly discharge, in cubic feet per second

Yearly discharge, in cubic feet per second											
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year			
		Observed				Adjusted		Observed		Adjusted	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1924	581	2,060	Apr. 20, 1924	28	205	-	1.34	18.25	213	-	18.99
1925	601, 801	3,540	Mar. 30, 1925	12	214	-	1.40	19.00	238	-	21.15
1926	621	2,680	Apr. 26, 1926	2.5	213	-	1.39	18.91	194	-	17.26
1927	641	1,320	Mar. 20, 1927	2.8	160	-	1.05	14.19	212	-	18.77
1928	661	3,230	Nov. 5, 1927	58	289	-	1.89	25.76	234	-	20.86
1929	681	1,230	Mar. 24, 1929	2	226	213	1.39	18.95	217	211	18.68
1930	696	1,330	Apr. 9, 1930	24	171	180	1.18	15.98	175	175	15.53
1931	711	2,240	July 23, 1931	53	168	167	1.09	14.85	172	186	16.51
1932	726	2,520	Apr. 13, 1932	42	196	186	1.22	16.56	202	200	17.75
1933	741	3,630	Apr. 19, 1933	45	210	209	1.37	18.57	195	185	16.43
1934	756	3,500	Apr. 13, 1934	55	196	196	1.28	17.42	200	210	18.61
1935	781	1,120	Jan. 12, 1935	32	194	202	1.32	17.91	188	184	16.35
1936	801	5,840	Mar. 19, 1936	52	240	227	1.48	20.21	253	261	23.18
1937	821	1,570	May 16, 1937	62	262	269	1.76	23.89	258	255	22.59
1938	851	4,400	Sept. 22, 1938	73	228	251	1.64	22.24	278	289	25.59
1939	871	2,500	Apr. 23, 1939	49	277	254	1.66	22.53	222	210	18.64
1940	891	2,500	May 5, 1940	2	228	244	1.59	21.70	237	250	22.26
1941	921	658	Nov. 17, 1940	52	163	156	1.02	13.86	155	142	12.58
1942	951	1,940	June 16, 1942	75	195	191	1.25	16.96	196	196	17.36
1943	971	1,260	Apr. 29, 1943	68	215	225	1.47	19.93	234	244	21.64
1944	1001	1,920	June 26, 1944	59	219	211	1.38	18.76	200	192	17.07
1945	1031	1,340	Mar. 22, 1945	37	243	249	1.63	22.06	279	290	25.75
1946	1051	1,520	Dec. 9, 1945	79	255	257	1.68	22.81	225	220	19.50
1947	1081	2,010	Apr. 13, 1947	55	260	246	1.61	21.82	243	219	19.43
1948	1111	1,410	Apr. 3, 1948	37	157	161	1.05	14.29	155	178	15.82
1949	1141	.984	Mar. 29, 1949	27	150	154	1.01	13.63	156	159	14.09
1950	1171	1,750	Apr. 22, 1950	30	179	173	1.13	15.41	-	-	-

\* Revised.

## 246. Ottauquechee River at Woodstock, Vt.

Location.--Lat 43°37'25", long. 72°31'15", on middle bridge at Woodstock, Windsor County, half a mile upstream from Kedron Brook (revised).

Drainage area.--126 sq mi.

Gage.--Chain gage. Datum of gage is 670.53 ft above mean sea level, datum of 1929.

Extremes.--1928-30: Maximum discharge, 8,450 cfs (revised) Apr. 26, 1929 (gage height, 8.7 ft, from graph based on gage readings), from rating curve extended above 720 cfs by logarithmic plotting; minimum daily, 14 cfs Sept. 5, 1929.

Maximum stage known, about 20.1 ft November 1927, from information by local resident.

Remarks.--Some regulation at low flows by mills above station. Small seasonal storage in reservoir at Plymouth.

## CONNECTICUT RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Ottauquechee River at Woodstock, Vt.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	-	111	115	95.5	-
1929	68.9	107	151	188	93.4	961	1,350	646	112	66.5	49.3	107	329
1930	92.2	147	137	318	*312	430	624	284	276	57.4	46.5	46.9	*230

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	-	1.02	1.05	0.85	-
1929	0.81	0.95	1.38	1.72	0.77	8.98	11.94	5.91	0.99	.61	.45	.95	35.46
1930	.84	1.30	1.26	2.90	*2.58	3.93	5.52	2.59	2.44	.53	.43	.42	*24.74

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1928	661	-	-	-	-	-	-	-	-
1929	661,1231	*8,450	Apr. 26, 1929	14	329	2.61	35.46	532	35.72
1930	696,1231	*4,670	Apr. 7, 1930*	20	*230	*1.83	*24.74	-	-

\* Revised.

## 247. Ottauquechee River at North Hartland, Vt.

Location.--Lat 43°36'05", long. 72°21'20", on left bank 300 ft upstream from highway

bridge at North Hartland, Windsor County, and 1 mile upstream from mouth.

Drainage area.--221 sq mi.

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.--20 years (1930-50), 389 cfs.

Extremes.--1930-50: Maximum discharge, 24,400 cfs Sept. 21, 1938 (gage height, 17.68 ft),

from rating curve extended above 5,400 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.

Maximum stage known, 21.5 ft in November 1927, from floodmarks (discharge, 30,400

cfs, by computation of flow over dam).

Remarks.--Flow regulated by power plants above station. Small seasonal storage in reser-

voir at Plymouth.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	51.8	154	146	68.3	75.5	233	1,290	652	504	470	126	187	330
1932	161	274	370	623	319	226	1,630	498	109	107	122	64.9	368
1933	180	735	282	296	216	183	2,160	407	119	50.1	88.1	77.2	406
1934	103	187	212	251	154	462	2,088	525	188	75.7	47.7	99.2	361
1935	143	294	235	523	240	814	911	510	264	261	103	118	370
1936	112	299	249	200	136	2,570	1,115	318	92.0	78.5	60.8	83.7	445
1937	204	303	378	726	507	206	1,409	1,109	454	226	110	71.8	474
1938	155	495	383	382	614	831	733	406	121	196	199	1,030	460
1939	322	318	812	267	295	397	1,773	769	177	92.9	81.8	43.7	446
1940	72.9	166	102	57.3	55.4	84.0	1,635	1,676	539	178	92.4	193	404
1941	92.7	350	330	285	254	193	961	201	81.4	162	64.6	59.5	252
1942	87.0	204	171	259	132	594	1,655	457	257	96.5	60.3	73.3	337
1943	107	294	235	131	239	702	1,180	1,253	338	192	479	248	451
1944	302	687	233	139	125	327	1,610	634	340	131	63.1	95.5	389
1945	183	168	192	247	166	1,406	852	1,062	413	337	136	150	445
1946	528	583	388	409	248	1,272	472	537	389	86.6	96.8	76.3	426
1947	185	217	212	318	368	625	1,535	809	865	268	99.9	55.3	462
1948	36.3	85.3	72.2	119	1,206	951	700	334	139	77.9	39.7	51.7	317
1949	51.6	202	506	595	364	683	745	327	91.9	5.5	51.1	58.0	311
1950	62.6	122	263	372	242	454	1,499	435	238	65.7	46.9	60.4	321

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	0.27	0.78	0.76	0.56	0.36	1.21	6.52	3.40	2.54	2.46	0.66	0.94	20.26
1932	.94	1.38	1.92	3.25	1.55	1.18	8.23	2.13	.55	.56	.44	.33	22.66
1933	.94	3.72	1.46	1.66	1.02	.95	10.90	2.59	.60	.26	.46	.39	24.87
1934	.54	.79	1.11	1.51	.73	2.41	10.54	2.74	.85	.40	.25	.50	22.17
1935	.75	1.48	1.21	2.73	1.14	4.24	4.60	2.66	1.44	1.36	.54	.60	22.75
1936	.58	1.51	1.30	1.04	.66	13.37	5.63	1.66	.46	.41	.32	.42	27.36
1937	1.06	1.53	1.97	3.79	2.38	1.07	7.12	5.79	2.29	1.18	.57	.36	29.11
1938	.81	2.50	1.99	1.99	2.90	4.34	3.70	2.12	.61	1.02	1.04	5.20	28.22
1939	1.68	1.61	4.23	1.40	1.38	2.08	8.95	4.01	.89	.48	.45	.22	27.36
1940	.38	.84	.53	.30	.27	.44	8.25	8.74	2.72	.93	.48	.97	24.65
1941	.48	1.76	1.72	1.49	1.20	1.01	4.85	1.05	.41	.84	.34	.30	15.45
1942	.45	1.03	.89	1.35	.62	3.10	8.36	2.38	1.30	.50	.31	.37	20.66
1943	.56	1.48	1.23	.68	1.13	3.68	5.96	6.54	1.70	1.00	2.50	1.25	27.69
1944	1.57	3.47	1.22	.73	.61	1.71	8.13	3.31	1.71	.68	.33	.47	23.94
1945	.95	.85	1.00	1.29	.78	7.34	4.30	5.54	2.09	1.76	.71	.76	27.37
1946	2.76	2.95	2.02	2.13	1.17	6.63	2.38	2.80	1.97	.45	.51	.39	26.16
1947	.97	1.09	1.10	1.66	1.73	3.26	7.75	4.22	4.37	1.40	.52	.28	28.35
1948	.19	.42	.38	.29	.58	6.29	4.70	3.65	1.68	.72	.41	.20	19.51
1949	.27	1.02	2.63	3.10	1.72	3.56	3.76	1.71	.46	.28	.27	.29	19.07
1950	.33	.62	1.67	2.94	1.14	2.37	7.57	2.27	1.20	.34	.24	.31	19.70

Yearly discharge, in cubic feet per second, of Ottauquechee River at North Hartland, Vt.

Yearly discharge, in cubic feet per second, on Ottawaqueenne River at North Hardland, Vt.									
Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1931	711	5,510	July 22, 1931	18	330	1.49	20.26	370	22.69
1932	726	5,650	Apr. 12, 1932	7.8	368	1.67	22.66	398	24.56
1933	741	10,400	Apr. 18, 1933	3.8	405	1.83	24.87	345	21.17
1934	756	12,700	Apr. 12, 1934	7.3	361	1.63	22.17	377	23.17
1935	781	5,500	Jan. 10, 1935	9.2	370	1.67	22.75	369	22.70
1936	801	19,200	Mar. 18, 1936	8.4	445	2.01	27.36	464	28.53
1937	821	8,460	Feb. 22, 1937	11	474	2.14	29.11	486	29.85
1938	851	24,400	Sept. 21, 1938	11	460	2.08	28.22	496	30.44
1939	871	6,060	Apr. 22, 1939	6.5	446	2.02	27.36	352	21.59
1940	891	8,600	May 3, 1940	7.6	404	1.83	24.85	440	27.06
1941	921	2,960	April 1941	6.6	252	1.14	15.45	226	13.86
1942	951	7,240	Apr. 8, 1942	5.7	337	1.52	20.66	351	21.56
1943	971	5,420	Apr. 28, 1943	13	451	2.04	27.69	499	30.68
1944	1001	8,110	Nov. 9, 1943	8.1	389	1.76	23.94	332	20.48
1945	1031	8,090	Apr. 26, 1945	30	445	2.01	27.37	526	32.30
1946	1051	5,700	Mar. 9, 1946*	11	426	1.93	26.16	352	21.59
1947	1081	7,720	Apr. 12, 1947	11	462	2.09	28.35	426	26.18
1948	1111	11,400	Mar. 22, 1948	4.7	317	1.43	19.51	365	22.44
1949	1141	13,300	Dec. 31, 1948	4.9	311	1.41	19.07	294	17.47
1950	1171	5,630	Apr. 5, 1950	4.9	321	1.45	19.70	-	-

\* Not previously published; estimated on basis of records for nearby stations.

## 248. Sunapee Lake at Sunapee, N. H.

Location.--Lat 42°23'10", long. 72°04'55", on Sugar River at outlet of Lake Sunapee, in Sunapee, Sullivan County.

Drainage area.--45.5 sq mi.

Gage.--Staff gage. Datum of gage is 1,079.41 ft above mean sea level.

Remarks.--Present dam built in 1928. Lake used for recreation and storage of water for power, has a usable capacity of 862,000,000 cu ft.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1928	-	-	-	-	-	-	-	-	-	-	-	5,923
1929	5,758	5,656	5,554	5,512	5,596	5,995	6,362	6,296	6,004	5,860	5,792	5,758
1930	5,435	5,367	5,239	5,520	5,707	6,040	6,220	6,148	5,960	5,724	5,639	5,503
1931	5,401	5,387	5,316	5,248	5,214	5,231	5,690	5,896	5,896	5,809	5,639	5,537
1932	5,418	5,333	5,350	5,520	5,554	5,571	5,986	5,843	5,690	5,588	5,486	5,401
1933	5,435	5,622	5,580	5,595	5,591	5,630	6,148	5,964	5,846	5,714	5,656	5,585
1934	5,540	5,486	5,506	5,520	5,500	5,561	6,004	5,905	5,823	5,727	5,608	5,614
1935	5,537	5,580	5,615	5,906	5,687	5,676	5,918	5,882	5,939	5,867	5,690	5,585
1936	5,461	5,469	5,427	5,503	5,473	5,185	5,888	5,810	5,699	5,674	5,602	5,500
1937	5,486	5,449	5,659	5,687	5,690	5,615	5,968	5,954	5,977	5,874	5,778	5,632
1938	5,588	5,732	5,732	5,775	5,690	5,710	5,800	5,860	5,802	5,878	5,751	5,667
1939	5,726	5,580	5,595	5,435	5,426	5,444	5,981	5,896	5,799	5,663	5,625	5,523
1940	5,455	5,455	5,455	5,425	5,423	5,442	5,964	5,932	5,836	5,748	5,605	5,551
1941	5,418	5,478	5,513	5,438	5,408	5,360	5,486	5,459	5,438	5,379	5,248	5,148
1942	5,068	5,042	5,073	5,103	5,119	5,362	5,782	5,765	5,833	5,743	5,610	5,512
1943	5,432	5,474	5,617	5,523	5,494	5,510	5,697	5,901	5,780	5,612	5,602	5,472
1944	5,478	5,607	5,505	5,406	5,331	5,345	5,709	5,649	5,857	5,802	5,698	5,639
1945	5,569	5,515	5,549	5,528	5,455	5,736	5,919	5,869	5,923	5,873	5,715	5,596
1946	5,546	5,653	5,729	5,716	5,630	5,707	5,789	5,950	5,802	5,693	5,636	5,612
1947	5,534	5,482	5,421	5,500	5,564	5,629	5,883	5,973	5,927	5,794	5,642	5,489
1948	5,340	5,353	5,313	5,296	5,269	5,646	5,876	5,963	5,923	5,753	5,642	5,479
1949	5,774	5,598	5,459	5,588	5,551	5,649	5,748	5,751	5,658	5,547	5,411	5,340
1950	5,255	5,200	5,197	5,292	5,353	5,486	5,918	5,928	5,878	5,734	5,680	5,561

## 249. Sugar River at West Claremont, N. H. 1/

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. Prior to October 1928, 258 sq mi.

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 about 1 mile upstream at slightly different datum.

Average discharge.--22 years (1928-50), 379 cfs (adjusted for storage).

Extremes.--1928-50: 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.--Flow regulated by mills above station and by Sunapee Lake (see above). Runoff adjusted for change in contents in Sunapee Lake since October 1928.

1/ Published as "at Claremont" prior to October 1, 1928.

Monthly and yearly mean discharge, in cubic feet per second (observed), of Sugar River at West Claremont, N. H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	455	237	208	183	-
1929	139	158	177	253	96.9	975	1,240	833	211	106	92.3	115	369
1930	89.1	124	129	321	323	787	487	286	192	82.9	108	61.7	249
1931	66.3	143	138	109	108	284	1,140	472	541	298	118	122	294
1932	114	158	264	455	267	222	1,530	541	127	102	69.5	78.3	309
1933	176	586	232	267	221	259	2,230	477	134	77.1	122	108	405
1934	187	164	205	210	126	458	2,036	433	204	84.2	74.0	119	357
1935	168	339	275	670	266	725	901	433	450	445	112	105	408
1936	84.9	225	198	204	147	2,490	1,203	282	95.0	73.3	57.1	56.2	428
1937	155	237	478	534	487	269	1,258	1,434	774	331	142	83.1	515
1938	126	399	365	378	419	576	603	408	150	453	280	1,269	451
1939	491	384	933	325	256	409	2,015	763	186	86.2	107	95.6	504
1940	116	271	192	88.2	79.0	108	2,057	1,657	818	214	88.1	133	482
1941	81.7	349	327	313	385	232	712	188	134	159	77.5	69.8	250
1942	66.5	116	107	152	74.5	654	1,074	548	479	158	89.2	69.3	282
1943	78.8	256	211	108	227	728	992	1,054	340	125	254	105	374
1944	194	471	195	121	127	337	1,597	488	548	159	67.0	124	367
1945	188	176	255	320	241	1,551	1,003	1,339	550	291	130	144	502
1946	258	518	496	408	270	1,202	488	749	405	108	106	128	430
1947	253	84	158	239	406	1,451	785	725	592	240	94.3	70.3	432
1948	81.2	138	92.9	84.7	121	1,114	878	693	395	163	95.5	68.9	343
1949	66.0	228	249	632	372	703	565	325	122	80.1	70.8	107	293
1950	91.0	147	201	355	226	489	1,217	336	266	113	70.3	117	302

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	\$1.97	\$1.06	\$0.93	\$0.79	-
1929	0.33	0.49	0.60	1.06	0.51	4.82	5.74	3.46	.41	.22	.29	.42	18.35
1930	.30	.40	.44	1.73	1.55	3.91	2.31	1.11	.34	.14	.33	.04	12.60
1931	.12	.54	.51	.36	.36	1.24	5.45	2.35	2.24	1.14	.24	.34	14.89
1932	.30	.52	1.16	2.22	1.12	.98	7.02	1.23	.28	.28	.13	.19	15.43
1933	.81	2.73	.93	1.17	.85	1.17	10.08	1.75	.37	.12	.43	.33	20.74
1934	.73	.59	.91	.93	.46	2.05	9.15	1.70	.71	.21	.13	.50	18.07
1935	.60	1.47	1.23	3.17	.84	3.09	4.13	1.80	1.95	1.79	.20	.28	20.55
1936	.15	.95	.78	1.00	.54	11.76	4.51	1.08	.21	.27	.13	.07	21.45
1937	.64	.82	2.89	2.34	1.98	1.05	5.74	6.12	3.25	1.26	.45	.11	26.17
1938	.47	1.89	1.57	1.68	1.49	2.50	2.64	1.84	.53	2.08	.99	5.78	23.44
1939	1.56	1.36	4.02	1.14	.98	1.78	9.22	3.14	.62	.15	.40	.19	24.56
1940	.39	1.12	.82	.33	.31	.49	9.28	7.05	3.24	.78	.15	.47	24.43
1941	.14	1.54	1.46	1.22	1.44	.92	3.16	.76	.52	.59	.12	.13	12.00
1942	.16	.44	.51	.70	.31	3.19	5.13	1.46	2.09	.53	.17	.13	14.82
1943	.21	1.13	.97	.47	.93	3.14	4.41	4.85	1.21	.27	1.07	.25	18.79
1944	.84	2.16	.67	.36	.39	1.47	7.20	1.99	2.61	.59	.12	.42	19.82
1945	.70	.65	1.15	1.34	.82	6.24	4.45	5.68	2.37	1.17	.31	.41	25.27
1946	1.02	2.32	2.25	1.73	.91	5.28	2.16	3.47	1.44	.29	.36	.49	21.72
1947	.96	.65	.81	1.15	1.67	3.48	6.42	3.25	2.38	.81	.16	.05	21.59
1948	.02	.59	.33	.34	.44	5.38	4.01	3.97	1.57	.43	.23	.02	17.33
1949	.12	.99	1.17	2.91	1.38	3.17	2.50	1.40	.35	.17	.09	.33	14.58
1950	.25	.52	.86	1.67	.97	2.31	5.74	1.46	1.02	.26	.21	.33	15.60

\* Not previously published.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30										Calendar year			
		Observed					Adjusted					Observed		Adjusted	
		Momentary		maximum	Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches			
		Discharge	Date												
1928	661	-	-	-	-	-	-	-	-	-	-	-	-		
1929	681	3,440	Mar. 23, 1929	56	369	364	1.35	18.35	358	358	18.07	-	-		
1930	696, 711	3,310	Mar. 8, 1930	35	249	250	.929	12.60	249	250	12.63	-	-		
1931	711	3,380	Apr. 11, 1931	31	294	295	1.10	14.89	310	311	15.70	-	-		
1932	726	4,080	Apr. 12, 1932	34	309	305	1.13	15.43	347	354	17.92	-	-		
1933	741	6,530	Apr. 18, 1933	57	405	411	1.53	20.74	369	367	18.50	-	-		
1934	756	10,500	Apr. 12, 1934	49	357	358	1.33	18.07	376	379	19.14	-	-		
1935	781	5,160	Jan. 10, 1935	77	408	407	1.51	20.55	385	379	19.13	-	-		
1936	801	14,000	Mar. 19, 1936	42	428	425	1.58	21.45	459	466	23.52	-	-		
1937	821	6,890	June 18, 1937	53	515	519	1.93	26.17	518	518	26.15	-	-		
1938	851	13,100	Sept. 21, 1938	58	451	465	1.73	23.44	529	524	26.45	-	-		
1939	871	6,180	Apr. 20, 1939	48	504	486	1.81	24.56	400	395	19.95	-	-		
1940	891	7,490	May 5, 1940	62	482	483	1.80	24.43	497	499	25.24	-	-		
1941	921	1,820	Dec. 31, 1940	42	250	238	.885	12.00	211	197	9.97	-	-		
1942	951	3,950	June 15, 1942	41	282	294	1.09	14.82	304	318	16.02	-	-		
1943	971	2,880	Apr. 28, May 13	48	374	373	1.39	18.79	400	400	20.15	-	-		
1944	1001	6,050	June 25, 1944	51	367	372	1.38	18.82	347	349	17.65	-	-		
1945	1031	\$3,700	Apr. 26, 1945*	90	502	500	1.86	25.27	556	562	28.36	-	-		
1946	1051	\$3,050	Mar. 15, 1946*	45	430	430	1.60	21.72	373	364	18.35	-	-		
1947	1081	5,120	Apr. 12, 1947	38	432	428	1.59	21.59	406	403	20.31	-	-		
1948	1111	5,550	Mar. 23, 1948	30	343	343	1.28	17.35	364	369	18.67	-	-		
1949	1141	3,700	Jan. 1, 1949	40	293	289	1.07	14.58	284	276	15.93	-	-		
1950	1171	3,810	Apr. 5, 1950	43	302	309	1.15	15.60	-	-	-	-	-		

\* Not previously published.



## 250. 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.

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.--21 years (1929-50), 273 cfs.

Extremes.--1929-50: 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.--Flow regulated by mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	#72.7	#86.9	140	281	334	536	539	262	409	84.9	64.0	45.0	#237
1931	44.0	92.5	95.8	58.6	61.8	191	1,070	560	471	439	84.4	110	273
1932	95.5	143	214	341	184	166	1,130	257	69.3	54.5	55.5	45.6	229
1933	129	643	169	173	142	151	1,490	304	70.9	44.5	92.7	98.3	290
1934	94.6	130	155	181	89.1	309	1,495	286	205	64.2	37.7	90.6	260
1935	113	259	161	348	161	599	667	311	216	279	76.7	85.7	274
1936	73.5	164	138	123	80.9	1,799	812	202	67.3	43.8	41.2	42.5	300
1937	128	203	317	530	395	160	998	821	302	132	67.1	44.5	340
1938	88.6	386	253	276	365	545	474	302	72.1	243	145	877	334
1939	203	220	596	162	201	258	1,310	495	97.6	55.9	49.6	29.2	306
1940	55.5	99.5	74.6	49.5	41.6	57.7	1,276	1,223	374	107	39.5	84.8	290
1941	48.5	199	227	171	251	149	602	117	83.0	66.5	37.1	30.4	162
1942	48.8	106	126	185	78.0	498	1,117	318	218	83.1	53.6	68.6	240
1943	116	262	168	101	190	548	851	898	224	120	278	112	323
1944	175	449	124	79.5	242	1,181	1,181	414	260	80.9	36.8	66.8	264
1945	105	88.2	124	158	130	1,017	572	818	322	214	82.3	134	316
1946	342	432	268	291	178	925	302	327	239	68.5	48.2	61.4	291
1947	121	123	118	183	259	447	1,083	521	429	265	81.4	51.2	304
1948	41.9	101	74.4	63.5	119	865	667	477	262	109	35.6	30.6	237
1949	41.7	141	355	411	270	486	508	214	52.6	28.4	23.3	44.9	214
1950	62.9	104	185	270	188	356	1,078	335	186	37.0	29.6	47.0	239

\* Not previously published; estimated on basis of records for Sugar River at West Claremont, N. H.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	#0.53	#0.61	1.02	2.05	2.20	3.91	3.81	1.91	2.89	0.62	0.47	0.32	#20.34
1931	.32	.65	.70	.43	.41	1.39	7.53	4.09	3.33	3.21	.62	.77	23.45
1932	.70	1.01	1.56	2.49	1.26	1.21	7.98	1.88	.49	.40	.40	.32	19.70
1933	.94	4.54	1.23	1.26	.94	1.10	10.54	2.22	.50	.32	.68	.68	24.95
1934	.69	1.92	1.13	1.33	.59	2.26	10.56	2.09	1.45	.47	.28	.64	22.41
1935	.82	1.83	1.18	2.54	1.06	4.37	4.71	2.27	1.53	2.04	.56	.60	23.51
1936	.54	1.16	1.01	.90	.55	13.14	5.74	1.48	.48	.32	.50	.30	25.92
1937	.93	1.43	2.32	3.86	2.60	1.16	7.05	6.00	2.13	.96	.49	.31	29.24
1938	.65	2.72	1.84	2.02	2.40	3.98	3.35	2.20	.51	1.78	1.08	6.19	28.70
1939	1.48	1.55	4.35	1.19	1.32	1.88	9.25	3.61	.69	.41	.36	.21	26.30
1940	.40	.70	.54	.36	.28	.42	9.01	8.92	2.64	.78	.29	.60	24.94
1941	.35	1.41	1.66	1.25	1.65	1.08	4.25	.85	.44	.49	.27	.21	13.91
1942	.36	.75	.92	1.35	.51	3.54	7.89	2.32	1.54	.81	.59	.48	20.66
1943	.85	1.85	1.22	.73	1.25	4.00	6.01	6.55	1.58	.87	2.03	.79	27.73
1944	1.28	3.17	.91	.58	.54	1.76	8.34	3.02	1.84	.59	.27	.47	22.77
1945	.77	.62	.91	1.15	.86	7.42	4.04	5.97	2.28	1.56	.60	.95	27.13
1946	2.50	3.05	1.85	2.12	1.17	6.75	2.13	2.39	1.69	.50	.35	.43	25.03
1947	.58	.87	.86	1.34	1.71	3.26	7.64	3.80	3.03	1.93	.59	.22	26.15
1948	.31	.71	.54	.46	.81	6.51	4.71	5.48	1.85	.80	.26	.22	20.46
1949	.30	.99	2.59	3.00	1.78	3.54	3.58	1.56	.37	.21	.17	.32	18.41
1950	.46	.73	1.35	1.97	1.24	2.60	7.61	2.45	1.32	.27	.22	.53	20.55

\* Not previously published; estimated on basis of records for Sugar River at West Claremont, N. H.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1930	696	3,650	Apr. 7, 1930	-	#237	#1.50	#20.34	231	19.85		
1931	711, 781	10,000	July 22, 1931	20	273	1.73	23.45	291	25.05		
1932	726	4,140	Apr. 12, 1932	22	229	1.45	19.70	269	23.14		
1933	741	5,510	Nov. 20, 1932	24	290	1.84	24.95	244	20.98		
1934	756, 781	10,000	Apr. 12, 1934	21	260	1.85	22.41	273	23.50		
1935	761	3,450	Jan. 10, 1935	31	274	1.73	23.51	260	22.39		
1936	801	14,700	Mar. 18, 1936	17	300	1.90	25.92	323	27.89		
1937	821	5,800	Feb. 22, 1937	20	340	2.15	29.24	347	29.77		
1938	851	15,500	Sept. 22, 1938	10	334	2.11	28.70	359	30.87		
1939	871	4,550	Dec. 6, 1938	17	306	1.94	26.30	239	20.56		
1940	891	6,120	May 3, 1940	17	290	1.84	24.94	310	26.72		

\* Not previously published.

Yearly discharge, in cubic feet per second, of Black River at North Springfield, Vt.--Continued

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1941	921	*1,630	Apr. 14, 1941*	14	162	1.03	13.91	146	12.52
1942	951	4,650	Apr. 8, 1942	17	240	1.52	20.66	265	22.55
1943	971	4,150	Apr. 28, 1943	40	323	2.04	27.73	339	29.17
1944	1001	5,550	Nov. 9, 1943	20	264	1.67	22.77	229	19.71
1945	1031	6,000	Apr. 26, 1945	37	316	2.00	27.13	376	32.33
1946	1051	*4,500	Mar. 9, 1946	21	291	1.84	25.03	235	20.14
1947	1081	5,370	Apr. 12, 1947	14	304	1.92	26.13	292	25.08
1948	1111	7,700	Mar. 22, 1948	13	237	1.50	20.46	265	22.78
1949	1141	8,780	Dec. 31, 1948	12	214	1.35	18.41	199	17.07
1950	1171	3,520	Apr. 20, 1950	17	239	1.51	20.55	-	-

\* Not previously published.

## 251. 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.

Gage.--Water-stage recorder. Altitude of gage is 430 ft (from topographic map).

Average discharge.--10 years (1940-50), 151 cfs.

Extremes.--1940-50: Maximum discharge, 8,830 cfs Dec. 31, 1948 (gage height, 13.31 ft, from high-water mark in gage well), 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.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	71.5	16.2	42.5	-
1941	17.7	119	145	107	176	93.1	324	66.4	34.1	27.8	10.8	14.4	93.6
1942	16.8	52.1	62.3	101	50.8	351	587	153	162	40.7	17.5	22.5	135
1943	31.5	117	113	63.4	128	382	532	551	113	48.9	141	56.3	190
1944	94.6	266	80.2	36.8	40.8	179	714	191	136	34.3	13.4	30.8	151
1945	50.3	51.3	82.6	79.4	82.9	642	362	534	173	88.7	31.6	32.0	185
1946	79.7	200	150	183	93.7	536	172	249	166	55.8	28.5	37.8	163
1947	57.9	62.2	56.3	106	180	317	688	297	192	94.3	31.2	15.5	174
1948	12.2	58.4	36.8	37.0	76.3	585	386	275	172	65.0	19.9	9.31	145
1949	15.7	75.3	257	271	219	323	293	129	26.6	12.4	9.05	22.5	138
1950	21.3	38.7	79.5	144	87.7	285	691	178	75.6	15.7	18.4	46.3	138

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	0.80	0.18	0.46	-
1941	0.20	1.29	1.62	1.19	1.78	1.04	3.51	0.74	0.37	.31	.12	.16	12.33
1942	.19	.58	.70	1.14	.51	3.95	6.35	1.71	1.75	.46	.20	.24	17.75
1943	.35	1.27	1.28	.71	1.29	4.28	5.77	6.18	1.22	.55	1.57	.61	25.04
1944	1.06	2.88	.90	.41	.43	2.01	7.73	2.14	1.48	.38	.15	.33	19.90
1945	.56	.56	.92	.89	.84	7.19	3.93	5.98	1.87	.99	.35	.35	24.43
1946	.89	2.16	1.68	2.05	.95	6.00	1.86	2.78	1.80	.63	.32	.41	21.53
1947	.65	.67	.63	1.19	1.82	3.54	7.45	3.32	2.08	1.06	.35	.17	22.93
1948	.14	.65	.41	.41	.80	6.54	4.18	3.07	1.86	.73	.22	.10	19.09
1949	.16	.82	2.88	3.05	2.22	3.61	3.18	1.45	.29	.14	.10	.24	18.14
1950	.24	.42	.89	1.61	.99	2.97	7.49	1.99	.82	.18	.21	.50	18.21

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1941	921	*2,850	Feb. 8, 1941	5.9	93.6	0.909	12.33	81.0	10.67
1942	951	*2,690	Apr. 8, 1942	7.0	135	1.31	17.75	146	19.18
1943	971,1031	3,650	May 12, 1943	16	190	1.84	25.04	205	27.00
1944	1001,1031	4,360	Nov. 9, 1943	8.3	151	1.47	19.90	129	17.10
1945	1031	5,030	Apr. 26, 1945	17	185	1.80	24.43	206	27.12
1946	1051	*2,630	Mar. 9, 1946*	12	163	1.58	21.53	142	18.75
1947	1081	4,820	Apr. 12, 1947	11	174	1.69	22.93	168	22.16
1948	1111	5,950	Mar. 22, 1948	5.8	145	1.41	19.09	165	21.79
1949	1141	8,830	Dec. 31, 1948	3.6	138	1.34	18.14	120	15.81
1950	1171	2,790	Apr. 5, 1950	5.2	138	1.34	18.21	-	-

\* Revised.

\* Not previously published.

## 252. 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.

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

Average discharge.--10 years (1940-50), 106 cfs.

Extremes.--1940-50: Maximum discharge, 4,660 cfs (revised) Dec. 30, 1948 (gage height, 10.51 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 July 25, 1949; minimum daily, 3.0 cfs Aug. 28, 1949.

Flood in September 1938 reached a stage of 17.9 ft, from floodmarks.

Remarks.--Occasional diurnal fluctuation at low flow caused by sawmill above station; fluctuation more frequent prior to 1946.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	43.0	10.4	27.6	-
1941	12.6	81.3	103	81.5	130	61.9	213	56.3	32.6	24.8	8.58	11.4	67.4
1942	11.0	35.0	50.6	85.6	38.1	273	364	106	66.6	25.1	12.5	15.5	90.1
1943	21.3	93.1	91.6	54.8	101	275	365	376	75.6	22.9	76.1	26.1	132
1944	57.3	186	60.8	30.0	32.7	139	504	117	102	26.7	11.7	25.8	107
1945	33.2	35.2	57.3	70.1	64.6	465	257	586	146	94.3	28.2	29.4	140
1946	46.4	119	109	125	64.0	349	107	193	130	28.7	17.8	19.3	110
1947	28.0	28.7	28.7	72.0	132	216	458	206	91.6	58.0	19.6	10.3	112
1948	8.33	56.7	33.5	30.3	56.6	408	298	222	132	33.5	12.8	5.07	108
1949	9.16	55.4	154	186	141	236	203	92.7	20.0	11.4	8.30	16.3	94.2
1950	15.1	27.5	56.8	119	70.7	203	453	128	58.1	14.5	20.2	56.0	102

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	0.69	0.17	0.43	-
1941	0.20	1.26	1.65	1.30	1.87	0.99	3.30	0.90	0.50	.40	.14	.18	12.69
1942	.18	.54	.81	1.34	.55	4.35	5.62	1.69	1.03	.40	.20	.24	16.95
1943	.34	1.44	1.46	.88	1.46	4.39	5.64	6.00	1.17	.37	1.22	.40	24.77
1944	.91	2.87	.97	.48	.49	2.22	7.79	1.87	1.57	.43	.19	.40	20.19
1945	.53	.54	.92	1.12	.93	7.42	3.97	6.16	2.26	1.51	.45	.45	26.26
1946	.74	1.84	1.74	2.00	.92	5.57	1.68	3.09	2.01	.46	.28	.30	20.61
1947	.45	.44	.46	1.15	1.90	3.45	7.07	3.29	1.41	.93	.31	.16	21.02
1948	.13	.88	.54	.48	.85	6.52	4.60	3.54	2.04	.53	.20	.08	20.39
1949	.15	.86	2.45	2.97	2.03	3.77	3.13	1.48	.31	.18	.13	.25	17.71
1950	.24	.42	.91	1.90	1.02	3.24	7.01	2.04	.90	.23	.32	.86	19.09

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1941	921	1,680	Feb. 8, 1941	4.8	67.4	0.934	12.69	59.0	11.11
1942	951	2,040	Mar. 9, 1942	5.2	90.1	1.25	16.95	99.2	18.66
1943	971	2,040	May 12, 1943	10	132	1.83	24.77	140	26.28
1944	1001	2,460	Nov. 9, 1943	6.0	107	1.48	20.19	92.4	17.43
1945	1031	2,460	Apr. 26, 1945	12	140	1.94	26.26	152	28.59
1946	1051	*1,700	Mar. 9, 1946*	7.3	110	1.52	20.61	93.8	17.64
1947	1081	1,880	Apr. 12, 1947	7.7	112	1.55	21.02	113	21.22
1948	1111	*3,450	Mar. 22, 1948	3.6	108	1.50	20.39	118	22.30
1949	1141	*4,660	Dec. 30, 1948	3.0	94.2	1.30	17.71	84.2	15.82
1950	1171	1,820	Apr. 20, 1950	5.4	102	1.41	19.09	-	-

\* Revised.

\* Not previously published; estimated on basis of reconstructed stage graph.

## 253. 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.

Drainage area.--5,493 sq mi, includes that of Saxtons River.

Average Discharge.--8 years (1942-50), 9,148 cfs (adjusted for storage).

Gage.--Water-stage recorder. Datum of gage is 218.63 ft above mean sea level, datum of 1929.

Extremes.--1942-50: Maximum discharge, 93,000 cfs Mar. 22, 1948 (gage height, 29.55 ft); minimum daily, 195 cfs Aug. 16, 30, 1942.

Maximum stage known, 43.8 ft, from floodmarks, Mar. 19, 1936.

Remarks.--Flow regulated by power plants and by lakes and reservoirs having a combined usable capacity of about 14 billion cu ft. Runoff adjusted for change in contents in First and Second Connecticut Lakes (see p. 229), Lake Francis since March 1940 (see p. 231), Comerford Station Pond since August 1930 (see p. 236), Union Village Reservoir since October 1949 (see p. 249), four reservoirs in Mascoma River Basin (see p. 257), and Sunapee Lake (see p. 261).

## CONNECTICUT RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second (observed), of Connecticut River at North Walpole, N. H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	-	-	-	-	-	-	29,960	13,530	9,905	2,815	1,461	2,121	-
1943	3,456	8,330	5,765	3,480	4,289	12,790	20,460	27,710	11,640	4,845	8,445	5,721	9,770
1944	6,791	14,570	5,415	3,421	2,998	6,532	28,190	19,700	7,081	3,564	2,225	2,964	6,585
1945	6,623	6,130	5,142	6,642	4,182	25,290	24,590	24,040	11,970	8,132	2,925	5,240	10,940
1946	14,810	12,660	9,445	7,632	6,018	24,560	13,800	14,460	7,782	2,834	4,683	3,095	10,190
1947	7,641	8,569	7,503	7,477	9,546	13,550	28,590	23,490	20,600	7,333	3,981	2,441	11,670
1948	1,524	2,686	2,124	1,866	2,819	19,320	20,640	18,120	7,365	3,531	2,562	1,610	7,058
1949	1,424	7,499	6,715	12,670	6,731	13,450	18,690	9,405	3,779	2,054	1,807	2,218	7,199
1950	2,435	4,569	7,003	8,982	6,138	8,958	29,810	11,330	6,680	2,845	2,452	3,019	7,831

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1942	-	-	-	-	-	-	6.43	3.01	2.00	0.57	0.28	0.40	-
1943	0.71	1.66	1.05	0.60	0.76	2.57	4.27	6.23	2.38	1.00	1.77	1.11	24.11
1944	1.47	2.90	1.00	.56	.48	1.21	5.91	4.43	1.49	.77	.40	.61	21.23
1945	1.47	1.17	.93	1.29	.65	5.44	5.26	5.18	2.38	1.71	.57	1.10	27.15
1946	3.06	2.59	1.99	1.43	.89	5.27	2.96	3.21	1.58	.55	.95	.56	25.04
1947	1.68	1.77	1.49	1.38	1.68	2.72	6.03	5.25	4.17	1.53	.61	.39	28.88
1948	.27	.62	.44	.33	.46	4.20	4.50	5.92	1.48	.71	.50	.19	17.82
1949	.28	1.66	1.30	2.64	1.11	2.78	4.04	2.11	.79	.36	.28	.44	17.79
1950	.48	.93	1.53	1.88	.97	1.70	6.31	2.54	1.46	.54	.43	.58	19.35

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed	Adjusted	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1942	951	54,400	Apr. 8, 1942	-	-	-	-	-	-	-	-
1943	971	53,700	Apr. 28, 1943	225	9,770	9,755	1.78	24.11	10,520	10,540	26.06
1944	1001	53,300	Nov. 9, 1943	203	8,585	8,568	1.56	21.23	7,873	7,841	19.43
1945	1031	61,900	Mar. 21, 1945	222	10,940	10,980	2.00	27.15	12,530	12,650	31.22
1946	1051	54,000	Mar. 15, 1946*	231	10,190	10,130	1.84	25.04	9,064	9,036	22.32
1947	1081	71,900	Apr. 13, 1947	251	11,670	11,600	2.11	28.68	10,250	10,150	25.09
1948	1111	93,000	Mar. 22, 1948	246	7,058	7,117	1.30	17.62	7,816	7,868	19.53
1949	1141	71,000	Dec. 31, 1948	199	7,199	7,199	1.31	17.79	7,068	7,080	17.49
1950	1171	57,900	Apr. 6, 1950	331	7,631	7,631	1.43	19.35	-	-	-

\* Not previously published.

## 254. 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.

Gage.--Water-stage recorder. Altitude of gage is 375 ft (from topographic map)

Average discharge.--10 years (1940-50), 107 cfs.

Extremes.--1940-50: Maximum discharge, 3,290 cfs Mar. 22, 1948 (gage height, 8.08 ft), from rating curve extended above 1,700 cfs by logarithmic plotting; minimum, 1.3 cfs Sept. 23, 1940.

Remarks.--Occasional diurnal fluctuation at low flow caused by sawmill above station; more frequent prior to 1945.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	53.5	7.95	22.8	-
1941	9.55	103	103	88.4	116	65.5	202	68	53.4	29.9	10.6	10.2	71.1
1942	9.47	23.6	41.9	56.5	20.5	274	296	109	95.4	21.9	11.1	10.1	81.0
1943	16.6	81.5	84.3	46.0	85.4	265	308	326	54.5	14.6	52.2	17.7	113
1944	48.4	192	56.5	29.9	32.0	147	573	121	127	52.3	16.0	51.5	120
1945	37.0	52.0	78.0	87.5	68.3	459	330	408	234	109	27.4	35.1	161
1946	44.6	141	147	131	67.6	326	134	271	110	23.5	15.5	19.0	120
1947	43.7	34.7	34.3	80.3	152	259	400	181	121	72.4	26.1	9.59	117
1948	7.62	48.1	34.2	28.1	43.7	456	294	245	150	45.7	11.5	5.31	113
1949	7.72	45.6	55.4	187	118	226	155	126	19.2	8.66	13.6	33.6	81.2
1950	24.1	45.1	78.4	156	85.4	197	334	94.5	71.5	18.9	14.9	51.6	97.4

Monthly and yearly runoff, in inches, of Cold River at Drewsville, N. H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	0.75	0.11	0.31	-
1941	0.13	1.39	1.44	1.23	1.46	0.91	*2.73	0.95	0.72	.42	.15	.14	11.67
1942	.13	.32	.58	.79	.26	3.81	4.00	1.53	1.29	.30	.16	.14	13.31
1943	.23	1.10	1.18	.64	1.05	3.69	4.16	4.54	.74	.20	.73	.24	18.50
1944	.67	2.59	.79	.42	.42	2.05	7.73	1.68	1.71	.73	.22	.70	19.71
1945	.52	.70	1.09	1.22	.86	6.39	4.46	5.69	3.16	1.53	.38	.47	26.47
1946	.62	1.90	2.04	1.83	.85	4.54	1.81	3.77	1.49	.33	.22	.26	19.66
1947	.61	.47	.48	1.12	1.91	3.60	5.40	2.53	1.63	1.01	.36	.13	19.25
1948	.11	.65	.49	.39	.57	6.35	3.96	3.42	1.75	.84	.16	.07	18.55
1949	.11	.62	.77	2.61	1.48	3.15	2.09	1.48	.28	.12	.19	.45	13.33
1950	.54	.61	1.09	2.18	1.07	2.75	4.50	1.32	.97	.26	.21	.70	16.00

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	921	331	July 12, 1940	-	-	-	-	-	-
1941	921	1,090	Feb. 8, 1941	1.9	71.1	.860	11.67	59.3	9.74
1942	951	*2,830	Mar. 9, 1942	6.3	81.0	.979	13.31	90.0	14.79
1943	971	970	Apr. 28, 1943	5.6	113	1.37	18.50	122	20.04
1944	1001	2,740	Nov. 9, 1943	8.2	120	1.45	19.71	109	17.97
1945	1031	3,040	June 20, 1945	12	161	1.95	26.47	175	28.72
1946	1051	1,940	May 28, 1946	5.3	120	1.45	19.66	101	16.66
1947	1081	1,380	Apr. 12, 1947	6.6	117	1.41	19.25	115	18.93
1948	1111	3,290	Mar. 22, 1948	3.8	113	1.37	18.55	114	16.81
1949	1141	1,400	Jan. 6, 1949	4.1	81.2	.982	13.33	84.5	13.87
1950	1171	1,380	Mar. 29, 1950	5.2	97.4	1.18	16.00	-	-

\* Not previously published.

## 255. 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.

Gage.--Water-stage recorder. Altitude of gage is 640 ft (from topographic map).

Extremes.--1946-50: 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 at crest stage; minimum, 5.0 cfs Aug. 28, 1949.

Remarks.--Diurnal fluctuation caused by mill above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1947	217	214	228	301	287	577	1,604	799	453	301	45.9	17.9	420
1948	16.9	140	78.7	67.9	203	1,267	829	567	370	137	38.7	12.5	311
1949	24.4	176	785	585	445	676	584	232	40.0	19.5	24.4	69.1	305
1950	70.0	110	192	300	168	452	1,371	422	197	27.4	29.3	115	287

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1947	1.40	1.33	1.47	1.94	1.67	3.72	10.00	5.15	2.82	1.94	0.30	0.11	31.85
1948	.11	.88	.53	.44	1.22	8.16	5.17	3.65	2.31	.88	.25	.08	23.66
1949	.18	1.10	5.06	3.77	2.59	4.55	3.64	1.50	.25	.13	.16	.43	23.14
1950	.45	.69	1.24	1.94	.98	2.91	8.54	2.72	1.23	.18	.19	.72	21.79

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1947	1081	9,110	Apr. 12, 1947	13	420	2.35	31.85	384	29.15
1948	1111	10,600	Mar. 22, 1948	6.5	311	1.74	23.66	374	28.48
1949	1141	29,500	Dec. 31, 1948	5.6	305	1.70	23.14	253	19.20
1950	1171	4,850	Apr. 5, 1950	6.6	287	1.60	21.79	-	-

## 256. 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.

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.--26 years (1919-23, 1928-50), 597 cfs (revised).

Extremes.--1919-23, 1928-50: 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 ft and 22.81 ft; minimum, 13 cfs Sept. 17, 18, 1946, and 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).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1920	385	982	683	197	109	1,700	2,450	814	342	135	156	103	672
1921	300	495	953	398	199	2,120	1,030	616	131	422	82.2	53.1	571
1922	78.9	305	553	260	206	1,760	*2,090	*985	913	143	119	105	*628
1923	93.1	169	170	350	219	671	*2,370	770	214	115	86.0	90.8	*442
1929	154	195	355	470	161	1,920	2,490	1,140	282	89.2	74.1	110	623
1930	164	296	429	801	835	1,000	879	569	592	124	91.5	45.8	485
1931	66.4	279	266	94.8	121	391	2,720	1,260	1,000	612	127	179	592
1932	143	309	587	1,020	429	319	2,600	585	119	98.9	61.5	47.0	523
1933	307	1,240	332	446	346	295	3,120	590	127	80.8	325	340	625
1934	240	314	393	483	158	814	2,748	501	592	218	64.2	253	564
1935	517	584	436	796	270	1,325	1,258	762	488	482	116	146	615
1936	107	485	329	298	157	3,712	1,565	386	140	87.8	90.0	71.2	620
1937	410	535	872	1,283	803	265	2,123	1,667	482	196	111	91.7	735
1938	315	941	515	651	894	1,139	1,100	687	128	431	339	1,667	730
1939	325	369	1,085	369	478	588	2,855	1,108	172	65.3	179	141	643
1940	175	418	270	106	113	184	3,001	2,733	555	194	41.5	286	672
1941	75.4	626	616	370	577	270	1,454	249	205	150	56.4	142	396
1942	140	403	342	444	169	1,131	2,429	655	316	139	56.1	100	525
1943	166	502	329	212	402	1,212	2,028	2,326	353	95.7	408	113	680
1944	325	886	228	157	181	714	2,554	702	624	102	43.7	141	552
1945	220	192	348	380	331	2,490	1,365	1,748	576	393	124	165	699
1946	428	814	433	616	298	1,890	589	1,065	573	148	131	109	596
1947	350	287	321	440	522	1,045	2,887	1,420	649	424	81.2	37.8	704
1948	32.7	248	137	118	346	2,478	1,540	1,104	630	202	64.4	21.7	578
1949	41.8	280	1,164	1,168	762	1,208	975	400	78.4	33.8	36.0	99.2	520
1950	110	175	322	505	290	858	2,647	771	354	54.5	49.3	236	530

\* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1920	1.44	3.56	2.56	0.74	0.36	6.37	8.88	3.05	1.24	0.51	0.58	0.37	29.68
1921	1.12	1.79	3.57	1.49	.67	7.95	3.73	2.51	.47	1.58	.51	.19	25.18
1922	.30	1.10	2.07	.97	.70	6.59	*7.59	*3.69	3.31	.53	.45	.38	*27.68
1923	.35	.61	.64	1.31	.74	2.51	*8.60	2.88	.78	.43	.32	.33	*19.50
1929	.58	.71	1.33	1.76	.54	7.20	9.02	4.28	1.02	.33	.28	.40	27.45
1930	.61	1.07	1.61	3.00	2.82	3.75	3.18	2.13	2.15	.46	.34	.17	21.29
1931	.25	1.01	1.00	.35	.41	1.46	9.83	4.73	3.63	2.29	.47	.65	26.08
1932	.53	1.12	2.20	3.80	1.50	1.20	9.41	2.19	.43	.33	.23	.17	23.11
1933	1.15	4.50	1.24	1.67	1.17	1.11	11.29	2.21	.46	.30	1.22	1.23	27.55
1934	.90	1.14	1.48	1.81	.53	3.04	9.95	1.98	2.14	.82	.24	.92	24.85
1935	1.19	2.12	1.64	2.97	.91	4.96	4.55	2.85	1.76	3.15	.43	.53	27.06
1936	.40	1.75	1.23	1.12	.55	13.95	5.67	1.37	.51	.33	.34	.26	27.48
1937	1.53	1.94	3.26	4.81	2.72	.99	7.69	6.24	1.74	.73	.42	.33	32.40
1938	1.18	3.41	1.92	2.43	3.02	4.27	3.98	2.57	.46	1.61	1.27	6.04	32.16
1939	1.22	1.34	4.06	1.38	1.61	2.20	10.34	4.15	.62	.24	.67	.51	28.34
1940	.66	1.52	1.01	.40	.40	.69	10.87	10.23	2.01	.73	.16	1.03	†29.71
1941	.28	2.27	2.31	1.38	1.95	1.01	5.27	.93	.74	.56	.21	.51	17.42
1942	.52	1.46	1.28	1.66	.57	4.23	8.80	2.38	1.14	.52	.21	.36	23.13
1943	.62	1.82	1.23	.79	1.36	4.54	7.35	6.71	1.28	.36	1.53	.41	30.00
1944	1.22	3.21	.85	.59	.63	2.67	9.25	2.63	2.26	.38	.16	.51	24.36
1945	.82	.70	1.30	1.42	1.12	9.32	4.94	6.54	2.09	1.47	.46	.60	30.78
1946	1.60	2.95	1.62	2.31	1.01	7.07	2.13	4.06	2.08	.55	.49	.40	26.27
1947	1.31	1.04	1.20	1.65	1.77	3.91	10.46	5.31	2.35	1.59	.30	.14	31.05
1948	.12	.90	.51	.44	1.22	9.28	5.58	4.13	2.28	.76	.24	.08	25.54
1949	.16	1.01	4.36	4.37	2.58	4.52	3.53	1.50	.28	.13	.13	.56	22.95
1950	.41	.64	1.20	1.89	.98	3.21	9.59	2.89	1.28	.20	.18	.86	23.33

\* Revised.

† Corrected.

Yearly discharge, in cubic feet per second, of West River at Newfane, Vt.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1920	501	\$11,500	Apr. 12, 1920*	53	672	2.18	29.68	647	28.60
1921	521	\$11,500	Mar. 9, 1921*	38	571	1.85	25.18	503	22.17
1922	541, 1231	\$12,400	Apr. 12, 1922	52	*628	*2.04	*27.68	*585	*25.81
1923	561, 1231	*7,860	Apr. 29, 1923	46	*442	*1.44	*19.50	-	-
1929	681, 1231	*10,600	Mar. 24, 1929*	24	623	2.02	27.45	638	28.12
1930	696, 1231	*6,140	Apr. 7, 1930	22	483	1.57	21.29	460	20.26
1931	711, 1231	*15,200	Apr. 11, 1931*	24	592	1.92	26.08	628	27.67
1932	726	9,130	Apr. 12, 1932	20	523	1.70	23.11	592	26.15
1933	741	13,800	Nov. 19, 1932	25	625	2.03	27.55	548	24.18
1934	756	15,000	Apr. 12, 1934	35	564	1.83	24.85	596	26.28
1935	781	11,100	July 8, 1935	58	615	2.00	27.06	579	25.49
1936	801	39,000	Mar. 18, 1936	25	620	2.01	27.48	696	30.83
1937	821	10,600	Feb. 22, 1937	38	735	2.39	32.40	730	32.18
1938	851	52,300	Sept. 21, 1938	46	730	2.37	32.16	732	32.27
1939	871	8,790	Apr. 25, 1939	26	643	2.09	28.34	565	24.91
1940	891	12,000	May 3, 1940	23	672	2.18	†29.71	710	31.38
1941	921	4,810	Feb. 8, 1941	26	396	1.29	17.42	359	15.82
1942	951	10,800	Apr. 8, 1942	20	525	1.70	23.13	534	23.54
1943	971	10,800	Apr. 28, 1943	35	680	2.21	30.00	717	31.61
1944	1001	14,600	Nov. 9, 1943	21	552	1.79	24.36	496	21.90
1945	1031	11,400	Apr. 26, 1945	52	699	2.27	30.78	775	34.13
1946	1051	9,620	Mar. 9, 1946	23	596	1.94	26.27	537	23.65
1947	1081	15,800	Apr. 12, 1947	28	704	2.29	31.03	658	29.01
1948	1111	21,000	Mar. 22, 1948	15	578	1.68	25.54	668	29.54
1949	1141	39,600	Dec. 31, 1948	14	520	1.69	22.35	446	19.65
1950	1171	11,000	Apr. 5, 1950	17	530	1.72	23.33	-	-

\* Revised.

† Corrected.

\* Not previously published.

## 257. 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.

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.--6 years (1944-50), 10,470 cfs (adjusted for storage).

Extremes.--1944-50: Maximum discharge, 101,000 cfs Mar. 23, 1948 (gage height, 208.53 ft); minimum daily, 99 cfs Oct. 8, 1944.

Maximum discharge known, 176,000 cfs Mar. 19, 20, 1936 (gage height, 128.8 ft, datum then in use), from rating curve extended above 69,000 cfs.

Remarks.--Flow regulated by power plants and by lakes and reservoirs having a combined usable capacity of about 14½ billion cu ft. Runoff adjusted for change in contents in First and Second Connecticut Lakes (see p. 229), Lake Francis since March 1940 (see p. 231), Comerford Station Pond since August 1930 (see p. 236), Union Village Reservoir since October 1949 (see p. 249), four reservoirs in Mascoma River Basin (see p. 257), and Sunapee Lake (see p. 261).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	-	-	-	-	3,841	56,340	27,960	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	22,110	-
1939	8,717	-	-	-	-	-	-	-	-	-	-	-	-
1945	7,136	6,798	6,172	7,813	5,154	30,230	27,550	28,100	14,040	9,489	3,524	5,848	12,710
1946	15,170	13,700	10,810	9,368	7,404	29,430	14,980	16,510	9,345	3,307	5,286	3,575	11,620
1947	8,362	9,076	9,265	9,645	10,920	15,360	32,250	25,780	21,990	8,425	4,502	2,338	13,100
1948	1,872	3,876	2,934	2,589	3,959	24,140	24,150	20,330	9,313	4,263	2,942	1,796	8,525
1949	1,679	8,021	7,890	15,260	8,331	15,370	20,040	9,897	4,009	2,191	2,005	2,610	8,102
1950	2,608	4,905	7,553	10,400	7,100	10,740	34,200	12,250	7,090	2,962	2,684	3,593	8,815

Monthly and yearly runoff, in inches (adjusted), of Connecticut River at Vernon, Vt.													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	-	-	-	-	0.59	10.59	5.03	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	3.98	-
1939	1.51	-	-	-	-	-	-	-	-	-	-	-	-
1945	1.38	1.15	1.01	1.34	.73	5.68	5.17	5.29	2.45	1.74	0.61	1.07	27.62
1946	2.75	2.46	1.99	1.57	1.01	5.51	2.81	3.19	1.66	.57	.94	.58	25.04
1947	1.53	1.68	1.45	1.42	1.73	2.72	6.12	5.02	3.89	1.54	.63	.43	28.22
1948	.30	.72	.53	.42	.60	4.57	4.53	3.84	1.65	.76	.51	.20	18.63
1949	.29	1.55	1.36	2.79	1.24	2.79	3.78	1.94	.73	.34	.28	.45	17.54
1950	.46	.87	1.44	1.91	1.01	1.82	6.31	2.40	1.35	.49	.42	.61	19.09

Yearly discharge, in cubic feet per second												
Year	W.S.P. no.	Water year ending Sept. 30							Calendar year			
		Observed				Adjusted			Observed		Adjusted	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	
		Discharge	Date									
1936	798	176,000	Mar. 19, 20, 1936	-	-	-	-	-	-	-	-	-
1938	867	132,500	Sept. 22, 1938	-	-	-	-	-	-	-	-	-
1945	1031	69,700	Mar. 22, 1945	99	12,710	12,750	2.03	27.62	14,350	14,450	31.28	
1946	1051	63,000	Mar. 10, 1946	114	11,620	11,560	1.84	25.04	10,450	10,420	22.56	
1947	1081	79,600	Apr. 13, 1947	340	13,100	13,030	2.08	28.22	11,680	11,570	25.05	
1948	1111	101,000	Mar. 25, 1948	200	8,525	8,584	1.37	18.53	9,268	9,540	20.28	
1949	1141	82,600	Dec. 31, 1948	180	8,102	8,101	1.29	17.54	7,896	7,906	17.11	
1950	1171	68,300	Apr. 6, 1950	266	8,815	8,815	1.41	19.09	-	-	-	

\* Not previously published; estimated on basis of comparison of peaks and dailies.

#### 258. Ashuelot River near Gilsun, N. H.

Location.--Lat 43°02'20", long. 72°16'15", on right bank 5 ft downstream from White Brook, 60 ft upstream from stone-arch bridge just off Keene-Newport Road, and 0.7 mile downstream from Gilsun, Cheshire County.

Drainage area.--71.1 sq mi.

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.--28 years (1922-50), 123 cfs.

Extremes.--1922-50: Maximum discharge, 5,220 cfs Sept. 21, 1938 (gage height, 11.24 ft), 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; minimum discharge, about 1 cfs Oct. 6, 1922, July 10, 1923.

Remarks.--Flow regulated by reservoir above station. Diurnal fluctuation caused by power plant above station prior to 1938.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1922	-	-	-	-	-	-	-	-	-	-	-	37.3	-
1923	32.1	44.5	40.1	157	43.3	96.7	557	185	26.9	29.7	28.7	24.6	105
1924	43.7	184	262	171	66.2	77.1	619	266	31.8	27.9	24.2	34.0	150
1925	27.0	26.3	72.3	15.6	252	380	241	70.8	47.9	49.6	28.7	34.0	103
1926	51.5	176	174	171	45.4	75.5	427	175	49.4	27.2	17.9	17.9	117
1927	49.0	206	87.2	59.5	37.0	263	211	158	54.9	44.0	42.0	45.4	105
1928	94.5	*425	222	120	98.0	162	308	311	214	86.2	140	104	*190
1929	57.5	45.5	52.4	89.9	58.5	339	468	317	46.7	25.7	25.7	18.8	129
1930	13.2	16.1	15.7	47.8	84.6	276	181	106	73.6	22.9	38.8	16.2	74.2
1931	15.5	29.1	22.1	14.3	11.8	71.3	*527	174	178	29.2	16.8	17.4	*91.9
1932	19.9	23.9	55.5	159	86.1	74.5	527	95.2	35.5	29.8	22.8	18.4	94.9
1933	59.1	236	59.3	62.2	70.2	62.0	718	134	26.3	41.6	69.1	141	145
1934	168	107	107	89.3	46.5	212	740	138	101	29.1	22.0	34.2	149
1935	67.8	156	180	204	73.4	233	305	126	142	208	18.4	29.8	146
1936	9.44	73.0	73.6	107	47.8	803	296	52.5	21.4	25.0	19.1	13.3	129
1937	18.3	42.7	161	191	137	56.1	368	400	144	77.6	25.2	12.6	136
1938	31.9	163	130	154	121	140	232	150	51.9	155	104	448	156
1939	94.6	99.7	307	79.6	75.8	144	619	154	49.0	24.0	20.3	17.1	140
1940	37.0	68.9	62.9	22.3	21.3	29.2	640	464	161	55.6	21.6	22.2	133
1941	12.1	88.9	100	94.1	172	52.2	229	76.8	58.7	44.9	23.5	26.3	80.6
1942	13.5	32.3	40.6	63.5	19.8	284	361	124	120	33.3	15.5	9.91	93.3
1943	18.6	105	86.6	52.5	103	260	318	284	43.4	12.8	40.6	15.5	112
1944	38.6	217	42.4	21.5	24.2	120	534	109	195	34.3	17.9	106	121
1945	49.4	64.9	119	125	66.2	467	323	408	251	115	31.1	36.1	172
1946	47.1	123	135	140	70.0	337	124	251	124	26.5	13.7	15.7	118
1947	40.1	58.7	54.4	86.6	146	234	447	199	151	60.3	29.5	20.3	127
1948	6.85	56.7	31.9	26.4	51.5	454	295	270	131	66.5	25.0	14.3	119
1949	13.9	40.9	45.9	247	108	206	167	124	24.8	21.3	12.7	25.9	86.5
1950	22.8	37.3	95.6	160	84.5	195	392	101	106	21.0	18.9	49.3	107

\* Revised.



Monthly and yearly runoff, in inches, of Ashuelot River near Gilsum, N. H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1922	-	-	-	-	-	-	-	-	-	-	-	-	0.59
1923	0.52	0.70	0.65	2.54	0.63	1.57	8.74	3.00	0.42	0.48	0.47	.39	20.11
1924	.71	2.89	4.24	2.77	1.00	1.25	9.71	4.31	.50	.45	.39	.53	28.75
1925	.44	.41	1.17	.25	3.70	6.16	3.78	1.15	.75	.80	.47	.53	19.61
1926	.84	2.76	2.82	2.78	.66	1.23	6.69	2.84	.77	.44	.29	.28	22.40
1927	.80	3.23	1.41	.97	.54	4.27	3.32	2.56	.86	.71	.68	.71	20.06
1928	1.53	*6.66	3.60	1.95	1.49	2.63	4.83	5.04	3.36	1.40	2.27	1.63	*36.39
1929	.93	.71	.85	1.45	.86	5.50	7.34	5.14	.73	.42	.42	.29	24.64
1930	.21	.25	.25	.77	1.24	4.47	2.84	1.72	1.16	.37	.65	.25	14.16
1931	.25	.46	.36	.23	.17	1.15	*8.27	2.82	2.79	.47	.27	.27	*17.51
1932	.32	.37	.87	2.58	1.30	1.21	8.27	1.54	.56	.48	.37	.29	18.16
1933	.96	3.70	1.11	1.34	1.03	1.33	11.27	2.17	.41	.67	1.44	2.21	27.64
1934	2.72	1.67	1.73	1.45	.68	3.44	11.60	2.24	1.58	.47	.36	.54	28.48
1935	1.10	2.44	2.92	3.31	1.07	3.78	4.79	2.04	2.23	3.38	.30	.47	27.83
1936	.15	1.15	1.20	1.73	.72	13.03	4.64	.85	.34	.41	.31	.21	24.74
1937	.30	.67	2.61	3.10	2.01	.91	5.78	6.49	2.26	1.26	.41	.20	26.00
1938	.52	2.56	2.11	2.50	1.77	2.27	3.64	2.43	.81	2.51	1.68	7.03	29.83
1939	1.53	1.56	4.98	1.29	1.11	2.34	9.72	2.50	.77	.39	.33	.27	26.79
1940	.60	1.08	1.02	.36	.32	.47	10.04	7.52	2.52	.90	.35	.35	25.53
1941	.20	1.40	1.63	1.53	2.52	.85	3.59	1.25	.92	.73	.38	.41	15.41
1942	.22	.51	.66	1.03	.29	4.61	5.66	2.01	1.89	.54	.25	.16	17.83
1943	.30	1.64	1.40	.85	1.51	4.21	4.99	4.61	.68	.21	.66	.24	21.30
1944	.63	3.41	.69	.35	.37	1.94	8.38	1.77	3.07	.56	.29	1.66	25.12
1945	.80	1.02	1.93	2.03	.97	7.58	5.08	6.62	3.94	1.86	.50	.57	32.90
1946	.76	1.93	2.19	2.26	1.03	5.47	1.95	4.06	1.94	.43	.22	.25	22.51
1947	.65	.92	.88	1.40	2.14	3.79	7.01	3.23	2.36	.98	.48	.32	24.16
1948	.11	.89	.52	.43	.78	7.37	4.63	4.38	2.05	1.08	.40	.22	22.86
1949	.22	.64	.74	4.01	1.58	3.34	2.63	2.01	.39	.35	.21	.41	16.53
1950	.37	.58	1.55	2.59	1.24	3.16	6.14	1.64	1.66	.34	.31	.77	20.35

\* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1923	561,1231	*1,690	Apr. 29, 1923	1.6	105	1.48	20.11	137	26.08
1924	581,1231	*1,430	Apr. 8, 1924	5.3	150	2.11	28.75	120	22.93
1925	601,1231	*1,690	Mar. 29, 1925	3.8	103	1.45	19.61	126	24.01
1926	621,1231	*1,730	Apr. 25, 1926	10	117	1.65	22.40	112	21.42
1927	641,1231	*915	Mar. 15, 1927	10	105	1.48	20.06	*138	*26.41
1928	661,1231	*3,460	Nov. 4, 1927	23	*190	*2.67	*36.39	142	27.09
1929	681,1231	*1,400	May 3, 1929	11	129	1.81	24.64	120	22.86
1930	696,1231	*955	Mar. 9, 1930	5.8	74.2	1.04	14.16	76.0	14.52
1931	711,1231	*1,750	Apr. 11, 1931	6.2	*91.9	*1.29	*17.51	*94.5	*18.00
1932	726,1231	*1,290	Apr. 12, 1932	3.7	94.9	1.33	18.16	117	22.37
1933	741	2,000	Apr. 18, 1933	4.2	145	2.04	27.64	147	27.99
1934	756, 781	3,580	Apr. 12, 1934	8.0	149	2.10	28.48	151	28.82
1935	781	2,840	July 7, 1935	6.6	146	2.05	27.83	125	23.87
1936	801	4,400	Mar. 18, 19, 1936	3.0	129	1.81	24.74	135	25.82
1937	821	1,240	May 15, 1937	4.0	138	1.91	26.00	144	27.61
1938	851	5,220	Sept. 21, 1938	5.1	156	2.19	29.83	171	32.71
1939	871	2,030	Apr. 20, 1939	7.0	140	1.97	26.79	112	21.42
1940	891	2,020	May 3, 1940	11	133	1.87	25.53	136	26.06
1941	921	*710	Feb. 9, 1941	7.2	80.6	1.13	15.41	71.0	13.57
1942	951	1,300	Mar. 10, 1942	4.5	93.3	1.31	17.83	104	19.78
1943	971	758	Apr. 28, 1943	2.3	112	1.58	21.30	119	22.69
1944	1001	2,180	Nov. 9, 1943	7.0	121	1.70	23.12	116	22.14
1945	1031	1,560	June 20, 1945	17	172	2.42	32.90	178	34.03
1946	1051	1,310	Mar. 9, 1946	4.6	118	1.66	22.51	105	20.08
1947	1081	1,420	Apr. 13, 1947	9.4	127	1.79	24.16	122	23.23
1948	1111	2,460	Mar. 22, 1948	4.8	119	1.67	22.86	120	22.94
1949	1141	1,380	Jan. 1, 1949	5.6	86.5	1.22	16.53	91.2	17.43
1950	1171	1,120	Apr. 6, 1950	10	107	1.50	20.35	-	-

\* Revised.

\* Not previously published; estimated on basis of weather records and records for nearby stations.

## 259. Surry Mountain Reservoir

Location.--Lat 42°59'50", long. 72°18'40", on Ashuelot River 2.6 miles upstream from Sturtevant Brook and 4½ miles north of Keene, Cheshire County.

Drainage area.--100 sq mi.

Gage.--Water-stage recorder. Datum of gage is 485 ft above mean sea level (levels by Corps of Engineers).

Remarks.--Reservoir completed in 1942 for flood control, has a usable capacity of 1,420,000,000 cu ft.

Cooperation.--Records furnished by Corps of Engineers.

Month-end contents, in millions of cubic feet, of Surry Mountain Reservoir

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1942	-	-	-	-	-	-	-	-	-	-	-	0.2
1943	0.2	3.2	9.3	0.3	6.4	116.8	153.6	0.8	0.1	0.2	0.1	.1
1944	.5	.9	.2	26.0	31.9	168.9	468.0	.3	428.0	.3	.1	.4
1945	.4	10.4	31.9	31.9	41.2	300.0	203.4	4.4	163.8	1.1	1.6	.4
1946	.4	29.5	42.2	44.9	42.2	2.2	2.7	91.4	.2	.1	.1	2.2
1947	.2	.5	33.5	59.8	36.7	40.3	172.3	.9	.5	.2	.1	.1
1948	.1	20.9	35.9	35.9	35.9	1,056.6	15.1	26.0	1.6	.2	.2	.1
1949	.1	11.5	96.9	22.0	21.5	7.9	.9	1.0	.1	.1	.1	.3
1950	.4	.8	33.5	37.5	35.1	216.7	2.1	.6	.2	.1	.6	.1

260. 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.

Gage.--Water-stage recorder and concrete control. Datum of gage is 480.00 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Average discharge.--5 years (1945-50), 152 cfs (adjusted for storage).

Extremes.--1945-50: 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.--Flow regulated by Surry Mountain Reservoir (see preceding page). Runoff adjusted for change in contents in Surry Mountain Reservoir.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	70.9	165	185	187	97.8	473	167	317	195	35.6	20.5	21.7	162
1947	55.8	71.2	55.6	114	220	339	543	328	193	75.4	32.4	22.4	170
1948	9.76	74.9	39.6	37.6	70.9	233	805	356	184	82.6	28.7	15.4	161
1949	16.2	53.4	36.1	347	154	299	218	164	35.1	28.8	18.1	41.5	118
1950	37.2	64.2	129	235	131	201	602	137	146	25.9	22.1	69.8	149

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	0.81	1.95	2.17	2.15	1.00	5.23	1.85	4.00	1.77	0.41	0.23	0.25	21.82
1947	.63	.79	.78	1.41	2.16	3.88	6.56	3.01	2.13	.86	.37	.25	22.83
1948	.11	.92	.52	.43	.76	7.01	4.45	4.11	1.93	.94	.33	.17	21.68
1949	.18	.64	.78	3.64	1.58	3.36	2.37	1.87	.38	.53	.21	.46	15.80
1950	.42	.71	1.61	2.69	1.34	3.07	5.73	1.56	1.61	.30	.25	.77	20.06

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year			
		Observed				Adjusted			Observed		Adjusted	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	
		Discharge	Date									
1946	1051	942	Mar. 21, 1946	7.3	162	162	1.60	21.82	142	142	19.09	
1947	1081	759	Apr. 29, 1947	10	170	170	1.68	22.83	165	165	22.18	
1948	1111	1,000	Apr. 2, 1948	1.1	161	161	1.59	21.68	159	161	21.73	
1949	1141	986	Jan. 13, 1949	.6	118	118	1.17	15.80	128	126	16.94	
1950	1171	1,090	Mar. 31, Apr. 9	15	149	149	1.48	20.06	-	-	-	

261. 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.

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.--27 years (1923-50), 69.5 cfs (revised).

Extremes.--1923-50: 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 daily, 1.9 cfs Oct. 14, 1929.

## CONNECTICUT RIVER BASIN

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Monthly and yearly mean discharge, in cubic feet per second, of Otter Brook near Keene, N. H.													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	30.1	97.1	150	108	50.4	58.4	317	121	24.0	12.4	5.91	26.0	83.2
1925	10.4	13.9	38.7	5.80	128	210	125	50.3	20.3	12.5	8.98	12.7	152.5
1926	15.0	49.0	98.2	58.0	24.8	43.4	197	78.3	34.2	31.1	11.4	10.8	54.3
1927	32.5	112	62.4	50.2	39.0	170	104	78.3	41.4	26.2	23.1	17.6	63.2
1928	47.1	*221	128	72.0	66.9	107	138	141	121	47.1	75.5	63.4	*102
1929	32.8	37.1	28.8	36.2	18.8	211	256	172	36.4	18.2	7.21	11.8	72.5
1930	5.28	11.3	10.0	22.4	45.5	139	84.2	75.8	40.3	15.8	14.2	8.66	39.4
1931	10.1	19.0	15.9	9.73	13.5	50.8	293	84.2	93.0	17.0	9.97	11.7	51.9
1932	14.9	18.8	56.4	91.6	54.6	47.4	256	57.0	16.6	14.2	11.0	15.2	54.1
1933	32.1	108	45.9	66.9	63.0	65.0	420	67.5	14.9	16.1	40.4	83.5	84.6
1934	85.3	57.0	57.7	46.8	21.1	107	375	77.4	30.8	13.4	9.10	27.2	75.6
1935	35.5	58.6	89.6	121	47.5	127	146	62.0	75.6	83.6	17.5	22.2	73.9
1936	13.2	42.5	39.2	60.5	28.1	440	174	32.5	12.5	12.3	9.8	6.9	73.1
1937	14.5	28.2	101	136	79.6	37.4	233	218	91.0	45.5	17.7	9.92	84.3
1938	30.4	115	74.0	100	84.6	86.7	132	92.0	38.0	146	84.5	54.1	110
1939	63.5	55.4	154	53.9	49.1	101	363	76.5	27.6	12.9	8.32	9.24	81.4
1940	9.15	27.9	34.5	12.5	14.9	23.2	219	205	79.9	25.7	7.08	9.24	72.0
1941	6.28	46.9	54.5	50.8	88.7	35.3	128	60.2	35.5	15.0	7.82	7.22	44.3
1942	5.38	11.5	25.5	41.3	17.1	161	179	66.2	59.6	53.0	12.4	7.23	53.3
1943	9.34	44.7	57.0	36.9	64.5	150	176	153	36.5	8.78	18.7	5.93	63.4
1944	16.6	110	27.3	12.8	15.7	82.0	284	61.9	127	26.3	9.14	68.3	69.6
1945	35.1	43.9	75.0	71.7	45.8	252	187	220	177	80.5	19.4	19.4	103
1946	22.5	51.2	75.1	82.7	42.8	205	168	140	69.1	10.8	12.0	12.2	66.2
1947	22.3	18.4	19.5	49.1	82.8	145	252	106	62.4	25.7	8.59	8.18	66.2
1948	3.77	43.4	29.8	21.2	34.4	262	163	160	93.0	39.3	8.49	3.16	72.0
1949	2.88	23.0	31.8	138	72.8	113	98.4	69.9	13.6	6.40	5.02	9.90	48.7
1950	9.45	17.8	50.7	92.6	58.0	110	216	62.9	58.0	5.68	7.21	61.1	62.2

\* Revised.

† Corrected.

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1924	0.82	2.56	4.09	2.95	1.29	1.59	8.37	3.29	0.63	0.34	0.16	0.69	26.78
1925	.28	.37	1.05	.16	3.15	5.73	3.30	1.37	.54	.34	.24	.34	16.87
1926	.41	1.29	2.68	1.58	.61	1.18	5.20	2.15	.90	.85	.31	.28	17.42
1927	.89	2.95	1.70	1.37	.96	4.63	2.74	2.13	1.09	.71	.63	.46	20.26
1928	1.29	*5.83	3.48	1.96	1.71	2.93	3.65	3.85	3.19	1.28	2.06	1.67	*32.90
1929	.90	.98	.78	.99	.46	5.75	6.76	4.70	.96	.50	.20	.31	23.29
1930	.14	.30	.27	.61	1.12	3.79	2.22	2.07	1.06	.43	.39	.23	12.63
1931	.28	.50	.38	.27	.33	1.39	7.72	2.30	2.45	.46	.27	.31	16.66
1932	.41	.44	1.54	2.50	1.39	1.29	6.76	1.55	.44	.39	.30	.40	17.41
1933	.68	2.84	1.20	1.82	1.55	1.80	11.08	1.84	.39	.44	1.10	2.20	27.14
1934	2.32	1.50	1.57	1.27	.52	2.93	9.88	2.11	.81	.36	.25	.72	24.24
1935	.97	1.55	2.42	3.31	1.17	3.45	3.84	1.69	1.99	2.28	.48	.58	23.73
1936	.36	1.12	1.07	1.65	.72	12.00	4.60	.88	.33	.34	.27	.18	23.52
1937	.39	.74	2.76	3.71	1.96	1.02	6.15	5.94	2.40	1.24	.48	.26	27.05
1938	.83	3.03	2.02	2.73	2.08	2.36	3.49	2.61	1.00	3.98	2.30	9.00	35.33
1939	1.73	1.46	4.20	1.46	1.21	2.76	9.57	2.09	.73	.34	.35	.22	26.12
1940	.25	.74	.94	.34	.38	.63	11.06	5.58	2.11	.70	.19	.24	23.16
1941	.17	1.24	1.48	1.38	2.18	.96	3.39	1.64	.94	.44	.21	.19	14.22
1942	.15	.30	.64	1.13	.42	4.38	4.73	1.80	1.57	1.45	.34	.19	17.10
1943	.25	1.18	1.55	1.01	1.59	4.08	4.63	4.17	.96	.24	.51	.16	20.33
1944	.45	2.91	.74	.35	.40	2.23	7.49	1.69	3.35	.72	.25	1.80	22.58
1945	.96	1.16	2.04	1.95	1.13	6.87	4.92	5.99	4.67	2.20	.53	.51	32.93
1946	.61	1.35	2.05	2.25	1.05	5.58	1.79	3.80	1.82	.29	.33	.32	21.24
1947	.61	.49	.53	1.31	2.04	3.94	6.84	2.90	1.65	.70	.23	.22	21.26
1948	1.0	1.15	.81	.58	.88	7.13	4.31	4.36	2.45	1.07	.23	.08	23.15
1949	.08	.61	.87	3.77	1.79	3.08	2.60	1.91	.36	.17	.14	.26	15.64
1950	.26	.47	1.38	2.52	1.43	3.01	5.70	1.71	1.53	.15	.20	1.61	19.97

\* Revised.

† Corrected.

\* Not previously published; estimated on basis of records for nearby stations.

a In W.S.P. 661, 781, 1231.

Yearly discharge, in cubic feet per second												
Year	W.S.P. no.	Water year ending Sept. 30					Calendar year					
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches			
		Discharge	Date									
1924	581,1231	*1,940	Apr. 7, 1924	2.4	83.2	1.97	26.78	65.3	21.01			
1925	601	874	Feb. 12, 1925	2.2	+52.5	+1.24	16.87	60.9	19.55			
1926	621	440	Apr. 25, 1926	6.4	54.3	1.28	17.42	57.9	18.58			
1927	641	595	Mar. 19, 1927	5.7	63.2	1.49	20.26	*78.9	*25.32			
1928	(a)	3,180	Nov. 4, 1927	7.6	*102	*2.41	*32.90	77.5	24.96			
1929	681	1,040	Mar. 15, 1929	3.1	72.5	1.71	23.29	66.5	21.34			
1930	696	*800	Mar. 26, 1930†	1.9	39.4	.931	12.63	40.7	13.08			
1931	711	1,300	Apr. 11, 1931	4.8	51.9	1.23	16.66	55.7	17.89			
1932	726	988	Apr. 1, 1932	6.5	54.1	1.28	17.41	61.9	19.94			
1933	741,1231	*1,560	Apr. 18, 1933	5.5	84.6	2.00	27.14	86.1	27.61			
1934	756,1231	*3,020	Apr. 12, 1934	7	75.6	1.79	24.24	74.1	23.79			
1935	781	960	Jan. 10, 1935	10	73.9	1.75	23.73	66.5	21.34			

\* Revised.

† Corrected.

\* Not previously published; estimated on basis of records for nearby stations.

a In W.S.P. 661, 781, 1231.

## CONNECTICUT RIVER BASIN

Yearly discharge, in cubic feet per second, of Otter Brook near Keene, N. H.--Continued									
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1936	801	3,580	Mar. 18, 1936	2	73.1	1.73	23.52	77.3	24.86
1937	821	1,320	May 14, 1937	3	84.3	1.99	27.05	90.5	29.04
1938	851	6,130	Sept. 21, 1938	5.6	110	2.60	35.33	115	+36.84
1939	871	1,360	Apr. 19, 1939	4.8	81.4	1.92	26.12	64.4	20.66
1940	891	1,700	Apr. 12, 1940	5.1	72.0	1.70	23.16	75.0	24.12
1941	921	*440	Feb. 10, 1941	4.1	44.3	1.05	14.22	38.7	12.42
1942	951	*1,040	Mar. 9, 1942	4.1	53.3	1.26	17.10	59.2	18.99
1943	971	472	Apr. 28, 1943	3.4	63.4	1.50	20.33	66.9	21.45
1944	1001	1,480	Nov. 9, 1943	3.0	69.6	1.65	22.38	69.7	22.44
1945	1031	1,620	June 20, 1945	7.5	103	2.43	32.93	102	32.78
1946	1051	1,200	Mar. 9, 1946	5.0	66.2	1.57	21.24	58.8	18.86
1947	1081	*700	Apr. 12, 1947*	4.9	66.2	1.57	21.26	67.6	21.69
1948	1111	1,490	Mar. 22, 1948	2.3	72.0	1.70	23.15	70.4	22.65
1949	1141	842	Jan. 6, 1949	2.1	48.7	1.15	15.84	50.4	16.19
1950	1171	1,380	Sept. 1, 1950	2.2	62.2	1.47	19.97	-	-

† Corrected.

\* Not previously published; estimated on basis of records for nearby stations.

## 262. Pratt Brook at Chesham, N. H.

Location.--Lat 42°55'40", long. 72°09'10", at ruins of old dam just below highway bridge on Marlboro-Chesham road at Chesham, Cheshire County, a quarter of a mile above mouth, three eighths of a mile downstream from Russell Reservoir, and 1.3 miles downstream from Howe Reservoir.

Drainage area.--11.2 sq mi.

Gage.--Staff gage. Altitude of gage is 1,140 ft (from topographic map).

Extremes.--1919-21: Maximum discharge, 1,000 cfs (revised) Mar. 10, 1921 (gage height, 7.0 ft), from rating curve extended above 200 cfs by logarithmic plotting; minimum observed, 0.4 cfs Sept. 24-30, 1921.

Remarks.--Flow regulated by storage in Howe Reservoir.

Monthly and yearly mean discharge, in cubic feet per second												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1919	-	-	-	-	-	-	-	-	-	-	2.97	5.53
1920	9.49	12.8	17.1	8.47	8.91	56.3	98.1	35.8	18.0	11.9	8.95	8.50
1921	19.6	8.85	69.5	22.6	15.3	75.5	42.0	37.8	8.17	8.23	10.8	4.00

Monthly and yearly runoff, in inches												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1919	-	-	-	-	-	-	-	-	-	-	0.31	0.55
1920	0.98	1.28	1.76	0.87	+0.86	5.80	9.77	3.69	1.80	1.22	.92	.85
1921	2.02	.88	7.16	2.33	1.43	7.77	4.18	3.90	.81	.85	1.11	.40

† Corrected.

Yearly discharge, in cubic feet per second									
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1920	501	*610	Apr. 14, 1920	2.7	24.5	2.19	+29.80	29.5	+35.84
1921	521	*1,000	Mar. 10, 1921	.4	27.1	2.42	32.84	-	-

\* Revised.

† Corrected.

## 263. Minnewawa Brook at Marlboro, N. H.

Location.--Lat 42°54'40", long. 72°13'20", on left bank 300 ft upstream from Marlboro-Keene town line, 0.7 mile northwest of Marlboro, Cheshire County, and 1.1 miles above mouth.

Drainage area.--31.7 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 635 ft (from topographic map).

Extremes.--1919-21: Maximum discharge, 1,170 cfs Mar. 9, 1921 (gage height, 8.22 ft), from rating curve extended above 330 cfs by logarithmic plotting; minimum, practically no flow at various times when water was held back by dams.

Remarks.--Flow at ordinary stages regulated by power plants in Marlboro and several small reservoirs above station.

Monthly and yearly mean discharge, in cubic feet per second, of Minnewawa Brook at Marlboro, N. H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1919	-	-	-	-	-	-	-	-	-	-	-	-	-
1920	20.0	63.8	76.1	24.0	19.0	194	227	82.9	39.9	22.0	15.1	20.9	68.7
1921	59.7	28.6	128	49.8	24.9	150	108	72.0	23.8	30.7	18.7	6.93	57.2
1922	12.0	17.4	44.0	31.1	38.5	-	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1919	-	-	-	-	-	-	-	-	-	-	-	-	-
1920	0.73	2.24	2.77	0.87	0.65	7.06	7.99	3.02	1.41	0.80	0.55	0.74	-
1921	1.44	1.01	4.66	1.81	.82	5.45	3.80	2.62	.84	1.12	.68	.24	29.53
1922	.44	.61	1.60	1.13	1.26	-	-	-	-	-	-	-	24.49

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1920	501	*662	Apr. 14, 1920*	-	68.7	2.17	29.53	71.8	30.90	
1921	521	*1,170	Mar. 9, 1921	2.1	57.2	1.80	24.49	46.8	20.03	
1922	541	-	-	-	-	-	-	-	-	

\* Revised.

\* Not previously published.

## 264. South Branch Ashuelot River at Webb, near Marlboro, N. H.

Location.--Lat 42°52'20", long. 72°12'55", on right bank 15 ft downstream from bridge, 800 ft southwest of Webb station on Boston & Maine Railroad, and 2½ miles south of Marlboro, Cheshire County.

Drainage area.--36.0 sq mi.

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.--30 years (1920-50), 58.0 cfs.

Extremes.--1920-50: 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 computations of peak flow; maximum gage height, 9.70 ft Mar. 12, 1936 (ice jam); practically no flow Mar. 22, 1931.

Remarks.--Flow regulated by power plant and several small reservoirs above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1921	49.0	*65.9	157	53.6	32.0	173	105	62.2	12.8	19.3	7.71	3.93	*62.2
1922	9.26	21.0	68.8	47.4	36.8	154	188	72.3	128	75.9	*43.0	24.9	72.5
1923	27.9	35.8	24.4	79.8	24.9	69.7	245	82.7	25.2	11.1	6.60	13.7	*53.9
1924	29.9	90.7	144	112	38.2	75.8	226	85.9	20.4	5.30	3.48	27.1	71.5
1925	12.1	10.8	42.3	6.35	143	191	99.3	44.8	18.7	10.6	6.66	4.87	48.6
1926	14.8	45.8	96.8	61.6	26.6	50.5	194	52.9	22.6	11.1	5.85	3.15	48.8
1927	15.5	84.9	53.4	35.8	27.5	158	67.2	85.6	50.4	20.4	33.8	15.9	50.8
1928	45.9	244	149	68.5	43.4	68.5	103	119	95.1	75.5	131	123	105
1929	34.7	36.9	*26.9	*53.0	*20.0	252	241	155	30.7	8.54	4.27	5.28	*71.1
1930	12.1	11.4	9.46	31.8	53.1	108	69.5	64.2	25.4	19.9	5.63	3.33	34.4
1931	6.49	22.4	16.2	9.31	9.29	45.1	217	102	84.9	9.01	6.27	12.4	45.0
1932	11.7	10.5	43.0	76.0	51.1	48.5	202	43.1	12.5	7.02	2.92	7.61	42.8
1933	39.6	96.9	38.9	54.0	59.6	70.6	324	49.5	9.24	5.24	17.0	59.0	67.3
1934	60.1	45.7	42.9	39.4	14.7	90.9	245	70.9	31.0	9.14	4.08	33.9	57.3
1935	32.2	49.5	65.2	80.9	36.2	103	107	49.0	56.7	44.7	6.90	15.4	54.0
1936	11.8	32.7	24.1	49.9	24.0	366	140	33.3	9.86	5.29	4.46	4.00	59.1
1937	13.2	16.7	78.9	101	60.9	54.5	160	125	57.5	18.5	5.35	8.84	58.3
1938	19.3	89.2	55.7	105	66.1	59.4	80.9	76.0	64.5	102	50.6	252	84.8
1939	*60.6	58.9	127	55.4	48.6	111	210	*51.8	20.9	5.92	14.5	12.4	*64.8
1940	8.50	28.3	33.8	12.9	11.4	26.6	356	142	86.0	27.0	8.10	5.29	61.8
1941	6.85	45.9	48.3	37.1	73.0	32.6	86.1	36.9	24.2	20.4	5.44	13.0	35.4
1942	5.77	20.3	23.6	34.0	14.5	178	104	38.0	48.8	35.0	26.6	17.6	45.8
1943	25.8	63.1	67.7	36.3	65.3	132	120	149	40.1	13.0	19.1	4.57	61.4
1944	23.5	77.9	27.9	12.5	15.0	84.9	190	45.7	98.4	19.7	6.90	37.0	53.0
1945	19.5	26.0	40.5	42.7	34.0	193	146	165	89.3	67.9	24.5	12.0	72.1
1946	16.4	40.3	61.0	72.6	37.3	151	64.4	94.0	61.4	21.4	32.7	15.4	55.9
1947	22.7	15.6	15.8	39.1	71.2	120	176	16.8	44.4	16.8	6.56	7.59	50.9
1948	7.56	43.7	21.6	14.2	27.8	200	117	132	101	47.1	9.78	4.50	60.7
1949	3.98	24.0	23.7	96.4	72.5	95.1	81.1	54.9	15.0	10.9	4.01	19.1	41.5
1950	11.0	21.3	48.8	81.2	48.4	95.0	153	53.2	37.1	8.00	10.7	18.1	48.7

\* Revised.

† Corrected.

\* Not previously published; estimated on basis of records for Ashuelot River at Hinsdale.

Monthly and yearly runoff, in inches, of South Branch Ashuelot River at Webb, near Marlboro, N. H.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1921	*1.57	*2.04	5.03	1.72	0.92	5.53	3.27	1.99	0.40	0.62	0.25	0.12	*23.46
1922	.30	.65	2.21	1.52	1.06	4.93	5.81	2.32	3.97	2.43	*1.58	.77	27.35
1923	.90	1.11	.78	2.56	.72	2.23	7.59	2.65	.78	.35	.21	.45	20.31
1924	.96	2.81	4.60	3.58	1.15	2.43	7.00	2.75	.63	.17	.11	.84	27.03
1925	.39	.33	1.36	.20	4.12	6.13	3.08	1.44	.58	.34	.21	.15	18.33
1926	.47	1.42	3.10	1.97	.77	1.62	6.03	1.69	.70	.35	.19	.10	18.41
1927	.50	2.63	1.71	1.18	.80	5.01	2.08	2.10	.94	.65	1.08	.49	19.17
1928	1.47	7.55	4.78	2.19	1.30	2.19	3.19	3.82	2.95	2.42	4.21	3.82	39.89
1929	1.11	1.14	*.86	*1.06	*.58	8.08	7.48	4.96	.95	.27	.14	.16	*26.79
1930	.39	.35	.50	1.02	1.54	3.46	2.15	2.05	.79	.64	.18	.10	12.97
1931	.21	.69	.52	.30	.27	1.44	6.74	3.28	2.63	.29	.20	.39	16.96
1932	.37	.33	1.58	2.43	1.53	1.55	6.26	1.38	.39	.22	.09	.24	16.17
1933	1.27	2.69	1.25	1.73	1.72	2.26	10.04	1.59	.29	.17	.55	1.83	25.39
1934	1.92	1.42	1.37	1.26	.43	2.91	7.58	2.27	.96	.29	.13	1.05	21.59
1935	1.03	1.53	2.09	2.59	1.05	3.31	3.31	1.57	1.76	1.43	.22	.48	20.37
1936	.38	1.01	.77	1.60	.72	11.73	4.33	1.07	.31	.17	.14	.12	22.35
1937	.42	.52	2.53	3.25	1.76	1.75	4.95	3.99	1.78	.59	.17	.27	21.96
1938	.62	2.77	1.79	3.56	1.91	1.90	2.51	2.43	2.00	3.25	1.62	7.81	*31.97
1939	*1.94	1.83	4.07	1.78	1.41	3.55	6.50	*1.66	.65	.19	.46	.38	*24.42
1940	.27	.88	1.08	.41	.34	.85	11.05	4.54	2.67	.86	.26	.16	23.37
1941	.22	1.42	1.55	1.19	2.11	1.05	2.67	1.18	.75	.65	.17	.40	13.36
1942	.18	.63	.76	1.09	.42	5.70	3.22	1.22	1.51	1.12	.85	.55	17.25
1943	.83	1.96	2.17	1.16	1.89	4.24	3.75	4.76	1.24	.42	.61	.14	23.15
1944	.75	2.42	.89	.40	.45	2.72	5.90	1.46	3.05	.65	.22	1.15	25.04
1945	.63	.81	1.30	1.37	.98	6.19	4.52	5.29	2.77	2.17	.78	.37	27.18
1946	.52	1.25	1.95	2.33	1.08	4.83	1.99	3.01	1.90	.69	1.05	.48	21.08
1947	.73	.48	.50	1.25	2.06	3.86	5.46	2.48	1.38	.54	.21	.24	19.19
1948	.24	1.35	.69	.46	.83	6.42	3.63	4.24	3.12	1.51	.31	.14	22.94
1949	.13	.74	.76	3.09	2.10	3.04	2.51	1.76	.46	.35	.13	.59	15.66
1950	.35	.66	1.56	2.60	1.40	3.04	4.74	1.70	1.15	.26	.34	.56	18.36

\* Revised.

† Corrected.

‡ Not previously published; estimated on basis of records for Ashuelot River at Hinsdale.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1921	521,1231	*1,240	Dec. 5, 1920	-	*62.2	*1.73	*23.46	47.7	17.98
1922	541,1231	*1,160	June 21, 1922	5	72.5	2.01	27.35	71.5	26.98
1923	561,1231	*1,400	Apr. 29, 1923	2.7	*53.9	1.50	20.31	68.6	25.89
1924	581,1231	*1,220	Apr. 7, 1924	1.4	71.5	1.99	27.03	54.9	20.74
1925	601, 641	1,680	Feb. 12, 1925	1.0	48.6	1.35	18.33	56.3	21.24
1926	621,1231	*630	Apr. 25, 1926	.4	48.8	1.36	18.41	48.4	18.26
1927	641	575	Mar. 17, 1927	1.2	50.8	1.41	19.17	74.6	28.13
1928	661,1231	3,560	Nov. 4, 1927	1.2	105	2.92	39.89	*77.2	*29.20
1929	681,1231	1,010	Mar. 23, 1929	1.0	*71.1	*1.98	*26.79	*65.6	*24.72
1930	696	535	Mar. 26, 1930	.8	34.4	.956	12.97	35.4	13.35
1931	711	660	Apr. 11, 1931	1.0	45.0	1.25	16.96	46.7	17.62
1932	726	1,150	Apr. 1, 1932	.9	42.8	1.19	16.17	51.1	19.30
1933	741,1231	*879	Apr. 18, 1933	1.5	67.3	1.87	25.39	68.0	24.89
1934	756,1231	*1,300	Apr. 12, 1934	1.6	57.3	1.59	21.59	57.1	21.53
1935	781	619	Jan. 10, 1935	4.7	54.0	1.50	20.37	47.4	17.88
1936	801	3,880	Mar. 18, 1936	1.6	59.1	1.64	22.35	62.6	23.66
1937	821	628	Apr. 6, 1937	1.9	58.3	1.62	21.96	62.8	23.67
1938	851,1231	5,960	Sept. 21, 1938	3.0	84.8	2.36	31.97	*91.9	*34.63
1939	871,1231	580	Dec. 6, 1938	2.2	*64.8	*1.80	*24.42	*49.9	*18.81
1940	891	1,910	Apr. 12, 1940	1.9	61.8	1.72	23.37	64.4	24.33
1941	921	*370	Feb. 9 or 10*	1.7	35.4	.983	13.36	31.2	11.74
1942	951	1,780	Mar. 9, 1942	3.4	45.8	1.27	17.25	54.7	20.84
1943	971	476	Dec. 2, 1942	1.8	61.4	1.71	23.15	59.0	22.25
1944	1001	1,470	June 24, 1944	1.2	53.0	1.47	20.04	49.5	18.72
1945	1031	725	Apr. 26, 1945	7.2	72.1	2.00	27.18	74.7	28.16
1946	1051	1,020	Mar. 9, 1946	5.3	55.9	1.55	21.08	50.6	19.07
1947	1081	485	Apr. 7, 1947	2.7	50.9	1.41	19.19	52.4	19.76
1948	1111	1,070	Mar. 22, 1948	1.3	60.7	1.69	22.94	59.0	22.29
1949	1141	660	Jan. 6, 1949	1.6	41.5	1.15	15.66	44.0	16.60
1950	1171	615	Apr. 21, 1950	3.0	48.7	1.35	18.36	-	-

\* Revised.

† Corrected.

‡ Not previously published.

## 265. 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  $1\frac{1}{4}$  miles upstream from mouth.

Drainage area.--420 sq mi.

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.--40 years (1907-11, 1914-50), 643 cfs.

Extremes.--1907-11, 1914-50: 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 observed, 11 cfs Aug. 12, 1923.

Remarks.--Flow regulated by mills above station. High flow affected by Surry Mountain Reservoir since 1942 (see p. 271). Runoff adjusted for change in contents of Surry Mountain Reservoir.

Monthly and yearly mean discharge, in cubic feet per second (observed)													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	1,320	734	592	345	174	383	-
1908	995	1,599	1,195	886	1,033	1,385	1,291	1,151	314	154	211	94.6	858
1909	67.6	70.0	122	418	664	800	2,266	767	405	122	117	88.4	488
1910	107	93.2	120	656	597	2,133	1,025	566	313	102	113	102	494
1911	68.5	139	118	411	171	604	1,480	540	200	83.5	147	206	347
1912	852	668	692	-	-	-	-	-	-	-	-	-	-
1914	-	-	-	-	-	-	-	-	-	-	131	99.2	-
1915	96.5	96.4	113	494	1,210	479	701	505	134	1,182	1,032	236	520
1916	265	265	609	772	761	832	2,526	879	1,125	641	358	639	802
1917	446	504	771	719	482	1,443	1,509	787	1,266	289	314	124	722
1918	139	429	161	131	301	1,033	2,111	553	353	181	115	432	493
1919	342	444	788	560	302	1,555	1,203	1,545	304	130	108	266	632
1920	165	857	654	196	221	2,068	3,006	1,492	546	227	582	319	861
1921	552	720	1,720	638	424	2,228	1,484	975	276	634	173	194	840
1922	226	480	563	402	389	1,795	2,312	981	994	569	354	305	781
1923	294	298	166	572	384	839	2,518	1,088	281	187	145	154	578
1924	353	1,000	1,511	1,025	385	648	2,496	1,075	270	150	97.4	265	773
1925	166	194	328	123	1,158	1,758	1,162	522	256	235	171	169	516
1926	263	627	665	472	415	724	2,016	766	331	186	127	112	558
1927	266	980	453	318	355	1,828	884	769	341	209	247	196	572
1928	397	2,248	1,344	736	677	755	1,435	1,240	1,119	555	950	944	1,031
1929	335	278	318	492	335	1,903	2,000	1,485	335	144	107	86.0	654
1930	95.1	128	154	337	439	1,198	736	500	318	182	142	77.8	359
1931	104	207	165	106	135	577	2,167	883	890	189	118	120	470
1932	126	160	378	706	499	433	2,226	537	173	130	91.1	103	461
1933	230	936	374	563	509	718	3,507	667	173	117	296	620	721
1934	663	496	494	566	306	1,050	2,773	690	394	139	109	270	662
1935	372	572	713	1,081	464	1,250	1,314	649	602	867	149	199	688
1936	116	349	362	603	319	4,392	1,707	428	147	120	102	86.6	731
1937	147	249	940	1,239	874	610	1,739	2,027	780	336	169	138	770
1938	232	781	698	979	760	764	1,045	690	429	821	650	2,394	851
1939	657	580	1,488	549	511	965	2,713	699	277	135	159	108	737
1940	148	325	313	147	157	273	3,654	1,663	821	285	120	117	665
1941	96.2	396	430	559	614	397	1,001	438	279	199	109	130	385
1942	90.3	217	320	471	185	1,679	1,292	600	440	341	158	120	495
1943	172	570	643	421	598	1,376	1,457	1,569	394	143	209	102	638
1944	187	1,011	331	143	199	905	2,193	786	625	403	143	543	619
1945	311	356	557	688	413	2,279	1,890	2,175	1,390	694	310	212	959
1946	236	453	652	681	405	1,740	693	1,171	785	193	214	144	617
1947	272	206	196	478	849	1,402	2,128	1,187	630	307	142	125	657
1948	79.7	461	263	181	328	1,769	1,975	1,570	1,150	493	150	72.8	708
1949	78.3	242	193	1,095	768	1,115	994	656	177	106	70.1	166	470
1950	138	229	520	858	546	671	1,863	586	466	121	110	306	549

Monthly and yearly runoff, in inches (adjusted)														
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year	
1907	-	-	-	-	-	-	-	3.50	2.02	1.57	0.95	0.48	1.02	-
1908	2.73	4.25	3.29	2.43	2.65	3.80	3.42	3.16	.83	.42	.58	.25	27.81	-
1909	.19	.19	.33	1.15	1.64	2.19	6.02	2.11	1.08	.33	.32	.23	15.78	-
1910	.29	.25	.33	1.80	1.48	5.86	2.72	1.56	.83	.28	.31	.27	15.98	-
1911	.19	.37	.32	1.13	.42	1.66	3.93	1.49	.53	.23	.40	.55	11.22	-
1912	2.34	1.77	1.90	-	-	-	-	-	-	-	-	-	-	-
1914	-	-	-	-	-	-	-	-	-	-	.36	.26	-	-
1915	.27	.26	.31	1.36	3.00	1.31	1.86	1.38	.36	3.24	2.84	.63	16.82	-
1916	.73	.70	1.67	2.12	1.95	2.28	6.70	2.41	2.99	1.76	.98	1.70	25.99	-
1917	1.22	1.34	2.12	1.97	1.20	3.95	4.00	2.16	3.36	.79	.86	.33	23.30	-
1918	.36	1.14	.44	.36	.75	2.84	5.61	1.52	.94	.50	.32	1.15	15.95	-
1919	.94	1.18	2.17	1.53	.75	4.27	3.19	4.24	.81	.36	.30	.71	20.45	-
1920	.45	2.28	1.80	.54	.57	5.67	7.99	4.09	1.45	.62	1.60	.65	27.91	-

Monthly and yearly runoff, in inches (adjusted), of Ashuelot River at Hinsdale, N. H.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1921	1.51	1.91	4.73	1.75	1.05	6.11	3.94	2.68	.73	1.74	.48	.52	27.15
1922	.62	1.27	1.54	1.10	.96	4.92	6.14	2.70	2.64	1.56	.97	.81	25.23
1923	.81	.79	.51	1.57	.95	2.31	6.69	2.99	.75	.51	.39	.41	18.68
1924	.97	2.66	4.15	2.81	.99	1.78	6.63	2.95	.72	.41	.27	.70	25.04
1925	.46	.52	.90	.34	2.87	4.83	3.09	1.43	.68	.65	.47	.45	16.69
1926	.72	1.66	1.82	1.29	1.03	1.98	5.36	2.10	.88	.51	.35	.30	18.00
1927	.73	2.69	1.24	.87	.88	5.02	2.34	2.11	.91	.57	.68	.52	18.47
1928	1.09	5.97	3.69	2.02	1.74	2.08	3.82	5.40	2.97	1.52	2.61	2.51	33.42
1929	.92	.74	.87	1.35	.83	5.22	5.31	4.08	.89	.40	.29	.23	21.13
1930	.26	.34	.42	.92	1.09	3.29	1.95	1.37	.84	.50	.39	.21	11.58
1931	.29	.55	.45	.29	.33	1.58	5.76	2.42	2.36	.52	.32	.32	15.19
1932	.35	.43	1.04	1.94	1.28	1.19	5.91	1.48	.46	.36	.25	.27	14.96
1933	.65	2.56	1.03	1.54	1.26	1.37	9.32	1.83	.46	.32	.81	1.65	25.38
1934	1.82	1.32	1.36	1.56	.76	2.88	7.36	1.89	1.05	.38	.30	.72	21.40
1935	1.02	1.52	1.96	2.96	1.14	3.44	3.49	1.79	1.60	2.38	.41	.53	22.24
1936	.32	.93	.99	1.66	.82	12.11	4.53	1.18	.39	.33	.28	.23	23.77
1937	.40	.66	2.58	3.40	2.17	1.67	4.62	5.57	2.08	.92	.46	.37	24.90
1938	.64	2.08	1.91	2.69	1.88	2.10	2.78	1.89	1.14	2.25	1.79	6.36	27.51
1939	1.80	1.54	4.08	1.51	1.27	2.65	7.21	1.91	.74	.37	.44	.29	23.81
1940	.41	.86	.86	.40	.40	.75	9.71	4.57	2.18	.78	.33	.31	21.56
1941	.26	1.05	1.18	1.54	1.52	1.09	2.66	1.20	.74	.55	.30	.34	12.43
1942	.25	.58	.88	1.29	.46	4.61	3.43	1.65	1.17	.94	.43	.32	16.01
1943	.47	1.52	1.77	1.15	1.49	3.89	3.91	4.15	1.05	.39	.57	.27	20.63
1944	.51	2.69	.91	.42	.52	2.62	6.13	1.68	2.10	.67	.39	1.44	20.08
1945	.85	.95	1.55	1.83	1.03	6.52	4.92	5.77	3.86	2.29	.85	.56	30.98
1946	.65	1.23	1.80	1.87	1.00	4.73	1.84	3.31	1.99	.53	.59	.39	19.93
1947	.74	.55	.57	1.34	2.08	3.85	5.73	3.08	1.67	.39	.39	.35	21.23
1948	.22	1.18	.74	.50	.84	5.90	4.13	4.32	3.03	1.35	.41	.19	25.94
1949	.21	.65	.62	2.93	1.90	3.05	2.63	1.80	.47	.29	.19	.44	15.18
1950	.38	.61	1.46	2.36	1.35	2.58	4.73	1.61	1.24	.33	.30	.81	17.76

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30										Calendar year		
		Observed					Adjusted					Observed		Adjusted
		Momentary		maximum	Minimum	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Mean	Mean	Runoff in inches
		Discharge	Date	day										
1907	781	\$3,580	Mar. 30, 1907*	-	-	-	-	-	-	-	-	-	-	-
1908	781	\$5,650	Nov. 8, 1907*	30	858	-	2.04	27.81	564	-	-	-	-	18.25
1909	781	\$7,800	Apr. 16, 1909*	24	488	-	1.16	15.78	493	-	-	-	-	15.94
1910	781	\$4,160	Mar. 2, 1910*	22	494	-	1.18	15.98	495	-	-	-	-	15.99
1911	781	\$3,580	Apr. 8, 1911*	15	347	-	.826	11.22	506	-	-	-	-	16.35
1915	431, 781	\$7,800	Feb. 26, 1915	34	520	-	1.24	16.82	591	-	-	-	-	19.08
1916	781	\$6,350	Apr. 2, 1916*	78	802	-	1.91	25.99	851	-	-	-	-	27.57
1917	451, 781	\$6,700	Mar. 29, 1917	34	722	-	1.72	23.30	638	-	-	-	-	20.58
1918	471, 781	\$5,650	Apr. 3, 1918	24	493	-	1.17	15.95	565	-	-	-	-	18.28
1919	501, 781	\$6,350	May 23, 1919*	42	632	-	1.51	20.45	640	-	-	-	-	20.69
1920	781	18,000	Mar. 29, 1920	32	861	-	2.05	27.91	973	-	-	-	-	31.53
1921	521, 781	\$7,060	Mar. 12, 1921	54	840	-	2.00	27.15	694	-	-	-	-	22.43
1922	541, 781	\$6,350	Apr. 15, 1922	86	781	-	1.86	25.23	740	-	-	-	-	23.91
1923	561, 781	\$8,940	Apr. 7, 1923	15	578	-	1.38	18.68	753	-	-	-	-	24.35
1924	581, 781	\$7,420	Apr. 9, 1924	35	773	-	1.84	25.04	590	-	-	-	-	19.14
1925	601, 781	\$5,300	Feb. 14, 1925	39	516	-	1.23	16.69	588	-	-	-	-	19.01
1926	621, 781	\$5,300	Apr. 26, 1926	35	558	-	1.33	18.00	569	-	-	-	-	19.37
1927	641, 781	\$5,650	Mar. 17, 1927	26	572	-	1.36	19.47	763	-	-	-	-	24.65
1928	661, 781	\$15,400	Nov. 5, 1928*	24	1,031	-	2.45	33.42	777	-	-	-	-	25.20
1929	681, 781	\$5,480	Mar. 24, 1929	12	654	-	1.56	21.13	607	-	-	-	-	19.62
1930	696, 781	\$4,020	Mar. 26, 1930	16	559	-	.855	11.58	567	-	-	-	-	11.85
1931	711, 781	\$5,650	Apr. 12, 1931	16	470	-	1.12	15.19	487	-	-	-	-	15.72
1932	726, 781	\$5,650	Apr. 2, 1932	14	461	-	1.10	14.96	533	-	-	-	-	17.36
1933	741, 781	\$8,180	Apr. 19, 1933	27	721	-	1.72	23.58	732	-	-	-	-	25.66
1934	758, 781	8,380	Apr. 14, 1934	66	662	-	1.53	21.40	662	-	-	-	-	21.40
1935	781	6,050	Jan. 11, 1935	95	688	-	1.64	22.24	618	-	-	-	-	19.98
1936	801	16,600	Mar. 19, 1936	50	731	-	1.74	23.77	775	-	-	-	-	25.17
1937	821	7,260	May 16, 1937	48	770	-	1.83	24.90	801	-	-	-	-	25.89
1939	851	16,200	Sept. 22, 1939	63	851	-	2.03	27.51	938	-	-	-	-	30.30
1939	871	5,840	Apr. 21, 1939	72	737	-	1.75	23.81	573	-	-	-	-	18.52
1940	891	8,650	Apr. 14, 1940	48	665	-	1.58	21.56	677	-	-	-	-	21.92
1941	921	\$1,630	Feb. 10, 1941*	67	385	-	.917	12.43	360	-	-	-	-	11.65
1942	951	4,640	Mar. 10, 1942	67	495	-	1.18	16.01	558	-	-	-	-	18.06
1943	971	2,780	Mar. 28, 1943	70	638	-	1.52	20.63	649	-	-	-	-	20.98
1944	1001	3,830	June 26, 1944	56	619	-	620	20.08	595	-	-	-	-	19.32
1945	1031	4,570	Mar. 27, 1945	108	959	-	959	30.98	969	-	-	-	-	31.31
1946	1051	4,390	Mar. 10, 1946	96	617	-	617	1.47	19.93	561	-	-	-	18.11
1947	1081	3,250	Mar. 16, 17, 1947	83	657	-	657	1.56	21.23	668	-	-	-	21.58
1948	1111	6,200	Mar. 23, 1948	64	708	-	708	1.69	22.94	684	-	-	-	22.21
1949	1141	2,960	Jan. 7, 1949	42	470	-	470	1.12	15.18	502	-	-	-	16.15
1950	1171	3,310	Apr. 5, 1950	45	549	-	549	1.31	17.76	-	-	-	-	-

\* Revised.

\* Not previously published.



266. Sip Pond Brook near Winchendon, Mass. 1/

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 2½ miles northwest of Winchendon, Worcester County.

Drainage area.--18.2 sq mi.

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.--34 years (1916-50), 29.5 cfs.

Extremes.--1916-50: 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.--Flow regulated by Pearly and Sip Ponds, Damon Reservoirs, and small mill above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	-	-	-	-	-	-	-	-	38.6	24.8	16.2	25.0	-
1917	21.8	19.2	28.8	27.6	18.4	74.7	74.8	41.2	42.6	17.7	43.5	26.1	36.5
1918	16.4	26.6	18.5	13.5	19.5	71.9	94.0	27.6	23.6	13.0	9.39	22.9	29.7
1919	18.8	18.9	37.2	35.4	20.2	62.1	62.9	78.8	16.2	5.66	1.96	9.30	30.7
1920	9.19	34.6	37.4	16.7	10.0	99.4	162	62.4	29.8	9.83	10.6	7.60	40.8
1921	23.2	26.7	87.0	29.0	16.4	70.0	71.5	51.4	9.55	12.2	5.10	2.70	33.9
1922	3.67	11.4	19.7	12.0	14.4	+71.3	103	39.9	69.9	57.0	18.3	22.5	+36.9
1923	21.2	23.3	12.3	28.5	23.0	34.6	114	44.9	14.3	9.55	8.38	3.17	28.0
1924	7.27	28.3	58.1	53.2	22.6	30.8	114	45.0	13.2	1.16	.67	5.44	31.6
1925	2.03	3.72	11.3	2.68	49.3	85.2	60.9	25.6	13.8	14.7	9.31	4.07	23.4
1926	7.71	24.1	32.0	18.3	15.4	28.6	111	32.7	13.8	8.09	7.24	5.45	25.3
1927	8.24	42.3	21.6	24.2	22.0	82.2	40.4	38.6	20.7	13.7	17.7	16.5	29.0
1928	22.4	77.3	65.1	40.0	28.5	33.5	59.0	55.0	45.2	34.2	56.5	55.1	47.6
1929	16.5	13.7	13.9	22.5	13.4	77.0	94.6	64.7	15.5	6.83	3.41	2.86	28.8
1930	2.38	2.60	3.80	7.97	12.1	39.5	29.6	19.6	13.9	12.3	7.16	3.91	12.9
1931	2.18	9.60	8.68	4.65	8.85	18.3	106	36.1	30.4	6.21	4.71	3.51	19.8
1932	4.86	5.31	13.7	37.2	22.9	18.9	98	24.4	10.4	5.52	4.95	3.70	20.8
1933	12.9	36.0	16.5	29.2	29.1	42.1	180	23.6	9.45	4.67	4.74	16.6	31.8
1934	22.9	17.4	19.1	20.9	9.70	47.7	126	34.7	24.3	6.38	5.75	11.6	28.8
1935	18.4	22.6	31.3	38.3	22.1	57.7	63.8	24.6	33.3	26.1	4.37	9.95	29.4
1936	5.81	13.2	15.7	27.6	14.3	190	78.9	22.5	12.5	6.14	4.66	3.74	33.0
1937	4.18	9.25	34.5	53.3	31.6	27.2	73.8	58.7	34.6	14.1	7.69	7.67	29.7
1938	8.44	33.7	37.6	35.2	35.0	34.9	46.0	27.7	38.3	54.7	25.5	151	43.8
1939	27.3	21.9	63.6	25.1	21.6	47.9	118	29.1	16.5	4.44	11.1	2.45	32.4
1940	4.83	15.4	16.2	6.56	7.19	12.1	181	58.1	36.5	11.8	4.81	3.75	29.6
1941	3.28	21.4	23.0	19.6	24.2	16.6	51.4	21.5	9.19	5.05	3.07	4.99	16.8
1942	4.75	12.0	14.8	16.8	10.4	94.4	50.9	16.6	17.6	15.8	10.4	6.26	22.7
1943	11.2	26.0	27.5	22.5	20.5	56.3	64.7	84.3	17.7	5.12	13.7	3.65	29.5
1944	11.8	40.8	15.2	7.97	10.0	35.1	104	26.9	40.2	13.5	4.79	12.3	26.7
1945	7.75	9.84	18.1	23.5	19.6	110	73.8	92.6	45.0	33.4	15.2	12.0	38.6
1946	12.3	20.2	30.1	32.1	23.3	86.1	36.4	54.5	38.0	14.0	16.3	6.98	31.0
1947	17.0	8.64	8.95	18.8	43.2	50.9	96.1	44.9	24.4	6.59	4.14	3.73	27.1
1948	2.73	9.90	9.72	10.5	17.3	93.3	63.9	66.2	56.6	31.4	3.75	2.37	30.7
1949	2.16	9.24	11.6	49.3	36.4	52.4	43.1	24.5	8.73	8.65	3.72	5.43	21.2
1950	5.59	9.65	19.5	38.0	28.2	36.8	84.5	27.2	27.6	5.08	3.37	4.48	24.1

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	-	-	-	-	-	-	-	-	2.36	1.57	1.03	1.53	-
1917	1.38	1.17	1.82	1.75	1.05	4.73	4.59	2.61	2.61	1.12	2.76	1.60	27.19
1918	1.04	1.63	1.38	.86	1.11	4.55	5.76	1.75	1.45	.82	.59	1.41	22.15
1919	1.19	1.16	2.35	2.24	1.16	3.93	3.86	4.99	1.99	.36	.12	.57	22.92
1920	.58	2.12	2.36	1.06	.59	6.30	9.93	3.95	1.76	.62	.67	.47	30.41
1921	1.46	1.64	5.51	1.83	.94	4.44	4.38	3.25	.58	.77	.32	.16	25.28
1922	.23	.70	1.24	.76	.82	4.52	6.32	2.52	4.28	3.61	1.16	1.38	27.54
1923	1.34	1.43	1.78	1.81	1.31	2.19	6.98	2.85	.88	.60	.53	.19	20.89
1924	.46	1.73	3.68	3.37	1.54	1.95	6.98	2.85	.81	.07	.04	.33	23.61
1925	.13	.23	.72	.17	2.82	5.40	3.74	1.63	.84	.93	.59	.25	17.45
1926	.49	1.47	2.03	1.16	.88	1.81	6.81	2.08	.84	.51	.46	.33	18.87
1927	.52	2.59	1.37	1.53	1.26	5.21	2.48	2.44	1.27	.87	1.12	1.01	23.67
1928	1.42	4.74	4.13	2.54	1.69	2.12	3.62	3.48	2.77	2.17	3.57	3.38	35.63
1929	1.04	.84	.88	1.43	.77	4.88	5.80	4.09	.95	.43	.22	.17	21.50
1930	.15	.16	.24	.50	.69	2.50	1.82	1.24	.85	.78	.45	.24	9.62
1931	.14	.59	.55	.29	.51	1.16	6.49	2.28	1.86	.39	.30	.22	14.78
1932	.31	.33	.87	2.35	1.36	1.20	6.05	1.54	.64	.35	.31	.23	15.54
1933	.82	2.21	1.04	1.84	1.67	2.66	9.81	1.50	.58	.30	.30	1.02	23.75
1934	1.45	1.07	1.21	1.33	.56	3.02	7.72	1.20	1.50	.40	.36	.71	21.53
1935	1.16	1.38	1.98	2.42	1.26	3.66	3.92	1.56	2.04	1.65	.28	.61	21.92

Published as Tarbell Brook subsequent to 1950.

Monthly and yearly runoff, in inches, of Sip Pond Brook near Winchendon, Mass.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	.37	.81	.99	1.75	.85	11.99	4.72	1.43	.77	.39	.29	.23	24.59
1937	.26	.57	2.19	3.59	1.81	1.72	4.52	3.72	2.12	.89	.49	.47	22.15
1938	.53	2.06	2.39	2.22	2.00	2.21	2.82	1.75	2.34	3.47	1.61	9.26	32.68
1939	1.73	1.34	4.02	1.59	1.24	3.03	7.23	1.84	1.01	.28	.70	.15	24.16
1940	.51	.95	1.03	.42	.43	.77	11.08	3.68	2.24	.75	.30	.23	22.19
1941	.21	1.31	1.45	1.24	1.39	1.05	3.15	1.36	.56	.32	.19	.31	12.54
1942	.30	.73	.94	1.07	.59	5.98	3.12	1.05	1.08	1.00	.66	.38	16.90
1943	.71	1.60	1.74	1.42	1.17	3.56	3.97	5.34	1.08	.32	.87	.22	22.00
1944	.74	2.50	.96	.51	.59	2.23	6.35	1.70	2.46	.86	.30	.75	19.95
1945	.49	.60	1.15	1.49	1.12	6.96	4.53	5.87	2.76	2.11	.96	.74	28.78
1946	.78	1.24	1.91	2.04	1.33	5.45	2.23	3.46	2.33	.89	1.03	.43	23.12
1947	1.08	.53	.57	1.19	2.47	3.22	5.89	2.84	1.49	.42	.26	.23	20.19
1948	.17	.61	.62	.67	1.02	5.91	3.92	4.19	3.47	1.99	.24	.15	22.96
1949	.14	.57	.73	3.12	2.08	3.32	2.64	1.55	.54	.55	.24	.33	15.81
1950	.35	.59	1.24	2.41	1.61	2.33	5.18	1.72	1.69	.32	.21	.27	17.92

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Runoff in inches
		Discharge	Date					
1916	431	-	-	-	-	-	-	-
1917	451	*310	Mar. 28, 1917	7	36.5	2.01	27.19	35.7
1918	471	221	Apr. 3, 1918	4.2	29.7	1.63	22.15	30.8
1919	501	339	May 23, 1919	1.1	30.7	1.69	22.92	31.2
1920	501	305	Mar. 28, 1920	1.9	40.8	2.24	30.41	45.4
1921	521	259	Dec. 6, 1920	1.3	33.9	1.86	25.28	25.3
1922	541	250	June 22, 1922	1.7	36.9	2.03	27.54	38.8
1923	561	269	Apr. 6, 1923	1.2	28.0	1.54	20.89	31.2
1924	581	292	Apr. 8, 1924	.1	31.6	1.74	25.61	25.2
1925	601	190	Mar. 31, 1925	.9	23.4	1.29	17.45	27.5
1926	621	193	Apr. 25, 1926	2.2	25.3	1.39	18.87	26.0
1927	641	190	Mar. 21, 1927	3.6	29.0	1.59	21.67	36.8
1928	661,1051	396	Nov. 4, 1927	7.2	47.8	2.62	35.63	37.6
1929	681	232	Apr. 22, 1929	2.2	28.8	1.58	21.50	25.9
1930	696	95	Mar. 27, 1930	1.8	12.9	.709	9.62	13.9
1931	711	249	Apr. 12, 1931	1.1	19.8	1.09	14.78	20.1
1932	726	229	Apr. 1, 1932	1.6	20.8	1.14	15.54	24.2
1933	741,1051	384	Apr. 19, 1933	2.3	31.8	1.75	23.75	31.4
1934	781,1051	372	Apr. 13, 1934	2.8	28.8	1.58	21.53	29.9
1935	781	192	Jan. 10, 1935	2.1	29.4	1.62	21.92	26.2
1936	801	1,430	Mar. 18, 19, 1936	1.7	33.0	1.81	24.59	34.1
1937	821	155	May 15, 1937	2.0	29.7	1.63	22.15	32.3
1938	851	2,630	Sept. 21, 1938	2.5	45.8	2.41	32.66	46.6
1939	871	216	Dec. 7, 1938	.4	32.4	1.78	24.16	25.9
1940	891	605	Apr. 13, 1940	1.0	29.6	1.63	22.19	30.6
1941	921	95	Apr. 10, 1941	.8	16.8	.923	12.54	15.5
1942	951	278	Mar. 10, 1942	2.2	22.7	1.25	16.90	25.5
1943	971	147	May 4, 1943	.9	29.5	1.62	22.00	29.7
1944	1001	269	June 26, 1944	.7	26.7	1.47	19.95	24.1
1945	1031	265	Mar. 22, 1945	2.8	38.6	2.12	28.78	40.8
1946	1051	223	Mar. 10, 1946	2.6	31.0	1.70	23.12	28.6
1947	1081	186	Apr. 8, 1947	1.5	27.1	1.49	20.19	26.0
1948	1111	441	Mar. 23, 1948	1.1	30.7	1.69	22.96	30.7
1949	1141	193	Jan. 7, 1949	.5	21.2	1.16	15.81	22.2
1950	1171	179	Apr. 6, 1950	1.2	24.1	1.32	17.92	-

\* Revised.

† Corrected.

## 267. 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 Sip Pond Brook, and 2 miles west of Winchendon, Worcester County.

Drainage area.--83.0 sq mi.

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.--34 years (1916-50), 138 cfs.

Extremes.--1916-50: Maximum discharge, 8,500 cfs Sept. 22, 1938 (gage height, 21.55 ft, from floodmarks), by computation of flow over dam; practically no flow because of regulation Sept. 20, 1918, Jan. 14, 1925.

Remarks.--Flow regulated by power plant and by Lake Monomonic and other reservoirs.

Monthly and yearly mean discharge, in cubic feet per second, of Millers River near Winchendon, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	-	-	-	-	-	-	-	-	-	100	57.8	95.1	-
1917	59.2	53.8	80.3	78.9	61.4	*331	*286	*180	*170	72.8	108	69.2	*130
1918	69.7	85.9	62.7	44.4	124	325	345	115	96.8	62.5	55.5	79.6	122
1919	56.0	83.6	117	159	92.9	293	266	333	96.1	75.7	58.7	83.0	144
1920	58.3	155	143	60.7	45.3	397	*647	246	145	73.3	80.8	64.9	176
1921	112	133	320	119	122	330	301	233	65.9	83.9	74.7	43.4	162
1922	41.1	76.6	137	51.7	69.6	313	412	189	303	201	116	102	168
1923	71.0	56.9	57.6	171	138	255	483	226	74.8	59.7	64.7	37.6	141
1924	41.1	93.3	182	237	110	124	487	206	71.8	38.3	45.2	42.1	140
1925	24.0	28.0	49.0	23.1	182	241	222	96.1	60.4	109	55.2	52.5	94.4
1926	74.0	111	170	117	184	214	380	118	76.5	58.0	44.3	22.2	130
1927	34.0	128	85.2	98.4	128	314	171	146	79.0	59.8	91.5	86.6	118
1928	112	302	320	190	174	145	213	213	219	182	249	197	210
1929	106	76.3	64.6	101	151	342	404	273	89.1	62.6	38.8	27.4	145
1930	31.1	37.0	35.0	60.9	85.9	130	120	72.6	69.0	58.1	32.8	24.7	62.9
1931	36.0	50.1	46.9	42.1	58.9	104	401	159	199	66.2	61.0	38.1	105
1932	38.2	33.4	80.3	202	150	112	433	89.8	43.3	30.7	19.6	25.8	104
1933	108	228	101	126	154	206	782	124	72.3	42.5	38.5	95.2	172
1934	103	94.2	93.4	130	89.5	346	508	146	128	46.3	46.2	62.8	149
1935	110	112	152	229	136	264	255	113	154	103	45.5	66.3	145
1936	33.9	64.4	75.0	141	89.8	931	354	80.4	60.8	49.8	33.1	35.8	163
1937	62.2	51.3	207	303	169	137	294	247	193	83.4	52.5	50.0	154
1938	54.5	157	173	207	192	154	206	147	167	261	203	752	222
1939	144	148	316	149	128	289	480	152	65.8	31.1	27.7	7.28	162
1940	17.3	60.5	53.7	26.8	35.0	88.1	782	275	165	63.5	28.0	33.5	135
1941	31.6	98.1	140	121	158	93.7	179	89.6	45.3	35.2	14.5	33.1	85.9
1942	25.2	42.1	59.3	76.7	62.5	390	243	78.2	82.8	93.9	51.3	42.0	104
1943	47.9	161	152	128	123	240	265	368	81.8	21.1	54.7	41.2	140
1944	42.6	184	76.6	29.6	64.0	192	408	104	264	66.2	23.3	95.6	127
1945	68.7	50.8	94.4	154	104	456	273	381	201	153	83.5	72.4	171
1946	70.2	70.1	121	181	156	373	139	227	181	56.8	72.2	44.7	145
1947	92.0	35.7	40.1	90.3	218	239	382	169	114	36.6	19.0	19.3	120
1948	11.6	71.5	48.2	41.1	109	585	304	289	236	103	21.8	12.1	153
1949	20.5	67.5	54.5	266	196	217	191	122	34.7	25.0	15.9	27.4	103
1950	18.5	26.0	67.9	189	138	173	360	114	96.2	21.2	17.3	22.1	103

† Corrected.

\* Not previously published; estimated on basis of records for nearby stations.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	-	-	-	-	-	-	-	-	-	1.39	0.80	1.28	-
1917	0.82	0.72	1.11	1.10	0.77	*4.60	*3.85	*2.50	*2.29	1.01	1.49	.93	*21.19
1918	.97	1.15	.87	.62	1.55	4.52	4.64	1.59	1.30	.87	.77	1.07	19.92
1919	.78	1.12	1.63	2.21	1.17	4.07	3.58	4.63	1.29	1.05	.82	1.12	23.47
1920	.81	2.08	1.99	.84	.59	5.52	8.70	3.42	1.95	1.02	1.12	.87	28.91
1921	1.55	1.79	4.44	1.65	1.54	4.58	4.05	3.24	.89	1.16	1.04	.58	26.51
1922	.57	1.03	1.90	.72	.87	4.35	5.53	2.63	4.08	2.79	1.61	1.37	27.45
1923	.99	.76	80.6	2.37	1.71	3.54	6.49	3.14	1.01	.83	.90	.51	23.05
1924	.57	1.25	2.53	3.29	1.43	1.72	6.55	2.86	.97	.53	.63	.57	22.90
1925	.33	.38	.68	.32	2.28	3.35	2.99	1.33	.81	1.51	.77	.71	15.46
1926	1.03	1.49	2.36	1.62	2.30	2.97	5.11	1.64	1.03	.81	.62	.30	21.28
1927	1.47	1.71	1.18	1.37	1.60	4.37	2.30	2.02	1.06	.83	1.27	1.16	19.34
1928	1.56	4.07	4.44	2.64	2.26	2.02	2.86	2.96	2.94	2.53	3.45	2.65	34.38
1929	1.47	1.03	.90	1.40	1.90	4.75	5.43	3.79	1.20	.87	.54	.37	23.85
1930	.43	.50	.49	.85	1.08	1.80	1.61	1.01	.93	.81	.46	.33	10.30
1931	.50	.67	.65	.58	.74	1.44	5.39	2.21	2.68	.92	.85	.51	17.14
1932	.53	.45	1.12	2.80	1.96	1.56	5.82	1.25	.58	.43	.27	.35	17.12
1933	1.50	3.07	1.40	1.75	1.93	2.86	10.51	1.72	.97	.59	.53	1.28	28.11
1934	1.43	1.27	1.30	1.80	1.12	4.80	6.83	2.03	1.72	.64	.64	.84	24.42
1935	1.52	1.50	2.11	3.18	1.70	3.66	3.43	1.56	2.06	1.43	.63	.89	23.67
1936	.47	.87	1.04	1.96	1.17	12.94	4.75	1.12	.82	.69	.46	.48	26.77
1937	.86	.69	2.87	4.20	2.12	1.90	3.95	3.43	2.59	1.16	.73	.67	25.17
1938	.76	2.11	2.41	2.87	2.41	2.14	2.77	2.04	2.24	3.62	2.92	10.11	38.30
1939	1.99	1.99	4.39	2.08	1.60	4.01	6.45	2.11	.88	.43	.39	.10	26.42
1940	.24	.81	.75	.37	.45	1.22	10.52	3.82	2.22	.88	.39	.45	22.12
1941	.44	1.32	1.94	1.68	1.98	1.30	2.40	1.24	.61	.49	.20	.45	14.05
1942	.35	.57	.82	1.07	.78	5.42	3.27	1.09	1.11	1.30	.71	.57	17.06
1943	.67	2.16	2.11	1.78	1.55	3.33	3.57	5.11	1.10	.29	.76	.55	22.98
1944	.59	2.47	1.06	.41	.70	2.66	5.48	1.44	3.55	.92	.32	1.29	20.89
1945	.95	.68	1.31	2.13	1.31	6.33	3.67	5.29	2.70	2.13	1.16	.97	28.63
1946	.98	.94	1.69	2.51	1.95	5.18	1.86	3.15	2.43	.79	1.00	.60	23.08
1947	1.28	.48	.56	1.25	2.74	3.32	5.13	2.35	1.53	.51	.26	.26	19.67
1948	.16	.96	.67	.57	1.42	8.13	4.08	4.02	3.18	1.44	.30	.16	25.09
1949	.28	.91	.76	3.70	2.45	3.01	2.57	1.70	1.47	.35	.22	.37	16.79
1950	.26	.35	.94	2.63	1.73	2.40	4.84	1.58	1.29	.29	.24	.30	16.65

\* Not previously published; estimated on basis of records for nearby stations.

Yearly discharge, in cubic feet per second, of Millers River near Winchendon, Mass.

Yearly discharge in cubic feet per second									
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1917	451	-	-	14	\$130	\$1.57	\$21.19	\$132	\$21.53
1918	471	715	Apr. 3, 1918	11	122	1.47	19.92	125	20.46
1919	501,1051	1,370	May 23, 1919	11	144	1.73	23.47	152	24.82
1920	501,1051	1,200	Mar. 31, 1920	13	176	2.12	28.91	194	31.81
1921	521,1051	1,190	May 1, 1921	21	162	1.95	26.51	136	22.23
1922	541,1051	1,510	June 25, 1922	13	168	2.02	27.45	162	26.50
1923	561,1051	1,330	Apr. 30, 1923	20	141	1.70	23.05	152	24.85
1924	581,1051	1,400	Apr. 8, 1924	10	140	1.69	22.90	122	19.94
1925	601	912	Mar. 31, 1925	5	94.4	1.14	15.46	116	18.95
1926	621	902	Apr. 26, 1926	10	130	1.57	21.28	121	19.76
1927	641	715	Mar. 14, 1927	10	118	1.42	19.34	159	26.05
1928	661,1051	1,370	Nov. 4, 1927	37	210	2.53	34.38	169	27.71
1929	681	1,080	Apr. 22, 1929	10	145	1.75	23.65	132	21.67
1930	696	414	Mar. 26, 1930	9.0	62.9	.758	10.30	65.4	10.70
1931	711	906	Apr. 14, 1931	3.1	105	1.27	17.14	107	17.42
1932	726	1,190	Apr. 1, 1932	4.2	104	1.25	17.12	128	20.99
1933	741,1051	1,520	Apr. 19, 1933	10	172	2.07	28.11	160	26.14
1934	756,1051	1,560	Apr. 13, 1934	10	149	1.80	24.42	156	25.55
1935	781	1,050	Jan. 10, 1935	8.8	145	1.75	23.67	128	20.92
1936	801	5,530	Mar. 19, 1936	6.6	163	1.96	26.77	176	28.81
1937	821	800	June 22, 1937	9.1	154	1.86	25.17	159	26.03
1938	851	8,500	Sept. 22, 1938	9.1	222	2.67	36.30	241	39.39
1939	871	885	Apr. 20, 1939	3.4	162	1.95	26.42	121	19.85
1940	891	2,050	Apr. 13, 1940	5.3	135	1.63	22.12	147	24.02
1941	921	\$500	Feb. 12, 1941*	8.3	85.9	1.03	14.05	73.9	12.09
1942	951	1,320	Mar. 9, 1942	9.8	104	1.25	17.06	124	20.26
1943	971	665	(a)	8.3	140	1.69	22.98	136	22.16
1944	1001	2,080	June 25, 1944	6.4	127	1.53	20.89	120	19.71
1945	1031	1,000	May 19, 1945	11	175	2.11	28.63	179	29.30
1946	1051	800	Mar. 9, 1946	13	141	1.70	23.08	133	21.79
1947	1081	660	Apr. 8, 1947	7.6	120	1.45	19.67	117	19.14
1948	1111	1,720	Mar. 23, 1948	5.2	153	1.84	25.09	154	25.25
1949	1141	930	Jan. 6, 1949	5.2	103	1.24	16.79	100	16.39
1950	1171	668	Apr. 6, 1950	8.0	103	1.24	16.85	-	-

\* Not previously published.

a Dec. 4, 1942, May 22, 1943.

268. 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.

Gage.--Water-stage recorder. Concrete control since September 1936. Datum of gage is 549.67 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.--34 years (1916-50), 32.4 cfs.

Extremes.--1916-50: Maximum discharge, 3,000 cfs Sept. 21, 1938 (gage height, 9.90 ft), from rating curve extended above 230 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.--Flow regulated by ponds and mill above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	-	-	-	-	-	-	-	-	41.2	31.3	14.2	30.0	-
1917	21.4	23.6	30.1	24.9	11.8	84.1	74.9	35.6	47.3	11.9	39.9	22.3	35.8
1918	\$14.5	\$19.0	\$12.5	\$7.42	\$29.1	\$86.0	\$91.1	\$26.9	\$21.9	\$12.5	2.11	21.4	\$28.6
1919	20.7	20.1	56.0	36.9	12.9	120	67.0	84.5	14.5	4.64	1.97	7.27	37.5
1920	8.7	48.8	37.0	6.7	8.1	134	179	65.2	37.5	10.4	29.9	13.4	48.1
1921	44.4	36.5	94.7	30.3	14.7	90.6	73.8	55.4	11.6	9.34	2.22	1.41	39.0
1922	5.35	25.5	30.5	12.1	18.5	86.3	110	56.5	125	62.5	19.3	15.7	47.3
1923	12.8	13.8	9.01	35.7	23.0	49.0	155	58.8	12.0	4.70	3.59	1.96	31.5
1924	10.7	51.5	82.5	57.9	15.4	28.2	142	48.8	6.59	1.64	1.16	5.91	37.7
1925	2.94	5.37	7.27	1.23	49.5	85.5	61.4	23.7	13.7	10.2	5.08	3.63	22.3
1926	10.3	23.0	38.5	22.1	13.1	40.5	114	25.3	10.1	3.77	2.95	1.73	25.4
1927	10.2	46.9	20.7	19.7	14.5	86.2	36.6	43.6	16.8	11.4	20.1	12.8	28.4
1928	28.3	124	64.8	38.2	25.7	37.4	64.4	57.5	51.3	46.1	68.8	54.4	55.0
1929	18.5	16.1	20.0	24.3	22.2	104	98.6	67.5	17.4	4.04	2.00	.873	33.0
1930	3.20	6.23	4.67	6.45	17.8	47.3	27.6	17.5	15.1	11.4	4.11	3.30	13.9
1931	4.00	7.61	7.64	4.77	7.62	31.2	121	47.2	33.1	2.97	3.29	3.03	22.7
1932	5.58	5.73	17.3	43.3	19.5	23.8	108	22.0	5.12	4.15	3.91	6.14	21.9
1933	14.2	49.0	17.0	33.9	30.1	48.9	175	23.2	5.21	2.82	5.38	20.0	35.2
1934	29.1	18.7	19.4	19.7	5.30	53.2	134	31.6	25.3	5.07	4.91	14.8	30.1
1935	20.3	27.8	39.5	53.9	21.2	65.8	62.1	21.8	33.1	29.9	3.29	7	32.2

\* Not previously published; estimated on basis of records for Millers River near Winchendon.

Monthly and yearly mean discharge, in cubic feet per second, of Priest Brook near Winchendon, Mass.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	4.7	14.3	16.8	30.8	15.3	199	82.7	19.0	10.1	4.6	5.9	3.3	34.0
1937	6.77	10.4	44.7	72.1	36.6	27.5	84.2	53.2	32.5	11.0	6.61	6.31	35.6
1938	10.1	39.7	39.5	41.0	35.4	39.2	47.6	27.5	40.4	59.3	26.3	178	46.5
1939	27.0	23.6	72.7	24.5	21.1	67.8	133	25.8	9.53	4.10	10.8	3.35	35.3
1940	5.30	16.6	17.1	6.63	6.73	13.6	225	61.5	43.1	12.3	5.10	2.46	34.4
1941	2.35	17.4	25.3	23.0	23.2	19.4	50.6	19.4	9.07	6.83	2.00	5.61	16.9
1942	3.58	16.4	15.9	20.7	11.2	115	52.4	18.8	27.5	20.7	11.7	8.83	27.0
1943	12.8	31.0	34.8	26.3	23.7	67.6	65.8	90.4	19.0	8.67	10.8	2.79	32.9
1944	8.67	41.2	15.8	9.13	7.74	42.2	108	25.1	56.2	14.1	8.08	13.3	29.0
1945	9.64	11.9	25.0	25.8	21.2	111	77.5	91.9	44.9	39.0	16.5	12.4	40.6
1946	12.3	25.3	31.8	33.1	26.3	101	37.2	55.4	36.8	18.4	16.6	8.67	33.7
1947	14.8	9.08	9.18	19.5	44.0	61.1	95.2	47.1	24.5	7.04	4.50	4.45	28.2
1948	1.51	16.9	11.0	9.73	16.7	119	64.0	71.5	56.8	28.7	6.74	2.85	33.9
1949	1.14	10.5	8.70	51.2	39.9	54.1	43.1	27.1	6.83	5.37	1.90	4.18	21.1
1950	6.61	8.43	22.0	46.7	28.3	44.2	89.1	28.8	28.7	4.37	6.84	9.30	26.9

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	-	-	-	-	-	-	-	-	2.56	1.86	0.84	1.73	-
1917	1.27	1.36	1.79	1.48	0.63	5.00	4.31	2.12	2.72	.71	2.38	1.28	25.05
1918	*8.66	*1.09	*7.74	*4.44	*1.56	*5.11	*5.24	*1.60	*1.28	*7.74	.13	1.23	*20.00
1919	1.23	1.16	3.33	2.19	.69	7.14	3.85	5.03	.83	.28	.12	.42	26.27
1920	.52	2.61	2.20	.40	.45	7.97	10.30	3.87	2.15	.62	1.78	.77	33.84
1921	2.64	2.10	5.63	1.80	.79	5.58	4.24	3.30	.67	.55	.13	.08	27.31
1922	.32	1.46	1.61	.72	.99	5.13	6.33	3.34	7.18	3.71	1.15	.90	33.04
1923	.76	.79	.53	2.12	1.24	2.92	8.91	3.48	.69	.28	.21	.11	22.04
1924	.64	2.94	4.90	3.44	.86	1.67	8.17	2.90	.49	.10	.07	.34	26.52
1925	.18	.31	.43	.07	2.66	5.08	3.53	1.41	.79	.61	.30	.21	15.58
1926	.61	1.33	2.28	1.31	.70	2.41	6.56	1.50	.58	.22	.18	.10	17.78
1927	.61	2.70	1.23	1.18	.78	5.12	2.11	2.59	.97	.68	1.20	.74	19.91
1928	1.68	7.13	3.85	2.27	1.42	2.22	3.70	3.41	2.94	2.74	4.09	3.12	38.57
1929	1.10	.93	1.19	1.44	1.19	6.18	5.67	4.01	1.00	.24	.12	.05	23.12
1930	.19	.36	.28	.50	.96	2.81	1.58	1.04	.87	.68	.24	.19	9.70
1931	.24	.44	.45	.28	.41	1.86	6.96	2.80	1.91	.18	.20	.17	15.90
1932	.33	.33	1.03	2.57	1.09	1.42	6.21	1.30	.29	.25	.23	.35	15.40
1933	.84	2.82	1.01	2.02	1.61	2.90	10.06	1.38	.30	.17	.32	1.15	24.58
1934	1.73	1.08	1.15	1.18	.28	3.16	7.71	1.68	1.45	.30	.29	.85	21.06
1935	1.21	1.60	2.35	3.20	1.14	3.91	3.57	1.29	1.91	1.78	.20	.40	22.56
1936	.28	.82	1.00	1.83	.85	11.87	4.75	1.13	.58	.27	.35	.19	23.92
1937	.52	.60	2.65	4.29	1.97	1.64	4.84	3.76	1.87	.65	.39	.36	23.54
1938	.60	2.29	2.35	2.43	1.90	2.33	2.73	1.64	2.32	3.53	.17	10.24	33.93
1939	1.60	1.36	4.32	1.45	1.14	4.02	7.65	1.53	.55	.24	.64	.19	24.69
1940	.51	.95	1.01	.39	.37	.81	12.95	3.66	2.48	.73	.30	.14	24.10
1941	.14	1.00	1.50	1.36	1.25	1.15	2.92	1.15	.52	.41	.12	.32	11.84
1942	.20	.95	.95	1.23	.60	6.82	3.02	1.12	1.58	1.23	.70	.51	18.91
1943	.76	1.78	2.07	1.56	1.27	4.02	3.78	5.37	1.09	.52	.64	.16	23.02
1944	.52	2.37	.94	.54	.43	2.51	6.24	1.49	3.23	.84	.46	.76	20.35
1945	.57	.68	1.37	1.54	1.14	6.61	4.46	5.46	2.58	2.32	.98	.71	28.42
1946	.73	1.45	1.89	1.96	1.41	6.00	2.14	3.29	2.12	1.09	.98	.50	23.56
1947	.88	.52	.55	1.16	2.35	3.63	5.47	2.80	1.41	.42	.28	.26	19.72
1948	.09	.97	.66	.58	.35	7.09	3.68	3.27	1.71	.40	.16	.16	23.79
1949	.07	.61	.52	3.04	2.14	3.21	2.48	1.61	.39	.32	.11	.24	14.74
1950	.40	.49	1.31	2.78	1.52	2.63	5.12	1.71	1.65	.26	.41	.54	18.82

\* Not previously published; estimated on basis of records for Millers River near Winchendon.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary Discharge	maximum Date	Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
1916	451	-	-	-	-	-	-	-	-
1917	451	-	Mar. 28, 1917*	1.6	35.8	1.85	25.05	-	-
1918	471	*319	Mar. 28, 1918*	1.5	*28.6	*2.47	*20.00	*32.9	*23.03
1919	501, 1051	*608	Mar. 28, 1919	1.5	37.5	1.93	26.27	37.2	26.08
1920	501	*732	Mar. 28, 1920*	2.5	48.1	2.48	33.64	55.0	38.68
1921	521	*457	Oct. 4, 1920*	.4	39.0	2.01	27.31	29.4	20.53
1922	541, 1051	*648	June 21, 1922*	2.8	47.3	2.44	33.04	45.1	31.53
1923	561, 1051	*530	Apr. 29, 1923*	.9	31.5	1.62	22.04	40.6	28.44
1924	581, 1051	*569	Apr. 7, 1924	.4	37.8	1.95	26.52	27.0	18.96
1925	601	148	Mar. 31, 1925	.4	22.3	1.15	15.58	27.0	16.86
1926	621	*230	Apr. 12, 1926	1.0	25.4	1.31	17.78	25.8	18.10
1927	641	*368	Mar. 17, 1927*	2.4	28.4	1.46	19.91	40.0	28.03
1928	661	1,000	Nov. 4, 1927	5.3	55.0	2.84	38.57	41.6	29.13
1929	681	*319	Mar. 23, 1929*	.1	33.0	1.70	23.12	29.6	20.73
1930	696	136	Mar. 27, 1930	.7	13.9	.716	9.70	14.3	10.00
1931	711	*273	Apr. 11, 1931*	1.6	22.7	1.17	15.90	23.5	16.46
1932	726	*457	Apr. 1, 1932	1.4	21.9	1.13	15.40	26.2	18.38
1933	741	*493	Apr. 18, 1933*	1.5	35.2	1.81	24.58	34.2	23.67
1934	756	*368	Apr. 12, 1934*	2.5	30.1	1.55	21.06	31.8	22.26
1935	781	*352	Jan. 10, 1935	-	32.2	1.66	22.56	27.9	19.50

\* Revised.

\* Not previously published.

Yearly discharge, in cubic feet per second, of Priest Brook near Winchendon, Mass.--Continued									
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1936	801	1,840	Mar. 18, 1936	-	34.0	1.75	23.92	36.4	25.59
1937	821	210	Apr. 16, 1937	3.2	33.6	1.73	23.54	35.7	25.01
1938	851	3,000	Sept. 21, 1938	1.9	48.5	2.50	33.93	51.4	35.97
1939	871	370	Dec. 6, 1938	.8	35.3	1.82	24.69	28.1	19.68
1940	891	685	Apr. 13, 1940	1.4	34.4	1.77	24.10	34.9	24.47
1941	921	104	Dec. 31, 1940	1.2	16.9	.871	11.84	16.1	11.30
1942	951	550	Mar. 10, 1942	1.4	27.0	1.39	18.91	30.6	21.42
1943	971	169	Mar. 28, 1943	1.5	32.9	1.70	25.02	31.8	22.24
1944	1001	532	June 25, 1944	1.5	29.0	1.49	20.35	27.3	19.14
1945	1031	280	Mar. 22, 1945	3.9	40.6	2.09	28.42	42.7	29.87
1946	1051	413	Mar. 10, 1946	3.2	23.7	1.74	23.56	30.7	21.44
1947	1081	188	Apr. 8, 1947	2.3	28.2	1.45	19.72	27.8	19.49
1948	1111	565	Mar. 23, 1948	.36	33.9	1.75	23.79	33.1	23.27
1949	1141	242	Jan. 7, 1949	.42	21.1	1.09	14.74	22.5	15.74
1950	1171	224	Mar. 30, 1950	1.0	26.9	1.39	18.82	-	-

## 269. Otter River near Gardner, Mass.

Location.--Lat 42°34'25", long. 72°01'00", on right bank on downstream side of concrete arch bridge about 200 ft upstream from Wilder and Perley (formerly Kneeland) Brooks and about 1 mile west of Gardner, Worcester County.

Drainage area.--20.0 sq mi.

Gage.--Staff gage. Altitude of gage is 945 ft above mean sea level (from topographic map).

Extremes.--1916-17: Maximum discharge, 192 cfs (revised) Mar. 28, 1917 (gage height, 3.65 ft); minimum gage height observed, about -0.4 ft several times in October 1917 (discharge not determined).

Remarks.--Occasional fluctuations in discharge caused by operation of a filter plant a quarter of a mile upstream.

Monthly and yearly mean discharge, in cubic feet per second												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1916	-	-	-	-	-	-	-	-	-	33.4	18.0	15.8
1917	10.4	18.6	29.6	27.8	20.5	87.2	70.8	46.4	47.9	24.6	28.9	18.6

Monthly and yearly runoff, in inches												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1916	-	-	-	-	-	-	-	-	-	1.92	1.04	0.88
1917	0.60	1.04	1.71	1.60	1.06	5.03	3.95	2.68	2.68	1.42	1.66	1.04

Yearly discharge, in cubic feet per second									
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1916	431	-	-	-	-	-	-	-	-
1917	451	*192	Mar. 28, 1917	4.0	36.0	1.80	24.47	-	-

\* Revised.

## 270. Birch Hill Reservoir

Location.--Lat 42°37'57", long. 72°07'25", on Millers River 1,300 ft upstream from Stockwell Brook and 1 mile east of South Royalston, Worcester County, Mass.

Drainage area.--175 sq mi.

Gage.--Water-stage recorder. Datum of gage is at mean sea level.

Remarks.--Reservoir completed in 1941 for flood control, has a usable capacity of 2,180,000,000 cu ft.

Cooperation.--Records furnished by Corps of Engineers.

Month-end contents, in millions of cubic feet												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1942	-	-	-	-	-	-	-	2.2	1.8	2.2	1.0	1.6
1943	2.0	7.5	12.6	2.7	7.5	10.0	16.6	8.0	2.1	3.9	1.8	1.5
1944	2.7	59.3	6.5	12.6	18.2	15.8	11.8	2.5	25.6	3.0	1.5	2.3
1945	2.3	23.4	30.0	22.3	57.6	18.2	11.0	5.1	6.0	5.7	1.8	1.5
1946	2.3	3.6	38.4	31.4	28.9	8.5	4.8	15.8	1.8	2.5	3.6	9.0
1947	2.7	1.6	16.6	69.0	38.4	8.0	9.0	4.2	2.7	2.3	1.5	1.6
1948	2.0	2.3	3.0	3.0	4.8	372.0	3.9	11.8	3.3	1.5	1.3	1.3
1949	1.3	3.0	42.6	4.2	7.0	6.0	4.2	3.3	2.0	1.3	1.3	2.3
1950	2.5	2.7	4.2	5.1	3.0	30.0	7.0	3.6	2.7	1.6	2.3	1.6

## 271. 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.

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.--11 years (1939-50), 288 cfs (adjusted for storage).

Extremes.--1939-50: 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, from floodmarks, Sept. 21 or 22, 1938.

Remarks.--Flow regulated by Lake Monomonic and other reservoirs, by mills and power plants, and at high flow by Birch Hill Reservoir since 1941 (see preceding page). Run-off adjusted for change in contents of Birch Hill Reservoir.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	40.7	144	159	74.5	78.3	210	1,850	617	390	140	69.1	30.1	317
											59.4	60.3	
1941	52.6	230	291	259	318	231	418	215	102	61.5	35.1	57.1	188
1942	44.3	110	135	170	119	985	503	201	250	200	110	84.8	244
1943	117	358	353	307	256	611	839	214	74.9	129	70.1	330	
1944	124	408	200	69.3	108	475	855	265	587	196	67.1	198	295
1945	132	133	234	315	197	1,058	644	821	480	369	188	156	396
1946	156	207	288	410	346	876	359	501	424	135	161	102	331
1947	218	100	102	203	445	570	771	421	253	102	67.9	59.1	274
1948	34.6	210	139	105	238	822	824	655	562	220	55.6	33.5	325
1949	45.0	187	133	578	464	509	482	312	84.8	56.2	35.6	51.0	244
1950	47.5	68.7	153	366	287	387	696	254	215	60.3	48.4	64.8	220

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	-	-	-	-	-	-	-	-	-	-
1940	0.25	0.86	0.98	0.46	0.45	1.29	11.04	3.80	2.33	0.86	0.43	0.18	23.05
											.37	.56	
1941	.32	1.37	1.79	1.60	1.77	1.42	2.50	1.33	.61	.38	.22	.34	13.65
1942	.27	.66	.84	1.05	.66	6.08	3.00	1.24	1.49	1.24	.68	.51	17.72
1943	.72	2.14	2.17	1.89	1.42	3.85	3.64	5.17	1.27	.46	.79	.42	23.94
1944	.77	2.57	1.11	.44	.64	2.92	5.09	1.62	3.55	1.16	.41	1.18	21.46
1945	.82	.84	1.46	1.93	1.18	6.43	5.83	5.05	2.87	2.27	1.15	.93	28.76
1946	.96	1.24	1.85	2.51	1.92	5.35	2.13	3.11	2.50	.83	.99	.62	24.01
1947	1.33	.59	.66	1.37	2.41	3.45	4.60	2.58	1.51	.63	.42	.35	19.90
1948	.21	1.25	.86	.65	1.38	5.91	4.07	4.06	3.33	1.35	.34	.20	23.61
1949	.28	1.12	.91	3.48	2.59	3.13	2.87	1.92	.50	.34	.22	.31	17.67
1950	.29	.41	.95	2.26	1.60	2.45	4.10	1.56	1.28	.37	.30	.38	15.95

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30								Calendar year		
		Observed				Adjusted				Observed		Adjusted
		Momentary		maximum	Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date									
1939	891	-	-	-	-	-	-	-	-	-	-	-
1940	891	4,400	Apr. 13, 1940	21	317	-	1.70	23.05	336	-	24.44	-
1941	921	#842	Dec. 31, 1940†	23	188	-	1.01	13.65	164	-	11.94	-
1942	951	2,630	Mar. 10, 1942	28	244	-	1.30	17.72	289	-	20.98	-
1943	971	1,240	May 23, 1943	33	330	-	1.76	23.94	322	322	23.36	-
1944	1001	2,830	June 25,26,1944	31	295	295	1.58	21.46	276	277	20.13	-
1945	1031	1,940	Mar. 22, 1945	58	396	396	2.12	26.76	409	409	29.69	-
1946	1051	2,120	Mar. 10, 1946	51	351	351	1.77	24.01	311	311	22.54	-
1947	1081	1,320	Apr. 8, 1947	34	274	274	1.47	19.90	271	271	19.64	-
1948	1111	2,540	Mar. 22, 1948	26	325	325	1.74	23.61	323	324	23.60	-
1949	1141	1,640	Jan. 8, 1949	23	244	244	1.30	17.67	236	234	17.01	-
1950	1171	1,310	Apr. 8, 1950	27	220	220	1.18	15.95	-	-	-	-

\* Not previously published.

## 272. Tully Reservoir

Location.--Lat 42°38'33", long. 72°13'29", on East Branch Tully River 0.8 mile upstream from outlet of Packard Pond and 3½ miles north of Athol, Worcester County, Mass.

Drainage area.--50.4 sq mi.

Gage.--Water-stage recorder. Datum of gage is at mean sea level.

Remarks.--Reservoir completed in 1948 for flood control, has a usable capacity of 958,000,000 cu ft.

Cooperation.--Records furnished by Corps of Engineers.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1949	0.2	0.4	5.4	24.2	25.4	6.7	0.3	0.2	0.1	0.1	0.1	0.1
1950	.2	.2	.3	22.5	12.7	17.1	.4	.3	.2	.2	.2	0.0

## 273. 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. Prior to Oct. 26, 1948, 50.3 sq mi.

Gage.--Water-stage recorder and concrete control. Datum of gage is 613.71 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark). Prior to Oct. 26, 1948, staff gage at site 0.2 mile upstream at datum 14.40 ft higher.

Average discharge.--35 years (1915-50), 83.4 cfs.

Extremes.--1916-50: Maximum discharge, 5,140 cfs Sept. 21, 1938 (gage height, 8.60 ft. From floodmarks, site and datum then in use), average of determinations by computation of flow over dam and by contracted-opening method; minimum, 0.03 cfs Jan. 4, Mar. 3, 1949.

Remarks.--Flow regulated by and runoff adjusted for change in contents of Tully Reservoir since 1948 (see preceding page).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	#28.4	#28.0	#80.7	#123	#134	#137	#283	#117	#111	77.0	41.9	75.3	#103
1917	50.0	53.9	83.4	81.1	38.6	191	196	103	121	31.2	84.8	59.2	91.3
1918	50.5	83.9	35.5	25.7	64.5	218	271	84.0	58.4	19.9	7.05	56.8	81.0
1919	47.0	63.0	131	128	51.0	245	169	166	28.4	14.0	4.64	25.5	90.0
1920	26.4	143	126	22.9	23.7	293	420	170	80.4	29.5	62.6	24.1	119
1921	77.5	77.6	239	93.0	40.4	254	200	147	16.8	44.0	15.1	4.31	101
1922	15.1	48.8	105	43.2	53.4	257	268	126	244	153	52.0	46.3	118
1923	33.6	38.8	22.3	105	58.9	136	296	132	24.3	15.8	10.7	5.10	73.2
1924	26.4	86.6	176	143	44.4	85.1	290	116	24.8	5.70	4.86	29.8	86.0
1925	11.0	21.9	44.4	10.0	154	222	158	70.6	34.1	33.5	16.5	10.6	95.0
1926	26.8	77.7	88.8	75.1	48.8	135	260	71.4	29.9	9.45	5.66	3.33	69.3
1927	20.3	108	58.7	62.1	49.4	251	95.2	109	43.6	29.3	43.3	23.4	74.8
1928	61.7	281	186	113	76.0	95.5	151	144	145	119	188	138	141
1929	36.2	34.8	43.0	69.7	51.8	249	223	170	48.7	12.8	4.58	2.90	79.2
1930	4.86	12.8	13.9	38.0	59.7	126	80.0	44.8	29.1	38.9	9.07	4.02	58.3
1931	8.43	30.3	21.5	9.89	14.5	85.4	242	109	87.8	9.90	8.41	6.94	52.7
1932	15.6	17.9	58.6	118	69.7	60.0	264	61.9	15.1	11.6	7.53	12.2	59.1
1933	36.2	103	49.3	86.9	83.9	121	443	63.5	14.4	6.08	22.6	83.9	92.2
1934	90.7	69.4	65.9	72.7	33.8	167	336	118	70.5	12.8	8.82	46.4	91.0
1935	57.4	80.7	107	144	67.0	184	167	66.7	88.3	57.3	7.01	23.5	87.5
1936	13.7	39.6	43.0	90.3	43.2	525	201	54.8	29.0	12.1	14.2	7.79	89.9
1937	29.8	34.5	132	186	104	90.1	200	150	94.0	36.9	18.3	21.5	91.4
1938	41.3	112	102	129	107	108	128	80.1	106	145	74.0	388	126
1939	61.1	63.7	177	72.4	61.7	155	298	76.3	23.5	7.97	25.7	5.79	87.4
1940	9.96	41.5	52.5	17.5	17.7	45.8	528	145	91.9	29.4	5.88	4.57	81.9
1941	4.26	58.8	68.3	58.6	66.3	45.7	123	44.5	22.3	33.1	9.41	16.1	45.6
1942	9.34	40.6	45.2	55.7	29.8	267	131	53.5	65.8	39.1	17.7	10.2	64.1
1943	25.2	78.7	93.6	83.8	66.4	181	165	225	50.9	8.17	21.6	5.87	84.0
1944	28.7	123	39.5	14.8	21.7	135	268	68.7	139	36.0	7.02	27.8	75.5
1945	19.9	25.4	55.6	69.2	49.8	261	190	247	115	116	37.6	29.5	102
1946	29.4	60.3	80.9	84.8	59.2	230	97.4	146	101	36.0	38.8	11.4	81.7
1947	29.5	17.2	17.5	47.2	113	154	231	136	66.7	19.5	6.26	6.99	69.9
1948	3.68	60.4	31.1	21.8	39.2	252	185	195	144	52.0	7.30	1.91	82.9
1949	3.45	37.3	24.5	109	102	157	140	78.7	15.0	8.51	3.86	8.29	57.0
1950	10.5	22.4	58.1	106	83.9	109	222	83.7	75.7	10.4	10.1	23.1	67.6

\* Not previously published; estimated on basis of records for nearby station.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	#0.65	#0.62	#1.85	#2.82	#2.88	#3.15	#6.28	#2.68	#2.47	1.76	0.96	1.67	#27.79
1917	1.15	1.19	1.91	1.86	.80	4.38	4.35	2.36	2.69	.72	1.95	1.32	24.68
1918	1.15	1.86	.81	.59	1.33	4.99	6.01	1.92	1.29	.46	.16	1.26	21.83
1919	1.08	1.40	3.00	2.93	1.05	5.62	3.75	3.80	.63	.32	.11	.56	24.25
1920	.60	3.17	2.98	.52	.51	6.72	9.32	3.90	1.78	.68	1.43	.53	32.41
1921	1.78	1.72	5.48	2.13	.84	5.82	4.44	3.37	.37	1.01	.35	.10	27.04
1922	.35	1.08	2.41	.99	1.10	5.89	5.95	2.88	5.41	3.50	1.19	1.03	31.78
1923	.77	.86	.51	2.41	1.22	3.11	6.56	3.02	.54	.36	.25	.11	19.72
1924	.60	1.92	4.04	3.27	.95	1.95	6.44	2.66	.55	.13	.11	.66	23.28
1925	.25	.48	1.02	.23	3.19	5.08	3.50	1.61	.76	.77	.38	.24	17.51
1926	.61	1.72	2.04	1.72	1.01	3.09	5.77	1.64	.66	.22	.13	.07	18.68
1927	.47	2.40	1.35	1.42	1.02	5.75	2.11	2.50	.97	.67	.99	.52	20.17
1928	1.42	6.24	4.27	2.59	1.63	2.19	3.35	3.30	3.21	2.73	4.31	3.06	38.30
1929	.83	.77	.98	1.60	1.07	5.71	4.94	3.90	1.08	.29	.10	.06	21.33
1930	.11	.28	.32	.87	1.24	2.88	1.77	1.03	.64	.89	.21	.09	10.33
1931	.19	.67	.49	.23	.30	1.96	5.37	2.50	1.95	.23	.19	.15	14.23
1932	.36	.40	1.34	2.71	1.59	1.37	5.86	1.42	.34	.27	.17	.27	16.01
1933	.83	2.29	1.13	1.99	1.74	2.78	9.83	1.45	.32	.14	.52	1.86	24.88
1934	2.08	1.54	1.52	1.67	.70	3.83	7.45	2.71	1.56	.29	.20	1.03	24.58
1935	1.25	1.78	2.46	3.30	1.38	4.22	3.70	1.53	1.96	1.31	.16	.52	23.63

\* Not previously published; estimated on basis of records for nearby station.

Note.--Runoff for period July 1916 to September 1935 recomputed on basis of revised drainage area.



Monthly and yearly runoff, in inches (adjusted), of East Branch Tully River near Athol, Mass.--Con.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	.31	.88	.98	2.08	.93	11.99	4.46	1.26	.64	.28	.32	.17	24.30
1937	.68	.76	3.02	4.27	2.16	2.06	4.44	3.44	2.09	.85	.42	.48	24.67
1938	.95	2.49	2.34	2.95	2.22	2.48	2.83	1.83	2.35	3.32	1.70	8.60	34.06
1939	1.86	1.42	4.06	1.66	1.28	3.55	6.60	1.75	.52	.18	.59	.13	23.60
1940	.23	.92	1.20	.40	.38	1.05	11.70	3.32	2.04	.67	.13	.10	22.14
1941	.10	1.30	1.57	1.34	1.37	1.05	2.72	1.02	.49	.76	.22	.36	12.30
1942	.21	.90	1.04	1.29	.62	6.13	2.90	1.23	1.46	.90	.41	.23	17.31
1943	.58	2.15	1.92	1.38	4.14	3.65	5.16	1.13	.19	.48	.15	.15	22.67
1944	.66	2.72	.90	.34	.47	3.10	5.95	1.57	3.08	.82	.16	.62	20.39
1945	.46	.56	1.23	1.59	1.03	5.97	4.22	5.66	2.56	2.66	.86	.65	27.45
1946	.87	1.34	1.85	1.94	1.23	5.28	2.16	3.35	2.25	.82	.89	.25	22.03
1947	.68	.38	.40	1.08	2.33	3.54	5.12	3.11	1.48	.45	.14	.16	18.87
1948	.08	1.34	.71	.50	.84	5.78	4.10	4.48	3.20	1.19	.17	.04	22.43
1949	.08	.83	.60	2.65	2.11	3.42	3.04	1.80	.33	.19	.09	.18	16.32
1950	.24	.50	1.33	2.62	1.65	2.53	4.77	1.91	1.68	.24	.23	.51	18.21

Note.--Runoff for period October 1936 to September 1939 recomputed on basis of revised drainage area.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year				
		Observed				Adjusted		Observed		Adjusted		
		Momentary		maximum	Minimum	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date	day								
1916	451	-	-	-	*103	-	*2.05	*27.79	*107	-	*28.92	
1917	451	*785	Mar. 28, 1917	6.2	91.3	-	1.82	24.68	89.8	-	24.25	
1918	471	*585	Apr. 3, 1918	2.9	81.0	-	1.61	21.83	87.1	-	23.49	
1919	501	*649	Mar. 28, 1919*	2.2	90.0	-	1.79	24.25	94.4	-	25.42	
1920	501	*1,110	Mar. 29, 1920	9.2	119	-	2.37	32.04	127	-	34.37	
1921	521	*874	Mar. 10, 1921	2.2	101	-	2.01	27.41	82.4	-	22.27	
1922	541	*1,110	June 22, 1922	8.5	118	-	2.35	31.78	112	-	30.08	
1923	561	*909	Apr. 6, 1923	2.8	73.2	-	1.46	19.72	89.3	-	24.14	
1924	581	*838	Apr. 8, 1924	2.5	86.0	-	1.71	23.28	68.3	-	18.47	
1925	601	*582	Feb. 13, 1925	3.6	65.0	-	1.29	17.51	74.7	-	20.13	
1926	621	*488	Apr. 10, 1926	2.2	69.3	-	1.38	18.68	70.1	-	18.53	
1927	641	*678	Mar. 17, 1927	3.5	74.8	-	1.49	20.17	103	-	27.88	
1928	661,1051	*2,090	Nov. 4, 1927	11	141	-	2.80	38.30	107	-	28.95	
1929	681	*771	Mar. 18, 1929	1.4	79.2	-	1.57	21.33	72.2	-	19.46	
1930	696	*366	Mar. 26, 1930	1.7	38.3	-	.761	10.33	40.7	-	10.97	
1931	711	*494	Apr. 5, 1931	3.1	52.7	-	1.05	14.23	55.5	-	14.98	
1932	726	*909	Apr. 2, 1932	1.5	59.1	-	1.17	16.01	67.1	-	18.16	
1933	741	*909	Apr. 19, 1933	3.9	92.2	-	1.83	24.86	95.4	-	25.77	
1934	756	*946	Apr. 13, 1934	4.3	91.0	-	1.81	24.58	92.6	-	24.99	
1935	781	*771	Jan. 10, 1935	3.5	87.5	-	1.74	23.63	75.0	-	20.25	
1936	801	3,700	Mar. 18, 19, 1936	3.9	89.9	-	1.79	24.30	98.5	-	26.59	
1937	821	*429	Dec. 22, 1936	4.9	91.4	-	1.82	24.67	96.2	-	25.99	
1938	851	5,140	Sept. 21, 1938	6.6	126	-	2.50	34.06	132	-	35.62	
1939	871	740	Dec. 7, 1938	2.5	87.4	-	1.74	23.60	69.0	-	*18.61	
1940	891	1,650	Apr. 13, 1940	2.2	81.9	-	1.63	22.14	84.2	-	22.76	
1941	921	260	Dec. 31, 1940	2.0	45.6	-	.907	12.30	42.5	-	11.48	
1942	951	860	Mar. 10, 1942	2.5	64.1	-	1.27	17.31	72.7	-	19.64	
1943	971	385	Mar. 27, May 23	2.4	84.0	-	1.67	22.67	83.3	-	22.47	
1944	1001	1,080	June 25, 1944	2.0	75.3	-	1.50	20.39	67.8	-	18.36	
1945	1031	550	Mar. 22, 1945	7.9	102	-	2.03	27.45	108	-	29.06	
1946	1051	650	Mar. 10, 1946	4.1	81.7	-	1.62	22.03	72.8	-	19.63	
1947	1081	450	Apr. 7, 8, 1947	2.9	69.9	-	1.39	18.87	72.4	-	19.54	
1948	1111	933	Mar. 23, 1948	1.3	82.9	-	1.65	22.43	80.5	80.6	21.81	
1949	1141	431	Jan. 7, 1949	.3	57.0	57.0	1.13	15.32	59.2	59.0	15.88	
1950	1171	582	Mar. 31, 1950	1.2	67.6	67.6	1.34	18.21	-	-	-	

\* Revised.

† Corrected.

\* Not previously published.

## 274. 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.

Gage.--Staff gage. 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.--34 years (1916-50), 20.8 cfs (revised).

Extremes.--1916-50: 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.

Monthly and yearly mean discharge, in cubic feet per second, of Moss Brook at Wendell Depot, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1909	-	-	-	-	-	-	-	-	-	2.84	5.39	4.58	-
1910	-	-	-	-	-	-	-	14.4	7.80	-	-	-	-
1916	-	-	-	-	-	-	-	-	-	11.2	4.62	6.83	-
1917	7.00	11.9	17.5	17.9	12.8	45.5	39.0	28.5	31.6	7.93	5.60	3.41	19.1
1918	10.0	11.9	6.97	5.21	18.0	47.5	53.2	20.7	9.81	3.27	1.45	6.91	16.2
1919	5.24	8.30	25.5	23.9	13.4	60.3	38.6	42.4	7.59	6.53	2.65	8.46	20.3
1920	6.65	26.6	28.9	6.88	7.92	67.6	98.9	51.2	29.1	11.2	7.82	6.22	29.1
1921	14.1	20.1	61.7	38.2	15.4	58.3	50.3	50.0	13.2	21.8	7.77	2.38	29.6
1922	5.18	19.5	47.0	9.29	14.0	*70.1	65.8	46.2	64.6	35.7	13.3	13.7	*33.8
1923	9.63	13.4	7.35	23.3	10.1	39.0	86.4	35.7	9.32	5.14	2.53	2.17	20.3
1924	8.96	30.2	50.1	*46.6	12.7	26.3	71.5	30.1	7.06	2.61	2.28	9.77	*24.9
1925	4.68	6.36	16.6	2.80	*40.7	*55.7	37.9	16.3	7.93	8.46	4.63	3.94	*17.0
1926	8.95	20.6	*23.6	*15.4	9.77	26.2	57.1	15.3	6.92	3.74	3.33	1.33	*16.0
1927	6.01	23.0	14.2	17.6	13.2	76.7	25.0	32.9	13.2	10.7	10.2	5.12	20.8
1928	17.1	83.3	46.7	31.1	22.3	25.8	52.6	41.6	53.8	26.0	39.4	30.4	39.2
1929	8.53	9.14	12.0	*14.2	*14.3	72.0	64.3	52.0	14.6	4.28	1.23	1.31	*22.4
1930	2.08	4.30	6.12	9.70	15.4	32.2	26.7	13.1	9.10	10.8	1.99	1.12	11.6
1931	1.92	6.04	4.48	2.61	4.07	25.5	49.1	29.3	24.6	4.25	3.21	2.27	13.1
1932	3.57	4.14	12.0	24.4	18.5	15.4	62.5	12.7	4.30	5.29	1.78	1.89	13.8
1933	7.49	23.5	11.8	22.9	18.9	29.2	125	15.0	3.81	1.65	5.15	18.2	23.3
1934	19.6	15.5	12.5	13.6	3.82	29.7	94.6	29.7	17.8	5.26	2.07	13.9	21.5
1935	16.7	20.6	21.9	27.7	12.7	35.5	37.6	20.0	20.1	8.74	1.35	3.71	18.9
1936	2.89	8.74	9.44	22.6	9.17	131	54.7	15.0	6.33	2.65	4.50	4.99	22.6
1937	7.48	8.69	32.5	47.7	28.3	24.4	53.4	43.4	26.9	9.14	4.61	9.02	24.6
1938	13.3	37.3	25.1	32.7	23.5	24.6	30.1	20.9	26.5	24.4	12.9	66.1	28.0
1939	20.8	17.3	46.2	20.8	17.4	42.9	73.9	15.1	6.15	2.13	10.4	4.56	23.1
1940	4.01	10.1	12.9	4.69	6.11	12.3	124	34.7	27.9	8.75	2.69	2.50	20.7
1941	2.16	16.1	19.6	13.9	16.1	13.0	26.6	10.7	4.82	5.57	1.67	2.67	11.0
1942	2.04	7.07	11.3	13.0	6.21	67.2	28.5	14.2	11.1	7.70	3.57	3.17	14.7
1943	5.32	23.5	24.9	18.1	17.6	47.1	42.7	54.5	12.2	2.37	2.62	2.09	21.1
1944	7.66	23.6	*9.30	3.85	5.43	35.9	60.0	14.8	18.6	11.1	3.70	10.4	17.0
1945	7.59	10.8	19.0	19.2	13.7	62.3	51.8	67.2	29.1	29.8	9.60	9.22	27.6
1946	9.57	18.7	28.5	24.2	16.0	52.8	21.9	34.4	21.7	6.06	8.86	6.34	20.8
1947	8.55	4.49	5.61	12.1	6.28	35.2	49.0	31.4	16.8	3.96	2.43	2.24	16.5
1948	1.95	17.6	9.80	6.32	9.19	62.4	39.4	48.4	42.0	10.9	2.40	1.08	21.0
1949	1.67	7.66	6.51	23.0	26.9	36.1	32.2	16.3	3.59	1.79	.94	1.56	13.1
1950	1.88	2.85	7.40	23.2	16.3	32.5	51.9	18.8	14.4	2.15	1.38	3.74	14.6

\* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1909	-	-	-	-	-	-	-	-	-	0.26	0.31	0.41	-
1910	-	-	-	-	-	-	-	1.35	0.70	-	-	-	-
1916	-	-	-	-	-	-	-	-	-	1.05	.43	.62	-
1917	0.66	1.08	1.64	1.68	1.08	4.27	3.54	2.68	2.87	.74	.52	.31	21.07
1918	.94	1.08	.65	.49	1.52	4.45	4.83	.89	.31	.31	.14	.63	17.77
1919	.49	.75	2.39	2.24	1.14	5.65	3.50	3.98	.67	.61	.25	.77	22.44
1920	.62	2.41	2.71	.64	.69	6.34	8.97	4.80	2.64	1.05	.73	.56	32.16
1921	1.33	1.82	5.79	3.59	1.30	5.46	4.56	4.69	1.19	2.04	.73	.22	32.72
1922	.48	1.77	4.40	.87	1.19	*6.57	5.97	4.34	5.86	3.34	1.24	1.24	*37.27
1923	.90	1.22	.69	2.18	.86	3.66	7.83	3.34	.84	.48	.23	.20	22.43
1924	.84	2.74	4.69	*4.37	1.11	2.47	6.48	2.82	.64	.24	.21	.88	*27.49
1925	.44	.58	1.56	.26	*3.45	*5.22	3.44	1.53	.72	.79	.43	.36	*18.78
1926	.84	1.86	*2.21	*1.44	.83	2.46	5.18	1.43	.63	.35	.31	.12	*17.66
1927	.56	2.09	1.33	1.65	1.11	7.19	2.26	3.08	1.19	1.00	.95	.46	22.87
1928	1.60	7.55	4.38	2.92	1.95	2.42	4.78	3.90	4.88	2.43	3.69	2.76	43.26
1929	.80	.83	1.12	*1.33	*1.21	6.74	5.84	4.88	1.33	.40	.12	.12	*24.72
1930	.19	.39	.57	.91	1.30	3.68	2.42	1.23	.83	1.01	.19	.10	12.82
1931	.18	.55	.42	.24	.34	2.39	4.45	2.74	2.23	.40	.30	.21	14.45
1932	.33	.38	1.12	2.28	1.62	4.44	5.67	1.19	.39	.50	.17	.17	15.26
1933	.70	2.13	1.10	2.14	1.60	2.73	11.38	1.41	.35	.15	.48	1.65	25.82
1934	1.83	1.41	1.18	1.28	.32	2.78	8.58	2.78	1.62	.49	.19	1.26	23.72
1935	1.57	1.86	2.05	2.59	1.07	3.33	3.41	1.88	1.82	.82	.13	.34	20.87
1936	.27	.79	.88	2.12	.80	12.34	4.96	1.22	.56	.25	.42	.45	25.06
1937	.70	.79	3.04	4.47	2.40	2.28	4.84	4.07	2.44	.86	.43	.82	27.14
1938	1.24	3.36	2.35	3.07	1.99	2.31	2.75	1.96	2.40	2.28	1.21	5.99	30.91
1939	1.95	1.57	4.34	1.95	1.47	4.02	6.70	1.42	.56	.20	.97	.41	25.55
1940	.58	.92	1.21	.44	.54	1.15	11.25	3.25	2.53	.82	.25	.23	22.97
1941	.20	1.46	1.83	1.30	1.36	1.22	2.41	1.01	.44	.52	.16	.24	12.15
1942	.19	.64	1.06	1.22	.53	6.29	2.59	1.33	1.01	.72	.33	.29	16.20
1943	.50	2.13	2.34	1.70	1.49	4.41	3.87	5.21	1.11	.22	.25	.19	23.32
1944	.72	2.14	.87	.36	.48	3.37	5.44	1.38	1.69	1.04	.35	.95	18.79
1945	.91	.98	1.78	1.80	1.16	5.84	4.70	6.30	2.64	2.79	.90	.84	30.44
1946	.90	1.70	2.67	2.27	1.35	4.95	1.99	3.22	1.97	.57	.83	.58	23.00
1947	.80	.41	.53	1.14	2.27	3.30	4.45	2.94	1.52	.37	.23	.29	18.25
1948	.18	1.60	.92	.59	.81	5.84	3.57	4.54	3.81	1.03	.22	.10	25.21
1949	.16	.69	.61	2.16	2.28	3.38	2.92	1.53	.31	.17	.09	.14	14.44
1950	.18	.26	.69	2.17	1.38	3.04	4.70	1.76	1.30	.20	.13	.34	16.15

\* Revised.

Yearly discharge, in cubic feet per second, of Moss Brook at Wendell Depot, Mass.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1909	415	-	-	-	-	-	-	-	-
1910	415	-	-	-	-	-	-	-	-
1916	431	-	-	-	-	-	-	-	-
1917	(a)	*255	Mar. 28, 1917	0.8	19.1	1.55	21.07	18.4	20.36
1918	471, 1231	*113	Mar. 24, 1918	1.0	16.2	1.32	17.87	17.1	18.83
1919	(b)	*365	Mar. 28, 1919	1.4	20.3	1.65	22.44	22.2	24.55
1920	(c)	*268	Apr. 14, 1920	2.0	29.1	2.37	32.16	31.9	35.36
1921	(d)	*195	May 1, 1921	1.3	29.6	2.41	32.72	27.6	30.43
1922	(e)	*350	June 22, 1922	2.0	*33.8	*2.75	*37.27	*30.3	*33.43
1923	(f)	*335	Apr. 29, 1923	.7	20.3	1.65	22.43	25.3	27.89
1924	(g)	*365	Apr. 7, 1924	1.1	*24.9	*2.02	*27.49	*19.7	*21.80
1925	(h)	*170	Feb. 13, 1925*	1.4	*17.0	*1.38	*18.78	*19.1	*21.11
1926	621, 1231	*113	Apr. 10, 1926*	.7	*16.0	*1.30	*17.66	*15.2	*16.73
1927	641, 1231	*242	Mar. 18, 1927	1.0	20.8	1.69	22.87	29.4	32.42
1928	661, 1231	*885	Nov. 4, 1927	2.5	39.2	3.19	43.26	29.4	32.48
1929	681, 1231	*255	Mar. 15, 1929*	.3	*22.4	*1.82	*24.72	*20.9	*23.12
1930	696, 1231	*185	Mar. 26, 1930	.6	11.6	.943	12.82	11.6	12.82
1931	711, 1231	*195	May 24, 1931	.8	13.1	1.07	14.45	13.7	15.13
1932	726, 1231	*395	Apr. 1, 1932*	.8	13.8	1.12	15.26	15.7	17.36
1933	741, 1231	*280	Apr. 19, 1933	1.2	23.3	1.89	25.82	23.8	26.31
1934	756, 1231	*560	Apr. 12, 1934	.9	21.5	1.75	23.72	22.5	24.78
1935	761, 1231	*185	Jan. 10, 1935	.8	18.9	1.54	20.87	15.7	17.33
1936	801, 821	1,540	Mar. 19, 1936	1.0	22.6	1.84	25.06	25.0	27.65
1937	821	205	May 15, 1937	1.0	24.6	2.00	27.14	26.8	29.58
1938	851	1,070	Sept. 21, 1938	1.6	28.0	2.28	30.91	28.8	31.80
1939	871, 1231	*309	Dec. 6, 1938	.9	23.1	1.88	25.56	18.3	*20.21
1940	891	364	Apr. 13, 1940	1.2	20.7	1.68	22.97	21.6	23.95
1941	921, 1231	*94	Dec. 30, 1940	.9	11.0	.894	12.15	9.56	10.55
1942	951	495	Mar. 9, 1942	.8	14.7	1.20	16.20	17.5	19.28
1943	971	130	Mar. 27, 1943	1.2	21.1	1.72	23.32	20.0	22.08
1944	1001, 1231	*164	Apr. 25, 1944*	1.3	17.0	1.38	18.79	16.7	18.53
1945	1031	320	Apr. 26, 1945	3.1	27.6	2.24	30.44	29.2	32.24
1946	1051	235	Mar. 9, 1946	1.6	20.8	1.69	23.00	17.6	19.47
1947	1081	123	Apr. 7, 1947	1.6	18.3	1.34	18.25	17.4	19.21
1948	1111	250	Mar. 25, 1948	.9	21.0	1.71	23.21	19.9	21.97
1949	1141, 1231	*155	Jan. 6, 1949*	.5	13.1	1.07	14.44	12.8	14.11
1950	1171	226	Apr. 21, 1950	.6	14.6	1.19	16.15	-	-

\* Revised.

† Corrected.

\* Not previously published; estimated on basis of records for nearby stations.

a In W.S.P. 451, 1051, 1231.

b In W.S.P. 501, 1051, 1231.

c In W.S.P. 501, 1051, 1231.

d In W.S.P. 521, 1051, 1231.

e In W.S.P. 541, 1051, 1231.

f In W.S.P. 561, 1051, 1231.

g In W.S.P. 581, 1051, 1231.

h In W.S.P. 601, 1051, 1231.

275. Millers River at Wendell, Mass.

Location.--Lat 42°35'50", long. 72°21'40", on left span of Boston and Maine Railroad bridge about 300 ft west of Wendell Depot, Franklin County, and about 800 ft downstream from Moss Brook.

Drainage area.--354 sq mi.

Gage.--Chain gage. Altitude of gage is about 465 ft above mean sea level (from topographic map).

Remarks.--Diurnal fluctuation caused by power plant upstream.

Monthly and yearly mean discharge, in cubic feet per second

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1909	-	-	-	-	-	-	221	133	113	76.7	55.4	89.2	-

Monthly and yearly runoff, in inches

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	The year
1909	-	-	-	-	-	-	0.72	0.43	0.36	0.25	0.17	0.29	-

## 276. 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. Prior to Jan. 1, 1939, 370 sq mi.

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, 1938, 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.--36 years (1914-50), 618 cfs.

Extremes.--1914-50: 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.

Remarks.--Flow regulated by power plants, Lake Monomac, and other reservoirs, and at high flow by Birch Hill (see p. 284) and Tully (see p. 285) Reservoirs. Runoff adjusted for change in contents of Birch Hill and Tully Reservoirs.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1914	-	-	-	-	-	-	-	-	-	-	160	125	-
1915	119	103	82.5	652	1,010	530	695	518	190	742	843	230	471
1916	243	244	633	922	1,000	1,010	1,930	878	842	570	350	465	755
1917	359	365	557	548	351	1,490	1,290	829	830	383	407	320	648
1918	313	461	244	178	532	1,370	1,550	594	444	222	150	295	528
1919	300	358	664	698	337	1,400	1,100	1,220	309	256	157	306	595
1920	220	765	774	268	165	1,890	2,770	1,230	749	304	342	251	813
1921	477	581	1,540	738	397	1,600	1,460	1,260	291	545	283	154	782
1922	152	343	698	328	453	1,540	1,910	1,020	1,640	1,080	421	457	837
1923	330	343	344	881	656	1,110	1,940	990	316	160	131	91.3	606
1924	157	436	945	1,100	508	860	2,150	862	306	139	112	190	630
1925	111	137	267	85.3	798	1,220	1,020	497	293	391	261	210	438
1926	289	532	750	552	368	739	1,700	536	276	173	128	94.9	513
1927	166	639	415	283	377	1,580	850	665	379	285	406	292	511
1928	448	1,620	1,480	869	736	693	1,010	840	972	701	1,050	972	948
1929	434	372	376	604	588	1,610	1,720	1,310	448	221	106	85.7	657
1930	89.5	145	146	319	438	689	632	378	268	274	104	90.6	297
1931	87.6	186	143	143	132	585	1,670	835	760	184	174	133	417
1932	172	170	443	884	673	588	1,820	498	178	140	103	142	482
1933	412	845	438	637	680	980	2,870	489	235	112	177	677	716
1934	588	452	404	561	278	1,611	2,279	859	535	172	154	365	691
1935	467	592	829	1,087	641	1,367	1,124	548	678	391	127	190	671
1936	136	257	317	717	313	3,989	1,662	434	251	151	158	152	715
1937	274	291	991	1,288	803	686	1,326	1,113	822	407	222	320	711
1938	313	866	915	1,139	850	761	936	624	815	1,118	811	5,051	1,032
1939	710	522	1,312	555	494	1,207	1,999	577	234	101	191	82.7	665
1940	74.0	299	349	151	161	429	3,584	1,215	712	290	115	111	621
1941	102	410	541	467	554	407	816	393	187	180	89.5	122	354
1942	98.9	233	327	377	235	1,975	985	414	492	403	184	141	491
1943	220	669	718	599	515	1,292	1,195	1,623	441	150	226	135	650
1944	250	842	354	127	199	952	1,673	564	936	370	134	324	558
1945	226	259	464	585	380	1,874	1,282	1,652	973	819	354	272	765
1946	259	437	606	732	569	1,609	724	1,011	828	297	315	179	632
1947	357	172	185	387	901	1,135	1,498	937	548	214	147	141	549
1948	85.0	468	296	195	393	1,685	1,424	1,297	1,132	422	117	77.0	632
1949	87.3	308	246	945	843	1,016	955	607	155	89.2	58.5	80.4	447
1950	82.9	114	296	721	551	839	1,494	589	499	127	89.6	132	459

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1914	-	-	-	-	-	-	-	-	-	-	0.50	0.38	-
1915	0.37	0.31	0.26	2.03	2.84	1.65	2.10	1.61	0.57	2.32	2.63	0.69	17.38
1916	.76	.73	1.97	2.87	2.91	3.15	5.82	2.73	2.54	1.78	1.09	1.41	27.76
1917	1.12	1.10	1.74	1.71	.99	4.65	3.89	2.58	2.50	1.20	1.27	.97	23.72
1918	.97	1.40	.76	.55	1.50	4.27	4.68	1.86	1.34	.69	.47	.88	19.37
1919	.94	1.08	2.06	2.18	.95	4.36	3.31	3.81	.93	.80	.49	.92	21.83
1920	.69	2.31	2.41	.83	.48	5.89	8.36	3.83	2.25	.95	1.07	.76	29.83
1921	1.49	1.75	4.80	2.29	1.11	4.98	4.41	3.93	.88	1.70	.88	1.46	28.68
1922	.47	1.05	2.18	1.02	1.27	4.80	5.76	3.18	4.94	3.37	1.31	1.38	30.71
1923	1.03	1.03	1.07	2.74	1.84	3.46	5.85	3.09	.96	.50	.41	.28	22.25
1924	.49	1.32	2.94	3.42	1.48	2.05	6.48	2.69	.92	.43	.35	.57	23.14
1925	.35	.41	.83	.26	2.25	3.81	3.08	1.55	.88	1.22	.81	.63	16.08
1926	.90	1.61	2.34	1.72	1.08	2.31	5.12	1.67	.83	.54	.40	.29	18.81
1927	.52	1.95	1.29	.82	1.06	4.92	1.96	2.08	1.14	.89	1.27	.88	18.76
1928	1.40	4.89	4.61	2.71	2.15	2.16	3.05	2.62	2.95	2.18	3.27	2.95	34.90
1929	1.35	1.13	1.18	1.69	1.89	5.02	5.19	4.08	1.35	.69	.53	.26	24.12
1930	.28	.44	.46	.99	1.23	2.14	1.91	1.18	.81	.85	.32	.27	10.88

Monthly and yearly runoff, in inches (adjusted), of Millers River at Erving, Mass.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	.27	.56	.44	.44	.37	1.76	5.03	2.61	2.29	.57	.54	.40	15.28
1932	.54	.51	1.38	2.76	1.96	1.83	5.49	1.56	.54	.44	.32	.43	17.76
1933	1.28	2.54	1.36	1.98	1.92	3.08	8.96	1.52	.70	.35	.55	2.04	26.26
1934	1.83	1.56	1.26	1.75	.78	5.02	6.87	2.68	1.66	.54	.48	1.10	25.33
1935	1.45	1.78	2.58	3.39	1.80	4.25	3.39	1.71	2.04	1.22	.40	.57	24.58
1936	.42	.78	.99	2.24	.91	12.45	5.01	1.35	.76	.47	.49	.46	26.33
1937	.85	.88	3.09	4.01	2.26	2.13	3.99	3.47	2.48	1.27	.69	.97	26.09
1938	.98	2.61	2.85	3.55	2.40	2.38	2.82	1.95	2.46	3.48	2.52	9.14	37.14
1939	2.21	1.57	4.09	1.65	1.38	3.71	5.95	1.78	.70	.31	.59	.25	24.19
1940	.23	.89	1.07	.46	.46	1.32	10.66	3.74	2.12	.89	.35	.33	22.52
1941	.31	1.22	1.66	1.43	1.54	1.25	2.43	1.21	.56	.55	.28	.36	12.80
1942	.30	.69	1.00	1.16	.65	6.07	2.93	1.27	1.46	1.24	.57	.42	17.76
1943	.68	1.99	2.21	1.84	1.43	3.97	3.56	4.99	1.31	.46	.70	.40	23.54
1944	.77	2.57	1.03	.40	.58	2.92	4.97	1.72	2.81	1.11	.41	.97	20.26
1945	.69	.79	1.43	1.79	1.10	5.72	3.80	5.07	2.90	2.52	1.08	.81	27.70
1946	.60	1.30	1.90	2.24	1.58	4.92	2.15	3.12	2.45	.91	.97	.54	22.86
1947	1.89	.51	.59	1.25	2.47	3.45	4.46	2.88	1.63	.66	.45	.42	19.86
1948	.26	1.39	.91	1.60	1.13	5.60	3.91	4.00	3.56	1.29	.36	.23	22.94
1949	.27	.92	.81	2.88	2.35	5.10	2.83	1.86	.46	.27	.18	.24	18.17
1950	.26	.34	.91	2.24	1.52	2.62	4.40	1.81	1.48	.39	.28	.39	16.64

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30										Calendar year		
		Observed					Adjusted					Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date											
1914	415	-	-	-	-	-	-	-	-	-	-	-	-	-
1915	401	*5,280	Feb. 25, 1915	-	471	-	1.29	17.38	543	-	-	-	-	19.90
1916	431	3,830	Apr. 2, 1916	41	755	-	2.05	27.76	768	-	-	-	-	28.26
1917	451	4,820	Mar. 28, 1917	63	646	-	1.74	23.72	623	-	-	-	-	22.89
1918	471	3,090	Apr. 3, 1918	14	528	-	1.43	19.37	554	-	-	-	-	20.32
1919	501	3,780	May 25, 1919	22	595	-	1.60	21.83	631	-	-	-	-	23.16
1920	501, 641	6,020	Mar. 28, 1920	56	813	-	2.19	29.83	885	-	-	-	-	32.46
1921	521	5,300	May 2, 1921	32	782	-	2.10	28.68	663	-	-	-	-	24.32
1922	541	4,850	June 22, 1922	21	837	-	2.26	30.71	822	-	-	-	-	30.16
1923	561	5,050	Apr. 7, 1923	18	606	-	1.64	22.25	650	-	-	-	-	23.87
1924	581	5,270	Apr. 8, 1924	13	630	-	1.70	23.14	544	-	-	-	-	19.98
1925	601	3,900	Feb. 12, 1925	9	458	-	1.19	16.06	527	-	-	-	-	19.34
1926	621	3,090	Apr. 10, 1926	8	513	-	1.39	18.81	482	-	-	-	-	17.70
1927	641	3,950	Mar. 16, 1927	12	511	-	1.38	18.76	705	-	-	-	-	25.92
1928	661, 781	5,740	Nov. 4, 1927	17	948	-	2.57	34.90	752	-	-	-	-	27.66
1929	681	3,950	Apr. 22, 1929	27	657	-	1.77	24.12	589	-	-	-	-	21.64
1930	696	1,840	Mar. 27, 1930	24	297	-	.804	10.88	300	-	-	-	-	10.97
1931	711	3,020	Mar. 30, 1931	11	417	-	1.13	15.28	449	-	-	-	-	16.44
1932	726	4,800	Apr. 2, 1932	34	482	-	1.31	17.76	558	-	-	-	-	20.51
1933	741, 781	6,000	Apr. 19, 1933	43	716	-	1.95	26.26	696	-	-	-	-	25.53
1934	756	4,920	Apr. 13, 1934	72	691	-	1.87	25.33	728	-	-	-	-	26.69
1935	781	4,400	Jan. 10, 1935	24	671	-	1.81	24.58	571	-	-	-	-	20.96
1936	801	19,700	Mar. 19, 1936	12	715	-	1.93	26.33	786	-	-	-	-	28.96
1937	821	3,390	Dec. 21, 1936	64	711	-	1.92	26.09	756	-	-	-	-	27.71
1938	851	29,000	Sept. 22, 1938	63	1,012	-	2.74	37.14	1,051	-	-	-	-	38.57
1939	871	*4,800	Dec. 7, 1938*	47	665	-	1.78	24.19	510	-	-	-	-	18.51
1940	891	7,000	Apr. 13, 1940	25	621	-	1.66	22.52	649	-	-	-	-	23.52
1941	921	*1,850	Apr. 8, 1941*	44	354	-	.944	12.80	321	-	-	-	-	11.60
1942	951	4,750	Mar. 9, 1942	71	451	-	1.31	17.76	570	-	-	-	-	20.65
1943	971	2,580	May 23, 1943	79	550	-	1.73	25.54	656	-	-	-	-	23.03
1944	1001	4,890	June 25, 1944	47	558	558	1.49	20.26	518	-	-	-	-	18.80
1945	1031	3,410	May 19, 1945	115	765	765	2.04	27.70	795	-	-	-	-	28.79
1946	1051	4,070	Mar. 9, 1946	98	632	632	1.69	22.68	583	-	-	-	-	21.07
1947	1081	2,550	Apr. 7, 1947	77	549	548	1.46	19.86	559	-	-	-	-	20.23
1948	1111	5,690	Mar. 22, 1948	29	632	632	1.69	22.94	615	-	-	-	-	22.38
1949	1141	2,570	Jan. 7, 1949	29	447	447	1.19	16.17	435	-	-	-	-	15.70
1950	1171	2,600	Mar. 30, 1950	38	459	459	1.22	16.64	-	-	-	-	-	-

\* Revised.

\* Not previously published.

## 277. Connecticut River at Turners Falls, Mass.

Location.--Lat 42°36'40", long. 72°33'20" at dam of Western Massachusetts Electric Co., Turners Falls, Franklin County, 0.2 mile upstream from Falls River.

Drainage area.--7,163 sq. mi.

Average discharge.--35 years (1915-50), 11,690 cfs (adjusted for storage).

Remarks.--Flow regulated by power plants and by lakes and reservoirs having a combined usable capacity of about 19 billion cu ft. Runoff adjusted for change in contents in First and Second Connecticut Lakes (see p. 229), Lake Francis since March 1940 (see p. 231), Comerford Station Pond since August 1930 (see p. 236), Union Village Reservoir since October 1949 (see p. 249), four reservoirs in Mascoma River Basin since October 1928 (see p. 257), Sunapee Lake since October 1928 (see p. 261), Surry Mountain Reservoir since November 1942 (see p. 271), Birch Hill Reservoir since October 1943 (see p. 284), and Tully Reservoir since October 1948 (see p. 285).

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

## CONNECTICUT RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second (observed), of Connecticut River at Turners Falls, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1915	-	-	-	6,280	13,600	10,300	19,800	9,800	4,050	16,400	14,300	4,580	-
1916	4,620	6,090	9,480	12,600	14,200	10,100	36,900	19,500	16,700	9,970	5,540	4,800	12,500
1917	5,980	6,980	10,700	6,450	4,200	14,000	32,800	20,100	22,400	6,980	7,100	4,390	11,800
1918	8,130	10,100	3,750	2,980	4,950	15,400	33,900	17,500	7,550	4,500	3,710	7,850	10,000
1919	13,700	15,800	12,000	9,080	5,130	23,400	27,800	22,500	6,080	5,180	2,020	5,570	12,200
1920	7,950	17,200	10,400	3,540	2,750	22,900	52,000	23,700	7,620	5,080	4,390	4,760	15,500
1921	8,230	8,880	20,800	9,800	5,210	41,000	24,300	11,600	3,540	5,390	3,400	1,560	11,900
1922	3,190	7,860	9,510	4,460	4,580	24,800	50,800	18,000	19,200	11,100	5,300	4,440	15,600
1923	3,940	4,510	2,750	7,060	4,130	10,100	39,900	25,400	6,930	3,210	2,100	2,370	9,360
1924	4,750	10,200	18,500	12,400	5,410	8,010	38,600	28,500	5,830	4,250	3,650	11,600	12,600
1925	5,340	7,540	7,050	3,100	15,700	28,300	26,200	12,400	7,130	9,060	4,370	5,960	11,000
1926	12,700	19,800	11,200	6,560	5,000	8,120	32,700	25,000	9,880	6,190	3,410	4,090	12,100
1927	8,440	16,300	7,170	7,620	5,600	22,200	17,300	14,100	6,150	4,000	3,980	4,190	9,630
1928	11,400	36,800	23,600	12,700	10,100	15,200	35,500	26,800	16,300	7,350	8,490	7,060	17,400
1929	7,550	7,950	2,760	8,390	5,600	25,200	37,800	27,200	8,040	5,240	3,690	3,850	12,500
1930	3,710	5,460	4,330	9,670	9,210	18,100	21,900	15,100	12,400	5,560	3,280	2,290	9,240
1931	2,580	5,300	4,590	2,880	2,780	8,010	30,100	17,600	13,500	8,400	3,680	5,020	8,700
1932	4,680	7,590	8,800	14,600	8,650	6,930	41,200	15,000	5,120	8,870	3,990	4,030	10,400
1933	7,000	18,200	7,570	7,740	8,430	7,600	50,400	18,400	5,300	2,450	5,390	4,830	11,700
1934	5,994	6,176	6,556	8,487	3,958	10,890	52,540	15,840	7,081	3,115	2,338	3,959	10,400
1935	4,601	11,650	9,399	15,170	6,468	17,120	27,020	19,170	13,590	8,727	3,462	5,342	11,640
1936	3,550	7,841	7,312	7,070	4,240	64,400	31,610	18,050	4,354	3,339	2,204	3,614	15,190
1937	8,670	9,904	13,170	18,790	12,450	7,586	33,570	38,490	13,150	7,008	3,763	2,792	14,120
1938	7,618	12,930	11,180	11,010	13,310	17,250	25,030	12,640	5,420	8,424	7,574	27,700	13,160
1939	10,200	9,262	24,190	8,233	7,514	11,790	41,220	26,710	7,768	4,195	3,655	2,305	13,110
1940	4,597	7,966	5,673	2,951	2,224	3,423	43,670	41,080	12,570	5,443	2,392	4,495	11,360
1941	3,267	12,920	9,188	8,897	8,174	5,467	23,670	6,954	4,217	4,847	2,652	2,759	7,714
1942	3,934	6,889	5,486	7,199	3,752	17,890	35,720	15,710	11,950	4,010	1,918	2,585	9,753
1943	4,317	11,240	8,695	5,538	7,006	17,580	25,600	34,770	13,230	5,680	9,431	6,456	12,490
1944	7,984	17,790	7,098	4,505	4,276	10,390	35,520	21,920	9,847	4,812	2,805	4,509	10,930
1945	7,700	7,627	7,141	9,191	6,168	33,790	31,300	31,730	16,270	11,160	4,165	6,256	14,430
1946	15,740	14,780	11,890	10,710	8,416	31,300	16,420	19,110	11,140	4,032	5,975	3,849	12,830
1947	9,056	9,333	8,553	9,347	12,540	17,480	36,890	29,190	23,560	8,628	4,614	2,979	14,240
1948	1,955	4,752	3,243	2,935	4,613	27,470	27,960	25,500	11,490	5,188	3,192	1,974	9,862
1949	1,621	8,612	8,204	17,820	10,050	18,410	22,460	11,900	4,662	2,454	2,282	2,953	16,506
1950	3,070	5,614	8,808	12,220	8,631	13,300	40,470	13,930	8,524	3,337	3,033	4,240	10,400

## Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1915	-	-	-	1.01	1.98	1.66	3.08	1.58	0.63	2.64	2.31	0.71	-
1916	0.74	0.95	1.52	2.03	2.14	1.63	5.75	3.14	2.60	1.60	.89	.75	23.74
1917	.94	1.06	1.71	1.02	.60	2.25	5.12	3.33	3.49	1.11	1.15	.67	22.45
1918	1.28	1.58	.56	.44	.71	2.48	5.32	2.86	1.18	.73	.55	1.20	19.87
1919	2.27	2.48	1.95	1.44	.68	3.75	4.40	3.62	.92	.47	.30	.87	23.15
1920	1.29	2.72	1.67	.48	.39	3.69	8.18	3.86	1.15	.83	.68	.71	25.63
1921	1.31	1.40	3.40	1.34	.73	6.68	3.78	1.82	.54	.86	.49	.23	22.58
1922	.52	1.25	1.53	.69	.65	4.01	8.02	2.94	3.00	1.79	.85	.63	25.88
1923	.56	.68	.45	1.14	.57	1.61	6.29	4.17	1.07	.49	.30	.31	17.64
1924	.78	1.82	3.00	2.02	.77	1.27	6.06	4.67	.85	.69	.57	1.84	24.12
1925	.81	1.15	1.14	.43	2.30	4.59	4.16	1.98	1.14	1.46	.68	.92	20.76
1926	2.09	3.10	1.79	1.05	.69	1.19	5.11	4.17	1.54	.99	.51	.52	22.75
1927	1.38	2.57	1.15	.84	.77	3.58	2.77	2.33	1.04	.65	.60	.58	18.26
1928	1.87	5.81	3.79	1.98	1.41	2.12	5.59	4.44	2.54	1.16	1.35	1.11	33.17
1929	1.23	1.20	1.05	1.34	.76	4.10	6.01	4.44	1.23	.77	.52	.55	23.20
1930	.59	.88	.67	1.59	1.34	2.96	3.47	2.49	1.92	.87	.56	.40	17.74
1931	.36	.85	.69	.40	.37	1.27	4.84	2.94	2.12	1.36	.58	.81	16.59
1932	.77	1.13	1.30	2.33	1.21	1.05	6.57	2.20	.78	1.13	.59	.60	19.66
1933	1.15	2.87	1.13	1.22	.86	1.18	8.07	3.06	.79	.39	.98	.73	22.31
1934	.97	.94	.99	.36	.52	1.74	8.42	2.62	1.10	.47	.32	.63	19.68
1935	.73	1.84	1.44	2.41	.82	2.77	4.35	3.17	2.15	1.38	.50	.52	22.08
1936	.53	1.26	1.09	.70	.57	10.56	4.96	2.95	.64	.54	.33	.54	25.04
1937	1.42	1.52	2.08	3.04	1.55	2.77	5.39	6.53	2.06	1.12	.58	.40	26.77
1938	.99	2.03	1.73	1.72	1.86	2.77	4.03	2.10	1.40	1.40	1.20	4.35	25.02
1939	1.56	1.41	3.88	1.20	1.06	1.84	6.57	4.44	1.22	.67	.56	.35	24.76
1940	.76	1.23	.83	.37	.31	.51	6.97	6.88	2.00	.89	.37	.71	21.83
1941	.48	2.08	1.36	1.34	1.08	.75	3.93	1.16	.67	.82	.40	.37	14.44
1942	.69	1.14	.88	1.03	.44	2.92	5.83	2.66	1.85	.63	.29	.38	18.72
1943	.69	1.72	1.28	.79	.98	2.75	4.08	5.90	2.07	.90	1.51	.97	23.64
1944	1.32	2.76	1.04	.60	.56	1.56	5.69	3.73	1.60	.76	.40	.71	20.75
1945	1.30	1.13	1.04	1.40	.79	5.56	5.10	5.20	2.50	1.79	.64	1.00	27.45
1946	2.50	2.32	1.92	1.59	1.03	5.12	2.68	3.22	1.73	.61	.94	.55	24.21
1947	1.50	1.51	1.31	1.36	1.75	2.72	5.93	4.77	3.66	1.38	.57	.38	26.64
1948	.28	.77	.55	.42	.63	4.62	4.47	3.87	1.78	.81	.49	.21	18.90
1949	.28	1.48	1.24	2.85	1.33	2.93	3.68	2.02	.74	.34	.29	.45	17.63
1950	.47	.88	1.47	1.97	1.11	2.02	6.48	2.36	1.40	.49	.42	.64	19.71

Yearly discharge, in cubic feet per second, of Connecticut River at Turners Falls, Mass.

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1915	661	-	-	-	-	-	-	-	9,920	9,920	18.81
1916	661	-	-	918	12,500	-	1.75	23.74	12,790	12,780	24.24
1917	661	-	-	532	11,800	11,900	1.66	22.45	11,680	11,710	22.16
1918	661	-	-	552	10,000	9,980	1.39	19.87	11,660	11,700	22.16
1919	661	-	-	193	12,200	12,200	1.70	23.15	11,700	11,680	22.13
1920	661	-	-	241	13,500	13,500	1.68	25.63	13,750	13,720	26.06
1921	661	-	-	148	11,900	11,900	1.66	22.58	10,460	10,440	19.77
1922	661	-	-	196	13,600	13,700	1.91	25.88	12,820	12,810	24.27
1923	661	-	-	215	9,360	9,320	1.30	17.64	11,240	11,270	21.33
1924	661	-	-	193	12,600	12,700	1.77	24.12	11,480	11,480	21.84
1925	661	-	-	140	11,000	11,000	1.54	20.76	12,950	13,000	24.84
1926	661	-	-	140	12,100	12,000	1.68	22.75	11,070	11,050	20.87
1927	661	-	-	325	9,630	9,650	1.35	18.26	12,970	13,020	24.83
1928	661	-	-	128	17,400	17,500	2.44	33.17	13,340	13,260	25.18
1929	661	-	-	270	12,300	12,200	1.70	23.20	11,560	11,530	21.86
1930	696	-	-	373	9,240	9,350	1.31	17.74	9,150	9,228	17.80
1931	711	-	-	216	8,700	8,750	1.22	16.59	9,382	9,432	17.89
1932	741	-	-	698	10,400	10,300	1.44	19.66	11,390	11,370	21.61
1933	741	-	-	340	11,700	11,800	1.65	22.31	10,590	10,580	20.06
1934	756	-	-	358	10,400	10,400	1.45	19.68	10,960	10,990	20.79
1935	781	-	-	112	11,640	11,650	1.63	22.08	11,060	11,050	20.95
1936	801	-	-	216	13,190	13,190	1.84	25.04	14,290	14,310	27.18
1937	821	-	-	120	14,120	14,130	1.97	26.77	13,980	14,020	26.50
1938	851	-	-	148	13,150	13,200	1.84	25.02	14,310	14,310	27.12
1939	871	-	-	272	13,110	13,060	1.82	24.76	10,960	10,940	20.73
1940	891	-	-	148	11,360	11,490	1.60	21.63	11,950	12,060	22.93
1941	921	-	-	148	7,714	7,619	1.06	14.44	6,959	6,969	13.21
1942	951	-	-	145	9,753	9,871	1.38	18.72	10,420	10,400	19.72
1943	971	-	-	299	12,490	12,470	1.74	23.64	13,200	13,230	25.07
1944	1001	-	-	138	10,930	10,910	1.52	20.73	10,070	10,040	19.08
1945	1051	-	-	138	14,430	14,480	2.02	27.45	16,110	16,200	30.72
1946	1051	-	-	143	12,830	12,770	1.78	24.21	11,530	11,500	21.79
1947	1081	-	-	39	14,240	14,170	1.98	26.84	12,820	12,720	24.12
1948	1111	-	-	138	9,882	9,942	1.39	18.90	10,610	10,680	20.30
1949	1141	-	-	138	9,306	9,306	1.30	17.63	9,201	9,209	17.45
1950	1171	-	-	138	10,400	10,400	1.45	19.71	-	-	-

† Corrected.

278. East Branch Deerfield River at Somerset Reservoir, Vt.

Location.--Lat 42°58'25", long. 72°57'00", at outlet of Somerset Reservoir, 2½ miles northeast of Somerset, Windham County.

Drainage area.--30.0 sq mi.

Gage.--Staff gage. Altitude of gage is about 2,060 ft above mean sea level (from topographic map).

Remarks.--Water discharged through outlet gates measured by 40-foot Cippoletti weir a few hundred feet below reservoir outlet. During construction of reservoir, prior to June 1914, the natural flow was ascertained by means of a weir just below the regulating works, with corrections for pondage. Runoff adjusted for change in contents of Somerset Reservoir (see p. 294).

Cooperation.--Records furnished by New England Power Co.

Monthly and yearly mean discharge, in cubic feet per second (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1912	-	-	-	-	-	70.0	234	88.5	44.4	5.8	2.1	17.7	-
1913	140.8	60.7	96.0	145.7	25.4	263	96.0	76.0	10.1	9.2	6.0	18.2	79.8
1914	55.2	118	41.2	26.6	7.5	74.4	326	157	9.0	(a)	24.0	18.0	71.4
1915	12.6	32.4	26.7	94.8	122	26.1	175	48.0	10.2	139	99.3	33.0	68.1
1916	34.5	36.6	77.7	112	116	31.8	215	182	72.9	25.2	4.2	16.5	76.8

a The apparent storage release during the month, as computed from capacity curve of reservoir, exceeded total quantity passing the weir, as computed from weir table.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1912	-	-	-	-	-	2.69	8.70	3.40	1.65	0.22	0.08	0.66	-
1913	5.41	2.25	3.69	5.60	0.89	10.11	3.57	2.92	.38	.36	.23	.68	36.09
1914	2.12	4.38	1.58	1.03	.26	2.86	12.14	6.04	.33	(a)	.92	.68	32.34
1915	.49	1.21	1.03	3.64	4.25	1.00	6.52	1.85	.39	5.34	5.62	1.23	30.76
1916	1.33	1.36	2.99	4.32	4.18	1.22	8.01	6.97	2.71	.97	.16	.62	34.64

a The apparent storage release during the month, as computed from capacity curve of reservoir, exceeded total quantity passing the weir, as computed from weir table.

Yearly discharge, in cubic feet per second (adjusted), of East Branch Deerfield River at Somerset Reservoir, Vt.

Year	W.S.F. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1912	424	-	-	-	79.8	2.66	36.09	-	-
1913	424	-	-	-	71.4	2.38	32.34	-	-
1914	424	-	-	-	68.1	2.27	30.76	-	-
1915	424	-	-	-	-	-	-	-	-
1916	424	-	-	-	76.8	2.56	34.84	-	-

### 279. Somerset and Harriman Reservoirs

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. (completed early in 1913), 2,500,000,000 cu ft; Harriman Reservoir on Deerfield River at Davis Bridge, Vt. (completed in March 1924), 5,060,000,000 cu ft. Records furnished by New England Power Co.

#### Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1914	225.3	581.7	693.3	762.9	782.3	980.7	1,821.8	2,249.2	1,993.5	1,363.5	446.1	112.3
1915	146.4	231.3	302.2	558.6	853.9	924.0	1,381.5	1,504.0	1,258.2	1,495.0	1,745.8	1,495.0
1916	1,226.4	1,173.6	1,034.8	1,265.2	1,377.3	1,470.0	2,054.3	2,511.4	2,699.4	2,649.8	1,981.3	1,658.5
1917	1,282.8	1,325.9	1,174.5	925.2	482.8	638.0	1,188.0	1,656.1	1,911.3	1,838.6	1,792.9	1,354.0
1918	1,460.6	1,282.3	765.7	313.1	271.0	537.7	1,216.6	1,561.9	1,727.0	1,424.5	897.1	891.4
1919	1,027.4	1,136.3	1,266.2	1,332.6	1,118.6	1,601.3	1,877.3	2,224.9	1,992.2	1,666.2	1,482.8	1,548.7
1920	1,114.3	1,927.1	1,934.3	1,061.2	339.5	600.0	1,356.1	1,697.4	1,894.2	1,834.3	1,676.8	1,611.7
1921	1,573.4	1,781.2	2,053.6	1,778.1	1,398.6	2,137.6	2,423.5	2,490.2	2,449.3	2,250.5	1,927.7	1,498.4
1922	1,342.5	1,412.6	1,578.6	1,128.4	1,022.5	1,336.3	2,136.9	2,449.3	2,686.2	2,415.9	2,013.4	1,425.6
1923	957.6	889.3	841.2	975.5	564.9	691.9	1,454.6	1,694.4	1,638.9	1,506.2	1,466.1	1,437.6
1924	1,582.0	1,448.0	1,704.6	1,698.0	1,460.6	1,271.2	5,428.2	6,988.2	6,229.0	4,955.2	4,182.2	3,641.1
1925	2,470.0	2,599.0	2,332.3	1,388.1	2,895.8	6,286.1	6,664.8	6,653.9	6,172.9	6,172.5	4,999.4	4,319.6
1926	4,000.9	5,757.4	5,394.1	3,553.8	1,416.8	1,268.9	5,022.5	6,793.0	6,388.4	4,722.0	3,682.8	3,085.1
1927	3,283.9	4,725.7	3,636.0	2,441.9	1,206.4	3,577.0	5,408.3	6,483.2	6,262.0	5,551.7	4,512.4	3,490.6
1928	3,745.7	6,786.8	6,331.5	4,574.9	2,743.3	2,203.7	5,123.0	7,331.7	7,304.2	6,885.2	6,814.1	5,628.4
1929	5,888.0	2,612.2	2,407.9	2,407.3	1,133.7	4,301.4	6,878.9	7,342.9	6,435.4	5,079.6	3,869.6	3,064.6
1930	2,122.9	2,320.0	2,363.8	2,570.1	2,391.2	5,147.8	4,555.3	5,382.0	5,701.2	4,897.9	3,801.6	3,106.9
1931	2,390.5	2,503.1	1,613.4	1,019.1	561.0	689.6	5,561.2	6,461.7	6,397.0	6,186.6	5,197.5	4,527.5
1932	3,410.6	3,543.9	3,804.4	5,234.2	3,580.6	1,401.6	5,690.2	6,802.6	6,146.1	6,221.1	5,332.4	5,890.2
1933	4,227.7	6,071.1	4,362.5	3,090.6	1,687.8	724.9	5,625.9	6,051.4	4,403.3	3,556.6	4,201.3	4,026.0
1934	5,902.3	3,327.0	2,850.7	2,103.0	1,103.8	1,904.0	6,029.7	6,276.9	6,672.4	2,372.7	4,287.0	4,613.0
1935	4,310.3	4,979.2	4,448.8	3,084.0	1,977.2	2,359.7	4,038.7	5,259.1	5,855.5	5,726.7	5,288.4	4,085.5
1936	3,619.8	3,702.8	2,931.4	1,919.3	1,305.3	6,345.8	6,825.2	6,999.9	5,849.6	5,226.9	4,923.6	4,520.3
1937	5,354.0	4,827.7	5,862.1	5,906.0	4,309.7	3,451.2	6,337.0	7,062.4	7,308.6	7,029.5	6,536.2	6,049.9
1938	5,809.6	6,201.7	4,330.2	4,076.8	3,659.3	3,422.6	4,843.4	5,999.4	5,560.8	6,832.0	6,048.5	5,946.5
1939	5,931.1	4,924.2	5,462.0	5,848.1	2,626.1	1,710.5	5,610.8	6,068.2	5,094.5	4,969.9	4,592.8	4,100.6
1940	4,010.1	3,500.0	3,064.6	2,047.5	1,683.7	1,223.8	5,294.8	6,983.4	6,988.9	6,732.2	5,485.0	5,678.4
1941	4,988.2	5,618.1	5,735.8	4,259.0	2,900.6	1,041.3	3,559.8	4,084.3	4,444.0	4,740.7	4,249.4	3,955.5
1942	4,564.4	5,377.9	5,125.2	4,569.8	2,942.7	4,154.8	6,769.9	7,429.3	7,375.9	7,326.4	7,149.6	7,024.1
1943	6,784.9	7,027.9	6,070.1	4,510.7	3,450.8	3,384.3	5,625.9	7,351.4	7,185.6	6,800.8	6,676.2	5,781.5
1944	5,812.5	6,081.4	4,306.2	2,747.7	2,050.9	3,387.0	6,056.3	6,663.2	7,179.2	7,096.8	6,307.7	6,176.4
1945	6,148.5	5,123.1	4,471.2	4,185.0	2,945.8	6,387.6	7,264.9	7,321.0	7,168.4	7,040.8	6,306.1	6,186.5
1946	6,377.8	6,592.9	5,533.1	4,843.6	3,586.1	5,923.8	6,165.0	6,783.6	6,455.5	5,946.8	5,788.5	5,260.9
1947	5,769.5	5,806.4	5,448.1	4,993.4	4,191.8	3,229.7	5,907.8	6,867.5	7,039.9	7,043.5	6,662.3	5,631.7
1948	4,565.2	4,998.6	4,448.6	3,735.0	3,442.6	6,103.9	6,975.6	7,146.6	7,226.3	6,841.5	6,263.8	5,192.1
1949	4,849.0	5,611.6	6,858.0	5,701.7	5,391.4	5,312.9	6,382.4	6,834.0	6,136.6	6,062.4	5,749.0	5,529.0
1950	4,948.9	4,052.4	4,843.4	6,088.9	5,310.0	5,176.5	6,886.2	7,096.0	6,839.3	6,461.7	6,193.9	6,423.0

Note.--Prior to March 1924, Somerset Reservoir only.

### 280. 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.

Gage.--Water-stage recorder. Datum of gage is 517.36 ft above mean sea level, datum of 1929.

Average discharge.--37 years (1913-50), 883 cfs (adjusted for storage).

Extremes.--1913-50: 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; no flow June 17, 1921; minimum daily, 5 cfs June 17, 1921.

Remarks.--Flow regulated by Somerset and Harriman Reservoirs and by several power plants above station. Runoff adjusted for change in contents in Somerset Reservoir, and Harriman Reservoir since February 1924 (see above).



Monthly and yearly mean discharge, in cubic feet per second (observed), of Deerfield River at Charlemont, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1913	-	-	-	-	-	-	-	-	-	175	219	187	-
1914	540	1,170	818	363	298	1,360	4,120	1,230	279	477	587	190	935
1915	90.8	177	135	761	1,400	515	1,570	596	224	1,610	1,190	541	712
1916	600	715	1,180	1,290	1,130	728	2,860	1,370	890	569	427	439	1,010
1917	436	747	691	572	590	1,250	2,410	1,410	1,680	296	299	309	821
1918	727	443	433	384	808	1,480	2,500	885	407	225	305	426	749
1919	529	969	969	583	268	1,990	1,590	2,030	344	274	269	819	860
1920	699	1,450	877	440	415	2,190	3,160	1,010	875	418	389	364	1,020
1921	591	748	1,670	724	869	3,840	1,270	874	425	614	337	270	993
1922	270	691	751	537	539	2,110	3,110	1,370	1,190	318	484	437	984
1923	366	358	254	836	522	1,050	911	554	226	139	1244	706	706
1924	1,060	970	1,630	1,190	360	491	1,520	1,460	550	574	397	524	896
1925	681	429	683	526	948	1,290	964	729	619	582	665	676	730
1926	615	1,020	1,220	1,070	1,130	630	1,700	771	639	768	497	406	869
1927	453	825	840	878	915	1,430	694	555	581	616	721	700	767
1928	746	2,100	2,030	1,810	1,600	1,290	1,300	1,050	1,410	946	1,100	1,020	1,360
1929	930	863	579	667	831	1,750	2,450	1,630	666	642	527	398	995
1930	542	319	524	957	1,110	1,050	664	509	535	521	525	341	631
1931	352	407	596	389	331	429	1,630	1,400	1,330	482	477	496	693
1932	572	330	823	1,070	1,260	1,190	1,390	451	478	205	530	623	741
1933	569	1,070	1,070	1,230	1,000	760	2,330	725	753	416	226	763	905
1934	525	717	786	961	601	981	1,836	737	589	643	465	527	781
1935	603	761	1,030	1,457	1,348	1,490	898	568	336	632	712	678	874
1936	679	439	720	928	504	3,521	1,920	563	693	443	394	325	931
1937	310	904	1,133	1,766	1,694	898	1,586	1,998	485	342	333	602	983
1938	1,067	1,424	1,355	1,176	1,412	1,709	827	433	564	718	826	2,404	1,156
1939	857	915	1,214	1,106	1,172	1,527	2,217	941	594	135	267	387	943
1940	324	675	605	488	297	450	2,146	2,775	932	501	582	380	846
1941	384	705	1,048	1,033	1,294	1,106	1,167	328	188	136	319	342	667
1942	211	357	729	947	992	1,090	2,177	700	390	366	220	366	707
1943	479	1,226	1,010	971	1,113	1,485	1,737	2,889	750	321	367	419	1,062
1944	507	1,334	965	783	531	619	2,097	578	674	248	359	429	749
1945	342	717	845	751	964	2,107	1,790	2,036	1,269	1,006	502	359	1,058
1946	529	843	876	1,112	995	1,542	687	1,402	939	393	268	415	833
1947	342	344	575	874	1,005	1,491	2,994	1,926	676	517	429	525	973
1948	571	456	419	659	580	2,139	1,827	1,934	1,015	398	322	439	898
1949	219	242	1,770	2,001	1,063	1,643	948	499	401	154	189	314	786
1950	441	667	592	979	825	984	2,337	1,039	754	299	366	555	819

† Corrected.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1913	-	-	-	-	-	-	-	-	-	0.33	0.25	0.53	-
1914	1.89	4.04	2.09	1.23	0.89	4.55	13.61	4.43	0.56	1.80	0.78	0.20	35.07
1915	.32	.65	.51	2.72	4.37	1.73	5.37	1.44	.39	5.42	4.05	1.43	26.40
1916	1.57	2.14	3.60	4.39	3.52	2.41	9.50	4.90	2.96	1.75	.59	.96	38.29
1917	.95	2.33	2.04	1.53	1.17	4.17	8.08	5.03	12.97	.88	.88	.43	†30.44
1918	2.43	1.17	.77	.69	2.26	5.03	8.45	3.29	1.46	.36	.33	1.32	27.56
1919	1.84	1.98	3.25	1.94	.52	6.91	5.24	6.88	.78	.48	.64	2.32	33.06
1920	2.42	4.74	2.73	.44	.39	7.26	10.60	3.63	2.92	1.28	1.04	.99	38.44
1921	1.88	2.57	5.64	1.98	1.34	12.57	4.25	2.88	1.00	1.97	.68	.30	37.06
1922	.68	2.21	2.59	1.20	1.42	7.07	10.58	4.75	3.95	.71	1.05	.63	36.84
1923	.61	.95	.69	2.19	1.03	3.47	11.03	3.18	1.64	.56	.40	.71	26.46
1924	3.31	3.05	5.51	3.79	.80	1.65	9.90	6.65	.81	.34	.30	.86	36.97
1925	.92	1.45	1.69	.52	4.52	6.88	4.65	2.32	1.34	1.80	.77	1.28	28.34
1926	2.03	4.76	3.49	1.24	.65	1.82	9.63	4.62	1.52	.46	.34	.52	31.08
1927	1.65	4.28	1.38	1.38	1.16	7.32	4.35	3.04	1.54	1.11	1.09	.94	29.24
1928	2.71	9.99	5.85	5.92	2.54	3.36	7.40	6.09	4.20	2.69	3.38	1.77	53.90
1929	.90	1.10	1.61	.87	2.14	6.87	10.72	5.70	.98	.47	.20	.28	34.27
1930	.58	1.26	1.73	3.29	2.94	4.23	5.73	2.59	2.04	.72	.35	.23	23.69
1931	.26	1.36	.89	.52	.41	1.51	10.76	5.54	4.04	1.27	.39	.73	27.68
1932	.47	1.17	2.95	5.10	1.60	1.33	9.34	2.86	.70	.73	.65	.22	27.12
1933	2.22	5.49	1.35	2.44	1.20	1.27	12.83	2.90	.40	.28	1.51	2.15	34.04
1934	1.50	1.48	1.99	2.17	.53	4.05	10.58	2.65	2.29	.50	.21	1.80	29.75
1935	1.59	2.98	2.88	4.52	1.00	5.16	4.59	3.45	1.72	3.06	.53	.71	32.19
1936	.43	2.61	1.28	1.87	.77	17.18	6.48	2.01	.78	.69	.89	.55	35.54
1937	1.92	2.21	4.65	5.87	2.99	1.18	8.23	7.26	1.78	.76	.49	1.08	39.42
1938	3.29	4.84	2.12	3.45	3.55	5.16	4.24	2.72	1.22	3.80	1.68	8.50	44.57
1939	1.57	1.60	4.48	1.61	1.93	3.78	11.49	3.54	.70	.28	.46	.62	32.06
1940	.93	1.48	1.41	.35	.45	.88	11.45	10.85	2.88	1.29	.31	1.40	33.68
1941	.41	2.91	3.49	1.53	2.10	1.32	6.59	1.67	1.01	.79	.39	.75	22.96
1942	1.40	2.01	2.02	2.36	.92	4.92	8.59	3.25	1.14	.49	.37	.30	30.17
1943	1.25	4.06	2.09	1.23	1.94	4.61	8.02	11.23	2.12	1.21	.22	.38	36.30
1944	1.65	4.12	.96	.64	.75	3.54	9.66	2.56	2.69	.69	1.02	1.17	28.63
1945	1.05	.99	1.92	2.05	1.30	10.80	6.56	6.55	3.73	3.05	.72	.96	39.68
1946	1.91	2.85	1.53	2.72	1.37	7.69	2.40	5.20	2.50	.65	.67	.70	30.19
1947	1.65	1.11	1.40	2.24	1.94	3.60	12.41	7.27	2.29	1.85	.91	.59	36.86
1948	.31	2.16	1.16	.77	1.36	9.98	6.57	6.36	3.22	.81	.34	.08	33.24
1949	.29	1.65	7.12	5.00	2.69	5.14	4.19	2.13	.41	.34	.23	.71	29.90
1950	.71	.99	2.83	4.60	1.45	2.98	9.24	3.56	2.02	.50	.91	1.98	31.77

† Corrected.

Yearly discharge, in cubic feet per second, of Deerfield River at Charlemont, Mass.

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year.		
		Observed				Adjusted			Observed		
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1914	381	18,200	Apr. 20, 1914	30	935	936	2.59	35.07	774	761	28.53
1915	401, 781	38,200	July 8, 1915	29	712	756	2.09	28.40	889	912	34.23
1916	451	11,500	Dec. 26, 1915	191	1,010	1,020	2.82	38.29	960	965	36.30
1917	451	9,760	Apr. 21, 1917	90	821	814	2.25	30.44	799	786	29.49
1918	471	*8,250	Apr. 3, 1918*	46	749	735	2.03	27.56	791	806	30.26
1919	501	27,500	Mar. 28, 1919	64	860	881	2.43	33.06	937	956	35.88
1920	501	18,400	Apr. 13, 1920	81	1,020	1,020	2.82	38.44	1,023	1,029	38.64
1921	521	32,400	Mar. 9, 1921	5	993	991	2.74	37.06	882	867	32.45
1922	541	21,000	Apr. 12, 1922	62	984	982	2.71	36.84	919	896	33.61
1923	561	14,900	Apr. 29, 1923	154	706	706	1.95	26.46	935	962	36.08
1924	581	16,600	Oct. 24, 1923	57	896	983	2.72	36.97	739	781	29.36
1925	601	9,330	Feb. 12, 1925	70	730	755	2.09	28.37	818	915	34.36
1926	621	7,980	Apr. 25, 1926	90	869	829	2.29	31.08	807	750	28.11
1927	641	5,470	Mar. 19, 1927*	96	767	780	2.15	29.24	998	1,079	40.46
1928	661	36,000	Nov. 3, 1927	132	1,360	1,430	3.95	53.90	1,356	1,036	38.98
1929	681	12,100	Apr. 29, 1929	28	995	914	2.52	34.27	913	912	34.23
1930	696	4,400	Mar. 26, 1930	45	631	632	1.75	23.69	628	605	22.63
1931	711	18,900	June 10, 1931	75	693	758	2.04	27.68	724	793	29.76
1932	726	6,070	Apr. 12, 1932	42	741	721	1.99	27.12	822	839	31.59
1933	741	13,000	Nov. 19, 1932	48	905	909	2.51	34.04	848	801	29.95
1934	756	11,600	Apr. 12, 1934	71	781	793	2.19	29.75	812	859	32.23
1935	781	11,300	Jan. 9, 1935	104	874	859	2.37	32.19	828	775	29.06
1936	801	32,200	Mar. 18, 1936	71	931	945	2.61	35.54	973	1,064	40.00
1937	821	15,800	May 15, 1937	72	983	1,026	2.83	38.42	1,109	1,065	39.89
1938	851	56,300	Sept. 21, 1938	108	1,156	1,189	3.28	44.57	1,084	1,119	41.97
1939	871	11,400	Apr. 19, 1939	54	943	854	2.36	32.06	827	751	28.23
1940	891	14,000	May 3, 1940	57	846	896	2.48	33.68	891	975	36.67
1941	921	4,500	Feb. 8, 1941	56	667	612	1.69	22.96	594	575	21.58
1942	951	5,950	Apr. 8, 1942	64	707	804	2.22	30.17	827	857	32.14
1943	971	14,000	May 13, 1943	95	1,062	1,023	2.83	38.35	1,051	1,005	37.68
1944	1001	13,700	June 24, 1944	85	749	762	2.10	28.63	683	688	25.86
1945	1031	15,000	Apr. 26, 1945	98	1,058	1,059	2.93	39.68	1,087	1,121	42.01
1946	1051	7,120	May 28, 1946	77	833	805	2.22	30.19	751	748	28.06
1947	1081	12,000	Apr. 12, 1947	82	973	983	2.72	36.86	988	969	36.33
1948	1111	12,200	Mar. 22, 1948	54	898	884	2.44	33.24	965	1,029	38.67
1949	1141	42,600	Dec. 31, 1948	44	786	797	2.20	29.90	740	676	25.37
1950	1171	8,280	Apr. 5, 1950	44	819	847	2.34	31.77	-	-	-

\* Revised.

† Corrected.

## 281. Deerfield River at Shelburne Falls, Mass.

Location.--Lat 42°35'58", long. 72°44'02", at power station No. 3 of New England Power Co. about half a mile downstream from Shelburne Falls, Franklin County. Prior to Jan. 1, 1914, at plant of Greenfield Electric Light and Power Co. about three-quarters of a mile downstream.

Drainage area.--500 sq mi. Prior to January 1914, 501 sq mi.

Remarks.--Flow regulated by power plants and by Somerset Reservoir since 1913. Runoff may not represent natural flow because of regulation.

Cooperation.--Records furnished by H. K. Barrows, Boston, Mass., and by the New England Power Co.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	-	274	-	122	567	-
1908	1,230	1,800	-	947	731	2,210	2,550	2,700	620	370	274	-	-
1909	-	207	236	730	1,230	904	5,060	1,350	689	152	249	313	-
1910	314	284	242	1,500	970	3,630	1,850	851	1,120	163	110	163	933
1911	132	307	169	987	301	947	3,230	986	774	148	234	668	741
1912	2,130	1,180	1,100	356	309	1,840	4,010	1,760	940	156	245	248	1,190
1913	1,450	1,650	1,430	2,430	876	3,240	1,630	849	334	181	244	212	1,210
1914	674	1,070	679	486	416	2,320	5,850	1,720	333	499	608	206	1,240
1915	108	253	173	987	1,750	732	2,300	552	266	1,920	1,850	679	959

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1907	-	-	-	-	-	-	-	-	0.61	-	0.28	1.26	-
1908	2.84	4.00	2.18	1.68	2.08	5.08	5.68	6.21	1.38	0.85	.63	-	-
1909	-	.46	.54	1.68	2.56	2.08	11.27	3.10	1.54	.35	.57	.70	-
1910	.72	.63	.56	3.45	2.02	8.35	4.12	1.96	2.50	.38	.25	.37	25.31
1911	.30	.68	.39	2.29	.63	2.18	7.20	2.27	1.73	.34	.54	1.48	20.03
1912	4.90	2.63	2.54	.84	.67	4.24	8.93	4.09	2.10	.36	.56	.55	32.41
1913	3.33	3.68	3.27	5.60	1.82	7.47	3.63	1.96	.75	.42	.56	.47	32.96
1914	1.56	2.39	1.58	1.12	.87	5.35	13.05	3.97	.74	1.15	1.41	.46	35.63
1915	.25	.56	.40	2.27	3.44	1.68	5.13	1.27	.59	4.43	4.27	1.52	25.81

Yearly discharge, in cubic feet per second, of Deerfield River at Shelburne Falls, Mass.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1909	415	-	-	-	-	-	-	960	25.76
1910	415	-	-	14	935	1.86	25.51	914	24.77
1911	415	-	-	0	741	1.48	20.03	1,060	28.73
1912	415	-	-	51	1,190	2.58	32.41	1,200	32.62
1913	415	-	-	0	1,210	2.42	32.96	1,040	28.19
1914	415	-	-	17	1,240	2.48	33.63	1,080	29.33
1915	415	-	-	0	959	1.92	25.81	-	-

## 282. North River at Shattuckville, Mass.

Location.--Lat 42°38'18" long. 72°43'32", on right bank in Shattuckville, Franklin County, 1½ miles south of Griswoldville, and 1.3 miles upstream from mouth.

Drainage area.--88.4 sq mi.

Gage.--Water-stage recorder. Datum of gage is 458.36 ft above mean sea level, datum of 1929.

Average discharge.--11 years (1939-50), 167 cfs.

Extremes.--1939-50: Maximum discharge, 10,000 cfs Dec. 31, 1948 (gage height, 9.62 ft), from rating curve extended above 3,000 cfs on basis of computation of flow over dam at gage height 9.62 ft; minimum daily, 5.1 cfs Oct. 3, 1948.

Remarks.--Diurnal fluctuation at low flow caused by mill above station; prior to 1950, greater regulation by mill.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	*61.4	*111	*101	31.4	23.7	46.2	926	440	214	76.9	29.4	48.5	*175
1941	20.6	131	182	132	216	120	291	92.5	50.9	24.8	13.4	20.9	107
1942	19.4	54.1	92.4	129	55.8	454	447	176	100	77.5	33.8	63.2	142
1943	81.5	310	215	104	158	387	518	526	146	59.1	69.5	34.9	217
1944	126	307	90.2	49.3	62.9	247	624	144	146	46.4	22.2	65.0	180
1945	41.2	61.9	141	147	109	684	426	541	250	178	75.2	47.2	226
1946	73.0	118	136	187	118	479	175	282	175	44.8	34.9	40.0	156
1947	55.8	41.2	51.3	117	146	242	794	361	146	96.4	57.8	51.5	179
1948	20.5	141	84.1	54.7	108	571	421	445	261	53.2	20.5	10.0	183
1949	12.6	55.3	299	321	210	303	328	137	33.4	17.6	18.5	25.2	147
1950	27.3	44.2	103	201	108	264	613	229	130	38.5	27.6	63.1	154

\* Not previously published; estimated on basis of records for nearby stations.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	*0.80	*1.40	*1.32	0.41	0.29	0.60	11.69	5.74	2.70	1.00	0.38	0.61	*26.94
1941	.27	1.65	2.38	1.72	2.54	1.57	3.67	1.21	.64	.32	.17	.26	16.40
1942	.25	.68	1.21	1.69	.66	5.93	5.64	2.29	1.26	1.01	.44	.80	21.86
1943	1.08	3.91	2.80	1.36	1.86	5.04	6.53	6.88	1.84	.77	.91	.44	33.38
1944	1.65	3.88	1.18	.63	.77	3.22	7.87	1.87	1.84	.60	.29	.82	24.82
1945	.54	.78	1.84	1.92	1.29	8.91	5.38	7.05	3.16	2.32	.98	.60	34.77
1946	.95	1.49	1.77	2.44	1.39	6.24	2.21	3.68	2.21	.58	.46	.50	23.92
1947	.73	.52	.67	1.53	1.71	3.15	10.02	4.70	1.84	1.26	.75	.65	27.53
1948	.27	1.78	1.10	.71	1.32	7.44	5.31	5.80	3.29	.69	.27	.13	28.11
1949	.16	.70	3.90	4.19	2.48	3.95	4.15	1.79	1.42	.23	.24	.32	22.53
1950	.36	.56	1.34	2.62	1.27	3.44	7.74	2.98	1.64	.50	.36	.80	28.61

\* Not previously published; estimated on basis of records for nearby stations.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1940	891	2,650	Apr. 12, 1940	-	175	1.98	26.94	180	27.72
1941	921	2,500	Feb. 8, 1941	6.0	107	1.21	16.40	92.8	14.24
1942	951	2,700	Mar. 22, 1942	8	142	1.61	21.86	179	27.49
1943	971	3,360	Apr. 28, 1943	6.8	217	2.45	33.38	210	32.52
1944	1001	4,150	Nov. 9, 1943	7.8	160	1.81	24.62	137	21.07
1945	1031, 1111	4,570	Apr. 26, 1945	15	226	2.56	34.77	233	35.82
1946	1051	2,130	Mar. 9, 1946	8.6	156	1.76	23.92	141	21.63
1947	1081	3,160	Apr. 12, 1947	14	179	2.02	27.53	187	28.76
1948	1111	4,520	Mar. 22, 1948	5.7	183	2.07	28.11	193	29.72
1949	1141	10,000	Dec. 31, 1948	5.1	147	1.66	22.53	130	20.03
1950	1171	2,520	Apr. 4, 1950	8.3	154	1.74	23.61	-	-

\* Not previously published.

283. Deerfield River near West Deerfield, Mass. <sup>1/</sup>

Location.--lat 42°32'09", long. 72°39'14", on right bank 0.4 mile downstream from South River, 1½ miles west of West Deerfield, Franklin County, and 2½ miles west of Deerfield.

Drainage area.--558 sq mi. Prior to December 1905, 562 sq mi (revised).

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.--10 years (1940-50), 1,223 cfs (adjusted for storage).

Extremes.--1904-5, 1940-50: Maximum discharge, 48,500 cfs Dec. 31, 1948 (gage height, 15.43 ft); minimum daily, 46 cfs Aug. 3, 1947.

Remarks.--Flow regulated by Somerset and Harriman Reservoirs (see p. 294) and by several power plants above station. Runoff adjusted for change in contents of Somerset and Harriman Reservoirs since October 1940.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1904	-	-	-	-	-	-	4,050	2,270	1,200	411	476	915	-
1905	983	336	-	-	-	-	3,380	716	682	421	588	2,110	-
1906	630	696	-	-	-	-	-	-	-	-	-	-	-
1941	451	998	1,461	1,301	1,739	1,361	1,783	516	316	209	370	382	901
1942	248	457	947	1,241	1,127	2,200	3,068	1,109	597	566	542	552	1,034
1943	673	1,919	1,571	1,261	1,508	2,397	2,772	3,945	1,105	479	505	516	1,554
1944	756	1,896	1,226	981	893	1,140	3,240	937	998	369	441	605	1,101
1945	458	944	1,256	1,103	1,354	3,531	2,683	3,125	1,850	1,369	688	482	1,573
1946	705	1,116	1,187	1,534	1,289	2,469	1,041	1,953	1,397	531	356	531	1,177
1947	467	440	699	1,144	1,341	2,064	4,425	2,657	981	682	531	599	1,333
1948	614	777	802	895	876	3,487	2,668	2,880	1,723	553	368	474	1,328
1949	255	370	2,145	2,718	1,535	2,235	1,685	811	484	170	235	369	1,084
1950	507	759	775	1,427	1,114	1,593	3,452	1,460	1,020	362	430	621	1,123

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1904	-	-	-	-	-	-	8.04	4.66	2.39	0.84	0.98	1.82	-
1905	2.02	0.67	-	-	-	-	6.70	1.46	1.35	.86	1.21	4.18	-
1906	1.29	1.38	-	-	-	-	-	-	-	-	-	-	-
1941	.40	2.48	3.12	1.55	2.20	1.38	5.51	1.47	.91	.66	.36	.57	20.61
1942	.98	1.50	1.76	2.14	1.85	5.48	8.00	2.95	1.15	1.13	.57	1.00	27.51
1943	1.21	4.02	2.51	1.40	1.99	4.88	7.31	9.47	2.08	.69	.94	.34	36.84
1944	1.58	4.00	1.16	.78	.80	3.37	8.55	2.40	2.39	.70	.30	1.11	27.14
1945	.92	1.10	2.09	2.06	1.57	9.95	6.04	6.50	3.58	2.73	.85	.87	38.26
1946	1.60	2.40	1.64	2.64	1.44	6.90	2.27	4.51	2.54	.71	.61	.68	27.94
1947	1.33	.91	1.17	2.01	1.88	3.52	10.91	6.23	2.10	1.41	.80	.40	32.67
1948	.29	2.04	1.13	.99	1.47	9.26	6.01	6.08	3.51	.85	.31	.12	32.06
1949	.26	1.33	5.39	4.72	2.63	4.56	4.19	2.02	.43	.29	.24	.57	26.63
1950	.60	.83	2.21	3.91	1.48	3.19	8.22	3.18	1.84	.46	.68	1.42	28.02

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		Adjusted
		Momentary		Maximum	Minimum day	Mean	Mean square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1904	415	-	-	-	-	-	-	-	-	-	-
1905	415	-	-	-	-	-	-	-	-	-	-
1906	415	-	-	-	-	-	-	-	-	-	-
1941	921	#10,000	Feb. 8, 1941#	57	901	847	1.52	20.61	794	775	18.85
1942	851	10,700	Mar. 9, 1942	59	1,034	1,151	2.05	27.51	1,245	1,275	31.01
1943	971	15,700	May 13, 1943	98	1,554	1,515	2.72	36.84	1,530	1,474	35.84
1944	1001	20,100	Nov. 9, 1943	80	1,101	1,114	2.00	27.14	1,000	1,005	24.51
1945	1031	21,300	Apr. 26, 1945	80	1,573	1,573	2.82	38.26	1,602	1,636	39.79
1946	1051	10,800	May 28, 1946	74	1,177	1,148	2.06	27.94	1,059	1,057	25.71
1947	1081	17,500	Apr. 12, 1947	46	1,333	1,343	2.41	32.67	1,365	1,346	32.72
1948	1111	21,100	Mar. 22, 1948	69	1,328	1,314	2.35	32.06	1,395	1,458	35.58
1949	1141	48,500	Dec. 31, 1948	48	1,084	1,095	1.96	26.63	1,021	958	23.29
1950	1171	12,500	Apr. 5, 1950	50	1,123	1,151	2.06	28.02	-	-	-

\* Not previously published; estimated on basis of records for nearby stations.

<sup>1/</sup> Published as "at West Deerfield", 1904-5.

## 284. Connecticut River at Montague City, Mass. 1/

Location.--Lat 42°34'48", long. 72°34'30", on left bank 75 ft downstream from New York, New Haven & Hartford Railroad bridge at Montague City, Franklin County, and 1,000 ft downstream from Deerfield River.

Drainage area.--7,865 sq mi. Prior to Oct. 1, 1929, 7,915 sq mi.

Gage.--Water-stage recorder. Datum of gage is 99.87 ft above mean sea level, datum of 1929.

Prior to Oct. 1, 1917, chain gage; Oct. 1, 1917, to Oct. 8, 1921, water-stage recorder used for low stages, chain gage otherwise; and Oct. 9, 1921, to Sept. 30, 1929, water-stage recorder at site 9 miles downstream at datum 1.00 ft lower.

Average discharge.--46 years (1904-50), 13,580 cfs (adjusted for storage and to present drainage area).

Extremes.--1904-50: 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.--Flow regulated by power plants and by lakes and reservoirs having a combined usable capacity of about 27 billion cu ft. Runoff adjusted for change in contents in First and Second Connecticut Lakes since October 1916 (see p. 229), Lake Francis since March 1940 (see p. 231), Comerford Station Pond since August 1930 (see p. 236), Union Village Reservoir since October 1949 (see p. 249), four reservoirs in Mascoma River Basin since October 1928 (see p. 257), Sunapee Lake since October 1928 (see p. 261), Surry Mountain Reservoir since November 1942 (see p. 271), Birch Hill Reservoir since October 1943 (see p. 284), Tully Reservoir since October 1948 (see p. 285), and Somerset and Harriman Reservoirs since October 1913 (see p. 294).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1904	-	-	-	-	-	-	-	37,900	30,700	7,300	3,890	7,750	-
1905	12,500	6,560	4,480	2,730	2,090	17,100	38,700	15,700	8,960	7,950	9,570	20,100	12,200
1906	7,520	7,970	15,300	19,900	10,700	15,800	37,600	29,000	17,300	8,260	4,820	3,350	14,600
1907	4,720	7,170	5,490	9,450	4,700	16,800	32,400	29,600	11,400	9,070	4,830	6,770	11,900
1908	21,200	27,800	21,400	12,500	15,000	24,700	32,400	31,700	10,200	3,580	4,480	1,830	17,300
1909	1,830	2,050	3,390	5,960	12,200	14,900	56,300	28,400	10,700	3,230	2,910	2,550	12,000
1910	4,430	3,980	4,810	12,900	8,200	40,800	29,800	17,800	14,800	3,250	4,190	3,100	12,300
1911	3,350	4,960	2,810	10,000	4,160	8,960	35,700	19,400	6,070	2,250	2,950	5,470	8,820
1912	16,300	12,700	18,200	9,100	4,500	14,100	51,500	24,800	18,700	3,210	4,130	7,630	15,400
1913	12,800	16,100	13,900	23,000	12,400	42,300	30,300	15,200	9,100	3,500	3,130	2,270	15,400
1914	5,910	9,260	7,530	3,650	5,170	15,300	54,600	26,900	5,220	4,340	5,160	3,480	11,900
1915	2,510	3,390	4,830	5,960	15,700	13,200	21,900	11,000	4,400	18,800	17,600	5,690	10,300
1916	5,690	7,200	11,500	16,900	21,700	13,700	45,400	23,800	20,400	11,900	6,370	5,650	15,800
1917	7,010	8,180	14,000	7,930	4,640	17,200	39,300	24,500	26,400	7,930	8,020	5,180	14,200
1918	8,780	12,200	4,850	3,990	7,370	22,600	41,200	20,500	8,760	5,110	4,300	8,640	12,300
1919	15,000	18,000	14,200	10,600	6,300	28,200	31,700	28,100	6,840	3,660	2,580	6,790	14,400
1920	8,730	20,000	14,400	5,200	3,950	28,500	59,100	29,200	9,730	6,210	5,970	5,510	16,300
1921	9,380	10,300	24,700	11,500	7,620	45,700	28,500	15,100	4,360	7,600	4,430	2,370	14,400
1922	3,420	8,990	13,100	6,750	6,880	33,400	57,600	22,300	22,300	13,300	6,120	5,220	16,600
1923	4,620	5,160	4,440	8,780	5,760	11,700	46,800	30,400	8,400	3,530	2,660	2,950	11,300
1924	6,390	11,600	23,700	18,900	7,300	10,900	42,300	33,400	7,000	5,300	4,650	15,400	15,400
1925	6,700	8,410	9,070	4,460	22,300	32,300	30,200	14,500	8,320	10,500	5,880	7,460	13,300
1926	14,300	21,900	15,400	9,540	8,620	11,700	38,500	29,900	11,400	7,170	3,970	4,430	14,700
1927	9,800	18,300	9,770	7,870	7,520	27,900	19,900	15,900	7,430	4,790	4,280	5,080	11,500
1928	13,200	42,300	28,900	16,000	13,600	15,700	39,100	30,600	19,900	9,030	10,900	9,640	20,700
1929	8,630	9,110	8,710	10,000	6,540	28,300	43,000	34,600	9,310	5,730	5,830	3,560	14,400
1930	4,400	6,080	5,230	11,600	11,400	20,400	23,700	16,500	14,000	6,580	4,180	2,760	10,600
1931	3,100	6,240	5,680	3,790	3,550	9,100	35,800	20,000	15,900	9,680	4,940	6,130	10,300
1932	5,890	8,270	10,100	17,300	10,900	8,730	42,200	14,100	6,150	7,720	5,100	5,110	11,800
1933	8,260	21,200	9,730	10,700	8,840	9,750	61,400	20,800	6,810	3,330	6,400	6,810	14,400
1934	7,070	7,784	8,635	8,484	5,857	13,800	60,240	18,350	8,638	4,182	3,090	5,478	12,590
1935	6,009	13,440	12,730	19,640	8,957	20,250	27,530	21,730	15,170	11,110	4,690	4,540	13,830
1936	4,721	8,921	9,110	8,839	5,141	71,920	34,580	19,520	5,286	3,969	2,688	4,172	14,980
1937	9,829	12,180	16,930	23,320	16,240	9,417	37,560	44,710	15,750	8,540	4,828	3,942	16,940
1938	8,068	16,030	14,120	14,650	16,240	21,090	27,440	14,660	7,026	10,440	9,664	32,660	16,010
1939	12,910	11,850	27,280	10,600	9,811	15,080	48,250	30,310	9,611	5,019	4,474	2,988	15,700
1940	5,359	9,618	6,973	3,868	2,938	4,316	48,550	47,000	15,550	7,028	3,507	5,673	13,350
1941	4,176	14,640	11,240	10,970	10,200	7,378	26,250	8,080	4,943	5,356	3,307	3,318	9,110
1942	4,568	7,931	6,978	9,241	5,586	21,200	39,880	19,760	13,200	4,952	2,565	3,776	11,520
1943	5,367	13,880	11,200	7,410	9,118	21,140	29,750	40,300	15,130	6,507	10,740	7,437	14,850
1944	8,846	20,230	8,724	5,719	5,128	11,780	39,860	24,170	11,290	5,424	3,493	5,447	12,480
1945	8,318	8,706	8,676	10,730	7,729	37,690	33,770	35,920	18,790	12,950	5,154	6,985	16,360
1946	16,970	16,290	13,640	12,490	9,882	35,290	18,620	22,250	13,410	4,774	6,539	4,628	14,620
1947	9,726	10,020	9,639	10,680	14,210	20,410	41,250	30,860	24,190	9,743	5,561	3,981	15,820
1948	2,750	5,770	4,178	3,926	5,702	31,120	30,680	26,670	13,800	5,912	3,711	2,516	11,410
1949	2,252	9,241	5,332	22,100	11,700	20,390	24,860	13,120	6,388	2,828	2,641	5,531	10,630
1950	3,738	6,556	9,984	14,470	10,120	15,080	41,960	16,080	9,849	3,821	3,550	5,036	11,650

1/ Published as "at Sunderland" prior to October 1929.

Monthly and yearly runoff, in inches (adjusted), of Connecticut River at Montague City, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1904													
1905	1.82	0.92	0.65	0.40	0.28	2.49	5.34	4.47	1.03	0.57	0.65	1.09	-
							5.46	2.28	1.26	1.15	1.40	2.83	20.94
1906	1.10	1.11	2.22	2.89	1.41	2.01	5.30	4.22	2.43	1.20	.70	.47	25.06
1907	.69	1.01	.80	1.37	.62	2.42	4.56	4.31	1.61	1.33	.70	.95	20.37
1908	3.09	3.92	3.11	1.82	2.05	3.60	4.56	4.61	1.44	.52	.65	.26	29.63
1909	.27	.29	.49	.87	1.60	2.17	7.93	4.14	1.51	.47	.42	.36	20.52
1910	.65	.56	.66	1.88	1.08	5.94	4.20	2.59	2.09	.47	.61	.44	21.17
1911	.49	.70	.41	1.45	.55	1.30	5.03	2.82	.86	.33	.42	.77	15.13
1912	2.58	1.78	2.65	1.33	.61	2.05	7.26	3.81	2.63	.47	.60	1.08	26.45
1913	1.87	2.26	2.03	3.34	1.64	6.16	4.27	2.21	1.28	.51	.46	.32	26.35
1914	.86	1.30	1.10	.53	.42	2.22	7.70	3.92	.74	.63	.46	.49	20.37
1915	.36	.48	.63	.87	2.06	1.92	3.09	1.60	.62	2.74	2.56	.80	17.73
1916	.83	1.01	1.67	2.47	2.95	1.99	6.40	3.47	2.88	1.73	.93	.40	27.13
1917	.98	1.14	2.01	1.13	.58	2.51	5.58	3.69	3.74	1.14	1.18	.70	24.38
1918	1.26	1.73	.64	.52	.95	3.31	5.89	3.05	1.23	.73	.56	1.20	21.07
1919	2.26	2.53	2.09	1.53	.76	4.13	4.54	4.14	.89	.48	.34	.96	24.65
1920	1.29	2.88	2.10	.64	.48	4.18	8.36	4.32	1.35	.91	.82	.74	28.07
1921	1.35	1.48	3.64	1.67	.95	6.77	4.03	2.17	.59	1.10	.58	.30	24.63
1922	.50	1.29	1.91	.93	.88	4.90	8.26	3.30	3.17	1.92	.87	.64	28.57
1923	.58	.70	.65	1.29	.71	1.71	6.73	4.52	1.17	.49	.35	.36	19.26
1924	.92	1.66	3.49	2.77	.94	1.57	6.23	5.07	.90	.71	.62	1.89	26.77
1925	.87	1.16	1.31	.53	3.02	4.86	4.40	2.11	1.17	1.53	.78	1.01	22.75
1926	2.12	3.17	2.21	1.29	.98	1.59	5.63	4.59	1.60	.95	.49	.50	25.12
1927	1.31	2.69	1.36	1.03	.88	4.20	2.96	2.43	1.06	.67	.55	.60	19.72
1928	1.97	6.19	4.16	2.19	1.85	2.24	5.72	4.69	2.80	1.28	1.57	1.30	35.76
1929	1.18	1.18	1.16	1.53	.74	4.34	6.33	5.11	1.25	.70	.42	.41	24.35
1930	.58	.90	.75	1.74	1.50	3.07	3.50	2.50	2.00	.90	.57	.39	18.40
1931	.37	.91	.74	.46	.43	1.33	5.48	3.08	2.29	1.41	.66	.86	18.02
1932	.78	1.15	1.45	2.59	1.30	1.11	6.36	2.22	.82	1.15	.65	.63	20.21
1933	1.24	3.14	1.24	1.48	1.03	1.33	9.18	3.17	.85	.43	.97	.94	25.00
1934	1.04	1.05	1.18	1.13	.64	2.06	6.99	2.77	1.25	.51	.35	.80	21.77
1935	.86	1.96	1.78	2.84	.93	3.00	4.12	3.34	2.24	1.66	.58	.58	23.87
1936	.57	1.36	1.21	1.19	.61	11.00	4.97	2.92	.65	.55	.36	.55	25.94
1937	1.51	1.67	2.49	3.45	1.99	1.22	5.63	6.72	2.26	1.23	.66	.49	29.32
1938	1.19	2.31	1.90	2.09	2.16	3.07	4.10	2.27	.97	1.64	1.36	4.72	27.78
1939	1.76	1.58	4.02	1.35	1.21	2.11	7.20	4.60	1.32	.72	.61	.39	26.87
1940	.80	1.33	.92	.42	.36	.57	7.26	7.23	2.24	1.03	.44	.83	23.43
1941	.53	2.17	1.54	1.45	1.17	.86	6.08	1.25	.74	.84	.43	.40	15.46
1942	.75	1.23	.99	1.21	.66	3.21	6.03	2.92	1.86	.71	.35	.45	20.27
1943	.77	1.96	1.48	.91	1.11	3.02	4.43	6.28	2.19	.92	1.56	.97	25.60
1944	1.33	2.87	1.08	.64	.59	1.69	5.94	3.76	1.69	.78	.42	.77	21.56
1945	1.27	1.13	1.16	1.48	.86	5.82	5.04	5.35	2.63	1.88	.69	1.01	28.32
1946	2.47	2.34	1.95	1.67	1.07	5.38	2.77	3.43	1.88	.64	.93	.58	25.11
1947	1.49	1.48	1.34	1.41	1.77	2.85	6.16	4.79	3.43	1.42	.63	.42	27.19
1948	.30	.88	.60	.47	.70	4.89	4.51	4.00	1.95	.93	.49	.23	19.83
1949	.30	1.45	1.41	3.16	1.42	2.35	3.75	2.04	.74	.36	.30	.45	18.36
1950	.50	.88	1.55	2.19	1.16	2.09	6.21	2.48	1.45	.50	.44	.71	20.16

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30								Calendar year		
		Observed				Adjusted				Observed		Adjusted
		Momentary		maximum	Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date									
1904	471	*74,000	Apr. 30, 1904*	-	-	-	-	-	-	-	-	-
1905	471,1051	*117,000	Apr. 1, 1905	1,900	12,200	-	1.54	20.94	12,800	-	-	21.98
1906	471	*83,500	Apr. 16, 1906*	1,960	14,600	-	1.84	25.06	13,500	-	-	23.13
1907	471	*64,800	Apr. 28, 1907*	1,730	11,900	-	1.50	20.37	16,300	-	-	27.99
1908	471	*83,800	Nov. 7, 1907*	1,080	17,300	-	2.19	29.63	12,000	-	-	20.56
1909	471,1051	*119,000	Apr. 16, 1909*	1,240	12,000	-	1.52	20.62	12,400	-	-	21.34
1910	471,1051	*98,200	Mar. 2, 1910*	1,180	12,300	-	1.55	21.17	12,200	-	-	20.90
1911	471	*60,600	Apr. 16, 1911*	1,060	8,820	-	1.11	15.13	11,900	-	-	20.34
1912	471,1051	*96,000	Apr. 9, 1912*	1,730	15,400	-	1.95	26.45	15,000	-	-	25.80
1913	471,1051	*144,000	Mar. 28, 1913	1,130	15,400	-	1.95	26.35	13,700	-	-	23.45
1914	471,1051	*106,000	Apr. 21, 1914	1,290	11,900	-	1.50	20.37	10,800	-	-	18.58
1915	471	*83,800	Feb. 26, 1915	1,290	10,300	-	1.30	17.73	11,500	-	-	19.77
1916	471	*80,200	Apr. 3, 1916	2,080	15,800	-	2.00	27.13	16,200	-	-	27.75
1917	471	*66,000	Mar. 30, 1917	1,620	14,200	14,200	1.79	24.38	13,900	-	-	23.68
1918	471	*73,500	Apr. 3, 1918	945	12,300	12,300	1.55	21.07	14,100	-	-	24.32
1919	501	*85,100	Mar. 29, 1919	1,180	14,400	14,400	1.82	24.65	14,000	-	-	24.04
1920	501,1051	120,000	Mar. 27, 28, 1920	1,670	16,500	16,500	2.06	28.07	16,500	-	-	28.27
1921	521	76,500	Mar. 10, 1921	780	14,400	14,400	1.82	24.63	12,800	-	-	21.86
1922	541,1051	133,000	Apr. 15, 1922	1,180	16,600	16,700	2.11	28.57	15,700	-	-	22.80
1923	561,1051	96,000	Apr. 7, 1923	780	11,300	11,200	1.42	19.26	13,600	-	-	23.40
1924	581	60,900	Mar. 7, 1924	1,290	15,400	15,600	1.97	26.77	15,900	14,000	-	24.04
1925	601,1051	100,000	Mar. 30, 1925	1,180	17,300	13,400	1.69	22.75	15,600	15,700	-	26.91
1926	621,1051	93,500	Apr. 26, 1926	1,130	14,700	14,600	1.84	25.12	13,500	13,400	-	22.98
1927	641	72,700	Mar. 19, 1927	1,620	15,500	11,600	1.45	19.72	15,400	15,600	-	26.68
1928	(a)	179,000	Nov. 5, 1927	1,340	20,700	20,800	2.63	35.76	15,900	15,700	-	26.96
1929	681	75,700	Mar. 25, 1929	1,290	14,400	14,200	1.79	24.35	b13,480	b13,480	b23,06	
1930	741	*49,500	Apr. 9, 1930	881	10,600	10,600	1.35	18.40	10,500	10,500	-	18.19

\* Revised.

\* Not previously published; estimated on basis of weather records and records for nearby stations.

a In W.S.P. 661, 781, 1051.

b Adjusted to 7,915 sq mi drainage area.

**Yearly discharge, in cubic feet per second, of Connecticut River at Montague City, Mass.--Continued**

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year			
		Observed				Adjusted		Observed	Adjusted		
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1931	741	*72,300	Apr. 12, 1931	597	10,300	10,400	1.32	18.02	11,100	11,200	19.38
1932	726, 741	91,900	Apr. 13, 1932	1,390	11,800	11,700	1.49	20.21	13,000	13,000	22.45
1933	741	137,000	Apr. 19, 1933	968	14,400	14,500	1.84	25.00	13,200	13,100	22.65
1934	756	114,000	Apr. 13, 1934	1,040	12,590	12,600	1.60	21.77	13,310	13,380	23.10
1935	781	92,500	Jan. 11, 1935	726	13,830	13,820	1.76	23.87	13,050	12,980	22.41
1936	801	236,000	Mar. 19, 1936	640	14,980	14,980	1.90	25.94	16,340	16,450	28.47
1937	821	97,000	May 16, 1937	878	16,940	16,990	2.16	29.32	16,870	16,830	29.05
1938	851	195,000	Sept. 22, 1938	774	16,010	16,080	2.04	27.78	17,190	17,220	29.74
1939	871	98,200	Apr. 23, 1939	758	15,700	15,570	1.98	26.87	13,150	13,060	22.56
1940	891	119,000	May 5, 1940	660	13,350	13,530	1.72	23.43	14,020	14,220	24.62
1941	921	46,300	Apr. 15, 1941	528	9,110	8,963	1.14	15.46	8,232	8,222	14.19
1942	951	70,600	Apr. 9, 1942	476	11,520	11,730	1.49	20.27	12,440	12,450	21.51
1943	971	71,100	Apr. 29, 1943	1,110	14,890	14,830	1.89	25.60	15,490	15,460	26.67
1944	1001	69,600	Nov. 10, 1943	511	12,480	12,470	1.59	21.56	11,500	11,470	19.84
1945	1031	85,600	Mar. 22, 1945	815	16,360	16,410	2.09	28.32	18,130	18,260	31.52
1946	1051	*71,000	Mar. 10, 1946†	766	14,620	14,530	1.85	25.11	13,150	13,120	22.66
1947	1081	95,600	Apr. 13, 1947	580	15,820	15,760	2.00	27.19	14,410	14,290	24.66
1948	1111	126,000	Mar. 23, 1948	672	11,410	11,450	1.46	19.83	12,110	12,250	21.21
1949	1141	139,000	(a)	325	10,630	10,640	1.35	18.36	10,570	10,510	18.13
1950	1171	79,400	Apr. 6, 1950	498	11,650	11,680	1.49	20.16			

\* Revised.

\* Not previously published; estimated on basis of weather records and records for nearby stations. a Dec. 31, 1948, Jan. 1, 1949.

285. Mill River at Northampton, Mass.

Location.--Lat 42°19'05", long. 72°39'21", on right bank at Northampton, Hampshire County,  $\frac{3}{4}$  miles upstream from mouth.Drainage area.--52.8 sq mi.Gage.--Water-stage recorder. Concrete control since June 29, 1939. Altitude of gage is 140 ft (from topographic map).Average discharge.--12 years (1938-50), 88.9 cfs.Extremes.--1938-50: Maximum discharge, 2,640 cfs (revised) Dec. 31, 1948, 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 discharge recorded, 2.3 cfs July 12, 1939; minimum daily, 5.5 cfs Sept. 27-30, 1941, Sept. 10, 1944.Remarks.--Flow regulated by mill above station.**Monthly and yearly mean discharge, in cubic feet per second**

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	*87.1	*84.3	200	82.3	92.7	183	349	71.5	35.0	19.2	24.8	19.9	*104
1940	*21.2	32.3	29.3	27.5	24.1	81.2	471	181	102	55.6	18.0	15.1	86.1
1941	12.5	43.9	58.2	48.5	104	76.2	118	46.5	53.1	38.9	17.7	16.5	52.4
1942	12.5	35.6	72.9	86.5	49.9	286	160	122	55.8	44.4	54.2	46.2	86.0
1943	46.8	170	171	96.0	111	229	188	213	77.3	55.5	32.2	20.7	118
1944	60.6	146	51.8	37.0	48.1	147	248	76.1	57.4	22.4	18.3	39.3	79.1
1945	26.6	49.2	88.4	86.8	56.6	310	198	274	161	105	64.9	78.0	125
1946	59.6	73.7	94.7	109	82.8	233	93.4	155	102	37.2	24.4	37.5	92.1
1947	37.3	23.6	23.9	59.1	94.1	167	240	155	63.4	30.1	29.5	26.3	78.9
1948	22.7	121	53.2	35.5	53.9	266	170	163	180	41.0	21.5	11.2	94.9
1949	16.6	35.4	*96.8	168	136	156	157	106	25.3	11.5	12.4	11.5	*77.4
1950	12.8	17.1	32.3	87.3	63.3	196	218	123	84.9	17.6	11.7	10.9	72.9

\* Revised.

\* Not previously published; estimated on basis of records for nearby stations.

**Monthly and yearly runoff, in inches**

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	*1.90	*1.78	4.37	1.80	1.83	4.00	7.38	1.56	0.74	0.42	0.54	0.42	*26.74
1940	.46	.68	.64	.60	.49	1.77	9.95	3.95	2.16	.78	.39	.32	22.19
1941	.27	.93	1.27	1.06	2.06	1.66	2.50	1.02	1.12	.85	.39	.35	13.48
1942	.27	.75	1.59	1.89	.98	6.25	3.39	2.67	1.18	.97	1.18	.98	22.10
1943	1.02	3.59	3.73	2.10	2.19	4.99	3.98	4.65	1.63	1.21	.70	.44	30.23
1944	1.32	3.09	1.13	.81	.98	3.22	5.25	1.66	1.21	.49	.40	.83	20.39
1945	.58	1.04	1.93	1.89	1.12	6.76	4.18	5.99	3.40	2.30	1.42	1.65	32.26
1946	1.30	1.56	2.07	2.38	1.63	5.09	1.97	3.38	2.16	.81	.53	.79	23.67
1947	.81	.50	.52	1.29	1.86	3.65	5.08	3.39	1.34	.66	.64	.56	20.30
1948	.49	2.57	1.16	.78	1.10	5.81	3.58	3.57	3.81	.90	.47	.24	24.48
1949	.36	.75	*2.11	3.67	2.68	3.40	3.31	2.30	.54	.25	.27	.24	*19.98
1950	.28	.56	.71	1.91	1.25	4.29	4.60	2.69	1.79	.58	.25	.23	18.74

\* Revised.

\* Not previously published; estimated on basis of records for nearby stations.

Yearly discharge, in cubic feet per second, of Mill River at Northampton, Mass.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1939	871	1,920	Dec. 6, 1938	-	#104	#1.97	#26.74	79.8	20.47
1940	891, 921	*2,000	Apr. 9, 1940	8.1	86.1	1.63	22.19	88.8	22.88
1941	921	*1,800	Feb. 8, 1941*	5.5	52.4	.992	13.48	52.9	13.62
1942	951	*2,180	Mar. 22, 1942	6	86	1.63	22.10	108	27.85
1943	971	2,020	Nov. 25, 1942	10	118	2.23	30.23	107	27.43
1944	1001	*2,110	Nov. 9, 1943	5.5	79.1	1.50	20.33	71.4	18.40
1945	1031	*2,560	Apr. 26, 1945	9.8	125	2.37	32.26	131	33.64
1946	1051	1,700	May. 28, 1946	9.2	92.1	1.74	23.67	80.1	20.57
1947	1081	1,200	Apr. 5, 1947	12	78.9	1.49	20.30	88.2	22.69
1948	1111, 1231	*2,240	Mar. 22, 1948	7.6	94.9	1.80	24.48	*81.0	*23.48
1949	1141, 1251	*2,640	Dec. 31, 1948	6.7	*77.4	*1.47	*19.88	*70.1	18.01
1950	1171	825	Mar. 29, 1950	5.6	72.9	1.38	18.74	-	-

\* Revised.

\* Not previously published.

286. Connecticut River at Holyoke, Mass.

Location.--Lat 42°12'50", long. 72°36'10", above dam of Holyoke Water Power Co. in Holyoke, Hampden County.

Drainage area.--8,309 sq mi (revised).

Average discharge.--19 years (1880-99), 12,250 cfs.

Extremes.--1880-1950: Maximum discharge, 244,000 cfs Mar. 19, 20, 1936 (gage height, 16.8 ft); minimum, practically no flow at various times when water was being stored above dam.

Remarks.--Discharge determined by adding water wasting over dam to flow through canals. Flow regulated by mills and reservoirs above station.

Cooperation.--Records furnished by the Holyoke Water Power Co.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1880	-	-	-	9,650	14,800	15,300	20,600	11,500	4,160	3,640	2,170	1,700	-
1881	2,260	6,100	3,050	2,520	5,730	13,600	22,400	27,000	6,210	3,950	3,900	2,950	8,290
1882	3,200	11,300	15,800	8,790	9,100	19,500	18,200	20,200	17,600	5,410	2,800	7,950	11,700
1883	4,610	3,360	2,740	2,630	3,930	5,270	33,300	19,600	10,800	5,610	3,060	1,880	8,050
1884	3,540	5,070	3,910	6,210	14,300	22,000	40,200	26,300	8,940	4,380	3,190	2,820	11,700
1885	4,020	8,380	11,200	15,500	7,140	4,810	37,400	16,500	7,010	7,050	6,150	5,580	10,900
1886	7,980	20,800	11,300	15,900	16,100	9,600	37,300	12,800	7,500	3,050	2,710	2,490	12,200
1887	4,370	14,700	10,400	11,800	13,700	8,160	44,300	31,100	12,700	11,000	12,000	5,520	14,900
1888	4,480	6,770	11,900	8,830	8,550	12,000	38,900	47,800	10,500	4,310	4,690	13,000	14,300
1889	18,000	22,600	19,600	16,700	7,290	13,600	26,500	13,800	13,100	9,120	9,240	6,060	14,700
1890	11,500	19,000	20,500	15,000	14,800	19,700	29,400	31,300	13,200	4,900	6,020	14,400	16,600
1891	18,300	14,100	5,830	14,200	17,000	29,900	41,300	15,100	7,410	5,130	5,300	3,890	14,800
1892	3,040	5,140	11,300	19,600	6,880	8,490	22,600	21,200	14,500	12,400	8,950	4,860	11,600
1893	4,860	15,800	6,660	3,560	6,240	11,800	31,000	36,200	8,160	3,370	5,440	5,680	11,600
1894	5,300	5,220	7,500	6,250	4,640	22,300	21,000	10,900	8,700	3,850	2,320	2,700	8,400
1895	4,610	7,530	6,060	4,740	2,980	6,260	45,300	12,300	6,110	3,030	3,280	2,740	8,720
1896	4,100	17,100	15,800	10,900	8,780	27,200	42,400	9,680	5,360	3,850	2,960	4,770	12,700
1897	11,000	14,100	7,620	5,010	5,780	14,500	35,500	22,500	22,300	23,500	10,800	4,310	14,800
1898	3,670	14,900	21,800	10,300	8,670	35,500	29,200	19,100	11,400	3,800	4,960	5,420	14,100
1899	12,200	15,800	9,720	8,780	5,690	13,800	49,400	20,800	4,930	4,470	2,670	2,530	12,600
1900	2,560	5,690	6,950	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	75,990	36,370	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	-	-
1939	11,710	-	-	-	-	-	-	-	-	-	-	33,880	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1880	-	-	-	1.34	1.93	2.12	2.77	1.60	0.56	0.50	0.30	0.23	-
1881	0.31	0.82	0.42	.35	.67	1.89	3.01	3.74	.83	.55	.54	.40	13.53
1882	.44	1.52	2.20	1.22	1.14	2.71	2.44	2.81	2.36	.75	.39	1.07	19.05
1883	.64	.45	.38	.37	.49	.73	4.47	2.72	1.45	.78	.42	.25	13.15
1884	.49	.68	.54	.86	1.85	3.06	5.40	3.65	1.20	.60	.44	.38	19.15
1885	.56	1.13	1.55	2.13	.90	.67	5.03	2.29	.94	.98	.85	.75	17.78
1886	1.11	2.79	1.57	2.20	2.01	1.33	5.00	1.77	1.01	.42	.38	.33	19.92
1887	.61	1.98	1.45	1.63	1.72	1.13	5.95	4.32	1.70	1.53	1.66	.74	24.42
1888	.62	.91	1.65	1.22	1.11	1.66	5.22	6.63	1.41	.60	.65	1.74	23.42
1889	2.50	3.03	2.72	2.31	.91	1.89	3.55	1.92	1.75	1.26	1.28	.81	23.93
1890	1.60	2.55	2.84	2.09	1.85	2.74	3.94	4.34	1.79	.68	.84	1.93	27.18



Monthly and yearly runoff, in inches, of Connecticut River at Holyoke, Mass.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1891	2.54	1.89	.81	1.97	2.13	4.15	5.55	2.10	.99	.71	.74	.52	24.10
1892	.42	.69	1.57	2.71	.89	1.18	3.03	2.94	1.92	1.72	1.24	.67	18.98
1893	.67	2.12	.92	.49	.78	1.64	4.17	5.02	1.10	.47	.75	.76	18.89
1894	.74	.70	1.04	.87	.58	3.08	2.82	1.51	1.17	.53	.32	.36	13.73
1895	.64	1.01	.84	.66	.37	.87	6.08	1.71	.82	.45	.46	.37	14.25
1896	.57	2.30	2.19	1.51	1.14	3.78	5.69	1.34	.72	.51	.41	.64	20.80
1897	1.52	1.90	1.06	.70	.72	2.01	4.76	3.13	3.00	3.25	1.50	.58	24.13
1898	.51	2.00	3.02	1.43	1.09	4.92	3.93	2.65	1.53	.53	.69	.73	23.03
1899	1.69	2.13	1.55	1.22	.71	1.91	6.64	2.88	.66	.62	.37	.34	20.52
1900	.35	.76	.98	-	-	-	-	-	-	-	-	-	-
1936	-	-	-	-	-	10.54	4.88	-	-	-	-	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	4.55	-
1939	1.62	-	-	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Maximum day		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1880	415	-	-	-	-	-	-	7,880	12.90
1881	415	49,000	May 18, 1881	0	8,290	0.998	13.53	9,890	16.14
1882	415	46,800	Dec. 30, 1881	0	11,700	1.41	19.05	10,000	16.36
1883	415	68,300	Apr. 14, 1883	250	8,050	.969	13.15	8,200	13.39
1884	415	71,900	Mar. 28, 1884	500	11,700	1.41	19.15	12,600	20.68
1885	415	64,000	Apr. 24, 1885	1,100	10,900	1.31	17.78	12,200	20.01
1886	415	80,200	Apr. 2, 1886	50	12,200	1.47	19.92	11,300	18.49
1887	415	85,500	Apr. 12, 1887	1,000	14,900	1.79	24.42	14,400	23.56
1888	415	99,800	May 1, 1888	1,100	14,300	1.72	23.42	17,400	28.49
1889	415	59,300	Dec. 19, 1888	1,350	14,700	1.77	23.93	13,900	22.67
1890	415	46,800	May 8, 1890	550	16,600	2.00	27.18	15,600	25.43
1891	415	67,300	Apr. 16, 1891	1,200	14,800	1.78	24.10	13,200	21.54
1892	415	63,100	Jan. 15, 1892	900	11,800	1.40	18.98	12,200	20.01
1893	415	94,400	May 5, 1893	750	11,600	1.40	18.89	10,800	17.66
1894	415	43,300	Apr. 25, 1894	150	8,400	1.01	13.73	8,410	13.74
1895	415	115,000	Apr. 16, 1895	350	8,720	1.05	14.25	10,300	16.82
1896	415	112,000	Mar. 2, 1896	400	12,700	1.53	20.80	12,300	20.22
1897	415	75,400	June 11, 1897	2,250	14,800	1.78	24.13	15,400	25.18
1898	415	76,200	Mar. 21, 1898	600	14,100	1.70	23.03	13,900	22.67
1899	415	82,500	Apr. 26, 1899	400	12,600	1.52	20.52	10,700	17.42
1936	798	226,100	Mar. 19, 1936	-	-	-	-	-	-
1938	867	179,000	Sept. 22, 1938	-	-	-	-	-	-

## 287. 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.

Gage.--Water-stage recorder. Altitude of gage is 745 ft (from topographic map).

Extremes.--1946-50: Maximum discharge, 1,450 cfs Mar. 23, 1948 (gage height, 5.93 ft),

from rating curve extended above 700 cfs by logarithmic plotting; minimum, 1.4 cfs

Aug. 28, 29, 1949.

Remarks.--Some regulation by Long Pond and other small reservoirs.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	44.4	26.7	-
1947	79.9	39.5	44.4	87.9	137	175	190	136	61.3	29.7	9.44	7.81	82.8
1948	10.6	68.7	39.0	31.2	62.3	338	170	185	182	78.2	18.6	9.19	99.6
1949	11.1	73.9	60.9	166	152	144	149	108	21.9	6.45	3.73	7.00	74.7
1950	7.22	13.4	46.9	103	83.5	145	212	99.9	49.0	15.5	6.40	5.72	65.5

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	0.93	0.54	-
1947	1.68	0.80	0.93	1.84	2.60	3.67	3.85	2.85	1.24	0.62	.20	.16	20.44
1948	.22	1.39	.82	.65	1.22	7.10	3.46	3.87	3.70	1.64	.39	.19	24.65
1949	.23	1.50	1.28	3.47	2.87	3.01	3.02	2.26	.44	.14	.08	.14	18.44
1950	.15	.27	1.03	2.15	1.58	3.03	4.29	2.09	.99	.32	.13	.12	16.15

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches
		Discharge	Date				
1946	1081	-	-	-	-	-	-
1947	1081	459	Mar. 16, 1947	2.8	82.8	1.51	20.44
1948	1111	1,450	Mar. 23, 1948	3.5	99.6	1.81	24.65
1949	1141	441	Jan. 7, 1949	1.5	74.7	1.36	18.44
1950	1171	467	Mar. 30, 1950	2.8	65.5	1.19	16.15

## CONNECTICUT RIVER BASIN

## Burnshirt River near Templeton, Mass.

Location.--Lat 42°30'45", long. 72°05'10", just below Brown Pond Dam, 3 miles south of village of Templeton, Worcester County.

Drainage area.--8.4 sq mi.

Gage.--Staff gage. Altitude of gage is about 880 ft (from topographic map).

Remarks.--Records for May 26 to Dec. 31, 1909, published in Water-Supply Papers 261 and 415, have been found to be in error on the basis of re-study of the original data and comparison with records for nearby stations. Those records are not published herein and should not be used.

## 288. Ware River at Cold Brook, Mass.

Location.--Lat 42°23'30", long. 72°03'40", on right bank above diversion dam at Ware River Intake works at Cold Brook, Worcester County, 2 miles east of South Barre, and 2.7 miles downstream from Burnshirt River.

Drainage area.--96.8 sq mi.

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.--22 years (1928-50), 151 cfs.

Extremes.--1928-50: Maximum discharge, 14,000 cfs Sept. 21, 1938 (gage height, 664.28 ft), by computation of flow over dam; minimum daily, 5 cfs Aug. 2, 3, 1931.

Remarks.--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.

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

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	198	160	294	289	326	184	154	138	-
1929	69.6	74.7	85.9	126	131	410	444	327	87.3	33.0	25.8	22.3	153
1930	25.7	35.9	32.6	64.0	81.3	165	161	84.9	62.2	96.0	27.9	22.6	71.5
1931	27.5	43.9	32.3	28.6	43.8	208	505	223	237	61.3	77.2	43.3	127
1932	45.9	45.0	103	240	165	174	426	106	40.0	27.3	23.6	51.9	120
1933	201	287	138	174	196	279	776	157	55.2	32.4	28.5	251	213
1934	175	122	109	181	96.2	381	569	236	135	46.1	31.1	144	186
1935	146	175	217	270	147	390	340	165	177	73.1	23.8	41.9	181
1936	21.3	63.7	74.6	181	95.1	1,066	403	156	78.2	21.7	24.6	35.1	186
1937	107	76.1	347	370	224	182	320	249	164	71.8	43.5	77.9	186
1938	77.7	250	253	240	241	213	242	173	221	337	191	893	277
1939	246	193	355	167	181	352	578	190	88.4	28.7	25.0	14.8	201
1940	21.3	69.6	71.1	48.5	51.8	118	963	317	163	82.6	29.4	15.6	162
1941	11.3	102	152	124	180	144	224	140	60.0	36.0	19.4	14.3	99.9
1942	15.3	41.3	57.1	100	65.1	563	220	133	150	110	40.6	27.8	128
1943	53.3	150	174	142	186	410	323	385	103	29.8	38.7	14.7	167
1944	60.1	181	83.3	36.9	53.9	248	363	162	342	127	23.4	105	148
1945	56.9	84.5	154	154	129	525	307	353	235	164	106	42.1	193
1946	47.0	94.6	168	239	170	455	202	228	225	64.7	71.2	54.5	169
1947	137	62.7	73.4	151	260	332	361	258	113	69.7	30.2	15.7	155
1948	15.4	107	60.4	51.5	104	586	307	332	324	140	41.5	18.5	174
1949	19.5	120	91.9	277	251	244	232	181	45.0	16.9	11.5	15.5	125
1950	18.6	28.6	84.5	185	147	264	352	168	101	34.9	17.0	14.6	118

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	2.21	1.90	3.39	3.45	3.76	2.19	1.83	1.60	-
1929	0.83	0.86	1.02	a1.50	a1.41	a4.88	a5.11	a3.88	a.99	a.37	a.29	a.24	a21.38
1930	a.29	a.39	a.36	a.74	a.85	a1.94	a1.83	a.99	a.69	a1.12	a.30	a.23	a9.73
1931	a.30	a.49	a.36	a.32	a.45	2.49	5.82	2.65	2.73	.73	.92	.50	a17.76
1932	.55	.52	1.22	2.86	1.83	2.08	4.91	1.27	.46	.33	.28	.60	16.91
1933	2.40	3.30	1.65	2.08	2.10	3.32	8.95	1.87	.64	.39	.34	2.89	29.93
1934	2.09	1.41	1.30	2.16	1.04	4.54	6.56	2.81	1.55	.55	.37	1.66	26.04
1935	1.74	2.02	2.58	3.22	1.58	4.65	3.92	1.96	2.04	.87	.28	.48	25.34
1936	.25	.73	.89	2.16	1.06	12.68	4.64	1.86	.90	.26	.29	.40	26.12
1937	1.28	.88	4.13	4.40	2.40	2.17	3.69	2.96	1.89	.86	.52	.90	26.08
1938	.93	2.88	3.01	2.86	2.59	2.54	2.79	2.06	2.54	4.01	2.27	10.30	39.78
1939	2.93	2.22	4.23	1.99	1.95	4.20	6.66	2.14	1.02	.34	.30	.17	28.15
1940	.25	.80	.85	.58	.58	1.40	11.10	3.78	1.88	.98	.35	.18	22.73
1941	.13	1.18	1.61	1.47	1.93	1.72	2.58	1.67	.69	.43	.23	.16	14.00
1942	.18	.48	1.68	1.19	1.70	6.71	2.54	1.58	1.73	1.31	.49	.32	17.90
1943	.63	1.73	2.07	1.69	2.00	4.88	3.73	4.59	1.18	.35	.46	.17	23.48
1944	.72	2.09	.99	.44	.60	2.95	4.18	1.93	3.94	1.51	.28	1.22	20.85
1945	.68	.97	1.84	1.83	1.39	6.25	3.58	4.21	2.71	1.95	1.27	.49	27.13
1946	.56	1.09	2.00	2.85	1.83	5.42	2.33	2.72	2.59	.77	.85	.63	23.64
1947	1.63	.72	.87	1.80	2.80	3.95	4.16	3.07	1.31	.83	.36	.18	23.68
1948	.18	1.25	.72	1.31	1.16	6.97	5.55	3.95	3.73	1.67	.97	.21	24.45
1949	.23	1.38	1.09	3.30	2.71	2.90	2.67	2.16	.52	.20	.14	.18	17.48
1950	.22	.33	1.01	2.20	1.58	3.14	4.06	2.00	1.16	.42	.20	.17	16.49

a Adjusted for pumpage from tunnel under construction.

Yearly discharge, in cubic feet per second, of Ware River at Cold Brook, Mass.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1928	661	-	-	-	-	-	-	-	-
1929	681	990	Mar. 16, 1929	16	a152	a1.57	a21.38	a140	a19.71
1930	696	425	Mar. 26, 1930	18	a69.4	a.717	a9.73	a70.3	a9.84
1931	711	1,200	Apr. 4, 1931	5	a127	a1.31	a17.76	a134	a18.90
1932	726	-	-	7.3	120	1.24	16.91	156	21.97
1933	741	1,400	Apr. 19, 1933	15	213	2.20	29.93	195	27.38
1934	756	1,180	Apr. 13, 1934	17	186	1.92	26.04	197	27.58
1935	781	976	Jan. 11, 1935	14	181	1.87	25.34	149	20.87
1936	801	5,990	Mar. 19, 1936	11	186	1.92	26.12	217	30.54
1937	821	1,090	Dec. 21, 1936	18	186	1.92	26.08	190	26.61
1938	851	14,000	Sept. 21, 1938	26	277	2.86	38.78	295	41.34
1939	871	961	Dec. 7, 1938	10	201	2.08	28.15	147	20.67
1940	891	1,630	Apr. 13, 1940	10	162	1.67	22.73	170	23.95
1941	921	897	May 10, 1941	6.1	98.9	1.03	14.00	87.2	12.22
1942	951	-	-	11	128	1.32	17.90	150	20.99
1943	971	-	-	12	167	1.73	23.48	163	22.85
1944	1031	-	-	12	148	1.53	20.85	146	20.54
1945	1031	-	-	26	193	1.99	27.13	194	27.29
1946	1051	-	-	16	169	1.75	23.64	165	23.21
1947	1081	-	-	9.1	155	1.60	21.68	147	20.59
1948	1111	-	-	7.3	174	1.80	24.45	178	25.02
1949	1141	-	-	7.0	125	1.29	17.48	116	16.34
1950	1171	-	-	8	118	1.22	16.49	-	-

a Adjusted for pumpage from tunnel under construction.

## 289. 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 south-west of Ware.

Drainage area.--199 sq mi.

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.--38 years (1912-50), 315 cfs (adjusted for diversion).

Extremes.--1912-50: Maximum discharge, 22,700 cfs Sept. 21, 1938 (gage height, 18.2 ft, from floodmarks), by slope-area method; minimum, 5.0 cfs Oct. 26, 1914; minimum daily, 6.0 cfs Oct. 4, 1914.

Remarks.--Flow regulated by mills above station. Runoff adjusted for diversion since March 1931 from 97 sq mi in Ware River Basin for supply of Boston metropolitan district.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1912	-	-	-	-	-	-	-	-	-	-	-	-	42.0
1913	48.0	104	168	367	193	792	780	307	147	66.4	60.3	74.9	259
1914	166	192	244	185	271	913	916	559	113	100	67.9	41.8	315
1915	30.0	34.3	60.7	413	525	226	240	156	65.0	244	416	96.1	207
1916	87.5	108	353	430	452	566	1,120	555	496	393	226	112	407
1917	94.7	117	196	252	242	918	619	445	397	159	86.5	70.4	300
1918	108	165	140	109	231	743	566	289	185	91.9	69.2	187	245
1919	170	191	325	401	237	912	716	563	181	141	86.5	315	354
1920	165	539	479	203	175	1,150	1,020	570	392	175	116	85.0	424
1921	215	340	721	379	223	703	668	553	130	381	138	75.1	379
1922	72.7	187	386	187	206	821	842	462	570	586	197	203	394
1923	169	160	102	487	218	787	941	468	164	73.8	65.4	49.2	307
1924	88.5	209	469	551	188	363	1,060	429	166	72.7	81.1	91.2	314
1925	54.9	67.0	173	71.3	364	627	479	239	132	112	79.0	67.5	206
1926	145	268	381	251	446	560	794	260	124	66.6	61.5	46.3	282
1927	78.0	279	182	396	316	804	319	358	176	202	379	276	314
1928	292	730	736	428	444	330	551	504	530	355	326	308	461
1929	172	144	185	265	253	855	883	628	167	69.2	50.8	57.2	311
1930	68.1	94.4	109	177	230	334	292	159	143	221	62.8	47.9	161
1931	45.2	97.6	69.7	66.1	104	350	392	315	299	110	151	96.1	175
1932	87.5	91.4	197	338	282	300	497	211	91.0	63.8	65.7	82.1	192
1933	264	435	232	320	367	574	1,340	266	134	66.6	72.6	49.2	378
1934	335	254	222	392	188	719	921	416	240	97.0	71.2	270	343
1935	293	337	422	510	318	763	639	333	327	134	44.9	79.8	351
1936	46.4	98.6	130	297	191	1,838	827	333	175	62.5	59.4	64.7	347
1937	198	152	512	712	473	415	632	543	382	200	117	232	380
1938	183	525	553	556	530	474	532	367	455	714	405	1,707	561
1939	488	380	653	297	326	642	980	293	159	57.4	58.3	46.8	363
1940	46.4	143	149	107	92.8	211	884	421	282	160	61.0	37.6	216

Monthly and yearly mean discharge, in cubic feet per second (observed), of Ware River at Gibbs Crossing, Mass.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	32.0	187	273	220	272	264	277	188	98.0	79.0	45.5	37.1	164
1942	31.8	98.3	118	179	142	546	309	246	278	209	82.1	53.6	191
1943	99.4	279	274	240	337	535	378	501	216	80.5	91.4	47.9	256
1944	109	306	170	80.2	144	372	455	264	358	141	48.6	132	214
1945	101	159	256	286	251	572	408	462	490	367	227	95.4	307
1946	123	195	296	330	314	491	291	329	352	139	154	97.1	259
1947	220	112	127	245	406	568	585	441	179	138	58.2	40.1	259
1948	35.1	185	110	90.0	194	771	549	563	603	305	103	57.4	297
1949	52.6	254	185	510	465	450	400	364	101	56.4	32.9	30.3	240
1950	37.0	68.7	172	331	254	396	396	300	228	99.8	69.5	48.3	200

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1912	-	-	-	-	-	-	-	-	-	-	-	-	0.24
1913	0.28	0.58	0.97	2.12	1.01	4.59	4.37	1.78	0.82	0.39	0.35	.42	17.67
1914	.96	1.08	1.42	1.07	1.42	5.29	5.13	3.24	.63	.58	.39	.25	21.44
1915	.17	.19	.35	2.40	2.75	1.31	1.35	.90	.36	1.42	2.41	.54	14.15
1916	.51	.61	2.04	2.49	2.45	3.27	6.28	3.22	2.78	2.27	1.31	.63	27.86
1917	.55	.66	1.14	1.46	1.27	5.32	3.47	2.58	2.22	.92	.50	.39	20.48
1918	.63	.92	.81	.63	1.52	4.30	3.17	1.67	1.04	.53	.40	1.05	16.67
1919	.98	1.07	1.88	2.53	1.24	5.28	4.02	3.26	1.02	.82	.50	1.76	24.16
1920	.96	3.02	2.78	1.18	.95	6.66	5.72	3.30	2.20	1.01	.67	.48	28.93
1921	1.24	1.91	4.17	2.19	1.17	4.07	3.75	3.20	.73	2.20	.80	.42	25.85
1922	.42	1.05	2.24	1.08	1.08	4.76	4.72	2.68	3.19	3.39	1.14	1.14	26.89
1923	.98	.90	.59	2.82	1.14	4.55	5.28	2.71	.92	.43	.37	.27	20.96
1924	.51	1.17	2.72	3.19	1.02	2.10	5.95	2.49	.93	.42	.47	.51	21.48
1925	.32	.58	1.00	.41	1.91	3.63	2.69	1.38	.74	.65	.46	.49	14.06
1926	.84	1.51	2.20	1.45	2.33	3.24	4.45	1.51	.70	.39	.36	.26	19.24
1927	.45	1.56	1.05	2.28	1.66	4.66	1.78	2.08	.99	1.18	2.19	1.55	21.44
1928	1.70	4.10	4.27	2.48	2.40	1.91	3.09	2.92	2.96	2.05	1.89	1.73	31.50
1929	1.00	.81	1.07	1.53	1.32	4.96	4.95	3.64	.94	.40	.29	.32	21.23
1930	.39	.53	.63	1.02	1.21	1.94	1.64	.92	.80	1.28	.36	.27	10.99
1931	.26	.55	.40	.38	.54	2.68	4.23	2.35	2.18	.64	.88	.54	15.63
1932	.51	.51	1.18	2.61	1.69	2.01	4.40	1.28	.51	.37	.38	.46	15.91
1933	1.57	2.44	1.35	1.86	1.92	3.32	7.51	1.54	.75	.39	.42	2.76	25.83
1934	1.94	1.32	1.29	2.27	.98	4.16	5.17	2.41	1.35	.56	.41	1.52	23.38
1935	1.70	1.89	2.44	2.96	1.69	4.43	3.58	1.92	1.83	.78	.26	.45	23.33
1936	.27	.55	.77	2.01	1.04	11.25	4.64	1.92	.98	.56	.34	.48	24.61
1937	1.15	.85	3.98	4.43	2.48	2.41	3.55	3.15	2.14	1.16	.68	1.30	27.28
1938	1.06	2.94	3.20	3.22	2.77	2.74	2.98	2.12	2.56	4.14	2.34	9.57	39.64
1939	2.82	2.13	3.78	1.72	1.71	3.72	5.58	1.81	.89	.33	.34	.26	24.89
1940	.27	.84	.87	.62	.50	1.34	9.58	3.49	1.90	.93	.35	.21	20.90
1941	.19	1.18	1.79	1.56	1.74	1.68	2.08	1.27	.56	.46	.26	.21	12.78
1942	.18	.55	.69	1.14	.74	5.69	2.22	1.50	1.61	1.21	.48	.30	16.31
1943	.58	1.74	1.89	1.53	2.06	4.70	3.19	4.36	1.29	.47	.53	.27	22.61
1944	.66	2.05	.99	.46	.78	2.92	3.83	1.75	3.36	1.02	.28	.99	19.10
1945	.59	.91	1.65	1.89	1.49	5.58	3.26	3.95	2.89	2.13	1.32	.53	26.19
1946	.71	1.18	2.00	2.53	1.85	4.70	2.03	2.46	2.26	.80	.89	.54	21.95
1947	1.27	.63	.73	1.42	2.13	3.29	3.28	2.56	1.01	.80	.34	.22	17.89
1948	.20	1.03	.64	.52	1.05	5.88	3.08	3.26	3.38	1.77	.60	.32	21.73
1949	.30	1.42	1.07	2.95	2.44	2.61	2.24	2.11	.57	.33	.19	.17	16.40
1950	.21	.38	1.00	2.01	1.44	3.10	3.44	1.94	1.36	.58	.40	.27	16.13

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30										Calendar year		
		Observed					Adjusted					Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Mean	Per square mile	Runoff in inches	Runoff in inches	Runoff in inches	Mean	Mean	Mean
		Discharge	Date											
1913	415	2,640	Mar. 28, 1913	15	259	-	1.50	17.67	263	-	19.50	-	-	-
1914	415	*3,360	Mar. 2, 1914	8.1	315	-	1.58	21.44	274	-	18.69	-	-	-
1915	415	2,560	Feb. 26, 1915	6.0	207	-	1.05	14.15	243	-	16.80	-	-	-
1916	431	2,370	Mar. 31, 1916	20	407	-	2.05	27.86	395	-	27.05	-	-	-
1917	451	2,430	Mar. 28, 1917	20	300	-	1.51	20.48	501	-	20.49	-	-	-
1918	471	1,260	Mar. 23, 1918	16	245	-	1.23	16.67	268	-	18.24	-	-	-
1919	501	2,570	Mar. 2, 1919	22	354	-	1.78	24.16	395	-	26.98	-	-	-
1920	501	2,870	Mar. 27, 1920	28	424	-	2.13	28.93	431	-	29.49	-	-	-
1921	521	2,200	May 1, 1921	24	379	-	1.90	25.85	326	-	22.24	-	-	-
1922	541	2,480	Mar. 8, 1922	22	394	-	1.98	26.89	376	-	25.65	-	-	-
1923	561	2,820	Apr. 6, 1923	17	307	-	1.54	20.96	336	-	22.89	-	-	-
1924	581	2,950	Apr. 8, 1924	17	314	-	1.58	21.48	275	-	18.78	-	-	-
1925	601	1,620	Feb. 12, 1925	16	206	-	1.04	14.06	248	-	16.91	-	-	-
1926	621	1,490	Apr. 10, 1926	18	282	-	1.42	19.24	260	-	17.75	-	-	-
1927	641	1,690	Mar. 15, 1927	17	314	-	1.58	21.44	417	-	28.45	-	-	-
1928	661	2,840	Nov. 4, 1927	85	461	-	†2.32	31.50	355	-	24.31	-	-	-
1929	681	2,170	Mar. 15, 1929	18	311	-	1.56	21.23	292	-	19.90	-	-	-
1930	696	1,040	July 7, 1930	12	161	-	.809	10.99	156	-	10.65	-	-	-

\* Revised.

† Corrected.

Yearly discharge, in cubic feet per second, of Ware River at Gibbs Crossing, Mass.--Continued

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed	Adjusted	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1931	711	1,540	Mar. 30, 1931	9.1	175	229	1.15	15.63	189	243	16.62
1932	726	2,390	Apr. 1, 1932	12	192	232	1.17	15.91	239	279	19.07
1933	741	2,960	Sept. 17, 1933	20	378	379	1.90	25.83	367	367	25.02
1934	756	2,300	Apr. 13, 1934	25	345	345	1.72	23.38	365	365	24.86
1935	791	2,180	Jan. 10, 1935	9.8	351	351	1.76	23.93	285	286	19.49
1936	801	11,200	Mar. 19, 1936	18	347	360	1.81	24.61	396	424	29.00
1937	821	1,760	Dec. 12, 1936	28	380	400	2.01	27.28	413	413	28.50
1938	851	22,700	Sept. 21, 1938	34	581	581	2.92	39.64	604	604	41.17
1939	871	2,300	Dec. 6, 1938	23	363	365	1.83	24.89	264	266	18.14
1940	891	2,180	Apr. 13, 1940	17	216	306	1.54	20.90	228	323	22.08
1941	921	878	Feb. 8, 1941	16	164	187	1.940	12.78	144	162	11.04
1942	951	2,570	Mar. 9, 1942	22	191	239	1.20	16.31	225	280	19.10
1943	971	11,120	Mar. 12, 1943	25	256	331	1.66	22.61	250	324	22.10
1944	1001	4,950	June 25, 1944	20	214	279	1.40	19.10	209	271	18.55
1945	1031	1,750	Jan. 2, 1945	48	307	384	1.93	26.19	315	395	26.93
1946	1051	1,280	Mar. 8, 1946	35	259	322	1.62	21.95	246	304	20.69
1947	1081	2,130	Mar. 15, 1947	29	259	259	1.30	17.68	248	248	16.92
1948	1111	2,130	Mar. 22, 1948	20	297	318	1.60	21.75	311	331	22.65
1949	1141	2,060	Jan. 7, 1949	15	240	240	1.21	16.40	223	223	15.20
1950	1171	880	Mar. 9, 1950	19	200	237	1.19	16.13	-	-	-

\* Not previously published.

## 290. 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  $\frac{1}{2}$  miles south of New Salem, Franklin County.

Drainage area.--3.39 sq mi.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 725 ft (from topographic map).

Extremes.--1947-50: Maximum discharge, 124 cfs Jan. 6, 1949 (gage height, 2.61 ft), from rating curve extended above 80 cfs by logarithmic plotting; minimum discharge, .01 cfs Aug. 10-12, 21-29, 1949.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1948	40.442	45.77	3.21	2.26	3.89	17.4	11.2	12.9	12.8	2.61	0.700	0.207	46.13
1949	425	3.08	3.12	8.11	10.3	9.19	8.20	9.10	1.69	.351	.124	.346	4.45
1950	.615	.953	3.23	8.03	6.06	10.1	14.5	7.09	6.15	.940	.633	.590	4.90

\* Not previously published; estimated on basis of records for nearby streams.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1948	40.15	41.90	1.09	0.77	1.24	5.93	3.68	4.38	4.21	0.96	0.24	0.07	24.62
1949	.14	1.01	1.06	3.00	2.82	3.50	3.70	2.78	.56	.12	.04	.11	17.82
1950	.21	.31	1.10	2.73	1.86	3.45	4.79	2.41	2.02	.32	.22	.19	19.61

\* Not previously published; estimated on basis of records for nearby streams.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1948	1111	109	Mar. 22, 1948	-	46.13	1.61	24.62	5.90	23.69
1949	1141	124	Jan. 6, 1949	.01	4.45	1.31	17.82	4.30	17.23
1950	1171	81	Apr. 20, 1950	.03	4.90	1.45	19.61	-	-

\* Not previously published.

## 291. East Branch Swift River near Hardwick, Mass. 1/

Location.--Lat 42°23'36", long. 72°14'21", on left bank 100 ft above spillway of regulating dam, 4.8 miles northwest of Hardwick, Worcester County.

Drainage area.--43.7 sq mi.

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.--13 years (1937-50), 67.5 cfs.

Extremes.--1937-50: 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 (result of regulation by construction operations), Aug. 26-28, 1949.

Remarks.--Discharge figures for period Oct. 1, 1939, to Mar. 12, 1940, adjusted for change in contents in pond above regulating dam. Regulating reservoir was filled Mar. 12, 1940.

1/ Published as "near Dana, Mass." prior to 1940.

## CONNECTICUT RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of East Branch Swift River near Hardwick, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1937	-	-	-	168	96.8	79.8	148	120	86.5	41.1	15.2	47.4	-
1938	44.1	99.9	99.4	110	100	93.9	107	67.2	87.8	179	96.6	390	123
1939	94.5	75.6	161	70.3	77.5	139	237	81.5	42.6	10.6	7.55	5.59	83.5
1940	12.7	26.2	31.8	20.5	18.5	53.9	420	133	92.1	29.1	9.50	5.61	70.7
1941	4.59	57.9	63.4	47.2	55.0	49.1	89.7	58.4	22.5	10.6	2.88	2.14	36.4
1942	5.23	22.2	25.5	43.6	32.6	227	88.5	51.0	62.2	40.4	10.1	7.94	51.6
1943	16.5	66.2	77.9	61.6	84.4	169	129	161	39.2	10.4	24.1	5.73	70.4
1944	25.9	86.9	37.4	18.5	23.6	120	173	60.4	139	38.7	10.8	30.8	63.5
1945	16.3	29.9	52.2	65.8	47.6	200	129	164	132	107	50.8	16.7	84.6
1946	24.9	45.4	69.1	88.5	75.9	188	87.1	109	107	50.8	23.4	19.7	72.5
1947	31.2	21.4	27.3	56.8	94.6	132	130	88.5	35.9	14.7	4.01	3.29	53.1
1948	5.44	45.1	27.8	20.9	39.3	210	121	108	108	34.0	13.6	3.98	61.1
1949	7.33	49.3	33.9	113	114	118	88.2	69.6	15.0	3.23	0.99	4.51	51.0
1950	6.15	12.6	44.2	93.9	73.2	118	147	71.8	60.9	16.3	5.65	6.14	54.5

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1937	-	-	-	4.43	2.31	2.11	3.78	3.17	2.21	1.08	0.40	1.20	-
1938	1.16	2.56	2.62	2.90	2.38	2.48	2.73	1.78	2.24	4.73	2.55	9.95	38.08
1939	2.49	1.93	4.24	1.86	1.84	3.67	6.05	2.14	1.09	.28	.20	.14	25.93
1940	.54	.67	.84	.54	.46	1.42	10.73	3.52	2.35	.77	.25	.14	22.03
1941	.12	1.48	1.67	1.25	1.31	1.30	2.29	1.54	.57	.28	.08	.05	11.94
1942	.14	.57	.67	1.15	.78	5.99	2.26	1.35	1.59	1.07	.27	.20	16.04
1943	.43	1.69	2.05	1.63	2.01	4.45	3.30	4.24	1.00	.27	.63	.15	21.85
1944	.68	2.22	.99	.49	.58	3.17	4.41	1.59	.54	1.02	.29	.79	19.77
1945	.43	.76	1.38	1.74	1.13	5.28	3.28	4.32	3.38	2.82	1.34	.43	26.29
1946	.66	1.16	1.62	2.34	1.81	4.96	2.22	2.89	2.73	.81	.62	.50	22.52
1947	.82	.55	.72	1.50	2.25	3.49	3.32	2.34	.92	.39	.11	.08	16.49
1948	.09	1.10	.73	.55	.97	5.53	3.08	2.85	2.76	.90	.36	.10	19.02
1949	.19	1.26	.89	2.98	2.71	3.12	2.25	1.84	.58	.09	.03	.12	15.86
1950	.16	.32	1.17	2.48	1.74	3.11	3.75	1.89	1.55	.43	.15	.16	16.91

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1937	821	392	Apr. 7, 1937	-	-	-	-	87.1	27.03
1938	852	6,780	Sept. 21, 1938	13.0	123	2.81	38.08	130	40.40
1939	871	672	Dec. 6, 7, 1938	0	83.5	1.91	25.93	61.5	19.12
1940	891	1,000	Apr. 13, 1940	2.3	70.7	1.62	22.03	75.3	23.45
1941	921	271	May 10, 1941	.1	38.4	.879	11.94	32.3	10.05
1942	951	1,240	Mar. 9, 1942	.6	51.6	1.18	16.04	60.6	18.83
1943	971	339	Mar. 21, 1943†	3.2	70.4	1.61	21.85	69.5	21.57
1944	1001	2,300	June 25, 1944	3.4	63.5	1.45	19.77	59.2	18.45
1945	1031	428	May 19, 1945	9.8	84.6	1.94	26.29	88.1	27.36
1946	1051	736	Mar. 9, 1946	8.0	72.5	1.66	22.52	67.5	20.97
1947	1081	446	Mar. 15, 1947	1.0	55.1	1.22	16.49	52.5	16.32
1948	1111	884	Mar. 6, 1948	1.1	61.1	1.40	19.02	62.5	19.44
1949	1141	575	Jan. 6, 1949	0	51.0	1.17	15.86	46.8	15.17
1950	1171	434	Mar. 30, 1950	1.2	54.5	1.25	16.91	-	-

† Corrected.

## 292. Quabbin Reservoir near West Ware, Mass.

Location.--Lat 42°16'57", long. 72°20'42", on Swift River 1½ miles northwest of West Ware, Hampshire County.

Drainage area.--186 sq mi.

Gage.--Float tape. Datum of gage is 5.65 ft below mean sea level, datum of 1929.

Remarks.--Reservoir completed in August 1939 for storage of water for municipal supply, has usable capacity of 55,700,000,000 cu ft.

Cooperation.--Records furnished by Water Division, Metropolitan District Commission.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1939	-	-	-	-	-	-	-	-	-	-	-	-
1940	308	577	a955	1,181	1,396	b972	5,970	7,696	8,532	8,775	8,739	8,738
1941	6,692	9,322	9,993	10,525	11,134	11,713	12,638	13,083	13,277	13,464	13,356	12,373
1942	10,671	10,902	11,225	11,883	12,229	15,461	16,453	16,952	17,553	17,861	17,794	17,861
1943	17,993	18,869	20,159	21,028	21,964	24,463	26,175	28,621	29,902	29,049	27,538	26,696
1944	26,910	28,113	28,354	28,527	28,915	30,640	32,979	33,647	34,556	33,687	35,059	32,832
1945	32,765	33,220	33,835	34,797	35,586	38,714	40,719	43,419	45,371	45,144	45,451	44,502
1946	44,529	45,064	46,173	47,470	48,379	50,946	51,895	53,593	55,023	55,304	55,130	54,181
1947	54,087	53,967	54,134	54,341	54,261	55,544	56,280	56,253	56,012	54,956	54,649	54,448
1948	53,365	52,750	52,937	53,205	53,552	55,892	56,012	56,368	56,320	55,969	54,582	54,194
1949	52,657	53,258	53,445	54,528	55,437	55,985	55,705	56,186	55,691	54,194	53,699	52,964
1950	51,427	50,291	50,371	50,678	51,400	52,884	55,103	53,790	54,087	53,285	52,349	51,948

a Contents by capacity table used beginning Dec. 1, 1939; contents Dec. 31, 1939, by capacity table used prior to Dec. 1, 1939, was 304 million cu ft.

b Contents by capacity table used beginning Mar. 1, 1940; contents Mar. 31, 1940, by capacity table used prior to Mar. 1, 1940, was 2,366 million cu ft.

## 293. 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.

Supplemental records available.--July 1910 to September 1912, twice daily gage heights and corresponding discharges.

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.--38 years (1912-50), 300 cfs (adjusted for change in contents in Quabbin Reservoir and for diversion to and from Quabbin Reservoir).

Extremes.--1910-50: 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.--Flow completely regulated since August 1939 by Quabbin Reservoir (see preceding page). Runoff adjusted for change in contents in Quabbin Reservoir (adjusted for diversion from Ware River Basin and diversion to Wachusett Reservoir) since August 1939.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1913	53.0	107	133	375	213	670	622	305	162	58.1	42.3	57.7	233
1914	125	131	198	140	238	671	852	527	144	112	78.0	53.0	272
1915	40.8	57.0	58.1	326	488	254	317	224	78.5	351	545	121	237
1916	127	136	340	429	417	535	985	442	408	297	185	185	373
1917	169	184	270	234	172	645	585	398	379	169	118	121	288
1918	118	198	139	109	263	723	624	275	189	98.3	75.4	127	244
1919	128	160	295	359	195	714	695	591	242	147	113	244	324
1920	149	412	461	177	171	974	1,070	586	436	197	180	127	412
1921	236	320	710	374	206	647	708	685	185	399	196	116	401
1922	115	216	390	164	220	655	718	475	697	602	214	225	392
1923	200	191	156	432	245	522	945	587	215	102	92.9	70.4	315
1924	121	250	596	608	235	327	816	417	171	87.5	76.6	86.0	316
1925	59.9	66.3	112	49.4	458	536	443	246	140	156	130	137	208
1926	163	249	347	322	224	458	730	266	140	88.8	84.2	65.2	262
1927	101	298	210	327	277	676	317	337	199	196	271	190	264
1928	252	727	693	458	411	556	542	465	577	317	337	343	456
1929	161	151	169	266	234	713	725	611	175	98.4	53.3	59.6	285
1930	64.2	101	108	168	195	339	265	169	146	127	50.5	44.4	148
1931	40.2	105	77.6	70.5	88.5	321	561	429	351	117	114	88.7	197
1932	90.0	108	195	342	303	299	748	260	110	101	80.6	76.6	225
1933	152	290	188	280	300	480	1,200	322	153	82.9	105	507	336
1934	335	262	227	310	202	612	1,035	550	285	119	96.3	246	357
1935	271	323	411	460	296	652	560	350	321	144	70.2	89.3	329
1936	69.4	115	137	303	174	1,654	828	320	174	77.5	74.2	99.6	337
1937	168	162	494	627	458	362	595	533	420	232	132	244	367
1938	231	444	545	500	474	401	468	344	365	628	462	1,109	497
1939	542	330	650	359	359	605	878	361	268	100	44.4	34.9	375
1940	38.5	36.5	35.6	32.3	34.8	33.7	33.3	29.8	32.1	32.4	32.2	32.2	33.6
1941	32.7	34.1	33.7	34.1	33.6	37.0	35.6	33.7	34.2	35.6	32.7	33.9	34.2
1942	34.8	35.8	35.0	34.5	40.2	43.4	36.9	36.8	33.1	33.2	33.2	33.5	35.7
1943	34.2	33.5	34.9	34.8	34.8	34.0	33.2	33.6	33.2	33.2	34.2	33.3	33.9
1944	32.5	32.4	32.1	33.6	33.3	32.7	31.4	31.4	32.7	31.2	30.7	31.1	32.1
1945	30.3	31.3	31.4	30.9	30.6	31.7	30.8	29.0	28.6	31.4	31.1	30.8	30.7
1946	30.3	31.3	31.2	31.5	31.5	31.3	30.5	31.0	35.0	32.2	34.0	33.6	31.9
1947	33.7	33.0	34.1	57.2	42.8	75.9	367	486	305	71.6	41.3	49.5	133
1948	39.1	58.7	61.9	76.2	74.5	103	249	405	661	301	101	74.2	183
1949	73.4	75.6	78.6	11.2	178	256	126	269	161	79.0	82.1	79.4	151
1950	77.6	75.3	75.9	78.2	77.4	80.5	76.9	79.9	80.0	76.0	79.6	76.2	77.6

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1913	0.33	0.64	0.82	2.33	1.20	4.15	3.73	1.89	0.97	0.36	0.26	0.35	17.03
1914	0.77	0.79	1.22	1.87	1.33	4.16	5.11	3.26	0.86	0.69	0.48	0.32	19.86
1915	0.25	0.34	0.36	2.02	2.73	1.58	1.90	1.38	0.47	2.18	3.58	0.73	17.32
1916	0.79	0.82	2.11	2.66	2.42	3.32	5.91	2.74	2.44	1.84	1.15	1.11	27.31
1917	1.05	1.10	1.67	1.45	0.92	4.00	3.51	2.47	2.28	1.05	0.73	0.73	20.96
1918	0.73	1.18	0.86	0.68	1.47	4.48	3.74	1.71	1.14	0.61	0.47	0.76	17.83
1919	0.79	0.96	1.83	2.22	1.09	4.43	4.17	3.67	1.45	0.91	0.70	1.46	23.68
1920	0.92	2.48	2.86	1.10	0.99	6.04	6.42	3.63	2.61	1.22	1.12	0.76	30.15
1921	1.46	1.92	4.40	2.32	1.16	4.01	4.25	4.24	1.11	2.48	1.21	0.70	29.26
1922	0.71	1.29	2.42	1.02	1.23	4.06	4.31	2.94	4.18	3.74	1.33	1.35	29.58
1923	1.24	1.15	0.97	2.68	1.38	3.24	5.87	3.64	1.29	0.63	0.58	0.42	22.69
1924	0.75	1.50	3.69	3.77	1.56	2.03	4.90	2.58	1.03	0.54	0.48	0.52	23.15
1925	0.37	0.40	0.69	0.31	2.45	3.32	2.66	1.52	0.84	0.97	0.81	0.82	15.16
1926	1.01	1.50	2.16	1.99	1.25	2.84	4.38	1.66	0.84	0.55	0.52	0.39	19.09
1927	0.63	1.78	1.30	2.03	1.55	4.18	1.90	2.09	1.19	1.21	1.68	1.14	20.68
1928	1.56	4.36	4.30	2.84	2.38	2.20	3.25	2.68	3.46	1.96	2.09	2.05	35.33
1929	1.00	0.91	1.05	1.65	1.31	4.42	4.35	3.78	1.05	0.61	0.33	0.36	20.82
1930	0.40	0.61	0.67	1.04	1.09	2.10	1.58	1.05	0.88	0.79	0.31	0.27	10.79

Monthly and yearly runoff, in inches, of Swift River at West Ware, Mass.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	.25	.63	.48	.44	.50	1.99	3.37	2.66	2.11	.73	.71	.53	14.40
1932	.56	.65	1.21	2.12	1.76	1.86	4.48	1.61	.66	.63	.50	.48	16.50
1933	.94	1.74	1.16	1.74	1.68	2.97	7.20	1.99	.92	.51	.65	3.05	24.55
1934	2.08	1.57	1.41	1.92	1.14	3.79	6.20	3.41	1.71	.74	.60	1.47	26.04
1935	1.68	1.94	2.55	2.85	1.66	4.05	3.36	2.17	1.93	.89	.43	.54	24.05
1936	.43	.69	.85	1.88	1.01	10.25	4.96	1.98	1.04	.48	.46	.60	24.63
1937	1.04	.97	3.07	3.85	2.43	2.22	3.53	3.27	2.49	1.42	.81	1.45	26.55
1938	1.42	2.63	3.34	3.07	2.62	2.46	2.78	2.11	2.16	3.85	2.84	6.58	35.86
1939	3.32	1.96	3.99	2.20	1.99	3.71	5.21	2.21	1.35	.61	.53	.36	27.44
1940	.47	.80	1.12	.81	.76	1.65	6.54	2.78	1.77	.75	.12	.21	17.78
1941	.09	1.48	1.49	1.35	1.26	1.34	1.76	1.05	.63	.63	-.04	.08	11.12
1942	.51	.73	.95	1.60	1.02	5.21	1.87	1.33	1.52	.91	.06	.35	16.05
1943	.51	2.06	2.80	2.05	2.02	4.23	2.99	4.26	.76	.54	.78	-.18	22.82
1944	.66	2.59	.74	.60	1.08	3.53	4.19	1.49	3.25	.69	-.09	1.32	19.85
1945	.03	1.21	1.43	2.15	1.79	4.96	3.75	5.02	5.13	3.50	.69	.27	30.13
1946	.25	1.32	2.43	2.51	2.04	4.16	1.93	3.50	3.18	.84	.61	.52	23.29
1947	-.0008	-.08	.64	1.69	2.10	3.40	3.86	2.92	1.26	.41	-.45	-.17	15.57
1948	-.15	1.38	.81	1.08	1.22	5.82	3.34	3.92	3.77	1.02	-.16	-.45	21.60
1949	-.27	1.83	.91	3.17	3.07	2.83	2.25	2.75	-.18	-.25	-.60	-.03	15.48
1950	-.05	-.22	1.24	2.52	1.97	3.05	4.24	2.58	1.82	.28	.16	-.43	17.16

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

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year			
		Observed				Adjusted		Observed	Adjusted		
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1913	351, 415	1,900	Mar. 29, 1913	24	233	-	1.25	17.03	247	-	18.02
1914	381	1,560	Mar. 29, 1914	23	272	-	1.46	19.86	247	-	18.03
1915	401	2,240	Feb. 26, 1915	30	237	-	1.27	17.32	275	-	20.09
1916	431, 451	1,970	Apr. 3, 1916	82	373	-	2.01	27.31	375	-	27.41
1917	451	1,800	Mar. 29, 1917*	82	288	-	1.55	20.96	273	-	19.91
1918	471	1,100	Mar. 25, 1918	55	244	-	1.51	17.83	255	-	18.64
1919	501	1,350	Mar. 30, 1919	80	324	-	1.74	23.68	361	-	26.36
1920	501	2,340	Mar. 28, 1920	94	412	-	2.22	30.15	433	-	31.67
1921	521	2,280	May 2, 1921	93	401	-	2.16	29.26	355	-	25.90
1922	541	1,960	July 1, 1922	84	392	-	2.11	28.58	377	-	27.52
1923	561	2,390	Apr. 7, 1923	45	513	-	1.68	22.89	349	-	25.47
1924	581	1,820	Apr. 9, 1924	42	316	-	1.70	23.15	255	-	18.67
1925	601	*1,600	Feb. 13, 1925	25	208	-	1.12	15.16	251	-	18.37
1926	621	1,250	Apr. 11, 1926	52	262	-	1.41	19.09	249	-	18.13
1927	641	1,350	Mar. 17, 1927	59	284	-	1.53	20.68	373	-	27.19
1928	661	2,230	Nov. 6, 1927	105	456	-	2.45	33.33	356	-	26.07
1929	681	1,630	Mar. 17, 1929	33	285	-	1.53	20.82	268	-	19.54
1930	696	720	Mar. 27, 1930	34	148	-	.796	10.79	144	-	10.47
1931	711	1,220	Mar. 31, 1931	22	197	-	1.06	14.40	212	-	15.46
1932	726	1,980	Apr. 2, 1932	43	225	-	1.23	16.50	245	-	17.66
1933	741	2,200	Sept. 18, 1933	58	336	-	1.81	24.55	353	-	25.77
1934	756	1,770	Apr. 14, 1934	73	357	-	1.92	26.04	372	-	27.15
1935	781	1,540	Jan. 11, 1935	57	329	-	1.77	24.05	272	-	19.85
1936	801	7,590	Mar. 19, 1936	53	337	-	1.81	24.63	379	-	27.74
1937	821	1,040	Dec. 21, 1936	78	367	-	1.97	26.55	400	-	29.09
1938	851	5,540	Sept. 22, 1938	106	497	-	2.64	35.86	523	-	37.74
1939	871	1,480	Dec. 7, 1938	33	375	380	2.02	27.44	255	285	20.56
1940	891	165	Mar. 14, 1940	15	33.6	246	1.31	17.78	32.8	251	18.45
1941	921	78	Jan. 7, 1941	26	34.2	154	.819	11.12	34.5	142	10.23
1942	951	92	Mar. 3, 1942	32	35.7	222	1.18	16.05	35.6	266	19.23
1943	971	115	May 7, 1943	30	33.9	316	1.68	22.82	33.4	297	21.44
1944	1001, 1031	135	June 24, 1944	28	32.1	274	1.46	19.85	31.7	256	18.53
1945	1031	89	Aug. 8, 1945	26	30.7	417	2.22	30.13	30.6	436	31.46
1946	1051	85	June 27, 1946	27	31.9	322	1.71	23.29	32.6	275	19.84
1947	1081	653	May 5, 1947	28	133	216	1.15	15.57	138	236	17.06
1948	1111	968	June 9, 1948	27	183	298	1.59	21.60	189	304	22.03
1949	1141	585	May 27, 1949	30	131	214	1.14	15.48	131	194	13.98
1950	1171	156	Apr. 20, 1950	33	77.6	238	1.27	17.16	-	-	-

\* Revised.

\* Not previously published.

## 294. 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  $3\frac{1}{2}$  miles northeast of Palmer.

Drainage area.--151 sq mi.

Supplemental records available.--September 1909 to August 1912, twice daily gage heights and corresponding discharges.

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 bridge pier at same datum.

Average discharge.--38 years (1912-50), 235 cfs.

Extremes.--1912-50: Maximum discharge, 8,470 cfs Sept. 21, 1938 (gage height, 11.8 ft, from floodmarks), by slope-area method; minimum daily, 7.8 cfs Oct. 11, 19, 1930.

Remarks.--Slight diurnal fluctuation at low flow caused by mill above station; regulation much greater prior to 1938.



Monthly and yearly mean discharge, in cubic feet per second, of Quabog River at West Brimfield, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1912	-	-	-	-	-	-	-	-	-	-	-	44.0	-
1913	37.0	70.0	115	276	179	459	682	244	135	52.3	40.0	47.3	194
1914	90.8	143	191	147	175	588	640	488	106	110	68.8	45.0	233
1915	34.5	42.6	61.0	528	433	245	173	115	63.4	124	178	72.3	171
1916	101	99.0	188	320	305	480	764	369	326	241	251	133	298
1917	106	104	141	199	184	580	501	273	255	107	91.4	83.6	219
1918	86.1	125	86.0	85.2	211	606	390	205	129	81.0	64.0	71.8	178
1919	106	110	161	284	202	639	516	365	142	136	87.6	275	252
1920	191	357	370	156	134	917	866	529	368	203	143	111	263
1921	203	212	533	302	198	545	419	450	93.9	175	104	61.0	276
1922	65.1	96.4	263	132	165	597	619	371	210	290	173	220	267
1923	155	152	87.6	393	154	581	735	434	162	89.0	88.5	45.0	257
1924	69.2	143	397	587	233	341	867	333	143	57.0	68.1	79.3	276
1925	51.1	51.2	123	54.6	301	433	292	186	104	72.7	66.8	48.9	148
1926	78.1	114	222	164	141	378	538	210	89.0	38.8	44.6	33.0	171
1927	50.2	136	119	185	284	501	246	229	126	96.1	269	240	306
1928	241	528	600	357	430	275	318	365	345	220	189	213	239
1929	128	119	124	215	192	545	608	534	120	60.5	43.9	44.4	228
1930	54.1	58.8	86.8	126	143	248	239	108	74.2	55.6	31.5	27.4	104
1931	18.7	46.3	48.5	49.0	71.8	300	530	253	327	85.0	104	96.2	161
1932	55.9	56.9	129	308	264	272	572	158	63.4	43.5	45.5	70.3	169
1933	175	385	201	245	293	473	968	270	116	41.5	58.3	310	293
1934	228	150	167	323	130	494	736	372	185	79.4	58.7	244	284
1935	271	281	280	393	256	591	512	288	243	80.2	45.5	59.5	275
1936	32.0	56.2	90.7	228	138	1,399	635	398	115	45.9	36.7	68.8	272
1937	165	145	482	515	371	324	389	312	183	116	79.7	173	268
1938	134	314	450	428	452	332	352	233	230	524	358	1,369	430
1939	437	262	502	241	261	483	695	203	80.1	37.6	40.3	33.4	273
1940	38.4	108	102	91.4	106	250	1,352	462	232	86.0	43.3	39.7	241
1941	35.5	140	187	160	248	207	280	128	74.6	53.2	37.1	31.7	131
1942	28.0	52.7	71.6	150	115	701	325	193	157	109	81.7	49.5	170
1943	56.6	166	270	235	320	646	399	573	217	70.4	79.6	32.2	256
1944	66.3	244	128	68.1	122	357	477	247	176	39.1	39.1	86.2	179
1945	59.9	92.9	189	218	203	751	393	347	380	260	172	105	282
1946	85.7	154	268	387	314	595	236	267	322	86.2	139	77.5	244
1947	255	109	133	226	355	495	477	359	139	57.3	45.6	39.0	224
1948	23.9	139	105	86.0	177	722	516	411	655	324	142	51.3	279
1949	47.3	165	141	348	337	364	302	229	73.5	27.8	16.8	17.5	171
1950	19.0	26.9	72.1	170	194	367	468	254	166	49.4	42.2	41.1	155

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1912	-	-	-	-	-	-	-	-	-	-	-	0.53	-
1913	0.28	0.52	0.86	2.11	1.24	3.50	5.04	1.87	1.00	0.40	0.30	.35	17.47
1914	.69	1.06	1.45	1.12	1.21	4.49	4.73	3.72	.78	.84	.53	.33	20.95
1915	.26	.31	.47	4.04	2.99	1.87	1.28	.88	.47	.95	1.36	.53	15.41
1916	.77	.73	1.44	2.44	2.18	3.67	5.65	2.81	2.41	1.85	1.91	.98	26.84
1917	.88	.77	1.52	1.27	1.43	3.70	2.09	1.89	1.82	.70	.82	.70	19.70
1918	.66	.92	.66	.65	1.46	4.62	2.88	1.57	.95	.62	.49	.53	16.01
1919	.81	.81	1.23	2.17	1.40	4.88	3.82	2.79	1.05	1.04	.67	2.03	22.70
1920	1.45	2.63	2.83	1.19	.96	7.00	6.40	4.04	2.72	1.55	1.09	.82	32.68
1921	1.55	1.56	4.07	2.31	1.36	4.16	3.09	3.44	.69	1.34	.79	.45	24.81
1922	.48	.71	2.01	1.01	1.14	4.55	4.57	2.84	1.55	2.21	1.33	1.63	24.03
1923	1.19	1.13	.67	3.00	1.06	4.44	5.43	3.31	1.19	.68	.68	.33	23.11
1924	.52	1.06	3.03	4.49	1.66	2.61	6.40	2.55	1.06	.43	.52	.59	24.92
1925	.39	.58	.94	.42	2.07	3.31	2.15	1.42	.77	.55	.51	.36	13.27
1926	.60	.84	1.70	1.26	.97	2.88	3.97	1.60	.66	.30	.34	.24	15.36
1927	.38	1.01	.91	1.42	1.96	3.83	1.82	1.75	.93	.73	2.05	1.77	18.56
1928	1.85	3.91	4.58	2.72	3.07	2.10	2.35	2.79	2.54	1.68	1.44	1.57	30.60
1929	.98	.88	.95	1.64	1.32	4.16	4.50	4.08	.89	.46	.34	.33	20.53
1930	.41	.43	.68	.96	.99	1.89	1.76	.82	.55	.42	.24	.20	9.35
1931	.14	.34	.37	.37	.49	2.29	3.92	1.94	2.42	.65	.79	.71	14.43
1932	.43	.42	.98	2.35	1.89	2.08	4.23	1.21	.47	.33	.35	.52	15.26
1933	1.34	2.84	1.53	1.87	2.02	3.61	7.15	2.06	.86	.32	.44	2.29	26.33
1934	1.74	1.11	1.28	2.47	.90	3.77	5.43	2.84	1.37	.61	.45	1.81	23.78
1935	2.06	2.08	2.13	3.00	1.77	4.51	3.78	2.20	1.80	.61	.35	.44	24.73
1936	.24	.42	.69	1.74	.99	10.68	4.70	3.04	.85	.35	.28	.51	24.49
1937	1.26	1.07	3.68	3.93	2.56	2.48	2.66	2.39	1.35	.89	.61	1.28	24.16
1938	1.02	2.32	3.44	3.26	3.11	2.54	2.60	1.76	1.70	4.00	2.73	10.12	36.62
1939	3.33	1.94	3.83	1.84	1.60	3.69	5.13	1.54	.59	.29	.31	.25	24.54
1940	.29	.80	.78	.70	.76	1.91	9.99	3.53	1.71	.66	.33	.29	21.75
1941	.27	1.04	1.43	1.22	1.71	1.58	2.07	.97	.55	.41	.28	.23	11.76
1942	.20	.59	.55	1.15	.79	5.35	2.40	1.48	1.16	.83	.62	.37	15.29
1943	.43	1.22	2.06	1.81	2.21	4.93	2.95	4.37	1.61	.54	.61	.24	22.98
1944	.51	1.80	.98	.52	.87	2.73	3.52	1.86	1.30	1.12	.30	.64	16.15
1945	.46	.69	1.44	1.66	1.40	5.74	2.90	4.17	2.61	1.98	1.32	.78	25.35
1946	.65	1.13	2.05	2.96	2.17	4.54	1.74	2.04	2.38	.66	1.06	.57	21.95
1947	1.95	.81	1.02	1.73	2.45	3.78	3.52	2.74	1.03	.44	.35	.29	20.11
1948	.18	1.03	.80	.66	1.26	5.51	3.81	3.14	4.84	2.47	1.09	.38	25.17
1949	.36	1.22	1.08	2.65	2.32	2.78	2.23	1.75	.54	.21	.13	.13	15.40
1950	.15	.20	.55	1.29	1.34	2.80	3.46	1.94	1.23	.38	.32	.30	13.96

Yearly discharge, in cubic feet per second, of Quabog River at West Brimfield, Mass.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1913	415	1,200	Apr. 16, 1913	11	194	1.28	17.47	211	19.01
1914	415	1,270	Mar. 1, 1914	14	233	1.54	20.95	209	18.79
1915	415	1,660	Jan. 7, 1915	13	171	1.13	15.41	192	17.31
1916	451	1,250	Apr. 3, 1916	46	298	1.97	26.84	295	26.56
1917	451	1,100	Mar. 29, 30, 1917	30	219	1.45	19.70	214	19.28
1918	471	*1,020	Mar. 7, 1918*	20	178	1.18	16.01	185	16.62
1919	501	1,360	Mar. 1, 1919	46	252	1.67	22.70	298	26.76
1920	501	1,980	Mar. 17, 1920	54	363	2.40	32.68	365	32.95
1921	521	970	May 3, 1921	33	276	1.83	24.81	232	20.83
1922	541	1,680	Mar. 7, 1922	39	267	1.77	24.05	255	23.92
1923	561	1,430	Mar. 26, 1923	30	257	1.70	23.11	275	24.73
1924	581	1,750	Apr. 7, 1924	28	276	1.83	24.92	244	22.02
1925	601	1,140	Mar. 1, 1925	16	148	.980	13.27	164	14.70
1926	621	890	Apr. 9, 1926	10	171	1.13	15.36	162	14.52
1927	641	890	Mar. 22, 1927	14	206	1.36	18.56	296	26.60
1928	661	1,180	Nov. 4, 1927	106	339	2.25	30.60	256	23.07
1929	681	1,140	Apr. 23, 1929	8.7	228	1.51	20.53	214	19.24
1930	696	556	Mar. 26, 1930	12	104	.689	9.35	96.9	8.68
1931	711	1,070	Apr. 1, 1931	7.8	161	1.07	14.43	171	15.41
1932	726	995	Apr. 1, 1932	15	169	1.12	15.26	212	19.14
1933	741	1,500	Apr. 18, 1933	18	293	1.94	26.33	275	24.75
1934	756	1,050	Apr. 12, 1934	40	264	1.75	23.78	288	25.92
1935	781	1,150	Jan. 11, 1935	20	275	1.82	24.73	220	19.81
1936	801	3,620	Mar. 18, 1936	16	272	1.80	24.49	323	†29.15
1937	821	1,050	Dec. 20, 1936	54	268	1.77	24.16	277	24.93
1938	851	8,470	Sept. 21, 1938	65	430	2.85	38.62	456	40.94
1939	871	a943	Apr. 6, 1939	22	273	1.81	24.54	193	17.31
1940	891	1,850	Apr. 13, 1940	24	241	1.60	21.75	251	22.62
1941	921	*800	Feb. 8, 1941*	14	131	.868	11.76	113	10.16
1942	951	1,170	Mar. 22, 1942	16	170	1.13	15.29	199	17.86
1943	971	960	Mar. 20, 1943	24	256	1.70	22.98	251	22.56
1944	1001	1,190	June 24, 1944	25	179	1.19	16.15	171	15.45
1945	1031	995	Mar. 7, 1945	39	282	1.87	25.35	296	26.59
1946	1051	*1,050	Mar. 9, 1946*	36	244	1.62	21.95	243	21.90
1947	1081	881	Mar. 14, 1947	24	224	1.48	20.11	204	18.34
1948	1111	1,650	Mar. 22, 1948	18	279	1.85	25.37	286	25.82
1949	1141	670	Jan. 6, 1949	11	171	1.13	15.40	152	13.64
1950	1171	756	Mar. 31, 1950	12	155	1.03	13.96	-	-

\* Revised.

† Corrected.

‡ Not previously published.

a Maximum peak discharge; maximum discharge during the year, 1,260 cfs at 12:01 a.m. Oct. 1, stage falling.

## 295. Chicopee River at Indian Orchard, Mass. 1/

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.

Gage.--Water-stage recorder. Altitude of gage is 125 ft (from topographic map). Prior to Nov. 1, 1938, at site  $\frac{1}{2}$  miles downstream at different datum.

Average discharge.--22 years (1928-50), 1,050 cfs (adjusted to present drainage area and for storage and diversions).

Extremes.--1928-50: Maximum discharge, 45,200 cfs Sept. 21, 1938, by computation of flow over dam; minimum daily, 16 cfs several times in 1929-31.

Remarks.--Flow regulated by power plants above station, by Quabbin Reservoir on Swift River since 1939 (see p. 308), and smaller reservoirs. Diversions since 1941 from 186 sq mi in Swift River Basin and as needed during period Oct. 15 to June 14 of each year since 1931 from 97 sq mi in Ware River Basin for Boston metropolitan district. Diversion from Ludlow Reservoir for Springfield and Chicopee. Runoff adjusted for change in contents in Quabbin Reservoir since August 1939, and Ludlow Reservoir since October 1943, and for diversions for Boston metropolitan district from 186 sq mi in Swift River Basin and from 97 sq mi in Ware River Basin, and for diversions for industrial use in Springfield from Ludlow Reservoir.

1/ Published as "at Bircham Bend" prior to November 1938.

Monthly and yearly mean discharge, in cubic feet per second (observed), of Chicopee River at Indian Orchard, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	-	-	-	1,090	-
1929	615	566	602	1,020	1,030	2,740	2,770	2,310	699	340	241	248	1,100
1930	254	355	420	715	834	1,300	1,110	647	524	530	236	163	589
1931	149	313	256	221	332	1,280	1,780	1,340	1,310	411	465	341	684
1932	277	314	666	1,270	1,130	2,250	858	398	276	271	501	761	764
1933	750	1,420	814	1,140	1,250	2,040	4,120	1,240	583	277	348	1,570	1,290
1934	1,103	815	785	1,366	647	2,465	3,221	1,685	1,003	*426	361	906	*1,234
1935	1,056	1,158	1,353	1,723	1,160	2,578	2,145	1,237	1,102	522	240	298	1,215
1936	217	356	491	1,035	649	5,993	2,823	1,315	691	319	245	364	1,213
1937	647	559	1,671	2,447	1,752	1,587	2,096	1,793	1,310	761	492	850	1,345
1938	715	1,559	1,900	1,931	1,902	1,588	1,771	1,232	1,358	2,458	1,609	5,474	1,952
1939	1,900	1,244	2,278	1,117	1,354	2,165	3,009	1,059	603	289	229	199	1,287
1940	187	477	443	403	378	877	3,064	1,241	860	447	218	190	725
1941	179	519	651	542	774	690	780	489	322	252	182	167	460
1942	131	258	325	464	458	1,714	898	658	644	511	300	209	549
1943	298	693	893	835	1,116	1,751	1,152	1,584	757	318	341	170	823
1944	281	803	453	252	432	1,040	1,538	732	784	458	206	425	599
1945	296	402	714	768	660	1,802	1,162	1,454	1,218	926	630	365	867
1946	323	502	827	1,096	946	1,523	776	877	941	387	484	269	746
1947	553	508	337	650	950	1,465	1,738	1,568	785	402	241	204	765
1948	144	554	345	301	597	2,137	1,736	1,704	2,475	1,238	508	248	997
1949	229	627	491	1,188	1,265	1,425	1,103	1,107	453	209	176	176	701
1950	172	200	411	748	729	1,162	1,326	943	737	343	275	225	605

\* Revised.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	-	-	-	1.73	-
1929	1.01	0.90	0.99	1.67	1.53	4.50	4.40	3.79	1.11	0.56	0.40	.39	21.25
1930	.42	.56	.69	1.18	1.24	2.13	1.76	1.06	.83	.87	.39	.26	11.39
1931	.24	.50	.42	.36	.49	2.28	3.39	2.34	2.22	.67	.76	.54	14.21
1932	.45	.50	1.10	2.26	1.78	2.03	4.02	1.42	.63	.45	.44	.48	15.56
1933	1.21	2.25	1.54	1.87	1.85	3.34	6.54	2.03	.92	.45	.57	2.49	24.86
1934	1.81	1.29	1.29	2.24	.96	4.05	5.11	2.77	1.60	*.70	.59	1.44	*23.85
1935	1.73	1.84	2.21	2.62	1.73	4.23	3.40	2.05	1.75	.86	.39	.47	23.46
1936	.36	.56	.61	1.78	1.00	10.00	4.48	2.16	1.10	.52	.40	.58	23.75
1937	1.06	.89	3.36	4.09	2.59	2.61	3.32	2.94	2.08	1.24	.81	1.35	26.34
1938	1.18	2.48	3.11	3.17	2.82	2.61	2.81	2.02	2.15	4.04	2.64	8.69	37.72
1939	3.11	2.02	3.82	1.87	2.05	3.63	4.88	1.81	.99	.48	.45	.36	25.46
1940	.38	.85	.99	.84	.75	1.90	8.04	3.10	1.92	.90	.34	.31	20.32
1941	.27	1.23	1.50	1.24	1.56	1.50	1.84	1.10	.64	.53	.24	.24	11.89
1942	.30	.56	.75	1.19	.91	4.95	2.05	1.43	1.42	1.05	.46	.38	15.45
1943	.58	1.69	2.29	1.94	2.27	4.50	2.94	4.18	1.37	.62	.73	.17	23.28
1944	.61	2.08	.91	.53	.93	2.83	3.64	1.65	2.50	.96	.27	1.08	17.99
1945	.46	.95	1.59	1.89	1.50	4.98	3.14	4.10	3.38	2.46	1.25	.62	26.32
1946	.57	1.15	2.08	2.65	2.01	4.18	1.86	2.54	2.43	.83	.93	.53	21.76
1947	.87	.42	.69	1.29	1.96	3.27	3.29	3.25	1.93	.67	.21	.20	16.81
1948	.14	1.21	.72	.69	1.14	5.41	3.53	3.62	3.98	1.86	.64	.16	22.54
1949	.17	1.43	.95	2.68	2.49	2.74	2.21	2.16	.43	.16	.001	.14	15.56
1950	.14	.15	.93	1.88	1.56	2.69	3.55	2.22	1.60	.52	.37	.12	15.93

\* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30										Calendar year			
		Observed					Adjusted					Observed		Adjusted	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	Mean	Mean	Runoff in inches	Mean
		Discharge	Date												
1928	661	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	681	6,700	Mar. 15, 1929	16	1,100	-	1.56	21.25	1,040	-	20.02	-	-	-	-
1930	696	3,010	Mar. 27, 1930	16	589	-	.838	11.39	563	-	10.88	-	-	-	-
1931	711	4,840	Mar. 30, 1931	16	684	738	1.05	14.21	730	785	15.10	-	-	-	-
1932	726	5,840	Apr. 2, 1932	16	764	805	1.15	15.58	905	946	18.31	-	-	-	-
1933	741	6,790	Apr. 20, 1933	31	1,290	1,290	1.83	24.86	1,270	1,270	24.45	-	-	-	-
1934	756, 1231	6,360	Mar. 5, 1934	31	*1,234	*1,234	*1.76	*23.85	*1,306	*1,306	*25.24	-	-	-	-
1935	761	6,010	Jan. 10, 1935	31	1,215	1,216	1.73	23.46	1,005	1,006	19.41	-	-	-	-
1936	801	20,400	Mar. 19, 1936	31	1,213	1,226	1.74	23.75	1,383	1,410	27.33	-	-	-	-
1937	821	4,860	Dec. 21, 1936	65	1,345	1,365	1.94	26.34	1,436	1,440	27.80	-	-	-	-
1938	851	45,200	Sept. 21, 1938	105	1,952	1,962	2.78	37.72	2,059	2,059	39.90	-	-	-	-
1939	871, 1231	*4,800	Apr. 7, 1939	32	1,287	1,294	1.88	25.46	918	949	18.75	-	-	-	-
1940	891	6,210	Apr. 1, 1940	35	725	1,027	1.49	20.32	750	1,066	21.10	-	-	-	-
1941	921	2,720	Feb. 8, 1941	36	460	603	.876	11.89	407	533	10.50	-	-	-	-
1942	951	4,280	Mar. 10, 1942	60	549	783	1.14	15.45	647	933	18.40	-	-	-	-
1943	971	3,710	Dec. 31, 1942	32	823	1,180	1.72	23.28	793	1,134	22.32	-	-	-	-
1944	1001	6,670	June 25, 1944	65	599	910	1.32	17.99	589	879	17.39	-	-	-	-
1945	1031	3,580	Jan. 2, 1945	120	867	1,334	1.94	26.32	887	1,375	27.12	-	-	-	-
1946	1051	3,490	Mar. 8, 1946	42	746	1,103	1.80	21.76	708	1,010	19.94	-	-	-	-
1947	1081	4,050	Mar. 15, 1947	95	765	852	1.24	16.81	751	856	18.90	-	-	-	-
1948	1111	5,250	Mar. 22, 1948	34	997	1,139	1.66	22.54	1,023	1,164	23.02	-	-	-	-
1949	1141	3,620	Jan. 7, 1949	50	701	769	1.15	15.56	654	721	14.23	-	-	-	-
1950	1171	2,510	Mar. 30, 1950	58	605	807	1.17	15.93	-	-	-	-	-	-	-

\* Revised.

\* Not previously published; estimated on basis of comparison of peaks and dailies for other years.

## 296. Watershops Pond at Springfield, Mass.

Location--Lat 42°05'50", long. 72°33'50", on Mill River in Springfield, Hampden County, 1.3 miles upstream from mouth.

Drainage area--33.9 sq mi.

Gage--Float gage. Datum of gage is 153.43 ft above mean sea level, datum of 1929. Prior to July 1941, water-stage recorder at same site and datum.

Remarks--Reservoir completed in 1857 for storage of water for power, has usable capacity of 70,600,000 cu ft.

Cooperation--Records furnished by Ordnance Department, Department of the Army.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1939	-	-	-	-	-	-	71.4	61.7	52.6	57.7	54.1	56.9
1940	55.4	53.9	57.0	51.1	51.2	74.0	67.4	61.4	63.0	54.1	52.5	56.2
1941	55.0	62.0	62.0	63.6	70.8	64.3	3.5	14.9	58.2	63.0	62.8	53.9
1942	55.6	57.5	61.8	68.2	61.8	55.6	58.9	63.3	53.6	66.2	70.0	70.7
1943	70.7	71.0	68.9	64.9	66.0	66.0	66.3	66.0	64.9	65.3	64.6	64.6
1944	71.4	70.7	68.9	62.4	55.6	59.5	70.4	58.7	64.9	63.3	60.5	61.1
1945	64.3	69.7	65.3	66.8	71.8	67.1	71.4	69.7	70.7	71.1	71.8	71.4
1946	71.1	72.1	72.1	71.4	71.4	72.1	72.1	67.9	64.3	70.0	57.5	56.3
1947	53.6	52.4	62.4	71.4	72.1	72.1	72.4	72.1	70.7	71.8	71.4	70.0
1948	71.4	71.4	71.1	70.0	70.7	72.1	72.1	73.1	72.1	71.4	68.9	62.7
1949	62.4	71.1	72.1	71.4	72.1	71.8	71.1	71.4	66.8	70.7	71.8	71.1
1950	70.7	71.1	71.1	71.1	70.3	72.1	71.8	71.8	71.1	70.3	70.0	68.5

## 297. Mill River at Springfield, Mass.

Location--Lat 42°05'39", long. 72°34'03", on right bank 75 ft upstream from Hancock Street Bridge at Springfield, Hampden County, 0.25 mile downstream from Watershops Pond, and 1.0 mile upstream from mouth.

Drainage area--33.9 sq mi.

Gage--Water-stage recorder and concrete control. Datum of gage is 118.92 ft above mean sea level, datum of 1929.

Average discharge--11 years (1939-50), 41.0 cfs (adjusted for storage).

Extremes--1938-50: Maximum daily discharge, 306 cfs Apr. 1, 1940; no flow May 30, 1941.

Remarks--Flow regulated by power plant and by Watershops Pond (see above). Runoff adjusted for change in storage at Watershops Pond since May 1939.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	65.1	73.5	94.3	104	54.8	42.5	21.3	25.5	21.1	-
1940	23.9	27.5	30.7	34.3	27.8	61.7	124	73.7	61.6	41.5	25.6	20.4	46.0
1941	20.7	36.0	36.2	28.2	37.0	43.5	62.8	24.8	7.67	17.5	15.8	17.7	28.9
1942	14.0	19.3	19.6	22.2	28.1	70.5	45.8	39.0	37.8	30.1	22.1	23.0	31.1
1943	26.4	49.4	68.9	65.6	69.7	93.8	65.9	86.6	53.1	40.6	26.0	21.7	55.6
1944	22.4	42.6	23.8	24.3	31.9	48.7	61.1	44.1	37.3	24.7	22.4	32.5	34.6
1945	24.5	29.6	42.8	44.5	44.2	101	70.0	78.2	69.4	55.5	41.2	28.2	52.4
1946	28.6	39.6	50.9	56.1	50.8	77.5	50.1	60.8	52.9	30.4	37.4	21.0	46.4
1947	21.5	21.1	17.2	26.4	36.1	51.8	57.0	58.3	36.5	28.7	22.6	22.4	35.3
1948	18.7	47.9	51.5	25.3	34.5	93.4	79.3	64.3	66.3	50.3	28.5	24.6	48.9
1949	21.0	32.8	28.6	53.7	52.5	55.6	48.5	51.8	28.2	17.3	20.4	1.8	36.0
1950	18.2	20.2	28.4	38.8	39.8	60.1	60.6	53.2	54.0	29.0	26.5	21.7	37.5

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1939	-	-	-	2.21	2.26	3.20	3.42	1.74	1.28	0.79	0.82	0.73	-
1940	0.81	0.91	1.05	1.17	.89	2.10	4.08	2.51	2.03	1.41	.87	.67	18.50
1941	.69	1.27	1.23	.98	1.23	1.40	1.29	.99	.80	.66	.53	.47	11.54
1942	.50	.66	.72	.84	.78	2.45	1.46	1.38	1.12	1.18	.79	.76	12.64
1943	.90	1.63	2.32	2.18	2.16	3.19	2.17	2.94	1.73	1.39	.89	.71	22.20
1944	.85	1.39	.79	.74	.93	1.71	2.15	1.35	1.30	.82	.73	1.08	13.64
1945	.87	1.04	1.40	1.53	1.42	3.37	2.36	2.64	2.26	1.89	1.41	.92	21.11
1946	.97	1.32	1.73	1.90	1.56	2.64	1.65	2.02	1.69	1.11	1.11	.68	18.38
1947	.70	.68	.71	1.01	1.12	1.75	1.89	1.98	1.18	.99	.76	.72	13.49
1948	.65	1.58	1.07	.85	1.12	3.19	2.61	2.20	2.90	1.70	.94	.73	19.54
1949	.71	1.19	.99	1.82	1.62	2.02	1.58	1.76	.87	.65	.71	.58	14.50
1950	.61	.67	.96	1.32	1.21	2.07	1.99	1.81	1.77	.98	.90	.70	14.99

Yearly discharge, in cubic feet per second, of Mill River at Springfield, Mass.

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1939	871	-	-	-	-	-	-	-	48.5	-	19.42
1940	891	-	-	1.2	46.0	46.0	1.36	18.50	46.9	47.1	18.92
1941	921	-	-	0	28.9	28.8	.850	11.54	25.6	25.6	10.23
1942	951	-	-	.6	31.1	31.6	.932	12.64	38.8	39.0	15.61
1943	971	-	-	3.7	55.6	55.4	1.63	22.20	50.9	50.9	20.38
1944	1001	-	-	.8	34.6	34.4	1.01	13.84	35.3	35.2	14.12
1945	1031	-	-	1.3	52.4	52.8	1.56	21.11	54.3	54.5	21.82
1946	1051	-	-	.5	46.4	45.9	1.35	18.38	41.4	41.1	16.45
1947	1081	-	-	1.0	33.3	33.7	.994	13.49	36.4	36.7	14.70
1948	1111	-	-	1.0	48.9	48.6	1.43	19.54	47.6	47.6	19.13
1949	1141	-	-	1.0	36.0	36.2	1.07	14.50	34.7	34.6	13.85
1950	1171	-	-	1.6	37.5	37.4	1.10	14.99	-	-	-

## 298. Westfield River at West Chesterfield, Mass.

Location.--Lat 42°23'48", long. 72°52'32", on right bank 0.2 mile downstream from West Branch and 0.5 mile downstream from highway bridge at West Chesterfield, Hampshire County.

Drainage area.--111 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 770 ft (from topographic map).

Extremes.--1946-50: Maximum discharge, 16,000 cfs Dec. 31, 1948 (gage height, 11.93 ft), from rating curve extended above 6,700 cfs on basis of slope-area determination at gage height 11.93 ft; minimum daily, 4.8 cfs Aug. 28, 1949.

Remarks.--Diurnal fluctuation at low flow caused by mill above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	49.7	98.8	-
1947	126	81.1	83.1	191	222	379	1,026	433	140	7.6	49.1	43.4	238
1948	30.9	235	109	71.1	123	824	456	547	459	89.8	28.1	10.8	249
1949	19.3	79.7	521	487	347	450	412	237	55.4	27.1	19.3	25.8	223
1950	31.8	48.0	127	281	156	317	700	269	190	40.0	23.6	32.5	184

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	0.52	0.99	-
1947	1.31	0.82	0.86	1.99	2.08	3.94	10.32	4.50	1.41	0.91	.51	.44	29.09
1948	.32	2.36	1.13	.74	1.19	8.56	4.59	5.68	4.61	.93	.29	.11	30.51
1949	.20	.80	5.41	5.06	3.26	4.68	4.14	2.46	.56	.28	.20	.26	27.31
1950	.33	.48	1.32	2.92	1.46	3.29	7.03	2.79	1.91	.42	.24	.33	22.52

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date							
1946	1081	-	-	-	-	-	-	-	-	-
1947	1081	4,180	Apr. 6, 1947	17	238	2.14	29.09	244	29.91	29.91
1948	1111	6,740	Mar. 22, 1948	6.1	249	2.24	30.51	270	33.11	33.11
1949	1141	16,000	Dec. 31, 1948	4.8	223	2.01	27.31	188	23.03	23.03
1950	1171	3,750	Apr. 5, 1950	10	184	1.66	22.52	-	-	-

## 299. Knightville Reservoir at Knightville, Mass.

Location.--Lat 42°17'26", long. 72°51'53", on Westfield River at Knightville, Hampshire County, 0.4 mile upstream from Sykes Brook, 2.6 miles upstream from Middle Branch, and 4 miles north of Huntington.

Drainage area.--162 sq mi.

Gage.--Water-stage recorder. Datum of gage is at mean sea level, datum of 1929 (levels by Corps of Engineers). Prior to Oct. 19, 1942, staff gage at same site and datum.

Remarks.--Reservoir completed in 1941 for flood control, has a usable capacity of 2,130,000,000 cu ft.

Cooperation.--Records furnished by Corps of Engineers.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1942	-	-	1.1	-	-	8.4	0.8	0.7	0.4	0.3	0.1	0.4
1943	0.3	1.3	-	-	-	-	7.6	423.4	133.8	0.6	.1	.1
1944	66.7	345.8	5.8	5.7	5.7	13.7	23.8	223.4	439.4	327.6	37.0	35.6
1945	1.0	5.3	7.2	5.1	33.5	11.7	482.5	352.9	421.8	398.5	188.0	82.8
1946	.5	8.9	9.0	9.0	10.0	3.8	.7	1.2	.7	.4	.2	2.2
1947	.2	.2	11.7	39.7	9.0	13.1	4.4	.4	.2	.1	.1	.1
1948	.9	8.3	8.4	7.1	10.4	11.7	.4	.8	.6	.1	.1	.1
1949	.1	.1	1,681.5	2.2	3.3	1.1	.7	.4	.1	.1	.2	.2
1950	.2	.6	7.8	8.9	12.8	5.2	1.1	1.1	.1	.1	.3	.1

## 300. 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 from Middle Branch, and 3.5 miles north of Huntington.

Drainage area.--162 sq mi.

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.--41 years (1909-50), 317 cfs (revised) (adjusted for storage).

Extremes.--1909-50: 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.--Flow regulated by Knightville Reservoir since 1941 (see preceding page). Runoff adjusted for storage at Knightville Reservoir since May 1943.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1909	-	-	-	-	-	-	-	-	-	-	-	-	-
1910	65.9	59.8	107	*657	258	1,200	573	245	355	44.4	35.7	75.1	*308
1911	24.1	141	85.7	201	74.1	259	648	216	256	39.6	60.8	84.6	174
1912	462	412	390	261	272	*1,090	1,020	422	176	26.4	42.0	43.5	*385
1913	193	395	381	643	212	864	607	245	78.0	20.7	15.7	47.4	310
1914	194	381	317	391	317	*796	1,270	500	70.5	57.1	53.6	19.1	*364
1915	23.3	54.4	69.5	365	*626	260	455	167	60.9	38.6	498	138	*256
1916	155	177	404	569	535	435	1,180	399	303	186	92.0	117	376
1917	86.5	197	217	265	138	645	784	503	533	142	38.7	27.0	298
1918	157	139	21.9	106	308	824	746	296	130	61.0	27.6	106	248
1919	96.3	174	350	232	118	754	554	810	128	97.7	70.5	174	299
1920	141	476	286	86.2	65.0	1,080	1,410	366	320	106	122	69.7	377
1921	261	416	781	281	174	1,110	682	362	74.7	145	55.4	33.0	367
1922	45.2	185	339	88.3	140	924	1,120	611	538	180	137	119	367
1923	116	113	85.7	273	150	495	1,050	391	195	81.9	39.8	63.1	252
1924	307	331	608	523	151	348	1,460	599	142	52.5	42.5	155	333
1925	138	230	210	78.8	667	770	494	235	108	305	155	71.5	286
1926	116	550	486	230	120	382	1,200	313	117	59.5	70.6	38.9	306
1927	127	454	198	281	245	997	373	354	193	102	135	119	299
1928	401	1,090	710	377	382	390	695	626	648	379	444	315	537
1929	86.3	86.8	126	180	139	1,040	1,140	526	102	30.6	23.4	31.4	294
1930	91.2	117	174	274	289	497	1,355	225	282	126	57.9	42.1	212
1931	31.8	163	78.5	46.0	76.3	229	1,130	619	534	153	64.6	44.6	264
1932	46.7	64.1	218	506	262	256	914	198	74.0	60.6	33.4	32.4	221
1933	202	721	307	389	263	334	1,570	239	103	50.0	246	770	430
1934	239	186	177	276	109	621	1,272	358	244	66.7	40.5	374	330
1935	231	368	346	462	241	627	414	305	254	151	34.6	67.7	292
1936	47.6	215	162	220	133	2,050	675	236	55.5	25.4	38.8	35.4	326
1937	108	125	444	588	542	306	912	840	284	143	83.5	189	379
1938	395	656	311	488	410	423	407	287	337	419	193	986	441
1939	243	215	632	230	269	524	1,238	238	97.8	41.2	41.9	33.6	317
1940	59.9	130	129	87.2	79.3	158	1,757	760	314	93.8	27.5	32.6	301
1941	24.9	144	226	155	328	184	553	245	144	56.8	28.8	55.2	177
1942	44.5	130	214	234	98.4	884	768	343	154	125	92.4	122	289
1943	147	595	581	220	280	719	818	728	409	175	82.6	33.5	382
1944	142	386	286	84.5	105	463	950	173	162	139	164	129	265
1945	108	120	301	271	199	1,268	588	888	471	429	275	165	426
1946	201	237	260	376	253	798	302	454	339	122	61.3	78.7	291
1947	154	97.7	90.8	214	296	484	1,254	540	188	96.1	62.8	49.1	235
1948	35.1	276	145	105	165	1,035	631	680	638	127	49.0	20.4	326
1949	30.0	109	76.3	305	466	582	528	299	72.5	37.7	28.4	32.7	297
1950	41.5	61.0	162	390	212	463	913	384	267	55.2	33.1	41.4	252

\* Revised.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1909	-	-	-	-	-	-	-	-	-	-	-	-	-
1910	0.47	0.41	0.76	*4.67	1.66	8.54	3.95	1.74	2.44	0.32	0.25	0.52	*25.83
1911	.17	.97	.61	1.43	.48	1.84	4.46	1.53	1.76	.28	.43	.58	14.54
1912	3.29	2.83	2.78	1.86	1.81	*7.76	7.03	3.00	1.22	.19	.30	.30	*32.37
1913	1.37	2.72	2.71	4.58	1.36	6.14	4.18	1.74	.54	.15	.11	.33	25.93
1914	1.38	2.62	2.26	2.78	2.04	*5.66	8.75	3.56	.49	.41	.38	.13	*30.46
1915	.17	.37	.49	2.59	*4.02	1.84	3.14	1.19	.42	2.74	3.54	.95	*21.46
1916	1.10	1.22	2.87	4.05	3.56	3.10	7.99	2.84	2.09	1.33	.66	.81	31.62
1917	.62	1.36	1.54	1.89	.89	4.59	5.40	3.57	3.67	1.01	.28	.19	25.01
1918	1.12	.96	.65	.75	1.98	5.87	5.13	2.11	.90	.43	.20	.73	20.83
1919	.68	1.19	2.49	1.65	.76	5.36	3.82	5.76	.88	.70	.50	1.19	24.98
1920	1.00	3.28	2.05	.61	.43	7.69	9.71	2.61	2.20	.75	.87	.48	31.66

\* Revised.

Monthly and yearly runoff, in inches (adjusted), of Westfield River at Knightville, Mass.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1921	1.86	2.87	5.56	1.99	1.11	7.90	4.70	2.57	.51	1.03	.39	.23	30.72
1922	.52	1.27	2.41	.63	.90	6.57	7.71	4.35	3.70	1.07	.98	.82	30.73
1923	.83	.78	.61	1.95	.96	3.51	7.23	2.78	1.34	.44	.28	.42	21.13
1924	2.19	2.28	4.32	3.72	1.01	2.48	10.05	4.27	.98	.37	.50	1.05	33.02
1925	.98	1.59	1.50	.56	4.29	5.48	3.40	1.67	.74	2.17	1.10	.49	23.96
1926	.83	3.79	5.46	1.64	.77	2.72	8.27	2.22	.81	.42	.50	.27	25.70
1927	.90	3.12	1.41	1.99	1.57	7.09	2.57	2.52	1.33	.73	.95	.82	25.00
1928	2.86	7.51	5.05	2.69	2.54	2.78	4.79	4.45	4.46	2.70	3.16	2.16	45.15
1929	.61	.60	.90	1.28	.89	7.40	7.86	3.75	.70	.22	.17	.22	24.60
1930	.65	.81	1.23	1.95	1.85	3.54	2.58	1.60	1.94	.90	.41	.29	17.75
1931	.23	1.13	.56	.33	.49	1.63	7.79	4.40	3.68	1.09	.46	.31	22.10
1932	.53	.44	1.56	3.60	1.75	1.82	6.29	1.41	.51	.43	.24	.22	18.60
1933	1.44	4.96	2.19	2.77	1.69	2.38	10.81	1.71	.71	.36	1.75	5.30	36.07
1934	1.71	1.28	1.26	1.96	.70	4.42	8.76	2.55	1.68	.48	.29	2.58	27.67
1935	1.65	2.53	2.47	3.29	1.55	4.46	2.86	2.17	1.75	1.07	.25	.47	24.52
1936	.34	1.48	1.15	1.57	.89	14.64	4.65	1.68	.38	.18	.28	.24	27.48
1937	.75	.86	3.16	4.18	3.49	2.18	6.28	5.98	1.95	1.02	.59	1.30	31.74
1938	2.81	4.50	2.21	3.47	2.64	3.01	2.80	2.04	2.32	2.99	1.37	6.80	36.08
1939	1.73	1.48	4.50	1.64	1.73	5.72	8.52	1.70	.67	.23	.30	.23	26.51
1940	.43	.90	.92	.62	.53	1.12	12.10	5.41	2.16	.67	.20	.22	25.28
1941	.18	.99	1.61	1.10	2.11	1.51	3.81	1.74	.99	.40	.21	.38	14.83
1942	.52	.89	1.52	1.66	.63	6.29	5.29	2.44	1.06	.89	.66	.84	22.49
1943	1.06	4.10	2.71	1.57	1.80	5.12	5.64	6.30	2.04	.89	.59	.23	32.04
1944	1.19	3.39	1.13	.60	.70	3.52	6.57	1.76	1.69	.69	.40	.89	22.33
1945	.67	.84	2.15	1.92	1.36	8.97	5.30	5.98	3.45	2.99	1.40	.85	35.86
1946	1.21	1.65	1.85	2.68	1.63	5.66	2.07	3.23	2.33	.87	.44	.55	24.17
1947	1.09	.67	.68	1.59	1.82	3.46	8.61	3.84	1.29	.68	.45	.34	24.52
1948	.25	1.92	1.05	.75	1.10	7.57	4.32	4.84	4.39	.90	.35	.14	27.36
1949	.21	.75	5.01	4.83	3.00	4.13	3.64	2.12	.50	.27	.20	.23	24.89
1950	.30	.42	1.18	2.78	1.37	3.28	6.28	2.73	1.84	.39	.24	.28	21.09

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed	Adjusted	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1910	415, 1231	*8,120	Jan. 22, 1910*	8.0	*308	-	*1.90	*25.83	*309	-	*25.94
1911	415	*2,380	Apr. 7, 1911*	14	174	-	1.07	14.54	259	-	21.89
1912	415, 1231	*7,280	Mar. 15, 1912*	13	*395	-	*2.39	*32.37	*360	-	*30.27
1913	415	*6,860	Mar. 27, 1913	4	310	-	1.91	25.93	303	-	25.39
1914	(a)	*5,680	Mar. 29, 1914	11	*364	-	*2.25	*30.46	*301	-	*25.23
1915	(b)	*8,260	Aug. 4, 1915	12	*256	-	*1.58	*21.46	*306	-	*25.62
1916	431	*3,940	Feb. 26, 1916	25	376	-	2.32	31.62	356	-	29.95
1917	451	*3,230	Mar. 28, 1917	17	298	-	1.84	25.01	289	-	24.22
1918	471	*2,140	Mar. 23, 1918*	16	248	-	1.53	20.83	281	-	22.46
1919	501	*7,210	May 22, 1919	32	298	-	1.84	24.98	322	-	26.93
1920	501	6,730	Apr. 13, 1920	28	377	-	2.33	31.66	424	-	35.64
1921	521	*6,730	Dec. 14, 1920	18	367	-	2.27	30.72	292	-	24.43
1922	541	*5,710	May 19, 1922	31	367	-	2.27	30.73	346	-	28.95
1923	561	*4,480	Apr. 5, 1923	17	252	-	1.56	21.13	331	-	27.70
1924	581	10,500	Apr. 7, 1924	18	393	-	2.43	33.02	337	-	28.29
1925	601	*8,140	July 27, 1925	23	286	-	1.77	23.96	334	-	27.98
1926	621	*5,710	Apr. 25, 1926	18	306	-	1.89	25.70	275	-	23.05
1927	641	*4,870	Mar. 14, 1927	18	299	-	1.84	25.00	418	-	34.99
1928	661	16,000	Nov. 3, 1927	35	537	-	3.31	45.15	379	-	31.84
1929	681	*5,170	Apr. 21, 1929	16	294	-	1.81	24.60	301	-	25.18
1930	696	*3,050	Mar. 26, 1930*	20	212	-	1.31	17.75	202	-	16.98
1931	711	*8,950	May 23, 1931	21	284	-	1.63	22.10	269	-	22.51
1932	726	*4,630	Apr. 1, 1932*	17	221	-	1.36	18.60	296	-	24.86
1933	741	*15,800	Sept. 16, 1933	22	450	-	2.65	36.07	378	-	31.73
1934	756	7,600	Apr. 12, 1934	25	330	-	2.04	27.67	359	-	30.07
1935	761	*4,900	Jan. 10, 1935	20	292	-	1.80	24.52	249	-	20.84
1936	801	25,700	Mar. 18, 1936	14	326	-	2.01	27.48	348	-	29.28
1937	821	9,600	May 15, 1937	33	379	-	2.34	31.74	436	-	36.51
1938	851	37,900	Sept. 21, 1938	46	441	-	2.72	36.98	420	-	35.15
1939	871	7,080	Apr. 19, 1939	18	317	-	1.96	26.51	251	-	21.05
1940	891	6,840	Apr. 12, 1940	18	301	-	1.96	25.28	307	-	25.81
1941	921, 1001	3,520	Feb. 8, 1941	12	177	-	1.09	14.83	176	-	14.78
1942	951, 1001	*3,500	Mar. 22, 1942*	20	269	-	1.66	22.49	330	-	27.62
1943	971, 1001	4,540	Nov. 25, 1942	21	382	382	2.36	32.04	357	357	29.89
1944	1001	1,350	Apr. 26, 27, 1944	7.6	265	266	1.84	22.33	241	241	20.28
1945	1051	6,660	Mar. 21, 1945	13	426	428	2.64	35.86	440	440	36.91
1946	1051	2,840	May 29, 1946	21	291	288	1.78	24.17	261	261	21.90
1947	1081	3,860	Apr. 7, 1947	24	293	293	1.81	24.52	302	302	25.28
1948	1111	4,640	Mar. 25, 1948	11	326	326	2.01	27.36	306	359	30.13
1949	1141	5,370	Jan. 4, 1949	8.5	297	297	1.83	24.89	301	248	20.82
1950	1171	3,540	Apr. 7, 1950	16	252	252	1.56	21.09	-	-	-

\* Revised.

# Not previously published.

a In W.S.P. 381, 415, 1231.

b In W.S.P. 415, 541, 1231.

## CONNECTICUT RIVER BASIN

## 301. 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.

Gage.--Water-stage recorder and concrete control. Datum of gage is 641.40 ft above mean sea level, datum of 1929.

Extremes.--1945-50: Maximum discharge, 187 cfs Dec. 31, 1948 (gage height, 3.09 ft), from rating curve extended above 25 cfs; minimum, 0.04 cfs Aug. 27, 28, 1949.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1945	-	-	-	-	-	-	-	-	-	3.63	1.96	1.41	-
1946	1.46	1.99	2.68	3.40	2.27	6.79	2.56	4.14	2.46	.697	.335	.497	2.45
1947	.825	.453	.743	1.66	2.32	4.74	7.55	4.78	1.57	.822	.496	.223	2.20
1948	.522	5.29	1.57	1.14	1.62	9.23	4.58	4.50	5.51	.969	.584	.186	2.81
1949	.283	1.01	5.11	6.69	4.94	5.17	4.76	3.13	.584	.186	.175	.161	2.68
1950	.231	.331	.921	2.33	1.48	4.34	6.34	3.46	2.26	.266	.135	.129	1.85

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1945	-	-	-	-	-	-	-	-	-	2.55	1.37	0.96	-
1946	1.03	1.36	1.88	2.39	1.44	4.77	1.74	2.91	1.67	.49	.24	.34	20.26
1947	.58	.31	.52	1.17	1.47	3.33	5.34	3.34	1.07	.58	.35	.15	18.21
1948	.37	2.24	1.10	.80	1.07	6.49	3.10	3.16	3.75	.68	.41	.13	23.30
1949	.20	.69	3.59	4.70	3.13	3.63	3.24	2.20	.40	.15	.12	.11	22.14
1950	.16	.23	.65	1.64	.94	3.05	4.31	2.43	1.53	.19	.09	.09	15.31

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1945	1051	-	-	-	-	-	-	-	-
1946	1051	37	Mar. 9, 1946	0.10	2.45	1.49	20.26	2.10	17.40
1947	1081	49	Apr. 5, 1947	.12	2.20	1.34	18.21	2.48	20.51
1948	1111	95	Mar. 22, 1948	.10	2.81	1.71	23.30	2.90	24.07
1949	1141	187	Dec. 31, 1948	.04	2.68	1.63	22.14	2.26	18.70
1950	1171	24	June 1, 1950	.07	1.85	1.13	15.31	-	-

## 302. 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.

Gage.--Water-stage recorder. Datum of gage is 400.30 ft above mean sea level, datum of 1929. Prior to Sept. 7, 1912, chain gage at same site. Prior to June 25, 1930, at datum 1.00 ft higher.

Average discharge.--40 years (1910-50), 102 cfs.

Extremes.--1910-50: Maximum discharge, 19,900 cfs Sept. 21, 1938 (gage height, 10.61 ft), mean of two contracted-opening determinations; 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.--Some diurnal fluctuation at low flow caused by mill above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1910	-	-	-	-	-	-	-	-	-	-	11.3	26.9	-
1911	6.71	54.9	30.0	70.0	25.0	176	264	78.4	84.4	13.3	20.9	36.7	71.7
1912	285	144	151	86.7	86.2	413	351	175	45.1	5.28	10.6	23.5	148
1913	51.6	129	154	183	72.0	264	205	71.1	25.5	6.13	3.77	11.8	98.3
1914	74.5	179	159	127	102	241	445	179	14.1	6.81	7.43	1.51	126
1915	4.72	12.2	18.0	188	230	60.5	122	41.0	3.92	105	124	13.6	76.1
1916	15.2	17.7	159	211	185	153	415	121	95.5	34.6	18.3	25.0	120
1917	23.1	71.3	72.4	87.2	45.7	204	238	131	138	23.6	7.92	6.88	87.5
1918	34.7	24.4	19.7	23.7	105	330	230	88.2	26.8	16.4	6.87	26.0	77.6
1919	21.1	43.8	143	97.5	53.1	262	179	251	31.1	31.6	19.2	61.5	100
1920	42.3	173	112	20.2	17.3	349	442	120	111	33.0	58.7	36.0	126



Monthly and yearly mean discharge, in cubic feet per second, of Middle Branch Westfield River at Goss Heights, Mass.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1921	85.2	170	281	110	72.8	474	247	118	29.4	33.7	18.2	16.5	139
1922	17.5	51.7	127	36.8	51.9	301	232	132	46.8	42.3	29.3		115
1923	36.8	31.9	28.0	114	52.7	140	332	121	52.8	13.0	5.42	10.1	78.5
1924	80.1	118	209	201	55.1	108	349	151	33.6	12.7	14.8	45.8	115
1925	35.8	70.6	79.6	26.6	239	257	132	69.1	20.5	42.9	26.1	14.3	83.5
1926	29.5	122	144	75.2	62.1	208	360	67.6	21.6	11.2	16.1	9.00	93.7
1927	31.3	145	44.7	58.6	43.6	294	92.3	105	50.1	39.2	58.0	55.4	95.0
1928	192	366	253	117	116	133	220	192	185	124	168	121	99.7
1929	45.9	26.9	57.5	63.5	51.2	317	379	183	41.9	11.5	8.27	8.27	182
1930	24.8	44.0	51.1	82.2	81.1	168	120	62.9	68.5	34.2	10.2	6.82	62.7
1931	6.64	33.7	21.0	15.2	23.0	93.1	319	179	135	27.0	12.6	9.88	72.8
1932	12.3	19.4	65.8	175	85.8	85.8	309	59.1	15.8	21.3	8.54	4.45	71.6
1933	41.9	217	69.8	99.5	72.6	116	463	62.3	29.8	11.1	74.4	297	129
1934	64.7	57.2	63.2	82.4	25.8	203	397	130	95.9	14.6	9.99	84.4	102
1935	57.5	124	137	179	87.1	238	135	90.5	70.4	62.2	8.22	11.8	100
1936	8.16	59.5	44.4	67.8	39.1	653	220	80.1	12.6	4.90	6.27	14.9	101
1937	41.2	50.3	154	213	170	91.8	300	251	79.5	36.7	33.0	70.3	124
1938	144	217	102	163	137	139	124	89.0	141	119	74.7	328	146
1939	60.8	64.7	208	78.1	84.7	174	414	62.5	125	10.5	9.81	9.05	99.9
1940	17.7	41.1	39.5	32.2	25.0	73.5	594	224	90.5	25.7	6.96	8.35	97.6
1941	5.11	42.9	72.5	44.7	106	59.8	171	75.7	43.0	16.1	8.61	14.1	54.4
1942	9.69	37.6	84.7	82.4	29.0	310	228	97.9	56.8	40.6	25.0	29.7	86.4
1943	46.7	223	129	63.4	111	271	248	274	96.3	24.3	23.4	8.68	127
1944	54.6	166	52.3	39.9	49.9	178	308	75.0	51.0	20.1	10.0	27.1	85.7
1945	23.3	55.7	94.2	82.3	68.0	436	236	280	162	127	56.5	33.4	139
1946	41.2	81.2	94.9	137	94.2	266	85.1	149	97.2	27.1	12.0	15.1	91.9
1947	32.1	21.9	23.6	73.9	96.2	196	399	177	46.8	29.4	13.2	8.40	92.8
1948	11.9	115	49.8	29.8	63.7	379	171	213	202	39.8	14.5	4.74	108
1949	6.21	28.0	262	194	162	179	145	74.6	17.9	8.19	8.26	7.69	90.9
1950	9.59	14.9	55.5	127	74.0	154	276	129	98.8	13.6	6.76	7.31	80.4

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1910	-	-	-	-	-	-	-	-	-	-	0.25	0.57	-
1911	0.15	1.16	0.66	1.53	0.49	3.85	5.61	1.72	1.79	0.29	.46	.78	18.49
1912	6.28	3.04	3.30	1.90	1.77	9.06	7.44	3.83	.96	.12	.23	.50	38.41
1913	1.13	2.73	3.37	4.01	1.43	5.78	4.35	1.56	.54	.13	.08	.25	25.36
1914	1.63	3.80	3.05	2.79	2.03	5.29	9.46	3.92	.30	.15	.16	.03	52.61
1915	.10	.26	.39	4.13	4.56	1.32	2.59	.90	.08	2.30	2.71	.29	19.63
1916	.33	.38	3.48	4.63	3.80	3.56	8.80	2.66	2.02	.76	.40	.53	31.15
1917	.51	1.51	1.59	1.91	.91	4.48	5.04	2.87	2.93	.52	.17	.15	22.59
1918	.76	.52	.43	.52	2.07	7.23	4.88	1.93	.57	.36	.19	.55	20.01
1919	.46	.93	3.13	2.14	1.05	5.74	3.79	5.50	.66	.69	.42	1.31	25.82
1920	.93	3.68	2.46	.44	.36	7.64	9.37	2.64	2.36	.72	1.29	.76	32.65
1921	1.87	3.60	6.16	2.42	1.44	10.40	5.24	2.59	.62	.74	.40	.35	35.83
1922	.58	1.10	2.78	.81	1.03	6.66	6.39	5.09	2.80	1.03	.93	.62	29.62
1923	.81	.80	.61	2.49	1.04	3.07	7.04	2.65	1.12	.28	.12	.21	20.24
1924	1.76	2.51	4.59	4.41	1.09	2.36	7.39	3.31	.71	.28	.33	.97	29.71
1925	.78	1.50	1.74	.58	4.74	5.64	2.81	1.52	.44	.94	.57	.30	21.56
1926	.65	2.58	3.16	1.65	1.23	4.56	7.63	1.48	.46	.25	.35	.19	24.19
1927	.69	3.07	.98	1.28	1.86	6.43	1.96	2.30	1.06	.86	1.27	1.18	21.94
1928	4.21	7.75	5.54	2.57	2.38	2.92	4.67	4.21	3.93	2.71	3.67	2.57	47.13
1929	1.01	.57	1.26	1.39	1.01	6.94	8.05	4.01	.89	.25	.18	.18	25.74
1930	.54	.93	1.12	1.80	1.61	3.68	2.55	1.38	1.45	.75	.22	.14	16.17
1931	.15	.71	.46	.33	.46	2.04	6.77	3.92	2.86	.59	.28	.21	18.78
1932	.27	.41	1.44	3.83	1.76	1.88	6.56	1.29	.34	.47	.19	.09	18.53
1933	.32	4.60	1.53	2.18	1.44	2.53	9.82	1.36	.63	.24	1.63	6.29	33.17
1934	1.42	.21	1.38	1.81	.51	4.44	8.43	2.84	2.03	.32	.22	1.79	26.40
1935	1.26	2.63	3.00	3.92	1.73	5.21	2.87	1.98	1.50	1.36	.18	.25	25.89
1936	.18	1.26	.97	1.49	.80	14.30	4.66	1.75	.27	.11	.14	.32	26.25
1937	.90	1.07	3.38	4.67	3.36	2.02	6.36	5.50	1.68	.80	.72	1.50	31.96
1938	5.16	4.61	2.24	3.57	2.71	3.04	2.63	1.95	2.99	2.61	1.64	6.96	38.11
1939	1.34	1.37	4.55	1.71	1.68	3.82	8.78	1.37	.53	.23	.22	.19	25.79
1940	.59	.87	.86	.71	.51	1.61	12.59	4.91	1.92	.56	.15	.18	25.26
1941	.11	.91	1.59	.98	2.10	1.31	3.62	1.66	.91	.35	.19	.30	14.03
1942	.22	.80	1.86	1.81	1.52	6.78	4.83	2.15	1.20	.89	.55	.63	22.29
1943	1.02	4.72	2.84	1.39	2.19	5.93	5.26	6.00	2.04	.53	.64	.18	32.74
1944	1.20	3.53	1.15	.88	1.02	3.89	6.54	1.64	1.08	.44	.22	.58	22.17
1945	.51	1.18	2.06	1.80	1.35	9.55	5.01	6.14	3.44	2.78	1.24	.71	35.77
1946	.90	1.72	2.08	3.00	1.86	5.84	1.80	3.27	2.06	.59	.26	.32	23.70
1947	.70	.47	.52	1.31	1.62	4.30	8.46	3.87	.99	.84	.29	.18	23.95
1948	.26	2.43	1.09	.65	1.31	9.32	4.66	4.29	.87	.29	.10	.27	27.92
1949	.14	.59	5.74	4.25	3.20	3.93	3.07	1.64	.58	.18	.16	.16	23.46
1950	.21	.32	1.22	2.79	1.46	3.58	5.86	2.82	2.09	.30	.15	.15	20.75

Yearly discharge, in cubic feet per second, of Middle Branch Westfield River at Goss Heights, Mass.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1911	415	2,420	Mar. 27, 1911†	-	71.7	1.56	18.49	113	29.12	
1912	415	2,330	Mar. 16, 1912†	-	148	2.81	38.41	128	33.04	
1913	351, 415	2,600	Mar. 27, 1913	1.6	98.3	1.87	25.36	103	26.61	
1914	381, 415	2,560	Apr. 9, 1914	0.4	126	2.40	32.61	96.4	24.88	
1915	415	4,500	July 8, 1915	0.4	76.1	1.45	19.65	89.4	23.07	
1916	431	2,900	Dec. 26, 1915	2.9	120	2.28	31.35	118	30.57	
1917	451	1,330	Apr. 1, 1917	5.4	87.5	1.66	22.59	80.1	20.69	
1918	471	1,220	Mar. 22, 1918	5.0	77.6	1.48	20.01	88.5	22.82	
1919	501	3,350	Mar. 28, 1919	7.5	100	1.90	25.82	110	28.37	
1920	501	4,230	Apr. 13, 1920	5	126	2.40	32.65	144	37.21	
1921	521	3,650	Mar. 9, 1921	14	139	2.64	35.83	110	28.46	
1922	541	2,650	May 19, 1922	15	115	2.19	29.62	107	27.58	
1923	561	2,010	Apr. 5, 1923	2.5	78.5	1.49	20.24	104	26.86	
1924	581	2,270	Apr. 7, 1924	3.0	115	2.19	29.71	96.1	24.87	
1925	601	4,250	Feb. 12, 1925	9.1	85.5	1.59	21.56	92.7	23.93	
1926	621	1,660	Apr. 25, 1926	4.0	93.7	1.78	24.19	87.3	22.54	
1927	641	1,540	Mar. 14, 1927	6.8	85.0	1.62	21.94	134	34.70	
1928	661	5,860	Nov. 3, 1927	14	182	3.46	47.13	125	32.47	
1929	681	1,950	Apr. 21, 1929	4.0	99.7	1.90	25.74	98.8	25.49	
1930	696	990	Mar. 26, 1930	4.7	62.7	1.19	16.17	57.7	14.90	
1931	711	2,340	June 10, 1931	4.8	72.8	1.38	18.78	75.9	19.58	
1932	726	2,000	Apr. 1, 1932	2.1	71.6	1.36	18.53	90.6	23.46	
1933	741, 781	8,020	Sept. 16, 1933†	4.6	129	2.45	33.17	117	30.13	
1934	756	2,850	Apr. 12, 1934	6.0	102	1.94	26.40	113	29.28	
1935	781	5,420	Jan. 9, 1935	5.5	100	1.90	25.89	83.0	21.41	
1936	801	8,400	Mar. 18, 1936	2.5	101	1.92	26.25	113	29.19	
1937	821	3,250	May 15, 1937	6.9	124	2.36	31.96	142	36.62	
1938	851	19,900	Sept. 21, 1938	10	148	2.81	38.11	137	35.36	
1939	871	2,250	Apr. 13, 1939	2.6	99.9	1.90	25.79	80.0	20.65	
1940	891	2,310	Apr. 9, 1940	4.6	97.6	1.86	25.26	99.5	25.75	
1941	921	1,600	Feb. 8, 1941	2.5	54.4	1.03	14.03	55.4	14.30	
1942	951	2,710	Mar. 22, 1942	4.4	86.4	1.64	22.29	109	27.99	
1943	971	3,150	Nov. 25, 1942	4.5	127	2.41	32.74	116	30.04	
1944	1001	3,670	Nov. 9, 1943	4.8	85.7	1.63	22.17	77.5	20.04	
1945	1031	3,790	Apr. 26, 1945	11	139	2.64	35.77	142	36.72	
1946	1051	1,870	Mar. 9, 1946	3.5	91.9	1.75	23.70	80.2	20.69	
1947	1081	2,250	Apr. 6, 1947	3.6	92.8	1.76	23.95	101	26.04	
1948	1111	3,400	Mar. 22, 1948	2.6	108	2.05	27.92	118	30.61	
1949	1141	9,600	Dec. 31, 1948	1.8	90.9	1.73	23.46	72.6	18.74	
1950	1171	1,700	Apr. 4, 1950	3.6	80.4	1.53	20.75	-	-	

† Corrected.

‡ Not previously published.

## 303. 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.

Gage.--Water-stage recorder. Datum of gage is 388.60 ft above mean sea level, datum of 1929.

Average discharge.--15 years (1935-50), 181 cfs.

Extremes.--1935-50: Maximum discharge, 21,800 cfs Sept. 21, 1938 (gage height, 15.5 ft, from floodmarks), mean of slope-area determination and computation of flow over dam; minimum, 4.2 cfs Aug. 28, 29, 1949.

Remarks.--Some diurnal fluctuation at low flow caused by mill above station.

## Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	-	-	-	-	-	-	-	-	-	-	-	24.5	-
1936	21.3	94.1	75.0	113	77.5	1,098	389	143	30.2	11.6	14.1	25.2	175
1937	68.6	82.4	289	397	284	163	505	421	132	65.8	73.3	146	218
1938	252	364	187	268	247	232	229	171	277	228	155	579	265
1939	132	131	344	130	146	316	109	51.8	26.4	23.7	20.8	175	175
1940	32.5	82.2	70.1	56.2	45.9	134	1,069	376	168	51.3	14.3	17.7	175
1941	16.2	84.1	132	83.7	175	112	293	108	90.1	47.9	24.3	36.8	99.3
1942	29.7	94.1	142	157	73.4	541	389	178	123	94.3	47.2	55.6	161
1943	82.0	378	238	132	198	493	406	473	169	53.5	49.2	25.1	225
1944	84.4	283	88.7	48.6	74.6	314	514	126	71.9	37.0	20.0	39.9	141
1945	39.9	94.4	166	160	120	714	412	495	256	279	132	106	253
1946	84.8	143	152	236	166	483	158	280	168	51.1	27.0	32.5	165
1947	53.5	38.4	39.8	135	170	362	669	301	86.4	48.3	25.4	16.3	162
1948	27.0	203	93.4	60.1	113	623	288	365	382	96.3	35.3	14.7	192
1949	19.4	64.3	401	402	301	311	261	137	35.5	21.4	11.9	14.7	165
1950	19.2	26.8	95.9	226	130	300	452	228	170	27.9	14.8	17.4	142

Monthly and yearly runoff, in inches, of West Branch Westfield River at Huntington, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1935	-	-	-	-	-	-	-	-	-	-	-	0.29	-
1936	0.26	1.12	0.92	1.40	0.89	13.49	4.63	1.76	0.36	0.14	0.17	.30	25.44
1937	.84	.98	3.55	4.89	3.16	2.01	6.01	5.18	1.57	.81	.90	1.74	31.64
1938	3.10	4.33	2.31	3.30	2.75	2.86	2.72	2.10	3.30	2.80	1.90	6.90	38.37
1939	1.63	1.56	4.23	1.60	1.62	3.88	8.02	1.34	.62	.33	.29	.25	25.37
1940	.40	.98	.86	.69	.53	1.65	12.73	4.62	2.00	.63	.18	.21	25.48
1941	.20	1.00	1.62	1.03	1.95	1.38	3.49	1.33	1.07	.59	.30	.44	14.40
1942	.37	1.12	1.75	1.93	.82	6.65	4.63	2.19	1.46	1.16	.58	.66	23.32
1943	1.01	4.51	2.92	1.63	2.20	6.06	4.84	5.83	2.01	.66	.61	.30	32.58
1944	1.04	3.37	1.09	.60	.86	3.86	6.12	1.55	.86	.46	.25	.48	20.54
1945	.49	1.12	2.05	1.97	1.34	9.37	4.91	6.10	3.05	3.44	1.62	1.26	36.72
1946	1.04	1.70	1.87	2.80	1.85	5.95	1.88	3.44	2.00	.63	.33	.39	23.98
1947	.86	.46	.49	1.66	1.89	4.46	7.86	3.70	1.03	.59	.31	.19	23.40
1948	.33	2.41	1.15	.74	1.37	7.57	3.43	4.55	1.19	.43	.17	.27	27.87
1949	.24	.77	1.94	4.95	3.34	3.82	3.11	1.68	.42	.26	.15	.18	23.86
1950	.24	.34	1.18	2.78	1.44	3.69	5.38	2.80	2.02	.34	.18	.21	20.60

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1935	801	-		-	-	-	-	-	-
1936	801	14,400	Mar. 18, 1936	7.6	175	1.87	25.44	196	28.51
1937	821	4,920	May 15, 1937	15	218	2.33	31.64	248	36.01
1938	851	21,800	Sept. 21, 1938	20	265	2.83	38.37	249	36.05
1939	871	4,140	Apr. 6, 1939	10	175	1.87	25.37	140	20.19
1940	891	3,610	Apr. 12, 1940	9.5	175	1.87	25.48	179	26.06
1941	921	\$2,140	Feb. 8, 1941*	9.5	99.3	1.06	14.40	102	14.82
1942	951	3,410	Mar. 22, 1942	12	161	1.72	23.32	197	28.52
1943	971	4,380	Nov. 25, 1942	13	225	2.40	32.58	205	29.64
1944	1001	4,460	Nov. 9, 1943	8.1	141	1.50	20.54	129	18.70
1945	1031	5,000	Apr. 26, 1945	21.1	253	2.70	36.72	260	37.67
1946	1051	2,780	Mar. 9, 1946	11	165	1.76	23.98	145	20.98
1947	1081	3,380	Apr. 6, 1947	7.9	162	1.73	23.40	177	25.68
1948	1111	4,170	Mar. 22, 1948	9.7	192	2.06	27.87	206	29.35
1949	1141	12,200	Dec. 31, 1948	4.2	185	1.76	23.86	136	19.67
1950	1171	2,350	Apr. 4, 1950	9.1	142	1.52	20.60	-	-

\* Not previously published; estimated on basis of stage-graph adjusted for ice effect.

## 304. Borden Brook near Westfield, Mass. 1/

Location.--Lat 42°07'45", long. 72°56'20", on Borden Brook at outlet of Borden Brook Reservoir, 2 miles upstream from confluence of Borden and Pebble Brooks, 3½ miles south of Blandford, Hampden County, and about 10 miles west of Westfield.

Drainage area.--8 sq. mi.

Gage.--Water-stage recorder. Altitude of gage is 1,075 ft. (from topographic map).

Average discharge.--8 years (1910-18), 13.2 (adjusted for storage).

Remarks.--Flow regulated by Borden Brook Reservoir (see following page). Discharge and runoff figures adjusted for change in contents at Borden Brook Reservoir.

Cooperation.--Records furnished by Board of Water Commissioners, Springfield.

Monthly and yearly mean discharge, in cubic feet per second (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1910	-	-	-	24.8	18.8	55.7	24.7	10.9	14.7	3.52	1.89	3.76	-
1911	1.71	4.59	0	7.94	3.34	20.7	29.3	9.35	12.9	.08	.80	11.1	18.46
1912	56.4	21.8	21.1	6.98	6.41	30.4	41.6	19.2	3.24	.58	1.41	5.68	18.1
1913	10.8	18.6	11.5	20.7	4.70	41.7	24.4	17.4	\$2.30	.70	1.78	2.03	13.1
1914	24.0	22.2	\$14.9	10.1	13.1	49.6	66.9	23.0	.18	1.97	0	0	18.8
1915	0	6.59	3.60	29.1	40.1	10.7	21.0	5.56	3.43	11.2	13.9	2.70	12.1
1916	.51	4.74	20.6	18.3	19.5	20.6	50.0	13.5	14.4	7.31	1.40	5.33	14.6
1917	2.58	8.36	5.58	7.21	2.47	29.9	\$49.8	23.8	17.3	1.31	0	0	12.4
1918	0	0	3.58	3.32	9.38	50.4	22.7	6.83	1.93	.11	0	0	8.20

† Corrected.

Note.--Figures of no flow indicate that evaporation and seepage from reservoir equalled or exceeded inflow.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1910	-	-	-	3.57	2.45	8.02	3.45	1.57	2.05	0.51	0.27	0.52	-
1911	0.25	0.64	0	1.14	.44	2.99	4.08	1.35	1.80	.01	.12	1.55	14.37
1912	8.42	3.04	3.04	1.01	.86	4.38	5.80	2.77	.45	.08	.20	.79	30.84
1913	1.56	2.59	1.66	2.99	.61	6.01	3.40	2.51	.32	.10	.26	.28	22.29
1914	3.46	3.10	\$2.14	1.45	1.71	7.15	9.33	3.32	.02	.28	0	0	\$31.96
1915	0	.92	.52	4.20	5.22	1.54	2.92	.80	.48	1.61	2.01	.38	20.60
1916	.07	.66	2.97	2.64	2.63	2.97	6.97	1.95	2.01	1.05	.20	.74	24.86
1917	.34	1.16	.80	1.04	.32	4.31	\$6.94	3.44	2.41	.19	0	0	\$20.95
1918	0	0	.52	.48	1.22	7.26	3.17	.98	.27	.02	0	0	13.92

† Corrected.

Note.--Figures of no flow indicate that evaporation and seepage from reservoir equalled or exceeded inflow.

1/ Published as "near Blandford", 1910-12.

Yearly discharge, in cubic feet per second (adjusted), of Borden Brook near Westfield, Mass.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1910	415	-	-	-	-	-	-	13.7	23.30
1911	415	-	-	-	+8.46	1.06	14.37	16.5	27.98
1912	415	-	-	-	18.1	2.26	30.84	13.0	22.15
1913	415	-	-	-	13.1	1.64	22.29	14.8	25.18
1914	415	-	-	-	18.8	2.35	+31.96	14.6	24.70
1915	415	-	-	-	12.1	1.51	20.60	13.5	22.86
1916	431	-	-	-	14.6	1.92	24.86	13.8	23.46
1917	451	-	-	-	12.4	1.55	+20.95	11.3	19.17
1918	471	-	-	-	8.20	1.02	13.92	-	-

† Corrected.

## 305. Borden Brook and Cobble Mountain Reservoirs

Borden Brook and Cobble Mountain Reservoirs in Westfield Little River Basin are operated as a unit for municipal supply and for hydroelectric power development. The downstream order and usable capacity of each are as follows: Borden Brook Reservoir on Borden Brook,  $3\frac{1}{2}$  miles south of Blandford, Mass. (completed in 1909), 344,000,000 cu ft; Cobble Mountain Reservoir on Westfield Little River,  $6\frac{1}{2}$  miles west of Westfield, Mass. (completed in August 1931), 3,050,000,000 cu ft. Records furnished by Board of Water Commissioners, Springfield, Mass.

Month-end contents, in millions of gallons

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1910	-	-	100	600	805	1,980	2,500	2,500	2,370	2,095	1,946	1,662
1911	1,298	920	763	783	960	1,327	1,965	2,128	2,370	2,162	2,030	2,272
1912	2,488	2,203	2,370	2,405	2,500	2,500	2,492	2,500	2,400	2,162	2,030	1,965
1913	1,900	2,300	2,470	2,500	2,500	2,500	2,500	2,500	2,405	2,062	1,773	1,531
1914	1,798	2,230	2,500	2,500	2,500	2,500	2,500	2,500	2,335	2,196	1,965	1,650
1915	1,584	1,128	1,091	1,626	2,342	2,210	2,500	2,500	2,500	2,500	2,500	2,494
1916	2,500	2,500	2,500	2,500	2,500	2,370	2,500	2,500	2,500	2,500	2,440	2,419
1917	2,370	2,500	2,500	2,500	2,500	2,300	2,500	2,500	2,500	2,452	2,135	1,792
1918	1,823	1,939	2,030	2,030	2,135	2,500	2,500	2,500	2,454	2,122	1,792	1,767
1919	1,699	1,805	2,196	2,391	2,464	2,500	2,500	2,500	2,342	2,102	1,748	1,620
1920	1,413	1,855	2,230	2,258	2,335	2,500	2,500	2,500	2,500	2,476	2,452	2,169
1921	2,500	2,500	2,464	2,500	2,500	2,500	2,500	2,500	2,162	2,108	1,933	1,578
1922	1,198	1,198	1,448	1,401	1,502	2,500	2,500	2,500	2,500	2,500	2,500	2,470
1923	2,217	2,162	2,089	2,203	2,203	2,500	2,500	2,500	2,446	2,135	1,855	1,614
1924	1,608	1,836	2,464	2,500	2,500	2,398	2,488	2,488	2,377	2,024	1,680	1,401
1925	1,215	1,080	1,270	1,060	1,572	2,363	2,500	2,500	2,419	2,419	2,342	2,037
1926	1,874	2,217	2,500	2,500	2,500	2,500	2,500	2,500	2,433	2,142	2,142	1,842
1927	1,761	2,176	2,349	2,500	2,500	2,500	2,500	2,500	2,500	2,488	2,500	2,500
1928	2,452	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	1,998	1,900
1929	1,849	1,842	1,959	1,900	2,004	2,446	2,370	2,500	2,272	1,830	1,327	856
1930	663	763	950	1,203	1,425	1,933	2,295	2,494	2,476	2,321	1,965	1,543
1931	1,101	1,149	1,096	865	793	1,237	2,300	2,570	2,570	2,426	2,215	1,780
1932	1,470	1,321	1,702	4,268	5,240	6,268	11,597	11,854	12,209	12,254	11,938	11,565
1933	12,738	17,490	18,372	19,552	20,115	19,990	24,301	24,817	21,338	17,910	15,672	13,632
1934	10,900	10,323	9,877	10,582	9,890	12,969	19,019	21,081	21,852	17,737	13,281	14,485
1935	12,960	14,575	13,983	13,842	12,797	16,046	18,245	19,141	19,815	19,783	17,113	14,761
1936	11,959	12,366	12,336	13,333	13,541	23,332	25,151	25,097	24,762	22,434	20,230	19,454
1937	19,421	18,019	19,915	22,015	22,064	22,099	25,053	25,186	25,261	24,416	24,209	23,989
1938	25,194	24,807	22,679	22,236	21,039	22,463	24,321	25,222	25,263	25,520	23,498	23,532
1939	22,520	20,398	20,646	17,044	16,210	18,926	23,407	23,602	23,223	21,885	21,388	20,333
1940	19,904	20,097	18,567	17,768	17,203	17,896	25,513	25,557	25,047	23,931	22,981	22,079
1941	20,535	20,832	21,168	17,797	17,384	17,394	20,174	20,774	21,542	21,205	20,689	19,725
1942	18,214	18,279	19,136	20,159	20,397	20,397	24,849	25,362	25,141	25,141	23,595	22,205
1943	22,506	24,995	22,399	20,117	17,870	22,251	24,668	25,288	24,668	24,704	24,059	23,400
1944	23,918	25,141	23,186	20,031	18,617	20,250	24,015	23,989	25,989	25,110	21,658	20,815
1945	19,582	20,005	21,475	20,808	18,456	24,095	25,251	25,104	25,031	25,288	23,015	22,506
1946	22,007	22,573	23,221	21,163	18,936	20,551	20,579	23,116	23,840	23,324	22,627	21,941
1947	21,452	20,776	19,807	19,272	17,976	20,699	22,339	23,567	22,980	22,405	21,640	20,064
1948	16,756	17,664	17,635	15,164	14,905	20,347	22,236	24,130	25,399	25,012	24,058	21,264
1949	17,991	17,798	19,241	22,912	21,941	23,463	24,488	24,298	23,231	21,167	19,255	17,655
1950	16,979	16,228	16,506	17,266	17,495	19,738	22,946	24,344	24,701	23,282	22,433	21,473

306. Westfield Little River at outlet of Cobble Mountain Reservoir, near Westfield, Mass. 1/

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. Prior to March 1910, 43 sq mi and March 1910 to September 1935, 48.5 sq mi.

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 2½ miles downstream.

Average discharge.--40 years (1910-50), 87.8 cfs (adjusted to present drainage area).

Remarks.--Flow regulated by Borden Brook Reservoir since 1910 and Cobble Mountain Reservoir since August 1931 (see preceding page). Diversion for municipal supply of Springfield, August 1931 to September 1935. Discharge and runoff adjusted for change in contents in Borden Brook Reservoir and Cobble Mountain Reservoir since August 1931 and for diversion for municipal supply of Springfield, Mar. 1, 1910, to September 1935.

Cooperation.--Records furnished by Board of Water Commissioners, Springfield.

Monthly and yearly mean discharge, in cubic feet per second (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1905	-	-	-	-	-	-	-	-	-	-	41.0	136	-
1906	45.8	51.9	-	-	-	-	-	74.3	47.1	27.0	17.4	9.0	-
1907	42.9	57.6	81.9	141	52.0	170	117	89.7	92.9	15.9	5.65	80.9	78.9
1908	242	222	191	165	141	292	134	180	27.4	18.8	14.1	5.71	136
1909	10.0	11.8	35.6	79.6	230	187	258	104	29.2	7.92	13.3	9.56	80.1
1910	10.1	11.5	46.8	-	-	-	-	-	92.9	12.3	12.3	8.18	-
1911	1.71	39.1	15.3	50.1	21.1	93.5	184	62.3	79.1	15.9	23.8	62.8	53.9
1912	248	133	113	75.6	137	353	250	152	43.2	6.24	11.5	17.2	129
1913	37.1	94.9	115	167	49.7	209	132	89.7	20.8	2.4	3.5	5.2	77.8
1914	100	115	78.7	57.0	65.9	232	313	110	13.1	13.2	5.39	3.6	92.1
1915	5.2	43.7	17.3	178	251	51.3	140	81.3	35.0	112	104	20.4	85.3
1916	28.5	42.9	139	133	125	88.9	358	93.1	103	73.7	20.5	36.7	103
1917	26.6	51.9	66.9	83.9	49.6	142	259	147	99.4	21.2	12.9	10.9	80.9
1918	55.8	35.6	24.2	33.1	111	271	156	57.9	30.8	8.82	11.4	31.9	69.7
1919	18.5	41.1	9.3	70.1	32.8	233	212	223	22.0	19.1	15.3	30.2	84.5
1920	23.0	117	92.7	26.3	27.4	335	382	106	131	48.8	70.5	38.1	117
1921	77.1	169	293	94.1	55.9	341	226	96.7	20.5	39.2	22.5	13.2	122
1922	6.74	31.7	49.7	17.0	29.6	262	252	225	103	70.0	54.3	36.7	95.2
1923	30.8	26.9	23.1	86.7	56.8	211	316	134	55.2	10.3	9.21	16.6	81.5
1924	100	94.6	171	163	41.0	85.9	439	160	31.7	11.2	6.48	25.0	111
1925	24.1	45.5	58.6	16.4	205	230	122	72.6	26.3	47.1	27.0	12.3	73.1
1926	30.2	86.8	143	74.1	69.7	137	327	77.2	24.4	14.3	30.7	11.9	85.3
1927	31.8	127	93.4	163	88.5	252	75.2	117	75.5	29.5	145	88.6	108
1928	171	400	195	114	186	115	245	136	149	109	178	85.3	173
1929	22.0	26.2	43.1	134	95.2	295	335	127	23.5	5.59	3.20	6.11	93.0
1930	35.3	44.8	71.0	82.4	77.3	156	118	72.4	80.7	23.1	10.2	9.68	65.0
1931	6.63	49.7	24.0	23.3	58.2	135	313	201	169	30.9	15.6	5.27	85.8
1932	9.40	15.6	41.6	154	69.3	104	261	45.0	43.8	27.7	8.31	4.53	65.1
1933	82.9	273	67.4	80.3	69.2	136	359	51.9	15.2	-4.14	58.5	134	108
1934	41.1	38.4	46.9	106	33.7	204	317	122	69.7	9.7	18.2	152	96.5
1935	68.8	132	111	124	65.9	223	123	68.3	62.8	22.3	-1.46	16.8	84.9
1936	3.71	38.8	17.8	65.7	30.0	591	173	52.9	7.13	-6.87	4.52	2.73	82.2
1937	31.2	16.2	132	185	147	74.0	225	190	44.5	24.4	16.8	50.8	94.5
1938	125	197	85.8	172	98.0	115	106	82.5	172	114	69.4	310	137
1939	43.5	57.2	172	50.9	87.9	169	293	30.3	2.91	6.00	9.65	2.42	76.9
1940	3.33	37.1	33.9	33.3	23.0	56.0	518	189	81.7	26.6	-1.38	6.00	83.4
1941	-1.43	51.5	68.3	53.6	116	39.5	167	62.3	66.9	14.8	4.80	21.4	54.6
1942	-9.63	32.0	74.7	79.7	37.0	279	143	114	58.1	30.5	17.1	35.6	74.6
1943	43.5	197	130	66.9	111	239	162	200	63.6	49.6	10.1	3.10	106
1944	72.1	163	31.8	21.7	36.9	166	247	42.6	45.6	12.9	2.96	4.57	73.6
1945	15.7	55.5	126	106	52.4	370	165	249	153	113	63.5	60.9	128
1946	40.6	77.4	96.8	131	77.8	203	66.5	159	71.5	15.7	7.17	5.91	79.9
1947	20.4	9.02	12.1	49.8	79.6	161	242	145	45.8	25.5	31.0	8.53	68.9
1948	15.8	148	45.2	25.3	55.5	315	128	128	176	24.0	10.7	11.3	30.3
1949	8.22	40.1	134	372	139	142	125	70.1	2.84	5.42	4.62	6.08	87.3
1950	4.77	6.63	44.6	95.7	66.0	153	204	113	87.1	4.71	4.91	-2.06	64.9

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

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1905	-	-	-	-	-	-	-	-	-	-	1.10	3.53	-
1906	1.18	1.35	-	-	-	-	-	7.48	1.99	1.23	0.72	.47	.23
1907	1.15	1.50	2.19	3.78	1.26	4.55	3.04	2.41	2.41	.37	.15	2.10	24.91
1908	6.49	5.76	5.12	4.43	3.54	7.83	3.48	4.83	.71	.50	.38	.15	43.22
1909	.27	.31	.95	2.13	5.57	5.02	6.69	2.79	.76	.21	.36	.24	25.30
1910	.27	.30	1.26	-	-	-	-	-	2.14	.29	.29	.19	-
1911	.04	.90	.36	1.19	.45	2.21	4.23	1.46	1.62	.38	.57	1.44	15.07
1912	5.89	3.06	2.69	1.80	3.04	8.39	5.75	3.61	.99	.15	.27	.40	36.04
1913	.88	2.19	2.73	3.97	1.06	4.97	3.04	2.13	.48	.06	.08	.19	21.78
1914	2.38	2.64	1.87	1.36	1.42	5.51	7.20	2.62	.30	.31	.13	.06	25.80
1915	.12	.96	.41	4.23	5.39	1.22	3.22	1.94	.81	2.66	2.47	.47	25.90

1/ Published as "near Blandford", 1905-11 and as "near Westfield", 1912-35.

Monthly and yearly runoff, in inches (adjusted), of Westfield Little River at outlet of Cobble Mountain Reservoir, near Westfield, Mass.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1916	.68	.99	3.31	5.16	2.78	2.11	8.23	2.21	2.36	1.75	.49	.84	28.91
1917	.63	1.19	1.59	1.99	1.06	3.38	5.96	3.49	2.29	.50	.31	.25	22.64
1918	1.33	.82	.58	.79	2.38	6.44	3.59	1.38	.71	.21	.27	.73	19.23
1919	.44	.94	2.17	1.67	.70	5.54	4.88	5.30	.51	.45	.36	.70	23.66
1920	.55	2.69	2.20	.62	.61	7.97	8.79	2.57	3.01	1.16	1.67	.88	32.72
1921	1.83	3.88	6.96	2.24	1.20	8.10	5.24	2.35	.47	.93	.53	.30	34.03
1922	.26	.73	1.18	.40	.64	6.23	5.80	5.35	2.56	1.66	1.29	.84	26.64
1923	.73	.62	.55	2.06	1.26	5.02	7.27	3.18	1.27	.24	.22	.58	22.80
1924	2.58	2.18	4.07	3.87	.91	2.04	10.10	3.80	.73	.27	.15	.58	31.08
1925	.57	1.05	1.40	.59	4.40	5.46	2.81	1.73	.60	1.12	.64	.28	20.45
1926	.72	2.00	3.40	1.76	1.50	3.25	7.52	1.83	.56	.34	.73	.27	23.86
1927	.76	2.92	2.22	3.87	1.90	6.00	1.73	2.78	1.74	.70	3.45	2.04	30.11
1928	4.07	9.20	4.64	2.71	4.14	2.69	5.63	3.29	3.42	2.59	4.23	1.96	48.57
1929	.52	.60	1.02	3.18	2.04	7.01	7.71	3.02	.54	.13	.08	.14	25.99
1930	.84	1.03	1.68	1.96	1.66	3.71	2.71	1.72	1.85	.55	.24	.22	18.17
1931	.16	1.14	.57	.55	1.25	3.20	7.20	4.77	3.88	.73	.37	1.22	25.04
1932	.22	.36	.99	3.67	1.54	2.47	6.00	1.07	1.01	.66	.20	1.0	18.29
1933	1.97	6.28	1.60	1.91	1.49	3.23	8.26	1.23	.35	-.10	.92	3.08	30.22
1934	.98	.88	1.11	2.52	.72	4.85	7.30	2.90	1.61	.23	.43	3.49	27.02
1935	1.64	3.04	2.64	2.95	1.42	5.30	2.83	1.63	1.44	.53	-.03	.39	23.78
1936	.09	.94	.45	1.65	.71	14.87	4.22	1.34	.17	-.17	.11	.07	24.45
1937	.79	.40	3.32	4.66	3.34	1.87	5.48	4.78	1.08	.61	.42	1.24	27.99
1938	3.15	4.80	2.16	4.34	2.23	2.89	2.58	2.08	4.20	2.87	1.75	7.55	40.60
1939	1.10	1.40	4.34	1.28	2.00	4.25	7.14	.76	.07	.15	.24	.06	22.79
1940	.08	.90	.85	.84	.54	1.41	12.62	4.76	1.99	.67	-.03	.15	24.78
1941	-.04	1.25	1.72	1.35	2.63	.99	4.07	1.57	1.63	.37	.12	.52	16.18
1942	-.24	.78	1.88	2.01	.84	7.02	3.49	2.86	1.42	.77	.43	.87	22.13
1943	1.09	4.79	3.26	1.68	2.53	6.00	3.96	5.03	1.55	1.25	.26	.08	31.48
1944	1.82	3.97	.80	.55	.87	4.17	6.03	1.07	1.11	.32	.07	1.10	21.88
1945	.39	1.35	3.16	2.67	1.19	9.30	4.01	6.26	3.73	2.85	1.60	1.48	37.99
1946	1.02	1.88	2.44	3.30	1.77	5.11	1.62	4.01	1.74	.47	.18	.14	23.68
1947	.51	.22	.30	1.25	1.81	4.05	5.89	3.64	1.12	.64	.78	.21	20.42
1948	.40	3.61	1.09	.71	1.31	7.94	3.12	3.23	4.28	.60	.27	.28	26.84
1949	.16	.98	3.56	9.36	3.16	3.57	3.05	1.77	.07	.14	.12	.15	25.89
1950	.12	.16	1.12	2.36	1.50	3.85	4.96	2.86	2.12	.12	.12	-.06	19.24

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

Yearly discharge, in cubic feet per second (adjusted)

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean
		Discharge	Date					Runoff in inches
1905	415	-	-	-	-	-	-	-
1906	415	-	-	-	-	-	-	-
1907	415	-	-	-	78.9	1.83	24.91	118
1908	415	-	-	-	136	3.16	43.22	86.3
1909	415	-	-	-	80.1	1.86	25.30	92.2
1910	415	-	-	-	-	-	-	25.60
1911	415	-	-	-	53.9	1.11	15.07	90.5
1912	415	-	-	-	128	2.64	36.04	108
1913	415	-	-	-	77.8	1.60	21.78	81.7
1914	415	-	-	-	92.1	1.90	25.80	72.9
1915	401	-	-	-	85.3	1.76	23.90	97.8
1916	431	-	-	-	103	2.12	28.91	97.5
1917	451	-	-	-	80.9	1.67	22.64	78.4
1918	471	-	-	-	68.7	1.42	19.23	71.7
1919	501	-	-	-	84.5	1.74	23.66	91.3
1920	501	-	-	-	117	2.41	32.72	142
1921	521	-	-	-	122	2.52	34.03	83.8
1922	541	-	-	-	95.2	1.96	26.64	94.6
1923	681	-	-	-	81.5	1.68	22.80	105
1924	681	-	-	-	111	2.29	31.08	90.7
1925	681	-	-	-	73.1	1.51	20.45	84.2
1926	681	-	-	-	85.3	1.76	23.88	84.6
1927	681	-	-	-	108	2.23	30.11	150
1928	681	-	-	-	173	3.57	48.57	117
1929	681	-	-	-	83.0	1.92	25.99	97.9
1930	696	-	-	-	65.0	1.34	18.17	59.0
1931	711	-	-	-	85.8	1.77	25.04	84.6
1932	726	-	-	-	65.1	1.34	18.29	94.7
1933	741	-	-	-	108	2.23	30.22	83.4
1934	756	-	-	-	96.5	1.99	27.02	112
1935	781	-	-	-	84.9	1.75	23.78	60.5
1936	801	-	-	-	82.2	1.79	24.45	92.3
1937	821	-	-	-	94.5	2.06	27.99	113
1938	851	-	-	-	137	2.99	40.60	126
1939	871	-	-	-	76.9	1.68	22.79	60.1
1940	891	-	-	-	83.4	1.82	24.78	87.1

Yearly discharge, in cubic feet per second (adjusted), of Westfield Little River at outlet of Cobble Mountain Reservoir, near Westfield, Mass.--Continued

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1941	921	-	-	-	54.6	1.19	16.18	52.9	15.67
1942	951	-	-	-	74.6	1.63	22.13	97.3	28.85
1943	971	-	-	-	106	2.31	31.48	97.6	28.93
1944	1001	-	-	-	73.6	1.81	21.88	68.0	20.19
1945	1031	-	-	-	128	2.79	37.99	130	38.43
1946	1051	-	-	-	79.9	1.74	23.68	65.4	19.37
1947	1081	-	-	-	68.9	1.50	20.42	82.6	24.49
1948	1111	-	-	-	90.3	1.97	26.84	88.3	26.24
1949	1141	-	-	-	87.3	1.91	25.89	76.9	22.79
1950	1171	-	-	-	64.9	1.42	19.24	-	-

### 307. 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.

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.--36 years (1914-50), 918 cfs (adjusted for diversion and, since October 1931, for storage).

Extremes.--1914-50: 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.--Flow regulated by diversion from Westfield Little River for municipal supply of Springfield, by Borden Brook and Cobble Mountain Reservoirs since 1931 (see p. 322) and Knightville Reservoir since 1941 (see p. 315). Runoff figures adjusted for diversion from Westfield Little River for municipal supply of Springfield, and for change in contents in Borden Brook and Cobble Mountain Reservoirs since 1931 and in Knightville Reservoir since 1941.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1914	-	-	-	-	-	-	-	-	-	-	229	92.9	-
1915	113	187	206	1,010	1,710	720	1,170	559	232	897	1,170	332	687
1916	358	487	1,030	1,490	1,270	1,190	2,840	995	899	586	302	364	982
1917	291	493	676	724	472	1,830	1,990	1,320	446	211	184	831	831
1918	534	463	296	352	1,000	2,300	1,920	854	397	253	162	364	738
1919	294	432	765	783	371	1,920	1,500	2,090	434	299	242	463	804
1920	322	1,150	899	*298	*215	*2,690	3,650	1,120	977	465	565	316	*1,050
1921	712	1,160	2,170	849	564	2,670	1,730	963	258	400	228	147	993
1922	160	513	587	290	446	2,300	2,380	1,730	1,200	632	480	362	909
1923	350	299	237	902	494	1,660	2,580	1,150	512	208	149	176	726
1924	831	760	1,520	1,500	462	894	3,280	1,580	445	204	170	377	1,000
1925	356	558	623	239	1,700	1,920	1,150	718	337	475	377	235	717
1926	352	919	1,140	690	501	1,090	2,770	790	370	186	342	245	782
1927	446	1,250	618	712	752	2,420	948	996	625	413	810	595	883
1928	1,250	3,540	2,070	1,120	1,270	1,200	1,940	1,660	1,680	1,080	1,500	1,040	1,590
1929	381	317	401	645	524	2,520	3,100	1,550	359	172	120	116	852
1930	285	370	542	681	740	1,400	1,050	635	789	377	178	133	597
1931	119	366	213	171	248	965	2,830	1,740	1,470	399	235	179	744
1932	173	215	476	1,230	712	693	2,300	514	260	211	146	109	585
1933	471	1,880	624	856	689	1,220	3,670	673	469	262	639	2,120	1,120
1934	791	534	513	834	297	1,523	2,692	1,094	750	438	368	1,001	922
1935	806	1,041	1,066	1,295	793	1,755	1,109	763	664	458	249	317	863
1936	276	460	429	594	399	5,064	2,070	850	276	204	218	176	923
1937	340	349	1,128	1,632	1,462	945	2,124	2,288	848	513	312	575	1,040
1938	1,040	1,843	1,071	1,611	1,350	1,146	1,090	851	1,284	1,325	907	2,938	1,367
1939	749	839	1,743	880	900	1,625	3,157	678	306	223	198	173	954
1940	183	428	463	365	304	616	4,540	2,008	1,039	386	154	165	884
1941	159	433	602	652	977	597	1,286	593	445	228	168	215	525
1942	181	350	608	730	364	2,407	1,859	957	560	398	336	401	766
1943	410	1,627	1,368	851	1,106	2,086	1,931	2,194	1,049	434	299	170	1,127
1944	464	1,246	685	422	461	1,387	2,276	620	425	281	278	357	740
1945	292	427	866	839	702	3,217	1,728	2,511	1,306	1,124	816	548	1,204
1946	469	676	797	1,250	906	2,130	1,268	901	347	197	221	833	833
1947	363	249	275	607	837	1,464	2,903	1,540	605	318	214	204	796
1948	313	1,072	517	799	586	2,614	1,548	1,606	1,720	463	256	226	852
1949	260	358	1,152	2,635	1,461	1,518	1,368	875	266	213	180	189	971
1950	154	204	453	961	631	1,321	2,072	1,071	848	228	132	145	684

\* Revised.

† Corrected.

Monthly and yearly runoff, in inches (adjusted), of Westfield River near Westfield, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1914										0.53	0.57	0.25	-
1915	0.30	0.45	0.52	2.39	3.62	1.71	2.67	1.34	0.56	2.12	2.76	.78	19.22
1916	.87	1.13	2.43	3.48	2.80	2.80	6.42	2.34	2.06	1.41	.74	.86	27.34
1917	.72	1.15	1.61	1.72	1.03	4.29	4.51	3.11	3.01	1.08	.54	.46	23.23
1918	1.28	1.08	.73	.87	2.14	5.58	4.35	2.03	.94	.64	.42	.86	20.72
1919	.73	1.01	1.82	1.87	.82	4.50	3.41	4.90	1.02	.74	.61	1.09	22.52
1920	.80	2.62	2.13	*.74	*.51	*6.28	8.23	2.64	2.24	1.13	1.36	.76	*29.44
1921	1.70	2.64	5.08	2.02	1.23	6.24	3.93	2.28	.63	.98	.57	.38	27.68
1922	.42	.75	1.41	.72	.98	5.58	5.39	4.06	2.73	1.51	1.16	.86	25.37
1923	.86	.72	.60	2.14	1.08	3.90	5.84	2.71	1.20	.53	.40	.45	20.43
1924	1.97	1.75	3.57	3.53	3.05	2.12	7.41	3.71	1.05	.53	.44	.90	28.03
1925	.88	1.30	1.50	.61	3.60	4.50	2.62	1.72	.81	1.15	.93	.59	20.21
1926	.87	2.11	2.69	1.65	1.09	2.67	6.26	1.88	.88	.49	.85	.61	21.95
1927	1.09	2.86	1.49	1.71	1.62	5.66	2.18	2.36	1.45	1.01	1.32	1.38	24.73
1928	2.95	7.54	4.85	2.64	2.80	2.82	4.40	3.90	3.77	2.55	3.53	2.38	44.13
1929	.94	.77	.98	1.56	1.14	5.91	7.03	3.64	.87	.47	.54	.33	23.98
1930	.72	.89	1.31	1.64	1.60	3.30	2.42	1.53	1.83	.94	.48	.36	17.02
1931	.34	.88	.55	.46	.58	2.29	6.42	4.08	3.37	.99	.61	.46	21.03
1932	.42	.52	1.20	3.23	1.69	1.84	5.75	1.29	.68	.55	.56	.25	17.78
1933	1.28	4.83	1.60	2.17	1.51	2.87	8.78	1.67	.71	.27	1.28	4.57	31.54
1934	1.57	1.18	1.19	2.05	.81	4.00	7.18	2.61	1.83	.58	.44	2.48	25.91
1935	1.72	2.61	2.47	3.03	1.59	4.53	2.77	1.92	1.62	1.11	.33	.49	24.19
1936	.58	1.13	1.04	1.54	.94	12.91	4.91	2.02	.64	.27	.51	.36	26.45
1937	.84	.67	2.89	4.08	3.11	2.25	5.17	5.37	1.98	1.15	.76	1.33	29.60
1938	2.61	4.14	2.29	3.74	2.73	2.87	2.71	2.13	2.93	3.16	1.92	6.67	37.90
1939	1.67	1.67	4.14	1.68	1.84	4.14	7.65	1.65	.71	.43	.47	.32	26.37
1940	.43	1.04	.95	.81	.65	1.57	11.10	4.72	2.36	.83	.31	.33	25.10
1941	.25	1.06	1.49	1.18	2.05	1.45	3.27	1.51	1.16	.56	.40	.44	14.82
1942	.52	.88	1.57	1.87	.85	6.13	4.27	2.34	1.30	.99	.67	.81	22.00
1943	1.05	4.00	2.95	1.77	2.12	5.41	4.68	5.59	2.11	.98	.70	.38	31.72
1944	1.27	3.25	1.14	.88	.90	3.48	5.62	1.68	1.22	.54	.32	.78	20.88
1945	.58	1.08	2.25	1.94	1.29	8.17	4.49	5.77	3.06	2.70	1.53	1.15	34.01
1946	1.03	7.66	2.00	2.73	1.70	5.19	1.91	3.31	2.19	.84	.46	.50	23.52
1947	.87	.57	.62	1.46	1.86	3.59	6.78	3.79	1.57	.77	.51	.37	22.56
1948	.43	2.62	.26	1.33	6.79	3.77	4.03	4.08	1.35	.58	.58	.29	27.27
1949	.52	.81	4.44	5.17	3.02	5.78	3.27	2.09	.58	.36	.31	.33	24.48
1950	.37	.46	1.15	2.43	1.43	3.40	5.10	2.74	2.04	.47	.32	.31	20.22

\* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30										Calendar year		
		Observed					Adjusted					Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Mean	Mean	Runoff in inches
		Discharge	Date											
1915	415,1051	*22,200	Feb. 25, 1915*	40	687	704	1.42	19.22		802	819	22.38		
1916	431	*11,800	Dec. 26, 1915*	131	982	999	2.01	27.34		947	965	26.39		
1917	451	13,000	Mar. 28, 1917	120	831	850	1.71	23.23		817	836	22.84		
1918	471	7,900	Oct. 30, 1917	110	738	759	1.53	20.72		755	776	21.19		
1919	501,1051	20,200	May 22, 1919	121	804	824	1.66	22.52		876	896	24.51		
1920	(a)	19,200	Apr. 13, 1920	*150	*1,050	*1,080	*2.17	*29.44		*1,200	*1,220	*33.31		
1921	521,1051	16,800	Dec. 15, 1920	99	993	1,013	2.04	27.68		742	762	20.84		
1922	541	12,700	May 19, 1922	82	909	929	1.87	25.37		895	914	24.97		
1923	561	11,100	Apr. 6, 1923	107	726	747	1.50	20.43		914	935	25.54		
1924	581, 601	32,500	Apr. 7, 1924	120	1,000	1,020	2.05	28.03		870	892	24.42		
1925	601,1051	16,200	Feb. 12, 1925	142	717	740	1.49	20.21		791	814	22.20		
1926	621	8,880	Apr. 25, 1926	97	782	805	1.62	21.95		772	795	21.72		
1927	641	9,050	Mar. 14, 1927	243	883	905	1.82	24.73		1,250	1,270	34.63		
1928	661	42,500	Nov. 4, 1927	243	1,590	1,610	3.24	44.13		1,130	1,150	31.48		
1929	681	12,600	Apr. 21, 1929	87	852	878	1.77	23.98		860	887	24.21		
1930	696	7,870	Mar. 8, 1930	86	597	624	1.26	17.02		555	581	15.87		
1931	711	16,500	May 23, 1931	89	744	770	1.55	21.03		759	783	21.40		
1932	726	11,900	Apr. 1, 1932	75	585	649	1.31	17.78		759	852	23.35		
1933	741	34,600	Sept. 16, 1933	86	1,120	1,150	2.31	31.54		1,051	1,020	27.77		
1934	756	18,000	Apr. 12, 1934	108	922	949	1.91	25.91		1,014	1,054	28.77		
1935	781	15,800	Jan. 10, 1935	111	863	886	1.78	24.19		714	730	19.94		
1936	801	48,200	Mar. 18, 1936	111	923	967	1.95	26.45		978	1,055	28.30		
1937	821	21,400	May 15, 1937	129	1,040	1,084	2.18	29.60		1,218	1,253	34.24		
1938	851	55,500	Sept. 21, 22, 1938	188	1,367	1,388	2.79	37.90		1,317	1,331	36.34		
1939	871	12,700	Apr. 20, 1939	93	954	966	1.94	26.37		764	780	21.31		
1940	891	12,800	Apr. 9, 12, 1940	97	884	916	1.84	25.10		894	930	25.48		
1941	921	7,750	Feb. 8, 1941	81	525	543	1.09	14.82		522	542	14.79		
1942	951	12,100	Mar. 9, 1942	107	766	805	1.62	22.00		954	996	27.21		
1943	971	15,000	Nov. 25, 1942	108	1,127	1,162	2.34	31.72		1,042	1,076	29.40		
1944	1001	11,700	Nov. 9, 1943	98	740	763	1.54	20.88		673	699	19.13		
1945	1051	12,600	Apr. 26, 1945	158	1,204	1,246	2.51	34.01		1,234	1,274	34.79		
1946	1051	8,130	Mar. 9, 1946	113	833	862	1.73	23.52		745	765	20.89		
1947	1081	8,030	Apr. 6, 1947	91	796	826	1.66	22.66		806	808	24.81		
1948	1111	11,300	Mar. 22, 1948	90	952	995	2.00	27.27		942	1,041	28.53		
1949	1141	32,200	Dec. 31, 1948	71	871	896	1.80	24.48		790	764	20.89		
1950	1171	5,960	Apr. 5, 1950	66	684	740	1.49	20.22		-	-	-		

\* Revised.

a In W.S.P. 501, 1051, 1231.



## 308. 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.

Gage.--Water-stage recorder on river and on canal at Connecticut Light and Power Co. Datum of gage is 38.48 ft above mean sea level, datum of 1929.

Average discharge.--22 years (1928-50), 15,910 cfs (adjusted for storage and diversion).

Extremes.--1928-50: Maximum discharge, 282,000 cfs Mar. 20, 1936 (gage height, 16.6 ft, from floodmarks); minimum daily, 1,060 cfs Aug. 28, 1949.

Remarks.--Discharge includes water diverted around station by canal of Connecticut Light and Power Co. Flow regulated by power plants, by diversion from Chicopee River Basin, and by lakes and reservoirs having a combined usable capacity of about 88 billion cu ft. Runoff adjusted for change in contents in First and Second Connecticut Lakes (see p. 229) Lake Francis since March 1940 (see p. 231), Comerford Station Pond since August 1930 (see p. 236), Union Village Reservoir since October 1949 (see p. 249), four reservoirs in Mascoma River Basin since October 1928 (see p. 257), Sunapee Lake since October 1928 (see p. 261), Surry Mountain Reservoir since November 1942 (see p. 271), Birch Hill Reservoir since October 1943 (see p. 284), Tully Reservoir since October 1948 (see p. 285), Somerset and Harriman Reservoirs (see p. 294), Quabbin Reservoir since August 1939 (see p. 308), Watershop Pond since May 1939 (see p. 314), Knightville Reservoir since May 1943 (see p. 315), and Borden Brook and Cobble Mountain Reservoirs (see p. 322).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	-	-	13,800	11,900	-
1929	9,930	10,100	9,820	12,100	8,880	35,900	49,200	38,600	9,910	5,450	4,870	4,910	16,700
1930	5,200	7,030	7,620	13,900	12,800	24,800	28,300	18,300	18,200	7,420	5,000	3,440	12,500
1931	3,600	7,240	6,280	4,310	4,480	12,200	42,500	24,500	20,000	10,400	5,950	6,280	12,300
1932	6,170	9,030	11,200	13,700	13,700	11,600	48,800	15,900	7,400	7,970	5,530	5,630	13,500
1933	9,580	28,000	11,600	13,900	11,800	14,500	73,200	24,200	6,370	4,020	7,340	11,600	18,000
1934	9,392	9,732	10,390	11,620	6,969	18,780	89,980	23,400	10,600	5,409	3,630	7,834	15,620
1935	8,295	15,400	15,090	22,870	10,890	25,750	32,950	24,630	17,650	12,080	5,382	5,572	16,410
1936	5,048	9,211	11,190	10,250	6,680	89,200	44,980	24,340	7,580	5,058	3,912	4,751	18,580
1937	10,080	12,840	19,070	27,580	20,440	13,320	40,760	49,090	17,790	9,845	6,098	6,408	19,430
1938	10,030	20,000	18,590	19,650	20,340	23,990	30,470	17,100	9,855	14,290	12,560	42,700	19,930
1939	15,480	14,380	32,000	13,490	12,600	19,870	54,870	32,710	10,760	5,747	5,351	3,994	18,540
1940	5,844	11,070	8,818	5,454	4,388	6,965	57,720	50,080	18,180	7,819	4,321	5,826	15,520
1941	4,708	15,980	12,580	13,580	13,740	9,559	29,290	9,611	6,000	5,699	3,985	3,785	10,650
1942	4,729	8,763	8,249	11,230	7,211	27,370	43,450	21,480	14,310	6,079	3,550	3,955	13,370
1943	6,434	13,950	14,420	10,860	11,430	26,880	33,440	46,840	17,520	7,518	11,020	7,487	17,570
1944	9,646	23,790	10,270	6,808	8,546	15,180	45,220	26,890	12,400	8,148	4,291	6,408	14,400
1945	8,934	9,604	11,250	12,810	9,094	44,200	38,680	42,640	22,980	15,230	7,050	7,644	19,250
1946	17,670	17,810	16,150	15,730	12,160	39,750	20,070	24,410	15,580	5,223	6,910	4,764	16,410
1947	10,340	10,040	10,030	11,580	16,730	24,580	47,790	36,110	27,310	10,560	6,408	4,384	17,900
1948	3,421	8,761	5,548	4,898	6,972	36,440	36,770	31,540	19,900	8,116	4,758	3,153	14,250
1949	3,073	10,610	9,344	29,690	15,970	24,210	29,470	16,220	6,118	3,295	3,146	3,957	12,900
1950	4,197	7,099	10,930	16,960	12,510	18,830	46,530	19,170	11,890	4,205	4,111	5,647	13,470

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	-	-	1.60	1.33	-
1929	1.12	1.08	1.03	1.43	0.86	4.46	5.90	4.67	1.09	0.66	.47	.50	23.27
1930	.57	.84	.89	1.68	1.36	3.01	3.38	2.26	1.87	.83	.57	.40	17.66
1931	.36	.86	.67	.44	.44	1.45	5.23	3.04	2.32	1.23	.66	.72	17.42
1932	.67	1.03	1.33	2.42	1.38	1.26	5.95	2.04	.82	.97	.58	.57	19.02
1933	1.20	3.15	1.24	1.59	1.17	1.65	8.66	2.99	.85	.41	.89	1.30	25.30
1934	1.10	1.08	1.16	1.29	.66	2.29	8.48	2.87	1.25	.54	.34	.91	21.97
1935	.96	1.84	1.73	2.70	.97	3.11	3.99	3.07	2.12	1.46	.52	.58	23.05
1936	.49	1.15	1.23	1.15	.67	11.09	5.22	2.95	.79	.56	.42	.51	26.23
1937	1.26	1.44	2.32	3.33	2.07	1.46	4.98	6.00	2.08	1.15	.69	.69	27.47
1938	1.20	2.34	2.05	2.29	2.18	2.85	3.69	2.14	1.12	1.80	1.44	5.00	28.10
1939	1.86	1.57	3.84	1.43	1.27	2.31	6.85	4.04	1.19	.67	.60	.43	25.86
1940	.71	1.26	.98	.54	.46	.81	7.24	6.32	2.15	.93	.44	.69	22.54
1941	.48	1.95	1.44	1.49	1.36	.99	3.73	1.22	.74	.73	.42	.37	14.92
1942	.63	1.11	.97	1.26	.65	3.52	5.37	2.73	1.67	.73	.39	.43	19.45
1943	.78	2.00	1.63	1.17	1.18	3.28	4.12	6.00	2.02	.88	1.31	.79	25.11
1944	1.20	2.82	1.05	.62	.63	1.87	5.59	3.42	1.80	.73	.41	.76	20.70
1945	1.10	1.05	1.27	1.49	.87	5.69	4.79	5.27	2.73	1.67	.77	.69	27.79
1946	2.09	2.11	1.94	1.79	1.14	5.03	2.46	3.14	1.85	.58	.80	.49	23.42
1947	1.28	1.19	1.14	1.28	1.75	2.88	5.82	4.53	3.14	1.25	.60	.38	25.24
1948	.29	1.09	.66	.50	.73	4.78	4.42	3.88	2.30	.92	.50	.21	20.28
1949	.30	1.36	1.21	3.47	1.65	2.89	3.62	2.05	.66	.32	.27	.42	18.22
1950	.44	.76	1.39	2.13	1.24	2.23	5.70	2.44	1.45	.44	.42	.62	19.26

Yearly discharge, in cubic feet per second, of Connecticut River at Thompsonville, Conn.

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed			Adjusted				Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1928	661	-	-	-	-	-	-	-	-	-	-
1929	681	84,800	Mar. 25, 1929	1,370	16,700	16,500	1.71	23.27	15,900	15,900	22.54
1930	696	57,600	Apr. 9, 1930	1,670	12,500	12,600	1.30	17.66	12,300	12,500	17.25
1931	711	78,100	Apr. 12, 1931	1,490	12,300	12,400	1.28	17.42	13,100	13,200	18.56
1932	741	98,400	Apr. 14, 1932	2,060	13,500	13,500	1.40	19.02	15,200	15,300	21.58
1933	741	153,000	Apr. 20, 1933	1,610	18,000	18,000	1.86	25.30	16,500	16,400	23.05
1934	756	124,000	Apr. 14, 1934	1,310	15,620	15,640	1.62	21.97	16,390	16,480	23.16
1935	781	100,000	Jan. 11, 1935	1,800	16,410	16,400	1.70	23.05	15,290	15,220	21.39
1936	801	282,000	Mar. 20, 1936	1,440	18,580	18,620	1.93	26.23	19,970	20,140	28.38
1937	821	103,000	May 16, 1937	2,750	19,430	19,530	2.02	27.47	19,960	19,940	28.04
1938	851	236,000	Sept. 22, 23, 1938	2,280	19,930	20,000	2.07	28.10	21,170	21,190	29.78
1939	871	103,000	Apr. 24, 1939	1,780	18,540	18,400	1.90	25.86	15,400	15,330	21.54
1940	891	121,000	May 6, 1940	1,680	15,520	16,000	1.66	22.54	16,140	16,670	23.46
1941	921	50,000	Apr. 16, 17, 1941	1,380	10,650	10,630	1.10	14.92	9,890	9,798	13.76
1942	951	73,200	Apr. 9, 1942	1,120	13,370	13,830	1.43	19.45	14,710	15,030	21.13
1943	971	75,000	Apr. 29, 1943	2,520	17,570	17,880	1.85	25.11	18,050	18,360	25.79
1944	1001	75,400	Apr. 26, 1944	1,490	14,400	14,690	1.52	20.70	15,260	15,510	19.05
1945	1031	95,000	Mar. 22, 1945	2,940	19,250	19,770	2.05	27.79	21,080	21,710	30.51
1946	1051	75,800	Mar. 11, 1946	1,860	16,410	16,670	1.73	23.42	14,620	14,880	20.89
1947	1081	97,000	Apr. 14, 1947	1,310	17,950	17,960	1.86	25.24	16,880	16,850	23.67
1948	1111	131,000	Mar. 23, 1948	1,170	14,200	14,580	1.49	20.28	14,640	14,970	21.11
1949	1141	138,000	Jan. 1, 1949	1,060	12,900	12,980	1.34	18.22	12,850	12,790	17.94
1950	1171	84,300	Apr. 6, 1950	1,540	13,470	13,710	1.42	19.26	-	-	-

## 309. Scantic River at Broad Brook, Conn.

Location.--Lat 41°54'42", long. 72°33'48", on left bank 300 ft upstream from highway bridge, half a mile downstream from Broad Brook, 1 mile southwest of town of Broad Brook, Hartford County, and 8½ miles upstream from mouth.

Drainage area.--98.4 sq mi.

Gage.--Water-stage recorder. Datum of gage is 26.23 ft above mean sea level, datum of 1929.

Average discharge.--22 years (1928-50), 134 cfs.

Extremes.--1928-50: Maximum discharge, 7,360 cfs Sept. 21, 1938 (gage height, 16.08 ft, from floodmark), by computation of flow over dams 7 and 9 miles above station, adjusted for flow from intervening area on basis of computation of flow over dam at Broad Brook; minimum, 10 cfs Aug. 13, 14, 1944; minimum daily, 16 cfs Aug. 13, 1944.

Remarks.--Flow regulated by mills and small reservoirs above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	-	-	-	*141	-
1929	88.9	90.9	84.0	135	165	331	334	256	81.1	57.2	52.2	46.4	143
1930	50.8	53.3	76.3	99.1	96.1	145	127	89.6	75.1	50.8	36.7	26.8	77.2
1931	35.0	47.1	42.6	43.5	72.1	178	138	135	165	52.8	62.7	34.4	83.8
1932	35.0	38.2	56.9	106	112	151	181	83.5	61.0	41.9	44.4	65.8	81.2
1933	86.4	166	114	125	151	293	400	126	77.3	46.9	48.6	124	146
1934	61.8	64.4	90.2	195	63.1	318	282	185	114	53.0	53.0	117	134
1935	146	149	166	231	204	365	191	132	105	105	43.8	62.6	158
1936	45.1	67.0	71.8	172	95.4	597	307	185	84.1	50.0	45.8	57.0	147
1937	78.2	63.7	244	290	223	243	229	151	111	74.9	58.0	64.7	152
1938	88.2	167	170	246	228	200	194	137	212	273	137	*623	222
1939	*255	195	318	182	287	336	350	118	67.4	52.0	60.8	54.5	*189
1940	64.3	106	117	133	81.3	287	523	225	250	131	56.4	54.7	169
1941	50.5	132	130	88.6	182	154	126	94.5	74.8	66.8	48.5	32.7	97.7
1942	34.0	61.0	71.2	90.2	102	309	141	124	92.3	111	63.3	57.3	105
1943	81.8	200	241	216	271	544	199	266	125	57.4	43.4	33.9	173
1944	51.1	99.8	53.2	50.6	95.0	147	205	99.9	129	58.3	36.0	61.4	91.0
1945	59.0	90.9	140	147	169	352	215	267	193	138	102	62.3	161
1946	70.0	114	177	218	195	245	132	168	156	79.1	79.6	46.8	140
1947	62.3	59.1	59.5	108	101	191	192	169	96.1	69.7	44.9	47.2	100
1948	37.5	147	82.3	71.8	133	*402	287	193	321	130	61.9	36.8	*158
1949	43.4	94.7	81.8	204	206	217	150	162	62.3	35.8	31.6	35.0	110
1950	39.6	53.6	83.4	112	126	230	199	166	166	64.8	53.0	50.5	112

\* Revised.

\* Not previously published; partly estimated on basis of records for nearby stations.

Monthly and yearly runoff, in inches, of Scantic River at Broad Brook, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	-	-	-	\$1.60	-
1929	1.04	1.03	0.98	1.58	1.84	3.87	3.78	3.00	0.92	0.67	0.61	.53	19.65
1930	.59	.60	.89	1.16	1.02	1.70	1.44	1.05	.85	.59	.43	.30	10.82
1931	.41	.53	.50	.51	.76	2.09	1.56	1.58	1.87	.62	.73	.39	11.55
1932	.41	.43	.67	1.24	1.23	1.76	2.05	.98	.69	.49	.52	.75	11.22
1933	1.01	1.89	1.34	1.46	1.59	3.44	4.54	1.48	.88	.55	.57	1.41	20.16
1934	.72	.73	1.06	2.28	.67	3.72	3.20	2.17	1.29	.62	.62	1.33	18.41
1935	1.71	1.68	1.95	2.71	2.16	4.28	2.16	1.54	1.19	1.23	.51	.71	21.83
1936	.53	.76	.84	2.02	1.05	7.00	3.48	1.94	.95	.59	.54	.65	20.35
1937	.92	.72	2.86	3.40	2.36	2.85	2.60	1.78	1.28	.88	.68	.73	21.02
1938	1.03	1.90	1.99	2.88	2.42	2.34	2.20	1.60	2.40	3.19	1.60	*7.06	*30.61
1939	*2.99	2.21	3.72	2.13	3.04	3.93	3.97	1.38	.76	.61	.71	.62	*26.07
1940	.75	1.20	1.37	1.56	.89	3.37	5.94	2.64	2.83	1.53	.66	.62	23.36
1941	.59	1.50	1.52	1.04	1.93	1.81	1.43	1.11	.85	.78	.57	.37	13.50
1942	.40	.69	.83	1.06	1.08	3.62	1.60	1.45	1.05	1.30	.74	.65	14.47
1943	.96	2.26	2.82	2.54	2.86	4.04	2.25	3.11	1.40	.67	.51	.58	23.80
1944	.60	1.13	.62	.59	.83	1.72	2.32	1.19	1.46	.68	.42	.92	12.57
1945	.69	1.03	1.64	1.72	1.78	4.13	2.43	3.12	2.19	1.61	1.20	.71	22.26
1946	.82	1.29	2.08	2.60	2.06	2.87	1.50	1.97	1.77	.93	.93	.53	19.35
1947	.73	.67	.70	1.27	1.07	2.24	2.18	1.98	1.09	.82	.53	.54	13.82
1948	.44	1.66	.96	.84	1.46	*4.72	3.26	2.26	3.64	1.52	.73	.42	*21.91
1949	.51	1.07	.96	2.39	2.18	2.55	1.70	1.90	.71	.42	.37	.40	15.16
1950	.46	.61	.98	1.31	1.33	2.70	2.25	1.95	1.99	.76	.62	.57	15.43

\* Revised.

\* Not previously published; partly estimated on basis of records for nearby stations.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1929	681, 871	*1,280	Mar. 6, 1929	27	143	1.45	19.65	136	18.68
1930	696, 871	578	Feb. 15, 1930	18	77.2	.785	10.62	72.4	9.98
1931	(a)	614	June 11, 1931	17	83.8	.849	11.55	84.3	11.62
1932	726, 871	664	Mar. 28, 1932	17	81.2	.825	11.22	101	13.95
1933	741, 871	877	Mar. 23, 1933	25	146	1.48	20.16	134	18.43
1934	756, 871	*1,670	Mar. 6, 1934	23	134	1.36	18.41	154	21.24
1935	781	1,290	Jan. 11, 1935	25	158	1.61	21.83	135	18.62
1936	801, 851	1,820	Mar. 13, 1936	28	147	1.49	20.35	164	22.72
1937	821	735	Dec. 12, 1936	31	152	1.54	21.02	155	21.44
1938	851, 1201	7,360	Sept. 21, 1938	38	222	2.26	*30.61	*251	*34.58
1939	871, 1201	1,110	Feb. 15, 1939	35	*189	*1.92	*26.07	149	20.47
1940	921	1,290	Mar. 31, 1940	41	169	1.72	23.36	171	23.85
1941	921	1,110	Feb. 8, 1941	21	97.7	.993	13.50	85.6	11.81
1942	951	611	Mar. 23, 1942	26	105	1.07	14.47	135	18.59
1943	971	(b)		17	175	1.76	23.80	146	20.11
1944	1001	920	June 25, 1944	16	91.0	.925	12.57	98.3	13.58
1945	1031	945	Feb. 28, 1945	31	181	1.84	22.26	167	23.09
1946	1051	550	Feb. 14, 1946	27	140	1.42	19.35	125	17.26
1947	1081	475	Mar. 16, 1947	25	100	1.02	13.82	107	14.78
1948	1111, 1201	*1,580	Mar. 17, 1948	25	*158	*1.61	*21.91	*154	*21.39
1949	1141	500	Jan. 7, 1949	20	110	1.12	15.16	106	14.67
1950	1171	610	Mar. 9, 1950	30	112	1.14	15.43	-	-

\* Revised.

a In W.S.P. 711, 726, 871.

b Dec. 30 or 31, 1942.

## 310. Otis Reservoir at Cold Spring, Mass.

Location.--Lat 42°09'35", long. 73°03'35", on Fall River three-quarters of a mile above mouth and 1 mile northeast of Cold Spring, Hampden County.

Drainage area.--17.2 sq mi.

Gage.--Staff gage. Altitude of gage is 1,400 ft (from topographic map).

Remarks.--Reservoir completed in 1865 for storage of water for power, has usable capacity of 780,000,000 cu ft.

Cooperation.--Records furnished by Collins Co., Collinsville, Conn.

Month-end contents, in millions of cubic feet, of Otis Reservoir at Cold Spring, Mass.												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1913	-	-	-	-	-	-	768	776	654	537	76	13
1914	60	186	261	279	299	451	775	780	654	503	201	29
1915	0	11	22	131	242	308	396	445	465	575	692	692
1916	620	604	542	485	597	524	765	780	776	776	586	451
1917	255	182	222	159	25	156	355	461	564	582	319	124
1918	36	67	57	64	163	349	532	601	597	438	222	135
1919	146	180	258	328	370	564	746	784	765	692	503	399
1920	215	255	352	194	66	232	612	703	784	776	765	634
1921	616	696	692	627	503	738	792	780	661	612	517	364
1922	208	208	258	152	144	383	620	780	792	776	719	654
1923	549	486	389	438	496	657	792	792	772	665	496	370
1924	271	343	482	616	528	468	784	792	776	604	448	310
1925	218	173	228	109	238	405	503	571	601	642	586	451
1926	322	422	528	568	634	680	784	780	772	665	661	524
1927	458	586	616	579	665	718	792	780	780	780	792	688
1928	745	638	654	571	646	700	795	780	784	780	761	654
1929	412	299	240	328	361	597	780	784	676	496	322	167.0
1930	71.7	83.0	107.0	179.5	217.7	343.0	424.8	478.5	533.2	520.8	415.0	296.2
1931	144.0	107.0	92.5	35.2	39.1	98.8	392.2	549.4	688.0	672.7	627.0	531.5
1932	367.4	247.5	235.0	358.2	358.2	415.0	668.8	699.5	661.2	634.5	458.0	307.5
1933	310.4	506.5	513.6	545.8	586.0	695.7	783.8	757.0	680.3	510.0	370.5	496.0
1934	402.0	346.0	343.0	428.0	310.3	431.3	734.0	772.3	768.5	589.7	408.5	421.5
1935	418.2	499.5	545.8	556.7	503.0	668.8	776.2	695.7	695.7	578.6	395.5	247.5
1936	110.3	35.2	0	57.2	95.7	593.4	768.5	780.0	676.5	503.0	337.0	206.0
1937	138.5	59.5	151.7	304.7	405.2	489.0	672.7	776.2	741.7	688.0	492.5	349.0
1938	287.7	444.7	513.6	545.8	600.8	549.4	665.0	745.5	780.0	795.3	653.5	783.8
1939	676.5	542.2	653.5	513.6	421.5	575.0	734.0	714.8	575.0	421.5	364.3	258.0
1940	100.4	135.0	48.8	37.5	49.4	90.9	531.5	730.2	783.8	776.2	753.2	743.6
1941	625.1	540.4	439.7	389.0	313.2	201.3	353.5	379.8	431.3	449.7	441.3	325.0
1942	210.7	218.8	232.5	308.9	344.5	569.5	728.2	781.9	780.0	737.8	712.9	632.8
1943	482.5	569.0	552.7	74.5	11.0	282.0	287.7	289.0	513.2	245.0	187.8	125.8
1944	105.3	295.3	260.7	151.7	167.0	274.0	499.5	582.3	589.7	542.2	392.2	334.0
1945	271.3	250.0	325.0	367.4	441.3	699.5	760.8	768.5	764.7	757.0	757.0	718.7
1946	485.5	319.0	438.0	586.0	578.7	649.7	688.0	760.8	757.0	768.5	749.3	645.8
1947	556.7	408.5	310.3	282.0	331.0	615.8	745.5	757.0	764.7	753.2	642.0	441.3
1948	290.5	373.6	421.5	252.7	227.5	492.5	684.2	768.5	768.5	760.8	757.0	707.2
1949	489.0	279.3	302.4	619.5	734.0	753.2	757.0	753.2	699.5	593.3	438.0	534.0
1950	242.5	161.2	142.2	282.0	373.6	458.0	645.8	749.3	760.8	714.8	608.2	464.7

## 311. West Branch Farmington River near New Boston, Mass. 1/

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.

Gage.--Water-stage recorder. Datum of gage is 758.21 ft above mean sea level, datum of 1929.

Average discharge.--37 years (1913-50), 179 cfs (adjusted for storage).

Extremes.--1913-50: 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 recorded, 4.4 cfs Aug. 27, 1913; minimum daily, 5.7 cfs Aug. 31, 1929.

Remarks.--Flow regulated by Otis Reservoir (see preceding page). Runoff figures adjusted for change in contents in Otis Reservoir.

Monthly and yearly mean discharge, in cubic feet per second (observed)													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1913	-	-	-	-	-	-	-	-	96.6	109	105	47.2	-
1914	*155	183	111	80.0	130	408	531	260	83.0	90.6	106	81.6	*185
1915	19.9	27.0	41.3	274	319	100	195	115	71.2	240	188	57.9	136
1916	79.4	93.7	252	349	239	177	575	174	142	113	110	96.9	200
1917	110	130	110	162	119	293	359	185	164	59.1	107	88.2	157
1918	99.2	49.5	31.1	39.9	131	403	305	131	76.8	91.1	94.0	116	131
1919	53.8	97.9	170	132	46.4	328	315	411	66.8	73.0	88.0	89.6	157
1920	120	209	164	118	119	534	646	171	155	82.4	147	131	216
1921	164	230	431	179	127	439	380	158	81.3	66.8	80.2	71.8	202
1922	80.6	75.1	148	86.8	129	393	394	277	210	123	104	90.2	176
1923	103	86.4	106	228	71.2	293	492	235	120	69.4	85.7	81.0	165
1924	177	126	234	315	153	166	596	296	94.4	81.0	81.3	115	203
1925	105	105	113	74.4	266	356	208	131	68.6	118	91.0	86.5	143

\* Revised.

1/ Published as Farmington River near New Boston, Mass., October 1913 to September 1948.

Monthly and yearly mean discharge, in cubic feet per second (observed),  
of West Branch Farmington River near New Boston, Mass.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	102	137	196	182	122	356	592	193	78.0	71.6	91.2	81.6	184
1927	103	245	98.2	212	189	522	167	258	145	73.7	225	168	201
1928	314	817	438	272	217	209	332	323	303	204	438	222	341
1929	127	108	126	158	141	442	688	342	109	81.4	75.2	76.8	206
1930	91.3	89.2	135	122	151	239	170	97.1	109	64.2	57.9	57.2	115
1931	69.6	88.7	48.9	49.9	56.8	155	424	278	233	71.0	58.9	39.4	131
1932	85.4	87.3	112	259	143	118	437	98.4	73.3	74.6	86.4	68.2	135
1933	117	323	118	147	117	159	706	119	72.8	71.7	165	319	202
1934	127	119	110	186	120	288	466	211	129	93.4	97.8	206	179
1935	146	233	220	260	163	324	235	183	142	95.5	80.6	79.6	180
1936	77.6	128	104	139	82.9	947	305	142	75.6	75.2	85.6	83.0	188
1937	98.1	105	202	297	211	116	345	334	133	114	186	211	196
1938	301	244	175	275	223	240	197	144	258	261	247	644	267
1939	165	184	298	177	201	262	570	119	104	89.5	61.5	64.0	191
1940	89.4	85.0	112	93.3	53.0	110	742	311	165	69.9	19.4	21.4	155
1941	54.9	143	186	126	212	148	258	61.6	88.5	39.2	29.8	69.6	117
1942	65.5	71.1	142	116	68.8	375	278	177	149	129	50.3	88.2	143
1943	139	376	283	197	171	358	372	382	169	88.4	63.5	51.2	221
1944	86.4	236	103	85.2	65.6	234	398	113	80.7	97.0	83.6	103	140
1945	76.6	137	137	124	96.8	587	362	488	296	290	153	139	242
1946	182	199	159	243	180	404	133	208	157	58.0	24.0	58.7	167
1947	80.3	73.3	59.0	108	131	234	497	277	101	56.4	76.9	70.7	147
1948	64.4	166	100	112	129	525	245	269	328	117	40.6	39.2	178
1949	94.7	170	470	401	224	273	230	150	55.1	49.7	62.9	56.8	187
1950	64.6	77.7	116	196	122	217	344	191	187	50.8	56.9	61.0	140

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1913	-	-	-	-	-	-	-	-	0.60	-0.12	0.10	0.28	-
1914	*2.16	2.81	1.74	1.08	1.57	5.82	7.96	3.28	.42	.43	-.09	.18	*27.36
1915	.11	.38	.57	3.94	4.13	1.56	2.78	1.67	.96	3.52	2.91	.70	23.23
1916	.66	1.06	2.86	4.01	3.42	1.88	8.10	2.24	1.70	1.41	.49	.54	28.37
1917	.46	1.23	1.57	1.73	.72	4.29	5.29	2.81	2.48	.82	.11	.16	21.67
1918	.83	.75	.34	.53	1.94	5.82	4.55	1.97	.91	.40	.17	1.00	19.31
1919	.73	1.35	2.49	1.99	.72	5.02	4.87	5.34	.72	.57	.22	.60	24.42
1920	.65	2.73	2.51	.74	.80	7.47	9.61	2.56	2.25	1.00	1.79	.98	33.09
1921	1.97	3.17	5.38	1.95	.86	6.60	4.86	1.93	.43	.61	.56	.15	28.47
1922	.28	.91	2.09	.59	1.42	6.04	5.89	4.22	2.60	1.46	1.04	.79	27.33
1923	.80	.75	.87	3.09	1.08	4.43	6.60	2.94	1.37	.37	.28	.39	22.97
1924	1.76	1.87	3.58	4.58	1.38	1.80	8.71	3.75	1.07	.21	.29	.75	29.75
1925	.88	1.07	1.68	.38	3.62	5.24	2.97	1.96	.97	1.67	.88	.42	21.74
1926	.67	2.13	2.95	2.47	1.69	4.68	7.66	2.40	.91	.40	1.12	.35	27.43
1927	.98	3.58	1.37	2.48	2.54	6.80	2.29	3.31	1.71	.92	2.68	1.55	30.41
1928	4.20	9.41	5.57	3.02	2.89	2.87	4.47	3.97	3.70	2.54	5.40	2.19	50.23
1929	.46	.79	1.31	2.39	1.75	6.64	9.20	4.31	.82	.18	.13	.21	28.19
1930	.70	1.13	1.80	1.88	1.89	3.58	2.44	1.46	1.58	.74	.23	.14	17.57
1931	.16	.90	.54	.36	.68	2.23	6.52	4.22	3.48	.62	.52	.03	20.44
1932	.27	.50	1.34	3.58	1.68	1.74	6.49	1.38	.71	.81	.25	.13	18.88
1933	1.47	4.84	1.52	1.99	1.52	2.50	8.97	1.37	.52	.10	1.41	4.46	30.67
1934	1.15	1.18	1.36	2.72	.80	4.17	7.07	2.83	1.55	.34	.37	2.56	26.10
1935	1.82	3.21	2.97	3.31	1.59	4.83	3.35	1.91	1.72	.62	.15	.27	25.75
1936	.33	1.21	1.14	2.00	1.15	14.19	4.52	1.84	.43	.13	.30	.39	27.63
1937	.92	.89	2.97	4.43	2.86	1.84	5.04	4.66	1.45	1.16	1.42	1.87	29.51
1938	3.48	3.70	2.51	3.58	2.77	2.77	2.92	2.18	3.29	3.33	2.43	8.41	41.37
1939	1.57	1.60	4.24	1.57	1.84	4.00	7.65	1.41	.61	.40	.50	.28	25.67
1940	.38	1.16	1.00	1.12	.88	1.57	11.07	4.83	2.25	.84	.14	.21	25.25
1941	.14	1.34	1.66	1.35	2.04	1.33	3.84	.89	1.32	.58	.34	.30	15.33
1942	.29	.90	1.84	1.81	.95	5.75	4.12	2.48	1.80	1.42	.51	.70	22.57
1943	1.08	4.07	2.91	1.84	1.63	5.78	4.55	4.84	2.12	.79	.53	.32	30.24
1944	1.00	3.74	1.14	.56	.84	3.44	5.89	1.80	1.01	.99	.35	.97	21.73
1945	.66	1.56	2.07	1.74	1.44	8.56	4.67	6.15	3.57	3.60	1.92	1.50	37.44
1946	1.19	1.63	2.55	3.73	2.00	5.39	1.79	2.94	1.88	.78	.21	.23	24.32
1947	.59	.20	.28	1.22	1.71	4.26	6.64	3.53	1.26	.65	.44	-.08	20.70
1948	.10	2.40	1.48	.61	1.40	7.82	3.87	3.76	3.98	1.43	.49	.24	27.58
1949	.17	1.07	6.00	6.50	3.07	3.51	2.81	1.86	.42	.13	.06	.20	25.80
1950	.38	.56	1.37	3.12	1.81	5.02	5.15	2.88	2.32	.42	.21	.07	21.31

\* Revised.

Note.--Negative figures indicate that evaporation and seepage from reservoir exceeded inflow.  
Runoff for period June 1913 to September 1936 adjusted for change in contents in Otis Reservoir  
and not previously published.

Yearly discharge, in cubic feet per second, of West Branch Farmington River near New Boston, Mass.											
Year	W.S.P. no.	Water year ending Sept. 30								Calendar year	
		Observed				Adjusted				Observed	Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches		Mean	Mean
		Discharge	Date								Runoff in inches
1913	415	-	-	-	-	-	-	-	-	-	-
1914	415, 1251	3,200	Oct. 26, 1913	9.6	*185	*185	*2.01	*27.36	155	147	21.71
1915	415	2,600	Feb. 25, 1915	7.0	136	157	1.71	23.23	165	181	26.75
1916	431	2,120	Dec. 26, 1915	35	200	192	2.09	29.37	193	183	27.05
1917	451	1,900	Mar. 27, 1917	19	157	147	1.60	21.67	143	138	20.33
1918	471	1,010	Mar. 22, 1918	9	131	131	1.42	19.31	142	149	21.96
1919	501	2,540	Mar. 28, 1919	27	157	165	1.79	24.42	171	174	25.74
1920	501	2,390	Apr. 13, 1920	31	216	224	2.43	33.09	244	255	37.72
1921	521	2,520	Mar. 9, 1921	16	202	193	2.10	28.47	158	144	21.23
1922	541	2,200	Mar. 29, 1922	27	176	186	2.01	27.33	175	179	26.47
1923	561	1,800	Apr. 5, 1923	15	165	156	1.70	22.97	185	188	27.76
1924	561, 641	3,960	Apr. 7, 1924	20	203	201	2.18	29.75	185	177	26.17
1925	601	2,050	Feb. 12, 1925	12	143	147	1.60	21.74	152	162	23.66
1926	621	1,740	Apr. 25, 1926	27	184	186	2.02	27.43	184	187	27.61
1927	641	1,820	Aug. 8, 1927	34	201	206	2.24	30.41	295	296	43.68
1928	661, 781	6,610	Nov. 3, 1927	53	341	340	3.70	50.23	240	227	33.61
1929	681	2,590	Apr. 21, 1929	5.7	206	191	2.08	28.19	202	198	29.26
1930	696	1,100	Mar. 8, 1930	16	115	119	1.29	17.57	106	105	15.54
1931	711	1,450	June 10, 1931	17	131	159	1.51	20.44	137	142	20.95
1932	726	1,980	Apr. 1, 1932	6	135	128	1.39	18.88	157	166	24.60
1933	741	3,610	Nov. 19, 1932	24	202	208	2.26	30.67	185	180	26.53
1934	756	2,250	Apr. 12, 1934	20	179	177	1.92	26.10	200	206	30.41
1935	781	3,060	Jan. 10, 1935	15	180	175	1.90	25.75	156	139	20.43
1936	801	9,080	Mar. 18, 1936	13	188	187	2.03	27.63	196	201	29.73
1937	821	3,280	May 15, 1937	25	196	200	2.17	29.61	222	234	34.42
1938	851	18,500	Sept. 21, 1938	36	267	281	3.05	41.37	261	285	39.09
1939	871	2,220	Apr. 19, 1939	20	191	174	1.89	25.67	160	141	20.80
1940	891	2,280	Apr. 12, 1940	12	155	171	1.86	25.25	164	176	28.05
1941	921	-	-	8.6	117	104	1.13	15.33	108	102	15.02
1942	951	-	-	15	143	153	1.66	22.57	186	187	27.60
1943	971	1,830	Nov. 25, 1942	12	221	205	2.23	30.24	190	190	28.06
1944	1001	2,610	Nov. 9, 1943	12	140	147	1.60	21.73	134	136	20.14
1945	1031	2,450	Apr. 25, 1945	24	242	254	2.76	37.44	258	261	38.52
1946	1051	-	-	11	167	165	1.79	24.32	140	136	20.02
1947	1081	-	-	12	147	140	1.52	20.70	156	160	23.61
1948	1111	3,180	Mar. 22, 1948	12	178	186	2.02	27.58	212	209	30.84
1949	1141	11,700	Dec. 31, 1948	9.2	167	175	1.90	25.80	147	141	20.87
1950	1171	1,270	Apr. 5, 1950	12	140	144	1.57	21.31	-	-	-

\* Revised.

Note.--Runoff for period June 1913 to September 1936 adjusted for change in contents in Otis Reservoir and not previously published.

## 312. 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, and 1 mile upstream from mouth.

Drainage area.--84.4 sq mi.

Gage.--Water-stage recorder. Datum of gage is 510.24 ft above mean sea level, datum of 1929.

Extremes.--1948-50: 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, 6.1 cfs Sept. 29, 30, 1948; minimum daily, 8.0 cfs Aug. 27, 28, 1949; minimum gage height, 0.30 ft Aug. 28, 29, 1949.

Remarks.--Ordinary flow regulated by power plant above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1948	-	-	-	-	-	-	-	-	-	-	36.7	24.7	-
1949	31.1	63.4	325	474	282	267	213	210	58.2	24.8	30.3	167	-
1950	34.5	39.1	83.3	151	134	282	299	187	206	41.8	42.5	26.8	127

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1948	-	-	-	-	-	-	-	-	-	-	0.50	0.33	-
1949	0.42	0.84	4.44	6.48	3.48	3.64	2.81	2.87	0.77	0.34	.35	.40	26.84
1950	.47	.52	1.14	2.06	1.66	3.85	3.95	2.56	2.72	.57	.58	.35	20.43

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1948	1141	-	-	-	-	-	-	-	-
1949	1141	9,550	Dec. 31, 1948	8.0	167	1.98	26.84	145	13.27
1950	1171	1,130	Mar. 29, 1950	9.0	127	1.50	20.43	-	-

## 313. West Branch Farmington River at Riverton, Conn.1/

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, 4 miles northeast of Winsted, and 8.2 miles upstream from East Branch.

Drainage area.--216 sq mi.

Gage.--Water-stage recorder. Datum of gage is 472.22 ft above mean sea level, datum of 1929.

Average discharge.--21 years (1929-50), 380 cfs (adjusted).

Extremes.--1929-50: Maximum discharge, 37,100 cfs Sept. 21, 1938 (gage height, 17.95 ft, from floodmark), from rating curve extended above 5,700 cfs on basis of velocity-area study and records for other stations on Farmington River; minimum, 17 cfs Sept. 28, 1929, Aug. 1, 1936; minimum daily, 23 cfs Aug. 1, 1936.

Remarks.--Flow regulated by plants above station. Runoff adjusted for change in contents in Otis Reservoir (see p. 329).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	154	159	238	288	281	499	407	239	247	114	89.7	87.9	232
1931	93.5	164	96.9	105	122	470	894	646	584	159	107	83.0	294
1932	114	125	203	485	290	272	991	237	194	155	120	114	274
1933	261	878	315	379	374	555	1,500	309	140	97.5	261	568	467
1934	251	224	224	408	250	646	1,110	549	268	133	140	424	385
1935	346	542	503	572	381	851	548	338	286	150	109	105	395
1936	92.7	178	154	259	153	2,023	749	295	147	95.5	97.3	105	364
1937	191	181	501	774	537	355	862	740	359	251	249	336	444
1938	587	680	452	737	534	521	518	346	513	615	421	1,410	610
1939	369	360	784	342	494	741	1,256	273	150	112	102	83.5	421
1940	154	194	208	211	137	332	1,845	801	452	193	60.7	59.6	384
1941	94.6	292	368	260	468	293	584	201	224	127	80.9	104	257
1942	94.7	143	277	235	178	1,009	554	469	316	274	110	139	318
1943	220	732	582	418	440	919	757	889	346	153	84.6	72.6	468
1944	156	501	184	145	177	591	946	301	215	146	110	189	304
1945	133	287	368	363	277	1,404	812	1,081	694	580	346	323	556
1946	317	428	505	597	385	948	338	504	392	146	68.6	106	395
1947	153	124	106	205	318	632	1,036	646	276	160	114	114	323
1948	104	419	205	197	263	1,240	595	549	698	210	76.9	61.1	384
1949	126	235	815	966	597	649	528	403	118	80.7	93.3	88.6	392
1950	95.5	117	218	389	286	583	769	443	461	108	112	102	306

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	0.53	0.84	1.31	1.68	1.43	2.92	2.26	1.38	1.38	0.59	0.27	0.22	14.81
1931	.20	.77	.49	.45	.60	2.63	5.20	3.76	3.29	.82	.48	.24	18.93
1932	.28	.41	1.06	2.84	1.44	1.57	5.62	1.33	.92	.77	.29	.29	16.82
1933	1.40	4.93	1.70	2.09	1.88	3.18	7.92	1.59	.57	.18	1.12	3.19	25.75
1934	1.15	1.04	1.19	2.35	.97	3.69	6.34	3.01	.13	.35	.39	2.22	24.07
1935	1.84	2.96	2.78	3.08	1.73	4.88	3.05	1.65	1.47	.57	.22	.25	24.48
1936	.22	.77	.75	1.50	.84	11.76	4.22	1.59	.55	.16	.19	.28	22.83
1937	.89	.77	2.86	4.43	2.80	2.06	4.82	4.15	1.80	1.22	.94	1.45	28.19
1938	5.01	3.85	2.55	4.00	2.69	2.68	2.91	2.01	2.72	3.32	1.96	7.54	39.22
1939	1.75	1.80	4.40	1.54	2.20	4.25	6.81	1.42	.50	.29	.45	.22	25.41
1940	.40	1.07	.94	1.10	.71	1.86	10.41	4.67	2.44	1.01	.28	.29	25.18
1941	.27	1.34	1.87	1.29	2.10	1.34	3.32	1.13	1.26	.71	.42	.31	15.56
1942	.28	.75	1.51	1.41	.93	5.83	3.18	2.61	1.63	1.37	.54	.56	20.60
1943	9.0	3.57	2.84	1.88	2.00	5.44	3.92	4.76	1.81	.68	.34	.25	28.39
1944	.80	2.97	.92	.55	.91	5.37	5.53	1.78	1.13	.68	.29	.86	19.59
1945	.58	1.44	2.11	2.02	1.49	8.00	4.32	5.79	3.57	2.97	1.84	1.60	35.73
1946	1.22	1.89	2.93	3.48	1.84	5.20	1.82	2.84	1.96	.80	.33	.34	24.65
1947	.64	.35	.37	1.04	1.62	3.94	5.61	3.47	1.44	.83	.39	.19	19.89
1948	.25	2.33	1.19	.71	1.26	7.15	3.46	3.10	3.56	1.10	.40	.22	24.73
1949	.24	.80	4.39	5.79	3.10	3.50	2.73	2.14	.50	.22	.19	.25	23.85
1950	.33	.44	1.13	2.35	1.56	3.24	4.38	2.57	2.41	.48	.39	.24	19.52

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1930	696,1081	1,990	Mar. 8, 1930	34	232	236	1.09	14.81	217	217	13.59
1931	711,1081	3,130	May 23, 1931	41	294	301	1.39	18.93	301	306	19.22
1932	726,1081	5,040	Apr. 1, 1932	34	274	267	1.24	16.82	358	367	23.10
1933	741,1081	9,720	Nov. 19, 1932	46	467	473	2.19	29.75	405	400	25.10
1934	756,1081	6,180	Sept. 17, 1934	32	395	383	1.77	24.07	443	449	28.27
1935	781,1081	*5,560	Jan. 10, 1935	34	395	389	1.80	24.48	314	297	18.64

\* Revised.

1/ Published as Farmington River at Riverton prior to October 1948.

Yearly discharge, in cubic feet per second, of West Branch Farmington River at Riverton, Conn.--Con.

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed	Adjusted	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1936	801,1081	19,900	Mar. 18, 1936	23	364	363	1.68	22.83	402	407	25.61
1937	821,1081	7,330	May 15, 1937	59	444	449	2.08	28.19	515	526	33.06
1938	851	37,108	Sept. 21, 1938	62	610	624	2.89	39.22	593	597	37.58
1939	871	5,070	Dec. 6, 1938	26	421	404	1.87	25.41	339	320	20.07
1940	891	6,240	Apr. 9, 1940	31	384	399	1.85	25.18	404	416	26.25
1941	921	4,500	Feb. 8, 1941	25	257	244	1.13	15.36	236	229	14.42
1942	951	7,520	Mar. 9, 1942	32	318	328	1.52	20.60	403	404	25.37
1943	971	4,750	Nov. 25, 1942	24	468	452	2.09	28.39	410	410	25.77
1944	1001	5,900	Nov. 9, 1943	36	304	311	1.44	19.59	300	302	19.03
1945	1031	6,960	Apr. 26, 1945	59	556	568	2.63	35.73	595	599	37.64
1946	1051	3,990	Mar. 9, 1946	32	395	393	1.82	24.65	322	318	19.97
1947	1081	4,910	Apr. 5, 1947	32	323	317	1.47	19.89	352	356	22.30
1948	1111	7,710	Mar. 22, 1948	24	584	592	1.81	24.73	422	418	26.39
1949	1141	22,000	Dec. 31, 1948	24	392	380	1.76	23.85	329	324	20.32
1950	1171	2,530	Apr. 5, 1950	32	306	310	1.44	19.52	-	-	-

## 314. Barkhamsted, East Branch, and Nepaug Reservoirs

Location.--Barkhamsted Reservoir, lat 41°54'38", long. 72°57'15", on East Branch Farmington River 1½ miles south of Barkhamsted.

East Branch Reservoir, lat 41°52'49", long. 72°57'30", on East Branch Farmington River 1 mile east of New Hartford.

Nepaug Reservoir, lat 41°49'37", long. 72°56'34", on Nepaug River 1½ miles northwest of Collinsville.

Drainage area.--Barkhamsted Reservoir, 53.8 sq mi; East Branch Reservoir, 61.2 sq mi; Nepaug Reservoir, 32.0 sq mi.

Remarks.--The three reservoirs are operated as a unit for storage of water for municipal supply.

Barkhamsted Reservoir, completed in 1939 for storage of water for municipal supply; total capacity, 31,800,000,000 gal.

East Branch compensating reservoir, completed in 1919 for storage of water to compensate for water diverted from river; total capacity, 3,000,000,000 gal.

Nepaug Reservoir, completed in 1918 for storage of water for municipal supply; total capacity, 9,540,000,000 gal.

Cooperation.--Records furnished by Water Bureau, Metropolitan District Commission, Hartford.

Month-end contents, in billions of gallons

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1928	-	-	-	-	-	-	-	-	-	-	12.1	11.5
1929	10.5	10.0	10.3	11.2	11.2	12.2	12.4	12.1	10.7	9.4	8.0	7.4
1930	7.2	7.5	8.7	8.4	9.0	10.7	10.6	11.4	11.3	10.5	9.4	8.3
1931	7.2	7.8	7.1	6.7	6.7	11.0	12.1	12.5	11.9	11.5	10.3	8.8
1932	7.7	7.2	7.4	8.5	7.8	9.7	12.2	11.5	11.2	10.4	9.4	8.6
1933	10.2	12.0	11.7	11.7	11.2	12.4	12.4	11.6	10.7	9.5	9.3	10.6
1934	9.8	9.4	9.5	10.3	8.8	11.7	11.8	12.1	11.4	9.5	7.8	10.6
1935	11.5	11.9	12.0	10.5	9.3	11.8	11.3	10.6	11.1	9.9	8.5	8.0
1936	7.4	7.6	7.6	7.7	7.4	12.5	12.1	12.0	10.8	9.1	8.2	7.8
1937	7.7	7.3	10.8	11.7	12.1	10.8	12.4	12.3	11.8	10.6	9.4	8.1
1938	10.2	12.3	10.9	12.4	9.9	11.1	11.9	12.8	13.0	13.8	11.5	15.5
1939	11.8	11.6	13.3	12.9	14.0	15.4	16.9	16.9	15.0	13.1	10.7	8.2
1940	7.9	7.7	7.6	7.8	8.1	11.8	17.1	17.4	17.3	14.4	14.0	13.6
1941	13.0	14.0	15.1	13.4	13.7	14.1	17.0	16.0	15.8	14.5	12.6	11.2
1942	10.1	10.3	11.4	12.4	12.6	20.6	21.5	24.0	24.8	24.9	22.3	19.8
1943	18.8	22.5	24.5	21.4	19.9	25.2	28.2	29.9	26.7	22.6	20.2	18.2
1944	17.9	20.4	19.9	18.9	18.1	22.5	27.7	25.6	24.9	22.8	20.9	21.0
1945	20.0	21.5	22.9	22.4	21.0	28.7	29.1	29.0	28.3	29.0	27.1	26.4
1946	25.2	26.5	28.4	28.2	27.4	30.3	30.8	33.2	30.0	29.0	27.2	25.6
1947	24.4	22.7	21.1	21.4	22.6	25.9	29.8	32.5	31.7	30.3	27.4	24.7
1948	22.8	25.9	25.6	24.9	25.0	34.0	38.1	41.2	44.2	41.9	37.8	33.6
1949	31.3	31.2	36.8	43.3	44.2	44.3	44.3	44.2	41.2	38.2	34.5	30.5
1950	28.4	26.6	25.9	26.9	28.4	33.4	38.1	40.8	42.1	39.9	37.3	33.6



## 315. Burlington Brook near Burlington, Conn.

Location.--Lat 41°47'10", long. 72°57'55", on left bank  $1\frac{1}{4}$  miles north of Burlington, Hartford County, 3 miles upstream from mouth, and 3 miles southwest of Collinsville.

Drainage area.--4.12 sq mi.

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.--19 years (1931-50), 7.75 cfs.

Extremes.--1931-50: Maximum discharge, 676 cfs (revised) Sept. 21, 1938 (gage height, 7.24 ft), from rating curve developed from theoretical formulas and checked by current-meter measurements below 321 cfs; minimum, 0.13 cfs June 21, 1933; minimum daily, 0.64 cfs Sept. 23, 24, 27-29, 1941, Aug. 27, 28, 1949.

Remarks.--Infrequent low-water regulation.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1932	1.14	1.24	2.13	6.41	5.11	8.32	11.4	5.20	3.07	1.94	2.15	2.01	4.17
1933	8.10	21.5	7.22	6.91	11.4	16.3	19.5	7.02	2.78	1.68	2.55	4.55	9.07
1934	2.65	2.86	3.79	9.36	2.02	17.0	18.0	12.3	6.56	2.54	2.27	16.4	8.00
1935	8.76	9.98	9.64	10.8	6.97	15.8	11.4	7.05	4.61	2.52	1.22	2.06	7.58
1936	1.23	2.64	2.53	6.66	3.23	34.2	14.5	7.05	4.14	1.64	1.91	1.79	6.83
1937	1.05	5.20	12.2	16.5	13.6	10.8	12.6	12.9	10.8	6.04	12.4	8.67	10.5
1938	10.1	16.5	10.5	15.2	10.6	10.6	11.1	8.13	6.02	15.2	5.96	16.1	11.3
1939	6.80	7.44	15.1	8.43	12.1	16.2	18.5	5.76	2.80	1.59	4.78	2.06	8.44
1940	3.25	6.31	5.08	6.15	3.78	11.1	30.4	13.1	8.37	3.98	1.89	1.99	7.93
1941	2.23	6.31	7.25	4.22	10.0	7.58	8.88	4.56	5.66	3.34	1.50	.862	5.16
1942	1.03	2.39	3.91	6.07	5.62	19.8	7.03	8.32	5.80	3.95	4.24	2.09	5.87
1943	3.44	10.2	12.1	6.77	10.7	19.5	10.9	15.9	6.80	2.61	1.54	1.34	8.48
1944	3.35	7.40	2.82	2.50	3.84	14.3	13.7	5.61	3.28	1.44	1.59	4.80	5.37
1945	2.47	8.15	9.90	9.39	8.56	22.6	16.6	19.7	10.6	8.70	7.26	4.44	10.7
1946	4.11	6.63	12.3	13.6	8.72	15.8	8.00	11.9	7.89	6.31	3.04	3.09	8.47
1947	3.49	2.97	3.15	6.72	7.70	13.4	11.8	11.0	5.88	5.97	2.01	2.63	6.39
1948	2.12	12.7	5.12	3.33	6.21	23.2	15.4	15.4	14.4	5.35	12.23	1.19	8.87
1949	1.37	3.78	15.2	20.2	13.9	13.4	11.1	11.2	2.57	2.18	1.58	1.29	8.13
1950	1.16	1.38	3.53	5.67	6.69	13.6	10.2	9.40	13.2	3.90	2.48	1.89	6.08

† Corrected.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1932	0.32	0.54	0.60	1.80	1.34	2.33	3.09	1.45	0.83	0.54	0.60	0.54	13.78
1933	2.27	5.82	2.02	1.94	2.88	4.56	5.28	1.96	.75	.47	.71	1.23	29.89
1934	.74	.77	1.06	2.62	.51	4.76	4.88	3.45	1.77	.71	.64	4.44	26.35
1935	2.46	2.70	2.70	3.02	1.76	4.42	3.09	1.97	1.25	.71	.34	.56	24.98
1936	.34	.72	.71	1.87	.85	9.57	3.93	1.97	1.12	.46	.53	.48	22.55
1937	1.13	.87	3.41	4.61	3.44	3.02	3.41	3.61	2.92	2.25	3.47	2.34	34.48
1938	2.82	4.46	2.94	4.25	2.68	2.96	3.00	2.27	1.63	4.25	1.67	4.36	37.29
1939	1.90	2.02	4.23	2.36	3.06	4.53	5.01	1.61	.78	.44	1.34	.56	27.82
1940	.91	1.71	1.42	1.72	.99	3.10	8.23	3.67	2.26	1.11	.53	.54	26.19
1941	.62	1.71	2.03	1.18	2.53	2.12	2.41	1.28	1.54	.94	.42	.23	17.01
1942	.29	.65	1.09	1.70	1.42	5.54	1.91	2.33	1.57	1.11	1.19	.57	19.37
1943	.96	2.77	3.39	1.89	2.71	5.45	2.96	4.45	1.84	.73	.43	.36	27.94
1944	.94	2.01	.79	.70	1.01	4.00	3.72	1.57	.89	.40	.44	1.30	17.77
1945	.69	2.21	2.77	2.63	2.17	6.33	4.50	5.51	2.87	2.43	2.03	1.20	35.34
1946	1.15	1.80	3.45	3.80	2.21	4.42	2.16	3.33	2.14	1.76	.85	.84	27.91
1947	.98	.80	.88	1.88	1.95	3.75	3.19	3.08	1.60	1.67	.56	.71	21.04
1948	.59	3.44	1.43	.93	1.63	6.49	4.17	4.31	3.90	1.50	.62	.32	29.33
1949	.38	1.02	4.25	5.65	3.51	3.75	3.00	3.14	.70	.61	.44	.35	26.80
1950	.33	.37	.99	1.59	1.69	3.60	2.77	2.63	3.57	1.09	.69	.51	20.03

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1932	726	101	Apr. 1, 1932	0.83	4.17	1.01	13.78	6.85	22.63
1933	741	*395	Nov. 10, 1932	.90	9.07	2.20	29.89	6.79	22.35
1934	756	*434	Sept. 9, 1934	1.01	8.00	1.94	26.35	9.60	31.64
1935	781	*346	Jan. 10, 1935	.81	7.58	1.84	24.98	5.74	18.89
1936	801	*533	Mar. 12, 1936	.87	6.83	1.66	22.55	7.93	26.19
1937	821	*268	Feb. 22, 1937	1.47	10.5	2.55	34.48	11.9	39.29
1938	851	*676	Sept. 21, 1938	1.70	11.3	2.74	37.29	10.7	35.22
1939	871	*243	Aug. 21, 1939	.77	8.44	2.05	27.82	7.20	23.71
1940	891	*293	Apr. 8, 1940	1.16	7.93	1.92	26.19	8.03	26.51
1941	921	*189	Feb. 8, 1941	.64	5.16	1.25	17.01	4.45	14.68
1942	951	*268	Mar. 8, 1942	.72	5.87	1.42	19.37	7.42	24.46
1943	971	*144	Dec. 30, 1942	.90	8.48	2.06	27.94	7.45	24.56
1944	1001	*242	Sept. 15, 1944	.84	5.37	1.30	17.77	5.96	19.70
1945	1031	*440	Apr. 26, 1945	1.40	10.7	2.60	35.34	10.9	36.07
1946	1051	376	July 23, 1946	1.19	8.47	2.06	27.91	7.34	24.17
1947	1081	205	Mar. 14, 1947	1.23	6.39	1.55	21.04	7.24	23.85
1948	1111	256	Nov. 12, 1947	.99	8.87	2.15	29.33	8.53	29.52
1949	1141	551	Dec. 31, 1948	.64	8.13	1.97	26.80	6.93	22.84
1950	1171	131	June 4, 1950	.84	6.08	1.48	20.03	-	-

\* Revised.

## CONNECTICUT RIVER BASIN

## 316. Whigville Reservoir at Whigville, Conn.

Location.--Lat 41°44'08", long. 72°57'02", on Copper Mine Brook at Whigville, Hartford County.

Drainage area.--3.95 sq mi.

Remarks.--Reservoir completed in 1908 for storage of water for domestic water supply. Total capacity, 64,750,000 gal.

Cooperation.--Records furnished by Board of Water Commissioners, New Britain, Conn.

Month-end contents, in millions of gallons

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1928	-	-	-	-	-	-	-	-	-	63.4	63.9	51.6
1929	43.6	45.9	47.9	37.8	60.9	65.0	65.3	65.0	58.4	38.0	38.1	42.3
1930	39.1	35.1	32.8	29.5	29.3	43.0	47.7	57.1	54.6	29.7	36.4	34.9
1931	35.0	31.9	33.4	33.4	36.0	65.3	65.0	65.1	62.3	28.1	33.4	31.0
1932	33.7	29.7	34.0	41.7	29.9	64.9	51.7	43.9	30.0	34.3	34.2	29.5
1933	39.3	65.0	65.0	64.4	64.9	65.7	65.2	50.0	28.6	34.7	32.9	27.9
1934	36.1	28.8	29.7	36.2	28.7	66.8	65.1	65.1	58.7	40.2	33.1	65.7
1935	65.0	43.7	45.9	48.9	62.2	64.8	58.0	29.0	53.5	43.2	28.9	28.0
1936	30.1	34.4	28.3	36.8	37.1	65.4	60.2	48.6	46.1	38.4	42.6	43.6
1937	42.9	26.7	63.9	65.3	65.0	64.9	65.2	64.4	64.7	28.6	63.3	45.2
1938	64.9	65.5	64.9	65.2	64.8	65.2	65.0	64.9	64.8	65.1	53.5	65.1
1939	64.8	65.0	64.9	64.8	65.6	65.4	65.1	64.3	46.5	34.6	49.0	33.2
1940	37.7	25.6	43.4	37.9	50.9	66.2	65.1	65.5	64.6	41.5	34.4	42.7
1941	47.4	32.7	63.5	34.6	49.1	43.8	44.9	37.0	20.1	42.9	35.6	35.0
1942	50.2	33.4	43.3	42.1	44.0	64.9	45.5	39.2	39.7	50.6	30.9	58.9
1943	36.0	65.1	65.7	43.9	65.0	64.9	65.0	40.6	29.9	28.8	49.9	49.9
1944	43.8	53.2	50.2	47.5	39.9	85.0	85.0	33.2	43.9	46.9	24.1	56.9
1945	53.1	56.6	54.1	34.6	65.3	65.1	64.9	58.0	34.9	51.7	55.6	
1946	30.9	58.6	65.0	62.7	60.0	64.4	51.6	65.0	37.7	48.1	53.3	53.0
1947	27.1	45.9	30.9	65.2	42.9	61.7	63.1	60.8	22.8	49.2	35.2	44.2
1948	50.3	53.1	29.5	49.3	44.6	65.3	64.9	65.2	65.1	24.3	31.4	41.2
1949	42.6	40.6	67.8	64.9	64.9	64.8	63.8	43.6	31.7	44.2	39.8	
1950	49.3	30.0	50.6	40.9	36.7	65.1	64.5	42.4	49.9	32.0	37.2	32.4

## 317. 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 & 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.

Gage.--Water-stage recorder. Datum of gage is 197.72 ft above mean sea level, datum of 1929.

Average discharge.--9 years (1941-50), 76.5 cfs (adjusted).

Extremes.--1941-50: Maximum discharge, 3,260 cfs Dec. 31, 1948 (gage height, 6.70 ft); minimum, 6.5 cfs Sept. 21, 22, 1941 (gage height, 0.64 ft); minimum daily, 7.0 cfs Sept. 21, 28, Oct. 26, 1941.

Flood of September 1938 reached a stage of about 7.3 ft, from floodmarks (discharge, 3,800 cfs, by slope-area method and computation of flow over dam).

Remarks.--Flow regulated by Whigville Reservoir (see above) and mills above station. Diversion for municipal water supply of city of New Britain from Copper Mine Brook. Effluent of sewage-disposal plant of city of Bristol was diverted into Quinnipiac River Basin prior to Oct. 19, 1949. Runoff adjusted for change in contents in Whigville Reservoir, diversion for municipal water supply of city of New Britain from Copper Mine Brook, and diversion of effluent of sewage-disposal plant of city of Bristol.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	-	-	-	-	-	-	-	-	-	-	16.2	10.2	-
1942	11.6	22.3	35.5	51.5	62.6	188	61.6	65.9	36.7	36.2	31.3	21.2	52.3
1943	27.5	68.8	105	71.7	108	180	95.5	154	69.4	32.8	22.0	15.0	79.1
1944	30.2	56.2	25.2	27.0	43.8	99.2	116	56.4	31.1	21.1	14.7	39.8	46.6
1945	20.5	56.2	89.8	88.1	86.7	215	134	185	74.2	66.8	52.6	45.5	93.1
1946	34.9	60.5	131	129	82.2	130	64.5	103	85.9	51.1	33.6	30.2	78.1
1947	26.6	21.8	24.6	42.8	56.1	113	103	93.3	60.6	57.4	33.5	29.8	55.2
1948	20.4	99.1	48.7	37.5	64.6	219	157	119	118	47.3	30.9	16.0	81.4
1949	17.0	58.6	107	208	121	110	100	104	29.4	20.8	16.6	17.6	74.1
1950	17.5	17.4	27.3	43.7	54.5	117	89.0	74.7	84.3	42.3	24.5	17.4	50.7

Monthly and yearly runoff, in inches (adjusted), of Pequabuck River at Forestville, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1941	-	-	-	-	-	-	-	-	-	-	0.60	0.43	-
1942	0.49	0.73	1.13	1.54	1.84	5.15	1.78	1.96	1.20	1.16	1.00	.72	18.50
1943	.89	2.02	2.99	2.13	2.79	4.90	2.62	4.21	1.94	.98	.68	.57	26.72
1944	.98	1.63	.85	.90	1.24	2.80	3.11	1.74	.97	.67	.55	1.22	16.66
1945	.75	1.63	2.55	2.48	2.16	5.76	3.58	5.00	2.09	1.95	1.53	1.28	30.76
1946	1.02	1.68	3.62	3.57	2.14	3.60	1.84	2.90	2.34	1.45	.97	.84	25.97
1947	.90	.72	.80	1.33	1.48	3.16	2.81	2.65	1.70	1.66	1.00	.86	19.07
1948	.67	2.67	1.45	1.11	1.75	5.89	4.12	3.29	3.16	1.58	.90	.52	26.89
1949	.56	1.13	2.39	5.59	3.02	3.08	2.71	2.86	.91	.74	.62	.61	24.82
1950	.61	.56	.91	1.33	1.44	3.24	2.40	2.12	2.32	1.27	.83	.62	17.65

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year					
		Observed			Adjusted			Observed		Adjusted			
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	Mean	Runoff in inches
		Discharge	Date										
1941	921, 971	-	-	-	-	-	-	-	-	-	-	-	-
1942	951, 971	1,340	Mar. 3, 1942	7.0	52.3	61.8	1.37	18.50	63.3	73.5	22.05	-	-
1943	971	1,190	Dec. 30, 1942	11	79.1	89.0	1.97	26.72	71.5	80.9	24.28	-	-
1944	1001	1,280	Sept. 14, 1944	9.8	46.6	55.4	1.23	16.66	51.3	60.3	18.13	-	-
1945	1031	1,980	Apr. 26, 1945	15	93.1	102	2.26	30.76	98.1	107	32.15	-	-
1946	1051	730	May 27, 1946	14	78.1	86.6	1.92	25.97	65.2	73.6	22.07	-	-
1947	1081, 1111	805	July 28, 1947	16	55.2	63.4	1.40	19.07	63.1	71.3	21.42	-	-
1948	1111	1,090	Nov. 12, 1947	12	81.4	89.3	1.98	26.89	81.1	89.0	26.81	-	-
1949	1141	3,260	Dec. 31, 1948	11	74.1	82.7	1.85	24.82	65.6	74.0	22.22	-	-
1950	1171	1,060	July 10, 1950	12	50.7	56.7	1.30	17.65	-	-	-	-	-

## 318. 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 & 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.

Gage.--Water-stage recorder. Datum of gage is 147.54 ft above mean sea level, datum of 1929.

Extremes.--1946-50: Maximum discharge, 3,440 cfs Dec. 31, 1948 (gage height, 13.55 ft); minimum, 10 cfs Aug. 26, 1949 (gage height, 1.42 ft).

Remarks.--Some regulation at low flow.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	46.1	38.1	-
1947	43.4	32.3	35.0	74.3	100	184	197	222	90.7	54.0	31.0	30.2	91.2
1948	29.5	164	68.4	53.1	78.9	317	203	199	234	78.2	37.8	23.6	124
1949	26.2	59.1	140	258	198	190	161	166	53.1	27.9	16.8	17.1	109
1950	18.3	22.1	39.9	73.4	74.1	210	178	134	141	41.6	30.7	26.3	82.4

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1946	-	-	-	-	-	-	-	-	-	-	0.88	0.70	-
1947	0.85	0.59	0.67	1.42	1.72	3.50	3.63	4.22	1.67	1.03	.59	.56	20.43
1948	.56	3.02	1.30	1.01	1.40	6.05	3.74	3.78	4.31	1.49	.72	.43	27.79
1949	.50	1.09	2.66	4.91	3.40	3.62	2.97	3.16	.98	.53	.32	.31	24.45
1950	.35	.41	.76	1.40	1.27	4.00	3.28	2.55	2.60	.79	.58	.48	18.47

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	Mean
		Discharge	Date								
1946	1141	-	-	-	-	-	-	-	-	-	-
1947	1141	1,340	Mar. 14, 1947	16	91.2	1.50	20.43	104	-	23.26	-
1948	1141	1,880	Nov. 12, 1947	18	124	2.05	27.79	121	-	27.16	-
1949	1141	3,440	Dec. 31, 1948	11	109	1.80	24.45	98.9	-	21.72	-
1950	1171	1,060	Mar. 29, 1950	14	82.4	1.36	18.47	-	-	-	-

## 319. Farmington River at Rainbow, Conn. 1/

Location.--Lat 41°54'41", long. 72°41'16", on left bank at Rainbow, Hartford County, 0.4 mile downstream from Farmington River Power Co. dam, 6.4 miles downstream from Salmon Brook, and 8 miles upstream from mouth.

Drainage area.--584 sq mi. Prior to October 1939, 571 sq mi.

Gage.--Water-stage recorder. Datum of gage is 35.36 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1939, water-stage recorder at site 5½ miles upstream at datum 94.85 ft higher.

Average discharge.--22 years (1928-50), 1,007 cfs (adjusted to present site; adjusted for storage and diversion).

Extremes.--1928-50: Maximum discharge, 29,900 cfs Sept. 22, 1938, by computation of flow over Tariffville Dam; minimum daily, 5.1 cfs Mar. 5, 1944, Oct. 28, Nov. 11, 1945, Feb. 22, 1947.

Remarks.--Flow regulated by power plants, by diversions for domestic water supply and sewage, and by reservoirs. Runoff adjusted for change in contents in Otis (see p. 329), Barkhamsted, East Branch, Nepaug (see p. 334), and Whigville Reservoirs (see p. 336); diversion for domestic water supply from Barkhamsted, Nepaug, and Whigville Reservoirs, Whites Bridge pumping plant, and sewage diversion from city of Bristol (discontinued Oct. 18, 1949).

Monthly and yearly mean discharge, in cubic feet per second (observed)												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1928	-	-	-	-	-	-	-	-	-	-	-	\$1,210
1929	480	405	445	774	867	2,340	3,030	1,790	525	305	281	242
1930	344	385	572	731	667	1,250	1,100	616	683	327	234	595
1931	223	350	258	263	334	1,180	2,060	1,640	1,600	408	295	234
1932	249	247	352	910	772	714	2,050	642	449	336	286	285
1933	604	2,370	846	882	967	1,780	3,320	866	386	252	418	873
1934	447	431	458	1,020	600	1,700	2,900	1,470	792	398	385	1,280
1935	1,021	1,222	1,232	1,559	1,018	1,890	1,408	866	666	440	295	297
1936	218	322	341	705	384	4,957	2,055	851	525	313	262	281
1937	441	335	1,158	1,835	1,523	1,510	1,765	1,676	976	725	630	765
1938	1,007	1,682	1,482	1,926	1,899	1,208	1,371	949	1,034	1,867	1,205	2,888
1939	1,250	985	1,992	1,112	1,377	2,131	2,921	897	448	333	419	328
1940	303	502	459	572	437	972	4,385	1,757	1,327	809	257	237
1941	257	681	740	673	1,270	931	1,164	641	661	431	334	236
1942	221	300	539	611	641	2,337	1,192	973	668	635	444	433
1943	550	1,395	1,430	1,594	1,416	2,215	1,543	2,020	1,101	606	311	256
1944	412	937	427	356	532	1,502	1,883	907	497	313	289	453
1945	307	650	1,151	1,062	940	3,195	1,985	1,751	1,607	1,145	958	757
1946	657	858	1,229	1,633	991	2,106	861	1,213	1,276	555	371	314
1947	443	366	366	550	805	1,440	1,876	1,434	778	551	449	397
1948	353	1,109	563	474	600	2,597	1,549	1,300	1,636	710	419	352
1949	344	530	694	3,339	1,632	1,774	1,432	1,317	516	324	346	408
1950	270	305	497	768	653	1,345	1,489	1,008	1,177	421	420	352

\* Not previously published.

Monthly and yearly runoff, in inches (adjusted)												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1928	-	-	-	-	-	-	-	-	-	-	-	2.35
1929	0.73	0.74	0.96	1.81	1.68	5.07	6.16	3.66	0.89	0.42	0.39	.37
1930	.70	.86	1.38	1.59	1.38	2.89	2.29	1.44	1.45	.65	.37	.35
1931	.31	.80	.52	.53	.68	2.96	4.44	3.55	3.25	.86	.52	.32
1932	.35	.42	.80	2.12	1.47	1.76	4.53	1.29	.90	.65	.44	.45
1933	1.46	5.04	1.76	1.89	1.81	3.87	6.64	1.73	.68	.34	.80	2.01
1934	.83	.83	1.01	2.31	.93	3.91	5.97	3.10	1.55	.56	.55	2.88
1935	2.24	2.57	2.63	3.10	1.77	4.28	2.87	1.72	1.44	.74	.40	.51
1936	.36	.67	.74	1.56	.80	10.99	4.20	1.76	.92	.40	.40	.48
1937	.94	.73	2.68	4.13	2.97	2.66	3.84	3.53	1.93	1.38	1.09	1.37
1938	2.31	3.72	2.99	4.16	2.96	2.61	3.22	2.12	2.15	3.95	2.19	6.24
1939	2.18	1.84	4.38	2.18	2.62	4.64	6.25	1.66	.67	.45	.66	.38
1940	.54	1.05	.92	1.21	.94	2.40	9.29	3.74	2.62	1.43	.53	.49
1941	.47	1.40	1.58	1.24	2.46	1.94	2.74	1.31	1.41	.88	.59	.36
1942	.58	.72	1.51	1.50	1.31	5.71	2.62	2.35	1.50	1.40	.75	.66
1943	1.04	3.10	3.07	2.59	2.50	5.27	3.40	4.34	1.95	.89	.50	.40
1944	.88	2.30	.89	.62	1.02	3.19	4.34	1.75	1.01	.49	.39	.94
1945	.57	1.48	2.56	2.21	1.69	7.52	3.97	5.51	3.11	2.43	1.81	1.36
1946	1.10	1.75	2.90	3.42	1.78	4.61	1.83	2.79	2.21	1.11	.65	.38
1947	.81	.54	.61	1.21	1.69	3.48	4.16	3.19	1.52	1.07	.63	.44
1948	.48	2.59	1.21	.85	1.21	6.31	3.59	3.03	3.53	1.29	.55	.35
1949	.43	.95	1.80	7.71	3.19	3.62	2.86	2.70	.77	.40	.34	.42
1950	.39	.47	.98	1.81	1.46	3.29	3.54	2.44	2.51	.70	.55	.25

Note.--Records prior to October 1936 not previously published. Records for period October 1936 to September 1943 revised.

1/ Published as "at Tariffville" prior to September 1939.

Yearly discharge, in cubic feet per second, of Farmington River at Rainbow, Conn.

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1928	661	-	-	-	-	-	-	-	-	-	-
1929	681, 871	7,220	Apr. 22, 1929	192	957	963	1.69	22.88	954	984	23.39
1930	696, 871	3,250	Mar. 9, 1930	175	595	646	1.13	15.34	555	591	14.03
1931	711, 871	5,640	June 11, 1931	180	756	788	1.38	18.74	738	786	18.68
1932	726, 871	4,940	Apr. 15, 1932	182	605	631	1.11	15.18	851	918	21.87
1933	741, 871	7,610	Nov. 21, 1932	192	1,130	1,180	2.06	28.03	920	944	22.44
1934	756, 871	7,390	Apr. 13, 1934	208	989	1,028	1.80	24.43	1,169	1,229	28.20
1935	781	6,800	Jan. 11, 1935	185	994	1,021	1.79	24.27	776	782	18.60
1936	801, 851	26,900	Mar. 19, 1936	179	937	976	1.71	23.28	1,031	1,093	26.06
1937	821	6,990	May 16, 1937	208	1,103	1,154	2.02	27.45	1,285	1,342	31.92
1938	851	29,900	Sept. 22, 1938	263	1,523	1,625	2.85	38.62	1,528	1,599	38.00
1939	871	6,190	Dec. 7, 1938	185	1,180	1,175	2.06	27.91	931	921	22.02
1940	891	10,200	Apr. 10, 1940	13	998	1,080	1.85	25.16	1,032	1,120	26.10
1941	921	5,860	Feb. 9, 1941	8	663	703	1.20	16.38	612	657	15.34
1942	951	8,280	Mar. 10, 1942	6.3	752	870	1.49	20.21	945	1,075	25.01
1943	971	6,940	Dec. 31, 1942	6.6	1,186	1,247	2.14	28.96	1,051	1,111	25.82
1944	1001	5,460	Apr. 26, 1944	5.1	691	766	1.31	17.82	719	788	18.36
1945	1031	8,760	Mar. 18, 1945	6.6	1,380	1,473	2.52	34.22	1,434	1,522	35.36
1946	1051	7,380	Mar. 10, 1946	5.1	1,007	1,056	1.81	24.53	876	893	20.74
1947	1081	5,420	Apr. 7, 1947	5.1	787	833	1.43	19.35	857	935	21.68
1948	1111	14,500	Mar. 23, 1948	25	972	1,072	1.84	25.00	935	1,029	23.99
1949	1141	26,500	Jan. 1, 1949	33	1,053	1,088	1.86	25.29	1,012	1,026	23.84
1950	1171	4,870	Mar. 29, 1950	12	725	790	1.35	18.38	-	-	-

† Corrected.

Note.--Adjusted records prior to October 1936 not previously published; those for period October 1936 to September 1943 revised.

## 320. South Branch Park River at Hartford, Conn.

Location--Lat 41°44'02", long. 72°42'51", on left bank at upstream side of Newfield Avenue Bridge in Hartford, Hartford County, 0.7 mile downstream from Trout Brook, and 3.3 miles upstream from confluence with North Branch.

Drainage area--40.6 sq mi.

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--14 years (1936-50), 67.8 cfs (revised).

Extremes--1936-50: Maximum discharge, 3,600 cfs Sept. 21, 1938 (gage height, 13.6 ft, adjusted for intake drawdown; 13.78 ft, unadjusted), from rating curve extended above 1,200 cfs on basis of records for stations on 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 city engineers from floodmarks.

Remarks--Some regulation by mills and reservoirs above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1937	36.5	25.1	120	147	86.0	89.3	92.5	77.4	72.9	43.6	50.9	53.8	74.7
1938	66.4	134	85.1	180	98.8	72.8	74.6	59.8	52.9	136	55.8	276	106
1939	51.5	45.9	155	65.0	125	151	140	38.1	25.4	21.6	31.6	22.1	72.4
1940	25.8	42.0	40.4	98.3	35.8	161	237	80.6	104	37.8	19.1	20.0	75.1
1941	26.8	69.2	71.7	50.2	129	82.4	61.4	47.2	46.1	39.2	26.5	19.2	55.2
1942	17.5	28.9	46.9	64.8	86.6	184	46.8	58.5	32.3	34.6	34.9	25.0	55.3
1943	40.7	103	149	85.1	122	165	74.2	118	57.8	27.6	21.0	17.1	81.5
1944	31.0	50.4	25.1	34.7	54.8	104	106	42.2	31.8	21.4	18.2	50.8	47.3
1945	28.3	75.9	103	70.5	86.5	181	90.2	125	51.8	36.7	32.1	24.3	75.5
1946	24.4	46.2	118	102	70.5	105	54.6	97.1	69.0	37.8	52.0	30.3	67.4
1947	21.7	22.6	31.4	50.7	44.1	90.0	89.1	74.9	47.0	45.3	28.6	33.1	48.2
1948	30.9	107	48.8	34.5	74.0	197	112	88.1	118	46.3	34.6	21.1	75.9
1949	28.8	45.2	70.6	148	102	91.9	86.6	89.5	28.3	24.8	25.6	27.1	63.9
1950	*23.7	*25.2	*39.1	*59.8	*78.1	*112	*77.5	*66.3	*64.6	*39.1	*35.0	*21.8	*53.2

\* Revised.

Monthly and yearly runoff, in inches, of South Branch Park River at Hartford, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1937	1.04	0.69	3.41	4.17	2.21	2.54	2.54	2.20	2.01	1.23	1.44	1.48	24.96
1938	1.89	3.68	2.42	4.54	2.53	2.06	2.05	1.70	1.45	3.86	1.58	7.59	35.35
1939	1.46	1.26	4.40	1.84	3.21	4.29	3.85	1.08	.64	.61	.90	.61	25.15
1940	.73	1.15	1.15	2.79	.95	4.58	6.52	2.29	2.86	1.07	.54	.55	25.18
1941	.76	1.90	2.04	1.43	3.31	2.54	1.68	1.34	1.27	1.11	.75	.53	18.46
1942	.50	.79	1.54	1.84	2.22	4.66	1.28	1.66	.89	.98	.99	.69	17.84
1943	1.15	2.83	4.23	2.42	3.12	4.68	2.04	3.36	1.58	.78	.60	.47	27.26
1944	.88	1.38	.71	.99	1.46	2.95	2.91	1.20	.87	.61	.52	1.40	15.88
1945	.81	2.09	2.93	2.01	2.22	5.14	2.48	3.55	1.43	1.04	.91	.67	25.28
1946	.69	1.27	3.56	2.89	1.81	2.99	1.50	2.76	1.90	1.07	1.48	.85	22.55
1947	.62	.62	.89	1.44	1.14	2.56	2.44	2.12	1.29	1.29	.81	.91	16.13
1948	.88	2.94	1.58	.98	1.96	5.59	3.08	2.50	3.25	1.31	.98	.58	25.43
1949	.82	1.24	2.01	4.21	2.61	2.61	2.38	2.54	.78	.70	.75	.74	21.37
1950	*.67	*.69	*1.11	*1.70	*1.95	*3.18	*2.13	*1.88	*1.77	*1.11	*.99	*.60	*17.78

\* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1937	821	650	Dec. 20, 1936	14	74.7	1.84	24.96	83.2	27.81
1938	851	3,600	Sept. 21, 1938	20	106	2.61	35.35	103	34.48
1939	871,1201	*950	Dec. 6, 1938	12	72.4	1.78	24.15	60.1	20.06
1940	891,1201	*2,430	Jan. 15, 1940	14	75.1	1.85	25.18	90.1	26.95
1941	921,1201	*2,330	Feb. 8, 1941	12	55.2	1.36	18.46	49.0	16.39
1942	951	800	Mar. 9, 1942	9.4	53.3	1.31	17.84	70.1	23.42
1943	971,1201	*1,800	Dec. 31, 1942	13	81.5	2.01	27.26	65.9	22.02
1944	1001,1201	*1,250	Sept. 15, 1944	13	47.3	1.17	15.88	55.7	18.74
1945	1031	890	Jan. 2, 1945	19	75.5	1.86	25.28	74.0	24.77
1946	1051	795	May 28, 1946	19	67.4	1.66	22.55	57.9	19.36
1947	1081	618	Apr. 6, 1947	16	48.2	1.19	16.13	57.4	19.20
1948	1111	1,110	Nov. 12, 1947	17	75.9	1.87	25.43	72.5	24.30
1949	1141,1201	1,190	Dec. 31, 1948	16	63.9	1.57	21.37	*59.2	*19.77
1950	1171,1201	*625	Mar. 9, 1950	*15	*53.2	*1.31	*17.78	-	-

\* Revised.

## 321. 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.

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.--14 years (1936-50), 34.4 cfs (revised).

Extremes.--1936-50: Maximum discharge, 3,000 cfs (revised) 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, 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, probably 2,800 cfs, revised).

Remarks.--Some regulation by mills upstream and by storage and diversion at Hartford water-supply reservoirs above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1937	18.8	9.40	76.3	96.9	51.5	53.9	54.7	39.0	43.4	25.5	26.3	23.7	45.8
1938	36.1	82.9	42.5	*10.9	45.6	46.4	48.7	32.8	40.4	88.3	22.4	*132	*60.7
1939	20.9	25.5	101	44.2	94.4	102	95.3	11.5	5.33	4.10	4.81	2.36	42.4
1940	7.11	19.3	21.0	39.9	16.6	*117	144	*52.9	46.3	15.3	3.14	3.36	*40.5
1941	5.14	32.3	38.1	12.3	56.0	49.8	25.9	16.3	14.6	4.74	3.78	1.14	21.4
1942	1.22	6.47	19.3	34.5	52.8	111	18.4	32.8	14.7	20.4	20.6	10.0	28.5
1943	16.3	72.8	*95.2	35.9	78.6	108	39.0	59.7	15.8	3.86	2.91	.965	*43.8
1944	9.29	28.8	6.59	11.3	25.0	65.4	61.2	10.0	6.18	1.18	1.723	14.9	19.9
1945	5.22	35.8	35.2	*36.3	47.1	105	*54.8	74.5	20.1	15.0	11.9	7.07	*37.3
1946	7.08	31.4	92.1	70.3	38.1	66.6	20.5	48.1	30.1	6.20	5.72	2.92	35.1
1947	3.80	4.10	7.13	30.8	21.4	58.2	43.9	45.9	14.8	12.2	6.63	7.47	21.4
1948	4.29	65.6	16.3	13.1	38.8	118	56.4	47.5	55.9	11.1	9.49	1.20	36.4
1949	2.94	14.5	45.5	80.9	64.0	56.7	38.7	45.2	3.99	1.29	1.06	1.62	29.6
1950	1.92	3.23	10.5	23.4	30.2	*81.9	30.2	22.6	34.6	9.50	4.96	3.38	*21.3

\* Revised.

Monthly and yearly runoff, in inches, of North Branch Park River at Hartford, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1937	0.86	0.42	3.48	4.42	2.12	2.46	2.41	1.78	1.92	1.16	1.20	1.32	23.55
1938	1.65	3.66	1.94	*4.97	2.00	2.11	1.78	1.50	1.78	4.02	1.02	*5.82	*32.61
1939	.95	1.13	4.60	2.02	3.88	4.65	4.21	.52	.24	.19	.22	.13	22.74
1940	.32	.85	.96	1.82	.71	*5.33	6.35	*2.41	2.04	.70	.14	.15	*21.76
1941	.23	1.43	1.74	.56	2.30	2.27	1.14	.74	.64	.22	.17	.05	11.49
1942	.06	.29	.88	1.57	2.18	5.06	.81	1.50	.65	.93	.94	.44	15.31
1943	.74	*3.21	*4.34	1.54	3.24	4.92	1.72	2.72	.70	.18	.13	.04	*23.48
1944	.42	1.27	1.30	.52	1.07	2.97	2.70	.46	.27	.05	.03	.66	10.72
1945	.24	1.58	1.60	*1.65	1.94	4.78	*2.42	3.39	.89	.68	.54	.31	*20.02
1946	.32	1.58	4.20	3.20	1.57	3.03	.90	2.19	1.33	.28	.26	.13	18.79
1947	.17	.18	.33	1.41	.88	2.65	1.94	2.09	.65	.56	.30	.33	11.49
1948	.20	2.89	.74	.60	1.65	5.37	2.49	2.17	2.47	.51	.43	.05	19.57
1949	.13	.64	2.08	3.69	2.64	2.58	1.71	2.06	.18	.06	.05	.07	15.89
1950	.09	.14	.48	1.07	1.24	*3.74	1.33	1.03	1.53	.43	.23	.15	*11.46

\* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Runoff in inches
		Discharge	Date					
1936	821,1201	*2,800	Mar. 12, 1936	-	-	-	-	-
1937	821,1201	*900	Dec. 20, 1936	0.9	43.8	1.73	23.55	48.5
1938	851,1201	*3,000	Jan. 25, 1938	3.3	*60.7	*2.40	*32.61	*59.7
1939	(a)	*1,100	Dec. 6, 1938	1.2	42.4	1.68	22.74	33.9
1940	891,1201	*1,460	May 31, 1940	1.5	*40.5	*1.60	*21.78	*42.9
1941	921,1201	*950	Feb. 8, 1941	.08	21.4	.846	11.49	17.4
1942	951,1201	*850	Mar. 9, 1942	.35	28.5	1.13	15.31	*41.7
1943	971,1201	*1,380	Dec. 30, 1942	.04	*43.8	*1.73	*23.48	32.0
1944	1001,1201	*560	Apr. 25, 1944	.12	19.9	.787	10.72	22.6
1945	1031,1201	*1,500	Apr. 26, 1945	2.0	*37.3	*1.47	*20.02	*42.0
1946	1051,1201	*755	Apr. 7, 1945	1.6	35.1	1.39	18.79	25.3
1947	1081,1201	*545	Apr. 5, 1947	1.7	21.4	.846	11.49	27.3
1948	1111,1201	*1,160	Nov. 12, 1947	.75	36.4	1.44	19.57	34.6
1949	1141,1201	*1,010	Dec. 31, 1948	.35	29.6	1.17	15.89	25.6
1950	1171,1201	*900	Mar. 9, 1950	1.0	*21.3	*.842	*11.46	-

\* Revised.

a In W.S.P. 871, 891, 1201.

## 322. Park River at Hartford, Conn.

Location.--Lat 41°45'36", long. 72°41'42", on left bank by downstream side of plate girder Footbridge on Riverside Street in Hartford, Hartford County, 1,300 ft downstream from confluence of North and South Branches, 0.9 mile upstream from inlet of Park River conduit, and 2.0 miles upstream from mouth.

Drainage area.--74.0 sq mi.

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.--14 years (1936-50), 112 cfs.

Extremes.--1936-50: Maximum discharge, 5,650 cfs Jan. 25, 1938 (gage height, 9.16 ft);

minimum, about 4 cfs Sept. 23, 1937; minimum daily, 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 by backwater from Connecticut River.

Remarks.--Some regulation by mills above station and by storage and diversion at Hartford water-supply reservoirs on small headwater streams.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1937	57.6	40.8	218	266	145	155	158	124	129	71.1	85.5	91.3	128
1938	109	259	129	292	159	128	134	96.5	94.4	229	85.9	408	175
1939	77.2	76.3	284	115	233	272	256	54.7	31.6	30.1	39.9	27.9	123
1940	37.9	68.0	72.8	144	56.7	280	403	141	174	64.0	26.4	27.7	124
1941	35.2	112	118	64.4	200	138	92.4	69.1	64.9	49.9	32.7	21.4	82.4
1942	21.1	40.8	73.5	107	151	319	71.0	103	55.4	63.2	62.8	40.3	92.3
1943	63.2	197	257	130	220	310	128	203	85.3	36.8	26.7	20.3	159
1944	45.8	85.2	34.0	50.5	87.0	181	184	58.4	42.0	24.6	20.6	73.8	73.6
1945	39.7	124	162	122	143	324	162	218	82.7	57.2	49.8	35.5	127
1946	34.8	89.9	216	182	113	187	85.4	153	111	49.2	63.7	35.5	110
1947	30.2	32.3	49.8	95.3	76.5	171	152	137	73.0	64.4	41.5	46.6	80.8
1948	35.2	185	70.8	54.6	132	343	184	151	198	65.8	51.6	26.0	124
1949	35.7	74.1	114	268	191	164	148	154	37.1	30.4	30.2	32.0	106
1950	30.4	34.2	55.3	93.0	114	208	118	100	113	54.6	45.2	27.3	82.7

Monthly and yearly runoff, in inches, of Park River at Hartford, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1937	0.90	0.61	3.40	4.14	2.04	2.41	2.39	1.94	1.94	1.11	1.34	1.37	23.59
1938	1.70	3.60	1.99	4.55	2.24	1.99	2.02	1.50	1.43	3.56	1.30	6.15	32.03
1939	1.20	1.15	4.12	1.79	3.29	4.24	3.86	.85	.48	.47	.62	.42	22.48
1940	.59	1.05	1.13	2.25	.83	4.36	6.08	2.20	2.62	1.00	.41	.42	22.92
1941	.55	1.68	1.83	1.00	2.81	2.14	1.40	1.08	.98	.78	.51	.32	15.08
1942	.53	.61	1.14	1.67	2.12	4.97	1.07	1.60	.84	.98	.98	.61	16.92
1943	.98	2.97	4.00	2.03	3.09	4.83	1.93	3.16	1.28	.57	.42	.31	25.57
1944	.71	1.28	.53	.79	1.27	2.82	2.78	.91	.63	.38	.32	1.11	13.53
1945	.62	1.87	2.52	1.90	2.01	5.05	2.44	3.40	1.25	.89	.78	.54	23.27
1946	.54	1.35	3.37	2.84	1.59	2.92	1.28	2.39	1.67	.77	.99	.54	20.25
1947	.47	.49	.78	1.49	1.07	2.65	2.29	2.13	1.10	1.00	.65	.70	14.83
1948	.55	2.79	1.10	.85	1.92	5.35	2.78	2.35	2.99	1.02	.80	.39	22.89
1949	.56	1.12	1.78	4.17	2.69	2.58	2.23	2.40	.56	.47	.47	.48	19.49
1950	.47	.52	.86	1.45	1.60	3.24	1.77	1.56	1.71	.85	.70	.41	15.14

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30				Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1937	821	1,620	Dec. 20, 1936	21	128	1.73	23.59	142	25.97
1938	851	5,650	Jan. 25, 1938	23	175	2.36	32.03	170	31.21
1939	871	1,830	Dec. 6, 1938	15	123	1.66	22.48	102	18.76
1940	891	3,490	Jan. 15, 1940	20	124	1.68	22.92	132	24.23
1941	921	2,960	Feb. 8, 1941	12	82.4	1.11	15.08	71.5	13.10
1942	951	1,680	Mar. 9, 1942	11	92.3	1.25	16.92	124	22.79
1943	971	2,630	Dec. 31, 1942	14	139	1.88	25.57	110	20.14
1944	1001	1,220	Apr. 25, 1944	14	73.6	.995	13.53	87.1	16.02
1945	1031	1,910	Apr. 26, 1945	24	127	1.72	23.27	128	23.52
1946	1051	1,420	May 28, 1946	24	110	1.49	20.25	91.1	16.73
1947	1081	1,050	Pr. 6, 1947	22	80.8	1.09	14.83	95.6	17.53
1948	1111	1,870	Nov. 12, 1947	22	124	1.68	22.89	119	21.91
1949	1141	2,100	Dec. 31, 1948	18	106	1.43	19.49	97.5	17.88
1950	1171	1,400	Mar. 9, 1950	18	82.7	1.12	15.14	-	-

## 323. Shenipsit Lake at Rockville, Conn.

Location.--Lat 41°52'06" long. 72°25'59", on Hockanum River three-quarters of a mile east of Rockville, Tolland County.

Drainage area.--16.5 sq mi.

Remarks.--Dam raised to present 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.

Cooperation.--Stage records furnished by Rockville Water & Aqueduct Co. Capacities based on lake survey by Connecticut State Board of Fisheries and Game.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1919	-	-	-	-	-	-	-	-	-	-	-	596.9
1920	577.7	624.4	655.4	618.8	602.4	725.7	735.2	728.4	731.1	710.9	653.0	618.8
1921	586.2	616.6	689.1	674.5	669.4	724.3	732.5	721.6	661.2	641.4	586.2	534.2
1928	-	-	-	-	-	-	-	-	-	702.0	710.9	673.2
1929	632.4	599.1	577.7	583.1	605.7	702.0	735.2	735.2	679.3	615.5	519.1	506.2
1930	460.8	453.2	481.8	494.3	507.2	554.6	570.4	578.8	584.1	575.6	562.0	547.5
1931	541.5	546.4	546.4	551.5	570.4	683.0	702.0	725.7	710.9	638.0	589.4	537.3
1932	486.6	457.9	470.2	524.2	541.3	578.8	621.1	611.1	583.1	546.4	516.1	502.2
1933	522.1	615.9	627.6	639.1	670.8	737.9	732.5	702.0	650.7	589.4	542.4	552.6
1934	522.1	499.2	501.2	554.6	556.2	658.9	728.4	728.4	712.2	556.5	607.8	583.7
1935	653.0	685.4	721.6	698.1	680.6	732.5	728.4	708.4	714.8	679.3	616.6	584.1
1936	532.2	519.1	497.3	541.3	541.3	735.2	714.8	721.6	691.7	627.8	594.8	572.4
1937	587.2	546.4	650.7	735.2	702.0	718.9	728.4	728.4	704.5	664.7	630.1	593.7
1938	589.4	662.4	693.0	718.9	728.4	751.1	725.7	735.2	737.9	731.1	666.7	706.4
1939	718.9	710.9	676.9	639.1	674.5	647.2	685.0	661.2	616.6	568.2	531.2	494.3
1940	489.5	511.1	534.2	584.1	589.4	676.9	731.1	742.0	731.1	695.5	635.8	599.1
1941	559.8	584.1	605.7	580.9	613.3	626.7	626.7	632.4	621.1	607.8	570.4	517.1
1942	476.9	479.8	506.2	546.4	568.2	710.9	704.5	702.0	667.1	632.4	583.1	536.2
1943	527.2	605.7	679.3	630.1	667.1	710.9	721.6	721.6	680.6	615.5	539.3	481.8
1944	486.6	514.1	516.1	516.1	517.1	591.6	704.5	689.1	721.6	667.1	602.4	596.9
1945	565.1	583.1	633.5	613.3	618.8	685.4	718.9	725.7	717.5	679.3	627.8	568.2
1946	526.2	527.2	573.5	618.8	639.1	693.0	693.0	728.4	695.5	644.9	600.2	551.5
1947	502.2	473.1	475.0	512.1	539.3	602.4	649.6	662.4	641.4	622.2	572.4	527.2
1948	506.2	570.4	575.6	556.7	578.8	728.4	717.5	736.6	728.4	691.7	633.5	572.5
1949	520.8	530.8	556.4	613.3	655.0	687.1	710.5	728.4	662.8	604.2	551.2	519.1
1950	496.0	487.1	500.9	539.3	580.9	670.8	710.5	732.9	704.1	662.8	635.8	586.2



## 324. Hockanum River near East Hartford, Conn.

Location.--Lat 41°46'59" long. 72°35'16", on left bank 700 ft downstream from dam at Case Bros., Inc. paper mill,  $\frac{1}{2}$  miles downstream from Hop Brook, and  $2\frac{1}{2}$  miles east of East Hartford, Hartford County.

Drainage area.--74.5 sq mi.

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.--24 years (1919-21, 1928-50), 111 cfs (adjusted).

Extremes.--1919-21, 1928-50: 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.--Flow regulated by Shenipsit Lake, other smaller reservoirs, and industrial plants above station. Runoff adjusted for change in contents in Shenipsit Lake (see preceding page).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1920	74.8	119	122	73.8	80.0	406	235	210	174	124	84.2	85.8	149
1921	92.0	141	222	166	139	237	193	187	95.1	115	82.7	64.5	145
1928	-	-	-	-	130	191	-	-	-	-	111	98.7	-
1929	66.9	67.5	62.4	92.6	130	191	245	219	91.3	65.0	82.9	42.7	113
1930	55.5	47.6	54.4	95.3	96.9	118	105	63.2	50.2	39.5	29.7	28.3	65.1
1931	25.6	36.7	*31.6	*42.4	62.1	118	113	115	139	70.9	72.5	46.4	*72.8
1932	47.1	50.2	58.9	67.5	78.1	99.8	124	76.5	60.5	48.7	55.8	60.8	68.9
1933	70.9	137	92.9	107	132	212	270	109	77.7	55.2	67.0	84.4	118
1934	61.5	57.2	66.8	128	66.8	214	206	152	88.5	56.4	66.4	79.7	104
1935	98.6	96.7	120	175	172	216	144	88.6	79.1	75.9	54.5	61.8	115
1936	49.1	59.1	60.1	113	81.5	360	222	127	82.3	58.7	56.0	74.6	112
1937	80.9	65.4	175	218	189	185	171	121	105	74.6	79.5	84.1	128
1938	85.3	141	139	215	181	155	142	109	126	200	111	519	176
1939	178	134	230	165	237	271	255	113	68.0	54.6	60.0	60.0	152
1940	66.0	88.3	81.1	111	76.2	235	387	166	210	129	69.4	68.0	140
1941	71.9	122	120	107	177	125	109	101	84.5	77.1	61.6	46.2	99.8
1942	48.4	51.4	58.7	64.4	84.6	207	111	96.5	83.5	79.4	64.0	52.6	83.5
1943	60.0	121	189	181	211	259	154	178	100	69.7	59.8	45.9	135
1944	42.8	59.7	41.9	44.2	80.1	94.3	125	96.4	*104	*60.4	*53.3	*95.2	*74.5
1945	59.6	97.8	140	141	149	239	149	229	137	88.8	78.4	54.0	150
1946	61.6	78.6	128	153	146	180	120	132	136	79.5	75.7	55.7	112
1947	62.6	58.3	50.1	72.0	66.9	116	131	112	77.0	72.4	61.8	66.6	79.0
1948	47.2	102	75.8	75.4	120	254	219	188	238	119	74.7	43.5	130
1949	51.9	76.7	60.3	150	145	156	128	123	60.9	52.7	48.2	41.4	90.8
1950	33.0	35.8	49.5	55.7	68.4	120	124	115	125	63.1	90.5	67.7	79.0

\* Revised.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1920	1.05	2.05	2.08	0.93	1.06	7.00	3.58	3.20	2.62	1.80	0.97	1.09	27.43
1921	1.23	2.29	3.85	2.49	1.91	3.99	2.93	2.84	1.05	1.67	.96	.66	25.87
1928	-	-	-	-	-	-	-	-	-	-	1.76	1.29	-
1929	.80	.82	.84	1.46	1.95	3.52	3.86	3.39	1.04	.64	.73	.56	19.61
1930	.60	.67	1.01	1.54	1.43	2.11	1.66	1.03	.78	.56	.38	.34	12.11
1931	.36	.58	*.49	*.69	.98	2.48	1.80	1.91	2.00	.68	.84	.39	*13.20
1932	.44	.59	.98	1.36	1.23	1.76	2.10	1.13	.74	.54	.69	.86	12.42
1933	1.19	2.59	1.51	1.72	2.03	3.67	4.02	1.51	.87	.50	.77	1.33	21.71
1934	.77	.73	1.04	2.29	.83	4.02	3.49	2.35	1.23	.55	.75	1.41	19.46
1935	1.58	1.63	2.08	2.57	2.30	3.63	2.13	1.26	1.23	.97	.48	.74	20.60
1936	.46	.81	.80	1.99	1.18	6.69	3.20	2.01	1.06	.54	.68	.99	20.41
1937	1.22	.83	3.51	3.87	2.45	2.95	2.62	1.87	1.41	.92	1.03	1.05	23.53
1938	1.29	2.53	2.32	3.46	2.58	2.41	2.10	1.75	1.90	3.04	1.46	7.88	32.74
1939	2.81	1.96	3.36	2.34	3.52	4.04	4.03	1.63	.76	.56	.71	.69	26.41
1940	.99	1.45	1.58	2.01	1.13	4.15	6.11	2.63	3.09	1.80	.73	.81	26.28
1941	.69	1.96	1.98	1.51	2.66	2.01	1.63	1.59	1.20	1.12	.74	.38	17.67
1942	.52	.79	1.06	1.23	1.31	4.02	1.63	1.48	1.05	1.03	.71	.52	15.35
1943	.88	2.26	3.34	2.52	3.16	4.25	2.36	2.76	1.26	.70	.48	.35	24.32
1944	.69	1.05	.66	.68	1.16	1.89	2.53	1.41	*1.74	*.62	*.45	*1.40	*14.28
1945	.74	1.57	2.46	2.06	2.11	4.08	2.42	3.58	2.01	1.15	.92	.46	23.56
1946	.71	1.18	2.25	2.63	2.16	3.09	1.80	2.25	1.84	.94	.91	.55	20.31
1947	.68	.71	.79	1.33	1.09	2.17	2.23	1.81	1.03	1.01	.67	.74	14.26
1948	.61	1.90	1.20	1.06	1.87	4.80	3.21	3.02	3.51	1.63	.82	.30	23.93
1949	.50	1.20	1.08	2.65	2.26	2.61	2.05	2.01	.53	.47	.44	.43	16.23
1950	.38	.49	.85	1.08	1.20	2.39	2.09	1.90	1.71	.74	1.24	.73	14.80

\* Revised.

## CONNECTICUT RIVER BASIN

Yearly discharge, in cubic feet per second, of Hockanum River near East Hartford, Conn.

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed	Adjusted	Runoff
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	in inches
		Discharge	Date								
1920	501,1051	*1,860	Mar. 13, 1920	1.2	149	150	2.01	27.43	161	162	29.62
1921	521,1051	623	Dec. 5, 15, 1920	5	145	142	1.91	25.87	-	-	-
1928	1051	-	-	-	-	-	-	-	-	-	-
1929	681,1051	*1,190	Feb. 7, 1929	4	113	108	1.45	19.61	110	107	19.43
1930	696,1051	390	Jan. 15, 1930	5.9	65.1	66.4	.891	12.11	*59.7	*61.7	*11.26
1931	(a)	405	June 10, 1931	*6.1	*72.8	*72.5	*.973	*13.20	*78.0	*75.6	*13.76
1932	726,1051	435	Mar. 28, 1932	12	68.9	67.9	.911	12.42	80.9	85.9	15.70
1933	741,1051	512	Mar. 22, 1933	12	118	119	1.60	21.71	108	104	19.96
1934	756,1051	1,920	Mar. 5, 1934	7.7	104	107	1.44	19.46	115	122	22.21
1935	781,1051	810	Jan. 10, 1935	6.3	115	113	1.52	20.60	102	94.9	17.38
1936	801,1051	1,810	Mar. 12, 1936	5.1	112	112	1.50	20.41	125	130	23.70
1937	821,1051	710	Dec. 20, 1936	4.7	128	129	1.73	23.53	132	133	24.31
1938	851,1051	5,160	Sept. 21, 1938	20	176	180	2.42	32.74	191	190	34.73
1939	871,1051	1,340	Feb. 15, 1939	14	152	145	1.95	26.41	126	121	22.10
1940	891,1051	1,410	Jan. 15, 1940	14	140	143	1.92	26.28	147	149	27.29
1941	921,1051	1,650	Feb. 8, 1941	8.7	99.8	97.2	1.30	17.67	86.7	83.5	15.21
1942	951,1051	635	Mar. 9, 1942	20	83.5	84.1	1.13	15.35	101	106	19.46
1943	971,1051	1,100	Dec. 31, 1942	28	135	133	1.79	24.32	116	111	20.24
1944	(b)	*1,020	Sept. 15, 1944	24	*74.5	*78.1	*1.05	*14.28	*87.4	*91.1	*16.65
1945	1031,1051	960	Feb. 27, 1945	23	130	129	1.73	23.56	128	126	22.93
1946	1051	485	Dec. 26, 1945	5	112	111	1.49	20.31	104	101	18.49
1947	1081	368	Mar. 3, 1947	14	79.0	78.2	1.05	14.28	83.5	80.3	15.79
1948	1111	860	Mar. 17, 1948	17	130	131	1.76	23.93	127	126	23.00
1949	1141	450	Dec. 31, 1948	12	90.8	89.1	1.20	16.23	85.0	83.2	15.17
1950	1171	700	Aug. 20, 1950	13	79.0	81.1	1.09	14.80	-	-	-

\* Revised.

a In W.S.P. 711, 1051, 1201.

b In W.S.P. 1001, 1051, 1201.

325. Salmon River near East Hampton, Conn.

Location.--Lat 41°33'11", long. 72°26'57", on right bank at Comstock Bridge on Hartford-Middlesex County line, 0.6 mile downstream from Dickinson Creek, and 3½ miles southeast of East Hampton, Middlesex County.

Drainage area.--105 sq mi.

Supplemental records available.--Records for April 1905 to March 1906, published in Water-Supply Paper 201, have been found to be in error on the basis of re-study of the original data. Those records are not published herein and should not be used.

Gage.--Water-stage recorder. Datum of gage is 69.50 ft above mean sea level, datum of 1929.

Average discharge.--22 years (1928-50), 172 cfs.

Extremes.--1928-50: 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.--Occasional regulation at low flows by mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	-	-	86.5	56.1	-
1929	73.9	69.8	115	247	*252	*464	448	384	62.6	28.5	34.0	22.4	*185
1930	19.8	42.5	85.7	143	177	228	179	119	92.8	48.1	10.9	7.19	95.7
1931	12.4	52.5	44.1	52.5	121	362	272	295	249	64.6	60.4	24.5	136
1932	18.4	25.2	62.7	177	162	230	269	113	82.5	28.0	54.2	72.2	108
1933	228	416	181	160	240	416	438	132	69.8	19.0	38.3	111	203
1934	59.7	63.5	91.9	263	64.6	440	512	296	142	36.5	35.3	127	180
1935	160	164	304	323	287	373	254	119	144	75.8	22.9	41.9	189
1936	17.2	68.1	*62.2	245	108	797	397	242	130	30.9	22.8	58.1	182
1937	106	70.0	415	409	291	299	341	228	152	68.0	54.3	59.9	208
1938	124	377	284	412	296	238	210	174	189	426	231	834	315
1939	240	190	378	220	413	489	491	137	58.3	27.5	38.1	37.4	225
1940	75.3	167	183	201	116	370	601	287	309	144	23.5	28.5	209
1941	35.5	197	192	167	302	216	177	179	146	80.3	32.8	15.2	144
1942	15.5	55.6	96.3	135	204	551	186	135	59.1	56.1	52.7	22.1	131
1943	59.6	202	357	242	326	444	248	268	108	31.7	15.5	5.80	192
1944	35.2	116	41.5	59.1	135	319	360	155	105	39.9	15.1	140	126
1945	71.0	256	329	241	258	424	264	362	113	50.7	31.6	19.4	202
1946	29.2	112	255	317	209	309	189	250	189	50.0	75.8	35.8	167
1947	51.0	46.0	69.2	146	120	264	303	192	98.7	46.8	42.6	40.0	118
1948	25.3	228	120	104	249	599	408	400	238	71.0	37.3	11.7	207
1949	20.0	91.1	113	329	288	264	287	214	59.8	13.7	14.3	22.4	140
1950	17.6	31.2	74.5	114	172	266	218	233	150	35.3	47.2	21.7	115

\* Revised.

Monthly and yearly runoff, in inches, of Salmon River near East Hampton, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	-	-	-	-	-	-	-	0.95	0.60	-
1929	0.81	0.74	1.27	2.71	*2.50	*5.32	4.76	4.22	.66	.31	.37	.24	*23.91
1930	.22	.45	.94	1.57	1.75	2.50	1.90	1.30	.99	.53	.12	.08	12.35
1931	.14	.56	.48	.58	1.20	4.20	2.89	3.24	2.64	.71	.66	.26	17.56
1932	.20	.27	.69	1.95	1.66	2.52	2.86	1.24	.88	.31	.59	.77	13.94
1933	2.50	4.42	1.98	1.75	2.38	4.56	4.65	1.45	.74	.21	.42	1.18	26.24
1934	.66	.68	1.01	3.11	.64	4.83	5.44	3.25	1.51	.40	.37	1.35	23.25
1935	1.75	1.74	3.34	3.55	2.84	4.09	2.70	1.30	1.53	.83	.25	.45	24.37
1936	.19	.72	.68	2.69	1.11	8.75	4.22	2.65	1.38	.34	.25	.62	23.60
1937	1.16	.74	4.55	4.50	2.88	3.29	3.63	2.50	1.62	.75	.60	.64	26.86
1938	1.36	4.00	3.11	4.52	2.94	2.62	2.23	1.91	2.01	4.68	2.54	8.86	40.78
1939	2.64	2.02	4.15	2.42	4.09	5.37	5.22	1.50	.62	.30	.42	.40	29.15
1940	.83	1.77	2.01	2.20	1.19	4.06	6.38	3.15	3.28	1.58	.26	.30	27.01
1941	.39	2.10	2.11	1.83	3.00	2.38	1.89	1.96	1.55	.88	.36	.16	18.61
1942	.17	.59	1.06	1.49	2.02	6.05	1.96	1.49	.63	.62	.58	.23	16.91
1943	.65	2.14	3.32	2.65	3.23	4.89	2.61	2.94	1.15	.35	.17	.06	24.75
1944	.39	1.23	4.61	.65	1.39	3.50	3.83	1.71	1.12	.44	.17	1.48	16.37
1945	.78	2.72	3.61	2.65	2.56	4.66	2.80	3.98	1.20	.56	.35	.21	26.08
1946	.32	1.19	2.80	3.48	2.07	3.39	1.80	2.74	2.01	.55	.83	.38	21.56
1947	.56	.49	.76	1.60	1.19	2.89	3.22	2.11	1.05	.51	.47	.43	15.28
1948	.58	2.42	1.51	1.14	2.56	6.57	4.34	4.39	2.53	.78	.41	.12	26.85
1949	.22	.97	1.24	3.61	2.85	2.89	3.05	2.35	.42	.15	.16	.24	18.15
1950	.19	.33	.82	1.26	1.71	2.92	2.32	2.56	1.60	.39	.52	.23	14.85

\* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1928	661	-	-	-	-	-	-	-	-
1929	681, 1201	*2,810	Mar. 5, 1929	14	*185	*1.76	*23.91	*176	*22.70
1930	696	940	Mar. 26, 1930	1	95.7	.911	12.35	92.4	11.92
1931	711	1,770	Mar. 29, 1931	1.1	136	1.30	17.56	136	17.54
1932	726	2,330	Mar. 28, 1932	10	108	1.03	13.94	167	21.68
1933	741	1,840	Nov. 10, 1932	5.5	203	1.93	26.24	152	19.69
1934	756	2,560	Mar. 5, 1934	8	180	1.71	23.25	214	27.73
1935	781	3,030	Jan. 10, 1935	12	189	1.80	24.37	148	19.13
1936	801	6,250	Mar. 12, 1936	10	182	1.73	23.60	220	28.46
1937	821	2,640	Dec. 20, 1936	9.8	208	1.98	26.86	223	28.88
1938	851	12,400	Sept. 21, 1938	24	315	3.00	40.78	318	41.12
1939	871	1,900	Feb. 15, 1939	7.0	225	2.14	29.15	193	24.95
1940	891	3,470	Jan. 15, 1940	12	209	1.99	27.01	208	27.00
1941	921	4,120	Feb. 8, 1941	6.4	144	1.37	18.61	122	15.83
1942	951	2,440	Mar. 9, 1942	6.8	131	1.25	16.91	169	21.80
1943	971	3,470	Dec. 30, 1942	4.0	192	1.83	24.75	156	20.12
1944	1001	2,860	Sept. 15, 1944	4.0	126	1.20	16.37	165	21.40
1945	1031	2,320	Jan. 1, 1945	12	202	1.92	26.08	180	23.28
1946	1051	1,380	Dec. 26, 1945	14	167	1.59	21.56	147	19.06
1947	1081	1,240	Apr. 6, 1947	17	118	1.12	15.28	135	17.48
1948	1111	2,480	Mar. 16, 1948	9	207	1.97	26.85	195	25.27
1949	1141	1,590	Dec. 31, 1948	5.2	140	1.33	18.15	132	17.06
1950	1171	1,050	Mar. 23, 1950	10	115	1.10	14.85	-	-

\* Revised.

326. East Branch Eightmile River near North Lyme, Conn.

Location.--Lat 41°25'40", long. 72°20'05", on left bank at highway bridge 0.4 mile upstream from confluence with West Branch, 1.1 miles north of North Lyme, New London County, and 5½ miles upstream from mouth of Eightmile River.

Drainage area.--22.0 sq mi.

Gage.--Water-stage recorder. Datum of gage is 55.21 ft above mean sea level, datum of 1929.

Average discharge.--13 years (1937-50), 43.1 cfs.

Extremes.--1937-50: 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, as a result of regulation; minimum daily, about 0.03 cfs (regulated) Oct. 2, 1941.

Remarks.--Slight regulation at low flow.

Monthly and yearly mean discharge, in cubic feet per second, of East Branch Eightmile River near North Lyme, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1938	30.1	68.4	69.5	75.4	60.5	48.5	50.7	35.7	38.7	96.9	56.5	160	67.4
1939	57.5	53.9	81.4	48.1	94.3	116	127	30.0	9.13	6.67	5.98	6.93	52.8
1940	8.50	36.4	35.6	44.7	33.9	9.39	129	63.4	61.0	26.1	3.73	4.73	45.0
1941	4.82	45.1	40.4	37.4	65.2	47.5	39.6	24.2	24.5	8.59	3.94	.852	28.2
1942	1.93	11.1	21.3	30.7	69.0	152	43.4	23.7	10.9	11.3	11.3	3.29	32.3
1943	16.2	46.1	105	63.2	80.4	89.0	54.4	64.3	29.2	5.82	2.09	.400	46.2
1944	7.49	20.5	9.37	19.6	28.8	100	82.9	32.5	11.2	2.59	.718	20.9	28.0
1945	11.3	32.4	91.4	56.6	60.8	107	60.5	88.5	29.6	13.7	8.95	3.19	52.0
1946	6.89	29.5	82.7	84.9	59.1	82.9	35.9	59.2	51.8	12.3	30.6	7.10	45.3
1947	11.6	10.7	18.2	36.8	28.0	69.7	72.6	55.3	29.3	10.0	9.63	10.1	30.2
1948	6.87	68.0	37.4	30.6	58.1	160	102	107	70.9	22.8	8.66	1.08	56.0
1949	3.38	27.2	28.0	107	82.8	74.8	68.8	49.3	8.80	1.78	3.81	8.81	38.5
1950	5.75	13.7	31.8	43.4	65.7	84.8	58.3	69.3	48.6	14.5	14.5	5.79	57.9

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1938	1.58	4.48	3.64	3.95	2.66	2.54	2.57	1.87	1.96	5.07	2.96	8.11	41.59
1939	3.01	2.73	4.27	2.52	4.47	6.08	6.44	1.57	.46	.35	.31	.35	32.56
1940	.44	1.84	1.87	2.34	1.66	4.92	6.54	3.32	3.09	1.37	.20	.24	27.83
1941	.25	2.29	2.12	1.96	3.08	2.49	2.01	1.27	1.24	.45	.21	.04	17.41
1942	.10	.56	1.12	1.61	3.27	7.97	2.20	1.24	.55	.59	.59	.17	19.97
1943	.85	2.34	5.50	3.31	3.80	4.67	2.76	3.37	1.48	.51	.11	.02	28.52
1944	.39	1.04	.49	1.03	1.41	5.25	4.21	1.71	.57	.13	.04	1.06	17.33
1945	.59	4.69	4.78	2.96	2.87	5.60	3.07	4.64	1.51	.72	.47	.16	32.06
1946	.36	1.50	4.34	4.45	2.80	4.35	1.82	3.10	2.62	.64	1.60	.36	27.94
1947	.61	.54	.95	1.92	1.32	3.66	3.68	2.89	1.48	.52	.50	.51	18.58
1948	.36	3.45	1.96	1.60	2.85	8.38	5.18	5.60	3.59	1.20	.45	.05	34.67
1949	.18	1.38	1.46	5.60	3.92	3.92	3.49	2.58	.45	.09	.20	.45	23.72
1950	.30	.70	1.67	2.27	3.11	4.44	2.96	3.63	2.47	.76	.29	.25	23.36

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1938	851	2,950	Sept. 21, 1938	5.6	67.4	3.06	41.59	67.9	41.90
1939	871	560	Apr. 7, 1939	1.2	52.8	2.40	32.56	43.3	26.70
1940	891	670	Mar. 15, 1940	.7	45.0	2.05	27.83	45.8	28.34
1941	921	790	Feb. 8, 1941	.27	28.2	1.28	17.41	23.5	14.53
1942	951	630	Mar. 9, 1942	.03	32.3	1.47	19.97	43.5	26.88
1943	971	750	Dec. 31, 1942	.2	46.2	2.10	28.52	35.3	21.75
1944	1001	525	Mar. 14, 1944	.1	28.0	1.27	17.33	41.2	25.47
1945	1031	578	Dec. 1, 1944	1.6	52.0	2.56	32.06	45.7	28.20
1946	1051	542	(a)	2.4	45.3	2.06	27.94	38.7	23.84
1947	1081	250	Apr. 6, 1947	3.2	30.2	1.37	18.58	36.1	22.25
1948	1111	595	Mar. 17, 1948	.8	56.0	2.55	34.67	51.6	31.92
1949	1141	542	Jan. 6, 1949	.85	38.5	1.75	23.72	37.9	23.37
1950	1171	490	Mar. 23, 1950	2.4	37.9	1.72	23.36	-	-

a Dec. 26, 1945, Feb. 7, 1946.

## 327. West Branch Eightmile River at North Plain, Conn. 1/

Location.--Lat 41°26'30", long. 72°20'00", at bridge on State Highway 82 at North Plain, Middlesex County, 0.8 mile upstream from confluence with East Branch, and 6 miles upstream from mouth of Eightmile River.

Drainage area.--18.6 sq mi. Prior to May 1, 1939, 19.2 sq mi.

Gage.--Wire-weight gage. Datum of gage is 57.74 ft above mean sea level, datum of 1929. Prior to May 1, 1939, staff gage 0.7 mile downstream at datum 45.57 ft above mean sea level, datum of 1929.

Average discharge.--13 years (1937-50), 37.1 cfs (adjusted to present site).

Extremes.--1937-50: 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 at North Plain; minimum observed, 0.05 cfs Sept. 12, 1944 (gage height, 1.60 ft).

1/ Published as "near North Lyme" prior to May 1, 1939.

Monthly and yearly mean discharge, in cubic feet per second, of West Branch Eightmile River near North Plain, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1938	28.4	84.0	65.1	71.9	57.3	45.4	47.4	35.8	36.7	90.4	60.4	147	63.9
1939	55.7	52.9	87.2	49.4	93.8	110	124	28.4	9.68	5.47	5.47	5.83	52.1
1940	10.3	34.7	37.8	41.0	31.1	85.4	119	61.2	53.0	24.4	3.38	4.02	42.1
1941	4.51	44.2	36.5	34.5	55.7	37.7	32.4	22.2	20.3	6.48	3.13	1.09	24.6
1942	1.92	7.55	19.2	27.6	57.1	134	37.6	21.5	9.47	8.58	9.30	2.89	28.0
1943	8.61	39.4	87.4	52.8	68.8	77.4	48.8	58.9	24.4	5.11	1.75	1.402	39.4
1944	5.37	16.4	7.06	15.6	23.3	87.5	75.0	28.6	11.0	2.96	1.19	10.1	23.6
1945	5.93	62.3	64.9	44.0	41.6	81.7	49.7	71.5	24.0	9.84	5.05	2.41	38.6
1946	4.44	23.3	64.8	65.2	47.1	64.6	35.0	52.0	43.5	10.3	24.0	10.4	37.1
1947	7.72	8.45	16.2	33.5	26.8	57.3	64.6	43.8	22.5	10.7	11.9	10.4	26.1
1948	6.44	65.8	34.5	25.9	47.7	127	95.5	98.4	55.1	20.0	9.60	1.78	49.0
1949	2.99	22.6	26.3	86.8	67.8	59.2	56.9	41.1	7.63	27.1	3.93	4.30	31.7
1950	4.59	9.24	22.4	31.6	50.4	61.2	46.2	61.0	41.8	11.8	12.2	4.91	29.7

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1938	1.71	4.89	3.91	4.31	3.10	2.72	2.76	2.03	2.13	5.43	3.63	8.55	45.17
1939	3.34	5.08	5.23	2.96	5.09	6.61	7.21	1.76	1.34	1.34	1.34	1.34	38.89
1940	.64	2.09	2.34	2.54	1.80	5.29	7.14	3.79	3.18	1.51	.21	.24	30.77
1941	.28	2.66	2.26	2.13	3.11	2.34	1.94	1.37	1.22	.40	.19	.07	17.97
1942	.12	.44	1.19	1.71	3.20	8.30	2.25	1.34	.57	.52	.58	.17	20.39
1943	.54	2.36	5.42	3.27	3.85	4.80	2.92	3.66	1.46	.32	.11	.02	28.73
1944	.35	.98	.44	.97	1.55	5.42	4.50	1.78	.66	.18	.07	.61	17.29
1945	.37	3.74	4.02	2.73	2.33	5.06	2.98	4.43	1.44	.60	.31	.14	28.15
1946	.28	1.40	4.01	4.05	2.64	4.00	2.10	3.23	2.61	.64	1.49	.62	27.07
1947	.48	.51	1.00	2.08	1.50	3.55	3.87	2.71	1.35	.66	.74	.62	19.07
1948	.40	3.95	2.13	1.60	2.76	7.87	5.72	6.10	3.30	1.24	.59	.11	35.77
1949	.19	1.36	1.63	5.38	3.79	3.67	3.41	2.55	.46	.17	.24	.26	23.11
1950	.28	.55	1.38	1.96	2.82	3.79	2.77	3.78	2.51	.73	.76	.29	21.62

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1938	851	1,810	Sept. 21, 1938	4.1	63.9	3.33	45.17	65.5	46.31
1939	871	495	Apr. 7, 1939	.8	52.1	2.74	36.89	42.5	30.31
1940	891	705	Mar. 15, 1940	1.0	42.1	2.26	30.77	42.2	30.90
1941	921	645	Feb. 8, 1941	.4	24.6	1.32	17.97	19.9	14.52
1942	951	615	Mar. 9, 1942	.5	28.0	1.51	20.39	36.9	26.96
1943	971	880	Dec. 30, 1942	.15	39.4	2.12	28.73	30.4	22.16
1944	1001	585	Apr. 24 or 25	.1	23.6	1.27	17.29	32.3	23.67
1945	1031	555	Nov. 30, 1944	1.2	38.6	2.08	28.15	35.2	25.71
1946	1051	425	Dec. 26, 1945	2.2	37.1	1.99	27.07	32.0	23.37
1947	1081	226	Apr. 3, 1947	2.7	26.1	1.40	19.07	32.3	23.56
1948	1111, 1141	580	Nov. 12, 1947	1.3	49.0	2.63	35.77	44.4	32.47
1949	1141	455	Jan. 6, 1949	1.1	31.7	1.70	23.11	30.4	22.14
1950	1171	335	Mar. 23, 1950	1.7	29.7	1.60	21.62	-	-

## MENUNKETESUCK RIVER BASIN

328. 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.

Gage.--Water-stage recorder. Datum of gage is 23.64 ft above mean sea level, datum of 1929.

Average discharge.--9 years (1941-50), 20.0 cfs.

Extremes.--1941-50: Maximum discharge, 870 cfs Nov. 12, 1947 (gage height, 6.72 ft), from rating curve extended above 270 cfs on basis of logarithmic plotting; no flow at times during August and September 1944.

Remarks.--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 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.



## 330. Eightmile River at Plantsville, Conn.

Location.--Lat 41°35'20", long. 72°53'55", on left bank at intersection of Marion Avenue, West Street, and West Main Street in Plantsville, Hartford County, 200 ft downstream from small dam, and a third of a mile upstream from mouth.

Drainage area.--14.9 sq mi.

Gage.--Staff gage. Altitude of gage is 145 ft (from topographic map).

Extremes.--1935-March 1938: Maximum discharge, 755 cfs Mar. 12, 1936, Jan. 25, 1938 (gage height, about 4.4 ft, from graph based on gage readings), from rating curve extended above 225 cfs by logarithmic plotting; minimum, 4.9 cfs Sept. 10, 11, 1936 (gage height, 0.99 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	9.04	12.7	9.68	24.4	13.6	88.9	56.0	29.7	21.5	10.2	7.87	11.7	24.7
1937	15.0	9.22	37.2	54.7	43.0	40.9	43.8	35.6	25.9	20.0	25.2	20.4	30.9
1938	22.8	46.0	38.7	65.1	42.5	-	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	0.70	0.95	0.75	1.89	0.98	6.88	4.20	2.29	1.61	0.79	0.61	0.88	22.53
1937	1.16	.69	2.88	4.23	3.01	3.16	3.28	2.76	1.94	1.54	1.95	1.53	28.13
1938	1.76	3.45	3.00	5.04	2.97	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1936	801	755	Mar. 12, 1936	4.9	24.7	1.66	22.53	27.2	24.86
1937	821	253	Dec. 10, 1936	7.0	30.9	2.07	28.13	†34.7	31.61
1938	851	-	-	-	-	-	-	-	-

† Corrected.

## 331. 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.

Gage.--Water-stage recorder and timber control. Datum of gage is 20.24 ft above mean sea level, datum of 1929.

Average discharge.--20 years (1930-50), 198 cfs.

Extremes.--1930-50: Maximum discharge, 5,230 cfs Sept. 21, 1938 (gage height, 9.55 ft), by computation of flow over dam 1 mile above station; minimum, 8 cfs Nov. 2, 1930 (gage height, 0.38 ft).

Remarks.--City of Bristol diverted an average of about 3 cfs from Pequabuck River Basin to Quinnipiac River above gage through Oct. 18, 1949. Flow regulated by mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	445.5	76.0	66.2	96.5	139	287	260	245	220	111	85.1	64.1	†141
1932	56.6	56.0	69.6	162	139	*213	271	144	96.6	55.8	60.2	59.1	115
1933	103	312	160	158	216	440	463	169	130	78.2	88.2	137	204
1934	81.6	73.7	89.0	231	101	414	499	318	165	108	83.2	*258	*202
1935	222	200	*279	*301	304	*420	264	150	150	97.5	*54.7	89.1	*211
1936	56.7	83.3	93.7	231	125	675	403	223	183	99.9	77.2	111	197
1937	148	113	*350	*420	325	*325	*331	173	117	117	117	119	*241
1938	170	324	312	429	336	260	264	219	212	325	244	641	311
1939	256	192	435	307	458	500	525	206	108	83.2	92.7	66.8	268
1940	91.1	158	150	238	142	413	626	284	459	167	81.5	66.7	240
1941	72.7	164	153	144	325	221	170	88.1	99.6	79.9	57.2	52.4	134
1942	49.1	67.7	119	153	248	508	207	182	102	88.2	106	72.7	158
1943	81.5	192	355	288	345	479	241	273	172	97.3	73.1	56.1	219
1944	85.1	149	82.2	111	164	297	324	154	83.0	59.0	49.6	195	145
1945	92.9	210	326	260	240	489	275	426	183	121	95.5	81.4	234
1946	76.1	150	314	331	244	319	175	283	264	135	172	102	214
1947	103	86.9	92.3	144	164	291	284	272	175	130	91.5	87.7	160
1948	62.2	305	158	129	208	547	435	294	267	168	116	55.2	228
1949	61.4	137	*170	*557	*352	*317	*324	*309	*116	*70.9	*66.5	*68.3	*212
1950	*53.0	*61.1	*30.6	*130	*180	*292	*220	*212	*154	*98.7	*75.9	*54.4	*135

\* Revised.

† Not previously published; records for Oct. 1-7, 1930, estimated on basis of records for nearby streams.

## QUINNIPIAC RIVER BASIN

Monthly and yearly runoff, in inches, of Quinnipiac River at Wallingford, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	*0.48	0.78	0.70	1.02	1.33	3.03	2.67	2.59	2.25	1.18	0.90	0.66	*17.59
1932	.60	.57	.74	1.72	1.38	*2.25	2.78	1.52	.99	.59	.64	.60	*14.38
1933	1.09	3.19	1.70	1.67	2.06	4.66	4.74	1.79	1.33	.83	.93	1.41	25.40
1934	.86	.75	.94	2.44	.97	4.38	5.11	3.37	1.68	1.14	.88	*2.64	*25.16
1935	2.35	2.04	*2.95	*3.18	2.90	*4.44	2.70	1.59	1.54	1.03	.58	.91	*26.21
1936	.60	.85	.99	2.44	1.24	7.14	4.13	2.36	1.87	1.06	.82	1.14	24.64
1937	1.57	1.16	*3.70	*4.44	3.10	*3.44	*3.62	*3.50	1.77	1.23	1.23	1.22	*29.98
1938	1.80	3.31	3.30	4.54	5.21	2.76	2.70	2.32	2.16	3.44	2.58	6.56	38.68
1939	2.71	1.96	4.60	3.25	4.37	5.29	5.38	2.18	1.11	.88	.98	.68	33.39
1940	.96	1.62	1.59	2.51	1.40	4.37	6.40	3.01	4.70	1.76	.86	.68	29.86
1941	.77	1.67	1.61	1.52	3.10	2.34	1.74	.93	1.02	.85	.61	.54	16.70
1942	.52	.69	1.26	1.61	2.35	5.37	2.12	1.92	1.04	.93	1.12	.74	19.67
1943	.86	1.96	3.54	3.04	3.50	5.06	2.47	2.88	1.76	1.03	.77	.57	27.24
1944	.90	1.53	.87	1.18	1.62	3.14	3.51	1.63	.85	.62	.51	2.00	19.16
1945	.98	2.15	3.45	2.76	2.29	5.19	2.81	4.51	1.87	1.28	1.01	.83	29.12
1946	.80	1.54	3.32	3.50	2.53	3.38	1.80	3.00	2.70	1.43	1.82	1.04	26.66
1947	1.09	.89	.98	1.52	1.56	3.08	2.91	2.88	1.80	1.37	.97	.90	19.95
1948	.66	3.12	1.67	1.36	2.06	5.79	4.45	3.11	2.73	1.78	1.22	.56	28.51
1949	.85	1.41	*1.80	*5.89	*3.56	*3.36	*3.31	*3.26	1.18	*3.44	*.70	*.70	*26.37
1950	*.56	*.63	*.96	*1.37	*1.72	*3.09	*2.25	*2.24	*1.57	*1.04	*.80	*.56	*16.79

\* Revised.

\* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1931	726	*852	Mar. 9, 1931	9	*141	*1.29	*17.59	*141	*17.54
1932	726, 1201	*1,330	Mar. 29, 1932	12	115	1.06	*14.38	*148	*18.45
1933	741, 851	1,260	Nov. 11, 1932	12	204	1.87	25.40	*176	*21.97
1934	756, 1201	1,810	Mar. 5, 1934	17	*202	*1.85	*25.16	*241	*29.95
1935	781, 1201	*1,120	Jan. 10, 1935	18	*211	*1.94	*26.21	*171	*21.31
1936	801, 851	3,240	Mar. 12, 1936	13	197	1.81	24.64	*229	*28.63
1937	821, 1201	*1,160	Dec. 21, 1936	16	*241	*2.21	*29.98	*257	*31.96
1938	851	5,230	Sept. 21, 1938	20	*311	2.85	38.68	318	39.54
1939	871	1,690	Feb. 26, 1939	39	268	2.46	33.39	227	28.29
1940	971	2,680	May 31, 1940	23	240	2.20	29.86	239	29.74
1941	971	2,320	Feb. 8, 1941	27	134	1.23	16.70	121	15.12
1942	971	1,370	Mar. 9, 1942	23	158	1.45	19.67	189	23.56
1943	971	2,170	Dec. 30, 1942	50	219	2.01	27.24	194	24.18
1944	1001	2,580	Sept. 15, 1944	35	145	1.33	18.16	172	21.44
1945	1031	1,180	Jan. 2, Feb. 27	58	234	2.15	29.12	226	28.20
1946	1051	1,180	May 28, 1946	62	214	1.96	26.66	192	23.98
1947	1081	770	Mar. 14, 1947	35	160	1.47	19.95	180	22.44
1948	1111	1,690	Mar. 17, 1948	45	228	2.09	28.51	216	*26.92
1949	1201	*2,900	Jan. 1, 1949	*31	*212	*1.94	*26.37	*198	*24.66
1950	1201	*655	Mar. 24, 1950	*32	*135	*1.24	*16.79	-	-

\* Revised.

\* Not previously published.

## HOUSATONIC RIVER BASIN

332. East Branch Housatonic River at Coltsville, Mass. 1/

Location.--Lat 42°28'10", long. 73°11'49", on right bank at Coltsville, Berkshire County, 1 1/2 miles upstream from Unkamet Brook and 2 miles northeast of Pittsfield.

Drainage area.--57.1 sq mi.

Gage.--Water-stage recorder. Datum of gage is 993.49 ft above mean sea level, datum of 1929.

Average discharge.--14 years (1936-50), 113 cfs (adjusted for storage and diversion).

Extremes.--1936-50: Maximum discharge, 6,400 cfs Sept. 21, 1938 (gage height, 10.80 ft), by computation of flow over dam; minimum daily, 4.4 cfs Aug. 15, 1936.

Remarks.--Flow regulated by power plants above station. Diversion above station from Cleveland Brook Reservoir for municipal supply of Pittsfield since May 1950. Runoff figures adjusted for change in contents in Cleveland Brook Reservoir since October 1949 and for diversion above station for municipal supply of Pittsfield since May 1950.

1/ Published as Housatonic River at Coltsville prior to October 1945.



Monthly and yearly mean discharge, in cubic feet per second (observed),  
of East Branch Housatonic River at Coltsville, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	-	-	-	-	-	-	222	91.4	36.0	22.4	28.0	27.4	-
1937	41.5	53.7	116	193	170	93.8	288	209	127	58.8	39.0	92.4	123
1938	134	154	90.9	155	139	154	129	106	125	201	115	326	152
1939	95.8	81.4	190	73.1	121	191	423	101	61.2	34.3	35.4	34.1	120
1940	45.5	73.4	60.7	43.1	34.3	66.5	573	253	97.9	49.5	32.1	37.9	113
1941	25.3	74.1	92.9	54.8	93.1	66.9	161	75.7	45.1	32.3	22.3	41.4	65.0
1942	36.5	51.2	80.5	82.4	42.4	274	244	118	69.1	65.7	53.1	65.7	99.0
1943	75.2	181	99.0	84.2	111	252	250	304	109	68.6	77.8	38.9	138
1944	47.3	119	44.6	34.5	49.9	167	267	92.5	71.5	52.0	32.0	66.9	86.8
1945	53.8	73.5	92.4	108	81.9	345	248	255	218	220	93.1	66.2	155
1946	66.2	95.5	77.9	139	95.1	245	107	157	125	72.7	53.5	62.2	108
1947	80.6	52.5	45.1	98.7	106	188	393	172	80.1	44.3	30.1	33.5	110
1948	25.5	92.1	53.8	42.5	64.0	329	172	221	212	73.9	41.0	28.7	113
1949	31.5	56.5	206	252	163	191	158	114	44.5	45.5	24.2	32.4	110
1950	31.5	33.1	64.3	123	76.6	132	239	111	85.2	37.6	34.5	36.1	83.6

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	-	-	-	-	-	-	4.34	1.84	0.70	0.45	0.56	0.54	-
1937	0.84	1.05	2.34	3.90	3.10	1.89	5.62	4.22	2.48	1.19	1.79	1.81	29.23
1938	2.71	3.01	1.83	3.12	2.55	3.11	2.52	2.14	2.44	4.06	2.32	6.37	36.16
1939	1.89	1.60	3.84	1.48	2.21	3.86	8.27	2.04	1.19	.69	.72	.67	28.46
1940	.92	1.43	1.23	.87	.65	1.34	11.19	5.11	1.91	1.00	.65	.74	27.04
1941	.51	1.45	1.88	1.11	1.70	1.35	3.15	1.53	.88	.85	.45	.81	15.47
1942	.74	1.00	1.62	1.66	.77	5.54	4.77	2.38	1.35	1.33	1.07	1.28	23.51
1943	1.52	3.53	2.00	1.70	2.03	5.08	4.89	6.14	2.14	1.39	1.57	.76	32.75
1944	.95	2.32	.90	.70	.94	3.38	5.23	1.87	1.40	1.05	.65	1.31	20.70
1945	1.09	1.44	1.87	2.18	1.49	6.97	4.85	5.15	4.25	4.44	1.88	1.29	36.90
1946	1.34	1.87	1.57	2.80	1.73	4.95	2.09	3.17	2.45	1.47	1.08	1.21	25.73
1947	1.63	1.03	.91	1.99	1.97	3.80	7.69	3.48	1.57	.89	.61	.66	26.23
1948	.51	1.80	1.09	.86	1.21	6.64	3.35	4.45	4.15	1.49	.83	.56	26.94
1949	.64	1.10	4.16	5.08	2.97	3.86	3.08	2.30	.87	.92	.49	.63	26.10
1950	.72	.80	1.89	2.87	1.40	2.67	4.68	2.30	1.82	.91	.86	.88	21.80

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year			
		Observed				Adjusted			Observed		Adjusted	
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	
		Discharge	Date									
1936	801, 851	6,000	Mar. 18, 1936	-	-	-	-	-	-	-	-	-
1937	821	1,910	May 15, 1937	5.3	123	-	2.15	29.23	137	-	-	32.55
1938	851	6,400	Sept. 21, 1938	17	152	-	2.66	36.16	151	-	-	35.94
1939	871	3,410	Apr. 19, 1939	14	120	-	2.10	28.46	104	-	-	24.71
1940	891	1,380	Apr. 12, 1940	10	113	-	1.98	27.04	115	-	-	27.30
1941	921	#832	Sept. 1, 1941*	4.8	65.0	-	1.14	15.47	63.1	-	-	14.99
1942	951	1,440	Mar. 9, 1942	16	99.0	-	1.73	23.51	114	-	-	27.20
1943	971	1,740	Nov. 25, 1942	21	138	-	2.42	32.75	126	-	-	29.87
1944	1001	1,280	Nov. 9, 1943	10	86.8	-	1.52	20.70	87.7	-	-	20.93
1945	1031	1,970	July 22, 1945	30	155	-	2.71	36.90	157	-	-	37.28
1946	1051	1,190	Mar. 9, 1946	17	108	-	1.89	25.73	103	-	-	24.52
1947	1081	1,730	Apr. 6, 1947	18	110	-	1.93	26.23	110	-	-	26.06
1948	1111	1,970	Mar. 22, 1948	5.2	113	-	1.98	26.94	123	-	-	29.44
1949	1141	5,700	Dec. 31, 1948	8.6	110	-	1.93	26.10	95.9	99.3	-	23.61
1950	1171	1,070	Apr. 5, 1950	14	83.6	91.7	1.61	21.80	-	-	-	-

\* Not previously published.

333. Housatonic River near Great Barrington, Mass.

Location.--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.

Gage.--Water-stage recorder. Datum of gage is 683.04 ft above mean sea level, datum of 1929.

Average discharge.--37 years (1913-50), 524 cfs.

Extremes.--1913-50: 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.--Flow regulated by power plants above station and, during period Oct. 9, 1949, to Jan. 10, 1950, was affected by filling of Cleveland Brook Reservoir (see records for East Branch Housatonic River at Coltsville for effect in monthly discharge during filling of reservoir).

## HOUSATONIC RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Housatonic River  
near Great Barrington, Mass.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1913	-	-	-	-	-	-	-	-	304	203	86.8	75.1	-
1914	273	403	415	255	279	1,130	2,290	844	234	186	147	139	549
1915	80.9	106	112	402	954	429	603	309	138	755	462	289	382
1916	222	189	842.1	1,000	829	655	1,970	527	357	313	174	189	604
1917	166	244	482	505	322	1,160	1,080	523	497	256	126	129	459
1918	138	198	162	118	449	1,310	1,020	572	267	143	123	173	389
1919	175	306	600	600	287	1,110	1,130	1,050	286	128	154	249	517
1920	255	816	724	280	208	1,590	2,650	756	368	266	242	200	695
1921	420	582	1,270	497	331	1,430	1,140	468	134	148	149	118	560
1922	133	263	505	233	336	1,310	1,620	830	864	364	320	339	593
1923	254	196	175	581	348	965	1,480	727	401	185	176	165	471
1924	394	578	1,010	827	281	396	1,900	722	287	167	148	314	585
1925	245	256	238	167	1,070	1,030	775	570	279	263	233	143	435
1926	187	573	474	355	261	680	1,870	535	184	165	268	205	479
1927	290	908	417	400	483	1,590	505	551	365	211	253	264	520
1928	525	2,040	1,280	873	788	673	935	1,040	969	685	937	827	962
1929	266	262	325	341	196	1,650	1,910	1,100	291	161	133	241	575
1930	129	219	359	329	408	777	622	320	334	254	254	268	355
1931	106	198	124	83.5	128	450	1,260	963	778	267	183	141	391
1932	110	140	322	789	521	340	1,570	385	178	198	183	128	404
1933	233	854	359	511	451	652	1,900	401	184	132	330	1,080	588
1934	354	342	391	506	242	956	1,487	682	509	203	148	452	523
1935	443	634	719	814	435	1,076	754	597	361	292	133	126	533
1936	129	249	274	436	254	2,528	1,179	480	191	121	120	132	510
1937	167	246	479	918	717	562	1,260	933	624	371	306	505	589
1938	584	667	605	788	785	709	844	510	583	942	654	1,601	744
1939	492	454	995	377	571	902	1,848	424	203	145	136	109	553
1940	170	371	275	233	201	348	2,529	979	490	220	144	163	508
1941	124	362	372	377	426	291	646	281	187	136	128	205	293
1942	143	218	356	405	228	1,213	895	459	313	289	204	249	416
1943	349	890	659	506	519	1,204	1,020	1,315	558	269	322	165	649
1944	167	575	337	166	251	814	1,186	458	272	231	199	248	408
1945	204	290	444	533	343	1,643	1,156	1,259	844	1,140	574	301	731
1946	286	425	444	681	479	1,102	459	678	621	305	206	178	489
1947	336	230	190	405	571	954	1,481	785	371	217	172	166	488
1948	122	404	258	193	299	1,442	897	1,032	1,070	513	226	163	551
1949	143	238	462	1,744	806	835	628	414	223	179	120	133	493
1950	132	160	332	642	463	641	1,045	511	469	198	150	163	408

## Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1913	-	-	-	-	-	-	-	-	1.22	0.84	0.36	0.30	-
1914	1.12	1.61	1.71	1.05	1.03	4.66	9.13	3.47	.93	.77	.61	.55	26.64
1915	.33	.42	.46	1.66	3.55	1.76	2.40	1.27	.55	3.11	1.90	1.07	18.48
1916	.91	.75	3.47	4.12	3.19	2.70	7.86	2.17	1.43	1.29	.72	.75	29.36
1917	.68	.97	1.98	2.08	1.20	4.77	4.31	2.16	1.99	1.05	.52	.51	22.22
1918	.57	.79	.67	.49	1.67	5.40	4.06	2.35	1.06	.59	.51	.69	18.85
1919	.72	1.22	2.47	2.47	1.06	4.56	4.51	4.32	1.18	.94	.63	.99	25.07
1920	1.05	3.25	2.99	1.15	.80	6.55	10.55	3.11	1.47	1.10	1.00	.80	33.82
1921	1.73	2.32	5.23	2.05	1.23	5.89	4.54	1.92	.53	.61	.61	.47	27.13
1922	.55	1.05	2.08	.96	1.25	5.40	6.46	3.41	3.45	1.50	1.31	1.35	28.77
1923	1.04	.78	.72	2.40	1.29	3.98	5.30	3.00	1.60	.76	.73	.66	22.86
1924	1.63	2.30	4.16	3.40	1.08	1.63	7.58	2.97	1.14	.69	.61	1.25	28.44
1925	1.01	1.02	.98	.69	3.98	4.24	3.09	2.35	1.11	1.08	.96	.57	21.08
1926	.77	2.28	1.95	1.46	.97	2.80	7.45	2.20	.73	.68	1.10	.82	23.21
1927	1.20	3.62	1.72	1.65	1.79	6.55	2.01	2.27	1.45	.87	1.04	1.05	25.22
1928	2.16	8.13	5.27	3.60	3.03	2.77	3.73	4.28	3.86	2.82	3.86	3.29	46.80
1929	1.10	1.04	1.34	1.41	.73	6.79	7.61	4.53	1.16	.66	.55	.96	27.88
1930	.53	.87	1.48	1.56	1.52	3.20	2.48	1.31	1.33	1.05	1.05	1.07	17.25
1931	.44	.79	.51	.34	.48	1.86	5.02	3.97	3.10	1.10	.79	.56	18.96
1932	.45	.56	1.33	3.25	2.01	1.40	6.26	1.60	.71	.82	.75	.51	19.85
1933	.96	3.40	1.48	2.10	1.68	2.69	7.58	1.65	.73	.54	1.36	4.31	28.48
1934	1.45	1.36	1.61	2.09	.90	3.93	5.92	2.81	2.03	.84	.61	1.80	25.35
1935	1.82	2.52	2.96	3.56	1.61	4.43	3.00	2.46	1.44	1.20	.55	.50	25.85
1936	.53	.99	1.13	1.80	.98	10.41	4.70	1.97	.76	.50	.49	.53	24.79
1937	.69	.98	1.97	3.78	2.67	2.32	5.02	3.84	2.49	1.52	1.26	2.01	28.55
1938	2.41	2.66	2.49	3.16	2.92	2.92	2.57	2.10	2.32	3.47	2.70	6.38	36.10
1939	2.03	1.81	4.09	1.56	2.12	3.71	7.36	1.74	.81	.60	.56	.43	26.82
1940	.70	1.48	1.13	.96	.77	1.43	10.08	4.03	1.95	.90	.59	.65	24.67
1941	.51	1.44	1.55	1.55	1.58	1.20	2.57	1.16	.75	.56	.53	.82	14.20
1942	.59	.87	1.47	1.67	1.85	5.00	3.57	1.89	1.25	1.19	.84	.39	20.18
1943	.44	3.54	2.71	2.08	1.93	4.98	4.06	5.42	2.22	1.11	1.33	.66	31.46
1944	.69	2.29	1.39	.68	.97	3.35	4.73	1.89	1.09	.95	.82	.99	19.84
1945	.84	1.16	1.79	2.19	1.28	6.77	4.61	5.18	3.56	4.69	2.36	1.20	35.43
1946	1.18	1.69	1.83	2.80	1.78	4.54	1.83	2.79	2.47	1.26	.85	.71	23.73
1947	1.38	.92	.78	1.67	2.12	3.93	5.90	3.23	1.48	.89	.71	.66	23.67
1948	.50	1.61	1.06	.79	1.15	5.94	3.57	4.25	4.26	2.11	.95	.61	26.78
1949	.59	.95	1.93	7.18	3.00	3.44	2.50	1.70	.89	.74	.50	.33	23.92
1950	.54	.64	1.37	2.64	1.72	2.64	4.16	2.10	1.87	.82	.62	.65	19.77

Yearly discharge, in cubic feet per second, of Housatonic River near Great Barrington, Mass.

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1914	415	*5,800	Mar. 28, 1914*	17	549	1.96	26.64	483	23.41
1915	415	*4,680	July 9, 1915	1.0	582	1.36	18.48	462	22.40
1916	451	5,300	Mar. 31, 1916	48	604	2.16	29.36	573	27.86
1917	451	*4,500	Mar. 28, 1917	29	459	1.64	22.22	425	20.62
1918	471	*2,830	Mar. 23, 1918	2.6	389	1.39	18.85	438	21.23
1919	501	*2,650	May 23, 1919	14	517	1.85	25.07	577	27.95
1920	501	*4,900	Mar. 27, 1920*	16	695	2.48	33.82	736	35.81
1921	521	*5,100	Mar. 10, 1921	15	560	2.00	27.13	445	21.53
1922	541	*4,100	Mar. 29, 1922	6	593	2.12	28.77	570	27.83
1923	561	*5,000	Apr. 6, 1923	5	471	1.68	22.86	585	28.41
1924	581	*5,300	Apr. 7, 1924	13	585	2.09	28.44	481	23.36
1925	601	*4,700	Feb. 13, 1925	4.2	435	1.55	21.08	476	23.07
1926	621	*3,550	Apr. 25, 1926	22	479	1.71	23.21	510	24.75
1927	641	*4,080	Mar. 20, 1927	47	520	1.86	25.22	706	34.24
1928	661, 1051	7,910	Nov. 5, 1927	105	962	3.44	46.80	714	34.72
1929	681	*5,220	Mar. 16, 1929*	18	575	2.05	27.88	563	27.28
1930	696	*2,040	Mar. 10, 1930	61	355	1.27	17.25	332	16.11
1931	711	*2,800	Apr. 13, 1931	27	391	1.40	18.96	403	19.56
1932	726	2,910	Apr. 2, 1932	30	404	1.44	19.65	476	23.15
1933	741, 1051	6,380	Sept. 17, 1933	60	588	2.10	28.48	558	27.06
1934	756	2,560	Mar. 6, 1934	42	523	1.87	25.35	582	28.23
1935	761	3,710	Jan. 11, 1935	48	533	1.90	25.85	437	21.20
1936	801	8,980	Mar. 19, 1936	22	510	1.82	24.79	530	25.78
1937	821	2,940	May 15, 1937	36	589	2.10	28.55	670	32.47
1938	851	11,520	Sept. 22, 1938	32	744	2.66	36.10	752	36.47
1939	871	5,100	Apr. 20, 1939	7.0	553	1.98	26.82	458	22.20
1940	891	4,310	Apr. 13, 1940	46	508	1.81	24.67	511	24.84
1941	921	1,400	Dec. 30, 1940	43	293	1.05	14.20	281	13.65
1942	951	2,850	Mar. 18, 1942	89	416	1.49	20.18	514	24.94
1943	971	3,120	Nov. 27, 1942	63	649	2.32	31.46	580	28.14
1944	1001	2,550	Apr. 26, 1944	71	408	1.46	19.84	396	19.26
1945	1031	3,570	Mar. 19, 1945	111	731	2.61	35.43	750	36.34
1946	1051	3,450	Mar. 10, 1946	33	489	1.75	23.73	456	22.11
1947	1081	4,080	Apr. 7, 1947	85	488	1.74	23.67	490	23.76
1948	1111	5,420	Mar. 23, 1948	53	551	1.97	26.78	557	27.05
1949	1141	12,200	Jan. 1, 1949	37	493	1.76	23.92	475	23.03
1950	1171	2,670	Apr. 6, 1950	48	408	1.46	19.77	-	-

\* Revised.

## 334. 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 1½ miles upstream from mouth.

Drainage area.--48.2 sq mi.

Gage.--Water-stage recorder. Datum of gage is 645.72 ft above mean sea level, datum of 1929.

Extremes.--1949-50: Maximum discharge, 515 cfs Mar. 28, 1950 (gage height, 4.82 ft); minimum, 2.2 cfs Aug. 28, 1949 (gage height, 1.12 ft).

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1949	-	-	-	-	-	-	-	-	-	-	-	-	-
1950	9.13	12.0	44.0	69.1	53.1	134	120	85.0	80.3	19.8	15.5	6.68	54.4

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1949	-	-	-	-	-	-	-	-	-	-	-	-	-
1950	0.22	0.28	1.05	1.65	1.14	3.20	2.78	2.03	1.86	0.47	0.13	0.16	15.31

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1950	1201	515	Mar. 28, 1950	5.8	54.4	1.13	15.31	-	-

## 335. Housatonic River at Falls Village, Conn.

Location.--Lat 41°56'56", long. 73°22'05", on left bank at Falls Village, Litchfield County, 0.6 mile downstream from power plant of Connecticut Power Co., and 2 miles downstream from Hollenbeck River.

Drainage area.--632 sq mi.

Gage.--Water-stage recorder. Datum of gage is 522.34 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Prior to Dec. 15, 1913, staff or chain gage at site 300 ft upstream at same datum.

Average discharge.--38 years (1912-50), 1,053 cfs.

Extremes.--1912-50: Maximum discharge, 23,900 cfs Jan. 1, 1949 (gage height, 22.9 ft, from floodmarks); practically no flow at times when power plant was shut down; minimum daily, 24 cfs Oct. 15, 1914, Sept. 18, 1932.

Remarks.--Low flow completely regulated by power plant of Connecticut Power Co.

Cooperation.--Records prior to Mar. 1, 1916, computed by engineers of Stone and Webster Engineering Corp. and furnished by Connecticut Power Co.

Monthly and yearly mean discharge, in cubic feet per second													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1912	-	-	-	-	-	-	-	-	-	-	321	316	-
1913	591	1,180	1,410	2,300	1,250	2,700	2,420	915	536	193	157	181	1,150
1914	726	984	912	513	721	2,380	3,820	1,830	407	306	255	196	1,090
1915	122	117	131	1,110	2,030	884	1,110	614	332	1,430	1,320	605	810
1916	450	441	1,750	2,270	1,870	1,380	3,630	1,140	802	890	445	449	1,290
1917	398	485	816	997	597	2,100	2,140	1,170	1,030	565	288	231	911
1918	277	450	347	249	1,080	2,700	1,860	1,150	555	270	189	437	795
1919	453	640	1,080	1,290	568	2,160	2,340	1,820	582	438	253	401	1,000
1920	364	1,240	1,290	377	267	2,910	4,300	1,490	858	509	732	487	1,240
1921	1,130	1,180	2,500	1,170	756	2,760	2,330	978	371	365	332	240	1,180
1922	239	550	991	514	704	2,370	2,910	1,640	1,250	721	630	553	1,090
1923	371	321	307	1,200	770	2,130	2,390	1,260	715	354	501	327	871
1924	719	1,110	2,000	1,770	589	768	3,370	1,460	604	257	270	584	1,120
1925	484	369	614	256	2,200	2,140	1,500	936	490	573	496	322	855
1926	398	1,030	872	820	743	1,850	2,900	995	426	522	442	359	922
1927	611	1,660	843	1,010	1,160	2,910	1,030	1,170	690	354	925	757	1,090
1928	1,340	3,800	2,550	1,320	1,610	1,740	1,540	1,650	1,340	2,070	1,310	1,780	1,780
1929	454	356	409	641	526	2,730	3,310	1,700	423	239	157	161	927
1930	209	321	507	610	674	1,490	1,050	599	870	492	259	198	606
1931	141	369	291	220	299	1,080	2,230	1,380	1,600	554	357	275	732
1932	228	235	555	1,390	1,080	756	2,980	727	552	530	345	260	800
1933	512	1,980	779	982	949	1,550	3,940	1,080	560	209	563	2,230	1,270
1934	767	701	755	1,160	508	2,132	2,847	1,478	891	441	331	901	1,078
1935	931	1,316	1,440	1,518	862	2,233	1,483	1,072	755	544	245	227	1,055
1936	201	417	615	934	494	5,291	2,535	982	352	211	236	259	1,040
1937	368	474	1,116	2,063	1,535	1,171	2,471	1,875	1,215	810	675	1,150	1,240
1938	1,233	1,351	1,278	1,606	1,618	1,301	1,308	911	1,160	1,638	1,512	3,543	1,534
1939	1,059	935	2,236	840	1,264	2,029	3,721	921	391	254	229	181	1,169
1940	244	659	491	374	340	845	5,207	1,960	1,220	574	279	321	1,038
1941	223	756	787	792	917	681	1,403	541	527	334	267	322	625
1942	237	365	685	795	537	2,506	1,661	1,029	802	757	425	435	856
1943	699	1,840	1,506	1,283	1,286	2,629	1,918	2,462	1,223	518	476	261	1,343
1944	511	1,257	641	312	504	1,725	2,328	981	704	463	365	437	834
1945	367	584	918	1,074	678	3,225	2,173	2,802	1,764	2,302	1,461	791	1,520
1946	560	888	1,117	1,584	999	2,337	973	1,382	1,373	598	348	289	1,039
1947	614	396	352	815	1,228	2,085	2,733	1,854	844	477	314	264	995
1948	190	982	493	374	693	3,235	2,086	1,921	2,093	1,158	416	254	1,158
1949	226	448	784	4,490	1,808	1,842	1,424	1,149	496	309	187	205	1,115
1950	202	238	685	1,273	931	1,510	2,044	1,156	1,128	396	266	247	838

Monthly and yearly runoff, in inches													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1912	-	-	-	-	-	-	-	-	-	-	0.59	0.56	-
1913	1.08	2.09	2.57	4.20	2.06	4.92	4.27	1.67	0.95	0.35	.29	.32	24.77
1914	1.33	1.74	1.66	.94	1.19	4.36	6.74	3.34	.72	.56	.46	.35	23.39
1915	.22	.21	.24	2.03	3.34	1.61	1.96	1.12	.59	2.61	2.41	1.07	17.41
1916	.82	.78	3.16	4.14	3.19	2.51	6.40	2.08	1.42	1.63	.81	.79	27.73
1917	.71	.86	1.67	1.82	.98	3.83	3.78	2.13	1.82	1.03	.52	.41	19.56
1918	.50	.79	.63	.45	1.78	4.92	3.28	2.10	.98	.49	.34	.77	17.03
1919	.83	1.13	1.97	2.35	.94	3.94	4.13	3.32	1.03	.80	.43	.71	21.58
1920	.66	2.19	2.35	.69	.46	5.50	7.59	2.72	1.52	.93	1.34	.86	26.61
1921	2.06	2.09	4.56	2.13	1.25	5.04	4.12	1.79	.65	.67	.61	.42	25.39
1922	.44	.97	1.81	.94	1.16	4.32	5.13	2.99	2.21	1.31	1.15	.98	23.41
1923	.68	.57	.56	2.19	1.27	3.88	4.22	2.29	1.26	.65	.55	.58	18.70
1924	1.31	1.96	3.64	3.23	1.01	1.40	5.95	2.66	1.07	.47	.49	1.03	24.22
1925	.88	.65	1.12	.47	3.62	3.91	2.64	1.71	.86	1.05	.89	.57	18.37

Monthly and yearly runoff, in inches, of Housatonic River at Falls Village, Conn.--Continued

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1926	.73	1.82	1.59	1.50	1.23	3.38	5.12	1.81	.75	.46	.81	.63	19.83
1927	1.11	2.93	1.53	1.84	1.92	5.30	1.82	2.13	1.22	.65	1.68	1.34	23.47
1928	2.44	6.70	4.65	2.43	2.75	2.08	5.07	2.81	2.91	2.44	3.78	2.31	38.35
1929	.83	.63	.75	1.18	.87	4.98	5.85	3.10	.75	.44	.29	.28	19.93
1930	.38	.57	.92	1.11	1.11	2.72	1.85	1.09	1.54	.90	.47	.55	13.01
1931	.26	.65	.53	.40	.49	1.97	3.94	2.51	2.82	1.01	.65	.49	15.72
1932	.42	.42	1.01	2.54	1.84	1.38	5.27	1.33	.97	.97	.63	.46	17.24
1933	.93	3.49	1.42	1.79	1.56	2.82	6.95	1.98	.99	.38	1.03	3.94	17.28
1934	1.40	1.24	1.37	2.12	.84	3.88	5.02	2.70	1.57	.80	.60	1.60	23.14
1935	1.70	2.32	2.63	2.77	1.42	4.07	2.62	1.96	1.33	.99	.45	.40	22.66
1936	.37	.74	.94	1.71	.84	9.65	4.47	1.79	.62	.39	.43	.46	22.41
1937	.67	.84	2.04	3.76	2.53	2.13	4.36	3.42	2.14	1.48	1.23	2.03	26.63
1938	2.25	2.39	2.33	2.93	2.67	2.38	2.31	1.66	2.05	2.99	2.76	6.26	32.98
1939	1.94	1.65	4.08	1.53	2.08	3.70	6.57	1.68	.69	.46	.42	.32	25.12
1940	.44	1.16	.90	.68	.58	1.54	9.19	3.57	2.15	1.05	.51	.57	22.34
1941	.41	1.34	1.44	1.44	1.51	1.24	2.48	.99	.93	.61	.49	.57	13.45
1942	.43	.64	1.24	1.45	.59	4.56	2.93	1.86	1.42	1.58	.77	.77	18.39
1943	1.28	3.25	2.74	2.34	4.40	3.38	4.50	2.16	.96	.87	.46	.46	28.87
1944	.57	2.22	1.16	.57	.86	3.15	4.11	1.79	1.24	.85	.67	.77	17.96
1945	.67	1.03	1.67	1.96	1.11	5.88	3.84	5.11	3.11	4.20	2.66	1.40	32.64
1946	1.02	1.57	2.04	2.89	1.64	4.27	1.72	2.52	2.42	1.09	.64	.51	22.33
1947	1.12	.70	.64	1.49	2.02	3.80	4.82	3.38	1.50	.87	.57	.47	21.38
1948	.35	1.73	.90	.68	1.19	5.90	3.68	3.50	3.69	2.11	.76	.45	24.94
1949	.41	.79	1.43	8.19	2.98	3.36	2.51	2.10	.88	.56	.34	.36	23.91
1950	.37	.42	1.24	2.32	1.53	2.76	3.60	2.11	1.98	.72	.49	.44	17.99

Yearly discharge, in cubic feet per second

Year	W.S.F. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1912	401	-	-	-	-	-	-	-	-
1913	401	a8,110	Mar. 29, 1913	72	1,150	1.82	24.77	1,110	23.76
1914	401	8,830	Mar. 29, 1914	136	1,090	1.72	23.39	900	19.33
1915	401	a5,850	Feb. 26, 1915	24	810	1.28	17.41	1,000	21.50
1916	431	6,960	Apr. 3, 1916	70	1,290	2.04	27.73	1,220	26.21
1917	451	6,000	Mar. 23, 1917	911	911	1.44	19.56	860	18.24
1918	471	4,220	Mar. 23, 1918	25	795	1.26	17.03	887	19.04
1919	501	4,320	Mar. 28, 1919	50	1,000	1.58	21.58	1,060	22.85
1920	501	7,950	Mar. 29, 1920	61	1,240	1.96	26.61	1,400	30.12
1921	521	5,490	Mar. 11, 1921	88	1,180	1.87	25.39	925	19.90
1922	541	5,230	Mar. 9, 1922	71	1,090	1.72	23.41	1,020	22.00
1923	561	5,570	Apr. 6, 1923	105	871	1.58	18.70	1,110	23.80
1924	581	8,390	Apr. 7, 1924	59	1,120	1.77	24.22	927	19.96
1925	601	7,410	Feb. 12, 1925	70	855	1.35	18.37	924	19.86
1926	621	4,370	Apr. 11, 1926	48	922	1.46	19.83	990	21.26
1927	641	5,500	Mar. 17, 1927	50	1,090	1.72	23.47	1,480	31.69
1928	661	11,700	Nov. 5, 1927	179	1,780	2.82	38.35	1,240	26.77
1929	681	6,850	Mar. 17, 1929	45	927	1.47	19.93	912	19.59
1930	696	2,890	June 11, 1930	49	606	.959	13.01	586	12.58
1931	711	4,320	Mar. 30, 1931	32	732	1.16	15.72	751	16.13
1932	726	5,290	Apr. 3, 1932	24	800	1.27	17.24	986	21.23
1933	741	8,160	Sept. 18, 1933	60	1,270	2.01	17.28	1,190	25.45
1934	756	5,400	Mar. 5, 1934	121	1,078	1.71	23.14	1,201	25.78
1935	781	4,560	Jan. 12, 1935	65	1,055	1.67	22.66	841	18.06
1936	801	14,500	Mar. 20, 1936	97	1,040	1.65	22.41	1,110	23.91
1937	821	5,520	May 15, 1937	46	1,240	1.96	26.63	1,400	30.05
1938	851	19,900	Sept. 23, 1938	270	1,534	2.43	32.98	1,567	35.88
1939	871	7,790	Apr. 21, 1939	109	1,169	1.85	25.12	929	19.95
1940	891	9,360	Mar. 31, 1940	124	1,038	1.64	22.34	1,069	23.03
1941	921	2,650	Dec. 30, 1940	115	625	.989	13.45	586	12.57
1942	951	4,720	Mar. 10, 1942	148	856	1.35	18.38	1,086	23.54
1943	971	4,960	Nov. 28, 1942	135	1,343	2.12	28.87	1,189	25.55
1944	1001	4,000	(b)	110	834	1.32	17.96	807	17.38
1945	1031	6,100	Mar. 22, 1945	204	1,520	2.41	32.64	1,579	33.90
1946	1051	5,570	Mar. 10, 1946	129	1,039	1.64	22.33	939	20.16
1947	1081	5,840	Apr. 8, 1947	175	995	1.57	21.38	1,020	21.90
1948	1111	10,100	Mar. 23, 1948	120	1,158	1.83	24.94	1,142	24.59
1949	1141	23,900	Jan. 1, 1949	105	1,113	1.76	23.91	1,086	23.51
1950	1171	3,790	Apr. 6, 1950	98	838	1.33	17.99	-	-

a Maximum daily discharge.

b Nov. 10, 1943, Apr. 26, 1944.

## 336. Tennile River at Dover Plains, N. Y.

Location.--Lat 41°43'00", long. 73°34'10", at upstream side near right end of Tabor's Bridge, about 2,000 ft downstream from Swamp River, about 2 miles downstream from Dover Plains, Dutchess County, and about 7½ miles upstream from Housatonic River.

Drainage area.--189 sq mi (revised).

Gage.--Chain gage or wire-weight gage. Altitude of gage is 370 ft (from topographic map).

Extremes.--1901-04: Maximum discharge, 5,850 cfs Mar. 1, 1902 (gage height, 15.5 ft);

minimum observed, 33.4 cfs May 27, 1903 (gage height, 3.89 ft); minimum daily, 38 cfs May 27, 1903.

## HOUSATONIC RIVER BASIN

Monthly and yearly mean discharge, in cubic feet per second, of Tenmile River at Dover Plains, N. Y.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1902	232	179	751	516	*355	*1,273	502	308	*133	242	*142	151	*401
1903	363	225	778	499	688	935	504	94	627	296	312	221	461
1904	645	*219	-	-	-	-	-	-	-	-	-	-	-

\* Revised.

† Not previously published; partly estimated on basis of weather records and records for nearby stations.

## Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1902	1.42	1.06	4.58	3.15	*1.96	*7.77	2.96	1.88	*0.78	1.47	0.87	0.89	*28.79
1903	2.22	1.33	4.75	3.05	3.79	5.70	2.97	.58	3.70	1.80	1.91	1.30	33.10
1904	3.93	*1.29	-	-	-	-	-	-	-	-	-	-	-

\* Revised.

† Not previously published; see footnote to preceding table.

## Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches	
		Discharge	Date							
1902	97	\$5,850	Mar. 1, 1902	*55	*401	*2.12	*28.79	*418	*50.03	
1903	97	\$5,290	Feb. 28, 1903	*58	461	*2.44	*33.10	-	-	
1904	97	-	-	-	-	-	-	-	-	

\* Revised.

† Corrected.

‡ Not previously published.

## 337. Tenmile River near Gaylordsville, Conn.

Location.--Lat 41°39'32", long. 73°31'44", on right bank 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.

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.--21 years (1929-50), 278 cfs.

Extremes.--1929-50: Maximum discharge, 12,500 cfs Sept. 22, 1938 (gage height, 12.77 ft); minimum, 10 cfs Sept. 24, 26, 1939 (gage height, 0.52 ft); minimum daily, 11 cfs Sept. 23-26, 1939.

## Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	*70	*100	*200	200	245	438	316	137	150	109	33.5	71.1	*172
1931	35.5	160	124	125	211	548	578	463	651	170	72.5	39.1	264
1932	28.3	40.2	85.1	218	266	224	672	212	144	103	58.4	55.4	174
1933	132	771	268	277	296	613	881	266	74.6	28.9	117	418	344
1934	175	143	162	490	134	679	630	438	154	51.9	33.0	122	269
1935	181	319	349	314	312	598	331	200	154	73.5	29.5	23.5	240
1936	19.0	47.6	60.0	222	94.7	1,671	616	229	111	34.4	19.9	21.4	264
1937	55.3	67.1	365	709	446	367	491	486	500	231	82.1	174	332
1938	267	389	371	608	432	322	344	225	388	998	540	1,082	497
1939	*308	*234	*737	*307	*586	*664	*883	*236	*103	*41.3	*29.7	*17.9	*344
1940	39.0	*116	89.4	132	126	603	1,164	415	339	150	57.9	87.5	276
1941	79.7	251	313	271	435	300	318	124	228	146	57.8	30.4	211
1942	26.5	45.0	124	164	255	651	299	206	191	212	80.3	47.8	192
1943	81.5	387	502	467	524	701	355	505	305	138	56.2	36.2	337
1944	73.3	365	196	112	219	532	515	266	233	122	40.8	35.4	225
1945	34.5	90.8	249	342	226	1,069	505	779	476	481	328	288	428
1946	191	249	459	508	241	518	239	269	308	147	66.4	46.9	271
1947	103	69.2	73.3	212	272	683	496	448	227	104	44.2	35.7	230
1948	27.0	294	134	108	292	1,095	646	403	447	*213	68.0	23.1	312
1949	25.0	57.1	208	1,054	520	452	343	384	102	41.6	24.1	19.8	269
1950	25.5	36.8	108	260	295	507	401	308	392	117	79.6	51.3	214

\* Revised.

† Corrected.

‡ Not previously published; estimated on basis of records for stations on Wappinger Creek near Wappingers Falls, N. Y., and Naugatuck River near Naugatuck, Conn.

Monthly and yearly runoff, in inches, of Tenmile River near Gaylordsville, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1930	\$0.40	\$0.55	\$1.13	1.13	1.25	2.48	1.73	0.77	0.82	0.62	0.19	0.39	\$11.46
1931	.20	.87	.70	.71	1.07	3.10	3.16	2.62	3.56	.96	.41	.21	17.57
1932	.16	.22	.48	1.23	1.40	1.27	3.67	1.20	.79	.58	.33	.30	11.63
1933	.75	4.22	1.51	1.57	1.51	3.46	4.82	1.50	.41	.16	.66	2.29	22.86
1934	.99	.78	.92	2.77	.68	3.84	3.45	2.48	.84	.29	.19	.67	17.90
1935	1.02	1.74	1.97	1.76	1.59	3.38	1.81	1.13	.84	.42	.17	.13	15.98
1936	.11	.26	.34	1.26	.50	9.44	3.37	1.29	.61	.19	.11	.12	17.60
1937	.31	.37	2.06	4.01	2.28	2.19	2.69	2.74	2.73	1.30	.46	.95	22.09
1938	1.51	2.13	2.10	3.44	2.21	1.82	1.89	1.27	2.12	5.64	3.06	5.91	33.10
1939	*1.74	*1.28	*4.16	*1.73	*2.99	*3.75	*4.83	*1.34	*.56	*.23	*.17	*.10	*22.88
1940	.22	†.63	.50	.75	.67	3.41	6.37	2.34	1.85	.85	.33	.48	†18.40
1941	.45	1.37	1.76	1.53	2.22	1.70	1.74	.70	1.25	.83	.33	.17	14.05
1942	.15	.25	.70	.95	1.50	3.69	1.64	1.16	1.04	1.20	.45	.26	12.78
1943	.46	2.12	2.84	2.64	2.58	3.97	1.94	2.86	1.67	.78	.32	.20	22.48
1944	.41	2.00	1.11	.63	1.15	3.01	2.81	1.50	1.27	.69	.23	.19	15.00
1945	.19	.50	1.41	1.94	1.16	6.04	2.77	4.40	2.60	2.72	1.86	1.57	27.18
1946	1.08	1.36	2.59	2.87	1.23	2.92	1.30	1.52	1.68	.83	.37	.26	18.01
1947	.58	.58	.41	1.20	1.38	3.86	2.71	2.54	1.24	.59	.25	.20	15.34
1948	.15	1.61	.76	.61	1.54	6.19	3.54	2.28	2.44	1.20	.38	.13	20.83
1949	.14	.51	1.18	5.96	2.66	2.56	1.87	2.17	.56	.24	.14	.11	17.90
1950	.14	.20	.61	1.46	1.51	2.87	2.20	1.74	2.14	.66	.45	.28	14.26

\* Revised.

† Corrected.

‡ Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1930	696, 871	980	Mar. 9, 1930	-	†172	‡0.843	‡11.46	168	11.15
1931	711, 871	1,980	June 17, 1931	28	264	1.29	17.57	250	16.66
1932	726, 871	2,050	Apr. 12, 1932	18	174	‡.853	11.63	259	17.25
1933	741, 871	3,090	Nov. 20, 1932	15	344	1.69	22.86	286	19.07
1934	756, 871	-	-	22	269	1.32	17.90	300	19.94
1935	781	1,580	Jan. 10, 1935	14	240	1.18	15.98	180	11.96
1936	801	10,200	Mar. 12, 1936	13	264	1.29	17.60	294	19.63
1937	821	2,080	Jan. 25, 1937	25	332	1.63	22.09	377	25.09
1938	851	12,500	Sept. 22, 1938	71	497	2.44	33.10	*519	*34.54
1939	871, 1201	*2,630	Dec. 6, 1938	*9	*344	*1.69	*22.88	*256	*17.05
1940	891	5,280	Mar. 31, 1940	20	276	1.35	†18.40	309	20.63
1941	921	2,370	Feb. 8, 1941	18	211	1.03	14.05	173	11.57
1942	951	1,600	Mar. 22, 1942	19	192	‡.941	12.76	257	17.08
1943	971	2,640	Dec. 31, 1942	24	337	1.65	22.48	309	20.58
1944	1001	2,640	Mar. 24, 1944	14	225	1.10	15.00	204	13.58
1945	1031	1,950	Mar. 4, 1945	22	408	2.00	27.16	452	30.09
1946	1051	1,210	Jan. 7, 1946	20	271	1.33	18.01	216	14.35
1947	1081	4,410	Mar. 15, 1947	28	230	1.13	15.34	248	16.49
1948	1111	3,510	Mar. 22, 1948	17	312	1.53	20.83	299	19.94
1949	1141	6,360	Jan. 1, 1949	12	269	1.32	17.90	259	17.22
1950	1171	1,410	Mar. 9, 1950	19	214	1.05	14.26	-	-

\* Revised.

† Corrected.

‡ Not previously published.

## 338. Housatonic River at Gaylordsville, Conn.

Location.--Lat 41°39'11", long. 73°29'25", on left bank at Gaylordsville, Litchfield County, 0.4 mile downstream from hydroelectric plant of Connecticut Light & Power Co., and  $1\frac{1}{2}$  miles downstream from Tenmile River.

Drainage area.--994 sq mi.

Supplemental records available.--October 1900 to November 1914, gage heights from chain gage on covered bridge half a mile downstream. Daily discharges are fragmentary or indicated as not representative of the mean for the day.

Gage.--Water-stage recorder. Datum of gage is 236.78 ft above mean sea level, datum of 1929.

Average discharge.--10 years (1940-50), 1,531 cfs.

Extremes.--1900-14, 1940-50: 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 observed in 1902. Flood of Sept. 22, 1938, reached a stage of 14.5 ft, from flood-marks, at present site (discharge, 37,000 cfs, by computation of flow over dam  $2\frac{1}{2}$  miles upstream adjusted for flow from intervening area).

Remarks.--Ordinary flow regulated by power plants above station.

Monthly and yearly mean discharge, in cubic feet per second, of Housatonic River at Gaylordsville, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	422	512	-
1941	401	1,243	1,387	1,348	1,719	1,269	2,112	889	1,013	667	405	406	1,065
1942	306	482	918	1,136	990	3,817	2,257	1,534	1,240	1,149	557	510	1,245
1943	850	2,496	2,283	1,974	2,128	3,957	2,635	3,441	1,816	805	588	343	1,943
1944	463	1,873	1,000	535	898	2,686	3,320	1,557	1,192	713	461	541	1,267
1945	448	748	1,341	1,660	1,174	5,299	3,178	4,283	2,819	3,174	2,104	1,299	2,306
1946	936	1,371	1,925	2,512	1,457	3,303	1,407	1,850	1,931	864	475	370	1,537
1947	773	528	475	1,130	1,699	3,201	3,643	2,595	1,299	649	360	327	1,388
1948	229	1,398	694	575	1,180	5,085	3,227	2,639	2,865	1,555	525	291	1,686
1949	264	542	1,145	6,599	2,698	2,647	2,067	1,857	706	596	256	275	1,620
1950	290	334	890	1,740	1,483	2,367	2,680	1,799	1,940	635	422	361	1,258

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1940	-	-	-	-	-	-	-	-	-	-	0.49	0.57	-
1941	0.46	1.40	1.61	1.57	1.80	1.48	2.36	1.03	1.14	0.77	.47	.46	14.55
1942	.36	.54	1.07	1.31	1.04	4.43	2.53	1.78	1.40	1.34	.65	.57	17.02
1943	.99	2.80	2.65	2.29	2.23	4.59	2.96	3.99	2.04	.93	.68	.38	26.53
1944	.54	2.10	1.16	.62	.97	3.11	3.73	1.81	1.34	.83	.53	.61	17.35
1945	.52	.84	1.56	1.92	1.23	6.14	3.57	4.97	3.17	3.68	2.44	1.46	31.50
1946	1.09	1.54	2.24	2.92	1.53	3.83	1.58	2.14	2.16	1.00	.55	.42	21.00
1947	.90	.59	.55	1.31	1.78	3.71	4.08	3.01	1.46	.75	.44	.37	18.95
1948	.27	1.57	.80	.67	1.26	5.88	3.63	3.06	3.21	1.80	.61	.33	23.09
1949	†.31	†.61	1.33	7.86	2.82	3.07	2.32	2.16	†.79	†.46	†.30	†.31	†22.14
1950	.34	.37	1.03	2.02	1.55	2.74	3.24	2.09	2.18	.74	.49	.40	17.19

† Corrected.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Discharge	Momentary maximum Date	Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
1940	921	-	-	-	-	-	-	-	-
1941	921	5,370	Feb. 8, 1941	200	1,065	1.07	14.55	955	13.05
1942	951	6,590	Mar. 10, 1942	231	1,245	1.25	17.02	1,572	21.49
1943	971	7,890	Nov. 26, 1942	232	1,943	1.95	26.53	1,750	23.89
1944	1001	7,210	Mar. 24, 1944	60	1,267	1.27	17.35	1,202	16.47
1945	1031	8,830	Mar. 21, 1945	186	2,306	2.32	31.50	2,448	33.45
1946	1051	7,890	Mar. 10, 1946	178	1,537	1.55	21.00	1,330	18.17
1947	1081	10,800	Mar. 15, 1947	234	1,388	1.40	18.95	1,432	19.55
1948	1111	16,500	Mar. 22, 1948	65	1,685	1.70	23.09	1,656	22.70
1949	1141	32,300	Jan. 1, 1949	60	1,620	1.63	†22.14	1,583	21.63
1950	1171	5,630	Mar. 30, 1950	173	1,258	1.27	17.19	-	-

† Corrected.

## 339. Lake Candlewood (Rocky River Reservoir) near New Milford, Conn.

Location.--Lat 41°35'00", long. 73°26'00" on Rocky River, a tributary of the Housatonic River, 2 miles west of New Milford, Litchfield County.

Drainage area.--40.4 sq mi

Remarks.--Completed in 1928 for storage of water for power. Usable capacity, 6,210,000,000 cu ft.

Cooperation.--Records furnished by The Connecticut Light & Power Co.

Month-end contents, in millions of cubic feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1928	-	-	-	-	-	-	-	-	-	-	-	-
1929	3,793	3,793	3,848	4,036	4,170	4,750	5,368	5,931	6,052	5,943	3,749	3,837
1930	5,487	5,451	5,463	5,297	5,156	5,606	5,678	5,738	5,979	5,967	5,919	5,498
1931	5,511	4,923	4,970	4,464	4,487	5,074	6,064	6,186	6,198	6,137	6,101	5,907
1932	5,475	4,946	4,784	5,168	4,912	5,004	5,895	6,161	6,101	6,003	5,919	5,630
1933	5,535	6,101	4,761	4,612	4,738	5,297	5,810	6,101	5,895	5,714	5,774	5,895
1934	5,440	4,946	4,923	4,993	4,510	5,274	6,247	6,186	6,174	6,101	5,931	6,161
1935	5,895	5,895	5,321	4,784	4,670	5,380	5,834	6,113	6,137	5,846	5,463	5,297
1936	5,016	4,912	4,750	4,958	5,016	5,919	6,186	6,125	6,101	5,738	5,416	5,250
1937	5,156	4,670	4,981	5,487	5,714	5,883	6,149	6,234	5,979	5,846	5,547	5,463
1938	5,295	5,411	5,267	5,340	5,392	5,318	5,511	5,618	5,738	6,045	6,106	6,093
1939	5,967	5,738	5,955	5,250	5,156	5,475	6,040	5,690	5,428	5,333	5,274	5,168
1940	4,984	4,715	4,487	4,396	4,555	4,970	5,926	6,203	6,088	5,986	5,702	5,278
1941	4,582	4,635	4,676	4,715	5,000	5,314	5,583	5,599	5,871	5,673	5,470	5,187
1942	4,407	4,578	5,016	5,535	5,810	6,247	5,979	6,174	6,137	6,125	6,064	5,948
1943	5,890	6,057	5,887	5,571	5,368	5,902	6,016	6,242	6,028	5,815	5,767	5,768
1944	5,757	6,035	5,678	5,432	5,421	5,955	6,352	6,210	6,071	5,999	5,960	6,113
1945	5,919	6,076	6,173	5,619	5,121	5,726	6,149	6,271	6,186	6,332	6,284	6,064
1946	5,798	5,726	5,967	5,798	5,535	5,535	5,822	6,357	6,113	5,967	5,774	5,227
1947	5,368	4,923	4,238	4,238	4,807	5,822	6,284	6,296	6,198	6,308	5,931	5,404
1948	4,784	5,535	5,250	3,992	3,793	5,086	6,210	6,357	6,357	6,161	6,113	5,642
1949	4,819	4,761	5,250	6,210	6,308	6,161	6,320	6,234	5,931	5,931	5,834	5,859
1950	5,810	5,842	5,919	5,822	5,571	5,547	5,738	6,132	6,064	5,950	5,755	5,250



## 340. Still River near Lanesville, Conn.

Location.--Lat 41°3'12", long. 73°25'07", at highway bridge 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.

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.--19 years (1931-50), 113 cfs.

Extremes.--1931-50: Maximum discharge, 4,410 cfs Sept. 22, 1938 (gage height, 10.88 ft), from rating curve extended above 1,900 cfs by logarithmic plotting; minimum, 5 cfs Oct. 20, 1946.

Remarks.--Some diurnal fluctuation caused by mills at Brookfield and Danbury.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1932	20.8	27.5	48.3	89.5	102	110	153	71.4	35.6	30.6	28.4	19.7	\$61.3
1933	47.3	233	101	101	111	233	272	86.8	44.2	30.4	117	121	124
1934	69.8	54.9	71.1	176	49.6	210	241	146	92.5	41.5	30.1	153	112
1935	151	143	133	129	131	211	104	57.5	60.2	36.5	18.6	28.6	100
1936	21.1	34.5	31.9	101	50.9	467	214	86.7	77.0	35.9	31.3	36.5	99.4
1937	49.3	44.1	177	277	189	149	183	165	109	76.0	105	129	138
1938	170	206	161	241	173	118	124	84.7	71.7	203	225	380	180
1939	141	104	258	177	278	291	309	87.4	33.9	24.9	24.5	28.1	146
1940	35.3	86.3	56.2	107	73.5	255	319	189	163	69.5	35.5	39.6	119
1941	36.7	101	107	80.6	240	117	98.7	45.2	65.9	104	39.3	18.4	86.8
1942	26.1	54.2	95.9	90.4	132	265	104	109	62.2	52.8	70.0	42.6	92.0
1943	55.0	143	156	149	198	240	142	181	162	47.7	28.9	22.1	127
1944	56.8	117	51.4	62.5	94.5	201	204	93.5	50.2	35.3	32.9	93.5	90.6
1945	50.5	115	166	137	147	290	144	215	114	180	68.7	57.0	141
1946	53.8	95.6	177	191	101	175	89.1	152	138	67.4	75.0	44.7	114
1947	96.0	46.9	56.8	86.4	110	215	165	179	115	62.0	61.1	48.3	104
1948	27.4	212	102	74.9	321	376	250	184	164	90.1	44.9	15.8	138
1949	18.3	49.7	73.5	299	188	187	160	164	47.7	26.4	30.6	21.7	105
1950	22.9	23.7	50.2	61.4	83.4	169	111	104	75.9	126	45.7	33.0	75.6

\* Not previously published; partly estimated on basis of weather records and records for station on Tennille River near Gaylordsville, Conn.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1932	*0.35	0.45	0.81	1.51	1.61	1.86	2.49	1.20	0.58	0.52	0.48	0.32	\$12.18
1933	.80	3.79	1.70	1.70	1.69	3.92	4.43	1.46	.72	.51	1.97	1.98	24.67
1934	1.18	.89	1.20	2.96	.75	3.54	3.93	2.49	1.51	.70	.51	2.49	22.15
1935	2.54	2.33	2.24	2.17	1.99	3.55	1.70	.97	.98	.65	.32	.47	19.91
1936	.36	.56	.54	1.70	.80	7.86	3.48	1.46	1.25	.60	.53	.59	19.73
1937	.63	.72	2.97	4.66	2.87	2.51	2.98	2.78	1.77	1.28	1.76	2.10	27.23
1938	2.86	3.36	2.71	4.06	2.64	1.98	2.02	1.45	1.17	3.41	5.79	6.39	35.61
1939	2.38	1.70	4.35	2.97	4.23	4.90	5.03	1.48	.55	.42	.41	.46	28.88
1940	.59	1.41	.95	1.80	1.15	4.29	5.20	3.18	2.66	1.16	.60	.64	23.63
1941	.62	1.64	1.80	1.36	3.64	1.97	1.61	.76	1.07	1.75	.66	.30	17.18
1942	.44	.88	1.61	1.52	2.01	4.46	1.70	1.83	1.01	.89	1.18	.69	18.22
1943	.93	2.33	2.63	2.51	3.01	4.04	2.31	3.04	2.63	.80	.49	.56	25.08
1944	.96	1.91	.86	1.05	1.49	3.38	3.32	1.57	.82	.56	.55	1.52	17.99
1945	.85	1.87	2.79	2.31	2.24	4.88	2.34	3.62	1.85	3.05	1.15	.93	27.86
1946	.90	1.56	2.97	3.22	1.53	2.94	1.45	2.56	2.24	1.13	1.26	.73	22.49
1947	1.61	.76	.96	1.45	1.68	3.62	2.69	3.01	1.87	1.04	1.03	.79	20.51
1948	.46	3.45	1.72	1.28	1.91	6.33	4.07	3.10	2.67	1.52	.75	.26	27.50
1949	.31	.81	1.23	5.03	2.85	3.15	2.61	2.76	.78	.44	.52	.35	20.84
1950	.39	.89	.85	1.03	1.27	2.85	1.81	1.75	1.24	2.12	.77	.54	18.01

\* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1932	726, 801	605	Mar. 29, 1932		\$11	\$61.3	\$0.895	\$12.18	\$84.8	\$16.86	
1933	741, 801	950	Nov. 20, 1932		13	124	1.81	24.67	\$109	\$21.65	
1934	756, 801	730	Apr. 1, 1934		15	112	1.46	22.15	131	25.99	
1935	781, 801	476	Oct. 1, 1934		12	100	1.66	19.91	71.9	14.26	
1936	801, 851	3,930	Mar. 12, 1936		16	99.4	1.45	19.73	115	22.79	
1937	821, 851	710	Dec. 21, 1936		22	138	2.01	27.23	160	31.64	
1938	851	4,410	Sept. 22, 1938		29	180	2.63	35.61	177	35.11	
1939	871	770	Dec. 7, 1938		17	146	2.13	28.88	118	23.40	
1940	891	1,730	Mar. 15, 1940		22	119	1.74	23.63	125	24.74	
1941	921	3,800	Feb. 8, 1941		14	86.8	1.27	17.18	81.1	16.05	
1942	951	730	Mar. 4, 1942		17	92.0	1.34	18.22	107	21.18	
1943	971	850	June 3, 1943		16	127	1.85	25.08	116	22.92	
1944	1001	\$875	Mar. 8, 1944		16	90.6	1.32	17.99	99.6	19.77	
1945	1031	1,110	Feb. 28, 1945		28	141	2.06	27.86	140	27.78	
1946	1051, 1081	660	May 28, 1946		20	114	1.66	22.49	103	20.39	
1947	1081	925	Mar. 15, 1947		16	104	1.52	20.51	115	22.81	
1948	1111	1,100	Mar. 20, 1948		8	138	2.01	27.50	122	24.22	
1949	1141	1,110	Jan. 1, 1949		10	105	1.53	20.84	101	20.12	
1950	1171	528	July 12, 1950		17	75.6	1.10	15.01	-	-	

† Corrected.

\* Not previously published.

## HOUSATONIC RIVER BASIN

## 341. Shepaug Reservoir at Woodville, Conn.

Location.--Lat 41°43'24", long. 73°17'37", on Shepaug River 1 mile north of Woodville, Conn.

Drainage area.--38.0 sq mi.

Remarks.--Completed in September 1933 for storage of water for municipal supply. Usable capacity, 77,000,000 cu ft.

Cooperation.--Records furnished by Bureau of Engineering, city of Waterbury, Conn.

Month-end contents, in millions of cubic feet												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1933	-	-	-	0	11.39	26.46	0.40	2.14	4.72	4.72	3.37	5.63
1934	22.95	78.68	98.42	97.42	97.71	100.96	98.04	90.47	96.41	88.63	92.14	13.53
1935	37.53	100.45	97.54	97.75	98.86	98.90	98.00	97.16	96.91	96.87	84.61	0.2
1936	0.3	34.95	76.40	98.51	97.37	99.12	97.50	95.40	96.66	93.25	95.32	85.47
1937	96.66	96.58	99.24	98.82	97.83	97.96	98.26	97.63	99.20	96.70	97.04	96.75
1938	98.56	100.41	97.46	99.12	97.33	98.60	97.92	97.25	98.60	98.60	96.87	98.26
1939	52.56	97.50	97.46	97.42	102.08	100.49	91.74	97.08	96.95	70.53	96.58	96.41
1940	85.74	96.62	96.75	96.75	97.04	102.47	98.26	102.26	98.60	95.91	96.49	84.92
1941	58.73	97.03	99.29	94.40	97.08	98.86	97.12	96.49	95.82	96.91	96.33	95.61
1942	78.60	75.41	97.12	103.35	97.21	98.86	97.25	97.25	97.00	96.79	94.52	80.93
1943	96.33	99.59	101.35	97.42	98.90	98.86	90.72	98.56	96.24	78.30	67.76	70.08
1944	96.75	97.67	84.58	28.02	53.85	98.77	98.60	96.58	97.67	72.65	33.35	58.70
1945	59.56	99.29	97.75	96.66	100.49	98.43	98.94	97.96	97.83	98.86	97.33	96.74
1946	97.16	98.00	99.29	97.50	97.42	97.79	97.71	98.51	97.92	95.24	95.99	82.06
1947	46.75	96.12	96.58	100.49	96.70	98.51	98.17	95.34	96.20	95.99	61.48	33.19
1948	25.13	96.58	96.54	96.37	97.75	99.46	97.83	99.29	92.35	94.52	76.32	48.65
1949	25.82	39.58	109.82	98.09	98.34	97.96	97.67	97.42	70.53	43.03	21.55	20.93
1950	21.08	20.08	81.46	98.17	97.25	100.23	98.77	98.56	96.75	89.23	89.66	62.43

## 342. Shepaug River at Woodville, Conn.

Location.--Lat 41°43'24", long. 73°17'37", at 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.

Gage.--Nonrecording gages.

Average discharge.--15 years (1935-50), 80.7 cfs (adjusted).

Extremes.--Maximum discharge, 6,000 cfs Sept. 21, 1938; no flow at times (result of regulation).

Remarks.--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 the spillway, flow computed from gage readings at permanent artificial control below the dam, which was calibrated with the sharp-crested weir. Water diverted from Shepaug Reservoir for municipal supply of Waterbury. Flow regulated by Shepaug Reservoir (see above).

Cooperation.--Records furnished by Bureau of Engineering, city of Waterbury, Conn.

Monthly and yearly mean discharge, in cubic feet per second (observed)													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	3.52	*0.077	1.43	61.2	24.9	494	159	74.4	42.3	2.32	3.53	2.96	72.9
1937	13.2	20.8	147	212	102	74.6	148	146	148	58.0	36.5	55.7	96.7
1938	147	154	95.4	189	101	81.7	103	59.2	73.2	214	104	298	135
1939	74.9	37.7	182	64.9	123	192	265	40.8	9.90	6.36	3.39	4.91	83.3
1940	14.8	30.2	33.2	46.4	30.3	126	417	184	109	30.6	2.69	3.18	85.2
1941	17.7	57.3	78.3	57.5	114	52.0	96.9	44.9	58.0	58.7	10.7	3.42	53.6
1942	6.08	2.40	22.8	62.8	63.2	254	85.2	86.6	66.3	76.6	16.8	3.83	62.4
1943	4.12	123	107	69.3	103	222	128	179	61.4	20.4	2.46	2.40	85.0
1944	3.78	94.0	21.9	0	0	129	178	42.2	47.2	8.45	2.40	2.40	44.0
1945	2.40	24.0	90.4	95.0	44.8	290	151	200	164	111	66.0	29.8	106
1946	20.3	70.4	112	141	50.5	168	64.0	94.2	77.5	18.9	2.59	2.40	68.8
1947	7.33	1.67	5.00	43.5	82.0	*187	150	106	52.3	16.0	2.40	2.40	*54.4
1948	2.40	12.2	10.4	9.16	51.4	280	142	114	130	22.7	2.40	2.40	63.4
1949	2.40	*0.63	110	282	141	119	91.4	114	7.70	2.60	2.37	2.50	72.8
1950	2.30	*0.60	0	75.7	67.4	164	125	92.3	149	15.3	3.42	2.40	57.9

\* Revised.

† Corrected.

Monthly and yearly runoff, in inches (adjusted), of Shepaug River at Woodville, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1936	0.11	*0.39	0.51	2.20	0.69	14.99	4.64	2.24	1.34	0.23	0.19	0.20	*27.73
1937	0.74	.61	4.48	6.43	2.79	2.26	4.34	4.43	4.37	1.73	1.11	1.63	34.92
1938	4.48	4.55	2.86	5.76	2.77	2.49	3.02	1.79	2.21	6.55	3.25	8.84	48.57
1939	1.75	1.62	5.52	1.97	3.43	5.80	7.69	1.30	.47	.23	.54	.14	30.46
1940	.33	1.01	1.01	1.41	.86	3.88	12.16	5.62	3.17	1.05	.36	.31	31.17
1941	.49	2.16	2.42	1.70	3.16	1.60	2.82	1.49	1.87	1.80	.32	.09	19.92
1942	.05	.40	1.15	1.97	1.67	7.74	2.49	2.63	1.94	2.32	.52	.31	23.19
1943	.62	3.64	3.33	2.05	2.85	6.73	3.67	5.52	1.87	.80	.16	.10	31.34
1944	.42	2.77	.90	.43	.82	4.55	5.22	1.53	1.60	.48	.17	.47	19.36
1945	.28	1.26	2.72	3.02	1.59	8.77	4.43	6.06	4.82	3.37	2.18	1.09	59.61
1946	1.05	2.15	3.40	4.24	1.38	5.10	1.87	3.00	2.33	1.07	.56	.45	26.60
1947	.87	.47	.52	1.63	2.26	15.80	4.41	3.33	1.76	.80	.34	.19	†22.38
1948	.12	1.55	.69	.61	1.15	8.52	4.14	3.55	3.73	1.01	.38	.11	25.56
1949	.12	.43	4.55	8.44	3.86	3.61	2.69	3.46	.43	.17	.10	.11	27.97
1950	.15	.20	1.46	3.12	2.03	5.00	3.64	2.94	4.41	.62	.62	.29	24.48

\* Revised.

† Corrected.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year		
		Observed			Adjusted			Observed		
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean
		Discharge	Date							
1936	801	4,070	Mar. 12, 1936	0	72.9	*77.5	*2.04	*27.73	87.8	90.9
1937	821	*1,500	May 15, 1937	2.4	96.7	97.7	2.57	34.92	115	115
1938	851	6,000	Sept. 21, 1938	1.4	135	136	3.58	48.57	127	128
1939	871	1,280	Dec. 6, 1938	2.4	85.3	85.1	2.24	30.46	65.0	66.8
1940	891	*1,500	Apr. 8, 1940	2.4	85.2	87.1	2.29	31.17	91.5	94.7
1941	921	*1,150	Feb. 7, 1941	2.4	53.6	55.7	1.47	19.92	43.4	46.0
1942	951	2,050	Mar. 9, 1942	2.4	62.4	64.8	1.71	23.19	79.3	81.6
1943	971	*880	Dec. 30, 1942	2.4	85.0	87.7	2.31	31.34	75.4	77.9
1944	1001	*1,100	Nov. 9, 1943	0	44.0	54.1	1.42	19.36	43.9	54.6
1945	1031	*1,300	Apr. 26, 1945	0	106	111	2.92	39.61	113	117
1946	1051	753	Mar. 9, 1946	2.4	68.8	74.6	1.96	26.60	53.0	61.4
1947	1081	*1,470	Mar. 14, 1947	0	†54.4	†62.5	†1.64	†22.38	†55.3	†63.9
1948	1111	*1,500	Mar. 22, 1948	0	63.4	71.5	1.88	25.56	70.8	79.1
1949	1141	5,160	Dec. 31, 1948	0	72.8	78.2	2.06	27.97	63.5	69.0
1950	1171	1,000	Mar. 9, 1950	0	57.9	68.6	1.81	24.48	-	-

\* Revised.

† Corrected.

## 343. Shepaug River near Roxbury, Conn.

Location.--Lat 41°32'59" long, 73°19'49", on right bank at highway bridge half a mile south of Roxbury Station, 1½ miles southwest of village of Roxbury, Litchfield County, and 2.4 miles upstream from Jack's Brook.

Drainage area.--133 sq mi.

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.--20 years (1930-50), 232 cfs (adjusted).

Extremes.--1930-50: 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, 5 cfs Oct. 8, 1948, Aug. 28 and Sept. 12, 13, 1949.

Remarks.--Diurnal fluctuations from an unknown cause. Water diverted from Shepaug Reservoir for municipal supply of Waterbury and flow regulated by Shepaug Reservoir since 1931. Runoff adjusted for diversion from and change in contents in Shepaug Reservoir (see preceding page).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	417.5	89.6	74.7	76.3	110	342	387	324	512	146	45.9	21.1	†179
1932	15.6	23.8	63.8	188	215	161	459	157	68.9	36.4	62.0	75.4	126
1933	158	681	219	203	225	426	714	219	49.2	13.7	43.7	106.4	254
1934	77.2	61.9	103	333	87.1	520	614	383	112	27.2	15.3	292	219
1935	284	420	377	424	263	567	337	183	114	59.6	21.4	59.6	259
1936	17.6	22.1	37.6	190	84.7	1,379	549	290	147	35.6	19.6	22.8	227
1937	70.3	79.9	394	634	356	285	397	415	362	194	134	211	294
1938	392	430	331	483	355	247	307	192	221	589	391	819	336
1939	246	184	562	245	407	528	732	152	51.3	21.5	47.5	41.6	267
1940	49.6	141	117	139	119	379	1,129	464	287	106	24.2	26.3	247
1941	42.5	162	220	195	340	191	279	114	142	131	48.6	19.1	156
1942	23.5	37.9	102	182	226	645	260	261	202	186	55.7	26.3	184
1943	47.2	313	355	276	341	625	352	531	242	64.4	23.5	12.9	265
1944	30.6	252	90.2	58.3	75.3	378	482	195	104	43.4	17.0	53.2	148
1945	39.5	126	303	297	173	779	407	580	385	325	256	117	317
1946	94.3	182	363	421	212	462	214	259	269	114	55.5	54.5	224
1947	74.8	50.7	51.3	159	274	466	438	310	183	78.4	26.1	20.7	177
1948	12.2	146	82.1	69.4	174	803	487	359	440	138	19.5	13.2	228
1949	9.29	36.5	23.7	872	419	387	306	369	63.7	15.8	9.10	8.06	228
1950	13.5	15.3	79.4	242	245	430	350	237	368	105	31.5	54.3	179

† Not previously published; partly estimated on basis of records for Tenmile River near Gaylordsville.

Monthly and yearly runoff, in inches (adjusted), of Shepaug River near Roxbury, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	\$0.15	0.75	0.65	0.66	0.86	2.99	3.25	2.81	4.30	1.27	0.40	0.18	\$18.25
1932	.13	.20	.55	1.63	1.75	1.40	3.85	1.36	.58	.32	.54	.63	12.94
1933	1.37	5.71	1.90	1.76	1.80	3.75	5.90	1.90	.42	1.12	.37	1.09	26.09
1934	.72	.76	.95	2.88	.68	4.52	5.14	3.30	.96	.25	.14	2.20	22.50
1935	2.54	3.73	3.26	3.68	2.06	4.91	2.82	1.59	.96	.52	.18	.27	26.52
1936	.15	.30	.46	1.75	.68	11.99	4.60	1.73	1.27	.36	.20	.22	23.71
1937	.72	.67	3.42	3.50	2.79	2.47	3.32	3.60	1.05	1.67	1.16	1.77	30.14
1938	3.40	3.62	2.86	4.20	2.77	2.14	2.58	1.66	1.87	5.12	3.41	6.91	40.54
1939	1.98	1.68	4.88	2.12	3.21	4.56	6.11	1.34	.49	.20	.55	.35	27.47
1940	.40	1.22	1.01	1.21	.97	3.30	9.45	4.04	2.41	.96	.29	.28	25.54
1941	.37	1.51	1.92	1.67	2.67	1.66	2.33	1.03	1.25	1.14	.42	.16	16.13
1942	.17	.41	1.03	1.59	1.75	5.60	2.18	2.26	1.70	1.61	.49	.28	19.07
1943	.55	2.63	3.10	2.38	2.68	5.42	2.92	4.64	2.05	.61	.23	.12	27.33
1944	.35	2.11	.85	.63	.83	5.44	4.04	1.76	.93	.44	.16	.56	16.12
1945	.40	1.23	2.62	2.61	1.46	6.74	3.41	5.03	3.22	2.61	2.27	1.04	32.64
1946	.95	1.55	3.15	3.64	1.66	4.00	1.80	2.28	2.28	1.13	.62	.40	23.46
1947	.83	.55	.55	1.46	2.14	4.07	3.67	2.72	1.61	.77	.30	.21	18.88
1948	.12	1.57	.82	.70	1.49	6.98	4.07	3.14	3.67	1.29	.26	.12	24.23
1949	.10	.43	2.40	7.53	3.28	3.56	2.57	3.19	.59	.16	.09	.08	23.78
1950	.14	.18	1.11	2.33	1.97	3.74	2.92	2.10	3.09	.95	.42	.35	19.50

\* Not previously published; see footnote to preceding table.

Note.--Adjusted figures for March 1931 and period February 1935 to September 1935 and water years 1931, 1935-55 not previously published.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Monthly discharge in cfs. per second							Calendar year			
		Water year ending Sept. 30							Calendar year			
		Observed			Mean	Adjusted		Observed		Adjusted		
		Momentary maximum	Minimum day	Mean		Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches	
		Discharge	Date									
1931	801	2,720	June 16, 1931	11	\$179	\$179	\$1.35	\$18.25	172	\$172	\$17.60	
1932	801	1,210	Apr. 1, 1932	9	126	126	.947	12.94	205	205	21.04	
1933	801	3,650	Nov. 19, 1932	6.8	254	\$256	\$1.92	\$26.09	186	\$192	\$19.54	
1934	801	4,150	Mar. 5, 1934	9.2	219	\$220	\$1.65	\$22.50	290	\$290	\$29.60	
1935	801	3,950	Jan. 10, 1935	9.2	259	\$259	\$1.95	\$26.52	175	\$175	\$17.90	
1936	801, 971	*7,480	Mar. 12, 1936	9.6	227	231	1.74	23.71	266	270	27.61	
1937	821, 971	2,420	May 15, 1937	24	294	295	2.22	30.14	345	345	35.21	
1938	851	10,500	Sept. 21, 1938	48	396	397	2.98	40.54	383	384	39.20	
1939	871, 971	2,920	Dec. 6, 1938	7.9	267	269	2.02	27.47	209	211	21.56	
1940	891, 971	3,190	Apr. 9, 1940	12	247	249	1.87	25.54	257	261	26.71	
1941	921, 971	3,190	Feb. 7, 1941	9.0	156	159	1.20	16.13	134	137	13.94	
1942	951, 971	2,830	Mar. 9, 1942	10	184	187	1.41	19.07	230	233	23.74	
1943	971	3,470	(a)	6.6	265	268	2.02	27.33	236	238	24.36	
1944	1001	2,090	Mar. 7, 1944	7.2	148	158	1.19	16.12	156	167	17.06	
1945	1031	2,330	Jan. 1, 1945	28	317	322	2.42	32.84	332	336	34.24	
1946	1051	1,360	Mar. 9, 1946	12	224	230	1.73	23.46	185	193	19.74	
1947	1081	†2,330	Mar. 14, 1947	10	177	185	1.39	18.88	182	191	19.46	
1948	1111	3,100	Mar. 22, 1948	6.5	228	236	1.77	24.23	232	240	24.65	
1949	1141	7,010	Dec. 31, 1948	5.0	228	233	1.75	23.78	213	219	22.28	
1950	1171	1,970	Mar. 8, 1950	8.0	179	190	1.43	19.30	-	-	-	

\* Revised.

† Corrected.

a Not previously published.

a Dec. 30 or 31, 1942.

## 344. Pomperaug River at Southbury, Conn.

Location.--Lat 41°28'50", long. 73°13'50", on right bank 200 ft upstream from highway bridge, three-quarters of a mile west of Southbury, New Haven County, and 5½ miles upstream from mouth.

Drainage area.--75.3 sq mi.

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.--18 years (1932-50), 122 cfs.

Extremes.--1932-50: Maximum discharge, 7,420 cfs Sept. 21, 1938 (gage height, 16.0 ft, from floodmarks), by computation of flow over dam 2 miles downstream; minimum, 3.3 cfs Aug. 27, 1949 (gage height, 2.32 ft).

Remarks.--Some regulation at low flow by mill above station.

Monthly and yearly mean discharge, in cubic feet per second, of Pomperaug River at Southbury, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1932	-	-	-	-	-	-	-	-	-	16.6	30.3	30.0	-
1933	79.9	342	*110	*97.3	114	259	302	*85.2	33.4	13.3	40.2	76.1	*129
1934	45.9	42.0	63.9	206	47.3	237	287	158	61.5	32.9	50.1	*249	*122
1935	154	192	172	150	134	262	135	79.0	71.3	44.5	13.6	22.6	119
1936	10.4	24.1	22.1	97.2	44.6	557	234	77.3	69.7	25.8	15.7	18.1	100
1937	40.8	31.8	203	307	180	152	172	169	109	64.7	157	112	142
1938	162	246	182	261	177	132	155	103	126	272	194	304	193
1939	116	108	272	167	254	268	341	85.5	29.9	16.4	48.8	24.3	144
1940	39.5	98.1	69.7	120	68.2	284	463	210	112	51.4	19.6	19.2	129
1941	17.9	75.8	104	73.4	210	121	98.9	40.3	47.7	31.2	23.1	14.8	70.5
1942	13.9	37.0	85.9	112	143	344	114	162	104	56.8	44.8	23.7	103
1943	43.8	191	220	152	209	284	162	268	125	39.5	15.4	9.9	142
1944	25.3	101	58.4	52.0	82.9	200	231	99.0	45.3	23.4	12.4	58.6	80.4
1945	33.2	129	197	167	160	340	179	267	108	131	85.6	56.2	155
1946	51.6	105	245	231	127	216	96.7	183	159	51.8	37.5	51.6	130
1947	68.5	46.8	47.0	90.9	116	246	201	149	78.4	44.2	17.1	18.5	93.5
1948	13.1	129	72.2	57.6	127	444	285	195	171	68.4	33.0	11.6	134
1949	11.8	31.3	177	590	212	198	155	186	55.2	20.0	14.4	10.1	120
1950	12.3	15.0	47.7	97.8	124	240	143	109	120	97.0	37.8	21.6	88.6

\* Revised.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1932	-	-	-	-	-	-	-	-	-	0.25	0.46	0.44	-
1933	1.22	5.06	*1.68	*1.49	1.57	3.97	4.47	*1.30	0.50	.20	.62	1.13	*23.21
1934	.70	.62	.98	3.16	.65	3.63	4.25	2.42	.91	.50	.46	*3.69	*21.97
1935	2.56	2.84	2.63	2.29	1.85	4.01	2.00	1.21	1.06	.68	.21	.33	21.47
1936	.16	.36	.34	1.49	.64	8.53	3.47	1.19	1.03	.40	.24	.27	18.12
1937	.62	.47	3.11	4.70	2.49	2.53	2.54	2.58	1.62	.99	2.40	1.66	25.51
1938	2.48	3.65	2.79	4.00	2.45	2.02	2.30	1.58	1.86	4.16	2.97	4.51	34.77
1939	1.78	1.60	4.16	2.56	3.51	4.10	5.05	1.31	.44	.25	.75	.36	25.87
1940	.61	1.45	1.07	1.83	.98	4.35	6.86	3.22	1.66	.79	.30	.28	23.40
1941	.27	1.13	1.59	1.12	2.90	1.86	1.46	.62	.71	.48	.35	.22	12.71
1942	.21	.55	1.31	1.72	1.98	5.27	1.68	2.48	1.54	.87	.68	.35	18.84
1943	.67	2.68	3.37	2.33	2.90	4.35	2.40	4.07	1.85	.61	.24	.15	25.62
1944	.39	1.50	.59	.80	1.19	3.07	3.42	1.51	.67	.36	.19	.87	14.56
1945	.51	1.91	3.02	2.56	2.21	5.21	2.66	4.09	1.60	2.01	1.31	.83	27.92
1946	.79	1.55	3.75	3.54	1.76	3.31	1.43	2.80	2.35	.79	.57	.76	23.40
1947	1.05	.69	.72	1.40	1.60	3.77	2.98	2.28	1.16	.68	.26	.27	16.86
1948	.20	1.91	1.11	.88	1.82	6.80	4.22	2.99	2.53	1.05	.50	.18	24.19
1949	.18	.46	2.71	5.97	2.94	3.03	2.30	2.85	.52	.31	.22	.15	21.64
1950	.19	.22	.73	1.50	1.72	3.68	2.12	1.67	1.77	1.49	.58	.32	15.99

\* Revised.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1932	741	-	-	-	-	-	-	-	-
1933	741,1201	*2,980	Nov. 19, 1932	7.0	*129	*1.71	*23.21	*97.3	*17.55
1934	756,1201	5,300	Sept. 17, 1934	11	*122	*1.82	*21.97	*152	*27.50
1935	781	*1,570	Mar. 6, 1935	5.8	119	1.58	21.47	80.5	14.50
1936	801	5,990	Mar. 12, 1936	6.5	100	1.33	18.12	119	21.46
1937	821	*2,200	Dec. 20, 1936	21	142	1.89	25.51	168	50.23
1938	851	7,420	Sept. 21, 1938	40	193	2.56	34.77	185	33.39
1939	871	2,000	Feb. 15, 1939	7.4	144	1.91	25.87	119	21.46
1940	891	3,660	Jan. 15, 1940	5	129	1.71	23.40	129	23.26
1941	921	5,960	Feb. 8, 1941	4.8	70.5	.936	12.71	65.4	11.79
1942	951	2,230	Mar. 3, 1942	5.8	103	1.37	18.64	129	23.29
1943	971	2,340	Dec. 30, 1942	7.5	142	1.89	25.62	118	21.36
1944	1001	2,340	Mar. 7, 1944	4.8	80.4	1.07	14.56	96.9	17.52
1945	1031	3,340	Jan. 1, 1945	17	155	2.06	27.92	158	28.57
1946	1051	1,520	Sept. 30, 1946	10	130	1.73	23.40	110	19.77
1947	1081	2,060	Mar. 14, 1947	11	93.5	1.24	16.86	97.7	17.62
1948	1111	1,960	Mar. 20, 1948	8.5	134	1.78	24.19	135	24.32
1949	1141	5,600	Dec. 31, 1948	5.6	120	1.59	21.64	108	19.43
1950	1171	2,920	Mar. 9, 1950	8.3	88.6	1.18	15.99	-	-

\* Revised.

## 345. Pomperaug River at Bennetts Bridge, Conn.

Location.--Lat 41°26'23", long. 73°15'15", on right bank 1,100 ft upstream from mouth, a quarter of a mile north of Bennetts Bridge, and 2 miles northeast of Sandy Hook, Fairfield County.

Drainage area.--89.3 sq mi.

Gage.--Inclined staff gage. Altitude of gage is 105 ft (from topographic map).

Extremes.--1913-16: Maximum discharge, 2,520 cfs Mar. 2, 1914 (gage height, 7.4 ft); minimum, 7.7 cfs Sept. 20, 1914 (gage height, 0.68 ft).

Remarks.--Some regulation at low flow by mills above station.

Monthly and yearly mean discharge, in cubic feet per second											
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	The year
1913	-	-	-	-	-	-	-	-	-	19.7	27.7
1914	199	219	173	103	49.9	335	236	182	50.7	54.3	140
1915	-	40.6	-	-	-	125	128	94.2	36.0	138	75.5
1916	76.3	73.8	225	232	224	283	356	137	135	81.0	159
1917	34.0	44.8	-	-	-	-	-	-	-	-	-

Monthly and yearly runoff, in inches											
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	The year
1913	-	-	-	-	-	-	-	-	-	0.25	0.35
1914	2.57	2.73	2.24	1.33	0.58	4.32	2.94	2.35	0.63	0.70	21.04
1915	-	.51	-	-	-	1.61	1.60	1.21	.45	.78	.92
1916	1.01	.92	2.90	3.00	2.71	3.66	4.45	1.76	1.68	1.05	24.15
1917	.44	.56	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second									
Year	W.S.P. no.	Water year ending Sept. 30					Calendar year		
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1914	351, 381	2,520	Mar. 2, 1914	7.7	140	1.57	21.04	-	-
1915	401	-	-	-	-	-	-	-	-
1916	431	2,080	Dec. 26, 1915	20	159	1.78	24.15	-	-
1917	451	-	-	-	-	-	-	-	-

## 346. Lake Zoar at Stevenson, Conn.

Location.--Lat 41°23'05", long. 73°09'55", on Housatonic River at Stevenson, Fairfield County.

Drainage area.--1,545 sq mi.

Remarks.--Completed in 1919 for storage of water for power. Usable capacity, 331,000,000 cu ft.

Cooperation.--Records furnished by The Connecticut Light & Power Co.

Month-end contents, in millions of cubic feet											
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Sept.
1928	-	-	-	-	-	-	-	-	-	-	-
1929	289.6	294.1	271.6	276.1	349.3	231.3	368.0	226.9	321.6	294.1	271.6
1930	240.2	298.7	267.0	262.5	312.5	276.1	86.6	262.5	276.1	285.1	289.1
1931	280.6	289.6	289.6	280.6	255.5	391.3	231.3	294.1	140.6	280.6	249.0
1932	240.2	280.6	222.5	298.7	271.6	363.3	226.9	231.3	294.1	298.7	289.6
1933	249.0	174.6	200.5	267.0	222.5	330.8	267.0	276.1	249.0	289.6	204.8
1934	209.2	280.6	280.6	253.5	307.9	386.6	218.1	94.8	285.1	298.7	340.0
1935	280.6	271.6	213.6	226.9	326.2	326.2	235.7	276.1	276.1	284.1	276.1
1936	267.0	226.9	280.6	249.0	222.5	267.0	127.9	312.5	262.5	249.0	258.0
1937	249.0	285.1	271.6	298.7	276.1	235.7	231.3	298.7	271.6	285.1	235.7
1938	271.6	363.3	244.6	204.8	196.2	127.9	140.5	249.0	330.8	349.3	204.8
1939	280.6	253.5	218.1	253.5	381.9	363.3	262.5	271.6	222.5	157.4	258.0
1940	258.0	280.6	271.6	321.6	307.9	486.4	178.9	335.4	276.1	249.0	213.6
1941	231.3	244.6	294.1	294.1	107.2	99.0	226.9	253.5	231.3	249.0	262.5
1942	271.6	289.0	244.6	222.5	271.6	289.6	253.5	271.6	267.0	267.0	289.6
1943	258.0	349.3	400.8	267.0	317.3	276.1	294.1	289.6	285.1	298.7	276.1
1944	307.9	253.5	253.5	280.6	262.5	276.1	294.1	285.1	294.1	298.7	258.0
1945	285.1	298.7	280.6	280.6	368.0	191.9	354.0	178.9	249.0	377.3	267.0
1946	258.0	258.0	276.1	244.6	204.8	249.0	258.0	321.6	280.6	280.6	258.0
1947	244.6	303.3	289.6	317.0	200.5	244.6	231.3	240.2	312.5	289.6	258.0
1948	218.1	280.6	271.6	294.1	271.6	249.0	149.0	294.1	322.5	235.7	244.6
1949	252.5	249.0	549.6	113.5	107.2	78.4	235.7	285.1	249.0	267.0	258.0
1950	289.6	276.1	235.7	213.6	249.0	368.0	249.0	235.7	280.6	280.6	307.9

## 347. Housatonic River at Stevenson, Conn.

Location.--Lat 41°23'05", long. 73°09'55", on left bank in New Haven County, a quarter of a mile upstream from Eightmile Brook and a quarter of a mile downstream from dam of Connecticut Light & Power Co. at Stevenson, Fairfield County.

Drainage area.--1,545 sq mi.

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.--22 years (1928-50), 2,480 cfs (adjusted).

Extremes.--1928-50: Maximum discharge, 69,500 cfs Mar. 12, 1936 (gage height, 23.5 ft, from floodmarks), by computations of peak flow at Stevenson and Derby Dams and slope-area determination at gaging station; practically no flow at times as a result of regulation.

Remarks.--Ordinary flow completely regulated by Stevenson hydroelectric plant. Runoff adjusted for change in contents in Lake Candlewood (see p. 358), Shepaug Reservoir (see p. 360), and Lake Zoar (see preceding page), and by small diversion from the basin at Shepaug Reservoir since October 1935.

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	1,970	2,150	6,050	7,030	4,170	1,130	553	531	526	2,260
1929	1,070	862	1,060	2,060	2,170	3,500	2,920	1,370	1,960	1,220	494	561	1,620
1930	599	883	1,700	2,070	2,170	3,500	2,920	1,370	1,960	1,220	494	561	1,620
1931	385	1,350	829	1,020	1,310	3,290	4,610	3,700	4,750	1,400	760	566	1,990
1932	575	657	1,110	2,390	2,700	2,090	5,580	1,810	1,190	939	735	715	1,700
1933	1,310	5,410	2,700	2,470	2,540	4,530	8,250	2,230	923	445	1,170	3,590	2,950
1934	1,670	1,491	1,693	3,609	1,498	5,229	6,385	4,082	1,785	764	597	2,339	2,600
1935	2,504	3,437	3,675	3,811	2,591	5,197	3,143	2,015	1,657	1,100	545	549	2,521
1936	453	744	897	2,099	1,144	12,960	5,515	2,278	1,253	640	526	549	2,433
1937	816	1,063	3,098	5,391	3,709	3,045	4,767	4,318	3,387	1,907	1,667	2,415	2,960
1938	3,075	3,721	3,488	4,843	3,979	2,963	3,162	2,112	2,567	4,923	4,009	8,705	3,956
1939	2,758	2,372	5,705	2,964	4,168	5,371	7,955	2,357	1,032	597	531	416	3,010
1940	684	1,666	1,247	1,501	1,141	3,606	10,900	4,675	3,262	1,541	789	902	2,651
1941	896	2,050	2,323	2,074	3,379	2,081	2,875	1,302	1,389	1,182	647	598	1,718
1942	679	648	1,303	1,643	1,905	6,287	3,322	2,465	1,863	1,664	934	737	1,958
1943	1,154	3,626	3,896	3,444	3,534	6,008	3,893	5,356	3,010	1,151	712	429	3,017
1944	636	2,654	1,488	982	1,495	4,157	5,093	2,439	1,657	950	563	846	1,908
1945	689	1,358	2,615	2,961	2,267	7,635	4,369	6,512	3,955	4,258	2,880	1,813	3,459
1946	1,388	2,129	3,475	4,286	2,422	4,921	2,077	2,932	3,220	1,349	845	837	2,495
1947	1,152	932	1,033	1,746	2,453	4,755	5,123	3,990	2,113	957	737	695	2,136
1948	583	2,355	1,402	1,458	2,076	7,773	4,933	3,999	4,304	2,120	674	528	2,683
1949	608	751	1,806	9,441	4,112	4,151	3,108	3,269	1,055	526	389	306	2,442
1950	332	424	1,226	2,593	2,529	4,045	4,181	2,662	3,070	1,296	812	700	1,983

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1928	-	-	-	1.52	1.51	4.65	5.29	3.23	0.87	0.38	0.38	2.26	-
1929	0.79	0.62	0.80	1.52	1.51	4.65	5.29	3.23	0.87	0.38	0.38	2.26	20.31
1930	.43	.64	1.26	1.49	1.44	2.73	2.08	1.09	1.48	.91	.56	.37	14.28
1931	.21	.82	.63	.62	.88	2.67	3.56	2.81	3.39	1.07	.56	.34	17.56
1932	.31	.34	.77	1.91	1.81	1.61	4.23	1.43	.86	.67	.53	.43	14.90
1933	.94	4.04	1.65	1.82	1.74	3.56	6.07	1.74	.60	.29	.89	2.62	25.96
1934	1.13	.98	1.27	2.70	.89	4.14	4.83	3.00	1.34	.55	.39	1.75	22.97
1935	1.79	2.50	2.57	2.70	1.74	4.08	2.36	1.59	1.20	.74	.29	.33	21.89
1936	.26	†.51	†.65	†1.63	.81	†9.94	4.02	1.73	†.89	†.38	.31	.34	†21.47
1937	†.59	.64	2.40	4.17	2.56	2.31	3.51	3.26	2.36	†1.58	1.15	1.72	†26.05
1938	2.26	2.74	2.52	3.62	2.70	2.17	2.34	1.64	1.91	3.77	2.99	6.27	34.93
1939	2.03	1.65	4.31	2.03	2.82	4.09	5.87	1.66	.66	.40	.41	.28	26.21
1940	.46	1.14	.86	1.11	.84	2.86	8.01	3.61	2.31	1.12	.49	.55	23.36
1941	.48	1.50	1.76	1.56	2.30	1.64	2.19	.99	1.08	.83	.44	.34	15.11
1942	.29	.52	1.11	1.37	1.38	4.92	2.31	1.90	1.34	1.23	.69	.50	17.46
1943	.85	2.69	2.87	2.44	2.34	4.62	2.94	4.06	2.12	.81	.51	.28	26.43
1944	.51	1.98	1.02	.68	1.06	3.27	3.79	1.79	1.16	.70	.40	.66	17.02
1945	.47	1.04	1.97	2.06	1.43	5.81	3.31	4.84	2.86	3.25	2.10	1.26	30.40
1946	.97	1.52	2.66	3.15	1.55	3.69	1.58	2.36	2.24	.98	.58	.46	21.74
1947	.91	.58	.58	1.31	1.78	3.83	3.83	2.99	1.53	.75	.46	.34	18.89
1948	.25	1.95	.97	.75	1.39	6.16	3.85	3.07	3.11	1.51	.52	.23	23.76
1949	.23	.53	1.45	7.19	2.79	3.04	2.33	2.43	.67	.40	.25	.24	21.55
1950	.24	.32	.96	1.92	1.64	3.04	3.04	2.10	2.21	.94	.56	.38	17.35

† Corrected.

Note.--Adjusted runoff prior to October 1935 not previously published.

## HOUSATONIC RIVER BASIN

Yearly discharge, in cubic feet per second, of Housatonic River at Stevenson, Conn.

Year	W.S.P. no.	Water year ending Sept. 30										Calendar year		
		Observed				Adjusted				Observed		Adjusted		
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches		Mean	Mean	Runoff in inches		
		Discharge	Date											
1928	661	-	-	-	-	-	-	-	-	-	-	-	-	-
1929	681	12,700	Mar. 6, 1929	76	2,260	2,310	1.50	20.31		2,270	2,320	20.43		
1930	696	5,530	Mar. 10, 1930	46	1,620	1,630	1.06	14.28		1,560	1,540	13.61		
1931	711	12,700	June 17, 1931	0	1,990	1,990	1.29	17.56		1,980	1,970	17.32		
1932	726	11,900	Apr. 12, 1932	73	1,700	1,690	1.09	14.90		2,280	2,260	20.11		
1933	741	*21,700	Nov. 20, 1932	57	2,960	2,960	1.92	25.96		2,570	2,580	22.71		
1934	756	*26,400	Mar. 5, 1934	70	2,600	2,614	1.69	22.97		2,999	3,010	26.45		
1935	781	14,700	Jan. 10, 1935	60	2,521	2,492	1.61	21.89		1,890	1,874	16.45		
1936	801	69,500	Mar. 12, 1936	53	2,433	†2,435	†1.58	†21.47		2,676	†2,686	†23.68		
1937	821	13,900	May 15, 1937	124	2,960	†2,967	1.92	†26.05		3,403	3,411	29.96		
1938	851	59,500	Sept. 21, 1938	700	3,956	3,976	2.57	34.93		4,006	4,028	35.40		
1939	871	17,100	Dec. 6, 1938	70	3,010	2,985	1.85	26.21		2,597	2,555	20.68		
1940	891	25,100	Mar. 31, 1940	65	2,651	2,656	1.72	23.36		2,790	2,801	24.64		
1941	921	30,500	Feb. 8, 1941	89	1,718	1,719	1.11	15.11		1,499	1,511	13.29		
1942	951	14,100	Mar. 9, 1942	71	1,958	1,985	1.28	17.46		2,463	2,498	21.95		
1943	971	17,100	Dec. 31, 1942	262	3,017	3,011	1.95	26.43		2,688	2,679	23.53		
1944	1001	11,800	Apr. 25, 1944	89	1,908	1,931	1.25	17.02		1,902	1,929	16.99		
1945	1031	14,400	Jan. 2, 1945	96	3,459	3,462	2.24	30.40		3,654	3,651	32.07		
1946	1051	10,800	Mar. 9, 1946	170	2,495	2,474	1.60	21.74		2,170	2,124	18.66		
1947	1081	14,700	Mar. 15, 1947	86	2,136	2,150	1.39	18.89		2,236	2,276	19.99		
1948	1111	26,000	Mar. 23, 1948	63	2,683	2,698	1.75	23.76		2,571	2,588	22.80		
1949	1141	51,800	Dec. 31, 1948	50	2,442	2,455	1.59	21.55		2,560	2,377	20.86		
1950	1171	9,450	Mar. 9, 1950	48	1,983	1,976	1.28	17.35		-	-	-		

\* Revised.

† Corrected.

Note.--Adjusted runoff prior to October 1935 not previously published.

## 348. Naugatuck River near Thomaston, Conn.

Location.--Lat 41°42'15", long. 73°03'53", on right bank at highway bridge a quarter of a mile upstream from Leadmine Brook and 2 miles north of Thomaston, Litchfield County.

Drainage area.--71.9 sq mi.

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.--20 years (1930-50), 135 cfs.

Extremes.--1930-50: Maximum discharge, 10,200 cfs Dec. 31, 1948 (gage height, 12.03 ft); minimum, about 7 cfs (freeze-up) Mar. 12, 1940; minimum daily, 13 cfs Oct. 24, 1931.

Remarks.--Slight diurnal fluctuation.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	17.7	42.0	36.0	33.4	43.8	244	236	236	232	54.0	29.4	21.6	102
1932	17.8	17.5	50.8	131	96.5	126	271	73.0	48.5	31.5	36.2	35.7	75.8
1933	87.2	365	113	119	146	262	419	98.6	26.6	19.0	37.4	89.2	148
1934	45.7	46.0	68.6	191	46.0	287	350	222	69.9	25.0	24.6	217	133
1935	209	248	208	238	156	342	206	98.6	69.0	43.3	25.9	28.9	156
1936	20.9	38.3	33.5	123	82.6	746	293	105	71.2	33.1	29.4	31.9	135
1937	48.5	45.2	228	332	198	156	250	232	200	110	92.1	115	167
1938	213	267	173	315	184	153	181	107	112	308	137	422	214
1939	117	125	321	136	217	300	367	89.4	41.0	27.3	68.4	35.5	155
1940	40.7	72.7	73.0	92.9	64.1	206	598	244	146	62.4	27.6	28.7	138
1941	34.8	94.7	133	82.2	152	115	157	60.7	79.3	82.2	38.8	25.0	87.4
1942	24.0	33.6	64.3	96.9	102	404	141	175	113	131	40.9	35.6	114
1943	54.4	224	225	136	186	360	224	332	110	40.2	25.8	27.1	162
1944	37.6	135	47.7	36.5	64.7	232	285	105	66.4	36.5	31.1	57.7	94.4
1945	53.2	110	153	170	133	471	266	333	250	175	132	75.2	192
1946	63.3	116	218	243	133	310	124	187	136	75.8	46.6	49.2	142
1947	51.7	40.0	44.9	107	130	268	239	184	96.5	56.4	30.9	27.1	106
1948	25.4	107	54.5	42.5	90.0	416	233	186	222	62.6	30.4	22.4	124
1949	19.5	28.6	31.1	388	239	228	159	216	38.0	24.6	25.2	21.9	142
1950	21.5	22.2	51.6	135	126	265	196	148	202	47.0	40.6	30.4	107



Monthly and yearly runoff, in inches, of Naugatuck River near Thomaston, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	0.28	0.65	0.58	0.54	0.83	3.91	3.66	3.78	3.60	0.87	0.47	0.33	19.30
1932	.29	.27	.49	2.10	1.44	2.02	4.21	1.18	.75	.50	.58	.52	14.35
1933	1.40	5.67	1.61	1.93	2.11	4.20	6.50	1.58	.41	.30	.60	1.38	27.87
1934	.73	.71	1.10	3.07	.87	4.60	5.43	3.56	1.08	.40	.39	3.37	25.11
1935	3.36	3.85	3.33	3.82	2.26	5.49	3.20	1.58	1.07	.69	.42	.45	29.52
1936	.54	.59	.54	1.97	1.24	11.99	4.55	1.68	1.10	.53	.47	.50	25.50
1937	.78	.70	3.66	5.33	2.86	2.50	3.88	3.72	3.10	1.78	1.48	1.78	31.55
1938	3.41	4.14	2.78	5.05	2.67	2.46	2.81	1.72	1.74	4.93	2.20	6.55	40.46
1939	1.88	1.94	5.14	2.18	3.14	4.81	6.00	1.43	.64	.44	1.10	.52	29.22
1940	.65	1.13	1.18	1.49	.96	3.31	9.28	3.91	2.26	1.00	.44	.45	28.06
1941	.56	1.47	2.13	1.31	2.20	1.84	2.43	.97	1.23	1.31	.62	.39	16.46
1942	.59	.52	1.03	1.56	1.48	6.48	2.19	2.80	1.75	2.10	.68	.55	21.51
1943	.87	3.48	3.61	2.18	2.70	5.78	3.48	5.33	1.71	.64	.41	.42	30.61
1944	.60	2.10	.76	.59	.97	3.72	4.42	1.68	1.03	.59	.50	.90	17.86
1945	.53	1.71	2.46	2.72	1.93	7.55	4.13	5.34	3.88	2.80	2.12	1.17	36.34
1946	1.01	1.80	3.49	3.90	1.93	4.97	1.92	3.00	2.11	1.21	.75	.76	28.85
1947	.83	.62	.72	1.72	1.88	4.30	3.70	2.95	1.50	.90	.50	.42	20.04
1948	.41	1.66	.67	.68	1.35	6.88	3.62	2.99	3.45	1.00	.49	.35	23.55
1949	.31	.44	4.99	6.23	3.46	3.66	2.47	3.46	.59	.39	.40	.34	26.74
1950	.34	.34	.83	2.17	1.82	4.25	3.05	2.38	3.14	.75	.65	.47	20.19

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1931	741	1,910	Mar. 29, 1931	14	102	1.42	19.30	99.8	18.84
1932	741	2,620	Apr. 1, 1932	13	75.8	1.05	14.35	117	22.18
1933	741	5,800	Nov. 19, 1932	14	148	2.06	27.87	114	21.55
1934	756	5,000	Sept. 17, 1934	16	133	1.85	25.11	175	33.11
1935	781	4,450	Jan. 10, 1935	18	156	2.17	29.52	108	20.45
1936	801, 821	6,590	Mar. 12, 1936	16	135	1.88	25.50	154	29.17
1937	821	3,050	May 15, 1937	30	167	2.32	31.55	195	36.74
1938	851	9,970	Sept. 21, 1938	26	214	2.98	40.46	207	39.09
1939	871, 1111	3,100	Aug. 21, 1939	18	155	2.16	29.22	123	23.22
1940	891	4,010	Apr. 9, 1940	20	138	1.92	26.06	144	27.26
1941	921	2,160	Feb. 8, 1941	22	87.4	1.22	16.46	75.6	14.24
1942	951	3,900	Mar. 9, 1942	18	114	1.59	21.51	146	27.53
1943	971	2,610	May 26, 1943	19	162	2.25	30.61	138	26.11
1944	1001	2,020	Mar. 7, 1944	19	94.4	1.31	17.86	101	19.10
1945	1031	4,450	Apr. 26, 1945	24	192	2.67	36.34	201	37.94
1946	1051	1,770	July 23, 1946	24	142	1.97	26.85	120	22.72
1947	1081	2,380	Mar. 14, 1947	21	106	1.47	20.04	110	20.81
1948	1111	2,700	Mar. 22, 1948	20	124	1.72	23.55	139	26.35
1949	1141	10,200	Dec. 31, 1948	14	142	1.97	26.74	119	22.51
1950	1171	1,470	Mar. 9, 1950	14	107	1.49	20.19	-	-

## 349. Leadmine Brook near Thomaston, Conn.

Location.--Lat 41°42'06", long. 73°03'28", on left bank 10 ft downstream from bridge on town road, 0.4 mile upstream from mouth, and  $2\frac{1}{4}$  miles northeast of Thomaston, Litchfield County.

Drainage area.--24.0 sq mi.

Gage.--Water-stage recorder at present site after Nov. 26, 1934. 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 gage or wire-weight gage at same site and datum.

Average discharge.--20 years (1930-50), 45.4 cfs.

Extremes.--1930-50: Maximum discharge, 3,080 cfs (revised) Sept. 17, 1934 (gage height, 11.2 ft, from floodmarks), from rating curve extended above 800 cfs by logarithmic plotting; minimum discharge, 0.08 cfs Aug. 27-29, 1949.

Remarks.--Occasional low-water regulation.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	1.99	17.4	10.4	11.0	16.2	107	78.0	80.4	53.7	5.80	2.85	to 9.13	32.2
1932	1.28	2.68	10.6	43.4	35.0	59.2	79.3	83.6	12.0	4.78	8.65	6.25	24.2
1933	40.6	145	45.2	42.5	54.3	107	131	53.6	5.62	1.84	7.87	24.2	52.9
1934	10.2	11.6	20.4	59.7	11.0	96.7	135	74.1	22.6	4.40	5.66	137	49.0
1935	67.6	84.2	74.2	82.1	49.8	113	66.4	31.6	17.0	7.66	2.18	7.42	50.4
1936	3.50	14.0	11.4	42.4	21.2	234	88.8	32.1	19.9	3.57	4.01	4.78	40.1
1937	17.0	10.4	78.8	115	74.8	64.5	76.9	69.5	68.8	44.2	48.5	41.7	59.4
1938	64.6	14.7	62.8	101	60.4	52.2	61.7	36.9	37.2	110	44.1	113	70.9
1939	35.5	40.7	107	50.4	85.5	97.5	120	24.3	8.55	2.37	25.4	8.82	50.3
1940	15.1	41.0	30.1	33.4	22.4	103	228	68.6	33.6	13.6	2.87	3.80	49.5
1941	7.18	34.9	47.5	26.9	62.6	49.7	50.1	23.2	27.1	23.8	5.08	1.55	29.7
1942	2.38	12.1	23.5	29.4	33.0	129	41.7	57.1	24.2	24.1	10.1	7.78	33.0
1943	19.7	72.2	78.5	47.2	77.0	142	69.3	109	33.9	6.48	1.81	2.12	54.9
1944	14.7	49.5	15.1	10.6	17.5	86.3	90.1	28.8	15.2	4.19	2.27	22.9	29.7
1945	11.5	56.0	79.4	60.2	57.4	154	89.1	119	69.3	60.4	48.1	19.5	68.9
1946	20.8	41.9	79.9	82.8	48.6	110	43.3	62.6	44.3	25.2	11.9	14.9	49.0
1947	26.4	16.3	15.4	39.4	47.0	90.1	66.7	64.4	29.9	33.5	6.02	5.90	36.8
1948	4.08	49.6	22.5	13.8	37.0	148	76.7	70.8	77.8	19.3	4.08	.61	43.7
1949	1.82	19.5	84.5	126	84.0	80.5	57.7	75.6	8.44	1.96	.700	.778	45.0
1950	3.93	4.45	22.0	45.9	41.5	101	64.7	52.3	83.9	16.4	10.7	7.27	37.7

† Corrected.

## HOUSATONIC RIVER BASIN

Monthly and yearly runoff, in inches, of Leadmine Brook near Thomaston, Conn.													
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1931	0.10	0.81	0.50	0.53	0.70	5.14	3.63	3.86	2.50	0.28	0.14	0.04	18.23
1932	.82	.12	.51	2.09	1.58	2.85	3.68	1.33	.58	.23	.41	.29	13.71
1933	1.95	6.74	2.17	2.04	2.35	5.14	6.09	1.81	.28	.09	.38	1.13	29.95
1934	.49	.54	.98	2.87	.48	4.65	6.27	3.56	1.05	.21	.27	6.37	27.74
1935	3.25	3.92	3.56	3.94	2.17	5.43	3.09	1.52	.79	.37	.10	.34	28.48
1936	.17	.65	.55	2.04	.95	11.24	4.13	1.54	.92	.17	.19	.22	22.77
1937	.82	.67	3.78	5.52	3.25	3.10	3.57	3.54	3.20	2.12	2.33	1.94	33.64
1938	3.10	4.98	3.02	4.65	2.62	2.51	2.87	1.78	1.73	5.28	2.12	5.26	40.12
1939	1.71	1.90	5.14	2.42	3.71	4.68	5.58	1.16	.40	.11	1.22	.41	28.44
1940	.73	1.91	1.44	1.60	1.01	4.95	10.60	3.30	1.56	.65	.14	.18	28.07
1941	.34	1.62	2.28	1.29	2.72	2.39	2.33	1.11	1.26	1.14	.24	.07	16.79
1942	.11	.56	1.13	1.41	1.44	6.20	1.94	2.74	1.13	1.15	.49	.36	18.66
1943	.95	3.36	3.77	2.27	3.34	6.82	3.22	5.23	1.57	.51	.09	.10	31.03
1944	.71	2.30	.73	.51	.79	4.15	4.18	1.58	.71	.20	.11	1.06	16.83
1945	.55	2.60	3.82	2.89	2.49	7.40	4.14	5.72	3.22	2.91	2.31	.91	38.96
1946	1.00	1.95	3.84	3.98	2.10	5.28	2.01	3.01	2.06	1.21	.57	.69	27.70
1947	1.27	.76	.74	1.89	2.04	4.32	3.10	3.08	1.40	1.61	†.29	†.27	†20.78
1948	.20	2.31	1.08	.66	1.66	7.11	3.57	3.40	3.62	.93	.20	.03	24.77
1949	.09	.91	4.06	6.05	3.64	3.86	2.68	3.63	.39	.09	.03	.04	25.47
1950	.19	.21	1.06	2.20	1.80	4.85	3.01	2.51	3.90	.79	.51	.34	21.37
† Corrected.													

† Corrected.

Yearly discharge, in cubic feet per second											
Year	W.S.P. no.	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1931	711	750	Mar. 29, 1931	0.5	32.2	1.34	18.23	31.0	17.51		
1932	726	925	Mar. 31, 1932	.6	24.2	1.01	13.71	42.1	23.88		
1933	741	*1,880	Nov. 10, 1932	.5	52.9	2.20	29.95	37.3	21.10		
1934	756	*3,080	Sept. 17, 1934	1.5	49.0	2.04	27.74	64.4	35.46		
1935	781	*1,880	Jan. 10, 1935	.5	50.4	2.10	28.48	33.8	19.12		
1936	801	*2,680	Mar. 12, 1936	1.1	40.1	1.67	22.77	47.0	26.67		
1937	821	1,000	Feb. 22, 1937	3.7	59.4	2.48	33.64	69.7	39.47		
1938	851	3,050	Sept. 21, 1938	6.1	70.9	2.95	40.12	66.8	37.77		
1939	871	1,740	Aug. 21, 1939	.8	50.3	2.10	28.44	42.1	23.77		
1940	891	1,500	Apr. 9, 1940	1.1	49.5	2.06	28.07	49.8	28.23		
1941	921	880	Feb. 8, 1941	.8	29.7	1.24	16.79	25.4	14.35		
1942	951	1,480	Mar. 9, 1942	1.0	33.0	1.36	18.66	44.1	24.94		
1943	971	*960	Dec. 30, 1942	.7	54.9	2.29	31.03	47.2	26.69		
1944	1001	1,040	Sept. 15, 1944	.4	29.7	1.24	16.83	35.4	20.06		
1945	1031	2,120	Apr. 25, 1945	5.5	68.9	2.87	38.96	68.5	36.78		
1946	1051	840	July 23, 1946	.6	49.0	2.04	27.70	41.9	23.68		
1947	1081	1,180	Mar. 14, 1947	1.8	36.8	1.53	†20.78	38.2	†21.50		
1948	1111	920	Mar. 20, 1948	.4	43.7	1.82	24.77	46.3	26.24		
1949	1141	2,780	Dec. 31, 1948	.08	45.0	1.88	25.47	38.7	21.87		
1950	1171	840	Mar. 9, 1950	1.0	37.7	1.57	21.37	-	-		

\* Revised.

† Corrected.

## 350. Pitch Reservoir near Thomaston, Conn.

Location.--Lat 41°41'34", long. 73°09'04", on Branch Brook, a tributary of the Naugatuck River, upstream from Morris Reservoir and 5 miles northwest of Thomaston, Litchfield County.

Drainage area.--5.74 sq mi.

Remarks.--Completed in 1943 for storage of water for municipal supply. Total capacity, 1,414,000,000 gal.

Cooperation.--Records furnished by Bureau of Engineering, city of Waterbury.

Month-end contents, in millions of gallons												
Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1944	0	11.0	321.8	1,011.0	1,022.8	1,050.7	1,184.9	1,278.0	1,273.8	1,231.2	1,385.9	1,356.4
1945	1,378.7	1,417.0	1,421.4	1,417.7	1,416.6	1,414.4	1,415.5	1,407.9	1,392.0	1,359.3	1,376.6	1,353.5
1946	1,358.2	1,395.6	1,411.1	1,385.8	1,357.1	1,406.8	1,386.3	1,415.1	1,361.4	1,358.6	1,415.5	1,405.0
1947	1,406.8	1,402.8	1,398.2	1,408.2	1,394.6	1,396.0	1,378.7	1,393.1	1,412.2	1,349.2	1,415.5	1,408.2
1948	1,318.9	1,413.6	1,414.7	1,414.7	1,390.2	1,416.2	1,379.1	1,414.4	1,414.0	1,415.1	1,415.1	1,391.7
1949	1,382.3	1,394.6	1,436.2	1,414.0	1,412.9	1,394.6	1,400.3	1,396.4	1,414.7	1,405.0	1,330.4	1,170.0
1950	1,002.9	976.1	1,383.0	1,381.6	1,385.9	1,414.4	1,360.0	1,413.3	1,400.0	1,384.5	1,415.1	1,414.7

## HOUSATONIC RIVER BASIN

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## 351. Morris Reservoir near Thomaston, Conn.

Location.--Lat 41°40'29", long. 73°08'39", on Branch Brook, a tributary of the Naugatuck River, downstream from Pitch Reservoir, upstream from Wigwam Reservoir, and 4 miles northwest of Thomaston, Litchfield County.

Drainage area.--13.3 sq mi.

Remarks.--Completed in 1913 for storage of water for municipal supply. Total capacity, 1,987,000,000 gal.

Cooperation.--Records furnished by Bureau of Engineering, city of Waterbury.

Month-end contents, in millions of gallons

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1918	-	-	-	-	-	-	-	1,990.1	1,835.5	1,601.4	1,295.7	1,180.8
1919	952.6	971.1	1,342.5	1,851.9	1,983.1	1,988.5	1,990.1	1,991.1	1,878.7	1,673.4	1,474.0	1,466.8
1920	1,371.7	1,812.0	1,990.1	1,905.8	1,859.0	1,999.2	1,996.2	1,989.0	1,922.1	1,989.0	1,949.8	1,994.8
1921	1,929.4	1,993.1	1,991.1	1,990.1	1,996.2	1,998.2	1,998.7	1,991.1	1,876.8	1,862.7	1,704.2	1,616.9
1922	1,406.0	1,522.3	1,785.6	1,762.7	1,989.6	1,996.7	1,984.6	1,988.5	1,990.6	1,988.5	1,989.0	1,911.1
1923	1,736.6	1,643.5	1,560.2	1,995.7	1,991.1	1,995.1	2,001.3	1,988.0	1,932.7	1,729.8	1,436.8	1,200.5
1924	1,282.0	1,494.0	1,991.1	1,991.6	1,988.0	1,994.1	1,992.6	1,990.1	1,988.0	1,796.9	1,597.2	1,657.7
1928	-	-	-	-	-	-	-	-	-	-	-	1,988.0
1929	1,881.5	1,801.2	1,808.7	1,987.5	2,000.3	1,993.1	1,996.2	1,992.1	1,962.0	1,724.9	1,521.1	1,313.4
1930	1,189.7	1,192.6	1,550.1	1,885.3	1,993.1	1,992.1	1,989.6	1,988.0	1,966.4	1,797.4	1,563.6	1,324.8
1931	1,080.6	1,058.2	906.2	804.2	764.9	1,756.4	1,989.0	1,994.6	1,987.5	1,895.3	1,701.2	1,471.6
1932	1,232.8	1,056.8	965.2	1,335.5	1,695.9	2,002.3	1,989.0	1,989.0	1,912.1	1,689.3	1,669.9	1,533.4
1933	1,767.6	1,990.1	1,990.1	1,987.0	1,991.1	1,994.6	1,991.1	1,992.1	1,855.2	1,619.9	1,544.2	1,982.1
1934	1,920.7	1,987.5	1,989.6	1,989.0	1,941.9	2,002.3	1,989.0	1,990.1	1,961.5	1,839.2	1,644.8	2,007.4
1935	1,991.1	2,002.3	1,989.6	1,989.0	1,991.1	1,993.1	1,990.6	1,975.7	1,964.0	1,962.0	1,833.6	1,828.0
1936	1,614.0	1,504.7	1,427.5	1,988.5	1,992.1	1,993.1	1,989.6	1,969.4	1,968.9	1,895.8	1,740.6	1,748.3
1937	1,860.6	1,824.2	1,994.1	1,994.1	1,989.0	1,989.0	1,991.1	1,990.6	1,995.2	1,988.0	1,992.1	1,985.5
1938	1,994.1	1,999.2	1,990.1	1,993.1	1,990.6	1,993.1	1,992.1	1,990.1	1,991.1	1,902.5	1,989.0	1,991.6
1939	1,947.8	1,852.4	1,897.7	1,993.1	2,000.3	1,840.2	1,991.6	1,988.0	1,991.1	1,991.1	1,991.1	1,986.0
1940	1,995.2	1,987.5	1,944.9	1,881.1	1,756.4	1,992.6	1,991.6	1,996.2	1,991.1	1,992.1	1,989.0	1,991.1
1941	1,964.0	1,796.9	1,845.8	1,708.7	1,740.2	1,993.6	1,987.5	1,991.1	1,991.1	1,790.2	1,399.8	1,052.7
1942	800.5	871.5	1,180.6	1,322.6	1,450.9	1,535.0	1,200.5	1,191.9	1,294.6	1,258.1	1,112.7	1,030.2
1943	1,303.9	1,900.1	1,996.7	1,988.0	1,991.1	1,990.1	1,991.1	1,991.1	1,991.1	1,991.1	1,824.7	1,498.1
1944	1,284.9	1,587.1	1,462.8	1,308.0	1,640.5	1,992.6	1,991.1	1,910.6	1,797.4	1,919.8	1,723.6	1,663.8
1945	1,603.9	1,916.9	1,990.1	1,966.4	2,000.3	1,989.0	1,992.6	1,980.1	1,977.7	1,979.6	1,975.7	1,948.3
1946	1,977.2	1,979.6	1,992.6	1,989.0	1,989.0	1,987.0	1,979.2	1,990.1	1,918.8	1,939.5	1,893.8	1,918.8
1947	1,976.2	1,987.0	1,974.3	1,994.1	1,983.1	1,988.0	1,988.5	1,985.0	1,977.2	1,951.2	1,861.8	1,759.6
1948	1,611.4	1,759.1	1,860.4	1,847.7	1,990.1	1,991.1	1,987.5	1,993.1	1,992.1	1,962.5	1,904.4	1,742.0
1949	1,598.0	1,567.8	2,061.4	1,990.6	1,990.1	1,987.5	1,926.0	1,985.5	1,921.2	1,809.2	1,643.9	1,521.9
1950	1,377.9	1,262.0	1,252.0	1,760.0	1,987.0	1,993.1	1,991.1	1,989.0	1,984.6	1,917.8	1,857.1	1,853.3

## 352. Wigwam Reservoir near Thomaston, Conn.

Location.--Lat 41°39'50", long. 73°07'41", on Branch Brook, a tributary of the Naugatuck River, downstream from Morris Reservoir and 3 miles west of Thomaston, Litchfield County.

Drainage area.--18.1 sq mi.

Remarks.--Completed in 1902 for storage of water for municipal supply. Total capacity, 729,000,000 gal.

Cooperation.--Records furnished by Bureau of Engineering, city of Waterbury.

Month-end contents, in millions of gallons

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1918	-	-	-	-	-	-	-	-	-	-	-	-
1919	661.7	621.7	649.5	629.0	708.4	738.0	732.6	676.3	683.2	672.6	676.6	666.8
1920	677.3	735.3	727.5	709.8	689.8	747.5	740.8	733.6	705.0	701.7	670.7	655.9
1921	715.9	737.0	737.0	733.6	744.4	744.0	744.4	735.6	715.2	703.7	705.0	651.4
1922	681.2	691.1	690.1	677.6	734.3	741.2	731.6	734.6	736.3	727.5	714.9	646.3
1923	596.7	657.2	705.7	739.8	735.0	740.5	741.2	727.8	698.4	695.1	701.0	695.7
1924	707.8	696.4	739.1	738.4	683.9	740.5	740.5	735.6	709.8	706.1	712.5	737.0
1928	-	-	-	-	-	-	-	-	-	-	-	723.7
1929	728.8	737.0	718.0	731.9	741.9	758.8	741.2	737.0	722.0	721.4	720.7	725.1
1930	713.9	718.0	701.1	702.7	738.4	739.1	731.6	728.2	718.6	719.3	711.2	707.8
1931	713.2	697.1	705.7	699.0	705.7	735.0	735.6	741.9	715.9	721.7	719.3	719.3
1932	719.7	703.7	711.2	704.4	717.3	751.0	735.0	732.9	720.7	720.7	719.0	716.3
1933	723.4	737.7	739.8	731.6	739.1	741.2	739.1	712.9	720.0	718.6	716.9	709.8
1934	718.0	710.5	730.9	730.2	714.9	764.8	738.0	738.4	713.2	711.8	710.5	749.6
1935	738.0	745.4	736.7	735.6	739.1	740.2	739.1	726.1	723.7	713.2	719.0	718.6
1936	720.0	728.2	720.7	738.4	741.9	741.2	737.0	723.7	713.9	718.3	719.0	716.6
1937	719.3	715.2	742.6	742.6	738.4	736.3	739.1	737.0	737.0	720.0	739.8	732.2
1938	741.2	744.0	739.1	740.5	736.3	741.2	739.8	735.0	737.7	749.2	719.0	739.1
1939	729.5	743.3	526.1	740.5	753.8	750.3	737.7	730.2	735.0	715.9	738.0	698.4
1940	752.9	722.4	741.2	735.0	707.1	755.2	759.1	741.2	737.0	724.1	688.8	712.2
1941	711.8	738.0	739.4	718.1	737.7	740.5	724.1	707.4	714.6	723.4	743.3	712.5
1942	712.2	713.2	599.1	650.5	715.9	746.4	671.3	715.6	643.4	712.2	670.2	694.8
1943	703.0	737.0	744.0	735.6	740.8	740.5	740.2	739.1	729.9	714.6	682.5	676.6
1944	686.2	728.5	660.1	655.9	726.5	740.5	737.7	730.9	728.2	722.7	703.7	710.8
1945	638.0	743.0	731.6	718.6	746.4	735.6	740.2	735.0	734.3	733.6	732.2	719.3
1946	728.2	732.9	743.6	687.8	714.2	733.6	703.3	739.1	726.8	729.9	732.9	743.3
1947	735.6	731.8	733.9	743.0	671.3	731.9	730.2	733.6	730.9	730.2	727.1	702.0
1948	654.0	715.9	622.0	664.6	733.6	739.8	731.9	740.8	740.2	720.0	716.6	691.6
1949	646.0	658.8	809.8	739.4	739.8	794.8	603.0	734.6	726.1	708.4	685.9	646.0
1950	582.0	503.4	543.5	610.8	713.2	739.8	739.4	735.6	732.2	726.8	723.4	683.2

## 353. 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 12 miles upstream from mouth.

Drainage area.--246 sq mi.

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.--28 years (1918-24, 1928-50), 444 cfs (adjusted).

Extremes.--1918-24, 1928-50: Maximum discharge, 28,500 cfs Dec. 31, 1948 (gage height, 12.40 ft), from rating curve extended above 9,000 cfs by logarithmic plotting 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.

Flood of November 1927 reached a stage of 14 ft (discharge, about 26,000 cfs).

Remarks.--Flow regulated by plants above station during low stages and by Pitch, Morris, and Wigwam Reservoirs. Flow increased by diversion from Shepaug Reservoir into Naugatuck River Basin. Runoff adjusted for diversions and for change in contents in Pitch Reservoir (see p. 368) and Morris and Wigwam Reservoirs (see preceding page).

Monthly and yearly mean discharge, in cubic feet per second (observed)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1918	-	-	-	-	-	-	-	-	-	137	109	174	-
1919	142	227	409	476	318	695	678	818	207	162	120	284	379
1920	216	495	514	232	223	1,912	1,258	705	539	439	273	281	592
1921	461	551	978	552	389	1,261	940	547	139	200	94.2	86.2	517
1922	85.2	189	289	132	314	904	766	663	351	316	208	154	364
1923	227	135	125	634	321	1,324	863	553	248	131	94.0	101	398
1924	268	282	656	921	258	484	1,415	725	297	108	113	117	471
1929	149	142	222	406	488	958	1,169	730	179	99.4	139	95.8	397
1930	141	175	323	387	378	625	500	263	275	133	84.2	78.9	280
1931	55.3	151	122	137	208	767	659	657	594	146	92.2	68.2	305
1932	58.0	63.9	116	338	352	474	745	272	154	134	134	115	245
1933	282	1,176	400	398	506	964	1,210	350	165	87.9	154	294	496
1934	176	156	229	631	204	928	1,092	723	261	130	106	778	452
1935	556	626	638	653	483	1,055	607	329	291	202	101	143	474
1936	88.2	148	113	438	242	2,155	894	362	235	89.6	76.5	86.1	412
1937	159	139	732	1,067	662	557	723	640	542	275	372	363	519
1938	566	886	630	992	623	459	554	375	372	957	526	1,301	686
1939	419	430	1,066	543	858	1,009	1,208	287	133	90.3	273	141	536
1940	157	333	277	417	270	884	1,921	780	530	244	127	129	505
1941	125	363	449	310	749	464	474	225	260	247	153	101	324
1942	93.5	151	255	384	450	1,562	492	535	286	282	170	158	363
1943	175	598	696	491	698	1,158	628	877	396	155	110	103	514
1944	168	419	184	183	293	795	935	399	201	124	102	273	339
1945	155	463	691	522	484	1,338	810	1,076	575	525	359	245	605
1946	217	391	879	832	471	857	393	648	519	264	231	222	495
1947	262	200	215	367	493	892	839	664	397	287	162	158	411
1948	120	504	267	221	427	1,426	922	723	799	275	162	109	496
1949	104	194	694	1,449	858	823	651	684	157	122	100	108	511
1950	106	110	222	423	478	923	669	524	618	234	162	121	382

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1918	-	-	-	-	-	-	-	-	-	0.59	0.44	0.76	-
1919	0.61	1.03	2.01	2.34	1.40	3.26	3.08	3.84	0.91	.71	.51	1.28	20.98
1920	.99	2.35	2.44	1.06	.96	9.00	5.70	3.30	2.44	2.05	1.27	1.29	32.86
1921	2.13	2.43	4.59	2.58	1.66	5.91	4.26	2.56	.60	.93	.40	.36	28.41
1922	.38	.89	1.42	.61	1.40	4.24	3.47	5.11	1.60	1.48	.97	.66	20.20
1923	1.01	.60	.58	3.08	1.35	6.20	3.92	2.51	1.17	.57	.37	.40	21.76
1924	1.28	1.33	3.20	4.31	1.12	2.28	6.42	3.40	1.34	.46	.48	.55	26.17
1929	.67	.63	1.04	1.95	2.07	4.48	5.30	3.42	.80	.41	.60	.38	21.75
1930	.63	.79	1.59	1.89	1.63	2.93	2.26	1.23	1.24	.59	.34	.30	15.42
1931	.20	.68	.54	.62	.87	3.82	3.05	3.08	2.69	.67	.39	.26	16.87
1932	.22	.25	.52	1.67	1.63	2.31	3.37	1.28	.68	.58	.62	.49	13.62
1933	1.38	5.39	1.88	1.86	2.14	4.52	5.49	1.64	.72	.36	.70	1.33	27.43
1934	.81	.69	1.08	2.95	.85	4.38	4.94	3.39	1.17	.58	.45	5.63	24.32
1935	2.61	2.84	2.99	3.06	2.04	4.95	2.76	1.53	1.32	.94	.43	.63	26.10
1936	.36	.65	.51	2.17	1.06	10.10	4.05	1.68	1.05	.37	.31	.35	22.66
1937	.77	.62	3.48	5.00	2.80	2.61	3.28	3.00	2.46	1.28	1.75	1.64	28.69
1938	2.65	4.02	2.95	4.65	2.64	2.16	2.51	1.75	1.67	4.46	2.46	5.89	37.81
1939	1.95	1.93	4.96	2.62	3.63	4.69	5.51	1.34	.57	.36	1.26	.63	29.45
1940	.74	1.51	1.29	1.94	1.15	4.21	6.70	3.66	2.40	1.11	.53	.53	27.77
1941	.53	1.60	2.11	1.42	3.19	2.24	2.14	1.03	1.15	1.11	.63	.37	17.52
1942	.37	.63	1.20	1.86	1.95	6.41	2.09	2.50	1.30	1.33	.75	.58	20.97
1943	.80	2.81	3.27	2.29	2.96	5.43	2.84	4.58	1.77	.67	.44	.39	28.25
1944	.74	1.99	.83	.82	1.30	3.79	4.27	1.83	.85	.52	.38	1.20	18.52
1945	.67	2.19	3.25	2.41	2.01	6.26	3.67	5.04	2.60	2.46	1.65	1.06	33.27
1946	.96	1.77	4.13	3.88	1.99	4.04	1.77	3.03	2.31	1.16	1.01	.93	26.98
1947	1.16	.84	.95	1.68	2.06	4.18	3.80	3.10	1.76	1.28	.65	.62	22.08
1948	.47	2.30	1.20	.99	1.88	6.69	4.17	3.39	3.63	1.23	.67	.39	27.01
1949	.40	.84	4.29	6.76	3.55	3.84	2.82	3.30	.62	.48	.46	.41	27.77
1950	.40	.42	1.02	2.02	2.07	4.34	3.02	2.44	2.79	1.04	.67	.46	20.69

Note.--Adjusted runoff prior to October 1935 not previously published.

Yearly discharge, in cubic feet per second, of Naugatuck River near Naugatuck, Conn.

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1918	1171	-	-	-	-	-	-	-	-	-	-
1919	1171	-	-	86	379	380	1.54	20.98	416	419	23.11
1920	1171	8,470	Mar. 13, 1920	134	592	595	2.42	32.86	655	655	36.22
1921	1171	6,290	Oct. 1, 1920	48	517	515	2.09	28.41	398	397	21.92
1922	1171	14,200	Mar. 8, 1922	53	364	365	1.48	20.20	358	357	19.73
1923	1171	6,490	Jan. 1, 1923	65	398	395	1.61	21.76	458	460	25.38
1924	1171	21,900	Apr. 7, 1924	64	471	473	1.92	26.17	-	-	-
1929	1171	5,730	Feb. 7, 1929	67	397	394	1.60	21.75	408	407	22.42
1930	1171	2,480	Mar. 8, 1930	60	280	280	1.14	15.42	253	250	13.83
1931	1171	3,420	Mar. 29, 1931	40	305	305	1.24	16.87	297	297	16.44
1932	1171	3,970	Apr. 1, 1932	46	245	245	.996	13.82	380	384	21.28
1933	1171	8,500	Nov. 19, 1932	65	496	496	2.02	27.41	589	588	31.34
1934	1171	10,500	Sept. 17, 1934	56	452	451	1.83	24.92	558	558	30.78
1935	1171	7,820	Jan. 10, 1935	63	474	472	1.92	26.10	351	348	19.18
1936	1171	23,500	Mar. 12, 1936	40	412	409	1.66	22.66	470	470	26.01
1937	1171	6,490	Dec. 20, 1936	72	519	520	2.11	28.69	606	606	33.44
1938	1171	25,300	Sept. 21, 1938	102	686	685	2.78	37.81	673	671	37.03
1939	1171	8,800	Aug. 21, 1939	50	536	534	2.17	29.45	439	438	24.15
1940	1171	9,590	Apr. 9, 1940	80	505	502	2.04	27.77	519	535	28.47
1941	1171	11,900	Feb. 8, 1941	59	324	318	1.29	17.52	287	280	15.48
1942	1171	10,100	Mar. 9, 1942	58	383	380	1.54	20.97	463	465	25.65
1943	1171	7,640	Dec. 30, 1942	77	514	512	2.08	28.25	456	452	24.93
1944	1171	5,840	Sept. 15, 1944	66	339	335	1.36	18.52	384	381	21.07
1945	1171	11,500	Apr. 26, 1945	112	605	603	2.45	33.27	621	615	34.02
1946	1171	4,880	Dec. 26, 1945	93	495	489	1.99	26.98	427	418	23.06
1947	1171	7,140	Mar. 14, 1947	93	411	400	1.63	22.06	428	418	21.10
1948	1171	6,700	Mar. 22, 1948	75	496	488	1.98	27.01	522	514	28.57
1949	1171	28,500	Dec. 31, 1948	64	511	503	2.04	27.77	447	436	24.08
1950	1171	6,100	Mar. 9, 1950	77	382	375	1.52	20.69	-	-	-

Note.--Adjusted records prior to 1936 not previously published.

## SAUGATUCK RIVER BASIN

## 354. Saugatuck Reservoir near Lyons Plain, Conn.

Location.--Lat 41°14'54", long. 73°20'59", 2 miles north of Lyons Plain, Fairfield County.Drainage area.--33.5 sq mi.Remarks.--Completed in 1942 for storage of water for municipal supply. Total capacity, 11,900,000,000 gal.Cooperation.--Records furnished by Bridgeport Hydraulic Co.

Month-end contents, in millions of gallons

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1942	-	-	0	200	1,750	5,700	6,670	7,826	8,425	8,273	8,976	8,964
1943	9,177	10,987	11,953	11,924	11,933	11,893	11,941	11,924	11,742	11,071	9,997	9,308
1944	9,049	10,226	10,555	11,006	11,933	11,985	11,950	11,898	11,552	10,681	9,887	10,148
1945	9,685	10,916	11,959	11,759	12,014	11,927	11,956	11,910	11,873	11,938	11,625	11,468
1946	11,137	11,956	12,011	11,853	11,933	11,924	11,930	11,996	11,801	11,736	11,699	11,501
1947	11,861	11,784	11,901	11,938	11,776	11,927	11,936	11,921	11,634	11,665	11,361	10,772
1948	10,013	11,930	11,918	11,339	11,959	12,028	11,933	11,968	11,927	11,833	11,350	10,529
1949	9,548	9,703	10,093	11,968	11,947	11,927	11,927	11,910	11,411	10,630	9,954	9,338
1950	8,617	8,015	7,903	8,371	9,400	11,292	11,944	11,947	11,924	11,956	11,456	10,862

## 355. Saugatuck River near Westport, Conn.

Location.--Lat 41°10'15", long. 73°22'00", on left bank on old Ford Road (Clinton Avenue), 400 ft downstream from West Branch, 600 ft downstream from dam of Dorr Co., and 2 miles north of Westport, Fairfield County.Drainage area.--77.5 sq mi.Gage.--Water-stage recorder. Datum of gage is 18.16 ft above mean sea level, datum of 1929.Average discharge.--18 years (1932-50), 138 cfs (adjusted for storage and diversion from Saugatuck Reservoir).Extremes.--1932-50: 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, 0.3 cfs Aug. 13, 1935; minimum daily, 1.0 cfs Aug. 11, 1939.Remarks.--Runoff adjusted for change in contents and diversion at Saugatuck Reservoir (total capacity, 11,900,000,000 gal) since January 1942 when reservoir gates were first closed (see above). At Aspetuck Reservoir, Bridgeport Hydraulic Co. diverts an indeterminate 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.

Monthly and yearly mean discharge, in cubic feet per second (observed), of Saugatuck River near Westport, Conn.

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1933	21.2	170	74.8	104	134	353	350	85.3	28.3	13.4	86.2	102	126
1934	90.9	48.8	75.3	220	57.7	332	456	208	128	24.1	18.0	269	159
1935	193	185	196	180	187	270	124	55.2	37.3	19.3	5.77	19.4	123
1936	†9.75	29.1	28.8	152	84.8	657	339	143	77.2	17.2	9.52	12.9	130
1937	32.2	21.8	251	386	258	193	293	186	99.8	50.9	49.1	62.8	157
1938	164	278	221	282	225	146	165	102	103	325	146	390	212
1939	139	110	293	218	332	359	336	62.8	25.7	14.7	26.5	17.8	160
1940	33.3	98.5	66.7	153	88.3	414	510	279	198	60.9	19.1	24.2	162
1941	24.7	122	124	104	254	132	133	49.8	74.0	82.4	38.3	11.2	94.6
1942	11.5	41.2	91.3	113	99.9	301	80.8	80.2	46.9	42.3	143	40.0	91.4
1943	40.9	127	202	221	262	335	190	234	201	26.1	14.9	12.3	155
1944	27.4	67.4	27.9	48.0	58.6	366	317	106	20.3	10.9	9.26	44.2	93.6
1945	18.9	78.8	179	181	130	342	185	278	52.7	91.5	29.7	22.4	133
1946	25.3	74.2	296	230	104	204	89.2	276	203	35.1	25.2	22.6	132
1947	31.0	27.6	31.4	21.6	119	284	234	206	97.6	25.6	23.3	16.4	98.8
1948	13.9	152	125	92.4	92.2	476	347	236	166	52.0	19.4	11.4	149
1949	12.9	24.8	75.1	352	235	225	208	198	25.7	13.8	10.8	11.1	116
1950	11.2	13.5	19.1	23.0	54.1	103	107	137	110	57.8	18.8	13.0	55.7

† Corrected.

Monthly and yearly runoff, in inches (adjusted)

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1933	0.32	2.44	1.11	1.54	1.80	5.25	5.04	1.23	0.41	0.20	1.28	1.47	22.09
1934	1.35	.70	1.12	3.27	.78	4.93	6.28	3.09	1.84	.36	.27	3.87	27.86
1935	2.87	2.67	2.92	2.68	2.51	4.01	1.78	.82	.54	.29	.09	.28	21.46
1936	.15	.42	.43	2.26	1.18	9.78	4.88	2.13	1.11	.26	.14	.19	22.93
1937	.48	.31	3.74	5.74	3.47	2.87	4.22	2.77	1.44	.76	.73	.90	27.43
1938	2.44	4.00	3.29	4.20	3.02	2.17	2.38	1.52	1.48	4.83	2.17	5.61	37.11
1939	2.06	1.58	4.36	3.24	4.46	5.34	4.84	.93	.37	.22	.39	.26	28.05
1940	.50	1.42	.99	2.27	1.23	6.16	7.34	4.15	2.84	.91	.28	.35	28.44
1941	.37	1.75	1.84	1.54	3.42	1.96	1.92	.74	1.07	1.22	.57	.16	16.56
1942	.17	.59	1.36	1.83	2.50	7.41	1.89	2.05	1.12	.76	2.87	.69	23.23
1943	.92	3.17	3.72	3.27	3.52	4.96	2.77	3.47	3.04	.31	.02	-.01	29.16
1944	.51	1.84	.66	1.05	1.50	5.79	4.53	1.53	.31	-.07	-.07	.99	18.57
1945	.28	2.10	3.83	2.55	2.00	5.08	2.73	4.12	.86	1.58	.57	.44	26.14
1946	.40	1.74	4.45	3.30	1.45	3.03	1.28	4.15	2.78	.73	.66	.53	24.50
1947	.97	.63	.75	1.53	1.68	4.50	3.37	3.06	1.24	.64	.43	.16	18.96
1948	.08	3.67	1.84	1.33	2.01	7.14	4.98	3.60	2.42	.97	.27	.04	28.35
1949	-.02	.71	1.73	6.63	3.14	5.33	2.99	2.97	.23	.06	.05	.10	21.92
1950	.02	.21	.43	.69	1.49	2.93	2.03	2.04	1.57	1.16	.21	.11	12.89

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

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30							Calendar year		
		Observed				Adjusted			Observed		Adjusted
		Momentary maximum		Minimum day	Mean	Mean	Per square mile	Runoff in inches	Mean	Mean	Runoff in inches
		Discharge	Date								
1933	741	1,230	Mar. 21, 1933	1.6	126	-	1.63	22.09	122	-	21.39
1934	756	3,100	Sept. 17, 1934	7.9	159	-	2.05	27.86	189	-	33.15
1935	781	8788	Dec. 20, 1934	1.3	123	-	1.59	21.46	79.9	-	14.00
1936	801	5,310	Mar. 12, 1936	5.1	130	-	1.68	22.93	150	-	26.46
1937	821	1,420	Apr. 6, 1937	11	157	-	2.03	27.43	186	-	32.63
1938	851	4,420	Sept. 21, 1938	24	212	-	2.74	37.11	202	-	35.38
1939	871	1,330	Jan. 6, 1939	1.0	160	-	2.06	28.05	131	-	22.96
1940	891	5,400	Mar. 15, 1940	2.7	162	-	2.09	28.44	168	-	29.49
1941	921	3,830	Feb. 8, 1941	6.4	94.6	-	1.22	16.56	840	-	14.72
1942	951	1,150	Aug. 17, 1942	7.2	91.4	133	1.72	23.23	110	165	28.92
1943	971	1,790	Dec. 30, 1942	9.2	155	167	2.15	29.16	134	159	24.36
1944	1001	1,860	Mar. 7, 1944	8.3	93.6	106	1.37	18.57	107	124	21.77
1945	1031	1,120	Apr. 26, 1945	13	133	149	1.92	26.14	143	152	26.52
1946	1051	1,950	May 28, 1946	12	132	139	1.79	24.50	107	116	20.26
1947	1051	1,240	Mar. 14, 1947	9.8	98.8	108	1.39	18.96	116	127	22.20
1948	1111	2,000	Apr. 1, 1948	7.1	149	162	2.09	28.35	134	143	25.18
1949	1141	1,350	Dec. 31, 1948	7.0	116	126	1.63	21.92	110	116	20.16
1950	1171	441	June 2, 1950	4.1	55.7	73.7	.951	12.89	-	-	-

a Maximum peak discharge; maximum discharge during year, 855 cfs at 12:01 a.m. Oct. 1, stage falling.

## 356. Mianus River at Bedford, N. Y.

Location.--Lat 41°12'05", long. 73°38'00", at highway bridge at Bedford, Westchester County, 3½ miles upstream from point where river crosses into Connecticut.

Drainage area.--10.4 sq mi (revised).

Gage.--Staff gage. Altitude of gage is 345 ft (from topographic map).

Extremes.--1903-04: Maximum daily discharge, 400 cfs Oct. 9, 1903; minimum daily, 1.4 cfs May 29-June 1, 1903.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	\$57.4	\$52.2	67.6	46.4	6.9	37.7	13.0	\$17.4	\$58.1	-
1904	\$84.0	38.0	\$47.1	-	-	-	-	-	-	-	-	-	-

\* Not previously published; estimated on basis of records for Mianus River near Stamford, Conn. and nearby streams.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	\$8.36	\$5.22	7.48	4.98	0.77	4.04	1.44	\$1.93	\$6.23	-
1904	\$9.31	4.08	\$5.22	-	-	-	-	-	-	-	-	-	-

\* Not previously published; estimated on basis of records for Mianus River near Stamford, Conn. and nearby streams.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1903	97	-	-	-	-	-	-	43.7	57.06	-	-
1904	97	-	-	-	-	-	-	-	-	-	-

## 357. Mianus River at North Mianus, Conn.

Location.--Lat 41°03'30", long. 73°35'00", on right bank 1 mile north of Mianus, Greenwich Township, and 2 miles west of Stamford, Fairfield County.

Drainage area.--29.9 sq mi.

Gage.--Water-stage recorder and sharp-crested weir and rounded crest dam. Altitude of gage is 10 ft (from topographic map).

Extremes.--1920-21: Maximum discharge, 810 cfs Sept. 30, 1920 (gage height, 3.67 ft), from rating curve extended above 250 cfs on basis of weir and dam ratings; minimum, 1.4 cfs Aug. 30, 1921 (gage height, 0.25 ft).

Remarks.--Flow regulated by mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1920	-	-	-	\$25.0	\$22.6	213	130	73.4	43.7	27.4	51.5	39.9	-
1921	72.2	56.4	132	84.4	54.7	116	111	73.8	18.6	22.1	14.9	5.99	63.7
1922	5.72	16.2	28.2	17.2	-	-	-	-	-	-	-	-	-

\* Not previously published; estimated on basis of records for station on Naugatuck River at Naugatuck.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1920	-	-	-	\$0.96	\$0.81	8.21	4.85	2.82	1.63	1.06	1.98	1.46	-
1921	2.78	2.11	5.08	3.25	1.91	4.47	4.14	2.85	.69	.85	.57	.22	28.92
1922	.22	.60	1.09	.66	-	-	-	-	-	-	-	-	-

\* Not previously published; see footnote to preceding table.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year			
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches		
		Discharge	Date								
1920	501	810	Sept. 30, 1920	-	-	-	-	\$74.2	\$33.77	-	-
1921	521	475	Dec. 14, 1920	1.9	63.7	2.13	28.92	45.9	20.86	-	-
1922	541	-	-	-	-	-	-	-	-	-	-

\* Not previously published.

## 358. West Branch Byram River near Port Chester, N. Y.

Location.--Lat 41°04'40", long. 73°41'40", at unused timber dam at Schilts Mill, 2 miles upstream from mouth, and 6 miles upstream from Port Chester, Westchester County.

Drainage area.--11.2 sq mi.

Gage.--Staff gage above dam. Altitude of gage is 340 ft (from topographic map).

Extremes.--1903 calendar year: Maximum discharge, 314 cfs Oct. 9, 1903 (gage height, 17 in.).

Remarks.--During a portion of the year the entire flow was diverted at a dam 1,100 ft north of the New York-Connecticut State line and 3 miles upstream from gage. Records of this diversion are not available. Flow at station, about 1 cfs during periods of diversion.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	*37.92	*36.24	45.07	37.60	*3.04	*8.04	*1.17	5.85	30.50	-
1904	44.09	10.04	*5.74	-	-	-	-	-	-	-	-	-	-

\* Revised.

\* Not previously published; partly estimated on basis of records for nearby streams.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	*3.90	*3.37	4.64	3.75	*0.31	*0.80	*0.12	0.60	3.04	-
1904	4.54	1.00	*0.59	-	-	-	-	-	-	-	-	-	-

\* Revised.

\* Not previously published; partly estimated on basis of records for nearby streams.

Yearly discharge, in cubic feet per second

Year	W.S.P. no.	Water year ending Sept. 30						Calendar year	
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff in inches	Mean	Runoff in inches
		Discharge	Date						
1903	97	-	-	-	-	-	-	*22.00	*26.66
1904	97	-	-	-	-	-	-	-	-

\* Not previously published.

## East Branch Byram River near Greenwich, Conn.

Location.--Lat 41°05', long. 73°40', just above bridge on Round Hill Road, 1 mile south of Round Hill, and 4 miles northwest of Greenwich, Fairfield County.

Drainage area.--4.84 sq mi.

Gage.--Non-recording.

Remarks.--Records for March to November 1903, published in Water-Supply Paper 97, have been found to be in error on the basis of re-study of the original data and comparison with rainfall records and records for nearby stations. Those records are not published herein and should not be used.

## 359. Byram River at Pemberwick, Conn.

Location.--Lat 41°01'15", long. 73°39'45", at Pemberwick, 1 mile downstream from Glenville, Fairfield County, and 3 miles upstream from mouth.

Drainage area.--27.2 sq mi.

Gage.--Unknown type of forebay gage at dam of the then Port Chester Bolt and Nut Co. Altitude of gage is 40 ft (from topographic map).

Remarks.--Flow regulated by mills above station.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	*86.6	94.3	106	76.0	-	-	-	*39.6	52.9	-
1904	106	26.4	*44.3	-	-	-	-	-	-	-	-	-	-

\* Not previously published.

Monthly and yearly runoff, in inches

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1903	-	-	-	*3.67	3.61	4.50	3.11	-	-	-	*1.68	2.16	-
1904	4.50	1.08	*1.88	-	-	-	-	-	-	-	-	-	-

\* Not previously published.



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