UNITED STATES DEPARTMENT OF THE INTERIOR
Ray Lyman Wilbur, Secretary
GEOLOGICAL SURVEY
George Otis Smith, Director

WATER-SUPPLY PAPER 601

SURFACE WATER SUPPLY OF THE UNITED STATES

1925

PART I. NORTH ATLANTIC SLOPE DRAINAGE BASINS

NATHAN C. GROVER, Chief Hydraulic Engineer
C. H. PIERCE, H. B. KINNISON, A. W. HARRINGTON
O. W. HARTWELL, and A. H. HORTON
District Engineers

Prepared in Cooperation with the States of
MAINE, NEW HAMPSHIRE, MASSACHUSETTS, NEW YORK
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ILLUSTRATION

SURFACE WATER SUPPLY OF NORTH ATLANTIC SLOPE DRAINAGE BASINS, 1925

AUTHORIZATION AND SCOPE OF WORK

This volume is one of a series of 14 reports representing records of measurements of flow made on streams in the United States during the year ending September 30, 1925.

The data presented in these reports were collected by the United States Geological Survey under the following authority contained in the organic law (20 Stat. L. p. 394):

Provided, That this officer [the Director] shall have the direction of the Geological Survey and the classification of public lands and examination of the geological structure, mineral resources, and products of the national domain.

The work was begun in 1888 in connection with special studies relating to irrigation. Since the fiscal year ending June 30, 1895, successive appropriation bills passed by Congress have carried the following items:

For gaging the streams and determining the water supply of the United States, and for the investigation of underground currents and artesian wells, and for the preparation of reports upon the best methods of utilizing the water resources.

Annual appropriations for the fiscal years ending June 30, 1895–1926

1895	$12,500.00	1903–1906	$200,000.00	1919	$148,244.10
1896	24,500.00	1907	150,000.00	1920	175,000.00
1897–1899	50,000.00	1908–1910	100,000.00	1921–1923	180,000.00
1900	70,000.00	1911–1917	150,000.00	1924–1925	170,000.00
1901–1902	100,000.00	1918	175,000.00	1926	165,000.00

In the execution of the work many private and State organizations have cooperated either by furnishing data or by assisting in collecting data. Acknowledgments for cooperation of the first kind are made in connection with the description of each station affected; cooperation of the second kind is acknowledged on pages 9 and 10.

Measurements of stream flow have been made at about 5,120 points in the United States and also at many points in Alaska and the Hawaiian Islands. In July, 1925, 1,710 gaging stations were being maintained by the Survey and the cooperating organizations. Many miscellaneous discharge measurements were made at other points. In connection with this work data were also collected in regard to precipitation, evaporation, storage reservoirs, river profiles, and water

power in many sections of the country and will be made available in water-supply papers from time to time.

DEFINITION OF TERMS

The volume of water flowing in a stream—the "run-off" or "discharge"—is expressed in various terms, each of which has become associated with a certain class of work. These terms may be divided into two groups—(1) those that represent a rate of flow, as second-feet, gallons per minute, miner's inches, and discharge in second-feet per square mile, and (2) those that represent the actual quantity of water, as run-off in inches, acre-feet, and millions of cubic feet. The principal terms used in this series of reports are second-feet, second-feet per square mile, run-off in inches, acre-feet, and millions of cubic feet. They may be defined as follows:

"Second-feet" is an abbreviation for "cubic feet per second." A second-foot is the rate of discharge of water flowing in a channel of rectangular cross section 1 foot wide and 1 foot deep at an average velocity of 1 foot per second. It is generally used as a fundamental unit from which others are computed.

"Second-feet per square mile" is the average number of cubic feet of water flowing per second from each square mile of area drained, on the assumption that the run-off is distributed uniformly both as regards time and area.

"Run-off in inches" is the depth to which an area would be covered if all the water flowing from it in a given period were uniformly distributed on the surface. It is used for comparing run-off with rainfall, which is usually expressed in inches.

An "acre-foot," equivalent to 43,560 cubic feet, is the quantity required to cover an acre to the depth of 1 foot. The term is commonly used in connection with storage for irrigation.

The following terms not in common use are here defined:

"Stage-discharge relation," an abbreviation for the term "relation of gage height to discharge."

"Control," a term used to designate the section or sections of the stream channel below the gage which determine the stage-discharge relation at the gage. It should be noted that the control may not be the same section or sections at all stages.

The "point of zero flow" for a gaging station is that point on the gage—the gage height—at which water ceases to flow over the control.

EXPLANATION OF DATA

The data presented in this report cover the year beginning October 1, 1924, and ending September 30, 1925. At the beginning of January in most parts of the United States much of the precipitation in the preceding three months is stored in the form of snow or ice,

or in ponds, lakes, and swamps, or as ground water, and this stored water passes off in the streams during the spring break-up. At the end of September, on the other hand, the only stored water available for run-off is possibly a small quantity in the ground; therefore the run-off for the year beginning October 1 is practically all derived from precipitation within that year.

The base data collected at gaging stations consists of records of stage, measurements of discharge, and general information used to supplement the gage heights and discharge measurements in determining the daily flow. The records of stage are obtained either from direct reading on a staff or chain gage or from a water-stage recorder

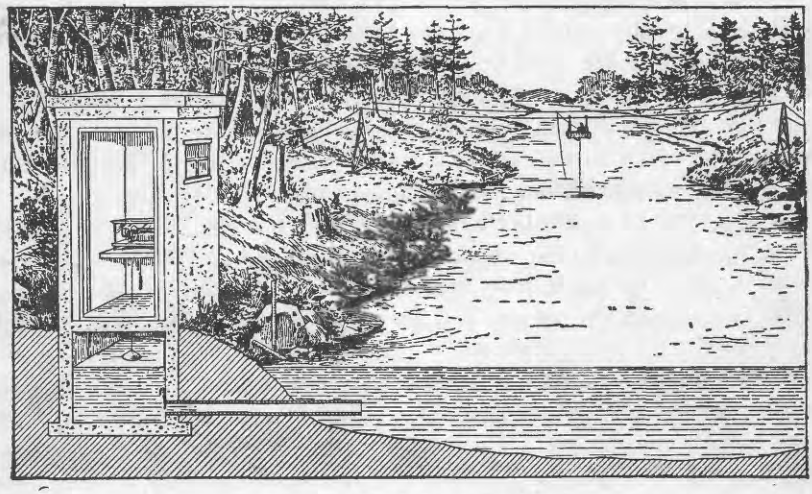

FIGURE 1.—Typical gaging station

that gives a continuous record of the fluctuations. Measurements of discharge are made with a current meter. The general methods are outlined in standard textbooks on the measurement of river discharge. A typical gaging station, equipped with water-stage recorder and measuring cable and car, is shown in Figure 1.

From the discharge measurements rating tables are prepared that give the discharge for any stage. The application of the daily gage heights to these rating tables gives the daily discharge from which the monthly and yearly mean discharge is computed.

The data presented for each gaging station in the area covered by this report comprise a description of the station, a table giving records of discharge measurements, a table showing the daily discharge of the stream, and a table of monthly and yearly discharge and run-off.

If the base data are insufficient to determine the daily discharge, tables giving daily gage height and records of discharge measurements are published.

The description of the station gives, in addition to statements regarding location and equipment, information in regard to any condition that may affect the permanence of the stage-discharge relation, covering such subjects as the occurrence of ice, the use of the stream for log driving, shifting of control, and the cause and effect of backwater. It gives also information as to diversions that decrease the flow at the gage, artificial regulation, maximum and minimum recorded stages, and the accuracy of the records.

The table of daily discharge gives, in general, the discharge in second-feet corresponding to the mean of the gage heights read each day. At stations on streams subject to sudden or rapid diurnal fluctuation the discharge obtained from the rating table and the mean daily gage height may not be the true mean discharge for the day. If such stations are equipped with water-stage recorders the mean daily discharge may be obtained by averaging discharge at regular intervals during the day or by use of the discharge integrator, an instrument operating on the principle of the planimeter and containing as an essential element the rating curve of the station.

In the table of monthly discharge the column headed "Maximum" gives the mean flow for the day when the mean gage height was highest. As the gage height is the mean for the day, it does not indicate correctly the stage when the water surface was at crest height, and the corresponding discharge was consequently larger than given in the maximum column. Likewise, in the column headed "Minimum" the quantity given is the mean flow for the day when the mean gage height was lowest. The column head "Mean" is the average flow in cubic feet per second during the month. On this average flow are based computations recorded in the remaining columns, which are defined on page 2.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

The accuracy of stream-flow data depends primarily (1) on the permanence of the stage-discharge relation, and (2) on the accuracy of observation of stage, measurements of flow, and interpretation of records.

A paragraph in the description of the station gives information regarding the (1) permanence of the stage-discharge relation, (2) precision with which the discharge rating curve is defined, (3) refinement of gage readings, (4) frequency of gage readings, and (5) methods of applying daily gage height to the rating table to obtain the daily discharge.

For the rating tables "well defined" indicates, in general, that the rating is probably accurate within 5 per cent; "fairly well defined," within 10 per cent; "poorly defined," within 15 to 25 per cent. These notes are very general and are based on the plotting of

the individual measurements with reference to the mean rating curve.

The monthly means for any station may represent with high accuracy the quantity of water flowing past the gage, but the figures showing discharge per square mile and depth in inches may be subject to gross errors caused by the inclusion of large noncontributing districts in the measured drainage area, by lack of information concerning water diverted for irrigation or other use, or by inability to interpret the effect of artificial regulation of the flow of the river above the station. "Second-feet per square mile" and "Run-off in inches" are therefore not computed if such errors appear probable.

The computations are also omitted for stations on streams draining areas in which the annual rainfall is less than 20 inches. All figures representing "second-feet per square mile" and "run-off in inches" published by the Survey in earlier reports should be used with caution because of possible inherent sources of error not known to the Survey.

The table of monthly discharge gives only a general idea of the flow at the station and should not be used for other than preliminary estimates; the tables of daily discharge allow more detailed studies of the variation in flow. It should be borne in mind, however, that the observations in each succeeding year may be expected to throw new light on data previously published.

PUBLICATIONS

Investigation of water resources by the United States Geological Survey has consisted in large part of measurements of the volume of flow of streams and studies of the conditions affecting that flow, but it has comprised also investigation of such closely allied subjects as irrigation, water storage, water powers, ground waters, and quality of waters. Most of the results of these investigations have been published in the series of water-supply papers, but some have appeared in the monographs, bulletins, professional papers, and annual reports.

The results of stream-flow measurements are now published annually in 12 parts, each part covering an area whose boundaries coincide with natural drainage features as indicated below:

PART I. North Atlantic slope basins (St. John River to York River).
II. South Atlantic slope and eastern Gulf of Mexico basins (James River to the Mississippi).
III. Ohio River Basin.
IV. St. Lawrence River Basin.
V. Upper Mississippi River and Hudson Bay Basins.
VI. Missouri River Basin.
VII. Lower Mississippi River Basin.
VIII. Western Gulf of Mexico Basins.
IX. Colorado River Basin.

PART X. Great Basin.
XI. Pacific slope basins in California.
XII. North Pacific slope basin in three parts.
A, Pacific slope basins in Washington and upper Columbia River Basin.
B, Snake River Basin.
C, Pacific slope basins in Oregon and lower Columbia River Basin.

Water-supply papers and other publications of the United States Geological Survey containing data in regard to the water resources of the United States may be obtained or consulted as indicated below:

1. Copies may be purchased at nominal cost from the Superintendent of Documents, Government Printing Office, Washington, D. C., who will, on application, furnish lists giving prices.

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

3. Sets are available for consultation in the local offices of the water-resources branch of the Geological Survey, as follows:

Augusta, Me., Statehouse.
Boston, Mass., 2500 Customhouse.
Albany, N.Y., 904 Home Savings Bank Building.
Trenton, N. J., 423 Statehouse Annex.
Charlottesville, Va., Brooks Museum, University of Virginia.
Asheville, N. C., 608 City Hall.
Chattanooga, Tenn., 630 Power Building.
Tuscaloosa, Ala., Post Office Building.
Columbus, Ohio, Engineering Experiment Station, Ohio State University.
Chicago, Ill., 1510 Consumers Building.
Madison, Wis., State Capitol.
Rolla, Mo., Rolla Building, School of Mines and Metallurgy.
Topeka, Kans., 23 Federal Building.
Helena, Mont., 45–46 Federal Building.
Denver, Colo., 403 Post Office Building.
Salt Lake City, Utah, 313 Federal Building.
Idaho Falls, Idaho, 228 Federal Building.
Boise, Idaho, Federal Building.
Tacoma, Wash., 404 Federal Building.
Portland, Oreg., 606 Post Office Building.
San Francisco, Calif., 303 Customhouse.
Los Angeles, Calif., 600 Federal Building.
Tucson, Ariz., 104 Agricultural Building, University of Arizona.
Austin, Tex., State Capitol.
Honolulu, Hawaii, Territorial Office Building.

A list of the Geological Survey's publications may be obtained by applying to the Director, United States Geological Survey, Washington, D. C.

Stream-flow records have been obtained at about 5,480 points in the United States, and the data obtained have been published in the reports tabulated on pages 7 and 8.

Stream-flow data in reports of the United States 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 Sept., 1890.
12th A, pt. 2	do	1884 to June 30, 1891.
13th A, pt. 3	Mean discharge in second-feet	1884 to Dec. 31, 1892.
14th A, pt. 2	Monthly discharge (long-time records, 1871 to 1893)	1888 to Dec. 31, 1893.
B 131	Descriptions, measurements, gage heights, and ratings	1893 to 1894
16th A, pt. 2	Descriptive information only	
B 140	Descriptions, measurements, gage heights, ratings, and monthly discharge (also data covering earlier years).	1895.
W 11	Gage heights (also gage heights for earlier years)	1896.
18th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge (also similar data for some earlier years).	1895 and 1896.
W 15	Descriptions, measurements, and gage heights, eastern United States, eastern Mississippi River, and Missouri River above junction with Kansas.	1897.
W 16	Descriptions, measurements, and gage heights, western Mississippi River below junction of Missouri and Platte, and western United States.	1897.
19th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge (also some long-time records)	1897.
W 27	Measurements, ratings, and gage heights, eastern United States, eastern Mississippi River, and Missouri River.	1898.
W 28	Measurements, ratings, and gage heights, Arkansas River, and western United States.	1898.
20th A, pt. 4	Monthly discharge (also for many earlier years)	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.
W 82 to 85	Complete data	1902.
W 97 to 100	do	1903.
W 124 to 135	do	1904.
W 165 to 178	do	1905.
W 201 to 214	do	1906.
W 241 to 252	do	1907 and 1908.
W 261 to 272	do	1909.
W 281 to 292	do	1910.
W 301 to 312	do	1911.
W 321 to 332	do	1912.
W 351 to 362	do	1913.
W 381 to 394	do	1914.
W 401 to 414	do	1915.
W 431 to 444	do	1916.
W 451 to 464	do	1917.
W 471 to 484	do	1918.
W 501 to 514	do	1919 and 1920.
W 521 to 534	do	1921.
W 541 to 554	do	1922.
W 561 to 574	do	1923.
W 581 to 594	do	1924.
W 601 to 614	do	1925.

NOTE.—No stream-flow data are given in the Fifteenth and Seventeenth Annual Reports.

The records at most of the stations discussed in these reports extend over a series of years, and miscellaneous measurements at many points other than regular gaging stations have been made each year. An index of the reports containing records obtained prior to 1904 has been published in Water-Supply Paper 119.

The following table gives, by years and drainage basins, the numbers of the papers on surface-water supply published from 1899 to 1925. The data for any particular station will be found in the reports covering the years during which the station was maintained. For example, data from 1902 to 1921 for any station in the area covered by Part III are published in Water-Supply Papers 83, 98, 128, 169, 205, 243, 263, 283, 303, 323, 353, 383, 403, 433, 453, 473, 503, 523, and 543, which contain records for the Ohio River Basin for those years.

Numbers of water-supply papers containing results of stream measurements, 1899–1925

[For basins included see pp. 5 and 6]

Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII		
												A	B	C
1899 [a]	35	[b] 35, 36	36	36	36	[c] 36, 37	37	37	[d] 37, 38	38, [e] 39	38, [f] 39	38	38	38
1900 [g]	47, [h] 48	48	48, [i] 49	49	49	49, [f] 50	50	50	50	51	51	50	51	51
1901	65, 75	65, 75	65, 75	65, 75	[k] 65, 66, 75	66, 75	[k] 65, 66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75	66, 75
1902	82	[b] 82, 83	83	[i] 82, 83	[k] 83, 85	84	[k] 83, 84	84	85	85	85	85	85	85
1903	97	[b] 97, 98	98	97	[k] 98, 99, [m] 100	99	[k] 98, 99	99	100	100	100	100	100	100
1904	[n] 124, [o] 125 [p] 126	[p] 126, 127	128	129	[k] 128, 130	130, [q] 131	[k] 128, 131	132	133	133, [r] 134	134	135	135	135
1905	[n] 165, [o] 166 [p] 167	[p] 167, 168	169	170	171	172	[k] 169, 173	174	175, [s] 177	176, [r] 177	177	178	178	[t] 177, 178
1906	[n] 201, [o] 202 [p] 203	[p] 203, 204	205	206	207	208	[k] 205, 209	210	211	212, [r] 213	213	214	214	214
1907–8	241	242	243	244	245	246	247	248	249	250, [r] 251	251	252	252	252
1909	261	262	263	264	265	266	267	268	269	270, [r] 271	271	272	272	272
1910	281	282	283	284	285	286	287	288	289	290	291	292	292	292
1911	301	302	303	304	305	306	307	308	309	310	311	312	312	312
1912	321	322	323	324	325	326	327	328	329	330	331	332-A	332-B	332-C
1913	351	352	353	354	355	356	357	358	359	360	361	362-A	362-B	362-C
1914	381	382	383	384	385	386	387	388	389	390	391	392	393	394
1915	401	402	403	404	405	406	407	408	409	410	411	412	413	414
1916	431	432	433	434	435	436	437	438	439	440	441	442	443	444
1917	451	452	453	454	455	456	457	458	459	460	461	462	463	464
1918	471	472	473	474	475	476	477	478	479	480	481	482	483	484
1919–20	501	502	503	504	505	506	507	508	509	510	511	512	513	514
1921	521	522	523	524	525	526	527	528	529	530	531	532	533	534
1922	541	542	543	544	545	546	547	548	549	550	551	552	553	554
1923	561	562	563	564	565	566	567	568	569	570	571	572	573	574
1924	581	582	583	584	585	586	587	588	589	590	591	592	593	594
1925	601	602	603	604	605	606	607	608	609	610	611	612	613	614

[a] Rating tables and index to Water-Supply Papers 35–39 contained in Water-Supply Paper 39. Tables of monthly discharge for 1899 in Twenty-first Annual Report, Part IV.
[b] James River only.
[c] Gallatin River.
[d] Green and Gunnison Rivers and Grand River above junction with Gunnison.
[e] Mohave River only.
[f] Kings and Kern Rivers and south Pacific slope basins.
[g] Rating tables and index to Water-Supply Papers 47–52 and data on precipitation, wells, and irrigation in California and Utah contained in Water-Supply Paper 52. Tables of monthly discharge for 1900 in Twenty-second Annual Report, Part IV.
[h] Wissahickon and Schuylkill Rivers to James River.
[i] Sciotio River
[f] Loup and Platte Rivers near Columbus, Nebr., and all tributaries below junction with Platte.
[k] Tributaries of Mississippi from east.
[l] Lake Ontario and tributaries to St. Lawrence River proper.
[m] Hudson Bay only.
[n] New England rivers only.
[o] Hudson River to Delaware River, inclusive.
[p] Susquehanna River to Yadkin River, inclusive.
[q] Platte and Kansas Rivers.
[r] Great Basin in California except Truckee and Carson River Basins.
[s] Below junction with Gila.
[t] Rogue, Umpqua, and Siletz Rivers only.

COOPERATION

Records in Maine were obtained in cooperation with the Public Utilities Commission of Maine, Charles E. Gurney, chairman.

The work in New Hampshire was done in cooperation with the Public Service Commission of New Hampshire, William T. Gunnison, Fred H. Brown, and John W. Storrs, commissioners.

In Massachusetts the work was carried on in cooperation with the Department of Public Works, division of waterways and public lands, William F. Williams, chairman, Richard K. Hale, commissioner (waterways).

In New England financial assistance has also been rendered by the Orono Pulp & Paper Co., New England Power Co., Turners Falls Power & Electric Co., Connecticut Valley Lumber Co., Holyoke Water Power Co., International Paper Co., Eastern Connecticut Power Co., Keene Gas & Electric Co., Profile Falls Power Co., Connecticut Power Co., Mascoma River Improvement Co., Worcester Electric Light Co., W. H. McElwain Co., Upper Connecticut River & Lake Improvement Co., Milo Electric Light Co., St. Croix Paper Co., and Thomas W. Clark.

Work in New York was carried on in cooperation with the State and at certain stations in cooperation with the following organizations: Hudson River Regulating District (Hudson River at North Creek, N. Y., and Schroon River at Riverbank, N. Y.); Indian River Co. (Indian Lake Reservoir, Indian River near Indian Lake, N. Y., Hudson River at Hadley, N. Y., and Sacandaga River at Hadley, N. Y.); Adirondack Power & Light Corporation (Hoosic River near Eagle Bridge, N. Y., Hudson River at Hadley, N. Y., and Fox Creek at West Berne, N. Y.); West Virginia Pulp & Paper Co. (Hudson River at Mechanicville, N. Y.); I. C. Blandy (Batten Kill at Battenville, N. Y.); Rensselaer Polytechnic Institute (Poesten Kill near Troy, N. Y.); Utica Gas & Electric Co. (West Canada Creek at Kast Bridge, N. Y.); United Hudson Electric Corporation (Wallkill River at Pellets Island Mountain, N. Y., Wallkill River at Gardiner, N. Y., and Shawangunk Kill at Pine Bush, N. Y.); New York State Gas & Electric Corporation (Susquehanna River at Colliersville, N. Y., and Unadilla River near New Berlin, N. Y.); F. Hurd Robinson, city engineer (Canacadea Creek at Hornell, N. Y.).

The work in New Jersey was carried on in cooperation with the State through the Department of Conservation and Development, Dr. Henry B. Kümmel, director, and H. T. Critchlow, chief, division of waters.

Financial assistance was also rendered in New Jersey by the Hackensack Water Co., Weehawken; city of Morristown (William H. Frapwell, commissioner, Department of Public Works); borough of Pompton Lakes; Taylor-Wharton Iron & Steel Co., High Bridge;

Somerset Lake and Game Club, Far Hills, Col. F. S. Tainter, engineer; Tintern Manor Water Co., Long Branch; Atlantic City Water Department, Mr. L. Van Gilder, engineer and superintendent; and Warren Manufacturing Co., Milford.

In Maryland work was carried on in cooperation with the State Geological Survey, E. B. Mathews, State geologist. Financial assistance was also rendered by West Virginia Pulp & Paper Co., and Washington Suburban Sanitary District.

Work in Virginia was done in cooperation with the Virginia Geological Survey, Albert W. Giles, acting State geologist until August, 1925, and succeeded by Wilbur A. Nelson, director. Financial assistance was also rendered by the Spottsylvania Power Co.

Financial assistance was given in West Virginia by the Potomac Edison Co. and in Pennsylvania by F. M. Waring, Juniata River Water Power Co., and Watts Water & Power Co.

DIVISION OF WORK

The data for stations in New England were collected and prepared for publication under the direction of C. H. Pierce and H. B. Kinnison, district engineers. M. R. Stackpole, assistant engineer, had immediate supervision of the work in Maine. The other assistants in New England were Lillian H. McCarthy and Henry F. Hill, jr.

Data for stations in New York were collected and prepared for publication under the direction of Arthur W. Harrington, district engineer, assisted by E. B. Shupe, J. L. Lamson, A. E. Johnson, W. B. Mifflin, C. G. Sutton, and Agnes D. Buchanan.

Data for stations in New Jersey were collected and prepared for publication under the direction of O. W. Hartwell, district engineer, assisted by Otto Lauterhahn, H. C. Barksdale, E. W. Downs, and Miss M. G. Tracy.

Data for stations in Maryland, Virginia, and West Virginia were collected and prepared for publication under the direction of A. H. Horton, district engineer, assisted by J. J. Dirzulaitis, W. C. Wiggins, Karl Jetter, J. H. Hofmann, O. D. Mussey, F. C. Christopherson, Miss Ruth Bradley, and Miss Nellie Minor.

The manuscript was assembled and reviewed by J. W. Mangan.

GAGING-STATION RECORDS

ST. JOHN RIVER BASIN

ST. JOHN RIVER AT VAN BUREN, ME.

LOCATION.—At international bridge at Van Buren, Aroostook County, 14 miles above Grand Falls.

DRAINAGE AREA.—8,270 square miles.

RECORDS AVAILABLE.—May 4, 1908, to September 30, 1925.

GAGE.—Gage painted vertically on second pier from Van Buren end of bridge; read by W. H. Scott.

DISCHARGE MEASUREMENTS.—Made from bridge.

CHANNEL AND CONTROL.—Control practically permanent. Banks high, rocky, cleared, and not subject to overflow except at very high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 23.0 feet at 7 a. m. May 7 (discharge, 94,000 second-feet); minimum discharge, estimated 1,800 second-feet February 2–9 (stage-discharge relation affected by ice).

1908–1925: Maximum stage recorded, 29.0 feet May 2, 1923 (discharge, by extension of rating curve, 134,000 second-feet); minimum discharge, estimated at 720 second-feet March 18, 1923 (stage-discharge relation affected by ice).

ICE.—Stage-discharge relation seriously affected by ice, usually from December to April.

REGULATION.—The little storage, which is used for log driving, probably does not materially affect the flow.

ACCURACY.—Stage-discharge relation practically permanent except when affected by ice. Rating curve well defined. Gage read to tenths once daily, occasionally twice daily. Daily discharge ascertained by applying rating table to daily gage height with corrections for effect of ice during winter. Records good.

The following discharge measurements were made:

February 11, 1925: Gage height, 3.80 feet;[1] discharge, 1,840 seeond-feet.

March 26, 1925: Gage height, 5.95 feet;[1] discharge, 4,200 second-feet.

Daily discharge, in second-feet, of St. John River at Van Buren, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,520	3,410	13,300	4,000	1,900	4,300	15,000	78,000	20,200	7,970	8,220	3,070
2	7,970	3,410	12,200	3,900	1,800	4,100	22,000	72,000	21,500	9,500	7,490	2,750
3	19,500	3,240	10,800	3,700	1,800	4,300	26,000	72,000	20,500	10,600	6,160	2,590
4	18,800	3,240	5,000	3,600	1,800	4,300	28,000	73,800	22,200	11,600	7,970	2,290
5	15,100	3,070	4,200	3,500	1,800	4,100	30,000	72,000	21,800	10,800	13,000	2,290
6	12,200	3,070	5,800	3,400	1,800	4,100	32,000	87,500	22,900	10,000	11,600	2,010
7	10,300	3,070	6,000	3,400	1,800	4,100	31,000	94,000	21,500	9,240	9,760	1,880
8	8,980	3,240	6,600	3,300	1,800	4,100	31,000	89,400	19,800	8,980	8,220	1,880
9	8,220	3,410	7,800	3,300	1,800	3,700	33,000	79,800	17,900	8,470	7,730	2,010
10	7,730	3,580	8,000	3,300	1,850	3,900	32,000	70,800	16,900	7,970	7,260	2,010
11	7,030	6,160	7,000	3,200	1,850	3,900	35,000	63,000	16,300	8,470	7,490	2,010
12	6,590	5,950	6,600	3,000	2,000	3,900	35,000	61,900	16,300	7,970	7,030	2,010
13	5,950	5,740	7,800	3,000	2,400	3,900	32,000	63,600	16,300	8,720	6,810	2,150
14	5,530	4,700	8,600	2,900	3,300	3,900	31,000	61,900	16,000	8,980	7,030	2,150
15	5,120	4,900	8,400	2,800	3,700	3,900	30,000	57,000	15,100	9,500	6,370	3,410
16	5,120	5,530	6,600	2,700	3,700	3,700	29,000	52,500	13,900	8,980	5,530	5,950
17	4,920	5,000	6,200	2,600	3,600	3,800	29,000	48,500	12,800	7,970	4,720	10,600
18	5,120	4,900	6,000	2,600	3,600	3,900	29,000	48,000	12,200	8,220	4,920	9,500
19	4,720	4,300	6,000	2,500	3,900	4,000	29,000	48,000	11,900	11,100	4,320	7,970
20	4,520	3,400	6,000	2,500	4,900	4,200	29,000	47,000	11,600	13,300	3,940	7,030
21	4,520	3,500	5,800	2,400	5,200	4,200	28,200	42,500	12,200	12,200	4,320	5,950
22	4,320	3,900	5,400	2,400	5,400	4,300	27,800	38,200	13,900	10,800	4,520	6,160
23	4,130	5,740	4,900	2,300	5,200	4,100	29,800	36,800	13,600	9,760	8,720	7,970
24	4,130	6,370	4,800	2,300	5,000	4,100	33,200	34,100	12,500	8,470	7,970	11,100
25	4,320	14,200	4,700	2,000	5,000	4,100	40,100	31,900	11,600	7,730	7,260	9,760
26	4,320	32,800	4,700	1,950	4,800	4,200	46,000	28,600	10,800	7,030	5,950	10,000
27	3,940	25,100	4,600	1,950	4,900	4,800	53,500	26,600	10,000	6,370	4,920	14,200
28	3,940	21,200	4,600	2,000	4,600	5,000	71,400	25,100	8,980	6,160	4,320	13,900
29	3,940	17,600	4,300	2,000	-------	6,600	86,200	23,300	8,470	6,370	3,760	13,300
30	3,760	15,100	4,200	2,000	-------	8,000	85,600	21,800	8,220	6,590	3,580	12,200
31	3,760	-------	4,100	2,100	-------	10,000	-------	20,500	-------	7,030	2,910	-------

NOTE.—Stage-discharge relation affected by ice Nov. 14, 15, 17–22, and Dec. 4 to Apr. 20; discharge determined from gage heights corrected for effect of ice.

[1] Stage-discharge relation affected by ice.

Monthly discharge of St. John River at Van Buren, Me., for the year ending September 30, 1925

[Drainage area, 8,270 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	19,500	3,760	6,870	0.831	0.96
November	32,800	3,070	7,630	.923	1.03
December	13,300	4,100	6,480	.784	.90
January	4,000	1,950	2,790	.337	.39
February	5,400	1,800	3,260	.394	.41
March	10,000	3,700	4,500	.544	.63
April	86,200	15,000	36,300	4.39	4.90
May	94,000	20,500	53,900	6.52	7.52
June	22,900	8,220	15,300	1.85	2.06
July	13,300	6,160	8,930	1.08	1.24
August	13,000	2,910	6,570	.794	.92
September	14,200	1,880	6,000	.726	.81
The year	94,000	1,800	13,300	1.61	21.77

ST. CROIX RIVER BASIN

ST. CROIX RIVER NEAR BAILEYVILLE, ME.

LOCATION.—A short distance below power house of St. Croix Paper Co. at Grand Falls, Baileyville Township, 3½ miles east of Baileyville station of Maine Central Railroad, Washington County.

DRAINAGE AREA.—1,320 square miles (measured on map compiled by Maine Water Power Commission).

RECORDS AVAILABLE.—November 25, 1919, to September 30, 1925.

GAGE.—Water-stage recorder on right bank; inspected by an employee of St. Croix Paper Co.

DISCHARGE MEASUREMENTS.—Made from cable.

CHANNEL AND CONTROL.—Bed covered with gravel and boulders. Control for low and medium stages formed by series of riffles near gage; for high stages not clearly defined.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 5.01 feet at 2 a. m. March 31 (discharge, 6,020 second-feet); minimum stage below 1.20 feet, the elevation of intake pipe, on several Sundays during year (discharge not determined).

1919–1925: Maximum stage recorded, 13.90 feet May 1, 1923 (discharge, by extension of rating curve, 23,300 second-feet); minimum discharge estimated at 100 second-feet December 9, 1923, July 20 and 27, 1924 (water held back by dam).

ICE.—River remains open throughout winter; stage-discharge relation probably not affected by ice or logs.

REGULATION.—About 30 billion cubic feet of storage has been developed in lakes and ponds above station. Variations in use of water at power plant a short distance above gage cause fluctuations in stage.

ACCURACY.—Stage-discharge relation probably permanent. Rating curve fairly well defined. Operation of water-stage recorder satisfactory except for short periods as indicated in footnote to daily-discharge table. Daily discharge ascertained by applying to rating table mean daily gage height as determined by inspection of recorder graph. Records good.

The following discharge measurements were made:
October 23, 1924: Gage height, 2.02 feet; discharge, 1,340 second-feet.
May 8, 1925: Gage height, 2.26 feet; discharge, 1,690 second-feet.
May 8, 1925: Gage height, 2.25 feet; discharge, 1,700 second-feet.

Daily discharge, in second-feet, of St. Croix River near Baileyville, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,220	1,350	656	1,450	690	869	5,820	1,520	1,270	1,440	1,660	1,290
2	1,180	853	634	1,310	623	1,190	5,640	1,670	1,380	1,410	1,040	1,520
3	1,520	1,320	667	1,370	656	1,760	5,640	1,060	1,520	1,450	1,420	1,320
4	1,600	1,320	634	886	656	1,860	5,640	1,440	1,400	732	1,630	1,160
5	885	1,160	645	1,230	712	1,690	4,710	1,660	1,150	875	1,660	1,240
6	1,410	1,330	700	1,270	784	1,870	5,120	1,630	1,450	1,360	1,580	876
7	1,410	1,320	806	1,320	916	1,940	4,460	1,530	1,030	1,520	1,690	575
8	1,310	1,110	796	1,410	730	1,450	3,740	1,690	1,280	1,650	1,670	1,100
9	1,330	893	868	1,270	723	2,080	3,200	1,520	1,480	1,590	1,040	1,230
10	1,420	1,200	1,040	1,110	930	2,220	2,980	948	1,360	1,480	1,160	1,190
11	1,360	1,350	1,330	964	816	2,050	3,050	1,400	1,460	1,510	1,520	1,070
12	1,130	1,220	1,130	844	1,090	2,010	2,470	1,620	1,530	1,000	1,480	967
13	1,350	1,010	733	784	955	2,080	2,450	1,440	1,550	1,360	1,380	870
14	1,550	1,200	520	712	1,160	2,080	2,980	1,290	1,130	1,600	1,310	1,310
15	1,370	1,140	964	964	913	1,660	2,900	1,270	1,450	1,490	1,330	1,520
16	1,360	854	1,290	904	1,220	2,380	2,980	1,310	1,620	1,670	862	1,330
17	1,400	1,150	1,310	748	1,670	2,680	2,980	1,000	1,590	1,630	1,320	1,440
18	1,410	1,140	1,460	820	1,530	2,900	2,980	1,310	1,700	1,320	1,410	1,560
19	995	1,040	1,450	760	1,410	2,900	1,890	1,600	1,880	1,030	1,240	1,550
20	1,400	1,050	1,330	700	1,360	2,900	2,010	1,400	1,970	1,590	1,440	1,170
21	1,490	1,270	1,050	667	1,380	2,900	2,220	1,280	1,310	1,400	1,200	1,350
22	1,460	916	1,060	844	970	2,010	2,220	1,260	1,780	1,290	1,240	1,600
23	1,320	763	916	868	1,180	2,520	2,150	1,260	1,870	1,730	971	1,600
24	1,530	712	1,120	724	1,660	2,980	1,940	975	1,830	1,410	1,230	1,420
25	1,360	832	784	796	1,450	2,980	1,870	1,270	1,830	1,450	1,310	1,350
26	970	760	656	820	1,380	3,050	1,130	1,180	1,730	1,000	1,150	1,650
27	1,230	667	856	860	1,560	3,120	1,580	1,270	1,560	1,340	1,230	1,030
28	1,480	700	833	700	1,730	3,200	1,940	1,350	948	1,620	1,190	1,380
29	1,150	736	1,220	678	-------	3,060	1,840	1,490	1,350	1,630	1,090	1,510
30	1,290	724	1,530	667	-------	4,640	1,560	1,380	1,530	1,740	791	1,550
31	1,410	-------	1,350	796	-------	5,820	-------	1,000	-------	1,620	1,200	-------

NOTE.—Daily discharge Jan. 26, 27, and May 31 estimated by comparison with output in kilowatt-hours of hydroelectric station just above.

Monthly discharge of St. Croix River near Baileyville, Me., for the year ending September 30, 1925

[Drainage area, 1,320 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	1,600	885	1,330	1.01	1.16
November	1,350	667	1,040	.788	.88
December	1,530	520	979	.742	.86
January	1,450	667	943	.714	.82
February	1,730	623	1,100	.833	.87
March	5,820	869	2,480	1.88	2.17
April	5,820	1,130	3,070	2.33	2.60
May	1,670	948	1,350	1.02	1.18
June	1,970	948	1,500	1.14	1.27
July	1,740	732	1,420	1.08	1.24
August	1,690	791	1,300	.985	1.14
September	1,650	575	1,290	.977	1.09
The year	5,820	520	1,480	1.12	15.28

PENOBSCOT RIVER BASIN

WEST BRANCH OF PENOBSCOT RIVER AT MILLINOCKET, ME.

LOCATION.—At Quakish Lake Dam and Millinocket mill of Great Northern Paper Co., Millinocket, Penobscot County.

DRAINAGE AREA.—1,910 square miles (measured on map compiled by Maine Water Power Commission).

RECORDS AVAILABLE.—January 11, 1901, to September 30, 1925.

GAGES.—Water-stage recorder at Quakish Lake Dam and gages in fore bay and tailrace of mill.

CHANNEL AND CONTROL.—Crest of concrete dam.

DISCHARGE.—Flow computed by considering the flow over the dam, the flow through the wheels, and the water used through the log sluices and filters. The wheels were rated at Holyoke, Mass., before being placed in position and were tested later by numerous tube-float and current-meter measurements. Ratings for four new wheels installed in 1917 are based on acceptance test on one unit after installation, discharge at various gate openings being measured by the use of Pitot tubes. When the flow of the river is less than 3,500 second-feet, all the water generally flows through the wheels of the mill.

ICE.—Determination of discharge not seriously affected by ice. Ferguson Pond, just above entrance to canal, eliminates effect from anchor ice.

REGULATION.—Except for a short time during the high-water period run-off is regulated by storage in North Twin and Ripogenus Lakes, the combined capacity of which is about 45 billion cubic feet.

COOPERATION.—Records furnished by engineers of Great Northern Paper Co.

Monthly discharge of West Branch of Penobscot River at Millinocket, Me., for the year ending September 30, 1925

[Drainage area, 1,910 square miles]

Month	Discharge in second-feet			Corrected run-off in inches
	Observed mean	Corrected for storage		
		Mean	Per square mile	
October	2,450	689	0.361	0.42
November	2,490	594	.311	.35
December	2,380	975	.510	.59
January	2,180	652	.341	.39
February	2,080	917	.480	.50
March	2,270	1,990	1.04	1.20
April	2,480	9,180	4.81	5.37
May	2,500	5,140	2.69	3.10
June	2,540	3,520	1.84	2.05
July	2,570	3,770	1.97	2.27
August	2,720	1,040	.545	.63
September	2,640	1,650	.864	.96
The year	2,440	2,510	1.31	17.83

WEST BRANCH OF PENOBSCOT RIVER NEAR MEDWAY, ME.

LOCATION.—Just above Nichatou Rapids, half a mile above mouth of East Branch of Penobscot River and village of Medway, Penobscot County, and 2 miles below East Millinocket.

DRAINAGE AREA.—2,120 square miles (measured on map compiled by Maine Water Power Commission).

RECORDS AVAILABLE.—February 20, 1916, to September 30, 1925.

GAGE.—Water-stage recorder on left bank; inspected by Scott Nadeau.

DISCHARGE MEASUREMENTS—Made from cable.

CHANNEL AND CONTROL.—Bed fairly smooth at measuring section; covered with rocks and boulders above and below gage. Channel divides a few hundred feet below gage, but practically entire flow passes to left of Nichatou Island. Control formed by Nichatou Island and head of Nichatou Rapids; somewhat shifting.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 5.32 feet at 6.30 a. m. September 20 (discharge, 6,520 second-feet); minimum stage, 1.15 feet at 10 a. m. November 2 (discharge, by extension of rating curve, 520 second-feet).

1916–1925: Maximum stage recorded, 9.88 feet June 18, 1917 (discharge, by extension of rating curve, about 20,000 second-feet); minimum discharge, estimated at 100 second-feet at various times during 1923 and 1924 when water was held back by dams.

ICE.—Ice forms along both banks, but the main channel remains open; stage-discharge relation not seriously affected.

REGULATION.—Flow at ordinary stages completely regulated by dams and storage reservoirs above the station.

ACCURACY.—Stage-discharge relation changed at time of high water in April. Rating curves well defined. Daily discharge ascertained by application of rating table to mean daily gage height determined by inspection of recorder graph, except for days of large fluctuations in stage when the mean of twelve 2-hour periods was used. Records good.

Discharge measurements of West Branch of Penobscot River near Medway, Me., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 6	4.27	3,070	Jan. 6	3.48	2,260	Apr. 30	3.99	3,060
Dec. 14	1.85	780	Feb. 10	4.37	3,370	Aug. 5	4.01	3,150
Do	3.93	2,740	Mar. 5	3.66	2,390	Sept. 18	4.10	3,340
Do	4.22	3,220	Mar. 24	3.73	2,420			

Daily discharge, in second-feet, of West Branch of Penobscot River near Medway, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,880	3,030	2,600	2,900	2,200	2,200	3,720	3,060	2,440	4,340	3,240	3,060
2	3,190	2,720	2,810	3,110	2,670	2,480	3,810	3,060	2,730	4,210	2,580	2,810
3	2,810	2,740	2,740	2,880	2,480	2,410	3,540	2,720	2,890	4,210	2,740	2,890
4	2,810	3,190	2,880	2,470	2,600	2,500	3,450	2,810	3,240	2,510	3,060	3,150
5	2,500	2,820	2,950	2,810	2,410	2,500	2,720	3,340	3,240	2,340	2,890	3,240
6	2,900	2,950	2,880	2,810	2,410	2,900	3,240	3,060	2,970	3,240	2,970	2,490
7	3,030	2,950	2,490	3,030	2,290	2,800	3,440	2,970	2,550	3,440	2,970	2,160
8	3,110	2,950	2,810	2,810	2,200	2,600	3,340	3,540	2,810	3,340	3,240	2,810
9	3,110	2,420	2,950	2,290	2,740	3,100	3,240	2,810	2,730	3,440	2,900	3,240
10	3,030	2,810	3,030	2,410	3,190	2,600	3,340	2,090	3,050	3,440	3,280	2,890
11	2,950	2,740	3,110	2,200	3,030	2,800	3,150	2,890	3,440	3,150	3,340	3,060
12	2,500	3,110	3,110	2,740	2,950	2,600	2,630	2,650	3,440	2,220	3,060	2,970
13	3,110	3,030	3,110	2,810	2,290	2,700	3,060	2,730	3,340	2,730	3,150	2,800
14	3,030	3,030	2,640	2,810	2,120	2,600	3,150	2,970	2,470	3,150	3,060	3,500
15	3,030	3,110	2,950	3,110	1,850	2,500	3,060	2,650	2,890	3,060	3,150	3,600
16	2,950	2,770	3,360	2,740	1,950	3,000	3,150	2,650	2,970	3,060	2,320	3,800
17	3,080	3,190	3,450	2,290	2,170	3,000	3,150	2,090	3,060	3,060	2,580	3,600
18	2,880	2,950	3,540	2,000	2,230	3,000	3,060	2,650	3,540	3,150	3,060	3,240
19	2,510	3,030	3,110	2,600	2,290	3,000	2,450	2,970	3,980	2,010	2,970	3,340
20	2,810	3,030	3,900	2,350	2,670	3,000	3,150	2,890	3,650	3,150	2,970	2,740

Daily discharge, in second-feet, of West Branch of Penobscot River near Medway Me., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	3,030	3,030	2,000	2,540	2,600	3,000	3,240	2,580	2,530	3,240	2,970	3,060
22	3,110	3,030	2,200	2,350	1,980	2,600	3,150	3,150	3,060	3,150	2,810	3,340
23	3,110	2,490	2,300	2,540	2,170	2,800	3,060	3,060	3,150	3,440	2,420	3,340
24	2,880	3,630	2,300	2,480	2,410	2,810	3,150	2,270	3,150	3,440	2,510	3,150
25	3,190	3,270	2,000	2,100	2,350	2,950	3,060	2,650	3,240	3,060	2,890	2,970
26	2,530	2,950	2,950	2,700	2,290	2,880	2,570	2,810	3,150	2,240	2,890	2,970
27	3,110	2,880	2,670	2,500	2,290	2,950	2,890	2,730	3,150	2,730	2,730	2,340
28	3,110	2,880	2,500	2,600	2,400	3,030	3,150	2,890	2,790	2,970	2,810	2,300
29	3,110	2,480	3,030	2,700	-------	2,670	3,150	3,150	3,340	3,060	3,060	2,970
30	3,030	2,450	2,810	2,600	-------	3,030	3,060	3,150	3,760	3,340	2,280	3,340
31	2,810	-------	3,030	2,350	-------	3,810	-------	2,520	-------	3,150	2,810	-------

NOTE.—Discharge estimated Oct. 5, 6, 11, 12, Dec. 21–25, 28, Jan. 1, 11, 18, 25–30, Feb. 1, 8, 28, Mar. 1, 4–23, and Sept. 14–17, by comparison with daily output in kilowatt-hours of hydroelectric station just above.

Monthly discharge of West Branch of Penobscot River near Medway, Me., for the year ending September 30, 1925

[Drainage area, 2,120 square miles]

Month	Discharge in second-feet					Corrected run-off in inches
	Observed			Corrected for storage		
	Maximum	Minimum	Mean	Mean	Per square mile	
October	3,190	2,500	2,940	1,180	0.557	0.64
November	3,630	2,420	2,920	1,020	.481	.54
December	3,900	2,000	2,850	1,440	.679	.78
January	3,110	2,000	2,600	1,070	.505	.58
February	3,190	1,850	2,400	1,240	.585	.61
March	3,810	2,200	2,800	2,520	1.19	1.37
April	3,810	2,450	3,140	9,850	4.65	5.19
May	3,540	2,090	2,820	5,470	2.58	2.97
June	3,980	2,440	3,090	4,070	1.92	2.14
July	4,340	2,010	3,130	4,340	2.05	2.36
August	3,340	2,280	2,890	1,210	.571	.66
September	3,800	2,160	3,040	2,050	.967	1.08
The year	4,340	1,850	2,890	2,950	1.39	18.92

PENOBSCOT RIVER AT WEST ENFIELD, ME.

LOCATION.—At steel highway bridge 1,000 feet below mouth of Piscataquis River and 3 miles west of Enfield railroad station, Penobscot County.

DRAINAGE AREA.—6,600 square miles.

RECORDS AVAILABLE.—November 5, 1901, to September 30, 1925.

GAGE.—Water-stage recorder on left bank, downstream side of left abutment; installed December 11, 1912; inspected by Harvey Thompson.

DISCHARGE MEASUREMENTS.—Made from bridge.

CHANNEL AND CONTROL.—Channel at gage broken by four bridge piers; straight above and below gage. Banks high and rocky and not subject to overflow. Control is at Passadumkeag Rips, 5 miles below gage.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 10.05 feet from 8 p. m. April 4 to noon April 5 (discharge, 33,800 second-feet); minimum stage, 1.71 feet at 7 a. m. November 10 (discharge, 3,040 second-feet).

1902–1925: Maximum stage recorded, 25.15 feet May 1, 1923 (discharge by extension of rating curve, 153,000 second-feet); minimum stage, 1.0 foot October 29, 1905 (discharge, 1,470 second-feet).

ICE.—Stage-discharge relation usually affected by ice from December to April; discharge ascertained by comparison with records at Sunkhaze Rips which were collected by Thomas W. Clark.

REGULATION.—Flow largely controlled by storage, principally in lakes tributary to the West Branch. Records not corrected for storage.

ACCURACY.—Stage-discharge relation practically permanent except as affected by ice and occasionally by logs. Rating curve well defined. Operation of water-stage recorder satisfactory. Daily discharge ordinarily ascertained by applying rating table to mean daily gage height taken from recorder graphs with corrections for effect of ice and log jams. At times of serious fluctuations in stage the daily discharge is ascertained by using average discharge of twelve 2-hour periods. Records good.

COOPERATION.—Gage-height record furnished by Thomas W. Clark, hydraulic engineer, Old Town, Me. Occasional discharge measurements made by students of the University of Maine under the direction of Prof. A. C. Lyon.

The following discharge measurements were made:

November 3, 1924: Gage height, 2.05 feet; discharge, 3,690 second-feet.

November 26, 1924: Gage height, 4.27 feet; discharge, 9,040 second-feet.

Daily discharge, in second-feet, of Penobscot River at West Enfield, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,180	4,000	5,520	4,600	3,600	6,800	31,300	11,500	7,210	10,900	5,750	4,420
2	5,750	4,000	5,640	4,400	3,500	6,600	32,400	12,200	7,730	16,500	5,750	4,420
3	6,340	3,690	5,800	4,500	3,600	6,600	33,500	11,900	7,730	15,400	4,850	4,210
4	5,640	3,790	5,600	4,500	3,600	6,400	33,500	11,500	7,730	13,200	5,290	4,420
5	5,070	4,210	5,200	4,200	3,600	6,400	33,500	12,200	7,730	10,900	5,520	4,420
6	4,740	3,790	5,600	4,300	3,600	7,400	31,300	17,700	7,470	10,000	5,070	4,420
7	4,960	3,900	5,200	4,300	3,600	11,000	28,500	18,600	7,210	9,410	4,850	3,790
8	4,850	3,790	5,600	4,400	3,600	15,000	26,000	16,900	6,710	8,550	5,520	3,590
9	4,850	3,690	7,400	4,300	3,500	15,000	24,500	15,400	7,210	8,270	5,980	4,000
10	4,850	3,300	9,600	4,100	3,600	15,000	22,500	13,900	7,470	8,000	5,520	4,420
11	4,740	3,690	9,200	3,900	4,200	15,000	22,000	12,500	7,210	7,470	5,980	4,420
12	4,520	3,690	8,800	3,800	4,400	15,000	21,200	11,900	7,470	6,960	5,750	4,630
13	4,000	3,900	8,200	4,200	5,600	14,500	19,800	10,900	6,960	5,750	5,520	4,850
14	4,420	4,000	7,400	4,300	8,200	14,500	19,000	10,600	6,460	5,980	5,290	5,520
15	4,420	4,000	5,800	4,300	9,800	14,000	17,700	10,000	6,340	5,980	5,070	7,730
16	4,520	4,000	6,000	4,200	8,200	13,000	17,300	9,120	7,470	5,750	5,070	8,270
17	4,320	3,690	6,400	3,900	7,800	13,000	17,300	8,830	7,470	5,750	4,210	8,000
18	4,420	4,000	6,600	3,800	7,600	13,500	16,200	8,270	7,730	5,750	4,420	8,270
19	4,100	4,100	6,400	3,800	7,400	14,000	15,400	9,410	9,410	5,980	4,630	8,000
20	3,790	4,100	6,200	3,900	7,400	15,000	13,200	9,120	10,000	5,290	4,420	7,730
21	4,100	4,100	6,000	3,900	7,400	16,000	13,200	8,830	9,120	5,980	4,630	7,470
22	4,210	4,210	5,000	4,000	7,200	17,000	12,500	8,830	7,730	5,980	4,420	8,550
23	4,320	4,520	4,700	3,900	6,800	16,500	12,200	9,410	7,730	6,220	4,420	8,270
24	4,100	7,210	4,500	3,700	7,000	16,000	12,900	9,120	7,210	8,270	3,790	7,730
25	4,100	12,200	4,200	3,600	7,000	16,000	13,600	8,000	6,710	8,000	4,000	6,710
26	4,210	9,700	4,200	3,600	7,000	16,000	13,200	8,270	6,340	6,460	4,630	6,460
27	3,590	8,550	4,300	3,700	7,000	16,200	13,200	8,830	6,220	5,290	4,420	6,220
28	4,100	7,470	4,400	3,600	7,000	17,300	13,600	9,120	6,460	5,520	4,420	5,290
29	4,210	6,840	4,300	3,600	-------	21,600	12,900	8,830	7,470	5,750	4,420	5,980
30	4,210	5,860	4,400	3,700	-------	28,500	12,200	8,000	9,410	5,980	4,630	6,710
31	4,100	--------	4,400	3,700	-------	30,700	--------	7,730	--------	6,220	4,000	------

NOTE.—Stage-discharge relation affected by ice Dec. 3 to Mar. 27; discharge based on gage heights corrected for effect of ice and by comparison with data at Sunkhaze, furnished by Thomas W. Clark.

Monthly discharge of Penobscot River at West Enfield, Me., for the year ending September 30, 1925

[Drainage area, 6,600 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	6,340	3,590	4,540	0.688	0.79
November	12,200	3,300	4,930	.747	.83
December	9,600	4,200	5,890	.892	1.03
January	4,600	3,600	4,020	.609	.70
February	9,800	3,500	5,820	.882	.92
March	30,700	6,400	14,500	2.20	[illegible]
April	33,500	12,200	20,200	3.06	3.41
May	18,600	7,730	10,900	1.65	1.90
June	10,000	6,220	7,500	1.14	1.27
July	16,500	5,290	7,790	1.18	1.36
August	5,980	3,790	4,910	.744	.86
September	8,550	3,590	5,960	.903	1.01
The year	33,500	3,300	8,080	1.22	16.62

NOTE.—The monthly discharge in second-feet per square mile and the run-off in inches do not represent the natural run-off from the basin because of storage. (See "Regulation.")

EAST BRANCH OF PENOBSCOT RIVER AT GRINDSTONE, ME.

LOCATION.—At Bangor & Aroostook Railroad bridge half a mile south of railroad station at Grindstone, Penobscot County, one-eighth mile above Grindstone Falls, and 9½ miles above confluence with West Branch at Medway.

DRAINAGE AREA.—1,070 square miles; includes approximately 240 square miles of Chamberlain Lake drainage (measured on map compiled by Maine Water Power Commission).

RECORDS AVAILABLE.—October 23, 1902, to September 30, 1925.

GAGE.—Chain attached to railroad bridge; temporary staff gage attached to log-crib pier used July 13 to August 6 during construction of new bridge; read by R. D. Porter.

DISCHARGE MEASUREMENTS.—Made from railroad bridge or by wading.

CHANNEL AND CONTROL.—Practically permanent; stream confined by abutments of bridge and broken by one pier at ordinary stages. Velocity of current medium at moderate and high stages but sluggish at low stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 8.45 feet at 7.20 a. m. April 3 (discharge, 6,140 second-feet); minimum stage, 3.71 feet at 3.30 p. m. November 19 (discharge, by extension of rating curve, 77 second-feet).

1902–1925: Maximum stage recorded, 16.5 feet April 30, 1923 (discharge, by extension of rating curve, 35,100 second-feet); minimum discharge recorded, that of November 19, 1924. An estimated discharge of 30 second-feet occurred February 28, 1904.

ICE.—Ice forms to a considerable thickness at gage and down to head of Grindstone Falls, and although the falls usually remain open during greater part of winter, the stage-discharge relation is somewhat affected.

REGULATION.—Dams maintained at outlets of a number of lakes and ponds near source of river are regulated for log driving; during the summer and fall gates are generally left open. The basin of the East Branch since about

1840 includes about 240 square miles of territory draining into Chamberlain Lake that formerly drained into the St. John River Basin, the diversion being made through what is known as Telos Canal. Records not corrected for storage and diversions.

ACCURACY.—Stage-discharge relation occasionally affected by backwater from log jams at station and at Grindstone Falls immediately below and by ice during winter. Rating curve well defined. Gage read to hundredths twice daily except on Sundays and during winter when it was read once a day. Daily discharge ascertained by applying rating table to mean daily gage height. Records good.

Discharge measurements of East Branch of Penobscot River at Grindstone, Me., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 7	a 4.96	349	Mar. 12	a 6.20	1,590
Feb. 10	a 4.86	297	Apr. 30	6.61	2,540

a Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of East Branch of Penobscot River at Grindstone, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	550	178	370	370	290	720	3,960	2,850	2,400	3,160	690	270
2	770	178	430	370	300	700	4,870	3,160	2,320	3,320	690	270
3	620	182	430	410	300	740	6,020	3,000	2,320	2,700	690	270
4	520	174	460	380	300	660	5,330	2,850	2,400	2,250	655	248
5	490	164	580	370	300	660	5,560	3,160	2,250	1,950	620	248
6	400	164	840	380	280	800	5,100	5,790	2,100	1,600	585	225
7	345	171	720	350	310	1,750	4,650	4,650	2,020	1,480	585	225
8	295	171	620	360	300	1,700	4,650	3,860	1,950	1,540	730	225
9	270	160	780	330	300	1,700	4,440	3,670	1,880	1,420	1,110	225
10	295	154	920	320	300	1,600	4,440	3,160	1,110	1,250	810	225
11	270	150	840	320	300	1,700	4,650	3,000	850	1,200	770	270
12	266	150	800	320	390	1,600	4,240	3,000	850	1,110	690	295
13	248	157	720	330	1,600	1,550	4,240	3,490	810	1,060	585	400
14	248	157	700	320	2,100	1,400	3,860	3,320	810	1,020	520	520
15	238	157	660	330	1,650	1,350	3,670	2,400	1,540	930	490	1,300
16	225	157	620	340	1,300	1,350	4,050	2,550	1,600	890	490	930
17	234	154	580	350	1,200	1,250	4,050	2,700	1,600	850	460	810
18	238	105	560	340	1,150	1,250	3,860	3,000	1,540	1,020	430	770
19	234	77	520	300	1,200	1,200	4,440	2,850	1,810	1,020	400	770
20	243	141	490	280	1,100	1,300	2,550	2,550	1,740	930	400	770
21	230	150	470	270	980	1,450	2,400	2,550	1,670	850	400	850
22	217	164	460	300	900	1,450	2,400	2,700	1,600	770	400	770
23	217	400	450	340	860	1,400	3,000	2,700	1,540	1,160	370	730
24	209	2,550	440	340	820	1,400	2,850	2,550	1,420	1,060	345	690
25	201	1,540	430	320	840	1,450	2,850	2,400	1,300	930	320	585
26	201	975	450	310	780	1,350	3,160	2,550	1,300	850	295	620
27	205	770	400	310	740	1,400	3,490	2,550	1,300	770	295	620
28	193	690	390	240	700	2,000	3,320	2,700	1,300	850	295	655
29	168	550	380	280	-------	2,700	2,850	2,550	1,670	975	270	810
30	171	490	380	280	-------	3,000	2,550	2,550	1,670	890	270	690
31	174	-------	400	270	-------	3,490	-------	2,550	-------	770	270	------

NOTE.—Stage-discharge relation affected by ice Dec. 5 to Mar. 28; discharge for this period based on gage heights corrected for effect of ice. Discharge estimated Aug. 23 and Sept. 13.

Monthly discharge of East Branch of Penobscot River at Grindstone, Me., for the year ending September 30, 1925

[Drainage area, 1,070 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	770	168	296	0.277	0.32
November	2,550	77	379	.354	.40
December	920	370	558	.521	.60
January	410	240	327	.306	.35
February	2,100	280	771	.721	.75
March	3,490	660	1,490	1.39	1.60
April	6,020	2,400	3,910	3.65	4.07
May	5,790	2,400	3,010	2.81	3.24
June	2,400	810	1,620	1.51	1.68
July	3,320	770	1,310	1.22	1.41
August	1,110	270	514	.480	.55
September	1,300	225	543	.507	.57
The year	6,020	77	1,230	1.15	15.54

MATTAWAMKEAG RIVER AT MATTAWAMKEAG, ME.

LOCATION.—At Maine Central Railroad bridge at Mattawamkeag, Penobscot County, half a mile above mouth of river.

DRAINAGE AREA.—1,500 square miles.

RECORDS AVAILABLE.—August 26, 1902, to September 30, 1925.

GAGE.—Chain gage fastened to railroad bridge; read by W. T. Mincher and J. C. Handy.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Practically permanent; channel at bridge broken by two piers.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 9.25 feet 10 a. m. and 5 p. m. April 5 (discharge, 10,600 second-feet); minimum stage, 3.60 feet several times during November, 1924, and September, 1925 (discharge, 210 second-feet).

1902–1925: Maximum stage recorded, 19.55 feet May 1, 1923 (discharge, by extension of rating curve, 43,900 second-feet); minimum discharge, 86 second-feet occurred on October 4–12, 1905; September 19 and October 6, 1906; September 24–29, 1908; and October 14–17, 1910.

ICE.—Stage-discharge relation affected by ice.

REGULATION.—Dams are maintained at outlets of several large lakes and ponds, but the stored water is used only for log driving.

ACCURACY.—Stage-discharge relation occasionally affected by backwater from log jams and during winter by ice. Rating curve well defined below 15,000 second-feet. Gage read to quarter-tenths twice daily, except during winter when it was read once daily. Daily discharge ascertained by applying mean daily gage height to rating table, except as indicated in footnote to table of daily discharge. Records good.

Discharge measurements of Mattawamkeag River at Mattawamkeag, Me., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 6	[a] 5.20	463	Apr. 30	5.89	2,820	Sept. 24	[b] 5.25	1,690
Feb. 19	[a] 6.18	1,540	Sept. 18	[b] 5.21	1,650			

[a] Stage-discharge relation affected by ice.
[b] Stage-discharge relation affected by fish dam.

Daily discharge, in second-feet, of Mattawamkeag River at Mattawamkeag, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	352	223	1,140	560	300	1,550	9,160	2,870	1,250	1,570	585	242
2	436	223	1,310	560	280	1,500	9,160	2,870	1,250	2,090	542	223
3	630	223	1,570	520	240	1,450	10,200	2,870	1,250	2,380	500	223
4	675	223	1,190	520	260	1,500	10,500	2,700	1,190	2,380	500	242
5	630	223	1,570	520	280	1,500	10,500	2,870	1,190	2,230	484	242
6	585	223	1,310	460	300	1,550	10,200	3,230	1,190	2,090	460	242
7	500	223	1,310	440	290	1,600	9,960	3,800	970	1,960	436	236
8	484	223	1,190	410	290	1,900	9,690	4,200	1,080	1,700	436	210
9	484	223	1,250	400	310	2,400	9,160	4,200	1,080	1,310	436	210
10	420	210	1,960	380	380	3,000	8,380	3,800	1,140	1,080	460	210
11	405	210	1,850	380	520	3,300	7,860	3,230	1,080	1,080	492	242
12	382	223	1,650	370	720	3,600	7,350	3,230	1,140	970	542	262
13	360	242	1,500	360	860	3,800	6,850	3,040	1,080	722	542	375
14	345	289	1,400	350	960	3,900	6,140	2,700	1,080	675	492	680
15	331	310	1,250	350	1,200	3,800	5,680	2,090	1,080	630	460	1,200
16	331	310	1,150	350	1,300	3,700	4,600	1,830	1,190	585	428	1,550
17	310	542	1,100	350	1,500	3,700	4,400	1,830	1,380	585	405	1,600
18	303	820	1,000	340	1,500	3,600	4,200	1,700	1,570	585	382	1,750
19	303	585	960	340	1,550	3,600	3,800	1,700	1,960	585	382	1,900
20	268	542	920	340	1,550	3,800	3,800	1,830	1,960	585	360	1,900
21	223	303	860	330	1,500	4,200	3,610	1,830	1,830	585	360	2,000
22	242	275	820	320	1,500	4,800	3,230	1,700	1,440	585	360	2,000
23	275	331	800	320	1,600	5,400	3,040	1,570	1,080	585	345	1,850
24	275	770	780	320	1,550	5,910	3,230	1,440	920	630	331	1,650
25	262	1,700	760	320	1,650	6,140	3,230	1,190	770	675	310	1,450
26	242	2,090	720	320	1,700	6,610	3,420	1,190	770	585	310	1,300
27	242	2,090	700	320	1,650	6,850	3,230	1,190	722	500	289	1,150
28	223	1,830	660	340	1,600	6,850	3,040	1,190	770	500	289	1,100
29	223	1,570	640	320	-------	6,850	3,040	1,190	1,080	542	289	1,300
30	223	1,310	620	320	-------	7,350	2,870	1,190	1,440	630	275	1,400
31	223	-------	580	320	-------	8,120	--------	1,250	-------	675	262	------

NOTE.—Stage-discharge relation affected by ice Dec. 11 to Mar. 23, and by fish dam Sept. 14-30; gage heights corrected by means of measurements and observer's notes.

Monthly discharge of Mattawamkeag River at Mattawamkeag, Me., for the year ending September 30, 1925

[Drainage area, 1,500 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	675	223	361	0.241	0.28
November	2,090	210	619	.413	.46
December	1,960	580	1,110	.740	.85
January	560	320	382	.255	.29
February	1,700	240	976	.651	.68
March	8,120	1,450	3,990	2.66	3.07
April	10,500	2,870	6,120	4.08	4.55
May	4,200	1,190	2,310	1.54	1.78
June	1,960	722	1,200	.800	.89
July	2,380	500	1,040	.693	.80
August	585	262	411	.274	.32
September	2,000	210	965	.643	.72
The year	10,500	210	1,620	1.08	14.69

PISCATAQUIS RIVER NEAR FOXCROFT, ME.

LOCATION.—At highway bridge known as Lows Bridge, three-quarters of a mile above mouth of Black Stream, 3 miles below Mill Stream, and 4½ miles above Foxcroft, Piscataquis County.

DRAINAGE AREA.—286 square miles.

RECORDS AVAILABLE.—August 17, 1902, to September 30, 1925.

GAGE.—Staff gage attached to left abutment of bridge; read by A. F. D. Harlow

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Practically permanent; banks are high and are overflowed only during extreme floods.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 6.92 feet at 5 p. m. April 1 (discharge, 4,350 second-feet); minimum stage, 1.50 feet at various times during October, November, and December (discharge, 20 second-feet).

1902–1925: Maximum discharge recorded, 21,700 second-feet [2] September 29, 1909 (by extension of rating curve); minimum discharge, 5 second-feet August 6, 1905, and November 22, 1908 (water held back by dams).

ICE.—Stage-discharge relation affected by ice during winter.

REGULATION.—The stream is used to develop power at two manufacturing plants at dam in Guilford; distribution of flow somewhat affected by operation of wheels.

ACCURACY.—Stage-discharge relation permanent except as affected by backwater from log jams and by ice during winter. Rating curve well defined. Gage read to quarter-tenths twice daily. Daily discharge ascertained by applying rating table to mean daily gage height with corrections for effect of ice during winter. Records fair.

Discharge measurements of Piscataquis River near Foxcroft, Me., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 24	4.34	1,490	Jan. 23	a 3.94	177	Mar. 20	a 3.78	721
Nov. 25	3.89	1,090	Feb. 17	a 5.79	895	June 11	3.81	1,040

a Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Piscataquis River near Foxcroft, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	128	50	64	165	26	320	3,720	800	157	2,250	191	39
2	372	23	209	165	30	370	2,670	870	167	1,650	191	39
3	320	39	209	165	32	370	2,560	730	213	1,100	249	35
4	114	39	191	175	56	360	2,560	800	294	590	345	34
5	72	39	91	180	68	340	2,560	1,180	249	520	294	34
6	147	39	128	145	72	460	1,850	1,550	209	520	233	44
7	54	47	39	115	68	1,100	1,650	800	272	249	191	26
8	54	28	42	96	39	1,200	1,650	800	406	173	173	34
9	50	22	91	80	56	1,100	1,550	695	590	249	173	30
10	82	44	625	76	56	1,000	1,550	590	660	314	160	30
11	36	64	430	72	56	980	1,750	695	980	173	157	30
12	34	64	730	98	90	940	1,650	695	520	249	114	26
13	119	64	400	72	1,450	900	1,550	590	372	249	82	57
14	93	50	72	84	1,400	860	1,550	400	345	209	141	372
15	36	34	290	88	1,100	840	940	345	378	217	91	209
16	47	20	330	90	980	820	1,020	320	389	173	114	294
17	64	50	370	88	800	940	1,550	229	272	209	91	272
18	39	157	290	56	780	940	940	136	345	209	58	294
19	34	64	340	100	700	840	730	128	294	272	58	249
20	80	82	140	66	620	720	1,100	141	217	294	58	299
21	40	82	210	50	600	720	980	157	209	294	58	520
22	45	57	310	52	490	460	1,060	157	249	555	44	730
23	40	57	210	72	480	600	1,060	157	128	835	72	940
24	57	1,950	120	50	500	470	1,360	144	128	460	157	870
25	40	870	115	39	500	480	1,180	173	64	272	82	258
26	34	555	250	68	460	470	1,020	141	105	209	64	202
27	47	555	175	50	440	600	1,020	157	202	241	57	191
28	40	490	140	50	420	1,300	1,060	173	448	320	57	335
29	34	191	210	48	-------	2,400	1,020	157	940	276	57	372
30	34	57	175	46	-------	3,840	835	157	980	233	44	345
31	50	-------	210	44	-------	3,240	-------	114	-------	209	44	------

NOTE.—Stage-discharge relation affected by ice Dec. 15 to Mar. 29; discharge for this period based on gage heights corrected for effect of ice.

[2] Estimates revised since publication of earer reports.

Monthly discharge of Piscataquis River near Foxcroft, Me., for the year ending September 30, 1925

[Drainage area, 286 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	372	34	78.6	0.275	0.32
November	1,950	20	196	.685	.76
December	730	39	232	.811	.94
January	180	39	88.5	.309	.36
February	1,450	26	442	1.55	1.61
March	3,840	320	967	3.38	3.90
April	3,720	730	1,520	5.31	5.92
May	1,550	114	457	1.60	1.84
June	980	64	359	1.26	1.41
July	2,250	173	444	1.55	1.79
August	345	44	126	.441	.51
September	940	26	240	.839	.94
The year	3,840	20	4,280	1.50	20.30

PISCATAQUIS RIVER AT MEDFORD, ME.

LOCATION.—At lower ferry in Medford, Piscataquis County, 1¾ miles above mouth of Schoodic Stream and 14 miles above confluence with Penobscot River.

DRAINAGE AREA.—1,170 square miles (measured on map compiled by Maine Water Power Commission).

RECORDS AVAILABLE.—June 27, 1924, to September 30, 1925.

GAGE.—Inclined staff on left bank 300 feet below ferry; read by A. W. Boobar and E. E. Chaples.

DISCHARGE MEASUREMENTS.—Made from ferryboat or by wading.

CHANNEL AND CONTROL.—Bed covered with gravel and alluvial deposits. Control well defined by riffle of boulders one-fourth mile below gage.

EXTREMES OF DISCHARGE.—Maximum stage recorded, 9.2 feet at 6.10 a. m. March 30 (discharge, by extension of rating curve, 13,500 second-feet); minimum stage, 1.82 feet at 6.25 a. m. November 10 (discharge, 172 second-feet).

1924–1925: Maximum stage recorded, that of March 30, 1925; minimum stage occurred November 10, 1924.

ICE.—Stage-discharge relation affected by ice during winter.

REGULATION.—Distribution of flow during low-water periods somewhat affected by operation of power plants above on main river and tributaries.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Gage read twice daily to hundredths except during winter when it was read once a day. Daily discharge ascertained by applying to rating table mean daily gage height with corrections for effect of ice. Records good.

Discharge measurements of Piscataquis River at Medford, Me., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 8	[a] 3.43	470	Apr. 29	5.05	3,090	Aug. 6	2.90	677
Feb. 13	[a] 4.68	991	May 12	4.63	2,480			
Apr. 16	5.83	4,510	June 10	3.84	1,500			

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Piscataquis River at Medford, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	740	490	900	600	400	1,350	12,200	2,440	1,240	3,890	820	525
2	1,190	405	940	580	380	1,400	11,900	2,880	1,100	7,110	820	630
3	1,020	356	780	600	370	1,400	11,000	2,440	940	5,660	740	525
4	820	356	740	480	360	1,400	10,700	2,440	940	4,070	1,280	460
5	490	380	940	470	360	1,350	10,400	3,040	1,060	3,360	1,020	525
6	560	333	700	500	370	1,450	8,680	6,610	980	2,730	665	430
7	595	312	560	540	370	2,800	7,110	6,370	1,240	1,620	740	356
8	665	312	665	490	340	3,700	6,130	4,640	1,100	1,510	1,320	430
9	740	218	940	520	390	3,400	5,440	3,710	1,370	1,670	1,100	490
10	525	235	1,670	520	380	3,200	4,640	3,360	1,560	1,560	940	525
11	630	235	1,910	520	380	3,100	4,830	3,200	2,040	1,510	900	525
12	490	290	1,910	500	540	3,000	5,230	2,440	2,300	1,370	780	560
13	405	356	1,460	500	900	3,000	4,830	1,790	1,560	1,190	740	630
14	595	380	1,190	540	3,100	3,000	4,260	1,910	1,370	1,020	740	860
15	460	356	1,200	540	3,100	2,900	3,710	1,560	1,370	940	665	1,420
16	630	271	1,150	520	2,700	2,900	4,260	1,190	1,460	820	380	1,100
17	430	218	1,150	540	2,400	2,900	4,260	1,100	1,460	780	700	1,100
18	560	290	1,150	520	2,100	3,000	3,710	1,280	1,460	940	630	1,240
19	356	290	1,100	540	1,950	3,000	3,710	1,460	1,790	1,020	665	1,060
20	356	271	1,050	540	1,800	3,000	3,530	1,460	1,620	1,100	525	1,020
21	630	290	920	540	1,700	3,200	3,200	1,670	1,060	940	490	1,190
22	525	312	940	540	1,600	3,000	3,200	1,620	1,420	940	525	1,620
23	525	312	980	540	1,550	3,000	3,040	1,790	1,100	1,460	525	1,190
24	380	2,730	960	500	1,550	2,900	3,360	1,670	900	3,040	490	980
25	490	3,530	840	470	1,550	2,800	3,360	1,910	900	2,370	525	940
26	380	1,910	820	470	1,500	2,800	3,360	1,620	860	1,460	630	860
27	312	1,460	780	470	1,600	3,200	3,710	2,170	820	1,240	560	700
28	430	1,240	700	460	1,400	4,070	3,710	1,790	1,190	1,100	560	780
29	460	1,020	660	450	-------	9,800	3,040	1,670	2,170	1,140	490	1,020
30	490	780	680	440	-------	13,500	3,200	1,320	2,580	1,020	490	1,020
31	490	-------	680	420	-------	13,200	-------	940	-------	940	490	-----

Monthly discharge of Piscataquis River at Medford, Me., for the year ending September 30, 1925

[Drainage area, 1,170 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	1,190	312	560	0.479	0.55
November	3,530	218	665	.568	.63
December	1,910	560	1,000	.858	.99
January	600	420	512	.435	.15
February	3,100	340	1,260	1.08	5.23
March	13,500	1,350	3,640	3.11	8.10
April	12,200	3,040	5,460	4.67	5.21
May	6,610	940	2,370	2.03	2.34
June	2,580	820	1,370	1.17	1.30
July	7,110	780	1,920	1.64	1.89
August	1,320	380	708	.605	.70
September	1,620	356	824	.704	.79
The year	13,500	218	1,690	1.44	19.60

SEBEC RIVER AT SEBEC, ME.

LOCATION.—1,000 feet below highway bridge and dam at outlet of Sebec Lake, Sebec, Piscataquis County.

DRAINAGE AREA.—344 square miles (measured on map compiled by Maine Water Power Commission).

RECORDS AVAILABLE.—October 17, 1924, to September 30, 1925.

GAGE.—Water-stage recorder on left bank; inspected by E. W. Ames and Kenneth Lancaster.

DISCHARGE MEASUREMENTS.—Made from cable 50 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed covered with gravel and small boulders. Control for low and medium stages is well-defined riffle 100 feet below gage; for high stages at head of falls 4 miles below gage.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 6.70 feet from 10 to 11 a. m. April 2 (discharge, 3,230 second-feet); minimum stage, 1.36 feet at 1 p. m. January 25 (discharge, by extension of rating curve, 20 second-feet).

ICE.—Stage-discharge relation not affected by ice.

REGULATION.—Flow at ordinary stages completely regulated by dams and storage reservoirs above station. Records not corrected for storage.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Operation of water-stage recorder generally satisfactory except for short periods indicated in footnote to daily-discharge table. Daily discharge ascertained by applying to rating table mean daily gage height as determined by inspection of recorder graph. On days when fluctuations were large the average discharge of twelve 2-hour periods was used. Records good.

Discharge measurements of Sebec River at Sebec, Me., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 17	2.60	336	Mar. 13	4.03	1,220	June 10	2.94	521
Mar. 12	2.78	418	Mar. 31	6.03	2,690	Aug. 6	2.87	466
Mar. 13	3.60	907	Apr. 29	3.35	715			

Daily discharge, in second-feet, of Sebec River at Sebec, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-------	272	196	166	183	89	2,910	689	250	1,560	280	258
2	-------	167	189	243	183	232	3,150	644	250	2,190	196	260
3	-------	240	209	219	170	250	3,070	590	210	2,190	280	296
4	-------	209	229	186	131	236	3,070	1,060	254	1,420	272	300
5	-------	196	212	206	143	250	2,910	1,560	291	1,390	257	250
6	-------	180	202	226	149	164	2,030	1,810	247	806	315	183
7	-------	174	128	232	161	122	1,280	1,600	149	524	541	200
8	-------	192	196	226	145	119	1,250	1,250	312	806	483	303
9	-------	164	199	243	174	164	1,220	1,180	304	806	189	308
10	-------	149	202	222	164	284	1,180	1,140	353	826	267	330
11	-------	146	192	127	155	349	1,180	1,220	660	760	265	304
12	-------	125	192	192	177	371	1,180	878	523	400	276	242
13	-------	120	202	180	196	682	1,280	546	432	320	270	167
14	-------	111	146	180	149	800	1,280	320	656	280	272	280
15	-------	117	209	183	155	702	1,280	311	722	300	214	270
16	-------	120	209	164	199	740	1,250	257	715	328	173	280
17	284	149	209	167	215	760	1,220	265	715	324	284	276
18	245	106	215	167	219	800	1,040	390	676	229	298	263
19	219	88	212	196	220	820	741	394	614	209	316	248
20	240	86	229	215	210	780	819	414	316	336	302	173
21	270	84	212	212	185	748	780	418	111	290	318	257
22	285	82	240	215	164	608	780	866	251	294	246	261
23	246	103	236	209	246	464	760	1,140	261	372	160	293
24	289	219	236	199	222	394	845	910	284	1,110	288	272
25	222	226	186	152	232	390	845	562	280	659	261	251
26	153	177	276	177	236	418	935	433	280	358	277	256
27	316	167	240	174	246	433	797	383	221	404	288	169
28	303	180	164	174	226	626	728	324	212	340	293	270
29	291	196	215	180	-------	1,040	696	284	328	316	266	254
30	291	189	189	180	-------	1,920	682	196	703	328	156	263
31	291	-------	212	164	-------	2,670	-------	160	-------	324	317	-------

NOTE.—Water-stage recorder not in operation Feb. 19–21, Mar. 16–20, May 31 to June 3, July 12–15, Sept. 4, 5, and 14–16; discharge for these periods estimated by comparison with records at power station just above.

Monthly discharge of Sebec River at Sebec, Me., for the year ending September 30, 1925

[Drainage area, 344 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	316	153	263	0.765	0.43
November	272	82	158	.459	.51
December	276	128	206	.599	.69
January	243	127	193	.561	.65
February	246	131	188	.547	.57
March	2,670	89	594	1.73	1.99
April	3,150	682	1,370	3.98	4.44
May	1,810	160	716	2.08	2.40
June	722	111	386	1.12	1.25
July	2,190	209	671	1.95	2.25
August	541	156	278	.808	.93
September	330	167	258	.750	.84

PLEASANT RIVER AT MILO, ME.

LOCATION.—At highway bridge known locally as Snows Bridge, at Milo, Piscataquis County.

DRAINAGE AREA.—325 square miles (measured on map compiled by Maine Water Power Commission).

RECORDS AVAILABLE.—June 4, 1920, to September 30, 1925.

GAGE.—Chain gage on downstream side of bridge near left abutment; read by Anna L. Fowler.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Bed covered with coarse gravel. Control for low stages is a well-defined riffle 100 feet below gage; at high stages formed by series of riffles extending a mile below gage.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 5.4 feet at 4 p. m. March 29 (discharge, 4,000 second-feet); minimum stage, 2.22 feet at 4.30 p. m. August 25 (discharge, 24 second-feet).

1920–1925: Maximum stage recorded, 14.33 feet April 30, 1923 (discharge, by extension of rating curve, 24,400 second-feet); minimum stage, 2.10 feet July 29, August 2, and September 11, 1921 (discharge, 22 second-feet).

ICE.—Stage-discharge relation affected by ice during winter.

REGULATION.—The flow is partly regulated by a power development at Brownville and by storage dams at the headwaters which are used during log-driving season.

ACCURACY.—Stage-discharge relation changed at time of high water March 29. Rating curves fairly well defined above 60 second-feet. Gage read to hundredths twice daily except during winter when it was read once a day. Daily discharge ascertained by applying rating table to mean daily gage height with corrections for effect of ice. Records fair.

Discharge measurements of Pleasant River at Milo, Me., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 8	[a] 3.80	190	Apr. 16	3.44	796	Aug. 6	2.74	258
Feb. 16	[a] 5.98	890	Apr. 28	[b] 4.00	1,240	Sept. 3	2.36	55
Mar. 13	[a] 5.45	1,030	May 12	3.18	542			
Apr. 16	3.73	1,200	June 10	3.08	478			

[a] Stage-discharge relation affected by ice. [b] Stage-discharge relation affected by pulpwood.

Daily discharge, in second-feet, of Pleasant River at Milo, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	203	37	470	230	80	500	2,600	760	265	2,410	278	63
2	625	39	545	230	78	520	2,600	800	493	2,230	265	48
3	344	72	545	220	74	540	2,410	680	361	1,470	303	59
4	247	84	585	210	72	540	2,230	880	303	706	320	70
5	222	127	580	210	70	500	1,970	880	427	807	284	70
6	122	84	540	200	66	580	1,820	2,050	400	614	164	79
7	108	66	540	190	64	1,150	1,670	2,230	394	456	234	63
8	222	52	540	190	60	1,450	1,670	1,400	456	532	464	52
9	228	72	560	180	66	1,250	1,470	1,100	394	394	367	66
10	209	72	560	170	84	1,200	1,340	1,100	571	387	387	63
11	196	66	540	170	135	1,100	1,970	980	532	413	341	37
12	104	52	470	165	320	1,050	1,600	571	435	367	127	55
13	108	56	430	160	880	1,050	1,280	571	407	380	148	116
14	174	58	400	150	1,150	820	1,100	1,100	335	420	107	278
15	141	52	370	145	1,050	780	658	580	328	354	55	216
16	141	42	350	140	860	760	920	500	361	265	84	181
17	118	253	340	135	720	760	980	540	322	284	55	175
18	72	234	340	130	620	800	807	600	367	341	153	284
19	69	99	320	130	580	840	1,220	700	571	571	33	278
20	104	78	320	125	540	900	1,100	540	471	471	79	193
21	81	84	310	120	540	980	860	580	394	328	33	387
22	72	87	300	120	520	1,050	658	860	532	493	121	407
23	69	84	290	115	520	1,150	1,040	1,100	400	754	116	271
24	66	2,480	290	105	520	1,200	920	420	387	754	30	187
25	63	1,380	280	100	520	1,300	860	754	354	614	28	216
26	56	670	270	94	520	1,450	980	706	265	442	37	127
27	56	508	270	90	520	1,600	1,200	1,540	210	380	52	127
28	54	373	250	90	470	2,100	1,300	980	754	341	55	198
29	50	322	250	88	-------	4,000	920	413	1,220	328	48	271
30	40	395	240	84	-------	3,790	1,350	348	1,280	341	55	204
31	42	-------	230	80	-------	2,980	-------	303	-------	407	70	------

NOTE.—Stage-discharge relation affected by ice Dec. 5 to Mar. 28; discharge estimated on basis of gage heights corrected for effect of ice. Stage-discharge relation affected by pulpwood on control Apr. 27 to May 5 and May 14-22; discharge based on gage heights corrected for effect of pulpwood.

Monthly discharge of Pleasant River at Milo, Me., for the year ending September 30, 1925

[Drainage area, 325 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	625	40	142	0.437	0.50
November	2,480	37	269	.828	.92
December	585	230	398	1.22	1.41
January	230	80	147	.452	.52
February	1,150	60	418	1.29	1.34
March	4,000	500	1,250	3.85	4.44
April	2,600	658	1,380	4.25	4.74
May	2,230	303	857	2.64	3.04
June	1,280	210	466	1.43	1.60
July	2,410	265	615	1.89	2.18
August	464	28	160	.492	.57
September	407	37	161	.495	.55
The year	4,000	28	522	1.61	21.81

PASSADUMKEAG RIVER AT LOWELL, ME.

LOCATION.—Half a mile below dam and highway bridge at Lowell, Penobscot County, and 10 miles above mouth of river.

DRAINAGE AREA.—301 square miles.

RECORDS AVAILABLE.—October 1, 1915, to September 30, 1925.

GAGE.—Water-stage recorder on right bank half a mile below highway bridge; inspected by M. J. Leard.

DISCHARGE MEASUREMENTS.—Made from cable near gage or by wading.

CHANNEL AND CONTROL.—Channel rough and somewhat irregular above gage; fairly smooth below gage. Control for low and medium stages at well-defined riffle 150 feet below gage; for high stages not well defined.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 4.28 feet at 8.15 a. m. April 1 (discharge, 1,450 second-feet); minimum stage, 0.45 foot from 4 to 5.30 p. m. October 26 (discharge, 15 second-feet; gates at dam were closed).

1916–1925: Maximum discharge recorded, 5,680 second-feet May 2, 1923; minimum discharge, estimated 5 second-feet several times in July and August, 1921, when gates at dam were closed.

ICE.—Stage-discharge relation usually affected by ice from December to April.

REGULATION.—Distribution of flow somewhat affected by use of storage reservoirs above station. A small dam and mill half a mile above gage causes diurnal fluctuations in stage when mill is in operation, usually from May to November.

ACCURACY.—Stage-discharge relation probably permanent. Rating curve well defined. Operation of water-stage recorder satisfactory throughout year. Daily discharge ascertained by applying rating table to mean daily gage height as determined from inspection of recorder sheets with corrections for effect of ice during winter. For days when large variations in stage occurred, discharge computed as average of twelve 2-hour periods. Records good.

The following discharge measurements were made:

January 22, 1925: Gage height, 2.68 feet;[3] discharge, 106 second-feet.

February 19, 1925: Gage height, 2.07 feet;[3] discharge, 303 second-feet.

June 19, 1925: Gage height, 2.47 feet; discharge, 487 second-feet.

Daily discharge, in second-feet, of Passadumkeag River at Lowell, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	194	94	366	145	105	315	1,310	380	608	464	294	82
2	201	91	328	140	105	312	1,220	356	576	424	276	78
3	164	90	285	140	105	322	1,220	373	549	388	265	78
4	75	49	246	130	105	328	1,220	335	528	444	251	78
5	258	90	224	130	105	322	1,220	345	516	452	235	78
6	303	74	198	130	105	356	1,160	373	508	440	230	78
7	108	26	188	125	105	484	1,100	400	516	428	227	96
8	110	27	184	125	105	567	1,010	492	524	424	227	77
9	445	94	219	125	110	608	775	472	528	420	230	82
10	276	182	300	120	115	630	725	468	532	408	238	82
11	124	60	428	120	120	630	725	508	536	400	240	79
12	33	74	452	115	125	630	682	572	516	384	238	79
13	127	84	452	115	130	630	680	585	450	366	230	103
14	165	90	444	110	160	630	685	554	428	352	219	154
15	161	91	500	110	200	585	717	528	484	335	201	219
16	152	92	500	110	260	549	580	536	492	322	196	274
17	140	96	328	110	290	516	661	540	484	312	188	335
18	203	96	285	105	300	516	653	558	480	312	178	480
19	326	96	260	105	300	630	636	562	638	312	169	528
20	158	94	240	105	300	750	608	562	549	312	146	567
21	99	92	230	105	290	700	692	554	476	306	103	585
22	90	91	220	105	290	725	369	536	484	294	121	567
23	105	103	200	105	285	775	516	524	480	328	125	608
24	106	138	190	105	288	775	651	516	468	352	121	440
25	161	318	180	105	294	775	366	476	452	373	116	428
26	82	464	170	110	303	775	412	500	444	373	111	412
27	56	488	170	110	315	775	448	508	432	366	108	380
28	27	472	160	110	345	825	448	516	428	362	103	362
29	62	444	155	110	----	900	432	544	444	352	100	345
30	169	416	150	105	-------	1,040	408	608	460	335	96	328
31	110	-------	145	105	-------	1,220	-------	608	-------	309	86	------

NOTE.—Stage-discharge relation affected by ice Dec. 20 to Feb. 22; discharge based on gage heights corrected for effect of ice.

[3] Stage-discharge relation affected by ice.

Monthly discharge of Passadumkeag River at Lowell, Me., for the year ending September 30, 1925

[Drainage area, 301 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	445	27	155	0.515	0.59
November	488	26	157	.522	.58
December	500	145	271	.900	1.04
January	145	105	116	.385	.44
February	345	105	202	.671	.70
March	1,220	312	632	2.10	2.42
April	1,310	366	744	2.47	2.76
May	608	335	496	1.65	1.90
June	638	428	500	1.66	1.85
July	464	294	369	1.23	1.42
August	294	86	183	.608	.70
September	608	76	269	.894	1.00
The year	1,310	26	342	1.14	15.40

KENNEBEC RIVER BASIN

MOOSE RIVER NEAR ROCKWOOD, ME.

LOCATION.—Just below outlet of Brassua Lake, 3 miles above Moosehead Lake, and 4 miles west of Kineo station and Rockwood post office, Rockwood Township, Somerset County.

DRAINAGE AREA.—708 square miles (revised from map compiled by Maine Water Power Commission).

RECORDS AVAILABLE.—September 7, 1902, to December 31, 1908; May 16, 1910, to September 18, 1912; November 1, 1919, to September 30, 1925, when station was discontinued.

GAGE.—Water-stage recorder on left bank; inspected by W. H. Maynard. Records previous to October 1, 1921, obtained from staff gage at Walter Scott's camp.

DISCHARGE MEASUREMENTS.—Made from cable or by wading.

CHANNEL AND CONTROL.—Channel consists of ledge rock and gravel. Control well defined by riffles a few hundred feet below gage until February 16 when drowned out by construction of Brassua Lake Dam.

EXTREMES OF DISCHARGE.—Maximum discharge recorded during year, 4,500 second-feet (stage-discharge relation affected by construction of dam); minimum stage, 1.42 feet at noon November 18 (discharge, by extension of rating curve, 52 second-feet).

1902–1908; 1910–1912; 1919–1925: Maximum discharge recorded, 12,200 second-feet May 1, 1923; minimum discharge, that of November 18, 1924.

ICE.—Stage-discharge relation apparently not affected by ice.

REGULATION.—During April, May, and June the operation of Long Pond for log driving causes a small diurnal fluctuation.

ACCURACY.—Stage-discharge relation subject to slight changes at infrequent intervals. Rating curve well defined. Operation of water-stage recorder generally satisfactory throughout year except for short periods noted in footnote to daily-discharge table. Daily discharge ascertained by applying rating table to mean daily gage height with correction for effect of obstructions. Records good.

Discharge measurements of Moose River near Rockwood, Me., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 18	2.89	718	May 17	4.32	2,000	Aug. 13	2.93	414
Apr. 18	5.25	3,090	June 17	4.76	2,580	Oct. 7	5.36	556

NOTE.—Stage-discharge relation of all measurements affected by construction of dam just below gage.

Daily discharge, in second-feet, of Moose River near Rockwood, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	406	380	966	489		920	2,100	3,600	1,950	2,100	390	400
2	428	340	1,020	450	100	920	2,500	3,400	1,850	2,700	400	400
3	434	310	1,050	423		920	3,000	3,500	1,750	2,900	400	380
4	445	272	1,050	390	120	900	3,200	3,300	1,750	2,800	400	380
5	440	250	975	355	140	920	3,400	3,300	1,800	2,500	400	380
6	428	240	993	325	160	920	3,500	3,200	1,800	2,300	410	380
7	406	230	993	290	180	920	3,400	3,200	1,850	2,000	420	360
8	401	220	984	267	200	920	3,300	3,000	2,000	1,800	430	360
9	385	210	1,010	240	213	920	3,300	2,700	2,000	1,750	430	350
10	370	195	1,050	209	179	940	3,200	2,500	2,300	1,650	430	340
11	365	179	1,060	179	175	940	3,300	2,300	2,500	1,600	450	350
12	360	175	1,070	155	192	840	3,500	2,200	2,600	1,500	440	350
13	350	175	1,080	141	262	840	3,400	2,100	2,600	1,300	420	340
14	350	171	1,150	118	345	840	3,300	2,000	2,600	980	420	390
15	360	171	1,200	106	428	800	3,100	1,800	2,600	760	420	420
16	360	166	1,100		500	760	3,100	1,850	2,600	620	420	440
17	370	134	957		580	740	3,200	2,000	2,600	600	420	460
18	390	73	820		680	720	3,100	2,200	2,500	580	420	450
19	410	158	820		760	720	2,800	2,200	2,000	560	420	
20	420	213	812		820	700	2,300	2,000	2,500	520	420	
21	440	183	790		860	680	2,200	1,650	2,700	500	410	
22	470	192	745		900	660	2,200	1,600	2,600	480	410	
23	480	244	720		920	640	2,500	1,600	2,500	470	400	
24	500	380	700	100	940	640	2,900	1,900	2,300	440	400	420
25	520	494	680		940	600	3,200	2,100	2,100	430	400	
26	540	567	640		940	600	3,400	2,100	1,600	410	400	
27	540	651	620		920	600	4,000	1,950	1,700	400	400	
28	542	700	580		920	640	4,400	1,750	1,800	400	390	
29	506	722	560		-------	800	4,500	2,400	1,850	400	390	
30	462	866	540		-------	1,100	4,200	2,200	1,550	400	400	
31	420	-------	520		-------	1,600	-------	2,100	-------	400	400	---

NOTE.—Water-stage recorder not in operation Oct. 14–27, Oct. 31, Nov. 1, Nov. 5–10, and Dec. 23–31. Recorder float held by ice Dec. 15, 16, and Jan. 16 to Feb. 8; discharge estimated by comparison with discharge of Dead River at The Forks and weather records. Stage-discharge relation affected by cofferdams used in construction of Brassua Lake Dam from Feb. 16 to Sept. 30; discharge for this period based on gage heights corrected for effect of obstructions.

Monthly discharge of Moose River near Rockwood, Me., for the year ending September 30, 1925

[Drainage area, 708 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	542	350	429	0.606	0.70
November	866	73	309	.436	.49
December	1,200	520	879	1.24	1.43
January	489	----------	185	.261	.30
February	940	----------	485	.685	.71
March	1,600	600	828	1.17	1.35
April	4,500	2,100	3,180	4.49	5.01
May	3,600	1,600	2,380	3.36	3.87
June	2,700	1,550	2,160	3.05	3.40
July	2,900	400	1,170	1.65	1.90
August	450	390	412	.582	.67
September	----------	340	399	.564	.63
The year	4,500	73	1,070	1.51	20.46

MOOSEHEAD LAKE AT EAST OUTLET, MAINE

LOCATION.—At wharf at east outlet of lake at Moosehead, Piscataquis County.

DRAINAGE AREA.—1,240 square miles.

RECORDS AVAILABLE.—April 1, 1895, to September 30, 1925.

GAGES.—Staff at end of boat landing; two datums have been used at east outlet; the first (or original datum) is 1,011.20 feet above mean sea level and approximately 10 feet below sills of outlet gates; gage is read to this datum; the second, to which all gage readings published to and including 1911 have been referred, is 10 feet higher; that is, the zero is at the sill of the gates; as it is believed that low water may go below the sill of the gates (zero of second datum); gage heights since 1912 are published as read, that is, to original datum.

REGULATION.—The lake is regulated to a capacity of 23,735 million cubic feet. The dam at the east outlet is controlled by 39 gates, the sills of the gates being at elevations ranging from 8.0 to 11.4 feet. At extreme low stages flow from lake is controlled by a bar above dam at an approximate gage height of 9 feet. The records show only fluctuations in the level of the lake and are used in the studies of regulation of the lake and in computing the natural flow of Kennebec River at The Forks.

COOPERATION.—Record furnished by Hollingsworth & Whitney Co.

Daily gage height, in feet, of Moosehead Lake at east outlet, Maine, for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13.1		11.75				13.0	16.7	17.5	17.45		
2				11.7	11.2	11.75						15.7
3	13.0	12.0	11.8				13.25		17.5	17.45	16.8	
4					11.2	11.75		17.0				15.6
5		11.9	11.8	11.7					17.5		16.8	
6	12.95				11.15	11.95	13.7	17.2		17.35		
7		11.85		11.65							16.75	15.4
8	12.85		11.8				13.95	17.35	17.5	17.35		
9		11.75		11.6	11.05	12.05						15.3
10	12.75		11.9				14.2		17.5	17.3	16.7	
11					11.05	12.1		17.45				15.2
12		11.65	11.9	11.55					17.5		16.65	
13	12.65				11.15	12.2	14.6	17.5		17.3		
14		11.65		11.55							16.6	15.3
15	12.6		11.9				14.8	17.5	17.5	17.2		
16				11.5	11.25	12.3						15.35
17	12.55	11.55	11.9				15.05		17.5	17.2	16.45	
18					11.25	12.35		17.5				15.4
19		11.4	11.9	11.45					17.5		16.35	
20	12.4				11.35	12.4	15.35	17.5		17.1		
21		11.35		11.4							16.3	15.35
22	12.3		11.85				15.5	17.5	17.45	17.05		
23				11.35	11.5	12.45						15.3
24	12.25	11.5	11.85				15.7		17.45	17.0	16.2	
25					11.55	12.5		17.5				15.25
26		11.6	11.8	11.25					17.4		16.0	
27	12.2				11.6	12.55	16.1	17.5		17.0		
28		11.65		11.2							15.95	15.2
29	12.2		11.8				16.4	17.5	17.3	16.95		
30				11.2		12.75						15.2
31	12.1		11.75							16.85	15.8	

KENNEBEC RIVER AT MOOSEHEAD, ME.

LOCATION.—At Canadian Pacific Railway bridge one-fourth mile below east outlet dam on Moosehead Lake, half a mile northwest of Moosehead railroad station in Big Squaw Mountain Township, Piscataquis County, and 4.4 miles from Somerset Junction.

DRAINAGE AREA.—1,240 square miles.

RECORDS AVAILABLE.—October 1, 1919, to September 30, 1925.

GAGE.—Water-stage recorder on west bank 250 feet above railroad bridge; installed October 8, 1924; chain gage near middle of bridge on downstream side used prior to this time. New gage reads about 1.3 feet higher than old gage. Recorder inspected by Frank Haggan.

DISCHARGE MEASUREMENTS.—Made from bridge.

CHANNEL AND CONTROL.—Large boulders and gravel. Control is a series of rapids practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 7.23 feet at 5 p. m. July 1 (discharge, 8,020 second-feet); minimum stage, 1.97 feet from 4 to 11 p. m. December 10 (discharge, by extension of rating curve, 82 second-feet).

1920–1925: Maximum discharge recorded, 13,400 second-feet (by extension of rating curve) May 12 and 13, 1920; minimum discharge, 62 second-feet (by extension of rating curve) April 7–15, 1923.

ICE.—Stage-discharge relation not affected by ice.

DIVERSIONS.—Leakage through west outlet dam and occasional opening of gates in this dam allow some water to pass down the west channel which is not included in records of flow at this station.

REGULATION.—Discharge is regulated by operation of the gates at Moosehead Lake; large diurnal fluctuations occur during the log-driving season.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined between 250 and 7,000 second-feet. Operation of water-stage recorder satisfactory except for parts of a few days in December. Daily discharge ascertained by applying rating table to mean daily gage height; on days of large changes in stage the average discharge of twelve 2-hour periods was used. Records good.

Discharge measurements of Kennebec River at Moosehead, Me., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 3	[a] 1.97	724	Apr. 17	2.90	460	May 16	5.94	4,620
Nov. 11	3.78	1,240	May 15	4.16	1,650	June 16	5.32	3,540
Mar. 19	2.52	266	Do	4.47	2,070	June 17	6.52	6,170

[a] Chain-gage datum.

Daily discharge, in second-feet, of Kennebec River at Moosehead, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,800	1,350	187	1,260	1,270	777	330	1,100	4,740	5,860	1,200	2,040
2	1,360	1,360	735	1,250	1,260	795	335	490	3,220	5,120	1,020	2,110
3	727	1,350	970	1,240	1,260	464	345	1,590	4,590	5,990	2,040	2,110
4	727	1,330	851	1,230	1,250	208	350	2,390	3,400	5,990	1,970	2,110
5	727	1,330	896	1,220	1,240	410	355	2,580	2,910	5,990	1,650	2,110
6	727	1,330	1,290	1,210	1,230	456	360	3,500	4,340	4,850	1,470	2,040
7	1,470	1,320	1,290	1,210	1,220	215	370	1,460	4,760	3,230	1,470	2,040
8	1,710	1,290	1,290	1,210	1,230	212	375	2,300	4,000	3,140	1,470	1,970
9	1,760	1,290	719	1,200	1,240	215	380	2,010	2,720	2,720	1,470	2,040
10	1,590	1,270	170	1,200	1,270	219	390	1,920	2,800	2,410	1,710	1,970

Daily discharge, in second-feet, of Kennebec River at Moosehead, Me., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	1,580	1,240	227	1,200	1,370	219	400	2,190	3,140	2,410	1,840	1,970
12	1,540	1,230	642	1,180	1,430	223	412	867	3,140	2,480	1,840	1,280
13	1,540	1,220	1,050	1,180	513	227	424	3,750	3,140	2,480	1,710	665
14	1,540	1,220	1,050	1,170	198	227	430	3,060	3,050	2,480	1,470	514
15	1,550	1,200	1,180	1,170	198	235	436	2,730	3,050	2,480	1,470	508
16	1,570	1,170	1,300	1,160	198	239	448	2,880	3,320	2,480	1,530	514
17	1,550	1,130	1,300	1,270	201	247	460	2,510	4,320	2,480	1,530	620
18	1,530	1,120	1,300	1,380	201	255	460	2,830	5,120	2,480	1,530	876
19	1,530	1,110	1,300	1,370	204	264	460	4,090	6,250	2,480	1,530	990
20	1,510	1,080	1,300	1,350	208	278	460	3,430	4,100	2,480	1,590	1,030
21	1,480	1,070	1,320	1,340	208	282	460	2,530	2,880	2,480	1,650	695
22	1,440	1,050	1,320	1,330	208	282	466	1,880	2,340	2,260	1,780	490
23	1,400	779	1,300	1,320	208	282	472	1,790	2,480	2,110	1,900	490
24	1,370	194	1,300	1,290	208	291	472	1,580	2,640	1,330	1,900	685
25	1,330	198	1,300	1,290	453	291	478	1,910	3,230	978	1,900	977
26	1,320	198	1,300	1,280	777	291	484	1,820	3,410	2,110	1,900	1,230
27	1,290	201	1,300	1,280	777	296	496	2,530	3,410	2,110	2,040	1,390
28	1,280	204	1,300	1,280	777	296	490	2,310	4,000	2,110	2,040	1,370
29	1,270	204	1,290	1,280	-------	320	1,540	2,440	4,430	1,970	1,970	1,330
30	1,250	187	1,280	1,280	-------	320	460	2,540	4,320	2,110	1,970	1,470
31	1,240	-------	1,270	1,280	-------	325	-------	4,670	-------	1,650	1,970	------

Monthly discharge of Kennebec River at Moosehead, Me., for the year ending September 30, 1925

[Drainage area, 1,240 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	1,800	727	1,380	1.11	1.28
November	1,360	187	974	.785	.88
December	1,320	170	1,080	.871	1.00
January	1,380	1,160	1,260	1.02	1.18
February	1,430	198	743	.599	.62
March	795	208	312	.252	.29
April	1,540	330	460	.371	.41
May	4,670	490	2,380	1.92	2.21
June	6,250	2,340	3,640	2.94	3.28
July	5,990	978	2,940	2.37	2.73
August	2,040	1,020	1,690	1.36	1.57
September	2,110	490	1,320	1.06	1.18
The year	6,250	170	1,520	1.23	16.63

NOTE.—No gates were opened in the west outlet dam during the year. Leakage through gates at that dam not included in the above record. The monthly discharge in second-feet per square mile and run-off in inches do not represent the natural run-off from the basin because of storage. (See "Regulation.")

KENNEBEC RIVER AT THE FORKS, ME.

LOCATION.—Half a mile above highway bridge and 1 mile above mouth of Dead River at The Forks, Somerset County.

DRAINAGE AREA.—1,570 square miles.

RECORDS AVAILABLE.—September 28, 1901, to September 30, 1925.

GAGE.—Water-stage recorder on right bank; inspected by S. C. Durgin and Henry Pierce.

DISCHARGE MEASUREMENTS.—Made from bridge.

CHANNEL AND CONTROL.—Channel at bridge is subject to slight changes. Control well defined by riffles a short distance below gage.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 7.09 feet at 8.30 p. m. July 1 (discharge, 11,600 second-feet); minimum discharge, estimated 460 second-feet February 23–24 (stage-discharge relation affected by ice).

1901–1925: Maximum stage recorded, 10.1 feet June 18, 1917 (discharge, by extension of rating curve, 23,700 second-feet); minimum stage, 0.3 foot by chain gage October 27, 1911 (discharge, 215 second-feet).

ICE.—Stage-discharge relation seriously affected by ice.

REGULATION—Flow regulated by storage in Moosehead Lake. From May to August the operation of Indian Pond for log driving causes a large diurnal fluctuation. Records of monthly discharge have been corrected for storage by adding or subtracting a discharge corresponding to the amount of water stored in or released from Moosehead Lake.

ACCURACY.—Stage-discharge relation apparently permanent except when affected by ice. Rating curve well defined below 9,000 second-feet. Operation of water-stage recorder satisfactory, except for short periods as shown in footnote to daily-discharge table. Daily discharge October 1 to March 31 and July 25 to September 30 ascertained by application of rating table to mean daily gage height with corrections for effect of ice during winter. Daily discharge April 1 to July 24 ascertained by use of discharge integrator. Records good.

Discharge measurements of Kennebec River at The Forks, Me., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 28	2.05	609	Mar. 18	a4.46	883	June 25	5.61	7,370
Jan. 15	a4.97	1,370	June 24	5.32	6,540			
Feb. 24	a3.40	462	Do	2.28	780			

a Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Kennebec River at The Forks, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,900	1,800	550	1,500	1,500	1,000	2,800	2,200	5,600	9,200	1,950	2,030
2	2,020	1,950	580	1,450	1,500	1,050	2,700	1,950	3,500	9,000	1,870	2,190
3	1,520	1,950	1,120	1,450	1,500	1,050	2,200	2,350	3,950	8,150	1,950	2,190
4	1,410	1,870	1,120	1,450	1,500	580	2,150	3,000	4,650	7,400	2,190	2,190
5	900	1,800	890	1,450	1,500	490	1,920	3,600	2,650	7,150	2,110	2,190
6	860	1,730	1,290	1,450	1,450	820	1,700	4,650	4,550	5,500	1,800	2,190
7	1,000	1,870	1,350	1,400	1,450	760	1,550	3,650	5,250	4,000	1,730	2,110
8	1,600	1,600	1,350	1,400	1,450	700	1,460	3,150	4,800	3,900	1,730	2,190
9	1,740	1,600	1,410	1,400	1,450	700	1,360	2,750	3,400	3,300	1,660	2,030
10	1,750	1,540	748	1,400	1,500	680	1,500	2,700	3,550	2,750	1,660	2,030
11	1,910	1,410	550	1,400	1,550	660	1,840	2,950	4,050	2,870	1,950	2,110
12	1,820	1,410	514	1,400	1,650	660	2,050	2,400	4,050	2,950	2,030	2,190
13	2,070	1,350	700	1,400	1,650	680	1,900	3,050	3,550	2,950	1,950	2,190
14	2,030	1,350	1,100	1,350	1,000	600	1,780	4,450	3,700	2,800	1,800	1,870
15	2,110	1,290	1,200	1,350	700	600	1,420	3,300	3,650	2,750	1,870	1,230
16	1,900	1,290	1,300	1,350	600	580	1,480	3,700	4,150	2,750	1,870	820
17	1,800	1,230	1,400	1,350	540	640	1,360	2,800	4,000	2,950	1,950	1,120
18	1,650	1,180	1,500	1,400	500	940	1,140	3,500	5,650	3,250	1,950	1,540
19	1,540	1,230	1,550	1,600	490	1,000	1,080	5,250	6,450	3,200	1,870	1,660
20	1,470	1,180	1,550	1,600	480	1,050	1,200	3,650	5,500	3,000	1,730	1,730
21	1,410	1,120	1,550	1,600	480	1,150	1,080	3,300	3,500	2,950	1,800	1,660
22	1,410	1,120	1,550	1,550	470	1,250	1,180	2,350	2,750	2,900	1,870	1,000
23	1,350	1,120	1,550	1,550	460	1,400	1,140	2,950	2,600	2,650	1,950	880
24	1,410	1,100	1,550	1,550	460	1,550	1,480	2,550	2,950	2,200	2,030	1,120
25	1,350	1,050	1,550	1,550	500	1,660	1,680	2,250	2,750	1,120	2,030	1,350
26	1,350	1,020	1,550	1,550	640	1,290	2,250	2,400	3,850	2,030	2,030	1,540
27	1,350	757	1,550	1,550	1,000	1,120	1,980	2,450	3,900	2,550	2,030	1,730
28	1,300	629	1,500	1,500	1,000	1,180	2,250	2,500	4,750	3,230	2,030	1,870
29	1,290	568	1,500	1,500	-------	1,660	3,000	3,200	5,600	2,460	2,030	1,660
30	1,290	556	1,500	1,500	-------	2,550	1,780	3,100	5,900	3,130	2,030	1,730
31	1,660	-------	1,500	1,500	-------	2,840	-------	3,800	-------	2,450	2,030	----

NOTE.—Stage-discharge relation affected by ice Dec. 13 to Mar. 24; discharge based on gage heights corrected for effect of ice and by comparison with records of discharge from Moosehead Lake. Water-stage recorder not in operation Oct. 5–8, 17–18, 27–28, Nov. 24–25, June 21, July 5 and 19; discharge estimated by comparison with records of discharge from Moosehead Lake.

Monthly discharge of Kennebec River at The Forks, Me., for the year ending September 30, 1925

[Drainage area, 1,570 square miles]

Month	Discharge in second-feet					Corrected run-off in inches
	Observed			Corrected for storage		
	Maximum	Minimum	Mean	Mean	Per square mile	
October	2,110	860	1,550	440	0.280	0.32
November	1,950	556	1,320	837	.533	.59
December	1,550	514	1,250	1,310	.834	.96
January	1,600	1,350	1,470	828	.527	.61
February	1,650	460	1,030	1,610	1.03	1.07
March	2,840	490	1,060	2,520	1.61	1.86
April	3,000	1,080	1,750	6,230	3.97	4.43
May	5,250	1,950	3,090	4,230	2.69	3.10
June	6,450	2,600	4,170	4,040	2.57	2.87
July	9,200	1,120	3,790	3,130	1.99	2.29
August	2,190	1,660	1,920	660	.420	.48
September	2,190	820	1,740	1,000	.637	.71
The year	9,200	460	2,020	2,240	1.43	19.29

KENNEBEC RIVER AT WATERVILLE, ME.

LOCATION.—At dam and mill of Hollingsworth & Whitney Co. at Waterville, Kennebec County, 2 miles above Sebasticook River and 3½ miles above Messalonskee Stream.

DRAINAGE AREA.—4,270 square miles.

RECORDS AVAILABLE.—March 22, 1892, to September 30, 1925.

GAGES.—Rod gages in pond above dam and in tailrace of mill. A water-stage recorder installed in pond above the dam is used in connection with computations of discharge through the wheels, over the dam, and thrqugh the waste gates in the dam.

DETERMINATION OF DISCHARGE.—Discharge computed from flow over dam, through the logway, and through the wheels of the mill. When flow is less than about 3,500 second-feet practically all the water is used through the wheels.

ICE.—Stage-discharge relation not as a rule affected by ice; in most winters the entire flow passes through wheels of mill.

REGULATION.—Numerous power plants and much storage above station; results not corrected for storage.

COOPERATION.—Records furnished by Hollingsworth & Whitney Co.

Daily discharge, in second-feet, of Kennebec River at Waterville, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,850	2,540	2,190	2,550	3,100	2,830	19,800	10,800	6,680	15,800	4,770	2,720
2	2,820	1,570	3,030	2,890	2,270	4,760	18,500	10,400	6,640	17,200	2,790	2,600
3	2,870	2,270	2,750	2,450	2,330	4,140	16,800	9,800	5,970	17,400	3,500	2,560
4	3,140	2,940	3,050	1,210	2,210	3,370	17,100	8,550	5,950	14,100	3,740	2,640
5	1,680	2,830	3,260	2,040	2,150	3,580	14,300	10,500	7,660	6,560	3,770	2,510
6	2,780	2,690	2,450	2,400	1,870	5,040	11,100	13,500	4,900	8,810	3,840	2,490
7	2,430	2,840	2,430	2,410	1,990	8,120	9,660	13,800	9,030	8,220	4,100	1,710
8	2,080	2,880	4,140	2,380	1,440	8,590	7,980	12,900	10,200	6,700	4,370	2,620
9	2,180	1,200	6,890	2,560	2,070	7,450	7,510	10,400	10,800	6,040	1,960	2,580
10	2,680	476	4,760	2,390	2,190	6,800	7,170	9,520	10,700	5,700	2,860	2,540

Daily discharge, in second-feet, of Kennebec River at Waterville, Me., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	2,540	2,920	3,460	1,300	2,190	6,820	7,280	9,170	9,780	4,340	3,090	2,130
12	1,870	2,510	3,590	2,050	3,600	7,210	7,180	7,800	10,200	4,560	2,670	2,420
13	2,460	2,640	3,530	2,250	15,700	7,330	7,770	7,800	8,650	3,450	2,850	1,120
14	2,750	2,320	1,860	2,060	24,200	6,870	7,170	6,620	6,840	4,560	3,020	4,000
15	2,510	1,940	2,800	1,760	16,400	5,960	7,600	9,110	6,790	4,750	3,830	5,840
16	2,680	1,410	2,390	1,650	13,600	5,570	8,100	7,200	6,070	4,680	2,060	4,430
17	2,420	1,720	2,390	2,020	12,100	4,900	9,750	9,000	6,290	3,990	3,120	4,270
18	2,660	2,380	3,080	1,320	9,330	4,610	7,530	5,640	7,020	5,790	3,010	2,970
19	2,480	2,160	3,820	2,000	7,820	5,710	7,960	6,240	9,670	4,410	2,920	2,670
20	2,580	2,140	3,250	2,400	7,760	6,390	7,910	7,750	8,660	5,960	3,420	1,710
21	2,390	1,610	1,780	2,110	6,150	6,960	7,680	7,750	8,070	4,290	3,020	4,540
22	2,350	1,680	2,420	2,170	5,390	6,290	5,780	5,870	5,860	4,820	2,430	5,840
23	2,050	855	3,030	2,600	6,690	7,110	7,920	5,520	5,430	8,680	1,280	5,320
24	1,950	19,600	2,760	2,120	6,570	6,570	7,410	3,160	4,390	9,440	2,630	4,160
25	2,120	16,200	1,460	2,200	4,810	6,960	10,400	5,160	3,790	5,160	2,860	2,330
26	1,280	14,100	2,920	2,640	5,050	7,080	11,500	4,120	5,590	4,630	2,800	4,190
27	2,040	12,400	3,240	2,610	4,700	7,750	12,900	4,250	4,630	2,780	2,720	2,750
28	2,300	10,600	945	2,370	4,670	11,100	11,000	4,370	5,850	3,770	1,870	2,920
29	2,080	8,800	2,010	2,130	-------	32,500	11,300	5,370	8,420	5,530	1,970	3,450
30	1,980	4,150	2,380	2,690	-------	27,000	9,470	5,500	8,960	5,210	1,580	3,350
31	1,730	-------	2,000	2,310	-------	22,400	-------	5,560	-------	4,870	2,500	------

Monthly discharge of Kennebec River at Waterville, Me., for the year ending September 30, 1925

[Drainage area, 4,270 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	3,140	1,280	2,350	0.550	0.63
November	19,600	476	4,480	1.05	1.17
December	6,890	945	2,910	.681	.79
January	2,890	1,210	2,190	.513	.59
February	24,200	1,440	6,370	1.49	1.55
March	32,500	2,830	8,320	1.95	2.25
April	19,800	7,170	10,100	2.37	2.64
May	13,800	3,160	7,840	1.84	2.12
June	10,800	3,790	7,320	1.71	1.91
July	17,400	2,780	6,850	1.60	1.84
August	4,770	1,280	2,950	.691	.80
September	5,840	1,120	3,180	.745	.83
The year	32,500	476	5,390	1.26	17.12

NOTE.—The monthly discharge in second-feet per square mile and the run-off in inches do not represent the natural run-off from the basin because of storage.

DEAD RIVER AT THE FORKS, ME.

LOCATION.—One-eighth mile above farmhouse of Jeremiah Durgin and 1½ miles west of The Forks, Somerset County.

DRAINAGE AREA.—878 square miles.

RECORDS AVAILABLE.—September 29, 1901, to August 15, 1907; March 16, 1910, to September 30, 1925.

GAGE.—Water-stage recorder on left bank; installed September 29, 1923; inspected by H. J. Farley. Records including those for 1923 obtained from staff gage 300 feet below present gage.

DISCHARGE MEASUREMENTS.—Made from cable or by wading.

CHANNEL AND CONTROL.—Bed rough. Control practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 8.60 feet at noon April 30 (discharge, by extension of rating curve,

16,600 second-feet); minimum stage, 1.70 feet from noon September 9 to noon September 10 (discharge, 145 second-feet).

1901–1907; 1910–1925: Maximum discharge recorded, 23,800 second-feet April 30, 1923; minimum stage, 0.2 foot September 12–13, 17, 1918 (water held back by logging dams; discharge not determined).

ICE.—Stage-discharge relation seriously affected by ice.

REGULATION.—A number of dams on lakes above; used for log driving during May and June.

ACCURACY.—Stage-discharge relation probably permanent. Rating curve well defined below 12,000 second-feet. Operation of water-stage recorder satisfactory throughout year except for short periods indicated in footnote to daily-discharge table. Daily discharge ascertained by applying rating table to mean daily gage height as determined from inspection of recorder sheets with corrections for effect of ice during winter; for days of large fluctuation the average discharge of twelve 2-hour periods was used. Records good.

Discharge measurements of Dead River at The Forks, Me., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 28	3.42	2,190	Mar. 17	2.55	875	Sept. 9	1.70	145
Jan. 14	*2.98	279	June 15	2.92	1,330			

*Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Dead River at The Forks, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	860	260	1,270	500	230	968	6,720	4,780	1,230	2,440	620	194
2	1,280	260	1,090	480	250	956	6,040	3,510	1,120	4,040	554	189
3	1,020	254	1,000	460	270	968	5,650	3,370	1,160	4,880	545	184
4	848	254	944	410	280	908	5,390	3,090	1,210	2,540	563	167
5	723	248	872	370	290	848	5,130	3,460	1,140	1,850	600	162
6	620	248	836	360	290	824	4,760	4,470	2,150	1,090	581	162
7	545	248	824	350	290	836	4,020	5,600	4,620	1,030	572	162
8	491	248	848	330	280	836	3,560	4,380	3,670	992	554	156
9	464	248	1,040	330	270	896	3,670	3,300	3,450	944	536	145
10	464	260	1,390	320	270	884	3,450	4,040	3,240	932	509	156
11	464	260	1,570	310	1,150	860	3,560	2,730	2,930	896	518	172
12	437	354	1,370	300	2,400	872	4,020	2,440	2,540	836	518	212
13	402	394	1,250	290	3,700	920	3,670	1,980	2,080	789	473	248
14	378	394	1,180	280	3,500	908	2,560	1,910	1,690	767	437	630
15	354	386	1,090	260	3,200	968	2,660	1,640	1,380	734	428	1,350
16	330	378	1,070	260	2,800	944	3,040	2,100	1,300	680	428	1,250
17	330	354	1,000	260	2,700	860	3,240	1,120	1,680	756	386	944
18	322	330	940	250	2,260	812	2,950	1,100	1,850	956	354	789
19	316	330	900	250	1,910	789	3,190	1,980	1,770	2,400	323	756
20	309	428	880	230	1,680	789	3,380	1,440	1,640	968	330	745
21	323	437	820	210	1,540	800	2,200	1,370	1,420	723	316	1,200
22	323	437	780	240	1,370	800	2,580	1,080	1,200	650	316	2,130
23	316	940	740	240	1,250	778	2,370	1,350	1,080	723	309	1,700
24	309	3,500	700	240	1,180	767	4,340	1,200	980	767	288	1,200
25	309	7,900	680	220	1,210	745	4,650	983	872	734	267	920
26	316	6,040	640	220	1,120	756	5,450	1,080	660	630	254	800
27	330	3,450	600	220	1,040	836	6,470	1,220	734	581	242	745
28	330	2,220	580	230	956	1,090	6,560	1,250	860	630	224	680
29	323	1,750	560	200	-------	2,170	3,000	1,320	1,040	767	212	712
30	295	1,460	520	200	-------	5,000	5,630	1,440	1,240	824	212	712
31	260	-------	500	210	-------	6,450	-------	2,460	-------	756	206	------

NOTE.—Stage-discharge relation affected by ice Dec. 17 to Feb. 17; discharge based on gage heights corrected for effect of ice. Water-stage recorder not in operation Nov. 23–25; discharge estimated.

Monthly discharge of Dead River at The Forks, Me., for the year ending September 30, 1925

[Drainage area, 878 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	1,280	260	464	0.528	0.61
November	7,900	248	1,140	1.30	1.45
December	1,570	500	919	1.05	1.21
January	500	200	291	.331	.38
February	3,700	230	1,350	1.54	1.60
March	6,450	745	1,220	1.39	1.60
April	6,720	2,200	4,130	4.70	5.24
May	5,600	983	2,360	2.69	3.10
June	4,020	660	1,710	1.95	2.18
July	4,880	581	1,240	1.41	1.63
August	620	206	409	.466	.54
September	2,130	145	652	.743	.83
The year	7,900	145	1,320	1.50	20.37

COBBOSSEECONTEE STREAM AT GARDINER, ME.

LOCATION.—At dam of Gardiner Water Power Co. in Gardiner, Kennebec County.

DRAINAGE AREA.—220 square miles.

RECORDS AVAILABLE.—June 16, 1890, to September 30, 1925.

GAGES.—Staff in pond above dam and in tailrace of power house. There are also gages to indicate the water-wheel gate and the waste-gate openings.

DETERMINATION OF DISCHARGE.—Discharge determined by considering (1) flow over dam, usually nothing except for a short time in the spring; (2) flow through two gates; (3) flow through 39-inch Victor wheel installed in 1907; (4) flow through the 39-inch Hercules wheel installed in 1895; and (5) leakage. Daily discharge computed from tables based on coefficients and experiments. The accuracy of these tables was verified by a series of weir measurements in August, 1921. Corrections have been made for leakage.

ICE.—Not affected by ice.

REGULATION.—Numerous lakes in the basin are regulated by dams at the outlets. Results not corrected for storage.

COOPERATION.—Computation of daily discharge made by engineers of S. D. Warren Co., Cumberland Mills, Me.

Daily discharge, in second-feet, of Cobbosseecontee Stream at Gardiner, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	210	190	210	210	13	13	1,620	290	240	210	210	190
2	210	13	210	210	103	270	1,220	290	270	210	13	190
3	210	190	210	210	103	270	1,120	13	270	210	210	190
4	210	190	210	13	103	270	980	270	270	13	210	190
5	13	190	210	190	103	270	670	270	270	13	210	190
6	210	190	210	160	98	280	553	270	270	210	210	13
7	210	190	13	130	85	290	420	290	13	210	210	190
8	210	190	260	130	13	13	275	290	270	210	210	190
9	210	13	260	130	103	290	260	290	270	210	13	190
10	210	160	260	130	105	290	260	13	270	210	210	190
11	210	160	260	13	110	290	260	270	270	210	210	190
12	13	160	260	150	135	290	13	270	270	13	210	190
13	210	160	260	130	185	290	290	270	270	210	210	13
14	210	160	13	130	270	290	300	270	13	210	210	190
15	210	160	260	130	13	290	310	270	270	210	210	190

Daily discharge, in second-feet, of Cobbosseecontee Stream at Gardiner, Me., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	210	13	260	130	270	290	310	270	270	210	13	190
17	210	160	260	130	270	290	300	13	270	210	210	190
18	210	160	260	13	270	290	290	270	270	210	210	190
19	13	160	260	146	270	290	13	270	270	13	210	190
20	210	160	260	146	270	1,180	265	270	240	210	210	13
21	210	160	13	140	270	835	280	270	13	210	210	190
22	210	160	210	130	13	600	290	270	270	210	210	190
23	210	13	210	130	270	545	290	270	270	210	13	190
24	210	160	210	130	270	475	290	13	270	210	190	190
25	210	160	13	13	270	466	290	270	270	210	190	190
26	13	185	190	107	270	467	13	270	240	13	190	190
27	190	13	117	107	270	475	290	270	210	210	190	13
28	190	150	13	103	270	595	290	270	13	210	190	190
29	190	210	210	103	-------	1,360	290	270	210	210	190	190
30	190	13	210	95	-------	2,020	290	140	210	210	13	190
31	190	-------	210	95	-------	1,960	-------	13	-------	210	190	-------

Monthly discharge of Cobbosseecontee Stream at Gardiner, Me., for the year ending September 30, 1925

[Drainage area, 220 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	210	13	181	0.823	0.95
November	210	13	140	.636	.71
December	260	13	194	.882	1.02
January	210	13	122	.555	.64
February	270	13	171	.777	.81
March	2,020	13	511	2.32	2.68
April	1,620	13	411	1.87	2.09
May	290	13	228	1.04	1.20
June	270	13	227	1.03	1.15
July	210	13	178	.809	.93
August	210	13	174	.791	.91
September	190	13	166	.755	.84
The year	2,020	13	226	1.03	13.93

NOTE.—The monthly discharge in second-feet per square mile and the run-off in inches do not represent the natural run-off from the basin because of storage. (See "Regulation.")

ANDROSCOGGIN RIVER BASIN

ANDROSCOGGIN RIVER AT RUMFORD, ME.

LOCATION.—At two dams of Rumford Falls Power Co., at Rumford, Oxford County.

DRAINAGE AREA.—2,090 square miles.

RECORDS AVAILABLE.—May 18, 1892, to September 30, 1925.

GAGES.—One in pond above each dam; and in tailrace of power station and mills.

DISCHARGE.—Computed from discharge over the dam by use of the Francis weir formula with modified coefficient, and the quantities passing through the various wheels of the power station and mills, which have been carefully rated.

ICE.—Stage-discharge relation little affected by ice.

REGULATION.—Storage in Rangeley system of lakes, at headwaters of Androscoggin River, aggregates about 29.6 billion cubic feet. The stored water is regulated in the interests of the water-power users above and below. Results not corrected for storage.

COOPERATION.—Records obtained and computations made by Charles A. Mixer, engineer, Rumford Falls Power Co.

Daily discharge, in second-feet, of Androscoggin River at Rumford, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11,400	2,320	3,030	2,500	2,370	2,590	10,700	5,880	3,510	3,860	2,260	2,120
2	5,580	1,880	2,680	2,420	2,310	2,640	9,450	5,300	3,580	3,080	2,270	2,010
3	3,740	2,390	2,560	2,440	2,270	2,830	8,740	4,730	3,450	2,330	2,800	1,960
4	3,070	2,400	2,800	2,550	2,160	2,640	8,570	4,260	3,250	2,310	2,730	1,900
5	2,680	2,390	2,470	2,800	2,190	2,740	7,260	7,580	3,060	2,420	2,670	1,520
6	2,880	2,420	2,910	2,670	2,240	2,820	6,470	7,110	2,070	2,710	2,640	1,500
7	2,490	2,420	2,800	2,540	2,240	3,060	5,790	5,230	2,580	2,790	2,590	1,580
8	2,510	2,460	3,550	2,420	1,960	2,720	6,160	4,420	3,850	3,600	2,060	2,070
9	2,520	1,900	4,790	2,470	2,380	3,180	6,030	3,920	3,630	3,380	1,930	1,900
10	2,460	2,550	4,380	2,440	2,350	3,200	6,120	3,230	3,120	3,070	2,690	1,980
11	2,430	2,430	3,050	2,140	2,630	3,380	6,380	3,870	2,920	3,000	2,550	1,930
12	2,210	2,380	2,670	2,510	10,700	4,100	6,150	4,370	2,790	2,240	2,550	2,010
13	2,690	2,340	2,790	2,410	14,200	4,030	6,360	3,880	2,400	2,860	2,530	2,300
14	2,630	2,270	2,420	2,470	8,040	3,750	5,650	3,690	2,150	2,710	2,520	4,020
15	2,650	2,190	2,270	2,340	5,260	2,930	5,470	3,610	2,710	2,710	2,010	3,300
16	2,470	1,770	2,030	2,410	4,680	3,470	6,460	3,620	2,790	2,640	1,870	2,720
17	2,520	2,230	2,570	2,550	4,080	3,290	5,780	3,570	2,910	3,520	2,440	2,890
18	2,430	1,630	3,070	2,370	3,440	3,290	4,820	4,430	2,710	2,960	2,270	2,600
19	1,650	1,830	3,080	2,430	3,200	3,430	4,310	3,990	2,710	2,480	2,200	2,130
20	3,020	2,400	2,940	2,480	3,210	3,370	4,200	3,450	2,380	2,780	2,550	1,700
21	2,430	2,400	2,470	2,480	3,110	3,550	3,960	3,510	1,550	2,680	2,260	2,650
22	2,370	2,500	2,500	2,480	2,540	3,640	4,590	3,370	2,810	3,310	1,930	2,640
23	2,400	18,800	2,680	2,470	3,110	3,690	5,410	3,090	2,820	5,220	1,790	2,450
24	2,460	23,400	2,610	2,340	3,600	3,510	6,810	2,830	2,670	3,560	2,350	2,280
25	2,330	10,200	2,640	2,280	4,100	3,540	6,290	3,460	2,640	2,540	2,160	2,190
26	2,080	7,850	2,380	2,570	3,650	4,270	6,900	3,320	2,850	2,370	2,190	2,190
27	2,540	5,290	2,340	2,540	3,090	4,540	7,770	3,280	2,570	3,680	2,090	1,480
28	2,580	4,010	2,010	2,450	2,880	9,160	7,430	3,210	3,170	4,270	2,090	2,560
29	2,310	3,880	2,440	2,510	-------	21,400	6,440	3,180	4,960	3,740	1,700	2,380
30	2,310	2,900	2,460	2,560	-------	21,000	5,800	2,850	4,430	3,000	1,610	2,260
31	2,460	-------	2,540	2,670	-------	13,200	-------	2,640	-------	2,690	2,200	------

Monthly discharge of Androscoggin River at Rumford, Me., for the year ending September 30, 1925

[Drainage area, 2,090 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	11,400	1,650	2,910	1.39	1.60
November	23,400	1,630	4,190	2.00	2.23
December	4,790	2,010	2,770	1.33	1.53
January	2,800	2,140	2,470	1.18	1.36
February	14,200	1,960	3,860	1.85	1.93
March	21,400	2,590	5,000	2.39	2.76
April	10,700	3,960	6,410	3.07	3.42
May	7,580	2,640	4,030	1.93	2.22
June	4,960	1,550	2,970	1.42	1.58
July	5,220	2,240	3,050	1.46	1.68
August	2,800	1,610	2,270	1.09	1.26
September	4,020	1,480	2,240	1.07	1.19
The year	23,400	1,480	3,510	1.68	22.76

NOTE.—The monthly discharge in second-feet per square mile and run-off in inches do not represent the natural run-off from the basin because of storage. (See "Regulation.") The indicated minimum discharge usually occurs on Sundays when water is held back by dams.

MAGALLOWAY RIVER AT AZISCOHOS DAM, ME.

LOCATION.—At Aziscohos Dam, Oxford County, 15 miles above mouth.

DRAINAGE AREA.—233 square miles (revised from map).

RECORDS AVAILABLE.—January 1, 1912, to September 30, 1925.

GAGE.—Vertical staff in two sections, the lower attached to one of the concrete buttresses of the dam and the upper to the concrete gate tower.

DETERMINATION OF DISCHARGE.—Discharge determined from readings of gate openings. Gates have been rated by current-meter measurements at a station about 1 mile below the dam.

REGULATION.—The storage of about 9,593 million cubic feet is completely regulated, and the discharge corresponds to requirements of water users below. The operation of the gates is planned to maintain as nearly as possible a constant flow at Berlin, N. H. Results not corrected for storage.

COOPERATION.—Discharge computed and furnished for publication by Union Water Power Co., Lewiston, Me.

Monthly discharge of Magalloway River at Aziscohos Dam, Me., for the year ending September 30, 1925

[Drainage area, 233 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	186	152	166	0.712	0.82
November	1,010	150	270	1.16	1.29
December	1,280	155	477	2.05	2.36
January	1,480	236	327	1.40	1.61
February	236	148	173	.742	.77
March	2,020	137	1,230	5.28	6.09
April	161	143	152	.652	.73
May	703	162	308	1.32	1.52
June	1,980	163	825	3.54	3.95
July	164	163	164	.704	.81
August	1,860	163	888	3.81	4.39
September	1,630	147	606	2.60	2.90
The year	2,020	137	468	2.01	27.24

NOTE.—The monthly discharge in second-feet per square mile and the run-off in inches do not represent the natural run-off from the basin because of storage. (See "Regulation.")

PRESUMPSCOT RIVER BASIN

PRESUMPSCOT RIVER AT OUTLET OF SEBAGO LAKE, ME.

LOCATION.—At outlet dam at Sebago Lake and hydroelectric plant at Eel Weir Falls, 1 mile below lake outlet.

DRAINAGE AREA.—436 square miles.

RECORDS AVAILABLE.—January 1, 1887, to September 30, 1925.

GAGES.—On bulkhead of gatehouse at outlet dam, and in fore bay and tailrace of power plant.

DISCHARGE.—Prior to March, 1904, discharge was determined from records of opening of gates in dam; since March, 1904, flow from lake has been recorded by three Allen meters, one on each of three pairs of 30-inch Hercules wheels; wheels and recording meters checked by current-meter measurements, brake tests of wheels, and electrical readings of the generator output. Water wasted at regulating gates is measured from records of gate openings and coefficients determined from current-meter measurements. Water taken from Sebago Lake for supply of Portland water district and water leaking through reservoir dam, a total of about 18 second-feet, not included in tables of discharge.

REGULATION.—Sebago Lake (area, 46 square miles) is under complete regulation. Results not corrected for storage.

COOPERATION.—Record in cubic feet a minute furnished by S. D. Warren Co.; computations on basis of cubic feet a second made by engineers of the Geological Survey.

Daily discharge, in second-feet, of Presumpscot River at outlet of Sebago Lake, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	606	498	672	672	270	135	636	813	726	628	439	609
2	571	255	671	667	641	590	642	709	707	674	142	602
3	572	633	636	626	644	590	635	437	690	540	792	602
4	614	674	599	220	646	602	577	759	725	140	723	605
5	188	673	662	676	641	587	324	837	755	263	651	478
6	640	670	653	680	618	402	673	724	448	642	683	56
7	632	638	5	673	603	438	800	825	128	631	654	68
8	662	508	707	713	319	126	783	830	707	643	369	738
9	665	322	639	679	691	528	755	793	745	650	204	681
10	648	680	621	644	660	561	709	267	686	608	638	636
11	592	680	663	286	598	524	651	831	689	228	646	612
12	192	637	680	671	422	561	317	835	686	362	614	244
13	674	636	587	686	530	526	744	836	417	636	612	191
14	641	674	165	678	506	462	1,240	836	322	609	611	615
15	642	667	707	625	101	131	1,630	836	713	616	284	649
16	637	289	620	676	515	526	1,310	687	531	644	239	608
17	645	665	665	638	552	527	1,170	294	804	645	594	610
18	652	659	629	290	562	517	840	747	638	413	623	494
19	328	663	607	724	566	528	805	794	693	348	608	366
20	641	664	726	726	600	532	979	715	417	662	590	283
21	638	664	159	680	561	492	1,440	713	354	686	635	461
22	630	663	699	681	102	122	1,310	746	628	686	428	737
23	660	213	677	680	494	517	995	700	690	634	187	636
24	653	648	672	632	493	557	843	180	684	614	544	644
25	618	630	371	292	514	522	741	820	690	467	598	645
26	251	666	566	614	549	562	539	796	683	274	602	366
27	632	421	620	614	594	522	777	798	450	674	596	296
28	666	734	308	643	611	475	736	702	286	636	593	594
29	662	676	673	646	-------	8	832	708	706	625	409	613
30	635	124	684	662	-------	520	814	0	588	631	240	612
31	631	-------	713	623	-------	576	-------	339	-------	613	582	-----

Monthly discharge of Presumpscot River at outlet of Sebago Lake, Me., for the year ending September 30, 1925

[Drainage area, 436 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	674	188	584	1.34	1.54
November	734	124	574	1.32	1.47
December	726	5	582	1.33	1.53
January	726	220	613	1.41	1.63
February	691	101	522	1.20	1.25
March	602	8	460	1.06	1.22
April	1,630	317	842	1.93	2.15
May	837	0	674	1.55	1.79
June	804	128	600	1.38	1.54
July	686	140	552	1.27	1.46
August	792	142	520	1.19	1.37
September	738	56	512	1.17	1.30
The year	1,630	0	586	1.34	18.25

NOTE.—The monthly discharge does not represent the natural flow from the basin because of artificial storage. The yearly discharge and run-off probably represent more nearly the natural flow, because comparatively little stored water is held over from year to year.

SACO RIVER BASIN

SACO RIVER AT CORNISH, ME.

LOCATION.—At highway bridge at Cornish, York County, half a mile below mouth of Ossipee River.

DRAINAGE AREA.—1,300 square miles.

RECORDS AVAILABLE.—June 4, 1916, to September 30, 1925.

GAGE.—Water-stage recorder on left bank 300 feet above highway bridge; installed October 30, 1919; inspected by A. H. Guimont.

DISCHARGE MEASUREMENTS.—Made from bridge.

CHANNEL AND CONTROL.—Channel covered with sand and boulders; broken by one pier at bridge.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 11.16 feet at 7 p. m. April 1 (discharge, 15,900 second-feet); minimum stage, 1.80 feet at 2 p. m. September 13 (discharge, 475 second-feet; water held back by dams).

1916–1925: Maximum stage recorded, 14.72 feet May 2, 1923 (discharge, by extension of rating curve, 23,000 second-feet); minimum discharge, by extension of rating curve, 90 second-feet October 1, 1921 (water held back by dams).

ICE.—Ice forms to a considerable thickness; stage-discharge relation seriously affected during most winters.

REGULATION.—Distribution of flow somewhat affected by power development at Great Falls, 3½ miles above gage.

ACCURACY.—Stage-discharge relation permanent except as affected by ice or by logs on control. Rating curve well defined below 13,000 second-feet. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying rating table to mean daily gage height as determined by inspection of recorder sheets, with corrections for effect of ice and logs. Records good.

Discharge measurements of Saco River at Cornish, Me., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 21	[a] 4.20	1,100	Mar. 11	[a] 4.62	3,290	May 6	[b] 5.46	4,040
Feb. 9	[a] 4.36	913	Apr. 27	[b] 5.87	5,360	Sept. 2	2.48	941

[a] Stage-discharge relation affected by ice. [b] Stage-discharge relation affected by logs.

Daily discharge, in second-feet, of Saco River at Cornish, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,620	895	3,600	1,250	1,000	4,100	15,800	5,000	1,470	1,570	2,290	972
2	2,840	998	3,170	1,250	1,000	4,000	15,400	5,000	1,520	1,620	2,120	972
3	3,310	1,030	2,780	1,200	1,000	3,800	14,000	4,700	1,520	1,620	1,960	946
4	3,530	1,080	2,530	1,250	1,000	3,700	12,800	4,400	1,570	1,520	1,790	972
5	3,530	972	2,290	1,300	980	3,600	11,600	4,100	1,620	1,390	1,620	733
6	3,380	946	2,120	1,250	960	3,600	10,800	4,100	1,570	1,290	1,520	933
7	3,100	954	2,180	1,200	920	3,600	10,000	4,100	1,370	1,370	1,440	845
8	2,840	1,050	2,180	1,200	920	3,500	9,200	4,100	1,360	1,290	1,400	938
9	2,590	1,020	2,350	1,150	900	3,400	8,600	4,100	1,310	1,190	1,310	863
10	2,290	972	2,590	1,100	920	3,300	8,000	3,900	1,290	1,240	1,330	815
11	2,060	963	2,590	1,050	980	3,300	7,600	3,800	1,270	1,280	1,410	762
12	1,900	946	2,530	1,100	1,450	3,600	7,210	3,600	1,210	1,160	1,310	794
13	1,790	946	2,290	1,100	2,800	3,800	6,830	3,400	1,200	1,040	1,250	765
14	1,620	904	2,120	1,100	3,700	4,000	6,640	3,300	1,200	1,100	1,210	998
15	1,570	879	2,100	1,050	4,200	3,990	6,450	3,200	1,150	1,060	1,170	1,050

Daily discharge, in second-feet, of Saco River at Cornish, Me., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	1,470	847	2,000	1,050	4,700	4,160	6,450	3,200	1,140	1,040	1,170	1,160
17	1,420	871	1,950	1,100	4,900	4,080	6,070	3,100	1,150	1,020	1,130	1,280
18	1,330	863	1,900	1,050	4,900	3,990	5,890	3,000	1,040	1,010	1,100	1,260
19	1,230	879	1,850	1,050	4,800	4,420	5,530	2,800	1,020	946	1,040	1,260
20	1,220	839	1,750	1,050	4,700	4,670	5,530	2,700	980	1,030	1,020	1,260
21	1,150	938	1,700	1,050	4,600	4,670	5,350	2,780	912	1,040	989	1,200
22	1,100	963	1,700	1,050	4,600	4,670	5,350	2,650	938	1,040	954	1,230
23	1,050	1,460	1,650	1,100	4,600	4,670	5,400	2,470	855	1,060	1,070	1,270
24	998	2,710	1,600	1,100	4,700	4,670	5,400	2,350	855	1,550	1,090	1,260
25	879	3,680	1,550	1,050	4,700	4,670	5,400	2,230	831	1,740	1,100	1,210
26	831	4,330	1,500	1,050	4,500	4,500	5,400	2,180	815	1,460	1,050	1,240
27	863	4,840	1,450	1,050	4,400	4,670	5,400	2,060	815	1,570	963	1,220
28	887	4,840	1,400	1,050	4,300	5,180	5,400	1,850	804	1,740	1,050	1,150
29	887	4,500	1,350	1,000	-------	8,800	5,200	1,620	1,150	2,180	972	1,170
30	879	4,160	1,300	1,000	-------	11,200	5,200	1,450	1,340	2,350	946	1,090
31	871	-------	1,250	1,050	-------	14,800	--------	1,420	-------	2,410	929	------

NOTE.—Stage-discharge relation affected by ice Dec. 15 to Mar. 14; discharge for this period based on gage heights corrected for effect of ice. Stage-discharge relation affected by logs Apr. 23 to May 20; discharge based on gage heights corrected for effect of logs.

Monthly discharge of Saco River at Cornish, Me., for the year ending September 30, 1925

[Drainage area, 1,300 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	3,530	831	1,780	1.37	1.58
November	4,840	839	1,710	1.32	1.47
December	3,600	1,250	2,040	1.57	1.81
January	1,300	1,000	1,110	.854	.98
February	4,900	900	2,970	2.28	2.37
March	14,800	3,300	4,810	3.70	4.27
April	15,800	5,200	7,800	6.00	6.69
May	5,000	1,420	3,180	2.45	2.82
June	1,620	804	1,180	.908	1.01
July	2,410	946	1,380	1.06	1.22
August	2,290	929	1,280	.985	1.14
September	1,280	733	1,050	.808	.90
The year	15,800	733	2,520	1.94	26.26

SACO RIVER AT WEST BUXTON, ME.

LOCATION.—At hydroelectric plant of Cumberland County Power & Light Co. at West Buxton, York County.

DRAINAGE AREA.—1,550 square miles.

RECORDS AVAILABLE.—October 19, 1907, to September 30, 1916, and January 1, 1919, to September 30, 1925.

GAGES.—One in pond above dam; another in tailrace of power house.

CHANNEL AND CONTROL.—Crest of concrete dam about 300 feet long.

DISCHARGE.—Flow over dam and through wheels of power plant determined by means of hourly gage readings.

ICE.—Stage-discharge relation not affected by ice.

REGULATION.—Distribution of flow somewhat affected by power developments above gage.

COOPERATION.—Records furnished by Cumberland County Power & Light Co., Portland, Me.

Daily discharge, in second-feet, of Saco River at West Buxton, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,800	1,100	3,940	1,480	916	4,570	19,100	5,760	2,460	1,740	2,540	1,400
2	2,040	794	3,700	1,220	1,540	4,620	18,700	5,450	1,850	1,800	2,080	1,330
3	3,270	1,580	3,330	1,070	1,330	4,160	17,000	4,960	1,910	2,090	2,680	1,320
4	3,330	1,500	3,110	862	1,440	4,020	15,800	5,080	1,880	1,160	2,490	1,150
5	3,200	1,220	2,730	1,730	1,060	3,620	14,100	4,750	1,870	1,060	2,440	1,060
6	3,830	1,760	2,350	1,810	833	3,850	13,500	4,630	1,580	2,150	2,340	597
7	3,500	770	2,250	1,610	1,240	4,220	12,400	4,660	1,450	2,080	1,980	681
8	3,210	744	2,830	1,450	776	4,330	11,200	4,780	2,030	1,380	1,410	1,190
9	3,000	707	2,570	1,500	1,080	4,710	10,000	4,820	1,810	1,650	1,010	1,030
10	2,810	1,240	2,590	1,170	1,230	4,350	9,430	4,300	1,830	1,590	1,730	965
11	2,310	1,040	2,770	944	1,300	4,420	8,710	4,470	1,560	1,240	1,550	1,400
12	1,920	1,250	2,210	1,670	2,580	5,110	7,980	4,110	1,470	962	1,610	906
13	3,100	1,160	2,200	1,090	3,130	5,340	8,040	4,080	1,210	1,490	1,750	692
14	2,190	1,320	2,660	1,420	4,750	5,420	7,400	3,700	881	1,460	1,950	980
15	1,930	808	2,380	1,310	5,340	5,390	7,140	3,560	1,730	1,380	1,520	1,600
16	1,950	731	2,320	1,150	6,250	5,670	7,210	3,350	1,570	1,380	807	1,170
17	1,730	1,200	2,030	1,110	6,410	5,330	6,960	2,420	1,750	1,390	1,520	1,960
18	1,670	1,170	2,000	966	6,420	5,620	6,500	3,070	1,660	1,170	1,600	1,240
19	894	1,020	1,910	1,380	6,200	6,020	5,960	2,900	1,560	746	1,480	1,330
20	1,640	874	1,940	1,480	5,980	7,480	6,240	2,750	876	1,440	1,090	1,070
21	1,620	729	1,570	1,360	5,500	6,580	6,840	2,670	356	1,430	1,140	1,550
22	1,490	962	2,380	1,220	4,920	6,180	6,110	2,440	1,210	1,380	961	1,780
23	1,380	1,300	1,820	1,160	5,200	6,480	6,490	2,300	1,030	842	1,000	1,430
24	1,520	2,600	1,720	1,190	5,190	5,960	6,680	1,540	1,280	1,640	1,400	1,690
25	724	3,480	1,210	1,020	5,610	5,810	6,400	2,860	1,380	933	1,470	1,800
26	653	4,320	1,800	1,280	5,650	5,580	5,950	2,590	1,200	1,130	1,400	1,020
27	1,230	4,300	1,520	1,460	5,410	5,730	6,450	2,500	861	2,150	1,490	883
28	1,170	4,760	2,290	1,300	4,820	6,260	6,210	2,160	418	2,060	1,390	1,540
29	1,210	4,440	1,770	1,410	------	9,630	5,920	2,060	1,500	2,090	904	1,740
30	1,140	3,880	1,400	1,190	------	16,400	5,850	970	1,550	2,610	908	1,700
31	1,100	------	1,430	1,520	------	17,200	------	1,270	------	2,810	1,320	-----

Monthly discharge of Saco River at West Buxton, Me., for the year ending September 30, 1925

[Drainage area, 1,550 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	3,830	653	2,020	1.30	1.50
November	4,760	707	1,760	1.14	1.27
December	3,940	1,210	2,280	1.47	1.70
January	1,810	862	1,310	.845	.97
February	6,420	776	3,650	2.35	2.45
March	17,200	3,620	6,130	3.95	4.55
April	19,100	5,850	9,210	5.94	6.63
May	5,760	970	3,450	2.23	2.57
June	2,460	356	1,460	.942	1.05
July	2,810	746	1,560	1.01	1.16
August	2,680	807	1,580	1.02	1.18
September	1,960	597	1,270	.819	.91
The year	19,100	356	2,960	1.91	25.94

OSSIPEE RIVER AT CORNISH, ME.

LOCATION.—At highway bridge in Cornish, York County, 1¼ miles above confluence with Saco River.

DRAINAGE AREA.—455 square miles (measured on map compiled by Maine Water Power Commission).

RECORDS AVAILABLE.—July 5, 1916, to September 30, 1925.

GAGE.—Chain gage attached to bridge; read by O. W. Adams.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Channel covered with sand and gravel; possibly somewhat shifting; broken by one pier at bridge.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 7.78 feet at 6 p. m. March 29 (discharge, 5,810 second-feet); minimum stage, 0.68 foot at 7 a. m. May 30 (discharge, 196 second-feet).

1916–1925: Maximum stage recorded, 8.76 feet April 30, 1923 (discharge, by extension of rating curve, 6,740 second-feet); minimum stage, 0.15 foot October 18, 1923 (discharge, by extension of rating curve, 66 second-feet).

ICE.—Ice forms to considerable thickness and stage-discharge relation is seriously affected during most winters.

REGULATION.—Flow regulated by dam at outlet of Great Ossipee Lake. Power developments at Kezar Falls, 5 miles above gage, may have some effect on distribution of flow.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined above 200 second-feet. Gage read to hundredths twice a day. Daily discharge ascertained by applying rating table to mean daily gage height with corrections for effect of ice. Records good.

Discharge measurements of Ossipee River at Cornish, Me., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
an. 21	a 2.67	413	Mar. 11	2.51	1,070	Sept. 2	1.31	419
Feb. 9	a 2.48	356	May 6	2.61	1,240			

a Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Ossipee River at Cornish, Me., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	680	224	770	420	420	1,260	5,360	1,340	276	520	710	402
2	770	262	680	450	420	1,260	5,070	1,340	300	495	650	448
3	740	380	570	450	420	1,260	4,310	1,190	320	495	680	448
4	710	380	520	480	420	1,260	3,670	1,190	300	425	570	402
5	620	360	495	520	420	1,190	3,490	1,190	300	380	595	380
6	595	360	570	500	420	1,260	3,130	1,190	239	340	495	380
7	570	380	650	470	400	1,260	3,040	1,190	249	402	470	380
8	495	402	650	480	380	1,190	2,770	1,190	320	380	402	380
9	448	402	740	490	360	1,190	2,590	1,120	320	360	402	380
10	425	402	710	500	390	1,120	2,590	1,120	320	340	425	360
11	380	402	710	500	420	1,120	2,500	1,050	320	360	520	320
12	360	402	740	500	600	1,190	2,140	1,050	320	320	545	320
13	320	380	770	480	940	1,260	1,980	1,050	300	286	545	340
14	300	360	740	470	1,200	1,340	1,900	980	320	286	545	402
15	290	360	700	470	1,700	1,420	1,820	1,050	320	259	470	402
16	286	360	680	460	1,800	1,340	1,740	1,050	300	380	425	402
17	279	380	660	450	1,750	1,420	1,660	1,120	320	300	425	360
18	265	340	640	440	1,750	1,420	1,580	980	340	380	402	320
19	259	320	620	430	1,700	1,500	1,580	800	360	402	380	259
20	246	320	580	420	1,700	1,500	1,580	800	300	448	360	246
21	246	320	580	420	1,700	1,500	1,580	800	296	448	320	360
22	243	380	580	420	1,580	1,660	1,580	800	320	495	300	448
23	233	920	580	420	1,340	1,820	1,660	800	296	570	425	448
24	224	1,340	600	480	1,420	1,820	1,660	680	246	545	448	470
25	221	1,260	620	500	1,500	1,820	1,820	620	259	545	495	470
26	211	830	580	470	1,500	1,740	1,740	570	208	470	495	520
27	218	680	560	460	1,340	1,740	1,660	545	221	470	470	520
28	246	620	520	430	1,260	1,740	1,580	495	425	520	470	545
29	246	620	540	420	------	5,260	1,420	425	595	680	448	495
30	252	740	470	420	------	5,360	1,420	199	495	740	402	470
31	246	------	450	420	------	5,450	------	214	------	740	402	------

NOTE.—Stage-discharge relation affected by ice Dec. 15 to Feb. 21; discharge based on gage heights corrected for effect of ice.

Monthly discharge of Ossipee River at Cornish, Me., for the year ending September 30, 1925

[Drainage area, 455 square miles]

Mean	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	770	211	375	0.824	0.95
November	1,340	224	496	1.09	1.22
December	770	450	622	1.37	1.58
January	520	420	459	1.01	1.16
February	1,800	360	1,040	2.29	2.38
March	5,450	1,120	1,800	3.96	4.56
April	5,360	1,420	2,350	5.16	5.76
May	1,340	199	908	2.00	2.31
June	595	208	317	.697	.78
July	740	259	445	.978	1.13
August	710	300	474	1.04	1.20
September	545	246	403	.886	.99
The year	5,450	199	805	1.77	24.02

MERRIMACK RIVER BASIN

PEMIGEWASSET RIVER AT PLYMOUTH, N. H.

LOCATION.—At 2-span highway bridge in Plymouth, Grafton County, three-fourths mile below mouth of Bakers River.

DRAINAGE AREA.—615 square miles.

RECORDS AVAILABLE.—January 1, 1886, to September 30, 1925.

GAGE.—Vertical staff gage in three sections; two lower sections 40 feet above bridge; upper section on bridge abutment; read by A. F. Morse.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Right channel rocky and practically permanent; left channel covered with fine gravel which shifts occasionally. Control section for low stages is gravel bed and has changed somewhat at various times. At high stages banks are overflowed below bridge and control is somewhat indefinite.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 15.8 feet determined by high-water marks night of February 12 (discharge, by extension of rating curve, 19,200 second-feet); minimum discharge, 99 second-feet several times during week of September 6.

1903–1925: maximum stage recorded 18.17 feet April 29, 1923 (discharge, by extension of rating curve, 22,400 second-feet); minimum discharge, 45 second-feet several times during August, September, and October, 1923.

ICE.—Stage-discharge relation is affected by ice.

REGULATION.—Several small ponds on Bakers River and other tributaries but practically no storage regulation. At very low stages the paper mill at Livermore Falls is obliged to shut down several times daily and at these times the ponding of water affects distribution of flow at Plymouth.

ACCURACY.—Stage-discharge relation changed during high water in February. Rating curves well defined below 7,000 second-feet and fairly well defined between 7,000 and 15,000 second-feet. Gage read to half-inches twice daily to June 11 and three times a day from June 12 to September 30. Daily discharge ascertained by applying mean daily gage height to rating table. Records fair.

Discharge measurements of Pemigewasset River at Plymouth, N. H., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 25	3.93	3,620	Feb. 13	11.76	[b] 14,500	Mar. 31	6.52	6,510
Do	3.72	3,260	Do	9.78	[b] 11,800	June 12	1.25	432
Do	3.62	3,080	Mar. 31	7.31	7,860	June 26	1.10	359
Dec. 31	[a] 1.71	445	Do	7.10	7,410	Sept. 2	.92	271
Feb. 12	[a] 14.40	15,600	Do	6.71	6,900			

[a] Stage-discharge relation affected by ice. [b] Discharge affected by changing stage.

Daily discharge, in second-feet, of Pemigewasset River at Plymouth, N. H., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11,400	341	972	410	290	1,180	5,620	2,170	1,020	2,170	1,300	150
2	3,600	329	1,010	370	280	1,300	4,340	2,170	1,120	1,420	1,240	171
3	2,140	329	1,010	390	410	1,240	4,340	1,920	1,300	1,020	1,070	157
4	1,600	341	954	380	280	1,240	4,340	1,670	1,070	818	965	154
5	1,130	365	714	370	330	1,180	3,680	4,070	915	818	770	171
6	1,090	341	855	480	320	965	2,800	3,550	648	685	915	138
7	1,010	329	1,110	360	320	1,550	2,670	2,670	610	648	770	217
8	927	353	990	350	350	1,610	2,920	2,170	575	1,610	818	182
9	855	341	2,820	360	300	1,360	2,420	1,920	508	965	685	193
10	802	257	2,850	350	780	1,240	2,550	1,790	540	610	648	201
11	786	257	1,740	350	1,900	1,300	2,550	1,790	508	610	818	182
12	714	329	1,430	330	14,500	2,550	2,670	2,550	445	575	610	189
13	547	210	1,280	240	13,700	1,920	2,300	1,920	415	610	540	1,070
14	620	305	1,240	360	6,050	1,920	2,040	1,790	360	475	575	3,550
15	484	365	1,280	350	3,170	1,790	2,040	1,790	388	445	575	1,550
16	470	329	819	340	2,550	1,180	2,800	1,670	508	388	508	1,020
17	498	281	1,130	320	2,170	1,240	2,170	1,670	575	1,610	388	1,920
18	498	329	1,310	320	2,040	1,240	1,920	2,300	508	1,070	415	1,360
19	498	281	1,090	320	1,790	1,610	1,920	1,610	415	728	335	965
20	353	210	1,030	290	1,920	2,670	1,790	1,300	388	575	415	685
21	470	220	900	330	1,790	2,040	1,550	1,240	388	540	388	2,040
22	498	305	620	250	1,670	2,170	2,040	1,300	335	1,420	310	1,360
23	456	9,110	720	320	1,610	2,040	3,300	1,120	415	4,200	335	1,020
24	414	8,370	800	240	1,610	1,670	4,900	1,070	360	2,040	306	728
25	414	3,450	800	320	2,170	1,670	3,300	965	388	1,240	301	648
26	379	2,400	740	270	1,790	1,670	3,810	965	388	1,120	274	575
27	414	1,880	720	240	1,070	2,420	4,070	915	415	5,330	249	540
28	379	1,620	640	270	965	6,480	3,300	818	2,670	4,340	241	610
29	414	1,350	440	320	-------	16,500	2,420	770	3,940	3,680	274	865
30	393	1,220	450	300	-------	12,900	2,170	818	3,050	2,300	229	575
31	353	-------	460	250	-------	7,780	-------	1,120	-------	1,670	205	------

NOTE.—Stage-discharge relation affected by ice Dec. 21 to Feb. 11; discharge based on gage heights corrected for effect of ice by means of 1 discharge measurement, observer's notes, and weather records.

Monthly discharge of Pemigewasset River at Plymouth, N. H., for the year ending September 30, 1925

[Drainage area, 615 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	11,400	353	1,120	1.82	2.10
November	9,110	210	1,200	1.95	2.18
December	2,850	440	1,060	1.72	1.98
January	480	240	327	.532	.61
February	14,500	280	2,360	3.84	4.00
March	16,500	965	2,830	4.60	5.30
April	5,620	1,550	2,960	4.81	5.37
May	4,070	770	1,730	2.81	3.24
June	3,940	335	839	1.36	1.52
July	5,330	388	1,480	2.41	2.78
August	1,300	205	564	.917	1.06
September	3,550	138	773	1.26	1.41
The year	16,500	138	1,430	2.33	31.55

MERRIMACK RIVER AT FRANKLIN JUNCTION, N. H.

LOCATION.—450 feet above covered wooden bridge of Boston & Maine Railroad at Franklin Junction, Merrimack County, and 1 mile below confluence of Pemigewasset and Winnepesaukee Rivers.

DRAINAGE AREA.—1,460 square miles.

RECORDS AVAILABLE.—July 8, 1903, to September 30, 1925.

GAGE.—Water-stage recorder on right bank; installed September 12, 1923; inspected by M. E. Merrill and Albert B. Guay.

DISCHARGE MEASUREMENTS.—Made from railroad bridge.

CHANNEL AND CONTROL.—Composed of coarse gravel and boulders; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, approximately 22.8 feet at noon February 13 (discharge, by extension of rating curve, 37,400 second-feet); minimum stage, 3.32 feet at 5.45 p. m. September 6 (discharge, 586 second-feet).

1903–1925: Maximum stage recorded, 23.5 feet April 30, 1923 (discharge, by extension of rating curve, 41,000 second-feet); minimum discharge, by extension of rating curve, 250 second-feet October 4, 1903.

ICE.—Stage-discharge relation affected by ice for short periods during severe winters.

REGULATION.—Flow affected by storage in Winnepesaukee, Squam, and New Found Lakes and by operation of mills above station.

ACCURACY.—Stage-discharge relation permanent except when affected by ice. Rating curve well defined. Operation of water-stage recorder satisfactory. Daily discharge ascertained by use of discharge integrator, except for period indicated in footnote to daily-discharge table. Records excellent for open-water period; fair for winter period.

Discharge measurements of Merrimack River at Franklin Junction, N. H., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 24	11.76	13,200	Apr. 1	10.87	12,300	June 11	4.67	1,620
Feb. 11	*5.42	1,660	June 11	4.78	1,780			

*Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Merrimack River at Franklin Junction, N. H., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9,750	1,340	1,940	1,400	1,460	2,550	12,100	4,050	2,250	4,050	2,600	1,180
2	6,350	1,200	1,720	1,620	1,720	2,450	9,440	4,000	2,400	3,000	2,300	1,100
3	3,800	1,220	1,800	1,540	1,720	2,750	8,570	3,750	2,550	2,250	2,300	1,020
4	2,900	1,240	1,820	1,240	1,680	2,550	8,160	3,500	2,450	1,800	2,100	1,040
5	2,400	1,300	1,540	1,260	1,740	2,400	6,930	4,950	2,050	1,760	2,000	1,040
6	2,200	1,260	1,640	1,180	1,680	2,450	5,600	6,200	1,940	1,700	1,880	910
7	2,150	1,240	1,820	1,100	1,640	2,750	5,100	4,650	1,560	1,720	1,900	840
8	1,920	1,260	1,980	1,060	1,380	2,950	5,050	3,950	1,520	2,050	1,760	1,020
9	1,940	1,100	2,850	1,100	1,360	2,950	4,750	3,500	1,560	2,350	1,600	1,040
10	1,960	1,180	4,800	1,220	1,360	2,900	4,350	3,050	1,600	1,920	1,600	1,120
11	1,760	1,100	3,300	1,240	1,600	2,900	4,350	2,900	1,640	1,680	1,800	1,120
12	1,460	1,120	2,400	1,400	8,620	4,050	4,200	3,800	1,620	1,520	1,700	1,080
13	1,600	1,120	2,250	1,240	28,000	4,400	4,100	3,450	1,480	1,520	1,620	1,200
14	1,620	1,160	2,100	1,180	13,800	4,300	4,000	3,150	1,280	1,600	1,660	3,050
15	1,580	1,120	1,960	1,240	7,000	4,050	4,100	3,100	1,280	1,500	1,860	3,750
16	1,540	1,100	1,840	1,500	4,950	3,500	4,750	3,000	1,380	1,410	1,420	2,300
17	1,520	1,180	1,560	1,020	3,950	3,350	4,300	2,800	1,480	1,200	1,460	2,800
18	1,500	1,000	1,800	1,120	3,200	3,300	3,700	3,350	1,480	2,640	1,280	2,650
19	1,460	930	1,900	1,500	2,900	4,100	3,300	3,000	1,360	1,490	1,300	2,200
20	1,440	970	1,780	1,480	2,800	5,550	3,400	2,600	1,260	1,520	1,400	1,720
21	1,400	970	1,560	1,220	2,750	4,950	3,600	2,500	1,140	1,490	1,420	1,700
22	1,420	970	1,640	1,380	2,550	4,650	4,150	2,550	1,100	1,580	1,320	2,800
23	1,440	4,950	1,680	1,300	2,650	4,400	5,800	2,500	1,220	6,020	1,120	2,100
24	1,400	14,100	1,520	1,320	2,950	4,050	7,800	2,200	1,240	4,200	1,240	1,780
25	1,420	5,500	1,240	1,480	3,950	3,800	6,350	2,200	1,220	2,750	1,200	1,660
26	1,240	3,800	1,560	1,540	3,700	3,750	5,800	2,200	1,360	2,100	1,260	1,560
27	1,340	2,950	1,480	1,520	2,950	4,500	6,500	2,100	1,360	3,850	1,200	1,320
28	1,340	2,550	1,460	1,660	2,550	8,660	5,700	2,000	1,760	7,250	1,140	1,360
29	1,320	2,350	1,500	1,600	-------	25,700	4,750	1,920	5,800	5,250	1,140	1,680
30	1,300	2,050	1,340	1,780	-------	28,300	4,200	1,920	4,900	4,200	930	1,720
31	1,300	-------	1,380	1,580	-------	16,500	-------	1,940	-------	3,150	1,040	-------

NOTE.—Stage-discharge relation affected by ice Dec. 20 to Feb. 13; discharge determined from gage heights corrected for effect of ice on basis of 1 discharge measurement, observer's notes, and weather records. Daily discharge June 16–23 determined by applying mean of two daily gage height readings to rating table.

Monthly discharge of Merrimack River at Franklin Junction, N. H., for the year ending September 30, 1925

[Drainage area, 1,460 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	9,750	1,240	2,120	1.45	1.67
November	14,100	930	2,110	1.45	1.62
December	4,800	1,240	1,910	1.31	1.51
January	1,780	1,020	1,360	.932	1.07
February	28,000	1,360	4,160	2.85	2.97
March	28,300	2,400	5,660	3.88	4.47
April	12,100	3,300	5,500	3.77	4.21
May	6,200	1,920	3,120	2.14	2.47
June	5,800	1,100	1,840	1.26	1.41
July	7,250	1,200	2,600	1.78	2.05
August	2,600	930	1,570	1.08	1.24
September	3,750	840	1,660	1.14	1.27
The year	28,300	840	2,790	1.91	25.96

NOTE.—The monthly discharge in second-feet per square mile and the run-off in inches, shown by the table, do not represent the natural flow from the basin because of artificial storage.

MERRIMACK RIVER AT MANCHESTER, N. H.

LOCATION.—At dam of Amoskeag Manufacturing Co. in Manchester, Hillsborough County, 2 miles above junction with Piscataquog River and 9.5 miles below Suncook River.

DRAINAGE AREA.—2,840 square miles.

RECORDS AVAILABLE.—January 1, 1924, to September 30, 1925.

COMPUTATION OF DISCHARGE.—Accurate record is kept of discharge over the dam and through the various wheels and gates.

REGULATION.—Flow somewhat regulated by storage in Lake Winnepesaukee and other reservoirs; diurnal regulation by several power plants above.

COOPERATION.—Daily-discharge record furnished by Amoskeag Manufacturing Co.; reduced to three significant figures and rearranged for climatic year by engineers of the Geological Survey.

Daily discharge, in second-feet, of Merrimack River at Manchester, N. H., for the period January 1, 1924, to September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1924												
1				2,390	3,270	1,900	6,830	14,400	3,720	1,840	1,310	876
2				2,680	3,320	1,680	6,350	21,500	3,460	1,990	1,010	1,370
3				2,720	2,940	2,380	5,710	16,500	3,340	1,400	838	1,400
4				3,010	3,020	2,220	6,080	12,300	3,000	1,050	1,020	1,810
5				2,630	2,920	2,330	6,930	15,400	2,750	1,220	960	1,800
6				2,650	2,810	2,560	9,460	13,500	2,680	877	970	1,710
7				2,830	2,950	2,900	18,900	11,100	2,300	1,280	1,100	2,200
8				2,850	2,930	2,780	32,900	9,560	2,120	1,210	1,150	2,130
9				3,070	2,580	2,840	29,100	9,940	2,320	1,370	1,120	1,930
10				2,960	2,180	3,470	22,900	10,900	2,400	1,400	956	3,780
11				3,420	2,600	3,860	19,900	10,600	2,470	1,580	1,050	16,300
12				4,650	2,560	3,870	17,500	11,000	2,380	1,580	1,060	10,400
13				8,850	2,350	3,560	15,000	14,600	2,250	1,040	1,050	5,550
14				7,500	2,430	3,200	15,400	16,100	1,890	1,470	1,130	4,730
15				6,960	2,440	3,070	19,200	14,000	1,520	1,300	1,140	4,050
16				5,460	2,250	2,680	16,900	13,100	2,090	1,280	1,110	3,560
17				7,060	1,710	2,970	13,800	10,500	1,900	1,370	843	3,130
18				10,600	2,290	2,780	12,300	8,340	2,150	1,590	1,000	2,900
19				10,800	2,370	2,760	18,800	8,290	2,410	1,570	990	2,270
20				8,000	2,310	2,920	25,600	8,130	2,110	1,320	1,010	2,250
21				6,690	2,240	3,460	21,700	6,570	1,930	1,530	1,110	1,730
22				4,910	2,020	3,820	18,600	5,900	1,270	1,430	1,290	2,010
23				4,740	2,060	5,540	20,600	5,200	1,240	1,390	1,220	1,850
24				4,200	1,880	6,920	18,200	4,560	1,320	1,290	948	1,940
25				4,110	2,220	7,360	15,000	4,920	1,770	1,170	2,000	2,140
26				3,640	2,100	7,360	12,700	5,740	1,670	1,060	1,620	2,050
27				3,020	2,210	6,820	10,800	4,930	1,780	981	2,000	2,010
28				3,290	2,290	6,440	11,100	4,810	1,830	1,250	1,920	1,460
29				3,000	2,380	6,700	11,000	5,380	1,390	1,010	1,560	1,640
30				3,210		7,000	11,300	4,540	1,600	1,080	1,390	1,780
31				3,420		7,170		4,240		1,070	961	
1924-25												
1	5,880	928	2,140	1,350	1,130	4,550	25,300	6,350	3,220	5,350	3,650	1,030
2	9,180	718	2,150	1,500	1,100	4,000	19,000	6,050	3,060	3,800	2,490	1,280
3	4,960	747	2,130	1,480	1,150	4,200	17,100	5,930	3,610	2,400	2,620	1,220
4	3,110	864	2,030	1,180	1,180	4,150	15,300	5,940	3,610	1,810	2,340	1,110
5	2,450	1,320	2,080	1,200	1,180	4,010	12,600	6,420	3,030	1,990	2,280	919
6	2,290	1,390	2,080	1,140	1,230	4,630	8,690	8,210	2,470	2,230	2,080	831
7	2,260	1,370	1,800	1,140	1,280	4,560	8,920	7,490	2,350	1,680	2,100	914
8	2,130	1,290	2,330	1,250	1,050	5,110	8,520	6,340	2,560	2,220	1,900	1,040
9	2,090	798	3,120	1,270	1,230	6,230	7,660	5,620	1,760	2,550	1,800	937
10	2,040	1,250	6,710	1,500	1,460	6,280	7,230	4,790	1,950	2,330	2,060	927

Daily discharge, in second-feet, of Merrimack River at Manchester, N. H., for the period January 1, 1924, to September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1924-25												
11	1,720	1,160	5,520	1,220	1,910	6,670	6,870	4,640	2,160	2,280	1,820	1,250
12	2,330	1,210	3,220	1,160	5,840	8,840	6,280	4,510	2,100	1,540	2,070	1,090
13	1,380	1,260	2,980	1,200	20,700	8,890	6,780	4,710	2,010	1,940	1,980	1,010
14	1,730	1,410	3,360	1,180	21,900	9,700	6,850	4,350	1,480	1,870	1,970	2,030
15	1,720	1,640	2,130	1,090	13,600	10,900	7,100	3,960	1,940	1,570	1,850	3,790
16	1,740	876	2,050	1,140	9,320	10,100	7,870	4,110	1,780	1,640	1,590	2,930
17	1,670	1,310	1,990	1,340	7,300	8,960	7,920	4,040	1,730	1,350	2,040	2,530
18	1,550	1,130	1,980	844	6,880	8,500	6,420	4,060	1,780	1,930	1,730	3,010
19	1,230	938	2,470	996	5,610	10,300	5,710	4,060	2,030	1,800	1,210	2,430
20	1,660	1,080	2,240	1,170	5,010	13,500	6,370	3,620	1,680	1,760	1,400	1,680
21	1,510	1,120	1,560	1,120	4,790	12,800	6,430	3,510	1,200	1,770	1,480	1,930
22	1,590	1,050	1,740	1,070	4,340	11,700	7,440	3,180	1,670	1,780	1,590	2,290
23	1,540	2,020	1,680	1,160	4,400	11,400	9,870	3,550	1,620	4,720	1,210	2,640
24	1,570	16,000	1,520	1,050	5,410	9,860	13,600	3,310	1,360	5,330	1,470	1,980
25	1,280	8,740	1,490	1,040	6,080	8,800	11,600	3,090	1,770	3,360	1,010	2,100
26	1,040	4,300	1,510	1,120	6,510	8,430	9,270	2,690	1,560	2,190	1,130	1,530
27	1,530	3,720	1,470	1,160	5,520	8,660	9,950	2,920	1,350	2,970	1,340	1,010
28	1,460	2,910	1,320	1,160	4,680	11,900	9,080	2,950	1,450	7,310	1,520	1,640
29	1,440	2,840	1,340	1,220	-------	26,800	7,980	2,180	4,980	6,350	899	1,620
30	1,400	2,140	1,440	1,130	-------	42,000	6,990	2,090	6,160	5,620	1,040	1,670
31	1,350	-------	1,440	1,320	-------	34,200	-------	2,250	-------	4,570	1,080	-------

Monthly discharge of Merrimack River at Manchester, N. H., for the period January 1, 1924, to September 30, 1925

[Drainage area, 2,840 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
1924					
January	10,800	2,390	4,690	1.65	1.90
February	3,320	1,710	2,470	.870	.94
March	7,360	1,680	4,040	1.42	1.64
April	32,900	5,710	15,700	5.53	6.17
May	21,500	4,240	9,890	3.48	4.01
June	3,720	1,240	2,170	.764	.85
July	1,990	877	1,320	.465	.54
August	2,000	838	1,160	.408	.47
September	16,300	876	3,090	1.09	1.22
1924-25					
October	9,180	1,040	2,220	.782	.90
November	16,000	718	2,250	.792	.88
December	6,710	1,320	2,290	.806	.93
January	1,500	844	1,190	.419	.48
February	21,900	1,050	5,420	1.91	1.99
March	42,000	4,000	10,700	3.77	4.35
April	25,300	5,710	9,690	3.41	3.80
May	8,210	2,090	4,420	1.56	1.80
June	6,160	1,200	2,310	.813	.91
July	7,310	1,350	2,900	1.02	1.18
August	3,650	899	1,770	.623	.72
September	3,790	831	1,680	.592	.66
The year	42,000	718	3,890	1.37	18.60

NOTE.—The monthly discharge in second-feet per square mile and the run-off in inches, shown by the table, do not represent the natural flow from the basin because of artificial storage.

MERRIMACK RIVER AT LAWRENCE, MASS.

LOCATION.—At dam of Essex Co., in Lawrence, Essex County.

DRAINAGE AREA.—Total of Merrimack River Basin above Lawrence, 4,663 square miles; net drainage area, exclusive of diverted parts of Nashua and Sudbury Rivers and Lake Cochituate Basins, 4,452 square miles.

RECORDS AVAILABLE.—January 1, 1880, to September 30, 1925.

COMPUTATIONS OF DISCHARGE.—Accurate record is kept of the flow over the dam and through the various wheels and gates. This flow includes the water wasted into the Merrimack from the Nashua, Sudbury, and Cochituate drainage basins. Estimates of the quantity wasted from these basins is furnished by the Metropolitan Water and Sewerage Board of Boston, and subtracted from the quantity measured at Lawrence to obtain the net flow from the net drainage area of 4,452 square miles.

DIVERSIONS.—Practically the entire flow of the South Branch of Nashua River, Sudbury River, and Lake Cochituate is diverted for use by the Metropolitan water district of Boston.

REGULATION.—Flow regulated to some extent by storage in Lake Winnepesaukee and other storage reservoirs. The low-water flow of the stream is affected by operation of various power plants above Lawrence.

STORAGE.—There are several reservoirs in the basins. It is estimated that the water surface is about 3.5 per cent of entire drainage area.

COOPERATION.—The entire record has been furnished by R. A. Hale, chief engineer of the Essex Co.; rearranged in form for climatic year by engineers of the Geological Survey.

Daily discharge, in second-feet, of Merrimack River at Lawrence, Mass., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,054	1,108	3,629	344	519	7,387	39,162	9,422	4,865	4,728	4,245	1,865
2	7,318	252	2,780	2,654	2,109	9,131	30,001	8,659	5,105	4,149	3,482	1,852
3	7,406	2,014	2,335	1,618	2,051	8,606	23,881	8,274	4,621	3,032	3,281	1,821
4	4,374	2,227	2,850	292	2,048	8,391	19,891	8,888	4,900	1,682	3,258	1,674
5	3,569	2,096	2,726	2,324	2,070	7,936	17,334	7,748	4,698	1,465	2,988	851
6	4,307	1,896	1,781	2,504	2,049	8,810	16,315	8,710	3,837	2,932	2,780	263
7	3,101	1,683	1,792	2,118	1,425	11,439	13,240	9,969	3,576	2,681	2,571	522
8	3,149	941	4,244	1,921	599	11,631	11,535	8,447	4,240	2,469	1,704	1,699
9	2,996	163	4,087	1,839	2,810	12,411	10,816	7,541	4,092	2,487	1,134	1,732
10	2,543	2,001	5,314	1,122	2,928	11,290	10,381	5,997	3,224	2,312	3,372	1,767
11	1,606	1,915	7,608	377	3,215	10,576	9,684	6,710	3,040	1,617	3 398	1,579
12	2,041	1,978	5,820	2,333	7,182	11,310	9,412	5,673	2,773	1,144	2,951	786
13	1,211	2,090	4,525	2,029	17,200	14,719	9,746	5,928	1,706	2,489	2,708	671
14	3,424	1,893	3,919	1,978	29,276	15,187	9,204	6,616	651	2,613	2,550	2,277
15	2,820	1,256	5,005	1,869	25,355	16,754	9,800	6,059	3,363	2,598	1,735	3,139
16	2,518	316	3,269	1,919	19,865	17,654	10,361	5,610	3,182	2,597	970	4,707
17	2,472	1,926	3,118	1,194	16,585	15,345	10,811	5,631	2,876	2,456	2,693	3,548
18	1,670	2,024	3,324	382	13,277	14,047	10,324	6,253	2,861	1,178	2,853	2,553
19	582	1,907	2,910	2,181	10,435	15,490	9,192	5,746	2,715	212	2,712	1,762
20	2,434	1,888	2,053	2,108	9,549	19,712	9,065	5,734	1,685	2,591	2,665	2,040
21	2,469	1,739	2,298	1,867	7,632	20,494	10,310	5,448	738	2,909	2,437	3,302
22	2,541	1,027	3,791	1,853	7,912	17,694	10,706	3,715	2,720	2,706	1,693	3,010
23	2,368	295	3,098	1,916	8,199	17,126	13,030	4,345	3,025	2,969	776	2,800
24	2,231	6,124	2,720	1,264	9,494	15,030	15,876	4,097	2,921	5,494	1,626	2,693
25	1,332	11,901	855	207	13,620	13,204	16,621	4,340	2,827	5,517	2,489	2,606
26	474	7,134	2,973	1,543	11,341	12,216	14,386	4,749	2,460	3,807	2,388	1,633
27	2,029	3,924	1,904	1,789	8,001	11,612	13,550	4,314	1,626	4,732	2,127	544
28	2,338	3,482	1,089	1,774	7,726	12,585	12,776	3,946	805	5,141	1,914	2,200
29	2,302	2,409	2,736	1,735	--------	18,164	11,374	3,211	2,361	7,056	986	2,588
30	2,302	2,665	2,583	1,654	--------	41,692	9,996	3,334	5,312	6,357	182	2,536
31	2,083	--------	2,542	1,211	--------	49,737	--------	3,091	-------	5,296	1,528	------

Monthly discharge of Merrimack River at Lawrence, Mass., for the year ending September 30, 1925

Month	Mean discharge in second-feet				Run-off		Rainfall in inches
	Measured at Lawrence (total drainage area, 4,663 square miles)	Wasting into Merrimack from diverted drainage basins (211 square miles)	From net drainage area of 4,452 square miles	Per square mile of uet drainage area	Inches	Per cent of rainfall	
October	2,744	18	2,726	0.612	0.71	237	0.30
November	2,409	21	2,388	.536	.60	19.8	3.02
December	3,215	45	3,170	.712	.82	42.8	1.92
January	1,610	21	1,589	.357	.41	12.4	3.32
February	8,588	208	8,380	1.88	1.96	75.9	2.58
March	15,399	205	15,194	3.41	3.93	66.4	5.93
April	13,959	151	13,808	3.10	3.46	132	2.63
May	6,071	64	6,007	1.35	1.56	71.8	2.17
June	3,093	27	3,066	.689	.77	18.2	4.23
July	3,207	39	3,168	.712	.82	17.3	4.74
August	2,329	21	2,308	.518	.60	30.7	1.95
September	2,034	11	2,023	.454	.51	14.8	3.44
The year	5,360	69	5,293	1.19	16.15	44.6	36.23

NOTE.—The monthly discharge in second-feet per square mile and the run-off in inches, shown by the table, do not represent the natural flow from the basin because of artificial storage.

SMITH RIVER NEAR BRISTOL, N. H.

LOCATION.—At highway bridge in South Alexandria, 3 miles from Bristol, Grafton County.

DRAINAGE AREA.—78.5 square miles (measured on Walker map).

RECORDS AVAILABLE.—May 11, 1918, to September 30, 1925.

GAGE.—Vertical staff attached to downstream side of left abutment of highway bridge; read by Lillian R. Bucklin.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Channel rough and covered with boulders. Control ledge rock and boulders 130 feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 4.94 feet at 3.10 p. m. March 29 and at 8.15 a. m. March 30 (discharge, by extension of rating curve, 1,660 second-feet); minimum discharge, estimated 6.8 second-feet February 1 and 3 (stage-discharge relation affected by ice).

1918–1925: Maximum stage recorded, that of 1925; minimum discharge 3.5 second-feet August 3 and 16, 1924.

ICE.—Stage-discharge relation affected by ice.

REGULATION.—A few small mills above gage, but no serious effect from their operation. Several small lakes in the basin have little if any storage regulation.

ACCURACY.—Stage-discharge relation not permanent. Rating curves well defined below 900 second-feet. Gage read to hundredths twice daily except during ice period, December 29 to February 10, when it was read once daily. Daily discharge ascertained by applying mean daily gage height to rating table with corrections for effect of ice. Records during open-water period good; during ice period probably poor.

Discharge measurements of Smith River near Bristol, N. H., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Feb. 10	[a] 2.43	40.1	Apr. 2	2.98	654	June 12	0.84	33.6
Apr. 2	2.99	679	June 12	.84	32.4	Sept. 2	.58	10.1

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Smith River near Bristol, N. H., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	188	27	118	23	6.8	144	852	166	101	178	114	19
2	158	25	140	18	7.5	140	664	155	124	128	118	17
3	92	27	152	19	6.8	134	488	134	155	87	101	16
4	75	32	146	21	11	130	428	155	120	68	82	17
5	64	27	132	28	7.5	113	319	166	96	65	62	15
6	56	32	146	59	8.2	130	272	190	80	57	54	10
7	49	32	126	90	8.2	155	258	166	62	54	56	16
8	48	32	118	86	14	166	230	155	44	89	50	14
9	45	27	380	84	19	155	203	144	43	73	48	14
10	45	32	310	84	27	142	178	144	40	57	57	12
11	39	28	158	84	66	144	178	144	39	50	87	15
12	42	30	136	78	870	302	178	144	40	41	70	12
13	37	23	126	60	852	287	203	138	35	35	64	85
14	37	26	148	74	756	287	203	122	33	29	92	178
15	39	31	228	70	530	302	244	126	29	26	84	118
16	36	30	208	56	408	258	230	124	25	23	53	98
17	32	34	295	38	302	258	216	128	19	24	43	132
18	31	45	225	48	190	216	244	116	17	30	39	105
19	33	32	172	53	166	353	230	94	16	29	35	77
20	30	28	152	49	155	756	190	94	12	26	39	54
21	30	40	150	42	144	950	203	80	14	22	38	48
22	30	40	140	34	130	448	287	78	33	203	35	41
23	32	172	122	38	155	389	509	77	18	530	29	35
24	30	345	112	39	203	336	216	73	13	389	26	32
25	30	214	104	20	272	302	258	77	14	178	26	27
26	31	134	96	7.5	190	302	287	77	28	124	24	25
27	27	100	74	8.9	178	428	230	73	28	389	21	24
28	34	118	52	8.9	166	900	190	75	107	370	19	29
29	28	110	44	8.9	-------	1,640	166	73	287	336	20	27
30	28	93	34	8.9	-------	1,640	178	70	319	230	18	22
31	32	-----	30	8.2	-------	1,260	-------	85	-------	155	16	-----

NOTE.—Stage-discharge relation affected by ice Dec. 21 to Feb. 12. Daily discharge based on gage heights corrected for effect of ice on basis of 1 discharge measurement, observer's notes, and weather records.

Monthly discharge of Smith River near Bristol, N. H., for the year ending September 30, 1925

[Drainage area, 78.5 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	188	27	48.7	0.620	0.71
November	345	23	65.5	.834	.93
December	380	30	148	1.89	2.18
January	90	7.5	43.4	.553	.64
February	870	6.8	209	2.66	2.77
March	1,640	113	425	5.42	6.25
April	852	166	284	3.62	4.04
May	190	70	118	1.50	1.73
June	319	12	66.4	.846	.94
July	530	22	132	1.68	1.94
August	118	16	52.3	.666	.77
September	178	10	44.5	.567	.63
The year	1,640	6.8	136	1.73	23.52

NORTH BRANCH OF CONTOOCOOK RIVER NEAR ANTRIM, N. H.

LOCATION.—At village of North Branch, Hillsborough County, half a mile above stone-arch bridge, route No. 9, 4 miles northwest of Antrim, 5 miles southwest of Hillsborough, and 6 miles above confluence with Contoocook River.

DRAINAGE AREA.—59.5 square miles (from Hitchcock map).

RECORDS AVAILABLE.—August 30, 1924, to September 30, 1925.

GAGE.—Slope gage on right bank.

DISCHARGE MEASUREMENTS.—Made by wading or from stone-arch bridge below gage.

CHANNEL AND CONTROL.—Bed composed of silt, sand, and stones. Control of boulders 100 feet below gage; probably permanent. Banks subject to overflow at extremely high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period August 30, 1924, to September 30, 1925, 5.40 feet at 6.30 p. m. February 14 (discharge, 1,340 second-feet); minimum stage, 0.40 foot September 26 and 29 (discharge, 4 second-feet).

ICE.—Stage-discharge relation affected by ice.

REGULATION.—Operation of gates at Contoocook Pond in Stoddard affects stage at gage slightly. There are several small storage ponds between Contoocook Pond and gage but these do not affect flow.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve well defined below and poorly defined above 50 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table with corrections for effect of ice. Records fair.

Discharge measurements of North Branch of Contoocook River near Antrim, N. H., during the period August 30, 1924, to September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
1924	*Feet*	*Sec.-ft.*	1925	*Feet*	*Sec.-ft.*
Aug. 31	0.55	8.0	Feb. 19	3.18	293
Do	.55	7.8	Do	3.06	273
Sept. 3	.67	13.3	June 6	1.16	35.8
Do	.67	12.8	June 8	.94	26.0
Oct. 25	1.07	30.1	Do	.95	26.8
Do	1.07	31.7	Sept. 9	.59	10.7

Daily discharge, in second-feet, of North Branch of Contoocook River near Antrim, N. H., for the period August 30, 1924, to September 30, 1925

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1924			1924			1924		
1		8.2	11		33	21		7.0
2		13	12		21	22		8.2
3		13	13		17	23		8.6
4		12	14		16	24		7.8
5		13	15		17	25		7.0
6		16	16		13	26		5.2
7		17	17		12	27		4.9
8		14	18		9.4	28		4.9
9		13	19		8.6	29		4.6
10		27	20		7.8	30	9.0	5.2
						31	8.6	

Daily discharge, in second-feet, of North Branch of Contoocook River near Antrim, N. H., for the period August 30, 1924, to September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1924–25												
1	19	28	15	13	8.6	165	750	125	45	22	17	7.0
2	17	23	13	13	8.6	158	530	107	54	21	17	14
3	14	32	12	13	9.4	138	405	90	58	21	16	14
4	12	36	9.4	12	16	101	302	80	51	21	15	14
5	9.0	30	7.0	12	17	96	227	66	45	28	15	15
6	7.8	29	11	11	17	101	195	58	37	30	16	13
7	7.0	26	13	11	18	101	172	58	24	30	17	13
8	7.0	24	15	11	18	113	151	58	26	30	16	15
9	7.0	21	51	8.6	21	107	138	51	39	29	13	10
10	7.0	21	71	8.2	30	107	132	47	33	30	13	9.4
11	7.0	19	44	7.4	90	138	138	47	26	30	12	9.0
12	6.1	19	24	7.0	262	165	125	58	23	30	9.4	8.2
13	5.8	18	20	7.0	530	165	119	66	21	27	9.0	10
14	5.8	17	15	7.0	1,040	188	119	66	21	24	11	12
15	5.5	16	15	9.0	860	244	144	71	21	22	13	11
16	5.5	15	14	21	565	262	165	76	23	22	13	11
17	5.5	13	16	30	405	262	158	90	21	23	10	11
18	5.5	10	15	23	350	262	144	96	20	21	9.8	9.4
19	5.5	7.8	13	15	262	262	132	80	17	19	9.0	7.8
20	5.5	13	9.8	13	172	302	125	71	16	17	8.6	7.0
21	9.8	15	7.4	11	138	262	125	66	17	17	7.8	7.0
22	32	17	11	10	125	262	144	58	17	27	7.0	6.7
23	33	52	12	9.8	101	227	188	58	15	29	7.0	5.2
24	33	62	13	9.4	138	227	211	58	15	24	6.4	4.6
25	32	48	12	9.4	144	211	227	62	18	19	6.4	4.6
26	30	32	11	9.4	138	203	227	58	18	18	13	4.0
27	30	27	11	9.4	144	195	227	52	16	20	22	5.2
28	30	17	12	9.4	165	262	195	50	16	22	22	5.2
29	30	15	13	9.4	----	605	158	50	18	21	17	4.3
30	29	15	13	9.0	----	915	138	51	21	18	12	12
31	29	----	13	8.6	----	1,110	----	45	----	17	7.0	----

NOTE.—Stage-discharge relation affected by ice Jan. 15 to Feb. 13; discharge corrected for effect of ice by means of observer's notes and weather records.

Monthly discharge of North Branch of Contoocook River near Antrim, N. H., for the period August 30, 1924, to September 30, 1925

[Drainage area, 59.5 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
1924					
August 30–31	9.0	8.6	8.8	----	----
September	33	4.6	12.1	0.202	0.23
1924–25					
October	33	5.5	15.6	.262	.30
November	62	7.8	23.9	.402	.45
December	71	7.0	17.1	.287	.33
January	30	7.0	11.5	.193	.22
February	1,040	8.6	207	3.48	3.62
March	1,110	96	255	4.29	4.95
April	750	119	207	3.48	3.88
May	125	45	66.7	1.12	1.29
June	58	15	26.4	.444	.50
July	30	17	23.5	.395	.46
August	22	6.4	12.5	.210	.24
September	15	4.0	9.32	.157	.18
The year	1,110	4.0	72.0	1.21	16.42

NUBANUSIT BROOK NEAR PETERBORO, N. H.

LOCATION.—At highway bridge 1½ miles above Peterboro, Hillsborough County

DRAINAGE AREA.—54.3 square miles.

RECORDS AVAILABLE.—November 18, 1920, to September 30, 1925.

GAGE.—Water-stage recorder on left bank; inspected by F. E. Moore.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Control formed by boulders 75 feet below gage. Bed covered with small boulders; probably permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 4.60 feet at 8 a. m. March 31 (discharge, 550 second-feet); minimum stage, 1.59 feet from 2 a. m. to 2 p. m. July 4 (discharge, by extension of rating curve, 1.0 second-foot; water held back by dams).

1920–1925: Maximum stage recorded, 5.4 feet at noon March 10, 1921 (discharge, by extension of rating curve, 1,050 second-feet); minimum stage, 1.51 feet July 26 and 27, 1923 (discharge, 1.3 second-feet; water held back by dams).

ICE.—Stage-discharge relation seriously affected by ice.

REGULATION.—Distribution of flow affected by operation of mills at West Peterboro one-half mile upstream. There are several storage reservoirs on main stream and tributaries above gage.

ACCURACY.—Stage-discharge relation permanent except when affected by ice. Rating curve well defined between 2 and 500 second-feet. Operation of water-stage recorder satisfactory throughout year. Daily discharge ascertained by use of discharge integrator. Records good during open-water periods and fair during winter when affected by ice.

Discharge measurements of Nubanusit Brook near Peterboro, N. H., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 17	3.02	98	June 5	2.50	48.6	Sept. 9	2.95	85
Jan. 6	[a] 5.43	69	June 6	2.33	31.4	Sept. 10	1.72	2.4
Feb. 20	[a] 6.50	165	Do	2.28	27.6			

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Nubanusit Brook near Peterboro, N. H., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	3.5	59.0	36	11	66	385	87	63	44	18	47
2	45	2.9	49	40	61	245	285	102	59	28	2.9	41
3	49	5.4	46	36	72	250	220	91	49	4.1	47	47
4	26	3.8	20	11	18	255	164	92	18	1.1	47	26
5	4.7	47	6.2	32	59	250	124	83	17	1.1	31	2.9
6	50	53	8.2	40	66	230	124	80	33	1.2	14	2.0
7	50	47	5.0	38	36	215	98	67	23	6.6	2.3	4.4
8	47	2.3	46	38	12	148	102	71	24	7.8	2.0	30
9	48	2.3	62	36	83	120	81	52	20	7.8	2.3	47
10	49	43	58	22	68	126	98	47	26	5.4	38	46
11	26	49	55	3	84	144	96	79	30	6.6	47	45
12	4.7	47	49	38	172	240	74	67	32	1.6	38	16
13	11	14	26	42	340	230	94	74	22	47	30	2.6
14	51	2.3	20	46	230	210	91	45	22	43	19	15
15	49	2.0	91	52	156	285	104	61	51	46	7.8	43

Daily discharge, in second-feet, of Nubanusit Brook near Peterboro, N. H., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	44	2.0	106	63	168	255	106	63	45	28	2.9	46
17	45	45	87	32	148	170	100	60	46	27	12	46
18	26	57	48	4	126	148	94	71	18	14	3.5	44
19	9.8	53	49	52	116	205	91	62	13	2.6	33	22
20	47	16	25	63	108	265	98	62	4.1	34	46	1.9
21	46	2.3	19	66	99	215	90	34	1.1	34	45	49
22	47	4.4	73	59	89	186	110	43	45	31	18	48
23	32	13	108	61	89	170	160	45	44	26	2.3	42
24	3.2	53	110	29	94	140	186	45	45	23	43	43
25	3.8	55	5.0	.7	61	128	156	73	33	2.3	47	49
26	2.9	51	33	50	44	120	124	64	12	3.5	46	31
27	14	4.7	40	61	47	120	138	56	1.6	9.0	41	9.0
28	9.8	45	36	66	61	134	110	34	6.6	9.8	26	53
29	3.2	49	56	63	-------	275	88	49	41	44	2.3	48
30	2.6	6.6	61	59	-------	465	66	47	46	45	1.8	42
31	2.9	-------	61	40	-------	475	-------	34	-------	47	47	------

NOTE.—Stage-discharge relation affected by ice Dec. 15–17 and Dec. 22 to Mar. 8; discharge based on gage heights corrected for effect of ice on basis of 2 discharge measurements, observer's notes, and weather records.

Monthly discharge of Nubanusit Brook near Peterboro, N. H., for the year ending September 30, 1925

[Drainage area, 54.3 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	51	2.6	28.9	0.532	0.61
November	57	2.0	26.0	.479	.52
December	110	5.0	48.9	.901	1.04
January	66	3.0	41.5	.764	.88
February	340	11	97.1	1.79	1.86
March	475	66	209	3.85	4.44
April	385	66	129	2.38	2.66
May	102	34	62.6	1.15	1.33
June	63	1.1	29.7	.547	.61
July	47	1.1	20.4	.376	.43
August	47	1.8	24.6	.453	.52
September	53	1.9	33.0	.608	.68
The year	475	1.1	62.4	1.15	15.58

SUNCOOK RIVER AT NORTH CHICHESTER, N. H.

LOCATION.—100 feet below highway bridge, 500 feet from Chichester depot, North Chichester, Merrimack County, and 2½ miles above mouth of Little Suncook River.

DRAINAGE AREA.—157 square miles (measured on topographic maps).

RECORDS AVAILABLE.—May 21, 1918, to September 30, 1920; June 15, 1921, to September 30, 1925.

GAGE.—Water-stage recorder on left bank; inspected by Mrs. M. H. Gamage.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Bed covered with gravel and other alluvial deposits. Low-water control at head of rapids 150 feet below gage; at high water control is probably formed by crest of old dam near Epsom.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 9.97 feet at 4 a. m. March 30 (discharge, 2,780 second-feet); minimum stage, 0.74 foot at 8 a. m. November 17 (discharge, 1.4 second-feet).

1918–1925: Maximum stage recorded, 13.0 feet April 7, 1923 (discharge, by extension of rating curve, 4,300 second-feet); minimum stage, that of 1925.

ICE.—River is covered with ice for several months during winter.

REGULATION.—Storage has been developed at several points above Pittsfield. Mills at Pittsfield cause a large variation in discharge during days when mills are in operation.

ACCURACY.—Stage-discharge relation apparently permanent except when affected by ice. Rating curve well defined. Operation of water-stage recorder satisfactory except for periods noted in footnote to daily-discharge table. Daily discharge ascertained by use of discharge integrator or by applying mean daily gage height to rating table, with corrections for effect of ice. Records excellent.

Discharge measurements of Suncook River at North Chichester, N. H., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 30	°2.59	31.8	Feb. 9	°4.46	198
Do	°3.97	194	June. 9	2.67	250

° Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Suncook River at North Chichester, N. H., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	90	17	114	32	16	595	1,450	275	174	116	62	48
2	89	16	116	37	39	690	1,040	250	156	87	12	25
3	100	16	97	61	130	610	820	246	178	65	97	44
4	88	16	88	36	80	520	690	240	146	16	61	38
5	124	18	106	42	45	470	580	270	115	18	62	16
6	38	17	48	84	58	630	505	255	66	102	67	9.6
7	22	15	39	80	47	830	440	230	82	93	81	10
8	34	15	164	98	19	880	405	210	148	108	56	9.1
9	34	15	380	92	70	840	350	172	126	102	30	8.2
10	33	14	410	67	124	780	330	184	110	118	130	9.6
11	48	5.0	330	25	152	750	345	194	92	55	104	7.3
12	116	3.7	400	77	1,440	1,030	325	225	95	14	104	6.4
13	31	12	345	106	2,300	1,100	320	200	60	102	67	11
14	25	29	295	94	1,610	1,120	330	168	31	100	65	35
15	26	24	225	88	1,140	1,140	355	174	124	102	42	44
16	27	18	114	69	1,040	930	480	174	138	124	15	56
17	28	11	100	46	1,060	870	440	174	118	104	49	51
18	28	27	92	22	980	965	355	172	122	48	55	51
19	27	24	73	64	880	1,160	320	174	86	14	62	29
20	22	25	66	85	840	1,440	320	120	66	96	64	8.2
21	21	50	69	84	810	1,080	355	132	32	112	67	18
22	20	31	82	69	810	895	515	92	112	126	32	10
23	19	73	87	80	880	810	720	78	138	96	13	10
24	19	220	84	53	920	715	730	88	106	55	46	8.2
25	19	215	23	15	950	645	580	130	114	42	53	44
26	19	146	33	39	890	635	480	136	96	15	25	37
27	19	103	43	55	770	640	430	120	52	74	35	11
28	19	94	24	62	675	710	350	124	21	116	46	22
29	19	82	69	55	-------	1,880	310	116	98	108	34	24
30	18	88	104	45	-------	2,600	275	31	120	108	14	11
31	17	-------	76	30	-------	1,970	-------	109	-------	102	50	------

NOTE.—Stage-discharge relation affected by ice Dec. 14 to Feb. 11 and Mar. 3–16; discharge computed from gage heights corrected for effect of ice by means of 3 discharge measurements, observer's notes, and weather records. Record missing Dec. 2, 3, Jan. 17–30, and Feb. 5–7; discharge estimated by comparison with records in adjacent drainage basins.

Monthly discharge of Suncook River at North Chichester, N. H., for the year ending September 30, 1925

[Drainage area, 157 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	124	17	40.0	0.255	0.29
November	220	3.7	48.0	.306	.34
December	410	23	139	.885	1.02
January	106	15	61.0	.389	.45
February	2,300	16	671	4.27	.45
March	2,600	470	965	6.15	7.09
April	1,450	275	498	3.17	3.54
May	275	31	170	1.08	1.24
June	178	21	104	.662	.74
July	126	14	81.9	.522	.60
August	120	12	54.8	.349	.40
September	56	6.4	23.7	.151	.17
The year	2,600	3.7	235	1.50	20.33

SOUHEGAN RIVER AT MERRIMACK, N. H.

LOCATION.—At head of Atherton Falls, Merrimack, Hillsborough County, 1½ miles above confluence with Merrimack River and 7 miles below mouth of Beaver Brook.

DRAINAGE AREA.—168 square miles.

RECORDS AVAILABLE.—July 13, 1909, to September 30, 1925.

GAGES.—Water-stage recorder on left bank 350 feet above falls; installed October 15, 1913; inspected by employee of W. H. McElwain Co.

DISCHARGE MEASUREMENTS.—Made by wading below falls or from cable.

CHANNEL AND CONTROL.—Channel opposite gage is pool in which velocity is very slow. Control of this pool is rock ledge at head of Atherton Falls; permanent.

ICE.—Ice forms on control for short periods during some winters.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 6.23 feet from 10 a. m. to 1 p. m. March 30 (discharge, 2,050 second-feet); minimum discharge, 15 second-feet from 4 p. m. to midnight September 6.

1909–1925: Maximum stage recorded, 11.82 feet April 8, 1924 (discharge, by extension of rating curve, 7,120 second-feet); minimum discharge, 15 second-feet September 8, 1909, and several times during 1923, 1924, and 1925.

REGULATION.—Flow slightly affected by operation of mills at Milford 8 miles above.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Operation of water-stage recorder satisfactory except for periods noted in footnote to daily-discharge table. Daily discharge ascertained by applying mean daily gage height to rating table. Records excellent.

The following discharge measurments were made:

October 16, 1924: Gage height, 2.04 feet; discharge, 23.6 second-feet.

June 9, 1925: Gage height, 2.43 feet; discharge, 63 second-feet.

Daily discharge, in second-feet, of Souhegan River at Merrimack, N. H., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	22	43	33	26	256	1,140	359	142	92	110	2
2	45	25	40	32	26	295	830	367	158	94	90	2
3	48	20	38	31	27	288	665	299	150	72	100	2
4	43	21	43	30	27	267	565	284	145	52	100	2
5	39	23	46	28	27	250	483	292	125	46	84	2
6	37	21	46	26	26	355	456	267	104	42	88	1
7	32	20	64	25	26	665	402	236	64	43	84	2
8	26	20	96	27	27	802	359	216	72	37	80	2
9	27	21	195	26	29	720	323	207	57	37	58	4
10	24	20	327	28	33	637	295	185	58	35	51	5
11	29	22	195	26	55	637	335	192	74	32	64	4
12	25	22	122	22	57	1,100	307	267	70	29	62	4
13	25	30	122	22	1,170	830	323	242	62	26	78	3
14	22	31	86	22	1,300	890	371	201	57	29	78	3
15	23	29	85	22	950	1,360	384	210	52	33	74	8
16	25	29	85	22	748	775	483	228	44	32	62	6
17	18	22	84	22	692	590	371	204	48	40	54	6
18	22	22	88	22	637	665	323	204	68	33	70	6
19	37	24	90	23	501	980	288	185	62	30	74	7
20	23	23	78	24	388	1,430	388	155	57	20	64	3
21	25	18	44	25	335	830	411	142	42	21	51	3
22	21	22	35	25	319	637	665	130	43	29	33	5
23	21	44	32	25	402	560	920	125	37	388	31	3
24	25	185	36	25	665	447	748	108	37	201	22	5
25	25	138	46	24	692	416	520	135	41	128	25	5
26	24	86	38	24	506	442	483	198	72	82	25	4
27	20	74	43	24	347	416	438	182	80	264	24	3
28	24	55	35	24	359	442	359	150	70	351	25	2
29	25	46	35	24	-------	1,140	307	132	55	232	40	2
30	18	42	34	25	-------	2,030	299	128	92	182	28	2
31	20	-------	34	25	-------	1,680	-------	112	-------	145	22	------

NOTE.—Recorder not in operation Dec. 15, 16, Dec. 29 to Jan. 6, and Jan. 29 to Feb. 3; discharge estimated by comparison with records in adjacent drainage areas.

Monthly discharge of Souhegan River at Merrimack, N. H., for the year ending September 30, 1925

[Drainage area, 168 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	48	18	27.6	0.164	0.19
November	185	18	39.2	.233	.26
December	327	32	76.9	.458	.53
January	33	22	25.3	.151	.17
February	1,300	26	371	2.21	2.30
March	2,030	250	737	4.39	5.06
April	1,140	288	475	2.83	3.16
May	367	108	205	1.22	1.41
June	158	37	74.6	.444	.50
July	388	20	92.8	.552	.64
August	110	22	59.7	.355	.41
September	80	16	39.7	.236	.26
The year	2,030	16	184	1.10	14.89

SOUTH BRANCH OF NASHUA RIVER BASIN (WACHUSETT DRAINAGE BASIN) NEAR CLINTON, MASS.

LOCATION.—At Wachusett Dam, near Clinton, Worcester County.

DRAINAGE AREA.—119 square miles 1896 to 1907; 118.19 square miles 1908–1913; 108.84 square miles 1914–1925.

RECORDS AVAILABLE.—July, 1896, to September, 1925.

REGULATION.—Flow affected by storage in Wachusett Reservoir and other ponds. Beginning with 1897, the determinations of discharge have been corrected for gain or loss in the reservoir and ponds, so that the record shows approximately the natural flow of the stream.

The yield per square mile is the yield of the drainage area including the water surfaces. For the years 1896 to 1902, inclusive, the water surface amounted to 2.2 per cent of the total area; 1903, 2.4 per cent; 1904, 3.6 per cent; 1905, 4.1 per cent; 1906, 5.1 per cent; 1907, 6.0 per cent; 1908 and subsequent years, 7.0 per cent.

COOPERATION.—Record furnished by the water division of the Metropolitan district commission; rearranged in form of climatic year by engineers of the Geological Survey.

Yield and rainfall in South Branch of Nashua River Basin (Wachusett drainage area) near Clinton, Mass., for the year ending September 30, 1925

[Drainage area, 108.84 square miles]

Month	Total yield (million gallons)	Yield per square mile		Run-off		Rainfall in inches
		Million gallons per day	Second-feet	Inches	Per cent of rainfall	
October	215.4	0.064	0.099	0.114	122.5	0.09
November	900.3	.276	.427	.476	14.4	3.30
December	1,328.6	.394	.609	.702	34.6	2.03
January	1,064.5	.316	.488	.563	15.3	3.68
February	4,773.7	1.566	2.424	2.524	111.3	2.27
March	7,574.5	2.245	3.473	4.005	69.0	5.81
April	4,695.2	1.440	2.228	2.482	81.1	3.06
May	2,387.0	.708	1.095	1.262	58.8	2.14
June	1,293.4	.396	.613	.684	17.2	3.97
July	788.9	.234	.362	.417	10.6	3.95
August	655.8	.194	.301	.347	17.0	2.04
September	1,128.5	.345	.534	.596	14.0	4.26
The year	26,805.8	.675	1.044	14.171	38.72	36.60

SUDBURY RIVER AND LAKE COCHITUATE BASINS NEAR FRAMINGHAM AND COCHITUATE, MIDDLESEX COUNTY, MASS.

DRAINAGE AREA.—Area of Sudbury Basin from 1875 to 1878, inclusive, was 77.8 square miles; 1879–80, 78.2 square miles; 1881–1925, 75.2 square miles. Area of Cochituate Basin from 1863 to 1909, inclusive, was 18.87 square miles; 1910, 17.8 square miles; 1911 to 1925, 17.58 square miles.

RECORDS AVAILABLE.—Of Sudbury River, January, 1875, to September, 1925; of Lake Cochituate, January, 1863, to September, 1925. Records of rainfall have been kept in the Sudbury Basin since 1875 and in the Cochituate Basin since 1852, but the latter are considered of doubtful accuracy previous to 1872.

REGULATION.—The greater part of the flow from these basins is controlled by storage reservoirs operated by the Metropolitan Water and Sewerage Board. Lake Cochituate, which drains into Sudbury River a short distance below Framingham, is controlled as a storage reservoir for the Metropolitan waterworks system. In the Sudbury River Basin the water surfaces exposed to evaporation have been increased from time to time by the construction of additional storage reservoirs. From 1875 to 1878, inclusive, the water surface amounted to 1.9 per cent of the total area; from 1879 to 1884, to 3 per cent; 1885 to 1893, to 3.4 per cent; 1894 to 1897, to 3.9 per cent; 1898 and subsequent years, 6.5 per cent.

DETERMINATION OF DISCHARGE.—In determining the run-off of the Sudbury and Cochituate drainage areas the water diverted for the municipal supply of Framingham, Natick, and Westboro, which discharge their sewerage outside the basins, is taken into consideration; the results, however, are probably less accurate since the sewerage diversion works were constructed.

Water from the Wachusett drainage basin also passes into the reservoirs in the Sudbury Basin and must be measured to determine the yield of the Sudbury Basin; the small errors unavoidable in the measurement of large quantities of water decrease the accuracy of the determination of the Sudbury water supply during the months of low yield for years subsequent to 1897.

COOPERATION.—Records furnished by the water division of the Metropolitan District Commission; rearranged in the form of climatic year by engineers of the Geological Survey.

Yield and rainfall in Sudbury River Basin near Framingham, Mass., for the year ending September 30, 1925

[Drainage area, 75.2 square miles]

Month	Total yield (million gallons)	Yield per square mile		Run-off		Rainfall in inches
		Million gallons per day	Second-feet	Inches	Per cent of Rainfall	
October	15.0	0.006	0.010	0.011	10.0	0.11
November	373.8	.166	.256	.286	11.4	2.51
December	639.5	.274	.424	.489	28.4	1.73
January	429.4	.184	.285	.328	7.4	4.47
February	3,900.0	1.852	2.866	2.985	136.0	2.20
March	5,089.9	2.183	3.378	3.895	68.4	5.69
April	3,358.2	1.491	2.306	2.570	87.2	2.96
May	1,354.4	.581	.899	1.036	42.2	2.45
June	489.1	.217	.335	.374	7.9	4.75
July	588.2	.239	.370	.427	8.0	5.35
August	133.7	.057	.089	.102	8.2	1.25
September	89.1	.039	.061	.068	2.1	3.19
The year	16,460.3	.600	.928	12.597	34.37	36.65

Yield and rainfall in Lake Cochituate Basin near Cochituate, Mass., for the year ending September 30, 1925

[Drainage area, 17.58 square miles]

Month	Total yield (million gallons)	Yield per square mile		Run-off		Rainfall in inches
		Millions gallons per day	Second-feet	Inches	Per cent of rainfall	
October	34.6	0.063	0.098	0.11	125.9	0.09
November	105.9	.201	.311	.35	14.4	2.40
December	158.9	.292	.451	.52	29.6	1.76
January	161.8	.297	.459	.53	11.3	4.68
February	1,001.8	2.035	3.149	3.28	152.5	2.15
March	1,016.5	1.865	2.886	3.33	59.5	5.59
April	649.8	1.234	1.909	2.13	74.9	2.84
May	286.3	.525	.813	.94	39.9	2.35
June	132.4	.251	.388	.43	9.8	4.43
July	158.3	.291	.449	.52	11.9	4.37
August	104.9	.192	.298	.34	27.7	1.24
September	78.6	.149	.230	.26	3.4	3.05
The year	3,889.8	.607	.939	12.75	36.48	34.95

TAUNTON RIVER BASIN

TAUNTON RIVER AT TITICUT, NEAR BRIDGEWATER, MASS.

LOCATION.—At Summer Street Bridge on road between Bridgewater and Middleboro, Plymouth County, half a mile from Titicut railroad station and 1 mile above confluence with Namasket River.

DRAINAGE AREA.—185 square miles.

RECORDS AVAILABLE.—March 1, 1920, to September 30, 1925, when station was discontinued.

GAGES.—Vertical staff gage on left bank downstream side of highway bridge; installed November 11, 1924; chain gage on upstream side of highway bridge used March 2, 1920, to April 1, 1924. Gages read by Harold and Esther Pratt.

DISCHARGE MEASUREMENTS.—Made from upstream side of bridge.

CHANNEL AND CONTROL.—Channel deep, with hard bottom covered with rocks and gravel. River overflows banks at high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 9.10 feet at 4.15 p. m. February 13 (discharge, 1,410 second-feet); minimum discharge, 23 second-feet at 4 p. m. November 19 and 9 a. m. August 29.

1920–1925: Maximum stage of 15.5 feet occurred March 19, 1920 (determined from high-water marks; approximate discharge, by extension of rating curve, 5,150 second-feet); minimum discharge, 23 second-feet August 10 and November 19, 1924, and August 29, 1925.

ICE.—Stage-discharge relation occasionally affected by ice.

REGULATION.—Nearest dam above gage is at Paper Mill Village, near Bridgewater, where water power is used by a paper mill. Operation of this mill does not materially affect distribution of flow at gage.

ACCURACY.—Stage-discharge relation occasionally affected by backwater from dam at East Taunton. Rating curve for medium and high stages fairly well defined. Gage read to hundredths twice daily. Daily discharge ascertained by applying rating table to mean daily gage height. Records poor.

Discharge measurements of Taunton River at Titicut, near Bridgewater, Mass., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 7	1.35	39.6	July 16	2.61	48.8
Nov. 11	1.58	33.6	Do	2.57	45.9

Daily discharge, in second-feet, of Taunton River at Titicut, near Bridgewater, Mass., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	168	42	128	65	295	270	485	144	280	113	136	38
2	136	80	120	80	325	310	435	160	270	85	152	38
3	101	80	85	90	270	345	345	184	240	70	160	51
4	90	75	56	80	260	365	325	200	270	75	152	95
5	107	60	75	65	295	435	280	200	240	85	144	120
6	136	56	101	53	325	510	270	168	220	107	120	168
7	120	38	136	47	365	570	250	152	250	120	152	200
8	107	30	184	42	365	620	230	168	280	168	168	192
9	107	42	200	49	410	600	240	220	220	210	176	192
10	120	38	176	60	540	460	250	250	176	210	160	107
11	101	38	192	65	760	365	260	240	136	220	136	90
12	113	42	184	72	1,040	345	260	240	128	230	120	80
13	107	38	160	70	1,380	365	280	210	128	200	75	75
14	107	34	152	80	1,300	410	310	220	160	160	70	65
15	90	47	136	95	1,240	485	345	210	144	120	107	38
16	120	47	107	120	1,040	485	365	220	128	95	128	80
17	136	56	85	176	880	385	385	200	90	75	184	90
18	144	42	85	250	790	345	410	210	75	90	85	85
19	160	23	101	325	650	325	435	176	70	90	75	80
20	168	26	120	280	540	365	435	152	60	90	65	85
21	168	38	152	240	460	365	385	120	80	128	85	85
22	107	47	144	120	385	325	345	101	85	136	90	90
23	90	65	128	107	345	345	310	107	60	184	80	80
24	95	75	113	128	325	345	295	152	51	230	56	47
25	113	107	101	144	385	325	280	220	51	240	51	44
26	101	120	90	168	435	325	270	250	65	240	51	30
27	80	107	82	192	345	365	260	220	90	240	70	38
28	85	85	75	200	260	345	200	184	85	192	34	42
29	70	95	65	240	------	310	168	184	85	176	26	47
30	56	107	56	240	------	310	152	210	95	168	34	38
31	56	------	56	250	------	435	------	220	------	144	38	------

NOTE.—Stage-discharge relation affected by ice Dec. 21 to Jan. 18; discharge based on gage heights corrected for effect of ice.

Monthly discharge of Taunton River at Titicut, near Bridgewater, Mass., for the year ending September 30, 1925

[Drainage area, 185 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	168	56	112	0.605	0.70
November	120	23	59.3	.321	.36
December	200	56	118	.638	.74
January	325	42	135	.730	.84
February	1,380	260	572	3.09	3.22
March	620	270	392	2.12	2.44
April	485	152	309	1.67	1.86
May	250	101	190	1.03	1.19
June	280	51	144	.778	.87
July	240	70	151	.816	.94
August	184	26	103	.557	.64
September	200	30	83.7	.452	.50
The year	1,380	23	195	1.05	14.30

PROVIDENCE RIVER BASIN

BLACKSTONE RIVER AT WORCESTER, MASS.

LOCATION.—150 feet below highway bridge on Webster Street, Worcester, Worcester County, three-quarters of a mile above mouth of Tatnuck Brook, and 1 mile below Kettle Brook.

DRAINAGE AREA.—31.5 square miles, including 6.3 square miles from which water is diverted to water-supply system of Worcester (measured on topographic map).

RECORDS AVAILABLE.—August 14, 1923, to September 30, 1925.

GAGE.—Water-stage recorder on right bank; inspected by Mr. Merritt.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Channel smooth, subject to growth of aquatic vegetation during summer. Control for low stages at riffle 200 feet below gage; at high stages control is in vicinity of railroad bridge, half a mile below gage.

EXTREMES OF DISCHARGE.—Maximum discharge recorded, 450 second-feet at 10 a. m. February 12; minimum discharge, 2.2 second-feet at 10 a. m. August 5.

1924–1925: Maximum discharge recorded, 740 second-feet on April 7, 1924; minimum discharge, 2.2 second-feet October 13, 1924, and August 5, 1925.

ICE.—At times of very low temperature ice forms along banks of river; stage-discharge relation not affected.

REGULATION.—Operation of several storage reservoirs above gage affects distribution of flow; diurnal variation in stage is also caused by operation of of small mill 200 feet above gage.

DIVERSIONS.—Water is diverted from 6.3 square miles as a part of the water-supply system of Worcester. Occasionally water from this diverted area wastes back into the river.

ACCURACY.—Stage-discharge relation affected by aquatic vegetation during month of October. Two curves used during year. New curve used after October 30 well defined below and fairly well defined above 60 second-feet. Operation of water-stage recorder satisfactory. Water diverted into the water-supply system of Worcester is measured by Venturi meters. Table of daily discharge shows flow past the gage without correction for diversion. Monthly-discharge table shows mean monthly discharge as measured at gage and also as corrected for diversion. Records fair.

Discharge measurements of Blackstone River at Worcester, Mass., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 10	[a]0.79	10.0	June 17	0.63	10.8	Aug. 11	0.41	5.2
Dec. 4	.52	7.6	July 17	.64	10.2	Aug. 22	.50	7.7
Do	1.04	26.1	Do	[a]1.42	46.9	Sept. 22	.46	6.9
Do	.67	11.6	July 27	.62	10.1			
Jan. 12	.575	9.4	Do	[a]1.22	31.3			

[a] Stage-discharge relation affected by aquatic vegetation.

Daily discharge, in second-feet, of Blackstone River at Worcester, Mass., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	9.0	12	9.5	11	61	102	82	18	16	9.3	7.2
2	22	11	10	9.3	11	150	84	92	20	18	9.3	7.2
3	15	8.3	13	9.5	11	125	68	85	28	12	60	7.4
4	14	6.0	9.3	9.3	11	97	60	61	31	11	21	8.6
5	11	8.3	11	9.3	11	79	87	35	23	12	2.6	8.1
6	14	11	25	9.3	11	112	81	30	19	12	3.8	7.0
7	11	12	21	9.3	12	111	54	27	16	13	4.5	6.6
8	12	10	38	9.3	14	104	30	30	14	14	4.3	6.2
9	16	11	27	9.8	27	91	30	32	14	15	5.4	6.0
10	10	12	21	9.3	97	98	30	20	12	15	5.4	5.8
11	9.1	13	16	9.3	196	82	27	22	14	18	5.8	6.4
12	8.5	14	14	9.5	322	100	21	30	17	20	7.6	8.3
13	8.2	14	22	11	160	86	36	15	10	17	9.3	7.4
14	12	13	17	10	86	110	30	15	10	15	13	8.3
15	25	11	14	9.3	105	84	44	23	10	14	14	9.0
16	43	11	12	7.4	99	67	69	30	11	16	11	14
17	16	9.8	17	11	96	58	66	19	11	19	10	9.3
18	5.2	10	17	8.6	84	63	62	15	11	11	9.3	9.0
19	4.8	10	17	9.0	63	112	88	17	11	11	8.8	9.5
20	4.5	10	15	9.0	59	150	98	20	11	11	8.6	11
21	4.5	12	14	9.5	53	91	97	22	11	9.5	8.1	7.4
22	21	14	12	9.8	42	117	95	14	12	9.3	7.6	7.0
23	21	30	8.3	9.5	60	104	92	13	12	9.0	7.6	7.4
24	9.7	24	13	9.0	67	82	81	12	11	9.3	7.8	10
25	5.8	18	14	8.6	66	96	82	14	12	8.6	8.3	9.8
26	6.1	16	12	8.6	74	102	93	14	12	9.3	8.6	9.0
27	6.4	15	11	9.0	67	81	82	20	11	12	8.3	9.5
28	6.7	14	11	9.5	52	79	71	24	11	12	8.1	11
29	7.0	14	11	10	-------	96	67	23	12	11	7.4	11
30	31	14	11	17	-------	93	65	22	18	9.8	7.4	10
31	18	-------	9.5	13	-------	108	-------	22	-------	8.8	7.2	-------

NOTE.—Stage-discharge relation affected by aquatic vegetation at control Oct. 11–29; discharge determined by shifting-control method.

Monthly discharge of Blackstone River at Worcester, Mass., for the year ending September 30, 1925

[Drainage area, 31.5 square miles]

Month	Observed discharge in (second-feet)			Corrected mean discharge [a] (second-feet)
	Maximum	Minimum	Mean	
October	43	4.5	13.8	24.0
November	30	6.3	12.8	18.0
December	38	8.3	15.3	17.9
January	17	8.6	9.73	12.4
February	322	11	70.2	76.2
March	150	58	96.4	106
April	102	21	66.4	76.3
May	92	12	29.0	39.0
June	31	10	14.4	24.5
July	20	8.6	12.9	19.3
August	60	2.6	9.98	13.4
September	14	5.8	8.48	11.1
The year	322	2.6	29.7	36.3

[a] Corrected for diversion to water supply of Worcester but not corrected for storage.

PAWTUXET RIVER AT FISKVILLE, R. I.

LOCATION.—At an unused milldam in Fiskville, Providence County.

DRAINAGE AREA.—101.8 square miles includes a water area af 2.5 square miles and a swamp area of 2 square miles.

RECORDS AVAILABLE.—January 1, 1916, to September 30, 1925.

DETERMINATION OF DISCHARGE.—Discharge determined from records of stage obtained by Gurley water-stage recorder. The dam, which is about 140 feet long, has been rated by laboratory tests on a full-size model and by current-meter measurements made at bridge a short distance upstream. Rating curve well defined below 1,400 second-feet.

REGULATION.—Previous to April, 1919, there were four reservoirs in the basin having a capacity of 390 million cubic feet. From April, 1919, to July, 1925, there were five reservoirs with a total available capacity of 445 million cubic feet. From July 5 to November 10, 1925, all flow past the new Scituate Dam went through a 36-inch pipe causing temporary storage of storm flows above this dam. A few small mill ponds near Fiskeville hold back-water Saturday afternoons and Sundays when the storage of the river is low. Monthly discharge has been corrected for gain or loss in amount of water held in storage.

DIVERSIONS.—The Pawtuxet Valley Water Co. diverts part of the flow from 1.3 square miles just above Fiskeville, correction for which has been made.

COOPERATION.—Data collected and compiled under the direction of Frank E. Winsor, chief engineer, City of Providence Water Supply Board.

Daily discharge, in second-feet, of Pawtuxet River at Fiskville, R. I., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	119	29.0	78.5	17.0	205	169	328	147	170	112	49.4	43.0
2	88.2	38.3	65.1	40.4	222	375	272	121	148	130	57.0	37.6
3	99.7	31.8	29.2	32.4	207	356	238	141	146	144	110	30.8
4	91.1	35.1	29.9	20.0	178	276	209	169	142	68.0	83.4	36.7
5	86.7	34.4	42.5	40.7	157	243	193	131	96.9	34.9	69.3	35.0
6	122	34.3	33.5	43.0	151	388	184	133	70.9	110	67.1	13.2
7	102	31.1	69.4	32.2	146	458	165	126	55.7	53.2	62.5	31.5
8	86.3	26.6	101	32.3	284	434	154	115	135	89.9	50.8	79.8
9	6.0	34.4	84.1	35.4	320	359	146	60.6	98.7	72.7	51.3	43.5
10	41.0	35.0	94.2	36.0	434	283	136	97.5	94.1	74.7	81.0	39.7
11	43.2	26.4	101	19.4	561	208	140	155	93.1	51.1	57.8	42.7
12	71.3	74.3	42.2	37.0	1,000	180	183	162	93.7	46.7	50.3	18.5
13	122	37.8	39.5	39.0	1,170	201	203	193	47.2	113	49.3	2.7
14	70.2	29.5	28.9	54.0	640	247	209	173	24.3	59.8	56.8	46.2
15	66.7	26.9	109	36.6	444	271	298	158	139	65.1	47.4	35.2
16	11.7	5.4	69.0	42.4	444	241	416	111	97.7	44.4	57.6	53.7
17	15.8	26.4	52.4	93.4	405	227	333	134	95.5	37.0	55.1	62.8
18	50.8	30.2	47.4	96.3	359	255	260	151	99.7	41.3	44.2	61.9
19	35.1	24.0	53.6	97.1	318	331	228	128	92.3	2.7	48.8	39.0
20	51.9	23.1	41.3	70.1	307	506	327	101	50.0	43.8	57.0	12.7
21	33.5	17.8	7.7	58.5	275	407	335	89.6	3.9	36.0	63.6	66.9
22	27.8	16.1	63.0	63.9	205	317	266	87.7	116	28.1	39.0	42.6
23	31.0	52.7	53.4	78	176	266	232	57.4	94.7	54.7	29.8	38.5
24	29.0	133	41.8	73	157	227	204	58.9	92.1	61.7	105	29.1
25	29.3	92.7	18.7	40	161	210	180	174	94.1	29.1	62.9	24.7
26	30.9	68.6	104	62	158	204	186	192	96.3	13.5	47.2	27.7
27	45.4	7.2	43.4	62	136	193	192	182	45.9	93.1	51.5	4.6
28	33.2	75.3	11.5	60	157	176	178	161	32.9	85.8	46.8	60.7
29	44.0	31.6	76.5	90	-------	222	159	131	106	63.2	18.5	38.7
30	30.8	15.7	41.9	238	-------	285	148	61.5	125	68.3	2.7	40.7
31	36.7	-------	29.9	230	-------	357	-------	112	-------	64.4	58.7	------

Monthly discharge of Pawtuxet River at Fiskville, R. I., for the year ending September 30, 1925

[Drainage area, 101.8 square miles]

Month	Observed discharge (second-feet)			Gain or loss in storage (millions of cubic feet)	Discharge corrected for storage (second-feet)		Run-off in inches	Rainfall in inches
	Maximum	Minimum	Mean		Mean	Per square mile		
October	122	6.0	56.5	−35.4	43.3	0.425	0.49	0.21
November	133	5.4	38.2	+15.0	44.0	.432	.48	2.23
December	109	7.7	54.9	+81.6	85.4	.839	.97	2.38
January	238	17.0	63.6	+45.5	80.6	.792	.91	4.41
February	1,170	136	335	+52.9	357	3.50	3.65	2.22
March	506	169	286	+40.8	301	2.96	3.41	4.76
April	416	136	223	+1.6	224	2.20	2.46	2.85
May	193	57.4	129	−2.5	129	1.26	1.46	2.72
June	170	3.9	93.2	−118.0	47.7	.468	.52	2.36
July	144	2.7	64.3	−34.8	51.3	.504	.58	6.14
August	110	2.7	55.9	−57.0	346	.340	.39	1.70
September	80	2.7	38.0	−22.2	29.4	.289	.32	2.96
The year	1,170	2.7	118	−32.5	117	1.15	15.64	34.94

NOTE.—The rainfall was computed as a weighted mean of records obtained at Hopkins Mills, Rocky Hill, South Scituate, and Fiskville, using weights of 2, 2, 2, and 1, respectively.

THAMES RIVER BASIN

QUINEBAUG RIVER AT JEWETT CITY, CONN.

LOCATION.—At Jewett City, New London County, 1,000 feet below railroad bridge and 570 feet below outlet of canal from Slater Mills (mouth of Pachaug River).

DRAINAGE AREA.—712 square miles (measured on topographic maps).

RECORDS AVAILABLE.—July 17, 1918, to September 30, 1925.

GAGE.—Water-stage recorder on left bank; inspected by Theodore Davis.

DISCHARGE MEASUREMENTS.—Made from cable.

CHANNEL AND CONTROL.—Channel of gravel and alluvial deposits. Control for low stages is fairly well defined riffle a few hundred feet below gage; at high stages the control is at head of rapids 2½ miles below gage.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 12.84 feet at 7.45 a. m. February 13 (discharge, 6,820 second-feet); minimum stage, 3.54 feet at 6 a. m. November 10 (discharge, 38 second-feet; water held back by dams).

1918–1925: Maximum stage, approximately 16.3 feet during high water of March 14–19, 1920 (discharge, by extension of rating curve, 10,800 second-feet); minimum discharge, 30 second-feet August 23, 1919 (water held back by dams).

ICE.—Not affected by ice.

REGULATION.—Flow of Pachaug River, which drains 59.7 square miles and enters Quinebaug River through canal 570 feet above gage, is under almost complete regulation. Numerous small reservoirs and power developments on the main river and tributaries above station also affect distribution of flow. Operation of mills at Jewett City causes a large variation in discharge.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined between 200 and 6,000 second-feet. Operation of water-stage recorder satisfactory except for periods indicated in footnote to daily-discharge table.

Daily discharge ascertained by use of discharge integrator. Records excellent.

No discharge measurements made during the year. Rating curve was verified by one discharge measurement made in October, 1925.

Daily discharge, in second-feet, of Quinebaug River at Jewett City, Conn., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	470	60	495	80	355	685	1,930	1,050	890	490	540	255
2	430	44	450	435	625	2,280	1,790	890	930	530	730	280
3	495	330	470	110	690	3,180	1,620	625	1,040	485	860	305
4	355	315	460	66	540	2,430	1,300	1,030	825	188	755	290
5	205	335	450	520	485	1,980	975	1,050	715	168	620	77
6	410	295	255	540	410	1,930	1,240	895	560	530	590	78
7	440	60	360	480	220	1,970	1,250	895	345	575	575	76
8	445	55	630	475	270	1,530	1,120	830	585	580	495	465
9	400	41	780	460	575	1,760	980	670	630	720	365	515
10	360	345	720	112	1,010	1,680	880	420	555	555	575	555
11	180	55	610	46	1,740	1,430	830	860	510	340	650	530
12	155	360	570	355	4,750	1,480	805	1,140	470	176	670	220
13	350	340	450	370	6,150	1,520	1,240	1,060	370	470	580	166
14	370	280	340	275	3,720	1,400	1,230	950	59	455	585	445
15	355	53	500	255	2,420	1,250	1,390	935	465	410	600	435
16	360	46	480	230	2,480	1,620	1,840	825	505	420	425	520
17	380	315	445	196	2,170	1,570	1,700	675	535	400	520	475
18	145	245	455	54	1,810	1,600	1,420	925	495	190	590	540
19	53	280	485	355	1,500	1,920	1,050	895	435	120	530	290
20	405	260	375	375	1,280	3,030	1,680	810	290	390	440	126
21	335	275	255	385	1,030	2,710	1,840	755	166	395	325	440
22	340	150	550	370	765	2,020	1,740	745	460	390	275	465
23	320	51	475	385	1,180	2,090	1,610	530	490	580	150	455
24	75	610	405	220	1,360	1,770	1,390	565	515	600	425	410
25	60	880	80	136	1,300	1,610	1,140	1,060	465	365	390	415
26	47	660	420	360	1,330	1,570	885	1,280	485	220	395	215
27	310	365	245	345	1,290	1,520	1,250	1,090	340	875	450	49
28	325	510	220	550	840	1,340	1,260	1,050	150	1,120	425	390
29	305	370	540	380	------	1,160	1,000	850	380	940	194	480
30	340	200	450	360	------	1,780	930	610	585	750	46	450
31	330	------	425	470	------	2,000	------	505	------	570	295	------

Monthly discharge of Quinebaug River at Jewett City, Conn., for the year ending September 30, 1925

[Drainage area, 712 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	495	47	308	0.433	0.50
November	880	41	273	.384	.43
December	780	80	447	.628	.72
January	550	46	315	.442	.51
February	6,150	220	1,510	2.12	2.21
March	3,180	685	1,800	2.53	2.92
April	1,930	805	1,310	1.84	2.05
May	1,280	420	854	1.20	1.38
June	1,040	59	508	.714	.80
July	1,120	120	484	.680	.78
August	860	46	486	.683	.79
September	555	49	347	.487	.54
The year	6,150	41	715	1.00	13.63

CONNECTICUT RIVER BASIN

SECOND CONNECTICUT LAKE NEAR PITTSBURG, N. H.

LOCATION.—At dam of Upper Connecticut River & Lake Improvement Co., at outlet of second Lake, 12 miles northeast of Pittsburg, Coos County.

DRAINAGE AREA.—41.5 square miles (reported by engineers of Upper Connecticut River & Lake Improvement Co.).

RECORDS AVAILABLE.—October 1, 1922, to September 30, 1925.

GAGE.—Vertical staff on cribwork of dam.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 13.15 feet October 2 and 3 (water stored, 830 million cubic feet); minimum stage, 1.1 feet January 22 to February 11 (water stored, 48.7 million cubic feet).

1922–1925: Maximum stage recorded, 15.8 feet on September 11, 1924 (water stored, 1,045 million cubic feet); minimum stage recorded, 0.7 foot February 1 to March 19, 1923 (water stored, 30.3 million cubic feet).

REGULATION.—Capacity of lake is 979 million cubic feet at gage height 15 feet. Records show fluctuations in level of lake and are used in making corrections for effect of storage to observed records of flow of Connecticut River.

Daily gage height, in feet, of Second Connecticut Lake near Pittsburg, N. H., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13.0	12.8	5.8	1.6	1.1	2.4	6.4	11.55	12.1	11.2	11.85	11.75
2	13.15	12.75	5.4	1.6	1.1	2.3	6.3	12.0	12.25	11.1	11.9	11.7
3	13.15	12.75	5.0	1.6	1.1	2.2	6.1	12.2	12.35	11.0	12.0	11.7
4	13.1	12.7	4.6	1.6	1.1	2.1	5.9	12.2	12.1	11.05	12.05	11.65
5	13.1	12.7	4.3	1.5	1.1	2.0	5.7	12.25	11.85	11.15	12.05	11.65
6	13.05	12.7	4.0	1.5	1.1	1.9	5.5	12.4	11.6	11.2	12.1	11.6
7	13.0	12.65	3.8	1.5	1.1	1.9	5.3	12.0	11.55	11.25	12.1	11.55
8	13.0	12.65	3.6	1.5	1.1	1.9	5.2	11.65	11.6	11.35	12.1	11.55
9	13.0	12.65	3.5	1.5	1.1	1.8	5.0	11.25	11.55	11.4	12.1	11.55
10	12.95	12.65	3.8	1.5	1.1	1.8	4.9	11.1	11.6	11.45	12.1	11.55
11	12.95	12.6	3.8	1.4	1.1	1.8	4.8	11.1	11.65	11.5	12.1	11.6
12	12.9	11.35	3.7	1.4	1.3	1.7	4.8	11.2	11.55	11.5	12.1	11.65
13	12.85	11.35	3.5	1.3	2.3	1.6	4.7	11.2	11.45	11.55	12.1	11.7
14	12.8	10.75	3.4	1.3	3.3	1.6	4.6	11.2	11.3	11.6	12.1	12.0
15	12.8	10.25	3.4	1.2	3.6	1.5	4.55	11.15	11.2	11.6	12.1	12.25
16	12.8	9.65	3.3	1.2	3.7	1.5	4.75	11.1	11.25	11.6	12.1	12.3
17	12.8	9.05	3.0	1.2	3.7	1.5	4.9	11.1	11.55	11.65	12.1	11.65
18	12.75	8.55	2.9	1.2	3.6	1.4	4.8	11.1	11.75	11.7	12.1	11.4
19	12.75	8.1	2.7	1.2	3.5	1.3	4.7	11.05	11.95	11.7	12.05	11.5
20	12.75	7.8	2.6	1.2	3.3	1.3	4.55	11.05	12.1	11.7	12.0	11.6
21	12.75	7.7	2.5	1.2	3.0	1.3	4.45	11.0	11.95	11.7	12.0	12.75
22	12.75	6.9	2.3	1.1	2.8	1.3	4.35	10.8	11.9	11.7	12.0	12.5
23	12.75	6.7	2.2	1.1	2.7	1.3	4.3	11.0	11.75	11.7	11.95	11.9
24	12.75	9.65	2.1	1.1	2.6	1.2	4.95	11.2	11.6	11.7	11.9	11.35
25	12.75	9.5	2.1	1.1	2.6	1.2	5.7	11.35	11.5	11.7	11.9	10.8
26	12.8	8.85	2.0	1.1	2.6	1.2	6.95	11.45	11.4	11.7	11.9	10.9
27	12.85	8.1	1.9	1.1	2.5	1.2	8.6	11.6	11.3	11.8	11.85	11.0
28	12.85	7.4	1.8	1.1	2.5	1.4	9.8	11.7	11.2	11.8	11.85	11.25
29	12.85	6.8	1.8	1.1	------	2.8	11.1	11.8	11.3	11.8	11.8	11.65
30	12.8	6.3	1.8	1.1	------	5.2	11.1	11.85	11.3	11.8	11.75	11.8
31	12.8	------	1.7	1.1	------	6.2	------	11.95	------	11.8	11.75	------

FIRST CONNECTICUT LAKE NEAR PITTSBURG, N. H.

LOCATION.—At dam of Upper Connecticut River & Lake Improvement Co., at outlet of First Lake, 6 miles northeast of Pittsburg, Coos County.

DRAINAGE AREA.—81.4 square miles (from survey by Connecticut Valley Lumber Co.).

RECORDS AVAILABLE.—October 1, 1916, to September 30, 1925.

GAGES.—Four staffs, one near each outlet gate, all to same datum which is 0.9 foot above sill of lowest outlet gate.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 22.5 feet several days in July (water stored, 2,434 million cubic feet[4]); minimum stage, 3.5 feet February 11 (water stored, 373.8 million cubic feet[4]).

1917–1925: Maximum stage recorded, 24.5 feet May 20, 1924 (water stored, 2,690 million cubic feet[4]); minimum stage, 2.1 feet February 17, 1917, and May 6, 7, 1922 (water stored, 252.5 million cubic feet[4]).

REGULATION.—During summer of 1924, the dam at outlet of First Connecticut Lake was raised to give a total capacity of 3,010 million cubic feet at gage height 27 feet. The dam is controlled by three gates, the sills of the gates varying from −0.9 to 14.4 feet on the gage. Records show fluctuations in level of lake and are used in making corrections for effect of storage to observed records of flow of Connecticut River. Additional storage has been developed in Second Lake and on tributary streams.

Daily gage height, in feet, of First Connecticut Lake near Pittsburg, N. H., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20.9	13.3	13.8	16.15	4.7	7.3	12.1	19.1	18.0	22.25	22.1	19.4
2	20.95	12.9	14.05	15.85	4.6	7.4	12.55	18.8	18.05	22.35	22.1	19.05
3	21.0	12.5	14.25	15.4	4.5	7.5	12.95	18.7	18.1	22.45	22.1	18.7
4	21.05	12.1	14.45	15.15	4.25	7.65	13.4	18.75	18.3	22.45	22.05	18.35
5	20.9	11.75	14.65	14.75	4.1	7.8	13.8	18.7	18.45	22.5	22.05	18.0
6	20.65	11.35	14.8	14.35	4.0	7.95	14.1	18.9	18.6	22.5	22.05	17.65
7	20.55	10.95	15.0	13.95	3.8	8.05	14.4	19.3	18.9	22.5	22.0	17.3
8	20.6	10.5	15.25	13.65	3.7	8.15	14.7	19.65	19.15	22.5	22.0	16.95
9	20.6	10.1	15.3	13.25	3.6	8.25	15.0	19.9	19.35	22.5	22.0	16.55
10	20.4	9.7	15.5	12.8	3.55	8.35	15.3	19.6	19.65	22.5	21.95	16.2
11	20.05	9.3	15.7	12.4	3.5	8.4	15.6	19.45	19.85	22.45	21.95	15.9
12	19.8	9.4	15.8	12.0	3.6	8.45	15.9	19.2	20.05	22.45	21.95	15.65
13	19.65	9.3	15.9	11.6	4.15	8.45	16.15	18.85	20.2	22.45	21.9	15.3
14	19.6	9.3	16.05	11.25	4.5	8.5	16.4	18.5	20.35	22.4	21.9	15.3
15	19.6	9.2	16.15	10.85	4.75	8.6	16.65	18.2	20.45	22.4	21.9	15.35
16	19.25	9.15	16.3	10.4	5.0	8.7	17.0	18.0	20.55	22.35	21.85	15.4
17	18.9	9.1	16.4	10.0	5.25	8.8	17.3	17.7	20.6	22.4	21.8	15.75
18	18.5	9.0	16.5	9.6	5.45	8.9	17.5	17.45	20.6	22.4	21.75	15.9
19	18.25	8.85	16.55	9.1	5.65	9.05	17.7	17.45	20.65	22.35	21.75	15.9
20	17.9	8.65	16.6	8.7	5.85	9.1	17.95	17.5	22.7	22.3	21.7	16.0
21	17.55	8.45	16.65	8.25	5.95	9.15	18.15	17.6	20.85	22.3	21.7	16.5
22	17.15	8.50	16.7	7.85	6.15	9.2	18.55	17.75	21.0	22.25	21.65	17.1
23	16.75	8.95	16.8	7.4	6.35	9.25	18.35	17.8	21.15	22.25	21.55	17.6
24	16.4	10.5	16.85	6.95	6.55	9.3	18.65	17.8	21.3	22.2	21.45	17.95
25	16.05	11.15	16.9	6.55	6.7	9.3	18.85	17.8	21.4	22.2	21.4	18.25
26	15.7	11.75	16.95	6.2	6.9	9.35	18.95	17.85	21.55	22.15	21.35	18.3
27	15.3	12.25	17.0	5.95	7.05	9.4	19.1	17.9	21.65	22.2	21.05	18.35
28	14.9	12.75	17.0	5.6	7.2	9.65	19.25	17.9	21.8	22.2	20.7	18.4
29	14.55	13.15	17.05	5.35	-------	10.15	19.4	17.9	22.0	22.15	20.35	18.5
30	14.15	13.50	16.8	5.05	-------	10.95	19.3	17.9	22.15	22.15	20.0	18.55
31	13.75	-------	16.5	4.8	-------	11.5	-------	17.95	-------	22.1	19.65	-----

CONNECTICUT RIVER AT FIRST CONNECTICUT LAKE, NEAR PITTSBURG, N. H.

LOCATION.—At outlet of First Connecticut Lake, 6 miles northeast of Pittsburg, Coos County.

DRAINAGE AREA.—81.4 square miles (from surveys by engineers of Connecticut Valley Lumber Co.).

RECORDS AVAILABLE.—April 1, 1917, to September 30, 1925.

GAGE.—Water-stage recorder on right bank one-fourth mile below outlet dam; inspected by H. H. Young.

DISCHARGE MEASUREMENTS.—Made from cable 200 feet above gage or by wading.

[4] Does not include water stored in Second Lake or tributaries.

CHANNEL AND CONTROL.—Bed rough, with rock bottom. Channel at cable section has been improved by removal of rocks and ledges. Control for river gage is rock ledge extending completely across stream; about 3 feet of fall immediately below ledge.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 6.35 feet at 11.30 a. m. May 5 (discharge, about 3,870 second-feet; water being released from storage); minimum discharge, 6 second-feet from 10 p. m. February 13 to 8 a. m. February 14 (gates closed at dam).

1917–1925: Maximum discharge recorded, that of 1925; minimum discharge, 3 second-feet during several days in April, 1917 (gates closed at dam).

ICE.—During extremely cold weather, when stage of river is low, ice occasionally forms on rocks at control for a few hours each day. Gage heights corrected by comparison of recorder graph with records of gate openings at dam.

REGULATION.—About 4,100 million cubic feet of storage has been developed in lakes and ponds above gage; records of monthly discharge have been corrected for effect of storage in First Lake since April, 1917, and for effect of storage in Second Lake since October, 1919.

ACCURACY.—Stage-discharge relation probably permanent except when affected by ice. Rating curve well defined below 800 second-feet. Operation of water-stage recorder satisfactory throughout year. Daily discharge ascertained by applying mean daily gage height to rating table and for days when variations occurred from opening and closing gates at dam by applying gage heights for fractional parts of days to rating table and computing weighted mean discharge for 24 hours. Records good.

No discharge measurements were made at this station during year.

Daily discharge, in second-feet, of Connecticut River at First Connecticut Lake, near Pittsburg, N. H., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	591	24	505	267	10	16	1,220	35	69	74	554
2	62	598	26	533	245	10	17	1,130	35	69	74	554
3	62	591	26	540	232	10	18	998	35	71	74	554
4	181	569	27	561	210	10	20	783	35	74	74	554
5	439	569	29	554	193	9	24	881	36	74	74	554
6	360	561	29	554	184	9	24	101	38	74	74	554
7	65	561	29	561	168	9	26	101	43	74	74	554
8	65	561	29	554	172	9	27	107	43	74	74	554
9	200	576	30	554	160	9	29	1,400	43	74	71	554
10	485	576	30	561	149	9	30	1,130	43	74	74	561
11	485	478	30	547	101	9	32	521	43	74	74	554
12	342	576	32	547	7	10	35	748	43	74	74	554
13	101	554	33	554	6	10	35	765	43	74	74	448
14	86	519	36	547	6	10	36	732	48	74	74	41
15	399	465	36	547	7	10	39	607	48	74	74	41
16	554	393	36	540	7	12	41	625	50	74	76	41
17	554	387	36	576	6	12	41	636	50	74	76	41
18	561	412	36	561	7	12	43	441	50	74	76	41
19	576	445	36	561	7	11	45	165	52	74	76	43
20	576	438	36	554	8	11	45	35	52	74	76	43
21	576	365	38	554	8	12	45	35	54	74	76	43
22	561	322	38	547	7	11	45	35	54	74	152	43
23	561	174	38	540	7	14	47	35	56	74	177	45
24	569	18	38	519	7	49	47	35	56	74	131	48
25	576	19	36	485	7	69	48	35	58	74	109	50
26	591	20	36	445	7	14	48	35	60	74	302	50
27	591	21	36	406	9	14	50	35	62	74	565	52
28	583	22	52	362	9	14	52	35	65	74	540	52
29	591	23	216	328	-------	19	90	35	67	74	561	52
30	591	23	519	302	-------	15	407	35	67	74	554	52
31	583	-------	512	287	-------	15	-------	35	-------	74	554	------

NOTE.—Stage-discharge relation slightly affected by ice Feb. 19 and Feb. 26 to Mar. 2; discharge based on gage heights corrected by comparison of recorder graph with records of gate openings at dam.

Monthly discharge of Connecticut River at First Connecticut Lake, near Pittsburg, N. H., for the year ending September 30, 1925

[Drainage area, 81.4 square miles]

Month	Observed discharge (second-feet)			Gain or loss in storage at First and Second Connecticut Lakes (millions of cubic-feet)	Discharge corrected for storage (second-feet)		Run-off in inches
	Maximum	Minimum	Mean		Mean	Per square mile	
October	591	62	406	−850.0	89	1.09	1.26
November	598	18	381	−488.6	193	2.37	2.64
December	519	24	70.5	+83.4	102	1.25	1.44
January	576	287	509	−1,243.0	45	.553	.64
February	267	6	78.7	+292.6	200	2.46	2.56
March	69	9	14.4	+646.5	255	3.13	3.61
April	407	16	50.1	+1,228.6	524	6.44	7.18
May	1,400	35	436	−97.0	400	4.91	5.66
June	67	35	48.8	+464.7	228	2.80	3.12
July	74	69	73.6	+32.2	86	1.06	1.22
August	565	71	168	−307.3	53	.651	.75
September	561	41	263	−129.7	213	2.62	2.92
The year	1,400	6	210	−367.6	198	2.43	33.00

CONNECTICUT RIVER AT SOUTH NEWBURY, VT.

LOCATION.—At covered highway bridge between South Newbury, Orleans County, Vt., and Haverhill, Grafton County, N. H., half a mile below Oliverian Brook and 4 miles above mouth of Waits River.

DRAINAGE AREA.—2,830 square miles.

RECORDS AVAILABLE.—July 22, 1918, to December 20, 1921, and August 19, 1922, to September 30, 1925.

GAGE.—Chain gage on downstream side of bridge; datum is 8.8 feet higher than datum of gage at Orford. Gage read by MRS. M. W. Dickey.

DISCHARGE MEASUREMENTS.—Made from bridge and from cable 300 feet above bridge.

CHANNEL AND CONTROL.—Channel wide and deep, with gravelly bottom. Control not clearly defined, except that several distinct riffles appear between South Newbury and Orford.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 24.03 feet at 10 a. m. March 30 (discharge, 32,300 second-feet); minimum stage, 0.52 foot at 6 p. m. August 26 (discharge, 550 second-feet).

1918–1925: Maximum stage recorded, 30.65 feet May 1, 1923 (discharge, about 43,600 second-feet); minimum stage, 0.30 foot September 24, 1921 (discharge, 460 second-feet).

ICE.—Stage-discharge relation affected by ice, usually from December to March; ice cover generally remains in place throughout winter.

REGULATION.—About 4,100 million cubic feet of storage has been developed at First and Second Connecticut Lakes and tributary streams above Pittsburg. There are several power developments above station, but the operation of these mills does not seriously affect distribution of flow.

ACCURACY.—Stage-discharge relation permanent except when affected by ice. Rating curve well defined below 28,000 second-feet. Gage read to hundredths four times daily. Daily discharge ascertained by applying mean daily gage height to rating table, with corrections for effect of ice during winter. Records good.

The following discharge measurements were made:
November 27, 1924: Gage height, 12.17 feet; discharge, 12,400 second-feet.
January 1, 1925: Gage height, 3.40 feet;[5] discharge 1,460 second-feet.
June 13, 1925: Gage height, 4.37 feet; discharge, 3,420 second-feet.

Daily discharge, in second-feet, of Connecticut River at South Newbury, Vt., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7,260	2,300	4,650	1,520	1,550	5,800	27,500	7,020	3,400	7,620	3,010	920
2	7,140	1,860	3,500	1,310	1,520	5,420	22,400	6,900	3,700	6,080	2,920	1,100
3	5,640	1,780	3,100	1,590	1,620	5,090	17,400	6,660	4,000	4,540	3,010	1,130
4	4,100	1,860	3,200	1,820	1,520	4,760	15,200	6,300	4,100	3,600	3,600	980
5	3,400	1,900	3,500	1,700	1,620	4,540	14,100	6,420	4,000	3,010	3,400	1,130
6	2,740	1,940	4,100	1,780	1,550	4,480	12,000	6,660	3,200	2,920	2,740	1,240
7	2,740	1,900	3,900	1,820	1,620	4,600	10,400	9,480	2,740	2,650	2,470	1,070
8	2,650	1,940	4,000	1,820	1,620	4,760	9,480	7,980	4,000	7,260	2,300	920
9	2,470	1,940	5,200	1,900	1,550	4,980	9,220	6,900	6,080	5,970	2,100	1,130
10	2,220	1,780	9,090	1,780	1,550	5,200	8,460	5,860	5,200	4,430	1,820	1,130
11	2,140	1,520	8,580	1,780	4,100	5,970	8,340	5,640	4,430	2,830	1,700	1,070
12	2,100	1,820	6,080	1,620	11,700	10,100	8,100	6,660	3,900	3,600	1,700	1,040
13	2,140	1,780	4,650	1,590	22,500	10,600	8,580	6,190	7,860	3,500	1,780	2,380
14	1,980	1,740	4,100	1,820	20,600	10,700	8,100	5,860	2,920	3,300	1,520	6,780
15	2,060	1,900	3,600	1,700	17,700	10,100	7,380	5,310	2,560	2,740	1,550	9,220
16	1,900	1,820	3,450	1,450	14,900	8,700	8,460	5,640	2,380	2,380	1,550	6,900
17	1,900	1,740	3,300	1,660	11,800	7,920	9,090	5,640	2,830	2,920	1,520	7,020
18	1,780	1,270	3,450	1,590	9,220	7,500	8,460	7,260	3,600	3,300	1,070	5,970
19	1,980	1,620	3,500	1,450	7,500	7,860	7,020	6,900	3,400	2,920	1,480	4,760
20	1,940	1,620	3,400	1,380	6,540	8,830	6,660	5,750	2,920	2,380	980	3,800
21	2,100	1,380	3,300	1,590	5,530	8,340	6,190	4,650	2,470	2,830	1,240	3,600
22	2,300	1,590	2,560	1,550	5,750	7,500	6,900	4,320	2,470	2,740	1,200	6,080
23	2,300	7,860	2,560	1,590	5,970	6,190	8,220	4,100	2,560	3,400	1,070	7,260
24	2,180	22,700	2,380	1,590	6,840	5,640	9,350	4,000	2,830	3,500	1,040	5,090
25	2,220	21,600	2,060	1,590	8,700	5,640	8,830	3,800	2,650	2,920	1,100	3,600
26	2,300	19,500	1,940	1,660	8,220	5,420	9,220	3,800	2,740	2,650	920	3,010
27	2,220	12,200	1,740	1,590	7,140	7,140	10,300	3,700	2,830	4,320	1,010	2,830
28	2,220	7,620	1,820	1,620	6,360	13,400	10,700	3,500	5,420	7,500	920	2,650
29	2,220	5,970	1,520	1,550	-------	27,200	9,480	3,300	8,960	7,500	1,100	3,340
30	2,140	4,980	1,700	1,520	-------	32,100	7,980	3,100	9,220	6,190	1,040	4,300
31	1,980	-------	1,820	1,480	-------	30,400	-------	3,200	-------	4,000	1,070	-----

NOTE.—Stage-discharge relation affected by ice Dec. 15 to Mar. 18; discharge for this period based on gage heights corrected for effect of ice on basis of 1 discharge measurement, observer's notes, and weather records.

Monthly discharge of Connecticut River at South Newbury, Vt., for the year ending September 30, 1925

[Drainage area, 2,830 square miles]

Month	Observed discharge (second-feet)			Gain or loss in storage at First and Second Connecticut Lakes (millions of cubic feet)	Discharge corrected for storage (second-feet)		Run-off in inches
	Maximum	Minimum	Mean		Mean	Per square mile	
October	7,260	1,780	2,720	−850.0	2,400	0.848	0.98
November	22,700	1,270	4,710	−488.6	4,520	1.60	1.78
December	9,090	1,520	3,600	+83.4	3,630	1.28	1.48
January	1,900	1,310	1,630	−1,243.0	1,170	.413	.48
February	22,500	1,520	7,030	+292.6	7,150	2.53	2.64
March	32,100	4,480	9,250	+646.5	9,490	3.35	3.86
April	27,500	6,190	10,500	+1,228.6	11,000	3.89	4.34
May	9,480	3,100	5,560	−97.0	5,520	1.95	2.25
June	9,220	2,380	3,980	+464.7	4,160	1.47	1.64
July	7,620	2,380	4,050	+32.2	4,060	1.43	1.65
August	3,600	590	1,730	−307.3	1,620	.572	.66
September	9,220	920	3,380	−129.7	3,330	1.18	1.32
The year	32,100	590	4,820	−367.6	4,810	1.70	23.08

[5] Stage-discharge relation affected by ice.

CONNECTICUT RIVER AT WHITE RIVER JUNCTION, VT.

LOCATION.—At railroad bridge between Westboro, Lebanon Township, Grafton County, N. H., and White River Junction, Hartford Township, Windsor County, Vt. Mascoma River enters from the east 1 mile below gage.

DRAINAGE AREA.—4,120 square miles.

RECORDS AVAILABLE.—November 1, 1911, to September 30, 1925.

GAGE.—Chain gage over west channel installed June 16, 1918; read by F. H. Chipman.

DISCHARGE MEASUREMENTS.—Made at highway bridges one-fourth mile above gage, the flow in White River and in Connecticut River above confluence of two streams being measured separately, the sum of the two being the discharge at gage.

CHANNEL AND CONTROL.—Channel deep. Bed covered with alluvial deposits, gravel and rock ledge. Control formed by rock outcrop extending across the river at various places below gage; control for high water is probably at Quechee Falls, 7 miles downstream.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 22.5 feet at 4 p. m. March 29 (discharge, 67,200 second-feet); minimum stage, 3.5 feet September 6 and 7 (discharge, 1,030 second-feet).

1912–1925: Maximum stage recorded, 30.0 feet at 9 p. m. March 27, 1913 (discharge, by extension of rating curve, 113,000 second-feet); minimum stage, 2.8 feet September 8, 1913 (discharge, by extension of rating curve, 560 second-feet).

ICE.—Stage-discharge relation seriously affected by ice.

REGULATION.—Distribution of flow not seriously affected by power plants, except for low water on Sundays caused by Sunday shutdown of paper mill at Wilder, 2 miles above gage. About 4,100 million cubic feet of storage at Connecticut lakes and tributary streams above Pittsburg, N. H., has some effect on low-water discharge.

ACCURACY.—Stage-discharge relation permanent except when affected by ice. Rating curve well defined below 52,000 second-feet. Gage read to tenths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table with corrections for effect of ice during winter. Records good.

COOPERATION.—Gage-height record furnished by New England Power Co.

The following discharge measurement was made:

September 8, 1925: Gage height, 3.97 feet; discharge, 1,500 second-feet.

Daily discharge, in second-feet, of Connecticut River at White River Junction, Vt., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9,770	2,980	5,830	2,530	1,110	8,430	40,900	11,700	5,830	11,700	5,180	1,600
2	10,900	2,820	4,980	2,390	2,110	7,200	34,500	10,900	6,270	9,230	4,980	1,600
3	8,960	2,670	4,980	2,250	2,110	13,200	27,700	10,300	6,730	7,440	5,390	1,720
4	6,730	2,670	4,600	1,720	1,980	7,200	23,900	10,300	6,270	5,610	5,830	1,980
5	5,610	2,670	4,220	2,530	1,980	6,270	21,100	10,900	5,830	5,180	5,830	1,500
6	4,600	2,670	4,040	2,530	1,980	5,830	19,000	12,600	5,390	4,980	4,980	1,030
7	4,220	2,670	4,980	2,390	1,980	5,830	16,400	13,200	3,680	4,600	4,410	1,110
8	4,220	2,670	5,610	2,390	1,300	6,050	14,800	12,300	4,600	8,430	3,320	1,720
9	4,040	2,670	9,230	2,390	1,980	6,960	13,800	10,900	6,730	6,050	3,860	1,850
10	3,860	2,530	13,200	2,390	1,980	6,730	12,900	9,770	6,960	6,960	3,860	2,110
11	3,500	2,530	11,400	1,720	3,500	8,690	12,600	8,960	6,050	5,830	3,860	2,110
12	3,320	2,530	8,690	2,250	36,100	14,800	12,000	9,500	5,390	4,220	2,980	1,600
13	3,150	2,530	6,050	2,250	35,700	13,800	12,900	9,500	4,600	5,390	2,980	2,250
14	3,150	2,530	5,390	1,980	30,400	13,800	12,600	8,960	3,680	4,980	3,150	8,180
15	3,150	2,530	4,790	2,110	25,000	14,800	12,000	8,430	4,220	4,600	2,820	10,900

Daily discharge, in second-feet, of Connecticut River at White River Junction, Vt., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	3,150	2,530	4,410	1,980	21,500	12,600	12,000	8,180	3,320	3,500	2,250	9,770
17	2,820	2,390	4,600	1,720	17,300	10,000	12,900	8,180	3,150	4,600	2,820	9,770
18	2,670	2,110	4,790	1,600	14,500	9,230	12,300	9,770	3,860	4,980	3,150	9,230
19	2,670	1,720	4,790	2,390	11,100	11,100	10,900	9,500	4,220	4,220	2,670	7,200
20	2,670	2,110	4,600	2,250	9,770	13,800	10,600	8,690	3,500	4,410	2,530	5,390
21	3,150	1,980	4,220	1,980	8,960	13,500	10,000	7,440	3,320	3,500	2,110	6,270
22	3,150	2,110	4,040	2,110	7,930	14,100	10,900	6,730	3,860	3,860	1,980	6,730
23	3,320	5,610	3,680	2,110	8,960	13,200	14,800	6,270	3,150	5,830	1,200	9,230
24	3,150	25,400	3,500	2,110	9,770	11,400	17,700	5,390	3,320	5,830	1,720	7,680
25	3,150	26,200	3,150	1,850	12,600	10,900	16,100	6,050	3,500	4,980	1,600	5,390
26	3,150	24,300	3,320	2,250	12,300	11,400	14,500	5,830	4,220	4,980	1,850	4,600
27	3,150	18,300	3,150	2,250	10,000	13,800	15,100	5,390	4,220	11,400	1,850	3,500
28	3,150	11,400	1,850	2,110	8,430	23,600	15,100	5,180	8,180	10,900	1,720	4,600
29	3,150	8,180	2,530	1,980	-------	61,900	14,100	4,790	12,600	12,300	1,400	4,410
30	3,150	7,200	2,530	1,980	-------	52,000	12,000	4,790	13,500	9,770	1,300	5,390
31	2,980	-------	2,390	1,980	-------	46,600	-------	4,790	-------	7,200	1,300	-------

NOTE.—Stage-discharge relation affected by ice Dec. 22 to Feb. 12; daily discharge for this period based on gage heights corrected for effect of ice on basis of observer's notes, weather records, and records in nearby drainage basins.

Monthly discharge of Connecticut River at White River Junction, Vt., for the year ending September 30, 1925

[Drainage area, 4,120 square miles]

Month	Observed discharge (second-feet)			Gain or loss in storage at First and Second Connecticut Lakes (millions of cubic feet)	Discharge corrected for storage (second-feet)		Run-off in inches
	Maximum	Minimum	Mean		Mean	Per square mile	
October	10,900	2,670	4,120	−850.0	3,800	0.922	1.06
November	26,200	1,720	6,040	−488.6	5,850	1.42	1.58
December	13,200	1,850	5,020	+83.4	5,050	1.23	1.42
January	2,530	1,600	2,150	−1,243.0	1,690	.410	.47
February	36,100	1,110	10,800	+292.6	10,900	2.65	2.76
March	61,900	5,830	15,100	+646.5	15,300	3.71	4.28
April	40,900	10,000	16,200	+1,228.6	16,700	4.05	4.52
May	13,200	4,790	8,550	−97.0	8,510	2.06	2.37
June	13,500	3,150	5,340	+464.7	5,520	1.34	1.49
July	12,300	3,500	6,370	+32.2	6,380	1.55	1.79
August	5,830	1,200	3,060	−307.3	2,940	.713	.82
September	10,900	1,030	4,680	−129.7	4,630	1.12	1.25
The year	61,900	1,030	7,250	−367.6	7,240	1.76	23.81

CONNECTICUT RIVER AT SUNDERLAND, MASS.

LOCATION.—At 5-span steel highway bridge at Sunderland, Franklin County, on road leading to South Deerfield, 18 miles in direct line and 24 miles by river above dam at Holyoke. Deerfield River enters Connecticut River from west 8 miles above station.

DRAINAGE AREA.—8,000 square miles.

RECORDS AVAILABLE.—March 31, 1904, to September 30, 1925.

GAGE.—Chain gage on downstream side of bridge; water-stage recorder on left bank downstream side of bridge; gage read and recorder inspected by P. J. Hogan.

DISCHARGE MEASUREMENTS.—Made from highway bridge.

CHANNEL AND CONTROL.—Channel deep, with bottom of coarse gravel and alluvial deposits. Control at low stages not well defined but practically permanent. At high stages control is at crest of dam at Holyoke.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorded, 25.7 feet at 11.30 p. m. March 30 (discharge, 86,900 second-feet); minimum stage, 1.03 feet at 9 a. m. August 31 (discharge, 1,100 second-feet).

1904–1925: Maximum stage recorded, 30.7 feet during the night of March 28, 1913, determined by leveling from floodmarks (discharge, by extension of rating curve, 108,000 second-feet); minimum stage, 0.0 foot August 29, 1921 (discharge, by extension of rating curve, 450 second-feet).

ICE.—River usually freezes over early in winter, but ice is likely to break up at times of sudden rises in stage and at those times it occasionally forms ice jams at Northampton, 10 miles below station causing several feet of backwater at gage.

REGULATION.—Distribution of flow affected by operation of power plants at Turners Falls and by regulation of Deerfield River. (See Deerfield River at Charlemont, Mass.) The effect of the regulation is shown by low water at the gage on Sundays and Mondays. Records of monthly discharge corrected for storage in First and Second Connecticut Lakes and in Somerset and Davis Bridge Reservoirs.

ACCURACY.—Stage-discharge relation practically permanent except when affected by ice. Rating curve for chain gage well defined between 750 and 70,000 second-feet. Chain gage read to half-tenths twice daily and used for comparison with water-stage recorder; operation of water-stage recorder generally satisfactory. Daily discharge ascertained by applying rating table to mean daily gage height corrected for effect of ice during winter. Records good.

Discharge measurements of Connecticut River at Sunderland, Mass., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 8	[a] 4.62	4,090	Jan. 28	[a] 5.87	6,210
Jan. 25	[a] 3.05	1,240	Apr. 27	10.53	24,300

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Connecticut River at Sunderland, Mass., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14,700	4,210	8,960	6,490	2,200	22,100	66,900	23,200	8,960	21,700	15,000	3,020
2	15,300	3,020	8,420	6,050	3,670	21,000	58,900	23,200	10,400	18,800	8,690	4,030
3	15,300	4,990	7,420	4,210	5,620	19,500	50,100	21,700	12,700	15,300	7,660	2,720
4	14,000	5,200	6,490	2,450	5,830	17,400	43,500	19,200	12,700	11,300	8,420	3,850
5	9,000	3,850	7,660	6,050	5,830	16,700	38,400	18,400	14,300	8,160	8,160	3,670
6	9,240	3,670	7,180	6,050	5,200	16,700	33,800	18,800	11,000	8,420	8,690	2,320
7	9,000	4,400	5,620	5,200	4,210	16,000	30,800	20,300	5,200	8,960	8,420	2,200
8	7,420	3,500	7,660	4,990	2,450	17,000	27,700	20,600	4,790	7,660	8,420	5,830
9	6,490	2,720	16,400	5,410	5,200	17,000	25,800	18,400	6,050	8,690	4,990	4,030
10	6,270	2,720	22,500	4,210	9,240	17,800	24,700	16,000	6,490	9,810	5,830	3,850
11	5,200	4,030	21,700	4,400	12,300	19,500	20,300	16,000	8,960	11,000	7,420	3,670
12	4,030	3,170	16,400	4,590	33,100	29,600	21,000	16,700	8,160	5,830	7,420	3,330
13	5,200	4,030	15,300	5,410	56,900	31,900	21,700	16,000	8,160	6,490	6,720	2,580
14	5,620	4,990	11,300	5,410	60,100	33,800	27,400	17,400	4,590	6,490	9,240	7,91
15	4,990	3,670	7,606	5,620	55,700	40,000	24,300	16,400	4,400	6,270	6,270	15,30

Daily discharge, in second-feet, of Connecticut River at Sunderland, Mass., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	4,790	1,290	8,690	5,830	48,200	36,900	27,000	14,700	6,950	6,720	2,870	14,000
17	5,620	5,370	8,960	4,030	41,600	32,300	25,100	11,700	6,490	7,180	3,500	15,700
18	5,620	5,370	7,660	1,290	34,600	29,300	27,000	14,000	6,050	7,910	5,620	14,700
19	2,450	5,320	8,160	4,030	27,700	26,600	16,400	15,300	6,490	4,990	5,410	15,700
20	4,400	4,380	8,420	4,030	19,900	38,400	19,500	13,600	6,490	5,200	5,410	10,100
21	6,270	3,500	7,660	3,850	19,200	37,700	19,900	14,700	3,670	4,990	4,790	8,160
22	5,200	3,670	6,950	3,850	14,300	33,100	22,500	12,300	5,410	6,050	4,400	8,690
23	4,790	7,420	6,950	4,590	17,400	31,500	29,300	10,100	5,620	7,420	2,580	8,160
24	4,400	18,100	6,270	3,170	22,800	29,300	38,400	4,790	5,620	11,700	3,330	10,400
25	4,030	29,600	5,620	1,180	32,300	26,200	34,600	6,720	5,620	13,600	4,400	11,300
26	2,870	30,400	6,270	2,580	28,500	24,700	30,800	8,420	6,490	5,410	3,850	8,960
27	5,410	28,100	5,410	4,590	27,400	26,600	27,000	9,240	6,720	13,600	3,670	4,990
28	4,990	22,500	3,670	4,990	23,600	42,200	25,800	9,240	5,410	18,100	3,850	10,100
29	5,410	16,000	6,270	4,790	-------	64,500	24,700	9,810	19,900	19,900	2,870	6,950
30	5,200	13,000	6,720	4,790	-------	85,000	24,000	6,950	25,800	20,600	1,960	7,660
31	4,400	-------	6,720	4,400	-------	80,800	-------	5,410	-------	17,800	2,450	-------

NOTE.—Stage-discharge relation affected by ice Dec. 15 to Feb. 9 and Feb. 18 to Mar. 11; daily discharge based on gage heights corrected for effect of ice.

Monthly discharge of Connecticut River at Sunderland, Mass., for the year ending September 30, 1925

[Drainage area, 8,000 square miles]

Month	Observed discharge (second-feet)			Gain or loss in storage at Connecticut Lakes and Somerset and Davis Bridge Reservoirs (millions of cubic feet)	Discharge corrected for storage (second-feet)		Run-off in inches
	Maximum	Minimum	Mean		Mean	Per square mile	
October	15,300	2,450	6,700	−1,896	5,990	0.749	0.86
November	30,400	1,290	8,410	−379	8,260	1.03	1.15
December	22,500	3,670	9,070	−159	9,010	1.13	1.30
January	6,490	1,180	4,460	−2,212	3,630	.454	.52
February	60,100	2,200	22,300	+1,788	23,000	2.88	3.00
March	85,000	16,000	31,600	+2,990	32,700	4.09	4.72
April	66,900	16,400	30,200	+2,633	31,200	3.90	4.35
May	23,200	4,790	14,500	−106	14,500	1.81	2.09
June	25,800	3,670	8,320	−13	8,320	1.04	1.16
July	21,700	4,990	10,500	+39	10,500	1.31	1.51
August	15,000	1,960	5,880	−1,443	5,340	.668	.77
September	15,700	2,200	7,460	−806	7,150	.894	1.00
The year	85,000	1,180	13,200	+436	13,200	1.65	22.43

WHITE RIVER AT WEST HARTFORD, VT.

LOCATION.—500 feet above highway bridge in West Hartford, Windsor County, 7 miles above mouth of river.

DRAINAGE AREA.—687 square miles.

RECORDS AVAILABLE.—June 9, 1915, to September 30, 1925.

GAGE.—Inclined staff on left bank; read by F. P. Morse.

DISCHARGE MEASUREMENTS.—Made from cable 1,500 feet below gage or by wading.

CHANNEL AND CONTROL.—Channel wide and of fairly uniform cross section at measuring section; covered with gravel and small boulders. Control formed by rock ledge 100 feet below gage; well defined.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 16.03 feet at 5 p. m. March 29 (discharge, 23,200 second-feet); minimum stage, 2.72 feet at 5 p. m. November 19 (discharge, 114 second-feet).

1915–1925: Maximum stage recorded, 16.9 feet April 12, 1922 (discharge, by extension of rating curve, 24,500 second-feet); minimum stage, 2.05 feet June 27, 1923 (discharge, by extension of rating curve, 19 second-feet).

The high water of March 27, 1913, reached a stage of 18.9 feet as determined from reference point on scale platform opposite gage (discharge approximately 30,000 second-feet).

ICE.—River freezes over at gage; control usually remains partly open, although ice on rocks and along shore affects stage-discharge relation.

REGULATION.—There are several power plants on main stream and its tributaries above station, the nearest being that of Vermont Copper Co. at Sharon; when this plant is in operation it causes some diurnal fluctuation in discharge at low stages. The effect of power plants farther upstream is practically eliminated by the large amount of pondage at Sharon.

ACCURACY.—Stage-discharge relation permanent except when affected by ice. Rating curve well defined. Gage read to hundredths twice a day. Daily discharge ascertained by applying mean daily gage height to rating table with correction for effect of ice. Records good for open-water period; fair during ice period.

The following discharge measurement was made:

September 5, 1925: Gage height, 2.86 feet; discharge, 127 second-feet.

Daily discharge, in second-feet, of White River at West Hartford, Vt., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,320	215	472	185	200	1,280	5,900	2,320	890	1,200	960	165
2	1,200	200	420	185	200	1,200	4,360	2,200	1,120	925	890	168
3	820	215	560	210	200	1,120	3,640	1,860	785	890	890	148
4	717	215	472	230	200	1,040	3,300	1,750	1,280	1,040	855	165
5	530	200	420	250	200	1,040	3,140	2,200	960	685	717	325
6	560	200	370	240	200	1,040	2,840	1,970	855	652	590	560
7	420	200	590	230	200	1,460	2,440	1,970	620	652	652	560
8	420	200	785	220	210	1,750	2,320	1,750	530	925	820	187
9	395	187	2,570	220	220	1,200	2,080	1,460	445	750	685	187
10	395	150	2,080	210	240	1,370	1,970	1,460	472	590	620	175
11	345	170	1,040	200	2,700	2,990	1,860	1,460	500	620	530	170
12	305	187	855	200	8,950	5,110	1,970	1,970	420	530	445	172
13	305	175	750	185	5,900	2,990	1,970	1,460	345	420	395	855
14	285	175	620	190	2,990	3,300	2,200	1,370	215	445	590	1,860
15	305	200	445	180	1,970	4,000	2,200	1,370	325	325	560	1,040
16	305	215	305	180	1,750	1,970	2,200	1,280	325	200	445	785
17	305	230	640	180	1,550	1,860	1,860	1,370	395	652	472	1,650
18	230	247	620	180	1,200	1,650	1,650	1,550	325	652	265	1,280
19	265	122	580	180	1,040	3,300	1,550	1,200	285	530	345	925
20	265	168	520	185	960	4,000	1,550	1,200	215	370	590	652
21	265	170	440	180	1,120	3,140	1,460	960	285	305	370	1,200
22	230	200	370	180	1,370	3,300	2,200	1,040	395	445	345	1,040
23	247	2,440	290	180	1,970	2,700	4,360	1,040	325	1,370	285	750
24	265	2,200	410	185	2,840	2,200	4,730	1,040	325	717	305	620
25	247	1,280	400	190	3,140	1,860	3,470	960	305	472	265	590
26	247	925	395	190	2,200	3,140	2,990	960	1,040	500	265	560
27	247	750	325	185	1,460	4,000	2,700	925	445	2,320	200	472
28	247	685	310	185	1,200	9,160	2,200	925	3,140	1,280	187	560
29	230	530	280	190	-------	21,300	1,860	530	2,440	2,080	168	652
30	230	560	260	200	-------	10,800	1,970	717	1,460	1,200	158	560
31	247	-------	230	200	-------	8,320	-------	785	-------	890	142	------

NOTE.—Stage-discharge relation affected by ice Dec. 17 to Feb. 10; discharge based on gage heights corrected for effect of ice by means of 1 discharge measurement, observer's notes, and weather records.

Monthly discharge of White River at West Hartford, Vt., for the year ending September 30, 1925

[Drainage area, 687 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	2,320	230	432	0.629	0.73
November	2,440	122	454	.661	.74
December	2,570	230	607	.884	1.02
January	250	180	197	.287	.33
February	8,950	200	1,660	2.42	2.52
March	21,300	1,040	3,670	5.34	6.16
April	5,900	1,460	2,630	3.83	4.27
May	2,320	530	1,390	2.02	2.33
June	3,140	215	716	1.04	1.16
July	2,320	200	795	1.16	1.34
August	960	142	484	.704	.81
September	1,860	146	634	.923	1.03
The year	21,300	122	1,130	1.65	22.44

MASCOMA RIVER AT MASCOMA, N. H.

LOCATION.—250 feet below railroad bridge and 1,500 feet below outlet of Mascoma Lake, in Mascoma, Grafton County.

DRAINAGE AREA.—148 square miles (measured on Walker map).

RECORDS AVAILABLE.—August 16, 1923, to September 30, 1925.

GAGE.—Water-stage recorder on left bank; inspected by John Greeley.

DISCHARGE MEASUREMENTS.—Made from railroad bridge or by wading.

CHANNEL AND CONTROL.—Channel opposite gage is pool in which the velocity is very low. Control at head of rapids 200 feet below gage; well defined.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 6.25 feet at 6 a. m. March 30 (discharge, by extension of rating curve, 3,700 second-feet); minimum stage, 1.03 feet from 8 a. m. to 1 p. m. June 28 (discharge, by extension of rating curve, 1.2 second-feet).

1923–1925: Maximum stage and minimum stage recorded, those of 1925.

ICE.—Not affected by ice.

REGULATION.—Operation of gates in storage dam 1,500 feet above gage causes considerable fluctuation in discharge during ordinary stages. About 1.5 billion cubic feet of storage has been developed in ponds and lakes in drainage basins above gage.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 1,700 second-feet. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying mean daily gage height to rating table and by applying gage heights for fractional parts of days to rating table and computing weighted mean discharge for 24 hours for days when variation occurred from opening and closing gates at dam. Records excellent.

Discharge measurements of Mascoma River at Mascoma, N. H., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 28	2.27	129	Feb. 15	3.63	629	June 15	2.13	109
Do	2.48	177	Do	3.79	748	Sept. 8	2.17	118
Do	2.62	223	Do	3.89	803			

Daily discharge, in second-feet, of Mascoma River at Mascoma, N. H., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	140	116	131	111	89	247	1,660	288	127	329	311	120
2	196	106	129	111	89	253	1,090	282	153	275	256	100
3	201	115	126	108	89	247	790	262	178	212	209	101
4	175	112	129	103	89	238	627	250	188	168	191	96
5	147	112	126	107	89	227	548	301	183	145	173	99
6	135	112	121	107	88	221	484	381	165	135	170	71
7	131	112	106	107	88	215	430	373	147	140	163	72
8	129	110	127	107	89	221	381	340	133	185	160	108
9	127	102	125	107	89	224	366	294	125	227	158	98
10	127	116	126	105	89	227	343	262	117	191	151	100
11	127	115	127	101	86	232	333	244	113	163	149	97
12	125	112	128	99	84	285	315	235	111	135	147	96
13	123	112	128	101	89	405	285	221	111	127	145	109
14	121	112	79	101	140	457	298	209	107	125	145	102
15	119	108	122	101	616	439	333	199	105	123	145	109
16	117	98	124	101	600	422	373	191	105	123	145	149
17	115	111	120	97	489	385	381	183	105	121	142	226
18	113	106	116	91	417	351	347	180	105	121	142	272
19	111	100	120	89	318	397	340	175	105	119	140	247
20	122	100	121	89	275	518	326	170	105	117	140	180
21	122	101	116	91	253	595	294	160	105	115	137	178
22	124	97	124	91	241	579	318	153	105	115	135	175
23	131	12	121	91	256	558	444	145	103	125	133	125
24	131	112	123	89	271	513	621	133	103	212	131	104
25	126	118	117	86	291	457	638	129	103	209	131	110
26	113	124	123	86	333	430	528	129	103	180	129	106
27	124	113	116	88	301	439	435	129	70	238	129	81
28	122	133	120	88	265	654	385	127	15	393	127	101
29	122	126	111	88	-------	1,990	326	125	125	480	64	103
30	123	114	111	88	-------	3,540	298	123	265	493	65	103
31	120	-------	111	88	-------	2,740	-------	119	-------	389	127	-------

Monthly discharge of Mascoma River at Mascoma, N. H., for the year ending September 30, 1925

[Drainage area, 148 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	201	111	131	0.885	1.02
November	133	12	108	.730	.81
December	131	79	120	.811	.94
January	111	86	97.3	.657	.76
February	616	84	222	1.50	1.56
March	3,540	215	603	4.07	4.69
April	1,660	285	478	3.23	3.60
May	381	119	210	1.42	1.64
June	265	15	123	.831	.93
July	493	115	201	1.36	1.57
August	311	64	151	1.02	1.18
September	272	71	125	.845	.94
The year	3,540	12	214	1.45	19.64

NOTE.—The monthly discharge in second-feet per square mile and the run-off in inches do not represent the natural run-off from the basin because of storage. (See "Regulation.")

ASHUELOT RIVER NEAR GILSUM, N. H.

LOCATION.—60 feet above stone-arch highway bridge on Keene-Newport Road, 1 mile below Gilsum, Cheshire County, and 8 miles north of Keene.

DRAINAGE AREA.—68.5 square miles (measured on Hitchcock map).

RECORDS AVAILABLE.—August 18, 1922, to September 30, 1925.

GAGE.—Water-stage recorder on right bank; inspected by employee of Keene Gas & Electric Co.

DISCHARGE MEASUREMENTS.—Made by wading or from highway bridge.

CHANNEL AND CONTROL.—Channel rough with steep slope. Control formed by rocks and boulders in vicinity of highway bridge.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 8.25 feet at 10.30 p. m. March 29 (discharge, 1,460 second-feet); minimum discharge, 2.8 second-feet at 1 a. m. November 21.

1922–1925: Maximum stage recorded, 8.25 feet April 29, 1923, and March 29, 1925 (discharge, 1,460 second-feet); minimum discharge, approximately 1 second-foot October 6, 1922, and July 10, 1923 (water was held back by dams).

ICE.—Ice forms on rocks and along banks, occasionally affecting stage-discharge relation.

REGULATION.—Flow affected by operation of mills at Gilsum. Several lakes and ponds above gage provide opportunity for storage, but little if any utilization of them has been made.

ACCURACY.—Stage-discharge relation permanent except when affected by ice. Rating curve well defined below 400 second-feet and fairly well defined between 400 and 1,100 second-feet. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying mean daily gage height to rating table with corrections for ice during winter. Records excellent.

Discharge measurements of Ashuelot River near Gilsum, N. H., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 17	1.66	19.3	Jan. 4	1.54	15.0	June 4	2.27	57
Do	1.80	23.2	Feb. 17	4.28	363	June 15	1.73	22.5
Oct. 24	1.70	20.8	Do	4.22	354	July 19	1.73	21.5
Nov. 29	1.86	28.2	June 4	2.32	54	Aug. 12	1.90	31.0

Daily discharge, in second-feet, of Ashuelot River near Gilsum, N. H., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	71	8.7	42	20	17	220	715	148	43	132	43	28
2	62	10	52	19	23	184	505	142	80	74	37	26
3	49	8.5	52	15	35	160	380	129	79	43	33	26
4	48	16	24	15	30	155	330	124	72	37	30	23
5	30	25	40	17	27	133	270	113	45	37	38	17
6	32	13	36	17	25	147	235	101	38	71	40	15
7	31	8.7	30	17	23	173	195	94	28	61	36	28
8	29	7.1	50	17	23	183	174	88	27	49	26	30
9	30	6.4	193	17	26	189	148	70	22	37	23	24
10	34	6.1	212	16	61	110	146	66	23	31	31	23
11	32	6.7	137	15	330	235	159	77	12	25	36	27
12	23	5.5	113	14	825	320	152	89	16	23	28	31
13	25	6.1	80	14	1,120	310	155	76	21	23	28	27
14	25	15	65	14	825	390	166	66	19	24	37	75
15	19	15	95	14	635	610	197	70	19	26	27	77

Daily discharge, in second-feet, of Ashuelot River near Gilsum, N. H., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	19	7.7	126	13	442	492	227	65	38	32	25	57
17	21	6.9	126	13	330	380	205	67	39	44	32	70
18	23	6.4	111	13	242	340	189	69	30	39	31	61
19	24	5.5	61	14	193	410	173	55	30	32	30	44
20	26	4.9	32	14	171	467	165	45	28	24	30	31
21	25	3.8	60	14	152	410	163	39	27	23	30	34
22	22	11	86	14	142	370	212	43	29	40	28	32
23	22	123	83	15	169	350	300	38	30	47	16	34
24	21	166	62	18	260	300	340	47	24	36	21	30
25	15	98	49	11	290	280	320	42	33	30	24	24
26	11	66	69	14	227	242	270	56	37	64	21	22
27	5.9	49	40	21	196	280	227	47	34	112	22	19
28	8.7	36	38	12	235	467	195	40	112	111	21	28
29	20	24	33	13	------	1,120	168	35	212	118	22	33
30	19	24	23	22	------	1,270	145	25	189	44	23	24
31	14	------	20	23	------	1,000	------	28	------	48	21	------

NOTE.—Stage-discharge relation slightly affected by ice Dec. 15–30, Jan. 27, and Jan. 30 to Feb. 12; discharge based on gage heights corrected for effect of ice on basis of 1 discharge measurement, observer's notes, and weather records. Gage-height record July 14–19, 23–26, 29–30, and Aug. 1–7 destroyed by mice in gage house; daily discharge for this period based on records at near-by drainage basins.

Monthly discharge of Ashuelot River near Gilsum, N. H., for the year ending September 30, 1925

[Drainage area, 68.5 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per sqnare mile	
October	71	5.9	27.0	0.394	0.45
November	166	3.8	26.3	.384	.43
December	212	20	72.3	1.06	1.22
January	23	11	15.6	.228	.26
February	1,120	17	252	3.68	3.83
March	1,270	133	380	5.55	6.40
April	715	145	241	3.52	3.93
May	148	25	70.8	1.03	1.19
June	212	12	47.9	.699	.78
July	132	23	49.6	.724	.83
August	43	16	28.7	.419	.48
September	77	15	34.0	.497	.55
The year	1,270	3.8	103	1.50	20.35

ASHUELOT RIVER AT HINSDALE, N. H.

LOCATION.—At lower steel highway bridge a quarter of a mile below dam of Fiske Paper Co., at Hinsdale, Cheshire County, and 1¼ miles above mouth of river.

DRAINAGE AREA.—440 square miles.

RECORDS AVAILABLE.—February 22, 1907, to December 31, 1909; July 11, 1914, to September 30, 1925.

GAGE.—Chain gage on downstream side of bridge; read by Mrs. Agnes Golden.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Channel covered with coarse gravel and boulders. Control is a short distance below gage and is practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 6.82 feet at 4 p. m. February 14 (discharge, 4,180 second-feet); minimum stage, 2.06 feet at 5 p. m. September 2 (discharge, 12 second-feet).

1914–1925: Maximum stage recorded, 9.98 feet March 29, 1920 (discharge, by extension of rating curve, 8,940 second-feet); minimum stage, 1.87 feet, August 12, 1923 (discharge, 5 second-feet).

ICE.—Ice forms below bridge on control, affecting stage-discharge relation for short periods.

REGULATION.—The mills immediately above station are operated continuously except Sundays and holidays, but cause little fluctuation in stage. Several reservoirs and ponds on river and tributaries have some effect on distribution of flow.

ACCURACY.—Stage-discharge relation practically permanent except when affected by ice. Rating curve well defined below 2,000 second-feet and fairly well defined between 2,000 and 4,000 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table with corrections for effect of ice during winter. Records good.

Discharge measurements of Ashuelot River at Hinsdale, N. H., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 18	3.05	199	Feb. 18	4.78	1,470	June 3	3.64	422
Oct. 24	2.90	118	Do.	4.78	1,500			

Daily discharge, in second-feet, of Ashuelot River at Hinsdale, N. H., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	291	173	240	185	115	1,000	3,000	810	375	490	200	68
2	291	84	185	195	68	900	2,440	1,000	490	400	179	58
3	325	86	100	190	92	1,050	1,380	1,000	460	209	185	73
4	291	113	94	135	98	900	1,550	855	400	194	191	120
5	212	134	110	150	90	810	1,380	460	350	167	197	167
6	239	90	120	135	88	900	1,050	625	223	227	212	197
7	215	122	170	160	94	1,000	1,000	660	111	239	185	145
8	185	98	296	175	105	1,430	950	590	215	173	197	223
9	161	120	730	130	120	1,550	770	590	239	179	164	300
10	200	106	1,430	160	145	1,380	810	590	300	191	145	96
11	155	129	1,000	90	200	1,430	855	490	102	185	231	152
12	34	124	590	210	1,650	1,320	900	660	100	191	142	49
13	150	150	555	220	3,430	1,380	855	590	167	209	179	100
14	185	152	490	140	3,860	2,170	950	555	94	150	179	203
15	167	145	555	165	3,570	1,910	950	490	152	124	167	291
16	158	68	520	210	2,170	2,040	1,050	430	145	203	100	291
17	179	57	400	155	1,910	1,910	1,160	430	260	203	203	247
18	194	38	350	110	1,380	1,550	950	430	247	203	173	273
19	65	185	320	210	1,160	2,040	1,050	460	179	197	108	247
20	94	130	320	190	1,000	2,300	900	400	194	173	167	231
21	139	88	500	175	1,050	2,300	950	340	115	152	185	197
22	185	125	640	120	1,050	1,910	1,210	340	115	219	215	179
23	167	173	500	155	1,050	1,910	1,160	320	209	223	191	139
24	90	1,000	500	230	1,430	1,380	1,610	310	197	203	176	255
25	79	555	360	105	1,380	1,380	1,490	400	291	98	173	120
26	82	490	260	150	1,380	1,320	1,260	460	375	164	42	90
27	84	310	240	145	1,160	1,320	1,210	375	227	310	173	82
28	102	278	220	185	1,430	2,720	1,050	350	243	490	120	124
29	161	260	300	200	-------	3,570	810	345	350	430	164	173
30	79	170	210	68	-------	3,720	770	325	555	375	200	122
31	161	-------	190	105	-------	3,860	-------	260	-------	209	106	-----

NOTE.—Stage-discharge relation affected by ice Nov. 19–22, Dec. 1–7, 15–18, and Dec. 21 to Feb. 12; discharge for these periods based on gage heights corrected for effect of ice on basis of observer's notes, weather records, and by comparison with flow of streams in same drainage basin.

Monthly discharge of Ashuelot River at Hinsdale, N. H., for the year ending September 30, 1925

[Drainage area, 440 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	325	34	165	0.375	0.43
November	1,000	38	192	.436	.49
December	1,430	94	403	.916	1.06
January	230	68	160	.364	.42
February	3,860	68	1,120	2.55	2.66
March	3,860	810	1,750	3.98	4.59
April	3,000	770	1,180	2.68	2.99
May	1,000	260	514	1.17	1.35
June	555	94	249	.566	.63
July	490	98	232	.527	.61
August	231	42	169	.384	.44
September	300	49	167	.380	.42
The year	3,860	34	521	1.18	16.09

OTTER BROOK NEAR KEENE, N. H.

LOCATION.—At highway bridge on road from Keene to Sullivan, three-tenths mile above Ferry Brook, 3½ miles above confluence with Minnewawa Brook, and 3½ miles northeast of Keene, Cheshire County.

DRAINAGE AREA.—39.5 square miles (measured on Hitchcock map).

RECORDS AVAILABLE.—October 1, 1923, to September 30, 1925.

GAGE.—Water-stage recorder on left bank, downstream side of bridge; inspected by employee of Keene Gas & Electric Co.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed covered with coarse gravel and boulders; pool opposite gage. Control is at riffle a short distance below gage.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 4.99 feet at 5.45 p. m. February 12 (discharge, by extension of rating curve, 874 second-feet); minimum stage, 1.98 feet at 9 a. m. November 17 (discharge, by extension of rating curve, 2 second-feet).

1923–1925: Maximum stage recorded, 5.98 feet April 7 (discharge, by extension of rating curve, 1,440 second-feet); minimum discharge, 2 second-feet August 24, 25, and November 17, 1924.

ICE.—Stream freezes over during winter; stage-discharge relation seriously affected.

DIVERSION.—Discharge from old mill pond enters below gage but is included in results of current-meter measurements.

REGULATION.—Two small mills above gage, the nearest at East Sullivan, 3 miles upstream, cause fluctuation in discharge. Several lakes and ponds above gage provide opportunity for storage, but little if any utilization has been made of them.

ACCURACY.—Stage-discharge relation shifted slightly February 11. Rating curves well defined. Operation of water-stage recorder satisfactory except for periods indicated in footnote to daily-discharge table. Daily discharge ascertained by applying mean daily gage height to rating table. Records excellent.

Discharge measurements of Otter Brook near Keene, N. H., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 25	2.12	5.5	Jan. 4	[a]2.76	10	June 5	2.41	21.7
Do	2.12	5.3	Feb. 16	3.42	181	July 19	2.12	6.1
Nov. 30	[a]2.30	9.7	Do	3.44	180			

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Otter Brook near Keene, N. H., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	9.6	16	11	2.7	202	273	98	33	18	20	11
2	24	6.3	29	13	2.7	214	208	88	43	15	12	13
3	19	7.3	27	15	2.7	252	173	73	37	12	9.6	14
4	16	9.2	24	10	2.4	242	148	70	34	9.6	10	15
5	10	8.8	21	13	2.4	153	130	66	28	21	14	14
6	12	8.8	24	11	2.2	130	115	62	22	20	14	7.9
7	14	9.6	55	16	2.2	119	101	58	16	14	14	9.1
8	10	8.0	51	14	2.2	119	92	54	18	12	9.6	14
9	9.2	5.7	150	6.3	4.4	124	85	48	18	9.1	7.9	16
10	8.4	6.7	70	5.4	12	117	85	43	18	11	8.7	16
11	8.4	8.4	70	4.4	175	160	107	57	17	10	10	15
12	6.7	8.0	102	5.4	645	197	85	69	16	7.9	13	15
13	6.0	7.7	114	5.4	540	165	90	57	14	6.1	14	9.6
14	8.0	8.4	106	4.4	309	199	94	51	8.7	5.7	16	19
15	7.0	8.0	87	3.7	194	256	128	47	14	5.4	12	20
16	7.7	7.0	67	3.4	183	194	148	44	20	6.1	7.9	18
17	7.7	4.2	48	2.9	155	153	119	46	18	14	6.4	20
18	8.4	8.0	27	3.2	146	153	98	51	16	8.7	9.1	15
19	6.7	6.0	16	2.9	109	245	83	45	16	6.4	8.7	12
20	7.0	5.0	8.8	2.7	99	259	92	40	16	6.1	8.3	7.5
21	9.2	4.8	6.7	2.7	92	202	101	37	9.1	9.1	8.7	6.4
22	9.2	17	5.4	2.7	80	181	151	34	11	13	5.7	11
23	8.0	95	4.7	2.7	115	165	199	34	17	14	4.8	11
24	5.7	45	5.4	2.4	178	139	194	32	16	11	4.8	11
25	7.0	25	5.7	2.2	168	128	148	45	22	9.1	4.5	14
26	6.7	17	5.4	2.2	135	128	130	44	23	12	4.5	11
27	7.0	17	5.4	2.2	101	151	113	39	16	22	4.5	6.7
28	8.8	15	11	2.2	126	249	98	36	21	21	4.0	7.1
29	8.8	16	13	2.2	-------	570	80	33	25	23	3.8	11
30	8.8	14	13	2.4	-------	555	83	31	26	15	3.5	11
31	8.8	-------	10	2.7	-------	389	-------	27	-------	20	4.5	-------

NOTE.—Stage-discharge relation affected by ice Dec. 11 to Feb. 11; discharge based on gage heights corrected for effect of ice on basis of 2 discharge measurements, observer's notes, and weather records. Recorder not in operation Nov. 19-21, Dec. 29 to Jan. 2, Jan. 15-16 and 24-25; discharge estimated by comparison with records from adjacent drainage areas.

Monthly discharge of Otter Brook near Keene, N. H., for the year ending September 30, 1925

[Drainage area, 39.5 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	38	5.7	10.4	0.264	0.30
November	95	4.2	13.9	.352	.39
December	150	4.7	38.7	.980	1.13
January	16	2.2	5.8	.147	.17
February	645	2.2	128	3.24	3.37
March	570	117	210	5.32	6.13
April	273	80	125	3.17	3.54
May	98	27	50.3	1.28	1.48
June	43	8.7	20.3	.514	.57
July	23	5.4	12.5	.317	.37
August	20	3.5	8.98	.227	.26
September	20	6.4	12.7	.322	.36
The year	645	2.2	52.6	1.33	18.07

SOUTH BRANCH OF ASHUELOT RIVER AT WEBB, NEAR MARLBORO, N. H.

LOCATION.—At highway bridge on State road between Keene and Troy, one-fourth mile from Webb railroad station, Marlboro, Cheshire County.

DRAINAGE AREA.—36.6 square miles (measured on topographic map).

RECORDS AVAILABLE.—November 16, 1920, to September 30, 1925.

GAGE.—Water-stage recorder on right bank, downstream side of bridge; inspected by W. L. Goodell.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Large pool opposite gage; water swift above and below. Control is formed by boulders 50 feet below gage; probably permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 5.53 feet at 4 p. m. February 12 (discharge, by extension of rating curve, 1,150 second-feet); minimum stage, 0.82 foot at 6 a. m. September 23 (discharge, 0.8 second-foot).

1920–1925: Maximum stage recorded, that of 1925; minimum stage, that of 1925.

ICE.—Channel obstructed by ice during winter.

REGULATION.—Distribution of flow affected by operation of mills at Troy, 4 miles upstream; several small storage ponds on main stream and tributaries above gage.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 500 second-feet. Operation of water-stage recorder satisfactory except for periods indicated in footnote to daily-discharge table. Daily discharge ascertained by discharge integrator for days affected by operation of mills above gage; for remainder of year by application of mean daily gage height to rating table, as determined from inspection of recorder sheets, with corrections for effect of ice during winter. Records good.

Discharge measurements of South Branch of Ashuelot River at Webb, near Marlboro, N. H., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 24	1.11	4.9	Feb. 17	2.34	129	Aug. 12	0.92	1.6
Jan. 5	a 1.29	6.4	June 3	1.68	33.9			
Feb. 17	2.33	123	July 18	1.05	3.3			

a Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of South Branch of Ashuelot River at Webb, near Marlboro, N. H., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	60	10	18	4.6	5.6	194	195	86	36	9	12	3
2	42	4.2	51	4.6	5.6	225	153	74	39	6	8	5
3	33	4.2	50	4.6	5.8	307	140	58	44	7	8	2.2
4	24	4.0	22	5.3	5.6	313	120	75	32	4	8	2
5	10	2.9	16	6.5	5.8	190	74	70	22	6.5	10	2.9
6	24	3.3	28	7.8	33	123	82	52	17	15	8	2.1
7	24	2.7	28	6.3	38	174	77	54	9	10	8	6.3
8	17	1.2	44	6.0	12	179	72	46	17	6	7	18
9	7.0	2.1	120	5.8	52	172	67	36	20	5	6	3.6
10	7.4	11	83	5.3	66	157	60	38	10	8	7	2.2
11	7.4	4.4	62	4.6	460	184	82	50	8	6	8	2.0
12	6.5	3.3	65	4.8	945	239	60	71	5	4	7	1.8
13	6.3	1.2	53	4.8	475	177	61	58	4	5	5	2.1
14	5.8	11	61	4.8	205	230	70	47	9	5	9	16
15	5.8	10	80	4.6	142	280	98	42	32	4	21	10
16	5.6	5.1	112	4.6	158	170	119	41	38	6	20	11
17	5.1	8	78	36	130	130	86	31	38	13	9	14
18	5.1	6	84	8.6	105	177	80	42	20	9	2	3.3
19	5.1	6.5	58	5.6	84	292	52	40	8	6	9	3.3
20	5.1	6.8	39	5.3	68	274	86	33	7	10	8	2.7
21	12	5.6	25	5.1	80	179	111	25	24	8	8	15
22	14	6.8	17	5.1	61	138	166	18	17	9	3	2.3
23	5.1	18	11	5.1	105	124	178	16	7	12	1.3	1.0
24	4.8	48	51	5.1	214	103	130	26	8	15	1.3	1.2
25	4.0	43	10	5.1	159	94	102	47	10	10	1.3	1.2
26	7	30	6.8	5.1	108	103	108	49	13	15	1.3	1.2
27	4.6	21	6.3	5.1	101	105	96	46	20	40	1.3	1.2
28	4.6	16	5.6	5.1	162	140	86	40	7	32	1.4	3
29	4.6	14	15	5.1	------	86	84	36	22	17	3	5
30	4.4	13	7.8	5.1	------	400	84	22	17	11	1.5	1.6
31	4.4	------	5.1	5.3	------	274	------	21	------	14	3	------

NOTE.—Stage-discharge relation affected by ice Dec. 2 to Feb. 11; discharge based on gage heights corrected for effect of ice on basis of 1 discharge measurement; observer's notes, and weather records. Clock not in operation Apr. 29–30, June 30 to July 4, July 13–18, 22–23, and July 30 to Aug. 12. Record for Nov. 23–30 lost in transit. Discharge for these periods estimated by comparison with records in adjacent drainage basins.

Monthly discharge of South Branch of Ashuelot River at Webb, near Marlboro, N. H., for the year ending September 30, 1925

[Drainage area, 36.6 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	60	4.0	12.1	0.331	0.38
November	48	1.2	10.8	.295	.33
December	120	5.1	42.3	1.16	1.34
January	36	4.6	6.35	.174	.20
February	945	5.6	143	3.91	4.07
March	400	86	191	5.22	6.02
April	195	52	99.3	2.71	3.02
May	86	16	44.8	1.22	1.41
June	44	4	18.7	.511	.57
July	40	4	10.6	.290	.33
August	21	1.3	6.66	.181	.21
September	18	1.0	4.87	.133	.15
The year	945	1.0	48.6	1.33	18.03

MILLERS RIVER NEAR WINCHENDON, MASS.

LOCATION.—At steel highway bridge known as Nolan's bridge, half a mile below mouth of Sip Pond Brook and 2 miles west of Winchendon, Worcester County.

DRAINAGE AREA.—80.0 square miles.

RECORDS AVAILABLE.—June 5, 1916, to September 30, 1925.

GAGE.—Water-stage recorder on right bank below highway bridge; inspected by H. D. Sawyer.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Channel covered with gravel and alluvial deposits. Control for low and medium stages is gravel bar 80 feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 7.35 feet at noon March 31 (discharge, by extension of rating curve, 912 second-feet); minimum stage, 2.23 feet at 9 p. m. January 14 (discharge practically zero; water held back by dams).

1916–1925: Maximum discharge recorded, 1,280 second-feet (by extension of rating curve) June 25, 1922; minimum discharge, practically zero September 20, 1918, and January 14, 1925 (water held back by dams).

ICE.—Ice cover usually forms during winter and owing to large diurnal fluctuation caused by operation of power plants in vicinity of Winchendon; water frequently overflows the ice.

REGULATION.—Distribution of flow is affected by operation of power plants at and below Winchendon and by storage in Lake Monomonac and other reservoirs.

ACCURACY.—Stage-discharge relation changed during high water in March. Rating curves well defined. Operation of water-stage recorder satisfactory with exception of periods indicated in footnote to daily-discharge table Daily discharge ascertained by discharge integrator with corrections for effect of ice during winter. Records good for open-water periods when water-stage recorder was in operation; fair at other times.

Discharge measurements of Millers River near Winchendon, Mass., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 1	3.05	49.9	Apr. 30	4.34	260	Aug. 13	3.64	152
Jan. 22	[a]3.90	35.9	July 18	2.79	20.5			
Jan. 23	[a]3.47	20.3	Aug. 13	3.35	95			

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Millers River near Winchendon, Mass., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	10	30	26	19	210	550	194	112	81	68	54
2	31	5	59	24	39	280	350	184	190	87	40	70
3	28	23	21	15	44	210	215	164	170	84	63	66
4	22	37	19	13	51	188	186	196	106	29	48	73
5	10	22	28	16	48	178	114	158	96	25	53	53
6	32	25	19	16	43	196	182	142	32	42	55	20
7	36	24	14	17	38	164	184	106	22	42	70	21
8	36	22	48	15	26	122	168	61	74	54	31	57
9	34	12	170	13	32	215	148	42	88	49	33	74
10	24	28	130	10	37	220	142	22	93	48	122	75

Daily discharge, in second-feet, of Millers River near Winchendon, Mass., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	22	28	88	5	48	215	96	118	58	25	82	84
12	10	34	87	11	360	235	116	158	56	18	99	50
13	20	28	60	14	600	240	285	150	18	56	80	24
14	36	28	16	15	450	260	178	97	18	57	112	72
15	40	20	64	26	340	235	205	94	44	38	53	74
16	38	7	63	27	275	275	220	72	72	34	47	90
17	27	18	58	11	230	240	220	50	67	36	49	71
18	23	25	37	6	205	215	172	128	56	18	50	50
19	11	34	50	20	188	270	200	116	54	17	58	31
20	13	35	36	32	172	325	250	114	24	24	68	18
21	23	36	32	37	162	240	260	77	18	41	78	40
22	23	24	71	35	155	176	255	71	38	280	34	68
23	23	20	41	30	275	240	300	40	29	260	24	58
24	23	112	31	32	230	220	315	18	28	114	29	54
25	16	48	22	20	240	200	270	82	34	67	26	43
26	5	36	41	34	250	184	265	66	40	152	36	31
27	16	18	34	34	275	164	245	72	18	510	46	16
28	16	47	21	34	250	162	200	69	21	405	40	23
29	18	17	49	40	-------	210	190	72	54	335	38	63
30	21	17	45	55	-------	510	184	27	82	220	24	51
31	22	-------	34	32	-------	680	-------	18	-------	122	54	-----

NOTE.—Stage-discharge relation affected by ice Dec. 21 to Feb. 21; discharge based on gage heights corrected for effect of ice. Water-stage recorder not in operation Oct. 17–18, Dec. 21–24, Dec. 30 to Jan. 3, Jan. 11–23, 28–31, Feb. 8–18, and Mar. 4–6; discharge estimated by comparisons with other stations in Millers River Basin.

Monthly discharge of Millers River near Winchendon, Mass., for the year ending September 30, 1925

[Drainage area, 80 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	44	5	24.0	0.300	0.35
November	112	5	28.0	.350	.39
December	170	14	49.0	.612	.71
January	55	5	23.1	.289	.33
February	600	19	182	2.28	2.37
March	680	122	241	3.01	3.47
April	550	96	222	2.78	3.10
May	196	18	96.1	1.20	1.38
June	190	18	60.4	.755	.84
July	510	17	109	1.36	1.57
August	122	24	55.2	.690	.80
September	90	16	52.5	.656	.73
The year	680	5	94.4	1.18	16.04

MILLERS RIVER AT ERVING, MASS.

LOCATION.—One-fourth mile below dam at Erving, Franklin County, 8 miles above confluence with Connecticut River, and below all important tributaries.

DRAINAGE AREA.—372 square miles.

RECORDS AVAILABLE.—August 1, 1914, to September 30, 1925.

GAGE.—Water-stage recorder on right bank; inspected by Napoleon Lemire.

DISCHARGE MEASUREMENTS.—Made from cable near gage or by wading.

CHANNEL AND CONTROL.—Channel covered with coarse gravel and boulders. Control section is short distance below gage and practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 4.98 feet at 6 p. m. February 12 (discharge, 3,900 second-feet); minimum stage, 0.93 foot from 5 to 7 a. m. October 27 and at 7.30 a. m. November 10 (discharge, approximately 5 second-feet; water held back by dams).

1914–1925: Maximum stage recorded, 5.74 feet March 28, 1920 (discharge, 5,800 second-feet); minimum discharge, practically zero at various times during 1915 and 1916, when water was held back by dams.

ICE.—River freezes over below gage during some winters.

REGULATION.—Distribution of flow affected by operation of various power plants and storage reservoirs above station.

ACCURACY.—Stage-discharge relation practically permanent except when affected by ice. Rating curve well defined. Operation of water-stage recorder satisfactory throughout year. Daily discharge ascertained by use of discharge integrator. Records good.

Discharge measurements of Millers River at Erving, Mass., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 3	2.42	372	Mar. 20	4.16	2,080	Aug. 14	2.62	513
Jan. 26	[a] 3.21	249	Do	4.02	1,870	Do	2.68	520
Mar. 18	3.60	1,370	May 2	2.64	563	Aug. 22	2.46	408
Do	3.57	1,350	May 31	2.46	419	Do	2.46	411

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Millers River at Erving, Mass., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	205	72	186	67	39	990	2,200	790	430	520	365	140
2	235	76	205	63	106	1,100	1,640	730	550	440	360	126
3	190	39	192	53	78	1,220	1,220	590	600	330	400	158
4	186	99	200	34	67	950	1,020	740	570	235	300	325
5	94	94	190	56	65	860	850	670	390	196	315	280
6	49	91	265	54	39	890	860	630	335	315	305	77
7	110	94	122	53	47	1,120	800	570	98	280	255	265
8	158	70	162	54	19	1,160	680	500	375	220	315	340
9	116	9	265	53	40	1,120	600	405	156	192	106	255
10	122	88	570	45	40	1,140	630	290	260	285	345	295
11	148	96	650	39	253	1,080	730	430	280	225	375	290
12	35	95	530	72	2,060	1,260	510	550	200	116	375	230
13	78	76	395	48	3,100	1,240	700	630	170	260	340	112
14	132	86	370	70	2,000	1,480	870	670	59	184	305	385
15	116	69	495	111	1,580	1,660	920	490	275	194	490	285
16	126	47	265	144	1,440	1,340	1,140	500	275	215	160	255
17	112	114	260	63	1,160	1,180	1,160	470	310	184	385	335
18	99	142	355	39	1,020	1,200	1,000	540	310	144	270	225
19	20	108	225	69	800	1,480	790	510	310	65	255	240
20	124	104	210	116	650	1,660	1,340	480	170	138	245	138
21	110	52	290	118	660	1,700	1,300	425	164	140	235	220
22	132	58	400	69	425	1,420	1,400	370	265	300	198	186
23	92	245	220	118	730	1,240	1,320	285	170	990	83	162
24	94	460	170	182	1,120	1,040	1,280	270	225	580	290	148
25	76	480	130	113	1,180	1,040	1,120	405	205	320	184	168
26	11	330	281	93	1,150	960	1,100	470	290	425	166	164
27	104	220	169	74	1,240	930	1,020	485	220	970	144	53
28	92	325	121	109	1,240	900	880	420	112	1,100	116	148
29	104	156	150	139	------	1,040	840	530	360	1,100	98	144
30	108	118	123	192	------	1,600	700	220	650	780	90	154
31	64	------	100	72	------	1,900	------	340	------	680	210	------

NOTE.—Stage-discharge relation affected by ice Dec. 26 to Feb. 12; discharge based on gage heights corrected for effect of ice.

Monthly discharge of Millers River at Erving, Mass., for the year ending September 30, 1925

[Drainage area, 372 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	235	11	111	0.298	0.34
November	480	9	137	.368	.41
December	650	100	267	.718	.83
January	192	34	83.3	.224	.26
February	3,100	19	798	2.15	2.24
March	1,900	860	1,220	3.28	3.78
April	2,200	510	1,020	2.74	3.06
May	790	220	497	1.34	1.54
June	650	59	293	.788	.88
July	1,100	65	391	1.05	1.21
August	490	83	261	.702	.81
September	385	53	210	.565	.63
The year	3,100	9	438	1.18	15.99

SIP POND BROOK NEAR WINCHENDON, MASS.

LOCATION.—500 feet above highway bridge one-fourth mile below Massachusetts-New Hampshire State line, 1½ miles below outlet of Sip Pond, and 3 miles northwest of Winchendon, Worcester County.

DRAINAGE AREA.—18.8 square miles.

RECORDS AVAILABLE.—May 29, 1916, to September 30, 1925.

GAGE.—Water-stage recorder on left bank; inspected by Mary N. Greenall.

DISCHARGE MEASUREMENTS.—Made from footbridge or by wading.

CHANNEL AND CONTROL.—Channel fairly uniform in section in vicinity of gage. Control clearly defined.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 8.2 feet at 6 a. m. March 31 (discharge, 190 second-feet); minimum stage, 4.88 feet October 28 and 29 (discharge, 0.9 second-foot).

1916–1925: Maximum stage recorded, 9.34 feet May 23, 1919 (discharge, by extension of rating curve, 339 second-feet); minimum discharge, 0.1 second-foot, August 25, 1924.

ICE.—Channel usually remains open during winter; ice occasionally forms in float well, interfering with operation of water-stage recorder.

REGULATION.—The distribution of flow considerably affected by operation of mills at State Line, N. H., and by storage in Pearly and Sip Ponds.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 250 second-feet. Operation of water-stage recorder generally satisfactory throughout year. Daily discharge ascertained by applying rating table to mean daily gage height. Records good.

Discharge measurements of Sip Pond Brook near Winchendon, Mass., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 22	5.02	2.1	June 16	6.00	27.7	Sept. 10	5.12	3.0
Apr. 24	6.99	85	July 18	5.54	10.6			
June 2	6.12	33.2	Aug. 11	5.87	21.6			

Daily discharge, in second-feet, of Sip Pond Brook near Winchendon, Mass., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.5	1.0	12	3.5	3.4	66	143	41	23	14	21	8.0
2	5.3	1.0	12	3.5	3.1	66	116	38	28	13	8.5	6.3
3	4.5	1.0	8.8	3.6	3.1	66	92	38	29	14	14	4.3
4	4.9	1.0	5.5	3.5	3.2	51	80	41	26	5.3	12	3.2
5	2.7	3.1	7.8	2.8	3.2	46	66	33	20	12	13	3.1
6	4.9	6.2	14	2.6	3.2	48	63	27	18	17	16	2.6
7	4.2	2.8	7.5	2.4	3.2	51	46	27	8.2	9.2	10	3.9
8	3.4	1.9	13	2.4	3.6	46	46	27	19	8.8	10	6.7
9	1.9	1.8	22	2.4	4.5	70	43	25	20	9.0	4.5	3.9
10	1.8	1.5	19	2.5	18	66	41	14	17	11	8.0	3.1
11	1.7	1.3	19	2.6	60	74	43	27	17	9.0	12	2.9
12	1.6	1.3	18	2.9	51	96	43	31	14	4.2	9.2	6.0
13	1.5	2.8	21	2.8	57	100	48	38	8.5	7.5	10	3.8
14	1.4	2.6	14	2.6	74	104	43	31	3.4	8.0	10	5.7
15	1.2	2.1	17	2.6	96	116	46	29	7.8	7.8	9.0	3.5
16	1.2	2.1	16	2.9	104	104	63	29	12	8.0	4.2	3.1
17	1.1	1.9	15	2.9	88	92	60	23	16	8.5	6.9	2.9
18	1.0	1.8	10	2.7	88	84	48	27	12	5.3	9.2	5.6
19	1.1	1.8	13	2.6	74	104	41	24	9.2	3.1	8.2	3.2
20	1.1	1.7	11	2.4	57	134	54	22	8.2	6.7	10	3.1
21	1.0	1.5	13	2.4	51	108	54	22	2.9	9.2	11	2.9
22	1.0	1.6	6.9	2.1	46	92	60	20	9.2	20	7.5	2.7
23	1.0	5.7	7.0	2.0	60	84	77	19	9.8	26	3.4	2.6
24	1.0	4.8	7.8	2.0	74	74	77	11	7.8	16	7.5	2.7
25	1.0	5.9	7.8	2.2	88	66	70	23	10	13	9.8	5.5
26	1.0	13	9.2	2.2	88	63	63	23	12	17	8.0	5.6
27	1.0	10	7.5	2.3	92	57	63	24	12	38	9.5	3.2
28	.9	10	5.6	2.3	84	63	48	23	4.2	48	8.2	4.6
29	1.0	9.5	4.1	2.5	------	92	46	19	15	41	8.5	5.0
30	1.0	9.0	3.1	3.6	------	170	43	7.8	16	25	3.4	2.5
31	1.0	------	2.2	3.4	------	190	------	9.2	------	20	6.0	------

Monthly discharge of Sip Pond Brook near Winchendon, Mass., for the year ending September 30, 1925

[Drainage area, 18.8 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	5.5	0.9	2.03	0.108	0.12
November	13	1.0	3.72	.198	.22
December	22	2.2	11.3	.601	.69
January	3.6	2.0	2.68	.143	.16
February	104	3.1	49.3	2.62	2.73
March	190	46	85.2	4.53	5.22
April	143	41	60.9	3.24	3.62
May	41	7.8	25.6	1.36	1.57
June	29	3.4	13.8	.734	.82
July	48	3.1	14.7	.782	.90
August	21	3.4	9.31	.495	.57
September	8.0	2.5	4.07	.216	.24
The year	190	.9	23.4	1.24	16.86

PRIEST BROOK NEAR WINCHENDON, MASS.

LOCATION.—200 feet below highway bridge 3 miles above confluence with Millers River and 3½ miles west of Winchendon, Worcester County.

DRAINAGE AREA.—18.8 square miles.

RECORDS AVAILABLE.—May 25, 1916, to September 30, 1917; July 18, 1918, to September 30, 1925.

GAGE.—Sloping staff on left bank; read by Horace Huntoon and H. E. Bruce

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Channel above station is straight with fairly uniform section and gravel bottom. Control is formed by foundation of old dam 30 feet below gage.

EXTREMES OF DISCHARGE.—Maximum discharge, estimated 148 second-feet March 31; minimum discharge, estimated 0.4 second-foot several days in December and January.

1916–17; 1918–1925: Maximum discharge recorded, 700 second-feet (by extension of rating curve) March 28, 1919; minimum discharge, 0.4 second-foot several times during August, 1921, December, 1924, and January, 1925.

ICE.—Brook freezes over at gage, but usually remains open at control. Stage-discharge relation affected by ice.

REGULATION.—Flow not appreciably affected by regulation.

ACCURACY.—Stage-discharge relation for low water changed during high water in March. Rating curves well defined between 1 and 130 second-feet. Gage read to hundredths twice daily except for periods indicated in footnote to daily-discharge table. Daily discharge ascertained by applying rating table to mean daily gage height. Records fair.

Discharge measurements of Priest Brook near Winchendon, Mass., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 1	2.70	5.0	June 1	2.79	11.9	July 30	2.67	8.6
Jan. 23	2.40	4.3	July 18	2.60	6.4	Aug. 12	2.52	4.8
Apr. 30	3.22	33.9	Do	2.58	5.5	Sept. 10	2.39	2.5
June 1	2.79	11.3	July 30	2.68	9.0			

Daily discharge, in second-feet, of Priest Brook near Winchendon, Mass., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	1.8	5.8	1.1	1.5	102	100	37	11	21	6.5	1.1
2	3.0	1.8	4.6	1.5	1.3	87	100	42	27	14	7.0	1.0
3	2.7	2.0	2.2	1.5	1.4	68	100	34	21	7.2	5.4	.9
4	1.7	2.0	1.3	1.5	1.4	64	60	32	17	8.0	4.0	1.8
5	1.4	2.0	1.5	1.5	1.3	61	60	30	21	7.2	8.0	2.2
6	2.0	1.8	1.6	1.5	1.3	43	60	34	21	5.6	4.2	1.4
7	1.8	2.1	1.5	1.5	1.3	41	40	30	10	5.6	4.4	4.8
8	.8	2.1	6.4	1.5	1.2	57	40	27	6.5	7.2	4.2	7.0
9	20	2.6	35	1.5	1.1	62	40	27	7.2	6.0	4.4	4.4
10	.6	2.7	53	1.4	.9	62	40	11	8.0	5.6	7.7	2.4
11	1.4	2.9	53	1.4	.8	62	40	14	14	5.2	12	1.8
12	2.6	2.2	20	1.3	47	67	40	30	8.0	6.0	5.6	1.8
13	2.0	2.1	13	1.1	84	75	40	34	8.0	5.0	11	2.2
14	1.8	2.2	7.4	1.0	99	115	65	27	8.0	2.9	7.5	8.0
15	1.6	2.6	4.6	.9	115	115	65	26	8.5	3.7	8.0	4.6
16	1.4	2.6	2.8	.7	112	107	65	21	7.2	4.0	5.6	5.6
17	1.3	2.6	1.9	.7	99	112	65	26	8.0	3.2	5.2	6.0
18	1.3	2.4	1.4	.4	89	94	65	18	7.2	2.7	3.7	4.4
19	1.1	2.6	.9	.4	87	99	65	27	6.5	3.2	3.6	3.9
20	1.6	2.4	.7	.4	72	99	65	28	7.2	3.2	3.7	4.8
21	1.8	2.4	.6	.4	47	90	65	26	19	3.2	3.7	3.0
22	2.0	5.8	.5	.7	45	94	80	13	15	15	3.4	2.6
23	2.0	21	.5	1.4	45	90	80	12	18	39	2.9	5.2
24	2.1	23	.4	1.5	58	90	80	11	21	11	2.9	3.7
25	1.8	21	.4	1.7	87	90	65	20	27	10	3.2	5.8
26	2.0	16	.5	1.8	99	87	65	17	25	21	3.2	2.9
27	2.0	11	.5	1.5	94	78	65	15	8.5	39	3.7	2.6
28	1.7	5.8	.6	1.5	94	75	45	16	5.6	26	3.6	1.3
29	2.0	4.6	.8	1.6	-------	94	45	14	14	14	3.3	7.5
30	1.8	5.1	.9	1.6	-------	121	36	26	27	5.6	4.4	4.2
31	1.8	-------	1.0	1.6	-------	148	-------	10	-------	7.2	1.5	-------

NOTE.—Stage-discharge relation affected by ice Jan. 5–13; discharge based on gage heights corrected for effect of ice. Gage-height record missing or questionable Nov. 26 to Dec. 4, Dec. 13–24, Jan. 14–23, and Mar. 29 to Apr. 29; discharge estimated from occasional readings and by comparison with records in adjacent drainage basins.

Monthly discharge of Priest Brook near Winchendon, Mass., for the year ending September 30, 1925

[Drainage area, 18.8 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	20	6	2.94	0.156	0.18
November	23	1.8	5.37	.286	.32
December	53	.4	7.27	.387	.45
January	1.8	.4	1.23	.065	.07
February	115	.8	49.5	2.63	2.74
March	148	41	85.5	4.55	5.25
April	100	36	61.4	3.26	3.64
May	42	10	23.7	1.26	1.45
June	27	5.6	13.7	.729	.81
July	39	2.7	10.2	.542	.62
August	12	1.5	5.08	.270	.31
September	8.0	.9	3.63	.193	.22
The year	148	.4	22.3	1.19	16.06

EAST BRANCH OF TULLY RIVER NEAR ATHOL, MASS.

LOCATION.—At highway bridge one-half mile below mouth of Lawrence Brook and 3½ miles north of Athol, Worcester County.

DRAINAGE AREA.—50.2 square miles.

RECORDS AVAILABLE.—June 13, 1916, to September 30, 1925.

GAGE.—Vertical staff on downstream side of right abutment; read by W. A. Thompson.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Two channels under bridge, one channel above; 200 feet below gage the channel is divided by an island. Control well defined by rocks and boulders near head of island.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 3.40 feet at 8 a. m. February 13 (discharge, by extension of rating curve, 560 second-feet); minimum stage, 0.30 foot at 5 p. m. September 1 (discharge, 3.5 second-feet).

1916–1925: Maximum stage recorded, 4.2 feet March 29, 1920 (discharge, by extension of rating curve, 1,000 second-feet); minimum stage, 0.22 foot several times during August and September, 1921 (discharge, 2.2 second-feet).

ICE.—River freezes slightly along banks, but stage-discharge relation is seldom affected.

DIVERSIONS.—Half a mile below station water is at times diverted through a canal into Packard Pond. The following measurements of this diversion were made: May 1, 1925, 12.2 second-feet; August 13, 1925, 1.3 second-feet.

REGULATION.—Flow not seriously affected by regulation.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 300 second-feet. Gage read to hundredths twice daily, except during winter when it was read once daily. Daily discharge ascertained by applying rating table to mean daily gage height. Records good.

The following discharge measurements were made:

May 1, 1925: Gage height, 1.84 feet; discharge, 109 second-feet.

August 15, 1925: Gage height, 0.79 foot; discharge, 16.8 second-feet.

August 15, 1925: Gage height, 0.80 foot; discharge, 17.2 second-feet.

Daily discharge, in second-feet, of East Branch of Tully River near Athol, Mass., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	6.4	30	11	14	139	330	109	50	82	39	3.6
2	38	6.4	25	7.7	12	96	245	113	72	51	34	3.8
3	27	6.0	23	7.7	12	137	198	103	90	32	29	4.2
4	21	6.0	24	7.7	12	111	170	93	78	21	21	5.3
5	19	6.0	22	8.2	13	103	158	84	59	19	17	5.1
6	13	6.0	25	8.7	12	107	150	77	41	16	15	5.1
7	12	5.7	39	9.7	12	162	123	71	32	16	15	11
8	11	6.0	48	9.7	12	200	109	65	21	22	14	24
9	10	6.0	99	11	13	218	98	62	19	16	15	21
10	9.0	6.0	172	9.7	18	218	94	59	20	16	24	18
11	9.0	6.0	137	11	55	222	104	62	16	15	23	16
12	9.0	6.0	104	9.2	312	277	111	102	13	12	17	10
13	8.0	6.0	110	9.7	540	277	109	99	11	9.5	17	9.7
14	7.7	6.4	68	9.2	416	283	117	90	11	8.4	24	15
15	7.7	6.4	72	10	320	354	139	82	12	8.2	34	17
16	7.7	6.4	43	8.2	256	286	195	74	19	6.8	29	17
17	7.5	6.6	39	9.2	231	248	172	72	31	8.4	22	19
18	7.3	5.7	37	8.7	204	227	139	73	29	8.0	16	16
19	7.3	5.1	39	8.7	160	250	137	62	24	7.1	14	13
20	7.3	5.1	39	9.2	117	368	172	53	18	6.8	15	11
21	6.8	5.1	32	9.7	104	320	174	46	15	6.8	11	9.5
22	6.8	6.8	23	10	106	274	200	46	13	12	11	9.2
23	6.6	53	18	10	126	227	218	47	17	77	9.2	8.2
24	6.6	104	16	11	187	193	206	45	20	56	7.7	7.3
25	6.8	102	18	11	262	174	183	61	17	42	7.1	6.8
26	6.8	80	16	11	253	168	174	71	36	65	6.8	6.0
27	6.8	68	15	11	323	152	160	64	38	95	6.4	6.6
28	6.8	48	13	12	218	164	137	63	34	99	5.1	6.4
29	6.6	39	11	12	-------	215	118	51	52	93	4.5	6.0
30	6.4	30	9.5	14	-------	334	104	44	114	66	4.5	6.0
31	6.4	-------	11	15	-------	390	-------	47	-------	47	4.0	-------

Monthly discharge of East Branch of Tully River at Athol, Mass., for the year ending September 30, 1925

[Drainage area, 50.2 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	38	6.4	11.0	0.219	0.25
November	104	5.1	21.9	.436	.49
December	172	9.5	44.4	.884	1.02
January	15	7.7	10.0	.199	.23
February	540	12	154	3.07	3.20
March	390	96	222	4.42	5.10
April	330	94	158	3.15	3.51
May	113	44	70.6	1.41	1.63
June	114	11	34.1	.679	.76
July	99	6.8	33.5	.667	.77
August	39	4.0	16.5	.329	.38
September	24	3.6	10.6	.211	.24
The year	540	3.6	65.0	1.29	17.58

MOSS BROOK AT WENDELL DEPOT, MASS.

LOCATION.—One-fourth mile above confluence with Millers River and one-fourth mile from Wendell Depot, Franklin County.

DRAINAGE AREA.—12.2 square miles.

RECORDS AVAILABLE.—June 7, 1916, to September 30, 1925. From June 4 to October 16, 1909, records were obtained at station near mouth and from April 25 to August 27, 1910, at a weir a short distance below present site.

GAGE.—Sloping staff gage on left bank; read by M. C. Eno.

DISCHARGE MEASUREMENTS.—Made by wading.

CHANNEL AND CONTROL.—Channel composed principally of ledge rock and boulders. Control formed by large boulders 25 feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 3.60 feet at 5 p. m. February 12 (discharge, by extension of rating curve, 161 second-feet); minimum stage, 0.97 foot at 5 p. m. September 2 (discharge, 1.3 second-feet).

1916–1925: Maximum discharge recorded 190 second-feet (by extension of rating curve) March 28, 1919, and June 22, 1922; minimum discharge, 0.7 second-foot August 19, 1923.

ICE.—Stage-discharge relation affected by ice for short periods.

REGULATION.—Flow not affected by regulation.

ACCURACY.—Stage-discharge relation subject to changes at infrequent intervals. Rating curves fairly well defined below 60 second-feet. Gage read to hundredths twice daily, except from November 3 to February 21, when it was read once daily. Daily discharge ascertained by applying rating table to mean daily gage height with corrections for effect of ice during some days in winter. Records fair.

Discharge measurements of Moss Brook at Wendell Depot, Mass., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 26	1.18	3.4	May 1	1.96	28.2	Aug. 14	1.55	11.7
Apr. 25	2.05	30.9	May 31	1.76	19.7	Do	1.57	11.1
Apr. 26	2.09	36.0	June 1	1.71	16.6			
Do	2.04	33.9	July 29	1.94	27.2			

Daily discharge, in second-feet, of Moss Brook at Wendell Depot, Mass., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	2.6	14	2.9	2.6	140	60	26	17	11	8.6	1.4
2	13	2.6	13	2.5	2.9	150	57	28	19	8.1	9.8	1.4
3	8.0	2.6	11	1.8	3.3	122	43	25	15	6.0	7.6	2.2
4	6.6	2.7	8.3	4.5	3.3	43	37	23	11	5.4	6.2	4.0
5	6.0	2.7	7.6	2.9	3.1	24	31	20	9.2	5.8	4.6	3.5
6	5.6	2.7	10	3.3	2.9	28	25	17	7.6	4.6	4.6	2.3
7	5.3	2.7	16	3.3	2.7	23	18	15	6.4	4.0	5.0	5.0
8	5.0	2.7	16	3.3	3.8	50	5.4	12	5.0	11	3.8	10
9	4.5	2.7	39	2.7	5.0	50	23	13	5.4	8.1	3.8	5.8
10	4.1	2.7	46	2.7	7.8	53	23	13	6.4	6.2	8.1	4.4
11	3.8	2.8	46	2.9	7.2	57	31	17	5.0	5.8	11	3.0
12	3.8	3.2	53	2.7	152	80	27	23	4.3	4.6	7.6	2.3
13	3.4	3.3	46	2.7	150	100	24	21	3.5	3.1	4.8	2.2
14	3.3	3.4	28	2.7	122	80	37	16	3.3	2.2	8.4	10
15	3.3	3.2	22	2.0	88	80	43	17	4.3	2.4	5.8	6.2
16	3.3	3.3	17	1.8	68	68	50	16	11	2.2	4.8	7.6
17	3.4	3.1	14	1.8	57	53	37	16	8.9	2.3	4.3	8.9
18	3.2	2.7	10	3.8	37	57	37	14	7.6	2.3	4.1	6.4
19	3.2	2.5	11	3.3	31	68	34	12	5.8	2.1	3.6	4.3
20	3.2	2.5	12	3.1	26	92	68	10	4.4	2.0	2.9	3.8
21	3.2	2.7	10	2.7	25	96	80	9.5	6.6	2.0	3.5	2.9
22	3.1	3.2	9.2	1.8	24	60	72	9.2	4.8	2.8	3.2	2.4
23	2.9	6.2	8.9	2.2	24	43	60	9.2	3.5	21	2.8	2.4
24	2.9	30	7.8	2.4	68	34	50	15	2.7	9.8	2.4	2.2
25	3.1	18	8.3	2.9	72	34	37	19	7.9	4.0	2.2	2.3
26	2.9	17	7.2	2.7	72	40	31	17	12	17	2.0	2.1
27	2.9	16	6.6	3.8	72	37	27	15	9.2	26	1.8	2.0
28	2.8	16	5.6	3.3	113	40	25	13	8.1	26	1.7	2.6
29	2.7	15	4.8	2.9	---	60	24	11	8.1	29	1.6	2.5
30	2.8	10	3.8	2.7	-------	88	21	12	15	17	1.5	2.2
31	2.7	-------	3.3	2.7	-------	76	-------	20	-------	8.6	1.4	------

NOTE.—Stage-discharge relation affected by débris on control Oct. 11, 14, and Nov. 10, and by ice Dec. 5–17, 23–24, and 27–30; discharge based on gage heights corrected for effect of débris and ice.

Monthly discharge of Moss Brook at Wendell Depot, Mass., for the year ending September 30, 1925

[Drainage area, 12.2 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	21	2.7	4.68	0.384	0.44
November	30	2.5	6.36	.521	.58
December	53	3.3	16.6	1.36	1.57
January	4.5	1.8	2.80	.230	.26
February	152	2.6	44.5	3.65	3.80
March	150	23	65.4	5.36	6.18
April	80	5.4	37.9	3.11	3.47
May	28	9.2	16.3	1.34	1.54
June	19	2.7	7.93	.650	.73
July	29	2.0	8.46	.693	.80
August	11	1.4	4.63	.379	.44
September	10	1.4	3.94	.323	.36
The year	150	1.4	18.1	1.48	20.17

DEERFIELD RIVER AT CHARLEMONT, MASS.

LOCATION.—1 mile below Charlemont, Franklin County.

DRAINAGE AREA.—362 square miles.

RECORDS AVAILABLE.—June 19, 1913, to September 30, 1925.

GAGE.—Water-stage recorder on left bank; inspected by E. F. Spear.

DISCHARGE MEASUREMENTS.—Made from cable or by wading.

CHANNEL AND CONTROL.—Channel covered with coarse gravel and boulders; fairly uniform section. Control practically permanent.

EXTREMES OF DISCHARGE.—Maximum discharge during year, approximately 9,330 second-feet at 9 a. m. February 12 (stage-discharge relation affected by ice); minimum stage during year from water-stage recorder, 1.57 feet at 2.30 a. m. November 17 (discharge, 63 second-feet; water held back by dams at power stations above gage).

1913–1925: Maximum stage recorded, 15.7 feet July 8, 1915 (discharge, by extension of rating curve, 45,000 second-feet); minimum stage, 0.70 foot June 17, 1921 (discharge, practically nil; water held back by dams).

ICE.—River usually frozen over during greater part of winter; ice jams occasionally form below gage causing several feet of backwater.

REGULATION.—Flow regulated by storage reservoirs at Somerset and Whitingham, Vt. Several power plants above the station cause diurnal fluctuation.

ACCURACY.—Stage-discharge relation practically permanent, except when affected by ice. Rating curve well defined. Operation of water-stage recorder satisfactory throughout year. Daily discharge during open-water period ascertained by discharge integrator; during remainder of year by applying rating table to mean daily gage height from recorder sheets with corrections for effect of ice. Records good.

Discharge measurements of Deerfield River at Charlemont, Mass., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 27	a 7.90	1,010	May 3	2.46	497	Aug. 20	2.95	827
Jan. 28	a 6.68	333	Aug. 20	3.10	1,030			

a Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Deerfield River at Charlemont, Mass., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,340	760	530	930	158	395	1,460	1,280	680	495	345	830
2	370	355	680	920	380	850	1,160	830	850	435	220	830
3	375	670	610	930	445	890	1,160	530	650	395	570	860
4	210	455	670	740	420	830	850	780	490	97	680	880
5	126	550	720	810	370	770	510	1,040	425	94	740	265
6	430	520	740	870	430	800	960	990	142	520	820	76
7	650	400	455	910	200	590	940	1,000	250	485	830	630
8	660	86	670	900	90	480	900	980	620	710	560	780
9	730	128	1,560	780	400	820	910	770	880	570	204	800
10	750	395	870	270	540	1,000	870	360	860	600	550	860
11	640	275	570	107	1,490	1,520	700	1,160	710	270	760	860
12	265	465	500	720	6,520	1,560	375	1,200	710	134	760	820
13	590	430	425	780	2,630	1,060	780	980	500	500	810	465
14	800	280	200	670	940	1,360	840	940	290	660	1,060	1,360
15	890	106	580	570	790	1,700	1,320	910	590	720	740	670
16	910	70	940	435	770	1,180	1,360	490	1,000	770	435	730
17	880	340	1,020	184	790	990	990	275	770	800	680	580
18	660	475	840	90	740	1,060	630	760	840	310	820	540
19	380	410	800	260	720	1,740	560	750	745	112	810	395
20	740	350	530	445	760	1,600	650	680	530	545	820	127
21	900	350	138	420	430	1,060	980	630	108	800	720	590
22	910	385	550	380	450	880	1,420	530	590	1,000	750	820
23	890	2,100	810	250	750	1,120	1,580	440	770	890	455	720
24	920	770	880	250	1,860	1,060	1,380	240	750	390	720	670
25	690	475	445	90	1,360	1,080	940	670	910	224	820	640
26	240	475	580	490	870	1,180	800	740	780	97	770	740
27	620	190	750	570	680	1,340	950	660	430	2,250	840	370
28	890	240	590	550	550	4,450	1,000	790	470	1,000	870	760
29	910	196	720	470	-------	2,550	960	770	690	750	610	870
30	880	166	870	355	-------	2,200	980	275	550	450	152	730
31	880	-------	930	158	-------	1,800	-------	162	-------	345	680	-------

NOTE.—Stage-discharge relation affected by ice Dec. 21 to Jan. 6 and Jan. 15 to Feb. 13; discharge based on gage heights corrected for effect of ice by discharge measurements, observer's notes, weather records, and comparisons with power-plant records at New England Power Co.'s plant No. 4 at Shelburne Falls.

Monthly discharge of Deerfield River at Charlemont, Mass., for the year ending September 30, 1925

[Drainage area, 362 square miles]

Month	Observed discharge in second-feet			Gain or loss in storage at Somerset and Davis Bridge Reservoirs[a] (millions of cubic feet)	Discharge corrected for storage (second-feet)		Run-off in inches
	Maximum	Minimum	Mean		Mean	Per square mile	
October	1,340	126	681	−1,046	290	0.800	0.92
November	2,100	70	429	+110	471	1.30	1.45
December	1,560	138	683	−242	593	1.64	1.89
January	930	90	526	−969	164	.453	.52
February	6,520	90	948	+1,495	1,570	4.34	4.52
March	4,450	395	1,290	+2,344	2,160	5.97	6.88
April	1,580	375	964	+1,404	1,510	4.17	4.65
May	1,280	162	729	−9	726	2.01	2.32
June	1,000	108	619	−478	435	1.20	1.34
July	2,250	94	562	+7	565	1.56	1.80
August	1,060	152	665	−1,136	241	.666	.77
September	1,360	76	676	−676	415	1.15	1.28
The year	6,520	70	730	+804	755	2.09	28.34

[a] Regulation by Davis Bridge Reservoir became effective Feb. 11, 1924.

WARE RIVER AT GIBBS CROSSING, MASS.

LOCATION.—Between highway and electric railway bridges at Gibbs Crossing, Hampshire County, three-quarters of a mile above mouth of Beaver Brook, and 3 miles below Ware.

DRAINAGE AREA.—201 square miles.

RECORDS AVAILABLE.—August 20, 1912, to September 30, 1925.

GAGE.—Water-stage recorder on right bank; inspected by Marion G. Moore.

DISCHARGE MEASUREMENTS.—Made from electric railway bridge or by wading.

CHANNEL AND CONTROL.—Channel rough and subject to growth of aquatic vegetation during summer. Control free from weeds and at ordinary stages well defined at section near gage; at high stages control is probably at dam at Thorndike, 4 miles below gage.

EXTREMES OF DISCHARGE.—Maximum stage during the year, from water-stage recorder, 4.18 feet at 2.30 p. m. February 12 (discharge, 1,620 second-feet); minimum stage, 1.27 feet at 11 a. m. November 1 (discharge, 15 second-feet; water held back by dams).

1912–1925: Maximum stage recorded 6.25 feet April 8, 1924 (discharge, 2,950 second-feet); minimum discharge, 5 second-feet October 26, 1914 (water held back by dams).

ICE.—River usually freezes over, and stage-discharge relation is affected by ice for short periods.

REGULATION.—Flow affected by operation of mills at Ware, which at low stages causes a large variation in discharge on days when mills are in operation, and a low discharge on Sundays and holidays.

ACCURACY.—Stage-discharge relation apparently permanent throughout year except when affected by ice. Rating curve well defined. Operation of water-stage recorder satisfactory. Daily discharge ascertained by discharge integrator with corrections for effect of ice during winter. Records good.

Discharge measurements of Ware River at Gibbs Crossing, Mass., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 11	[a] 2.52	51	May 27	2.39	250	Sept. 24	1.37	19.2
Feb. 3	[a] 2.83	89	May 28	2.57	346			

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Ware River at Gibbs Crossing, Mass., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	106	24	162	125	25	355	760	350	255	260	80	74
2	110	16	91	94	57	1,220	660	330	280	196	92	53
3	92	26	87	80	80	810	570	325	280	138	144	44
4	48	31	84	60	80	550	475	355	215	36	160	55
5	23	40	69	78	84	420	440	340	175	70	112	54
6	67	56	60	92	66	445	420	285	126	144	104	80
7	96	80	72	64	30	540	360	270	74	172	94	112
8	110	52	94	45	23	485	345	240	168	196	76	194
9	70	18	182	28	39	480	305	150	164	186	39	144
10	82	50	405	52	100	395	260	188	152	100	118	160
11	28	50	305	100	475	380	310	300	104	110	144	88
12	18	43	175	185	1,500	530	320	320	75	88	108	54
13	17	41	175	125	1,290	520	405	295	46	114	102	31
14	35	42	165	76	870	550	400	260	39	124	85	122
15	70	36	340	55	670	810	485	235	134	86	55	120

Daily discharge, in second-feet, of Ware River at Gibbs Crossing, Mass., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	70	20	660	57	650	740	600	200	124	84	29	146
17	68	42	170	29	520	570	520	220	118	96	86	100
18	30	50	120	19	395	610	440	285	118	66	128	120
19	17	46	122	23	305	860	400	225	82	23	140	92
20	34	38	105	70	265	1,270	860	200	57	68	75	52
21	34	46	204	80	212	1,020	840	215	59	35	53	150
22	72	32	320	80	220	810	680	186	114	72	24	104
23	76	134	310	59	295	660	580	110	128	75	20	89
24	42	255	218	45	395	540	510	98	79	71	21	64
25	24	230	90	27	385	490	460	235	102	41	35	65
26	16	188	100	90	420	490	425	285	99	39	77	60
27	41	39	94	84	400	460	470	235	53	202	64	20
28	49	106	60	74	335	440	385	205	102	138	65	52
29	70	91	84	84	-------	510	345	166	180	148	45	62
30	60	88	105	84	-------	670	330	114	260	152	18	63
31	28	-------	125	45	-------	810	-------	185	-------	128	56	-------

NOTE.—Stage-discharge relation affected by ice Dec. 21 to Feb. 11; discharge for this period based on gage heights corrected for effect of ice.

Monthly discharge of Ware River at Gibbs Crossing, Mass., for the year ending September 30, 1925

[Drainage area, 201 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	110	16	54.9	0.273	0.31
November	255	16	67.0	.333	.37
December	660	60	173	.861	.99
January	185	19	71.3	.355	.41
February	1,500	23	364	1.81	1.88
March	1,270	355	627	3.12	3.60
April	860	260	479	2.38	2.66
May	355	98	239	1.19	1.37
June	280	39	132	.657	.73
July	260	23	112	.557	.64
August	160	18	79.0	.393	.45
September	194	20	87.5	.435	.49
The year	1,500	16	206	1.02	13.90

SWIFT RIVER AT WEST WARE, MASS.

LOCATION.—1,000 feet below old dam opposite West Ware station of Boston & Albany Railroad, Hampshire County, 6 miles downstream from Enfield, and 3 miles below confluence of East and West Branches of Swift River.

DRAINAGE AREA.—186 square miles.

RECORDS AVAILABLE.—July 15, 1910, to September 30, 1925.

GAGE.—Water-stage recorder on left bank; inspected by H. C. Davis.

DISCHARGE MEASUREMENTS.—Made from cable or by wading.

CHANNEL AND CONTROL.—Gravel and alluvial deposits; some aquatic vegetation in channel during summer. Control has shifted slightly at various times, the greatest change occurring during high water of April 3, 1916, when dam above gage was washed out; at high stages control is probably at dam at Bondsville, 4 miles below gage.

EXTREMES OF DISCHARGE.—Maximum discharge during year, approximately 1,460 second-feet February 13 and 14 (stage-discharge relation affected by

ice); minimum discharge, about 25 second-feet January 5 (stage-discharge relation affected by ice).

1910–1925: Maximum discharge recorded, 2,390 second-feet (by extension of rating curve) April 7, 1923; minimum discharge, 22 second-feet September 22, 1914.

ICE.—River usually freezes over, and stage-discharge relation is affected by ice for short periods during most winters.

REGULATION.—Operation of mills at Enfield 6 miles above station has at times affected distribution of flow at low and medium stages; not seriously affected during present year.

ACCURACY.—Stage-discharge relation permanent. Rating curves well defined above 100 second-feet. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying rating table to mean daily gage height determined by inspection of gage-height graph, with corrections for effect of ice. Records good.

Discharge measurements of Swift River at West Ware, Mass., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 10	[a] 2.55	40.6	May 25	2.75	241	Sept. 24	2.28	116
Feb. 4	[a] 2.40	50	May 26	2.88	273			

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Swift River at West Ware, Mass., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	69	53	84	47	48	440	575	330	186	186	245	82
2	90	54	82	35	44	650	560	317	219	169	245	80
3	80	56	72	27	47	575	500	305	243	158	204	80
4	74	56	71	26	56	530	455	292	241	144	171	85
5	74	59	78	25	57	455	410	280	212	140	154	120
6	71	56	76	30	56	485	367	267	201	130	144	144
7	62	54	86	32	44	515	342	250	186	128	140	210
8	59	50	84	33	35	515	330	232	167	156	130	270
9	57	50	134	30	44	500	305	217	163	144	124	262
10	56	57	190	35	76	455	292	208	169	124	132	238
11	60	53	179	38	400	410	305	221	150	122	122	199
12	59	51	150	53	860	470	317	292	134	110	126	165
13	56	54	146	35	1,460	500	330	292	116	105	124	144
14	54	57	114	44	1,460	545	367	275	116	98	140	136
15	54	56	161	94	1,250	650	425	260	122	96	148	136
16	60	60	216	65	1,060	650	500	280	118	94	140	150
17	63	59	110	32	860	590	500	280	109	92	130	148
18	56	76	90	26	715	560	440	275	101	92	122	144
19	54	54	88	44	555	635	425	260	92	83	122	140
20	54	48	86	51	455	745	620	238	85	92	118	130
21	54	48	150	51	330	745	682	217	83	76	109	128
22	54	47	205	50	262	680	680	186	92	85	103	110
23	56	88	225	88	255	590	620	179	91	163	105	110
24	57	112	130	71	305	515	545	186	91	182	107	107
25	57	116	86	39	367	455	485	215	92	163	101	103
26	56	112	92	36	395	425	455	241	116	161	94	98
27	54	98	80	54	355	410	425	236	110	226	83	94
28	53	90	67	114	410	410	380	221	110	395	85	98
29	53	80	47	90	-------	440	342	190	128	355	85	94
30	51	84	44	78	-------	500	317	186	171	305	83	92
31	51	-------	45	59	-------	560	-------	184	-------	255	83	-------

NOTE.—Stage-discharge relation affected by ice Dec. 21 to Feb. 19; discharge based on gage heights corrected for effect of ice.

Monthly discharge of Swift River at West Ware, Mass., for the year ending September 30, 1925

[Drainage area, 186 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	90	51	59.9	0.322	0.37
November	116	47	66.3	.356	.40
December	225	44	112	.602	.69
January	114	25	49.4	.266	.31
February	1,460	35	438	2.35	2.45
March	745	410	536	2.88	3.32
April	682	292	443	2.38	2.66
May	330	179	246	1.32	1.52
June	243	83	140	.753	.84
July	395	76	156	.839	.97
August	245	83	130	.699	.81
September	270	80	137	.737	.82
The year	1,460	25	208	1.12	15.16

QUABOAG RIVER AT WEST BRIMFIELD, MASS.

LOCATION.—At 2-span highway bridge near West Brimfield station of Boston & Albany Railroad, Hampden County, one-third mile above mouth of Blodgett Mill Brook.

DRAINAGE AREA.—150 square miles.

RECORDS AVAILABLE.—August 23, 1909, to September 30, 1925.

GAGE.—Water-stage recorder on left bank, upstream side of bridge; inspected by Mrs. G. G. Allen.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed covered with boulders, gravel, and alluvial deposits. Slight shifts in control have occurred at various times.

EXTREMES OF DISCHARGE.—Maximum discharge recorded during year, 1,140 second-feet at 10 p. m. March 1; minimum discharge, 12 second-feet at 4.30 p. m. November 9 (water held back by dams).

1909–1925: Maximum discharge recorded, 1,980 second-feet March 17 1920; minimum discharge, 2.5 second-feet September 17 and 18, 1910 (water held back by dams).

ICE.—Ice usually forms on rocks and along banks, and stage-discharge relation is affected during most winters.

REGULATION.—Flow affected by operation of power plants at several places above gage. At low stages this causes a large variation in discharge on days when mills are in operation and a low discharge on Sundays and holidays.

ACCURACY.—Stage-discharge relation probably permanent. Rating curve well defined. Operation of water-stage recorder satisfactory. Daily discharge for open-water periods ascertained by discharge integrator and during winter by applying rating table to mean daily gage height corrected for effect of ice. Records good.

Discharge measurements of Quaboag River at West Brimfield, Mass., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 9	a2.20	41.2	Feb. 2	a2.83	50	Sept. 23	1.80	22.1
Do	a2.87	68	May 23	2.24	88			

a Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Quaboag River at West Brimfield, Mass., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	80	39	84	53	48	367	435	264	162	109	90	38
2	67	26	90	58	48	678	427	264	175	102	88	37
3	71	35	86	53	48	524	412	261	173	92	78	37
4	62	30	75	48	46	470	396	261	162	71	69	34
5	66	35	76	54	47	435	371	226	148	88	67	40
6	71	34	78	50	47	439	356	212	129	82	69	26
7	58	37	84	53	44	427	342	207	129	84	76	48
8	60	32	98	52	59	412	309	193	122	109	94	62
9	58	16	120	48	100	385	289	165	115	86	88	46
10	54	38	134	52	170	371	283	175	120	73	104	50
11	48	28	143	50	423	342	280	207	102	73	82	46
12	53	33	165	54	833	332	252	229	90	71	71	43
13	47	30	134	53	753	315	274	223	84	73	78	37
14	46	34	104	48	678	360	258	207	80	64	92	62
15	50	29	178	46	632	385	252	199	86	62	80	50
16	52	30	332	56	566	378	223	188	82	64	76	59
17	52	44	243	58	507	371	223	165	76	64	78	80
18	44	42	152	56	462	396	210	162	78	47	69	64
19	38	33	122	58	412	524	252	160	71	56	62	43
20	47	42	115	59	360	537	332	155	62	53	64	39
21	40	34	124	62	339	537	312	145	76	51	53	56
22	42	40	175	66	296	520	309	131	75	60	50	40
23	46	129	201	59	280	491	289	131	56	56	42	39
24	42	115	150	60	277	462	280	143	62	46	64	40
25	38	104	107	59	261	446	274	168	71	43	46	53
26	37	96	88	64	264	427	258	162	73	44	43	54
27	48	90	84	59	196	415	235	152	60	113	41	59
28	44	90	76	52	240	423	226	150	129	107	40	69
29	42	90	78	53	------	396	212	152	131	78	57	51
30	40	80	67	47	------	423	199	155	148	67	35	66
31	40	------	60	52	------	435	------	162	------	66	46	------

NOTE.—Stage-discharge relation affected by ice Dec. 1–8 and Dec. 20 to Feb. 16; discharge based on gage heights corrected for effect of ice.

Monthly discharge of Quaboag River at West Brimfield, Mass., for the year ending September 30, 1925

[Drainage area, 150 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	80	37	51.1	0.341	0.39
November	129	16	51.2	.341	.38
December	332	60	123	.820	.95
January	66	46	54.6	.364	.42
February	833	44	301	2.01	2.09
March	678	315	433	2.89	3.33
April	435	199	292	1.95	2.18
May	264	131	186	1.24	1.43
June	175	60	104	.693	.77
July	113	43	72.7	.485	.56
August	104	35	66.8	.445	.51
September	80	26	48.9	.326	.36
The year	833	16	148	.987	13.37

WESTFIELD RIVER AT KNIGHTVILLE, MASS.

LOCATION.—At single-span steel highway bridge known locally as Pitcher Bridge, in Knightville, town of Huntington, Hampshire County, 1 mile north of outlet of Norwich Lake, and 3 miles above confluence with Middle Branch of Westfield River.

DRAINAGE AREA.—162 square miles.

RECORDS AVAILABLE.—August 26, 1909, to September 30, 1925.

GAGE.—Chain gage attached to downstream side of highway bridge; read by Russell Burr.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Channel rough, covered with boulders and ledge rock. Control practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 9.06 feet at 7.30 a. m. July 27 (discharge, by extension of rating curve, 7,860 second-feet); minimum stage, 0.96 foot at 6 p. m. July 20 (discharge, 22 second-feet).

1909–1925: Maximum stage recorded, 10.8 feet April 7, 1924 (discharge, by extension of rating curve, 10,500 second-feet); minimum stage, 0.60 foot August 10, 1913 (discharge, 4 second-feet).

ICE.—Ice usually forms in river early in winter and seriously affects stage-discharge relation.

REGULATION.—Flow not seriously affected by regulation.

ACCURACY.—Stage-discharge relation practically permanent except when affected by ice, although individual discharge measurements have at times appeared erratic, the rough and irregular channel causes difficulty in obtaining accurate discharge measurements. Rating curve fairly well defined below 3,500 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying rating table to mean daily gage height, with corrections for effect of ice during winter. Records good.

The following discharge measurements were made:

January 30, 1925: Gage height, 1.96 feet;[6] discharge, 70 second-feet.

May 9, 1925: Gage height, 1.98 feet; discharge, 213 second-feet.

Daily discharge, in second-feet, of Westfield River at Knightville, Mass., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,280	63	134	76	68	310	685	595	183	132	310	32
2	390	63	130	74	71	685	567	485	292	93	330	30
3	240	60	128	79	68	595	460	370	240	77	196	39
4	186	57	124	82	65	412	435	350	188	57	132	41
5	139	54	134	92	64	330	390	310	128	79	257	41
6	126	53	184	95	65	435	350	257	95	70	175	38
7	117	51	350	93	67	685	350	240	82	73	240	33
8	104	50	390	95	87	715	330	210	73	156	240	85
9	97	50	1,120	92	130	685	310	225	73	104	275	82
10	89	51	390	84	350	685	275	194	92	74	257	60
11	85	53	225	76	2,140	1,050	390	275	76	68	240	54
12	84	57	194	77	5,290	1,050	350	310	64	56	175	47
13	82	61	184	82	1,630	747	370	292	54	39	175	43
14	79	63	178	76	945	945	485	205	54	35	310	191
15	79	60	174	68	655	1,280	715	194	58	30	225	134
16	77	49	170	77	780	485	747	168	109	27	158	111
17	76	31	240	85	595	625	540	240	99	76	104	240
18	76	36	255	85	370	747	390	199	87	76	92	121
19	74	100	240	81	330	1,280	567	173	77	41	82	84
20	73	240	196	84	350	945	980	153	71	23	73	71
21	71	400	158	85	310	812	655	117	63	35	67	61
22	68	625	134	79	435	715	812	104	57	95	240	53
23	68	2,360	114	74	595	625	625	126	43	109	92	50
24	70	910	134	71	1,200	567	595	144	29	90	67	47
25	68	390	158	70	845	540	567	257	76	63	57	45
26	68	257	134	74	540	595	512	257	194	117	51	42
27	65	194	128	73	350	540	435	205	104	5,150	43	41
28	64	173	114	63	292	1,830	370	163	104	1,280	39	73
29	63	144	104	61	-------	1,280	257	134	180	655	35	85
30	63	146	95	70	-------	910	292	194	191	275	32	70
31	64	-------	88	70	-------	780	-------	153	-------	202	32	-------

NOTE.—Stage-discharge relation affected by ice Nov. 19-21, Dec. 3-8, and Dec. 13 to Feb. 10; discharge based on gage heights corrected for effect of ice.

[6] Stage-discharge relation affected by ice.

Monthly discharge of Westfield River at Knightville, Mass., for the year ending September 30, 1925

[Drainage area, 162 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	1,280	63	138	0.852	0.98
November	2,360	31	230	1.42	1.58
December	1,120	88	210	1.30	1.50
January	95	61	78.8	.486	.56
February	5,290	64	667	4.12	4.29
March	1,830	310	770	4.75	5.48
April	980	257	494	3.05	3.40
May	595	104	235	1.45	1.67
June	292	29	108	.667	.74
July	5,150	23	305	1.88	2.17
August	330	32	155	.957	1.10
September	240	30	71.5	.441	.49
The year	5,290	23	286	1.77	23.96

WESTFIELD RIVER NEAR WESTFIELD, MASS.

LOCATION.—At Trap Rock Crossing, 1 mile below mouth of Big Brook, 2 miles below mouth of Westfield Little River, and 3 miles east of Westfield, Hampden County.

DRAINAGE AREA.—496 square miles.

RECORDS AVAILABLE.—June 27, 1914, to September 30, 1925.

GAGE.—Water-stage recorder on right bank; inspected by Andrew Kelly.

DISCHARGE MEASUREMENTS.—Made from cable or by wading.

CHANNEL AND CONTROL.—Bed covered with gravel and alluvial deposits; some aquatic vegetation in channel during summer. Riffle of boulders 200 feet below gage forms control at low and medium stages. At high stages control is probably formed by crest of storage dam at Mittineague, 3 miles below station.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 15.55 feet at 3.45 p. m. February 12 (discharge, by extension of rating curve, 14,600 second-feet); minimum stage, 3.12 feet at 11.30 p. m. July 21 (discharge, by extension of rating curve, 99 second-feet).

1914–1925: Maximum stage recorded, 22.13 feet April 7, 1924 (discharge, by extension of rating curve, 32,500 second-feet); minimum stage, 2.78 feet October 2, 1921 (discharge, by extension of rating curve, 9 second-feet).

ICE.—Stage-discharge relation seldom if ever affected by ice. River freezes over above and below gage, but control remains open throughout winter.

DIVERSIONS.—Water is diverted from Westfield Little River and carried to Springfield for municipal use.

REGULATION.—There are several power plants above station, but diurnal fluctuation is small; nearest dam is at Westfield.

ACCURACY.—Stage-discharge relation for low stages subject to slight changes. Rating curves well defined below 7,500 second-feet. Operation of water-stage recorder satisfactory except for short periods indicated in footnote to daily-discharge table. Daily discharge ascertained by application of rating table to mean daily gage height as determined from recorder sheets. Records good.

Discharge measurements of Westfield River near Westfield, Mass., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 6	4.24	469	May 19	4.33	589	July 29	5.50	1,350
Jan. 29	3.44	191	May 21	4.15	515	Sept. 25	3.44	164
May 13	4.75	859	July 28	6.45	2,240			

Daily discharge, in second-feet, of Westfield River near Westfield, Mass., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,950	208	440	227	263	990	1,590	1,290	550	455	678	157
2	1,130	190	358	231	259	2,500	1,360	1,330	625	283	804	157
3	620	155	367	235	255	1,550	1,220	990	630	263	605	163
4	480	170	403	231	251	1,220	1,120	924	560	183	440	166
5	285	177	349	263	247	1,080	1,020	822	394	187	475	163
6	360	165	480	275	243	1,470	936	786	344	349	440	179
7	295	165	942	259	247	1,950	864	708	275	215	371	199
8	257	175	990	263	255	1,910	816	642	267	211	480	353
9	244	170	2,350	247	317	1,830	756	615	259	308	385	403
10	250	160	1,550	247	470	1,710	744	540	475	223	470	275
11	226	152	960	239	4,260	2,030	900	678	299	199	605	211
12	220	180	750	211	12,300	3,100	828	1,120	255	166	525	231
13	220	165	660	235	4,650	1,950	942	840	219	172	394	183
14	205	162	575	227	2,400	2,030	1,220	714	191	172	505	263
15	235	152	750	227	1,790	3,100	1,400	690	231	154	550	416
16	202	190	585	219	2,210	1,750	1,670	690	295	148	389	407
17	199	165	550	227	1,750	1,510	1,190	600	394	187	385	362
18	190	175	720	207	1,220	1,710	978	696	304	203	331	358
19	205	300	768	247	990	3,210	870	585	219	215	367	235
20	177	500	630	227	1,020	3,000	1,600	500	235	151	299	271
21	180	1,000	525	247	936	1,950	1,550	480	183	142	215	255
22	205	1,900	412	239	1,190	1,710	1,600	430	183	255	223	195
23	205	4,400	317	223	1,710	1,510	1,500	430	175	535	199	203
24	185	1,790	362	247	2,400	1,260	1,450	555	179	371	203	211
25	182	1,050	455	223	2,030	1,260	1,350	876	243	151	211	183
26	190	768	455	247	1,710	1,330	1,220	924	403	223	203	157
27	182	555	385	235	1,190	1,330	1,120	672	376	3,320	207	172
28	185	530	317	227	978	2,600	930	545	299	2,700	199	175
29	211	475	313	223	-------	2,900	834	510	440	1,260	187	169
30	182	398	308	279	-------	2,160	792	525	615	804	175	183
31	188	-------	279	267	-------	1,990	-------	560	-------	520	166	-------

NOTE.—Water-stage recorder not in operation Nov. 17–23, Feb. 2–7, and Apr. 20–25; discharge for these periods estimated by comparison with other records in Westfield River Basin.

Monthly discharge of Westfield River near Westfield, Mass., for the year ending September 30, 1925

[Drainage area, 496 square miles]

Month	Observed discharge in second-feet			Diversion from Westfield Little River in millions of gallons	Total discharge in second-feet		Run-off in inches
	Maximum	Minimum	Mean		Mean	Per square mile	
October	2,950	177	356	452.09	379	0.764	0.88
November	4,400	152	558	463.71	582	1.17	1.30
December	2,350	279	623	457.60	646	1.30	1.50
January	279	207	239	493.40	264	.532	.61
February	12,300	243	1,700	421.92	1,720	3.47	3.61
March	3,210	990	1,920	420.99	1,940	3.91	4.51
April	1,670	744	1,150	404.24	1,170	2.36	2.63
May	1,330	430	718	420.85	739	1.49	1.72
June	630	175	337	455.91	361	.728	.81
July	3,320	142	475	461.21	498	1.00	1.15
August	804	166	377	475.74	401	.808	.93
September	416	157	235	499.16	261	.526	.59
The year	12,300	142	717	5,426.82	740	1.49	20.24

NOTE.—The effect of storage in Borden Brook Reservoir not taken into account in computing the total discharge.

MIDDLE BRANCH OF WESTFIELD RIVER AT GOSS HEIGHTS, MASS.

LOCATION.—At highway bridge in Goss Heights, Hampshire County, half a mile above confluence with North Branch of Westfield River and 1½ miles above Huntington.

DRAINAGE AREA.—53 square miles.

RECORDS AVAILABLE.—July 14, 1910, to September 30, 1925.

GAGE.—Water-stage recorder on right bank upstream side of bridge abutment; inspected by Chester W. Cady.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Channel covered with coarse gravel and boulders. Control somewhat shifting.

EXTREMES OF DISCHARGE.—Maximum discharge during year, from water-stage recorder, about 4,250 second-feet at 12.30 p. m. February 12 (stage-discharge relation affected by ice); minimum stage, 0.69 foot at 3.30 a. m. November 14 (discharge, about 4 second-feet).

1910–1925: Maximum stage recorded, 7.33 feet July 8, 1915 (discharge, by extension of rating curve, 4,500 second-feet); minimum discharge, practically zero October 26 and 27, 1914.

ICE.—River usually frozen over during greater part of winter; ice jams occasionally form below gage, causing several feet of backwater.

REGULATION.—Flow somewhat affected at times by operation of small power plant 2 miles above station.

ACCURACY.—Stage-discharge relation changed at time of high water in February. Rating curves well defined below 1,000 second-feet. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying rating table to mean daily gage height determined by inspection of gage-height graph with corrections for effect of ice during winter. Records good during open-water periods; fair during winter.

Discharge measurements of Middle Branch of Westfield River at Goss Heights, Mass., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 30	[a]1.89	18.3	July 28	1.78	238	Sept. 26	0.71	8.4
May 12	1.36	113	Do	1.75	234			

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Middle Branch of Westfield River at Goss Heights, Mass., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	365	18	56	28	27	133	180	160	43	21	76	11
2	105	16	55	28	25	273	152	146	41	15	66	9.9
3	60	19	53	29	24	160	133	107	40	13	37	9.1
4	42	20	55	32	23	135	122	91	29	11	28	11
5	34	20	53	32	25	117	107	80	22	12	56	14
6	31	20	80	32	26	163	91	76	18	13	26	16
7	28	19	115	30	27	243	85	66	15	14	35	21
8	25	18	130	29	30	249	78	64	14	23	35	23
9	21	15	418	28	39	246	70	54	13	16	22	21
10	21	15	185	28	70	225	74	52	16	13	38	17
11	21	14	120	27	700	376	98	85	12	13	37	14
12	20	13	86	27	1,600	433	85	125	13	11	23	13
13	21	12	70	26	800	252	98	78	11	11	24	13
14	21	12	60	26	450	352	140	62	11	9.9	38	15
15	20	13	66	25	260	429	210	64	13	9.9	37	19
16	19	14	70	25	330	222	186	62	24	11	24	23
17	20	13	74	26	301	189	125	70	24	12	21	26
18	19	12	86	26	149	237	98	66	14	15	16	22
19	18	20	74	24	130	616	174	50	12	11	15	17
20	18	32	70	25	117	360	348	43	11	9.9	13	13
21	18	34	55	27	115	243	225	37	11	9.9	13	12
22	18	175	49	26	138	216	222	31	11	28	13	11
23	19	735	44	26	216	177	163	35	11	52	14	9.1
24	18	320	51	25	372	149	133	50	9.9	38	14	9.1
25	16	160	60	25	258	154	110	96	17	14	13	12
26	15	94	53	24	195	154	135	74	37	28	13	9.1
27	16	78	44	24	133	157	107	47	20	460	13	9.1
28	16	68	38	23	122	465	78	41	24	240	12	9.9
29	15	60	35	23	-------	348	70	35	38	107	12	9.1
30	14	58	32	24	-------	270	74	49	41	52	13	9.9
31	16	-------	30	25	-------	231	-------	47	-------	35	12	------

NOTE.—Stage-discharge relation affected by ice Nov. 17–19, Nov. 29 to Dec. 8, and Dec. 12 to Feb. 16 discharge based on gage heights corrected for effect of ice.

Monthly discharge of Middle Branch of Westfield River at Goss Heights, Mass., for the year ending September 30, 1925

[Drainage area, 53 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	365	14	35.8	0.675	0.78
November	735	12	70.6	1.33	1.48
December	418	30	79.6	1.50	1.73
January	32	23	26.6	.502	.58
February	1,600	23	239	4.51	4.70
March	616	117	257	4.85	5.59
April	348	70	132	2.49	2.78
May	160	31	69.1	1.30	1.50
June	43	9.9	20.5	.387	.43
July	460	9.9	42.9	.809	.93
August	76	12	26.1	.492	.57
September	26	9.1	14.3	.270	.30
The year	1,600	9.1	83.5	1.58	21.37

FARMINGTON RIVER NEAR NEW BOSTON, MASS.

LOCATION.—At highway bridge a quarter of a mile below Clam River and 1 mile south of New Boston, Berkshire County.

DRAINAGE AREA.—92.7 square miles.

RECORDS AVAILABLE.—May 27, 1913, to September 30, 1925.

GAGE.—Water-stage recorder on left bank, downstream side of bridge; inspected by George Snow.

DISCHARGE MEASUREMENTS.—Made from a cable or by wading.

CHANNEL AND CONTROL.—Channel rocky and covered with boulders. Control practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 6.65 feet at noon February 12 (discharge, by extension of rating curve, 2,050 second-feet); minimum stage, 2.32 feet at 3.45 a. m. November 17 (discharge, 7.5 second-feet).

1913–1925: Maximum stage recorded, 7.84 feet April 7, 1924 (discharge by extension of rating curve, 3,450 second-feet); minimum stage, 2.22 feet August 27, 1913 (discharge, 4.4 second-feet; water held back by dam).

ICE.—River usually frozen over during greater part of winter with occasional ice jams below gage.

REGULATION.—Flow affected by storage in Otis Reservoir about 5 miles above New Boston, which has a capacity of 880 million cubic feet, and by operation of a woodworking shop just above station.

ACCURACY.—Stage-discharge relation permanent except when affected by ice. Rating curve well defined below 1,700 second-feet. Operation of water-stage recorder satisfactory throughout year. Daily discharge ascertained by applying rating table to mean daily gage height determined by inspection of gage-height graph, with corrections for ice during winter. Records good.

The following discharge measurements were made:

October 7, 1924: Gage height, 3.07 feet; discharge, 61 second-feet.

February 1, 1925: Gage height, 4.96 feet;[7] discharge, 105 second-feet.

May 17, 1925: Gage height, 3.44 feet; discharge, 117 second-feet.

Daily discharge, in second-feet, of Farmington River near New Boston, Mass., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	415	42	71	41	98	197	302	210	99	93	238	93
2	269	51	72	54	45	500	254	224	122	67	173	93
3	173	84	72	67	45	337	224	162	114	54	116	94
4	122	84	67	71	42	302	197	162	122	47	93	102
5	99	85	55	72	36	320	162	131	87	64	68	100
6	77	68	80	66	28	320	151	112	75	54	73	98
7	63	43	108	54	12	302	141	110	63	44	78	131
8	64	42	198	44	15	302	131	98	55	67	66	96
9	55	56	435	40	29	286	122	98	59	63	58	47
10	47	88	302	36	114	286	131	93	104	50	86	35
11	49	88	198	40	575	375	173	131	73	64	75	74
12	51	87	141	52	1,220	455	151	197	54	47	64	96
13	45	86	132	88	740	337	173	141	43	37	66	86
14	53	68	108	91	525	415	210	122	42	31	80	100
15	81	34	122	90	435	550	286	112	46	31	66	58
16	81	29	122	86	455	356	286	110	70	31	58	84
17	80	76	131	80	337	286	224	107	65	63	52	71
18	118	93	122	47	254	286	173	102	51	54	47	60
19	141	78	106	43	224	625	197	91	45	44	47	49
20	105	106	100	48	162	525	455	80	46	33	44	45

[7] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Farmington River near New Boston, Mass., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	104	88	100	122	174	375	320	76	43	76	40	41
22	104	151	107	110	210	302	254	70	37	254	37	37
23	104	550	104	104	269	254	224	141	36	210	86	34
24	102	302	96	98	395	210	197	151	34	91	100	34
25	102	185	88	90	337	210	185	254	43	70	141	34
26	104	141	74	93	286	210	238	197	68	68	141	173
27	102	106	59	90	210	224	210	141	51	770	141	173
28	98	87	45	90	185	575	162	110	46	525	131	173
29	99	84	34	93	------	500	141	105	93	269	141	162
30	87	80	34	102	------	435	151	122	173	173	122	122
31	59	------	36	106	------	375	------	105	------	112	94	------

NOTE.—Stage-discharge relation affected by ice Dec. 2-7 and Dec. 21 to Feb. 12; discharge based on gage heights corrected for effect of ice.

Monthly discharge of Farmington River near New Boston, Mass., for the year ending September 30, 1925

[Drainage area, 92.7 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	415	45	105	1.13	1.30
November	550	29	105	1.13	1.26
December	435	34	113	1.22	1.41
January	122	36	74.4	.803	.93
February	1,220	12	266	2.87	2.99
March	625	197	356	3.84	4.43
April	455	122	208	2.24	2.50
May	254	70	131	1.41	1.63
June	173	34	68.6	.740	.83
July	770	31	118	1.27	1.46
August	238	37	91.0	.982	1.13
September	173	34	86.5	.933	1.04
The year	1,220	12	143	1.54	20.91

HOUSATONIC RIVER BASIN

HOUSATONIC RIVER NEAR GREAT BARRINGTON, MASS.

LOCATION.—At highway bridge one-fourth mile northeast of Van Deusenville station of New York, New Haven & Hartford Railroad (Berkshire division) and 2 miles north of Great Barrington, Berkshire County.

DRAINAGE AREA.—280 square miles.

RECORDS AVAILABLE.—May 17, 1913, to September 30, 1925.

GAGE.—Inclined staff attached to concrete anchorages on downstream side of left abutment of highway bridge; vertical high-water section attached to bridge abutment; read by Mrs. Herbert Armstrong.

DISCHARGE MEASUREMENTS.—Made from upstream side of highway bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of sand and gravel. Control for high stages not well defined; at low stages control is at riffle a few hundred feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 7.05 feet at 7 a. m. February 13 (discharge, by extension of rating curve, 4,350 second-feet); minimum stage, 0.4 foot at 8 a. m. January 18 and at 6 a. m. August 24 (discharge, 4 second-feet).

1913–1925: Maximum stage recorded, 8.0 feet March 31, 1916 (discharge, by extension of rating curve, 5,300 second-feet). Zero flow recorded at various times caused by storage of water at dams above.

ICE.—Stage-discharge relation seldom if ever affected by ice, although river freezes over a few hundred feet downstream from gage.

REGULATION.—Storage above dam of paper mill about a mile above station causes low flow on Sundays and holidays.

ACCURACY.—Stage-discharge relation has changed slightly at infrequent intervals. Rating curve fairly well defined between 10 and 2,000 second-feet. Gage read to quarter-tenths twice daily. Daily discharge ascertained by applying rating table to mean daily gage height. Records good.

The following discharge measurements were made:

May 16, 1925: Gage height, 2.29 feet; discharge, 446 second-feet.

May 16, 1925: Gage height, 2.33 feet; discharge, 494 second-feet.

September 29, 1925: Gage height, 1.60 feet; discharge, 184 second-feet.

Daily discharge, in second-feet, of Housatonic River near Great Barrington, Mass., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	710	162	280	222	20	885	920	920	320	342	550	190
2	610	40	240	205	150	920	920	710	520	365	390	147
3	520	88	280	150	205	990	920	675	465	260	320	135
4	280	31	190	190	175	850	780	780	365	162	440	175
5	62	135	175	150	190	745	640	780	465	147	365	162
6	280	68	280	205	175	710	710	675	320	175	320	66
7	222	115	260	260	175	885	780	710	162	162	300	36
8	342	205	342	300	145	850	675	710	342	205	280	190
9	260	76	342	150	102	1,060	520	610	365	175	222	47
10	300	175	280	127	390	990	710	440	300	205	260	190
11	222	110	240	84	920	990	710	415	300	162	190	190
12	162	222	240	145	2,920	1,130	675	780	280	145	175	135
13	260	175	390	222	4,300	1,130	440	610	205	162	260	28
14	70	142	320	222	3,370	1,060	492	610	240	190	300	100
15	130	70	280	240	2,380	885	780	640	260	140	240	150
16	222	70	190	135	2,210	990	780	580	145	140	205	222
17	280	205	175	130	1,970	990	885	365	300	175	260	240
18	127	162	280	4.2	1,570	1,130	920	342	300	150	240	280
19	33	162	342	92	920	1,410	1,060	550	240	140	260	90
20	222	145	240	365	885	1,410	390	415	240	145	190	53
21	260	135	175	240	885	1,060	885	280	175	175	175	280
22	222	127	205	112	675	1,130	885	320	260	145	280	115
23	240	520	190	51	675	710	815	440	260	147	222	82
24	260	1,060	205	127	920	745	745	610	150	140	36	175
25	162	815	205	18	1,060	710	745	580	190	130	140	175
26	76	675	68	205	990	710	885	640	280	175	162	130
27	260	520	190	135	920	640	850	580	150	205	145	61
28	240	550	175	120	675	990	885	520	145	465	150	205
29	260	415	190	205	-------	1,810	850	550	222	1,060	21	145
30	150	320	205	190	-------	1,810	990	580	415	1,130	21	102
31	140	-------	190	162	-------	1,570	-------	240	-------	640	120	-------

Monthly discharge of Housatonic River near Great Barrington, Mass., for the year ending September 30, 1925

[Drainage area, 280 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	710	33	245	0.875	1.01
November	1,060	31	256	.914	1.02
December	390	68	238	.850	.98
January	365	4.2	167	.596	.69
February	4,300	20	1,070	3.82	3.98
March	1,810	640	1,030	3.68	4.24
April	1,060	390	775	2.77	3.09
May	920	240	570	2.04	2.35
June	520	145	279	.996	1.11
July	1,130	130	263	.939	1.08
August	550	21	233	.832	.96
September	280	28	143	.511	.57
The year	4,300	4.2	435	1.55	21.08

HOUSATONIC RIVER AT FALLS VILLAGE, CONN.

LOCATION.—Half a mile below power plant of Connecticut Power Co., at Falls Village, Litchfield County.

DRAINAGE AREA.—644 square miles.

RECORDS AVAILABLE.—July 11, 1912, to September 30, 1925.

GAGE.—Water-stage recorder on left bank; inspected by an employee of Connecticut Power Co.

DISCHARGE MEASUREMENTS.—Made from cable 150 feet above gage or by wading.

CHANNEL AND CONTROL.—Channel deep and fairly uniform in cross section; one channel at all stages. Control not clearly defined except at low stages.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 11.78 feet at 1.30 p. m. February 12 (discharge, 7,410 second-feet); minimum discharge, 54 second-feet December 31 (likely not affected by ice).

1912–1925: Maximum stage recorded, 13.3 feet March 29, 1914 (discharge, 8,830 second-feet); minimum discharge, zero flow at various times when water was held back by dam.

ICE.—Stage-discharge relation affected by ice during winter of 1924–25.

REGULATION.—Low-water flow is completely regulated by power plant at Falls Village.

ACCURACY.—Stage-discharge relation fairly permanent. Rating curve well defined between 100 and 7,000 second-feet. Operation of water-stage recorder satisfactory. Daily discharge ascertained by use of discharge integrator. Records good.

Discharge measurements of Housatonic River at Falls Village, Conn., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
May 15	3.68	1,280	Sept. 27	1.25	157	Sept. 28	0.93	89
Do	3.68	1,260	Do	1.13	127	Do	.91	88
Sept. 27	1.32	186	Sept. 28	.97	92	Sept. 29	1.75	335

Daily discharge, in second-feet, of Housatonic River at Falls Village, Conn., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,580	326	564	388	219	1,460	2,800	1,200	577	775	1,300	226
2	1,740	149	460	330	197	2,430	2,300	1,390	750	577	800	219
3	1,410	206	420	400	182	2,180	2,020	1,020	725	586	925	279
4	1,100	197	424	160	194	1,960	1,850	1,100	750	258	650	249
5	514	203	344	249	279	1,800	1,580	1,000	750	320	700	182
6	700	168	630	242	222	1,680	1,410	1,100	675	376	605	157
7	595	160	460	344	249	1,800	1,360	975	429	388	620	420
8	615	152	1,050	356	245	2,070	1,200	850	404	352	750	320
9	537	93	1,390	313	433	1,740	1,150	775	532	416	216	249
10	447	182	1,520	262	1,020	1,900	1,080	775	438	412	800	337
11	456	173	1,200	110	4,270	1,850	1,280	725	429	514	564	337
12	206	191	925	236	5,840	2,070	1,100	1,390	474	144	501	465
13	269	216	875	171	6,750	2,180	1,150	1,250	420	380	555	168
14	309	197	573	216	6,470	2,120	1,330	1,100	265	337	650	388
15	337	185	700	275	5,590	2,360	1,360	1,000	487	323	850	460
16	282	70	546	303	4,750	2,300	1,580	1,050	384	299	168	595
17	320	171	605	255	3,630	2,180	1,460	700	416	299	424	640
18	396	168	514	137	2,870	2,020	1,410	925	460	424	438	564
19	197	185	725	299	2,240	2,300	1,100	850	465	265	460	555
20	242	168	595	206	1,800	2,800	1,740	850	429	299	384	157
21	209	176	505	216	1,630	2,570	1,960	700	384	416	400	245
22	258	320	447	226	1,410	2,120	1,900	615	340	675	320	460
23	306	975	483	236	1,630	1,900	1,740	573	438	925	121	282
24	275	1,280	519	194	1,900	1,740	1,580	750	272	528	326	229
25	330	1,410	451	258	2,020	1,520	1,410	1,100	340	514	275	309
26	168	1,200	380	272	2,020	1,520	1,250	1,220	412	396	249	404
27	236	650	420	255	1,900	1,410	1,460	1,020	492	775	249	239
28	219	675	132	203	1,580	2,180	1,200	850	272	1,410	255	91
29	236	514	275	197	------	3,470	1,200	825	505	1,410	249	197
30	258	320	380	269	------	3,470	1,050	800	975	1,520	114	236
31	258	------	514	352	------	3,240	------	546	------	1,460	154	------

NOTE.—Stage-discharge relation affected by ice Dec. 22 to Feb. 10; discharge based on gage heig hts corrected for effect of ice.

Monthly discharge of Housatonic River at Falls Village, Conn., for the year ending September 30, 1925

[Drainage area, 644 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	1,740	168	484	0.752	0.87
November	1,410	70	369	.573	.64
December	1,520	132	614	.953	1.10
January	400	110	256	.398	.46
February	6,750	182	2,200	3.42	3.56
March	3,470	1,410	2,140	3.32	3.83
April	2,800	1,050	1,500	2.33	2.60
May	1,390	546	936	1.45	1.67
June	975	265	490	.761	.85
July	1,520	144	573	.890	1.03
August	1,300	114	486	.755	.87
September	640	91	322	.500	.56
The year	6,750	70	855	1.33	18.04

HUDSON RIVER BASIN

HUDSON RIVER AT GOOLEY, NEAR INDIAN LAKE, N. Y.

LOCATION.—Half a mile above Gooley, Essex County, 1½ miles below mouth of Cedar River, 1 mile above mouth of Indian River, and 5 miles northeast of Indian Lake, Hamilton County.

DRAINAGE AREA.—418 square miles (measured on topographic maps).

RECORDS AVAILABLE.—August 30, 1916, to September 30, 1925.

GAGE.—Gurley printing water-stage recorder on right bank; inspected by Frank Brown and engineers from Albany office of United States Geological Survey.

DISCHARGE MEASUREMENTS.—Made from cable 100 yards below gage or by wading.

CHANNEL AND CONTROL.—Solid ledge overlain with coarse gravel; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 8.35 feet at 8.30 p. m. October 1 (discharge, 9,720 second-feet); minimum discharge, about 140 second-feet September 3–7 (stage-discharge relation affected by backwater from logs).

1916–1925: Maximum stage recorded, 10.0 feet at 8.15 a. m. April 12, 1922 (discharge, 13,900 second-feet); minimum stage, 1.38 feet from 8 p. m. August 22 to 10 p. m. August 23, 1923 (discharge, 44 second-feet).

ICE.—Stage-discharge relation affected by ice.

REGULATION.—Large diurnal fluctuation due to logging operations during spring. Seasonal distribution of flow slightly affected by storage.

ACCURACY.—Stage-discharge relation practically permanent except as affected by ice and by backwater from logs on control. Rating curve well defined between 200 and 7,500 second-feet. Operation of water-stage recorder satisfactory except during periods indicated in footnote to daily-discharge table. Mean daily gage height obtained by averaging hourly gage heights from printed record. Daily discharge ascertained by applying mean daily gage height corrected for ice or log effect, if necessary, to rating table, or for days of considerable fluctuation, by averaging the hourly discharge. Records good, except during periods of ice and log effect, and estimate, for which they are fair.

Discharge measurements of Hudson River at Gooley, near Indian Lake, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 14	[a] 2.72	263	Apr. 8	3.84	1,820	July 18	[b] 2.68	556
Feb 26	[a] 5.23	1,650	May 27	[b] 2.92	730	Sept. 11	[b] 1.73	152

[a] Stage-discharge relation affected by ice.
[b] Stage-discharge relation affected by logs on control.

Daily discharge, in second-feet, of Hudson River at Gooley, near Indian Lake, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8,890					1,000	3,860	1,990	800	550	600	160
2	7,420					850	3,110	1,930	1,300	550	550	150
3	4,050					800	2,760	1,870	1,800	500	550	140
4	2,760					700	2,560	1,760	1,800	440	500	140
5						650	2,050	2,110	1,500	400	500	140
6						650	1,760	1,810	1,200	380	500	140
7				270		650	1,640	2,240	1,000	340	500	140
8						650	1,700	1,810	800	320	500	160
9						700	1,810	1,390	650	300	550	160
10						1,200	1,990	1,490	550	380	650	160
11						1,200	1,760	1,800	480	500	600	150
12						1,300	1,930	1,300	420	400	550	160
13					780	1,400	2,500	1,100	380	340	480	340
14				240		1,700	2,170	1,100	340	300	460	1,000
15				220		1,600	2,750	950	320	260	440	1,300
16		640	525	190		1,500	3,400	850	340	260	400	1,400
17				180		1,400	3,040	1,400	320	500	420	1,900
18	520			170		1,800	2,500	1,000	320	600	750	1,700
19				160		2,200	2,240	1,400	480	500	750	1,200
20				160		2,200	1,930	900	700	420	650	950
21				160		2,200	1,700	1,100	750	360	550	1,000
22				170		2,000	1,640	1,000	650	600	400	1,200
23						1,900	2,300	800	500	1,300	360	1,000
24						1,700	3,110	800	400	1,600	340	800
25						1,600	3,180	800	400	1,300	320	700
26				150	1,700	1,600	3,480	800	550	1,100	300	750
27					1,500	4,600	3,700	750	480	1,200	260	1,000
28					1,300	7,140	3,480	750	460	1,000	260	1,000
29						7,560	2,620	700	480	950	220	1,200
30						6,330	2,050	700	550	750	190	850
31						4,850		700		800	180	

NOTE.—Mean daily discharge Oct. 5–31, Nov. 1–30, Dec. 1–31, Jan. 1–13, 23–31, Feb. 1–25, estimated by comparison with record of Hudson River at North Creek reduced by record of Indian River near Indian Lake; water-stage recorder not in operation. Discharge Jan. 14–22 and Feb. 26 to Mar. 27 determined from gage heights corrected for ice effect from 2 discharge measurements, study of gage-height graph and weather records, and by comparison with adjusted North Creek record. Discharge May 11 to Sept. 30 determined from gage heights corrected for backwater effect from logs, from 3 discharge measurements, and by comparison with adjusted North Creek record.

Monthly discharge of Hudson River at Gooley, near Indian Lake, N. Y., for the year ending September 30, 1925

[Drainage area, 418 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	8,890		1,200	2.87	3.31
November			640	1.53	1.71
December			525	1.26	1.45
January			210	.502	.58
February			857	2.05	2.14
March	7,560	650	2,120	5.07	5.84
April	3,860	1,640	2,490	5.96	6.65
May	2,240	700	1,260	3.01	3.47
June	1,800	320	691	1.65	1.84
July	1,600	260	619	1.48	1.71
August	750	180	461	1.10	1.27
September	1,900	140	703	1.68	1.87
The year	8,890	140	981	2.35	31.84

HUDSON RIVER AT NORTH CREEK, N. Y.

LOCATION.—At 2-span steel highway bridge in North Creek, Warren County, immediately above mouth of North Creek.

DRAINAGE AREA.—804 square miles.

RECORDS AVAILABLE.—September 21, 1907, to September 30, 1925.

GAGE.—Chain at upstream side of left span of bridge; read by Wm. R. Alexander.

DISCHARGE MEASUREMENTS.—Made from upstream side of highway bridge or by wading.

CHANNEL AND CONTROL.—Heavy gravel; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, about 8.65 feet before midnight March 28 determined from plotted gage-height graph (discharge, 14,200 second-feet); minimum stage, 2.10 feet at 5 p. m. September 5 and 7 a. m. September 6 (discharge, 215 second-feet).

1907–1925: Maximum stage recorded, 12.0 feet during evening of March 27, 1913 (discharge, about 30,000 second-feet); minimum stage, 1.92 feet at 7.30 a. m. and 5 p. m. September 2, 1923 (discharge, 128 second-feet).

ICE.—Stage-discharge relation affected by ice.

REGULATION.—The numerous lakes and ponds in the basin of the upper Hudson have a decided effect on the low-water flow, especially the reservoir at Indian Lake. Many of the reservoirs are used to make flood waves in the spring in connection with log driving.

ACCURACY.—Stage-discharge relation practically permanent except as affected by ice. Rating curve well defined between 400 and 7,000 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table, except for days of great range in stage, when discharge is averaged for intervals of day. Records good, except during period of ice effect, for which they are fair.

Discharge measurements of Hudson River at North Creek, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 22	3.28	1,100	Feb. 27	[a] 4.98	2,240	May 27	3.44	1,300
Jan. 15	[a] 3.63	739	Apr. 7	4.47	2,770	July 17	2.87	725

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Hudson River at North Creek, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12,000	940	940	550	700	1,500	6,940	4,070	1,520	300	990	1,150
2	10,400	940	892	500	700	1,400	5,420	3,860	2,260	755	845	1,150
3	5,910	940	845	460	700	1,300	4,720	3,280	2,920	712	755	1,150
4	3,660	940	845	460	700	1,300	4,280	3,470	2,920	712	845	480
5	2,580	940	755	420	650	1,200	4,070	4,070	2,420	330	800	235
6	2,020	940	712	480	700	1,100	3,100	3,470	2,100	630	670	432
7	1,590	940	712	440	650	1,000	2,920	3,660	1,660	590	712	1,040
8	1,270	940	755	400	650	1,000	3,100	3,280	1,270	552	755	1,150
9	1,150	845	1,520	380	650	1,000	2,920	2,750	1,040	515	755	1,100
10	990	845	1,900	460	750	1,000	3,280	2,580	845	590	892	1,100
11	800	845	1,600	700	1,000	1,700	2,920	2,420	800	755	990	845
12	590	845	1,400	750	2,800	2,200	3,100	2,420	670	1,150	940	755
12	670	845	1,200	750	2,600	2,000	3,660	2,580	1,040	1,040	892	1,390
14	755	845	1,000	750	2,400	2,400	3,470	1,880	990	845	845	2,260
15	892	845	900	700	2,200	3,200	4,280	1,730	892	1,040	800	2,290

Daily discharge, in second-feet, of Hudson River at North Creek, N. Y., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	670	845	850	700	2,000	3,000	5,180	1,520	990	1,210	755	2,420
17	590	755	850	900	2,000	2,600	4,500	1,520	990	845	670	3,100
18	515	670	750	900	1,800	2,600	3,860	2,020	670	755	1,520	2,750
19	480	670	700	900	1,600	3,000	3,470	1,950	630	1,100	1,660	2,750
20	1,040	670	700	850	1,400	3,100	2,920	1,950	845	1,150	1,800	2,260
21	1,100	755	600	850	1,200	3,100	2,750	1,520	940	1,330	1,100	1,590
22	1,150	670	600	800	1,300	3,100	2,750	2,020	892	1,590	630	1,800
23	1,040	5,180	600	750	1,400	2,750	4,500	1,520	940	1,800	940	1,590
24	755	4,720	550	750	1,900	2,420	6,160	1,520	845	1,950	1,100	1,330
25	515	3,470	550	750	2,400	2,580	5,910	1,460	940	1,660	1,330	1,150
26	755	2,580	500	750	2,400	2,750	6,420	1,390	845	1,390	1,390	1,270
27	1,040	1,950	500	750	2,000	2,920	6,160	1,330	800	1,590	1,330	1,950
28	1,040	1,590	850	750	1,800	10,200	6,160	1,270	755	1,460	1,040	1,950
29	1,040	1,330	1,000	700	-------	13,400	4,950	1,270	755	1,460	845	1,880
30	1,040	1,150	1,000	700	-------	12,000	4,280	1,270	800	1,270	1,040	1,040
31	1,040	-------	650	700	-------	9,200	-------	1,210	-------	1,040	1,150	------

NOTE.—Discharge Oct. 13, 14, and Dec. 5, estimated as indicated in above table; observer's readings doubtful. Discharge Dec. 10 to Mar. 19, determined from gage heights corrected for ice effect from 2 discharge measurements, study of gage-height graph, weather records, and observer's notes, and by comparison with other Hudson River stations.

Monthly discharge of Hudson River at North Creek, N. Y., for the year ending September 30, 1925

[Drainage area, 804 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	12,000	480	1,910	2.38	2.74
November	5,180	670	1,350	1.68	1.87
December	1,900	500	878	1.09	1.26
January	900	380	668	.831	.96
February	2,800	650	1,470	1.83	1.91
March	13,400	1,000	3,290	4.09	4.72
April	6,940	2,750	4,270	5.31	5.92
May	4,070	1,210	2,270	2.82	3.25
June	2,920	630	1,200	1.49	1.66
July	1,950	515	1,060	1.32	1.52
August	1,800	630	993	1.24	1.43
September	3,100	235	1,500	1.87	2.09
The year	13,400	235	1,740	2.16	29.33

NOTE.—The monthly discharge in second-feet per square mile and run-off in inches shown by the table do not represent the natural flow from the basin because of artificial storage, mainly in Indian Lake Reservoir. The yearly discharge and run-off doubtless represent more nearly the natural flow.

HUDSON RIVER AT HADLEY, N. Y.

LOCATION.—At Hadley, Saratoga County, a quarter of a mile above mouth of Sacandaga River and just below mouth of Lake Luzerne outlet.

DRAINAGE AREA.—1,660 square miles (from Fourth Annual Report of New York State Water Supply Commission).

RECORDS AVAILABLE.—July 15, 1921, to September 30, 1925. Comparable records at station at Thurman, 13 miles above, September 1, 1907, to September 30, 1920.

GAGE.—Friez 7-day graph water-stage recorder on right bank; inspected by J. F. Kelly.

DISCHARGE MEASUREMENTS.—Made from cable 100 yards above gage.

CHANNEL AND CONTROL.—Solid ledge with some large boulders; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 15.30 feet at 11 p. m. March 29 (discharge, 23,800 second-feet); minimum stage, 1.69 feet at 2 p. m. September 6 (discharge, 600 second-feet).

1921–1925: Maximum stage recorded, 19.71 feet at 3.30 p. m. April 12, 1922 (discharge, 33,100 second-feet); minimum stage, 1.19 feet at 9.30 a. m. September 3, 1923 (discharge, 362 second-feet).

ICE.—Stage-discharge relation affected by ice.

REGULATION.—Discharge regulated to some extent by the storage reservoirs at Indian, Schroon, and Brant Lakes, and the mills on Schroon River.

ACCURACY.—Stage-discharge relation changed slightly at time of spring break-up. Rating curves well defined. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of gage-height graph or, for days of considerable fluctuation, by averaging discharge for intervals of day Records excellent, except during periods of ice effect, for which they are fair.

Discharge measurements of Hudson River at Hadley, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft*
Oct. 23	3.34	1,820	Apr. 6	7.46	7,740	Sept. 9	2.98	1,510
Jan. 12	*3.35	1,440	July 15	2.72	1,270	Sept. 22	4.14	2,820
Feb. 24	5.20	4,470	July 16	2.77	1,270			

* Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Hudson River at Hadley, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14,300	1,320	1,700	1,400	1,100	3,530	17,600	8,390	2,560	1,760	1,980	1,610
2	14,700	1,270	1,600	1,000	1,200	3,320	14,500	8,030	3,170	1,560	1,810	1,560
3	10,400	1,400	1,600	1,000	1,200	3,110	12,200	7,160	3,910	1,420	1,760	1,560
4	7,150	1,400	1,500	1,000	1,200	2,910	10,900	6,650	4,300	1,280	1,760	1,380
5	5,610	1,400	1,500	1,100	1,200	2,780	9,650	6,990	3,980	1,200	1,860	880
6	4,650	1,360	1,500	1,000	1,200	2,660	8,390	6,990	3,540	1,240	1,710	665
7	3,820	1,360	1,600	1,000	1,200	2,600	7,330	6,650	3,030	1,120	1,760	1,190
8	3,320	1,360	1,800	1,000	1,200	2,600	6,820	6,480	2,760	1,040	1,810	1,660
9	2,910	1,320	3,000	950	1,100	2,600	6,480	5,820	2,380	975	2,030	1,560
10	2,600	1,270	3,400	950	1,200	2,720	6,310	5,180	2,080	1,040	2,080	1,510
11	2,300	1,220	2,800	1,100	1,400	3,650	6,140	4,860	1,860	1,160	2,200	1,420
12	2,020	1,220	2,400	1,400	3,200	4,970	5,820	5,520	1,660	1,280	2,080	1,240
13	2,020	1,220	2,200	1,500	4,600	4,810	6,310	4,220	1,720	1,610	2,030	1,650
14	2,020	1,220	2,200	1,400	4,400	5,280	6,820	3,910	1,710	1,350	2,030	3,240
15	2,080	1,220	2,000	1,300	4,350	7,460	6,990	3,760	1,610	1,160	1,980	3,170
16	1,920	1,180	1,800	1,300	4,200	5,840	8,390	3,540	1,810	1,460	1,810	2,890
17	1,750	948	1,700	1,300	4,050	4,970	7,850	3,460	1,810	1,560	1,610	4,060
18	1,500	841	1,600	1,400	3,530	4,500	6,990	4,270	1,810	1,280	1,650	4,060
19	1,270	809	1,500	1,400	3,110	6,320	6,310	3,540	1,510	1,240	2,360	3,610
20	1,550	932	1,400	1,400	2,980	7,670	5,980	3,920	1,460	1,610	3,170	2,960
21	1,800	920	1,400	1,300	2,720	7,780	5,500	3,100	1,560	1,610	2,500	2,630
22	1,800	1,140	1,300	1,300	2,720	7,780	5,500	3,480	1,710	2,130	1,610	2,820
23	1,700	5,410	1,300	1,200	3,110	6,310	7,480	3,030	1,560	2,550	1,240	2,890
24	1,550	5,780	1,200	1,200	4,050	5,980	10,700	3,030	1,560	2,380	1,560	2,700
25	1,180	4,810	1,200	1,200	4,500	5,980	10,200	2,960	1,560	2,500	1,710	2,500
26	1,020	3,820	1,200	1,200	4,650	6,140	10,400	2,890	1,710	2,030	1,920	2,320
27	1,450	3,110	1,100	1,100	4,200	7,160	10,400	2,760	1,510	2,320	1,860	2,630
28	1,600	2,660	1,200	1,100	3,820	14,400	10,000	2,560	1,610	2,440	1,710	3,030
29	1,600	2,420	1,700	1,100	-------	23,200	8,930	2,560	1,920	2,700	1,420	2,820
30	1,550	2,190	1,700	1,100	-------	22,800	7,670	2,500	1,920	2,440	1,330	2,700
31	1,450	-------	1,700	1,100	-------	20,700	-------	2,380	-------	2,030	1,560	-------

NOTE.—Discharge estimated Dec. 28–30, Jan. 11, 12, 16, and Feb. 15; imperfect automatic record. Discharge Dec. 2 to Feb. 14 determined from gage heights corrected for ice effect from 1 discharge measurement, study of gage-height graph, weather records, and comparison with records at stations in same drainage area.

Monthly discharge of Hudson River at Hadley, N. Y., for the year ending September 30, 1925

[Drainage area, 1,660 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	14,700	1,020	3,370	2.03	2.34
November	5,780	809	1,880	1.13	1.26
December	3,400	1,100	1,740	1.05	1.21
January	1,500	950	1,190	.717	.83
February	4,650	1,100	2,760	1.66	1.73
March	23,200	2,600	6,860	4.13	4.76
April	17,600	5,500	8,490	5.11	5.70
May	8,390	2,380	4,540	2.73	3.15
June	4,300	1,460	2,180	1.31	1.46
July	2,700	975	1,660	1.00	1.15
August	3,170	1,240	1,870	1.13	1.30
September	4,060	665	2,300	1.39	1.55
The year	23,200	665	3,230	1.95	26.44

NOTE.—The monthly discharge in second-feet per square mile and run-off in inches shown by the table do not necessarily represent the natural flow from the basin because of artificial storage, mainly in Indian Lake Reservoir, Schroon and Brant Lakes. The yearly discharge and run-off doubtless represent very nearly the natural flow.

HUDSON RIVER AT MECHANICVILLE, N. Y.

LOCATION.—At Duncan Dam of West Virginia Pulp & Paper Co. in Mechanicville, Saratoga County, 3,700 feet above mouth of Anthony Kill, 1¼ miles below mouth of Hoosic River, and 9 miles above mouth of Mohawk River.

DRAINAGE AREA.—4,500 square miles.

RECORDS AVAILABLE.—October 1, 1887, to September 30, 1925.

GAGE.—Water-stage recorder at dam, installed in 1910.

EXTREMES OF DISCHARGE.—Maximum daily discharge during year, 44,300 second-feet March 30; minimum daily discharge, 696 second-feet February 8.

1887–1925: Maximum discharge recorded, 120,000 second-feet at 6 a. m. March 28, 1913. The plant is occasionally shut down and the flow of the river stored in the pond so that the discharge below the station at these times approaches zero.

DIVERSIONS.—Water is diverted from Hudson River through the Glens Falls feeder and old Champlain Canal into the summit level of the Barge Canal. A portion flows north into Lake Champlain. No correction has been made for this diversion.

ACCURACY.—Discharge over spillway determined from a rating curve based on coefficients derived by the United States Geological Survey for dams of ogee section. Discharge through turbines computed from records of their operation. Discharge at lock and through Barge Canal turbines at lock computed from records of the number of lockages a day.

From a study of records from stations above this point, it is believed that the record as published is from 5 to 10 per cent small.

COOPERATION.—Discharge over the spillway and through turbines of the West Virginia Pulp & Paper Co. furnished by Mr. W. J. Barnes, engineer of the company. Record of lockages obtained from the office of New York State Department of Public Works.

Daily discharge, in second-feet, of Hudson River at Mechanicville, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17,200	2,500	3,980	2,310	705	12,100	35,200	15,700	6,060	9,980	8,840	2,540
2	21,900	1,520	2,590	2,330	1,030	14,500	30,300	15,500	6,490	8,890	6,780	2,350
3	17,900	2,260	3,010	2,250	997	11,600	25,900	14,200	6,600	8,430	6,400	2,430
4	14,100	2,660	3,280	1,260	963	9,820	22,800	13,800	7,140	6,980	5,860	2,500
5	10,400	2,500	3,250	2,020	928	8,240	20,800	13,100	6,720	5,760	5,240	2,310
6	9,180	2,420	3,080	2,310	1,030	8,190	18,500	13,200	6,350	5,450	5,230	1,380
7	7,200	2,610	3,320	2,120	975	8,680	16,800	12,500	5,050	4,640	4,860	1,380
8	6,000	2,400	3,620	1,800	696	9,200	14,800	12,100	4,820	3,630	5,080	1,690
9	5,370	1,360	8,780	1,480	959	9,250	14,000	10,500	4,180	3,700	4,320	2,920
10	4,780	1,570	9,990	2,200	5,900	10,000	14,100	9,310	4,040	3,900	5,480	3,070
11	3,970	1,700	9,840	981	17,500	11,900	12,700	9,780	3,420	3,600	6,210	2,550
12	2,650	2,010	8,440	1,040	26,600	13,000	12,500	10,300	3,500	2,270	6,280	2,770
13	2,780	2,110	7,070	2,330	17,300	14,700	13,900	9,100	3,120	3,740	5,240	5,280
14	3,290	2,060	5,860	2,260	14,100	23,300	14,000	7,540	1,660	3,280	5,540	12,100
15	3,430	1,910	6,400	1,980	14,000	22,900	15,100	7,210	1,880	3,360	6,400	8,620
16	3,280	988	3,670	1,900	13,300	19,400	17,000	6,640	3,860	3,850	4,370	9,220
17	3,050	1,580	4,060	1,820	11,400	18,700	16,800	5,510	4,200	5,220	4,770	7,840
18	2,580	1,640	4,410	1,100	10,400	17,900	15,100	6,560	4,260	4,220	3,990	8,060
19	1,610	1,870	4,450	1,140	8,260	19,000	16,100	7,030	3,400	3,170	3,780	7,770
20	2,160	1,620	3,290	1,170	8,730	20,800	17,000	6,540	2,640	3,480	5,380	6,920
21	3,040	1,390	2,840	1,490	8,920	19,800	14,800	6,460	1,780	3,880	6,620	5,740
22	2,870	1,370	3,740	1,480	10,800	21,000	15,300	5,950	2,560	9,170	5,550	4,840
23	2,860	6,290	4,180	1,330	12,300	19,500	17,000	6,040	3,190	11,400	3,940	5,110
24	2,890	12,700	3,780	1,210	14,800	17,300	20,300	5,040	3,030	8,620	3,000	4,960
25	2,600	10,900	2,470	1,020	14,800	16,500	20,500	5,410	3,700	7,720	3,790	4,740
26	1,820	9,470	1,900	1,120	15,900	16,300	20,600	5,300	2,870	6,740	3,370	4,290
27	2,220	7,480	2,270	1,240	18,000	16,700	20,300	5,940	5,650	9,410	3,530	4,120
28	2,820	7,310	1,990	1,210	13,900	28,100	18,700	5,660	10,000	12,800	2,820	4,540
29	2,770	7,040	2,160	1,110	-------	40,600	17,100	5,640	11,000	13,100	2,600	5,000
30	2,770	5,360	2,880	1,370	-------	44,300	15,700	4,360	11,200	10,500	1,530	4,720
31	2,800	-------	3,460	1,220	-------	40,400	-------	4,790	-------	9,620	1,630	-------

NOTE.—Flashboards damaged by high water Oct. 2, repaired Oct. 22, started leaking Jan. 1 owing to ice pressure; estimated 95 per cent was carried away at 6 a. m. Feb. 12 and all off at 2 a. m. March 13; partly installed May 27, completely installed June 8; damaged by high water Sept. 14 and repaired Sept. 24; discharge corrected accordingly.

Monthly discharge of Hudson River at Mechanicville, N. Y., for the year ending September 30, 1925

[Drainage area, 4,500 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	21,900	1,610	5,560	1.24	1.43
November	12,700	988	3,620	.804	.90
December	9,990	1,900	4,320	.960	1.11
January	2,330	981	1,600	.356	.41
February	26,600	696	9,470	2.10	2.19
March	44,300	8,190	18,200	4.04	4.66
April	35,200	12,500	18,100	4.02	4.48
May	15,700	4,360	8,600	1.91	2.20
June	11,200	1,460	4,810	1.07	1.19
July	13,100	2,270	6,470	1.44	1.66
August	8,840	1,530	4,800	1.07	1.23
September	12,100	1,380	4,730	1.05	1.17
The year	44,300	696	7,510	1.67	22.63

NOTE.—The monthly discharge in second-feet per square mile and run-off in inches shown by the table do not necessarily represent the natural flow from the basin because of artificial storage. (See "Diversions" above.)

INDIAN LAKE RESERVOIR NEAR INDIAN LAKE, N. Y.

LOCATION.—At masonry storage dam at outlet of Indian Lake, 2 miles south of Indian Lake village, Hamilton County, and 7½ miles above mouth of Indian River.

DRAINAGE AREA.—131 square miles, including 9.3 square miles of water surface of Indian Lake at the elevation of crest of spillway (measured on topographic maps).

RECORDS AVAILABLE.—July 22, 1900, to September 30, 1925.

GAGE.—Chain gage on dam near gate house; read by Frank Brown. Mean elevation of crest of spillway is at gage height 33.38 feet.

EXTREMES OF STAGE.—Maximum elevation of water surface recorded during year, 35.05 feet May 17–19; minimum elevation, 10.45 feet February 11.

1900–1925: Maximum elevation recorded, 38.8 feet March 28, 1913; minimum elevation, 2.0 feet March 9–18, 1907, and January 3–17, 1910.

REGULATION.—At ordinary stages discharge is completely regulated by operation of sluice gates. Water is held in storage until needed to augment flow of the upper Hudson during low-water period. Storage capacity is about 4.7 billion cubic feet, equivalent to a flow of about 600 second-feet for 90 days.

COOPERATION.—Record of gate openings furnished by the Indian River Co.

Daily gage height, in feet, of Indian Lake Reservoir near Indian Lake, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19.95	19.05	15.6	17.75	12.95	15.75	26.6	34.65	34.85	34.85	34.5	30.75
2	20.7	18.8	15.7	17.85	12.65	15.85	26.95	34.75	34.85	34.85	34.55	30.45
3	21.15	18.5	15.75	17.85	12.35	16.0	27.3	34.85	34.9	34.85	34.6	30.1
4	21.35	18.15	15.8	17.9	12.05	16.15	27.65	34.95	34.9	34.85	34.55	30.1
5	21.5	17.85	15.85	17.9	11.75	16.25	28.0	34.95	34.85	34.85	34.55	30.1
6	21.55	17.55	16.0	17.95	11.45	16.35	28.3	34.9	34.8	34.85	34.55	29.85
7	21.65	17.25	16.15	18.0	11.15	16.55	28.65	34.85	34.75	34.9	34.6	29.45
8	21.7	16.95	16.3	18.05	10.85	16.65	28.95	34.75	34.75	34.9	34.65	29.05
9	21.75	16.65	16.45	18.1	10.65	16.75	29.3	34.65	34.75	34.9	34.75	28.65
10	21.85	16.35	16.95	18.1	10.55	16.85	29.65	34.7	34.75	34.95	34.85	28.35
11	21.9	16.05	17.25	17.95	10.45	17.05	29.95	34.75	34.75	34.95	34.85	28.05
12	21.95	15.75	17.35	17.75	10.75	17.4	30.35	34.75	34.75	34.95	34.85	27.85
13	22.05	15.45	17.4	17.55	11.35	17.65	30.75	34.85	34.7	34.75	34.8	27.85
14	22.1	15.15	17.45	17.35	11.75	17.95	31.15	34.9	34.7	34.55	34.85	28.05
15	22.1	14.95	17.5	17.15	12.05	18.25	31.65	34.9	34.65	34.35	34.8	28.3
16	22.15	14.75	17.55	16.85	12.25	18.45	32.15	34.95	34.6	34.05	34.75	28.75
17	22.15	14.55	17.6	16.55	12.45	18.55	32.6	35.05	34.45	34.1	34.75	29.15
18	22.15	14.35	17.7	16.25	12.65	18.85	32.85	35.05	34.4	34.15	34.55	29.55
19	21.95	14.2	17.8	15.95	12.85	19.25	33.05	35.05	34.4	33.85	34.35	29.55
20	21.65	14.0	17.95	15.65	13.15	19.85	33.4	35.0	34.45	33.55	34.25	29.65
21	21.45	13.8	18.05	15.45	13.35	20.15	33.65	34.95	34.5	33.25	34.35	29.75
22	21.25	13.95	18.1	15.15	13.55	20.45	33.95	34.95	34.45	33.35	34.35	29.85
23	21.05	14.25	18.15	14.95	13.75	20.75	34.05	34.85	34.4	33.5	34.0	29.95
24	21.05	14.75	18.25	14.75	14.1	20.95	34.25	34.9	34.25	33.55	33.75	30.0
25	21.15	14.95	18.3	14.55	14.45	21.25	34.65	34.9	34.3	33.6	33.35	30.0
26	20.85	15.1	18.35	14.35	14.8	21.5	34.8	34.85	34.45	33.75	32.85	30.05
27	20.5	15.25	18.15	14.15	15.2	21.85	34.8	34.85	34.55	34.05	32.55	30.05
28	20.2	15.3	17.95	13.95	15.6	23.2	34.75	34.8	34.6	34.25	32.35	30.1
29	19.85	15.4	17.75	13.75	------	24.45	34.55	34.8	34.7	34.35	32.05	30.15
30	19.65	15.5	17.55	13.55	------	25.45	34.45	34.85	34.8	34.45	31.65	30.25
31	19.35	------	17.65	13.25	------	26.05	------	34.85	------	34.5	31.05	------

INDIAN RIVER NEAR INDIAN LAKE, N. Y.

LOCATION.—Three-quarters of a mile below dam at outlet of Indian Lake, 1 mile above mouth of Big Brook, 2 miles south of Indian Lake village, Hamilton County, and 6½ miles above mouth.

DRAINAGE AREA.—132 square miles (measured on topographic maps).

RECORDS AVAILABLE.—July 1, 1912, to June 30, 1914; and June 5, 1915, to September 30, 1925.

GAGE.—Gurley 7-day graph water-stage recorder on right bank; inspected by Frank BROWN.

DISCHARGE MEASUREMENTS.—Made from cable 75 feet below gage or by wading.

CHANNEL AND CONTROL.—Control is a reef of coarse gravel; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 4.23 feet at 7 p. m. April 26 (discharge, 1,140 second-feet); minimum stage, 0.04 foot from 9 a. m. December 6 to 2 a. m. December 7 (discharge, 1.3 second-feet).

1912–1925: Maximum stage recorded, 7.8 feet at 4 p. m. March 28, 1913 (discharge, 3,460 second-feet); minimum discharge, 0.7 second-foot at midnight September 30, 1918.

ICE.—Stage-discharge relation occasionally slightly affected by ice.

REGULATION.—Discharge is regulated by operation of the sluice gates at Indian Lake Dam.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve well defined between 10 and 1,500 second-feet. Operation of water-stage recorder satisfactory except as indicated in footnote to daily-discharge table. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of gage-height graph, or for days of great range in stage, by averaging discharge for intervals of day. Records good, except for periods of estimate, for which they are fair.

Discharge measurements of Indian River near Indian Lake, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 7	0.52	22.6	May 27	1.76	248	Sept. 10	2.80	51 5
May 7	2.98	620	July 18	.72	36.0			

Daily discharge, in second-feet, of Indian River near Indian Lake, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	521	1.5	2.3	486	2.5	14	171	209	41	39	919
2	5.1	626	1.4	1.8	475	2.5	16	173	214	74	39	897
3	3.5	626	1.4	1.8	464	2.1	18	257	217	93	112	402
4	2.9	606	1.4	1.7	461	1.9	18	472	214	98	166	20
5	2.7	606	1.4	1.7	450	1.9	18	626	212	95	41	206
6	2.5	606	1.3	1.7	443	1.9	18	606	202	95	41	798
7	2.7	587	1.4	1.6	433		18	606	191	95	42	897
8	2.7	568	2.2	1.8	426		18	568	159	92	42	897
9	2.7	568	4.8	1.8	420		18	398	63	92	43	875
10	2.9	568	3.1	183	413	4.0	20	236	63	103	54	683
11	3.3	549	2.3	397	410		22	236	60	256	141	530
12	3.5	530	1.8	397	221		24	150	60	380	195	660
13	3.3	530	1.8	390			29	54	57	371	193	589
14	3.1	530	1.8	390	3.0	4.5	33	76	54	509	193	244
15	2.9	440	1.8	390		6.8	34	124	215	789	188	19

Daily discharge, in second-feet, of Indian River near Indian Lake, N. Y., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	2.9	349	1.7	475		3.9	30	131	371	389	182	18
17	3.3	349	1.6	579	3.0	3.3	32	180	222	35	279	18
18	69	346	1.6	572		2.7	33	255	144	344	510	17
19	413	343	1.5	560		9.7	38	266	75	587	626	16
20	423	343	1.5	553	1.8	6.8	41	258	42	834	354	15
21	423	343	1.6	545	1.8	4.8	42	247	42	1,030	47	13
22	423	340	1.6	541	3.1	5.4	300	242	178	440	329	13
23	268	198	1.6	534	5.6	3.7	563	226	293	29	606	12
24	2.9	4.5	1.5	526	9.3	3.3	526	224	293	30	823	12
25	144	3.3	1.6	523	6.8	3.5	711	219	157	31	963	12
26	606	2.7	213	519	4.8	4.2	1,040	217	35	32	963	12
27	685	2.1	645	512	3.5	25	1,120	214	35	33	730	12
28	665	1.7	626	508	3.1	11	1,100	207	35	33	568	13
29	665	1.7	626	504	-------	11	973	205	36	35	787	13
30	547	1.7	334	497	-------	13	557	205	38	36	941	13
31	410	-------	3.7	493	-------	13	-------	202	------	39	941	----

NOTE.—Discharge Dec. 20, 21, 25, Jan. 16 to Feb. 20, Feb. 28, Mar. 1, 7–13, 27, Apr. 3–7, June 5, July 18–31, Aug. 29, and Sept. 14–18, estimated from record of gate openings and reservoir elevations; no automatic record.

Monthly discharge of Indian River near Indian Lake, N. Y., for the year ending September 30, 1925

[Drainage area, 132 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	685	2.5	187	1.42	1.64
November	626	1.7	370	2.80	3.12
December	645	1.3	80.4	.609	.70
January	579	1.6	342	2.59	2.99
February	486	1.8	184	1.39	1.45
March	25	1.9	5.69	.043	.05
April	1,120	14	247	1.87	2.09
May	626	54	266	2.02	2.33
June	371	35	140	1.06	1.18
July	1,030	29	230	1.74	2.01
August	963	39	361	2.73	3.15
September	919	12	295	2.23	2.49
The year	1,120	1.3	226	1.71	23.20

NOTE.—The monthly discharge in second-feet per square mile and run-off in inches shown by the table do not represent the natural flow from the basin because of artificial storage in Indian Lake Reservoir.

NORTH CREEK AT NORTH CREEK, N. Y.

LOCATION.—125 feet below dam in North Creek, Warren County, and 1,000 feet above mouth.

DRAINAGE AREA.—21.8 square miles (measured on topographic maps).

RECORDS AVAILABLE.—July 9, 1924, to September 30, 1925.

GAGE.—Vertical staff on left bank; read by Wm. R. Alexander.

DISCHARGE MEASUREMENTS.—Made from highway bridge near dam or by wading.

CHANNEL AND CONTROL.—Gravel and small boulders; shifts occasionally.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period of record, 5.1 feet at 5 p. m. March 28, 1925 (discharge, corrected for backwater from Hudson River, 655 second-feet); minimum stage, 1.10 feet at 7.30 a. m. August 17, 1924 (discharge, 2.3 second-feet).

ICE.—Stage-discharge relation slightly affected by ice.

ACCURACY.—Stage-discharge relation practically permanent during period except as affected by ice or by backwater from Hudson River. Rating curve well defined between 6 and 300 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table, except for periods of backwater from ice or from Hudson River for which it was ascertained as indicated in footnote to table of daily discharge. Records good except for periods of backwater from ice or from Hudson River for which they are fair.

Discharge measurements of North Creek at North Creek, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 1	3.91	302	Feb. 25	2.51	105	May 28	1.81	31.8
Oct. 22	1.41	10.1	Apr. 7	2.24	69.9	July 17	1.49	14.5
Jan. 15	1.34	7.90	May 7	2.26	73.3			

Daily discharge, in second-feet, of North Creek at North Creek, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	315	5.8	18	7	7	55	123	163	41	37	14	5.8
2	123	6.3	16	6	7	48	106	132	56	30	12	6.1
3	61	6.3	16	6	6	44	98	114	47	22	4.9	5.2
4	31	6.3	13	8	6	38	91	106	39	20	23	6.1
5	27	6.3	10	7.8	6	30	84	132	30	16	24	6.3
6	23	6.3	10	6.9	6	28	77	98	22	14	20	5.8
7	20	6.1	16	6.3	6	27	72	91	18	12	21	12
8	16	6.3	56	6.9	6	30	77	66	16	10	24	16
9	16	5.8	114	6.9	6	33	72	56	15	9.4	23	14
10	15	5.8	72	6.3	12	39	66	47	14	16	52	9.4
11	15	5.8	45	6.3	100	106	61	52	12	14	34	8.8
12	14	5.5	34	6.6	547	142	61	52	10	12	24	8.8
13	13	5.2	30	6.3	132	84	84	47	10	9.7	22	52
14	13	7.5	24	6.9	77	114	77	38	10	8.4	26	91
15	12	11	24	8.1	72	142	174	35	12	7.2	25	61
16	11	8.1	22	8.1	61	91	132	37	12	7.5	20	72
17	16	7	22	8.8	46	77	106	52	10	14	13	77
18	12	7	20	8.1	42	66	91	52	14	11	10	52
19	12	6	20	8.1	40	77	72	41	16	10	9.7	32
20	11	5	18	8.1	34	252	66	39	10	9.1	13	23
21	10	7	18	7.8	27	123	47	35	12	8.4	33	25
22	11	14	16	7.5	47	106	77	32	14	56	19	22
23	10	298	14	8.1	61	84	238	33	12	52	14	18
24	10	98	13	7	152	84	252	37	10	30	10	16
25	9.7	66	11	6	114	84	186	37	28	20	9.1	16
26	8.4	61	10	7	77	114	174	40	33	18	8.4	15
27	8.1	47	9	7	65	142	132	35	20	22	6.6	16
28	7.5	43	9	7	60	574	106	32	43	29	6.3	21
29	6.9	31	8	7	-------	315	91	35	52	52	6.3	23
30	6.1	16	7	7	-------	238	77	38	52	27	6.1	17
31	5.5	-------	7	7	-------	142	-------	35	-------	19	6.1	-----

NOTE.—Discharge Nov. 17–21, Dec. 2–6, Dec. 12 to Jan. 4, Jan. 24 to Feb. 11, Feb. 18–19, and Feb. 27 to Mar. 4 determined from gage heights corrected for backwater from ice by means of 2 discharge measurements and study of weather records. Discharge Oct. 1–2 and Mar. 28 to Apr. 1 determined from gage heights corrected for backwater from Hudson River.

Monthly discharge of North Creek at North Creek, N. Y., for the year ending September 30, 1925

[Drainage area, 21.8 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	315	5.5	28.0	1.28	1.48
November	208	5.2	27.0	1.24	1.38
December	114	7	23.3	1.07	1.23
January	8.8	6	7.16	.328	.38
February	547	6	65.1	2.99	3.11
March	574	27	114	5.23	6.03
April	252	47	106	4.86	5.42
May	163	32	59.3	2.72	3.14
June	56	10	23.0	1.06	1.18
July	56	7.2	20.1	.922	1.06
August	52	4.9	17.4	.798	.92
September	91	5.2	25.1	1.15	1.28
The year	574	4.9	42.7	1.96	26.61

SCHROON RIVER AT RIVERBANK, N. Y.

LOCATION.—At steel highway bridge near Riverbank post office, Warren County, 9 miles below Schroon Lake, and 9 miles above Warrensburg.

DRAINAGE AREA.—534 square miles.

RECORDS AVAILABLE.—September 2, 1907, to September 30, 1925.

GAGE.—Chain gage on upstream side of bridge; read by J. H. Roberts.

DISCHARGE MEASUREMENTS.—Made from upstream side of highway bridge or by wading.

CHANNEL AND CONTROL.—Gravel; occasionally shifting. Logs occasionally become lodged on control causing backwater.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 9.3 feet at 4 p. m. March 30 and 8 a. m. March 31 (discharge, 8,350 second-feet); minimum stage, 1.6 feet September 10–12 (discharge, 211 second-feet).

1907–1925: Maximum stage recorded, 10.7 feet at 5 p. m. March 28, 1913 (discharge, about 13,500 second-feet); minimum stage, 0.85 foot at 5 p. m. October 17, 1909 (discharge, 28 second-feet).

ICE.—Stage-discharge relation affected by ice.

REGULATION.—Flow affected by storage in Schroon and Brant Lakes.

ACCURACY.—Stage-discharge relation changed slightly at time of spring break-up; affected by ice December 13 to February 24. Rating curves well defined between 150 and 7,000 second-feet. Gage read to hundredths once daily. Daily discharge ascertained by applying mean daily gage height to rating table. Open-water records fairly good, except for days when sluice gates in dam above station are operated when one gage reading a day may not give the true mean daily gage height. Records during period of ice effect, fair.

Discharge measurements of Schroon River at Riverbank, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 22	2.32	471	Feb. 28	3.52	1,210	July 7	1.72	251
Jan. 16	*2.18	332	Apr. 8	5.35	2,930	July 16	1.79	268

*Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Schroon River at Riverbank, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,210	363	560	420	300	1,110	7,300	2,360	730	520	595	241
2	1,740	327	535	460	300	1,110	6,310	2,250	790	475	620	241
3	2,470	327	535	420	280	1,110	5,470	2,140	760	348	620	241
4	2,470	310	512	420	240	1,040	5,060	2,140	820	292	730	241
5	2,040	310	490	400	260	975	4,020	2,140	850	241	702	241
6	1,940	310	490	420	280	975	3,760	2,040	910	241	675	241
7	1,550	293	490	440	280	975	3,280	2,040	850	274	730	241
8	1,290	277	535	420	300	910	3,160	1,940	820	274	790	241
9	920	261	535	400	320	910	2,690	1,840	820	310	760	241
10	800	261	535	400	320	850	2,580	1,750	730	310	975	211
11	772	261	535	380	400	1,040	2,360	1,750	702	292	850	211
12	1,130	261	560	360	600	1,110	2,140	1,660	675	274	850	211
13	1,130	246	550	360	800	1,040	2,040	1,580	675	258	790	258
14	920	231	550	340	1,000	1,330	1,940	1,580	620	258	760	310
15	860	231	550	340	1,100	1,410	1,940	1,410	620	258	730	310
16	800	231	550	320	1,100	1,410	2,040	1,260	620	274	675	409
17	745	217	550	320	1,000	1,490	1,940	1,180	570	258	595	675
18	535	217	550	320	1,000	1,490	1,940	1,180	570	258	258	820
19	468	231	550	300	950	1,660	2,040	1,040	520	241	409	850
20	490	217	550	300	900	1,750	1,940	1,040	520	241	329	850
21	445	231	500	300	950	1,840	1,750	1,040	520	258	348	850
22	445	217	500	300	950	1,940	2,040	975	498	258	329	975
23	424	512	500	280	950	1,940	2,040	975	520	274	310	1,040
24	445	535	480	280	1,100	1,940	2,250	975	498	310	310	1,110
25	424	512	480	280	1,110	2,040	2,580	910	520	348	310	1,040
26	424	490	460	280	1,110	2,140	2,580	910	545	368	292	975
27	424	512	460	280	1,110	2,250	2,580	850	570	368	292	910
28	382	512	460	260	1,110	2,500	2,470	850	570	388	274	850
29	332	585	460	280	-------	5,760	2,360	850	570	409	258	850
30	382	560	440	260	-------	8,050	2,360	730	595	570	274	790
31	363	-------	440	260	-------	8,200	-------	702	-------	570	258	-------

NOTE.—Discharge Dec. 13 to Feb. 24 determined from gage heights corrected for ice effect from 1 discharge measurement, study of gage-height graph and weather records, and comparison with adjusted records of flow at Hudson River stations.

Monthly discharge of Schroon River at Riverbank, N. Y., for the year ending September 30, 1925

[Drainage area, 534 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	2,470	363	930	1.74	2.01
November	585	217	335	.627	.70
December	560	440	513	.961	1.11
January	460	260	342	.640	.74
February	1,110	240	719	1.35	1.41
March	8,200	850	2,010	3.76	4.34
April	7,300	1,750	2,900	5.43	6.06
May	2,360	702	1,420	2.66	3.07
June	910	498	653	1.22	1.36
July	570	241	323	.605	.70
August	975	258	539	1.01	1.16
September	1,110	211	556	1.04	1.16
The year	8,200	211	936	1.75	23.82

NOTE.—The monthly discharge in second-feet per square mile and run-off in inches shown by the table do not necessarily represent the natural flow from the basin because of artificial storage in Schroon and Brant Lakes.

SACANDAGA RIVER NEAR HOPE, N. Y.

LOCATION.—1½ miles below junction of East and West Branches, 4½ miles above Hope, Hamilton County, about 12 miles above Northville.

DRAINAGE AREA.—494 square miles (measured on topographic maps).

RECORDS AVAILABLE.—September 15, 1911, to September 30, 1925.

GAGE.—Staff gage on left bank, the lower inclined and the middle and upper vertical; read by Melvin Willis.

DISCHARGE MEASUREMENTS.—Made from cable 100 feet below gage or by wading.

CHANNEL AND CONTROL.—Rocky; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 7.75 feet at 5.30 p. m. March 28 (discharge, 12,500 second-feet); minimum stage, 1.77 feet several times November 14, September 5 and 6; minimum discharge, 110 second-feet November 19–20 (stage-discharge relation affected by ice).

1911–1925: Maximum stage recorded, 11.7 feet during flood of March 25–30, 1913, determined by leveling from floodmarks (discharge above limits of rating curve); minimum stage, 1.17 feet at 7.55 a. m. September 30, 1913 (discharge, about 16 second-feet).

ICE.—Stage-discharge relation affected by ice.

ACCURACY.—Stage-discharge relation practically permanent except when affected by ice. Rating curve fairly well defined between 100 and 10,000 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table. Records good, except during periods of ice effect and estimate, for which they are fair.

Discharge measurements of Sacandaga River near Hope, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 11	2.41	440	Feb. 9	*3.86	326	June 13	1.90	207
Oct. 23	2.47	464	Mar. 23	4.55	2,960	Sept. 12	2.21	312

* Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Sacandaga River near Hope, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8,830	314	480	320	220	1,300	4,990	2,230	760	2,080	950	227
2	3,760	314	440	300	190	1,200	3,990	2,230	720	1,460	805	194
3	2,230	314	380	300	190	1,140	3,760	2,080	578	990	760	207
4	1,570	290	360	320	170	1,090	3,760	1,940	514	850	680	177
5	1,240	290	360	300	160	1,090	3,330	1,810	483	720	645	165
6	1,040	267	380	300	150	1,090	2,930	1,570	453	610	680	158
7	940	247	550	300	150	1,090	2,930	1,460	423	514	940	217
8	805	227	850	300	150	1,190	2,930	1,300		453	940	267
9	760	210	3,200	300	300	1,300	2,740	1,190		366	1,040	247
10	645	201	2,800	280	500	1,090	2,560	1,140	270	340	1,520	201
11	550	194	1,500	280	900	1,300	2,740	1,040		720	1,090	171
12	483	182	950	280	2,800	1,350	2,560	578		680	895	314
13	610	171	850	260	2,400	1,400	2,740	720		545	990	423
14	514	165	800	260	1,900	2,230	3,330	990	207	514	990	940
15	453	160	700	240	1,700	3,540	4,730	895	227	483	805	805

Daily discharge, in second-feet, of Sacandaga River near Hope, N. Y., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	423	160	550	240	1,570	2,560	3,990	850	610	453	645	940
17	394	140	480	220	1,300	2,560	3,130	1,040	514	578	545	805
18	423	130	460	220	1,140	2,560	2,740	1,090	423	610	514	680
19	514	110	480	220	1,190	2,740	2,740	1,040	366		514	545
20	483	110	480	220	1,190	3,500	2,230	990	340		760	483
21	453	140	420	200	1,240	4,500	2,080	940	366		610	453
22	453	1,200	420	200	1,300	2,930	3,130	940	423		514	423
23	423	3,400	420	190	1,690	2,740	4,480	895	394		453	366
24	394	3,400	400	190	2,740	2,390	4,230	895	340	1,200	423	314
25	394	2,800	400	190	2,560	2,560	3,990	895	1,090		394	267
26	366	2,000	380	190	1,800	2,930	3,540	850	1,190		366	247
27	366	1,400	360	170	1,600	3,540	2,930	805	1,350		340	247
28	366	950	340	170	1,400	8,830	3,330	760	1,810		314	340
29	340	700	320	170	-------	10,300	2,930	720	2,390		290	340
30	340	600	320	170	-------	7,530	2,560	645	2,560		290	314
31	340	-------	320	190	-------	6,350	-------	680	-------	-------	267	------

NOTE.—Discharge Nov. 15 to Feb. 15 and Feb. 26 to Mar. 2, determined from gage heights corrected for ice effect from 1 discharge measurement, study of gage-height graph and weather records, and comparison with records of Sacandaga River at Hadley. Discharge Oct. 11, Mar. 20–21, June 8–13, July 19–31, and Aug. 1, estimated from comparison with Hadley record; gage-height record either doubtful or missing.

Monthly discharge of Sacandaga River near Hope, N. Y., for the year ending September 30, 1925

[Drainage area, 494 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	8,830	340	997	2.02	2.33
November	3,400	110	693	1.40	1.56
December	3,200	320	682	1.38	1.59
January	320	170	242	.490	.56
February	2,800	150	1,160	2.35	2.45
March	10,300	1,090	2,900	5.87	6.77
April	4,990	2,080	3,270	6.62	7.39
May	2,230	578	1,140	2.31	2.66
June	2,560	207	672	1.36	1.52
July	2,080	340	921	1.86	2.14
August	1,520	267	676	1.37	1.58
September	940	158	383	.775	.86
The year	10,300	110	1,140	2.31	31.41

SACANDAGA RIVER AT HADLEY, N. Y.

LOCATION.—Half a mile west of Hadley, Saratoga County, 1 mile above mouth of river, and 4½ miles below site of proposed storage dam at Conklingville

DRAINAGE AREA.—1,060 square miles (measured on topographic maps).

RECORDS AVAILABLE.—January 1, 1911, to September 30, 1925. September 13, 1907, to December 31, 1910, at upper bridge station; September 24, 1909, to midsummer of 1911, at lower bridge station.

GAGE.—Friez 7-day graph water-stage recorder on left bank; inspected by James F. Kelly.

DISCHARGE MEASUREMENTS.—Made from highway bridge half a mile below gage or by wading.

CHANNEL AND CONTROL.—Very rough but practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage from water-stage recorder, 8.94 feet at 1 p. m. March 30 (discharge, 14,500 second-feet); minimum stage, 2.84 feet at 8 p. m. November 18 (discharge, 294 second-feet).

1911–1925: Maximum stage, from water-stage recorder, 12.36 feet from 11 a. m. to noon March 28, 1913 (discharge, about 35,500 second-feet); minimum stage, 2.25 feet all day September 16, 1913 (discharge, about 61 second-feet).

ICE.—Stage-discharge relation affected by ice.

ACCURACY.—Stage-discharge relation practically permanent, except as affected by ice. Rating curve well defined between 150 and 12,000 second-feet. Operation of water-stage recorder satisfatory. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of gage-height graph or, for days of considerable fluctuation, by averaging discharge for intervals of day. Records good except during period of ice effect, for which they are fair.

Discharge measurements of Sacandaga River at Hadley, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Feb. 24	a6.32	3,380	July 15	3.67	834
Apr. 6	6.65	6,250	July 16	3.58	808

a Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Sacandaga River at Hadley, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,860	632	1,290	700	460	3,400	11,900	4,580	1,570	4,950	2,890	490
2	7,740	581	1,120	650	480	3,000	10,400	4,580	1,720	4,580	2,380	462
3	8,050	546	1,070	650	460	2,800	8,700	4,580	1,770	3,880	2,060	429
4	6,700	518	974	650	460	2,600	7,740	4,340	1,530	3,080	1,770	422
5	5,470	490	798	700	440	2,200	7,130	4,340	1,260	2,460	1,570	422
6	4,220	476	702	700	400	2,000	6,550	4,340	1,060	1,990	1,490	429
7	3,080	462	866	650	420	1,900	5,860	4,100	902	1,550	1,710	539
8	2,300	455	1,140	650	420	2,000	5,340	3,770	774	1,250	1,990	648
9	1,750	442	2,780	600	500	2,000	5,080	3,260	758	1,050	2,060	710
10	1,430	429	3,770	600	650	2,200	4,700	2,800	750	1,000	2,420	640
11	1,190	416	3,770	600	1,100	3,000	4,460	2,540	718	1,220	2,800	574
12	1,040	416	3,000	600	2,800	4,000	4,340	2,800	610	1,290	2,300	553
13	920	422	2,200	550	4,000	5,000	4,340	2,380	532	1,180	1,850	742
14	830	442	1,800	550	3,800	5,860	4,460	2,140	483	1,030	1,990	1,690
15	774	469	1,500	550	3,600	6,840	5,080	2,140	532	902	2,140	2,460
16	742	497	1,300	550	3,400	7,740	5,600	1,920	742	857	1,850	2,140
17	702	489	1,200	550	3,000	8,050	6,000	1,920	1,090	1,160	1,550	2,140
18	678	359	1,100	550	2,600	7,280	5,730	2,380	1,060	1,260	1,290	2,140
19	726	396	1,000	500	2,200	7,280	5,210	2,380	830	1,240	1,110	1,850
20	766	334	950	500	2,000	7,430	4,950	2,060	670	1,160	1,360	1,570
21	750	359	950	500	1,900	8,370	4,820	1,920	640	1,040	1,990	1,330
22	766	595	900	500	1,900	9,370	4,950	1,820	750	1,370	1,540	1,120
23	750	3,620	850	500	2,400	8,370	5,600	1,710	734	3,300	1,160	965
24	742	4,950	800	500	3,400	7,280	6,410	1,710	662	3,170	929	822
25	774	4,700	800	500	4,200	6,700	6,980	1,770	766	2,460	782	718
26	830	3,990	800	480	4,400	6,410	6,980	1,920	1,660	1,990	766	662
27	893	3,170	800	500	4,000	6,550	6,550	1,840	1,990	2,920	734	632
28	848	2,540	750	500	3,800	8,700	5,860	1,620	2,540	3,990	694	726
29	798	2,140	750	480	-------	11,900	5,210	1,450	3,880	4,340	632	857
30	766	1,550	700	480	-------	14,300	4,580	1,640	4,820	4,220	567	893
31	694	-------	700	460	-------	13,500	-------	1,680	-------	3,560	532	------

NOTE.—Discharge Dec. 12 to Mar. 13, determined from gage heights corrected for ice effect from discharge measurement, study of gage-height graph and weather records, and comparison with record of Sacandaga River near Hope and Hudson River at Hadley.

Monthly discharge of Sacandaga River at Hadley, N. Y. for the year ending September 30, 1925

[Drainage area, 1,060 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	8,050	678	2,050	1.93	2.22
November	4,950	334	1,230	1.16	1.29
December	3,770	700	1,330	1.25	1.44
January	700	460	563	.531	.61
February	4,400	400	2,110	1.99	2.07
March	14,300	1,900	6,070	5.73	6.61
April	11,900	4,340	6,050	5.71	6.37
May	4,580	1,450	2,660	2.51	2.89
June	4,820	483	1,260	1.19	1.33
July	4,950	857	2,240	2.11	2.43
August	2,890	532	1,580	1.49	1.72
September	2,460	422	992	.936	1.04
The year	14,300	334	2,350	2.22	30.02

BATTEN KILL AT BATTENVILLE, N. Y.

LOCATION.—1 mile southwest of Battenville, Washington County, 3 miles below mouth of Whitaker Brook, and 11 miles above mouth.

DRAINAGE AREA.—397 square miles (measured on topographic maps).

RECORDS AVAILABLE.—October 1, 1922, to September 30, 1925.

GAGE.—Gurley 7-day graph water-stage recorder on left bank; inspected by employee of Blandy Paper Co.

DISCHARGE MEASUREMENTS.—Made from cable 400 feet below gage or by wading.

CHANNEL AND CONTROL.—Solid rock ledge extending practically across channel, overlain with some gravel on right side; practically permanent.

EXTREMES OF DISCHARGE.—Maximum discharge, about 7,350 second-feet at 11 a. m. February 12 (stage-discharge relation affected by ice); minimum stage from water-stage recorder, 1.65 feet at 6 a. m. November 19 (discharge, 40 second-feet).

1922–1925: Maximum discharge recorded, that of February 12, 1925; minimum stage, that of November 19, 1924.

ICE.—Stage-discharge relation seriously affected by ice.

REGULATION.—Some diurnal fluctuation, due to operation of mills at Battenville and above, is noticeable during low water.

ACCURACY.—Stage-discharge relation changed during flood of February 11–12. Rating curve used previously very well defined between 80 and 6,000 second-feet; curve used subsequently, fairly well defined between 100 and 5,000 second-feet. Operation of water-stage recorder satisfactory throughout year. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of gage-height graph or, for days of considerable fluctuation, by averaging discharge for intervals of day. Records good, except during period of ice effect, for which they are fair.

Discharge measurements of Batten Kill at Battenville, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 25	3.09	622	Apr. 3	4.34	1,430	May 30	3.12	551
Jan. 23	a 3.42	184	Apr. 29	3.97	1,050	July 7	3.56	802
Feb. 18	4.02	1,020	May 1	4.15	1,270	Aug. 18	2.88	404

a Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Batten Kill at Battenville, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	834	160	275	240	190	1,180	1,930	1,220	542	1,700	1,040	236
2	673	154	309	220	190	1,700	1,570	1,140	742	1,290	970	227
3	485	161	266	260	180	1,290	1,370	1,040	650	1,040	840	211
4	424	159	257	240	170	1,110	1,330	970	530	872	742	215
5	370	165	226	240	170	970	1,330	1,000	470	1,080	656	245
6	355	153	280	240	180	970	1,180	970	420	970	692	219
7	325	154	330	240	200	1,110	1,110	905	376	775	808	284
8	330	154	345	220	220	1,080	1,040	872	345	692	698	414
9	320	145	1,140	220	320	1,040	1,040	808	325	602	626	310
10	300	148	1,190	220	500	1,000	970	756	320	680	620	263
11	285	148	837	220	1,900	1,080	1,080	.838	291	686	632	236
12	257	144	654	200	6,500	1,220	1,000	1,140	277	548	554	245
13	252	148	618	220	4,200	1,080	1,040	905	258	475	508	943
14	239	144	534	220	2,950	1,920	1,040	775	241	420	572	1,450
15	234	151	490	190	2,120	3,170	1,080	749	286	392	566	1,250
16	234	137	546	180	1,840	2,620	1,370	704	408	483	492	1,000
17	226	144	485	200	1,370	2,020	1,180	742	519	1,180	431	1,040
18	218	146	524	200	1,110	1,880	1,080	840	345	872	382	905
19	202	116	458	190	1,040	1,930	1,000	704	277	692	365	775
20	200	134	490	180	1,000	2,220	1,110	632	241	590	810	674
21	194	140	392	200	1,000	1,880	1,080	578	236	560	674	590
22	196	153	360	190	1,570	1,620	1,250	548	267	1,390	536	530
23	189	880	340	180	1,750	1,450	1,570	554	258	2,680	464	486
24	186	1,000	320	150	2,420	1,250	1,840	596	241	1,880	426	448
25	176	615	320	160	2,070	1,220	1,750	584	258	1,330	376	442
26	166	446	320	190	1,800	1,180	1,700	596	365	1,140	345	360
27	176	355	320	180	1,180	1,180	1,530	566	346	1,340	315	365
28	158	315	300	170	1,110	2,050	1,290	530	1,460	1,800	296	420
29	168	315	280	140	-------	3,170	1,110	497	3,060	1,880	277	426
30	158	305	280	180	-------	3,170	1,040	536	2,420	1,450	258	376
31	159	-------	260	190	-------	2,520	-------	530	-------	1,140	241	-------

NOTE.—Discharge Dec. 22 to Feb. 13 determined from gage heights corrected for ice effect from 1 discharge measurement, study of gage-height graph, and weather records.

Monthly discharge of Batten Kill at Battenville, N. Y., for the year ending September 30, 1925

[Drainage area, 397 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	834	158	280	0.705	0.81
November	1,000	116	250	.630	.70
December	1,190	226	443	1.12	1.29
January	260	140	202	.509	.59
February	6,500	170	1,400	3.53	3.68
March	3,170	970	1,650	4.16	4.80
April	1,930	970	1,270	3.20	3.57
May	1,220	497	769	1.94	2.24
June	3,060	236	559	1.41	1.57
July	2,680	392	1,050	2 64	3.04
August	1,040	241	555	1.40	1.61
September	1,450	211	520	1.31	1.46
The year	6,500	116	742	1.87	25.36

HOOSIC RIVER NEAR EAGLE BRIDGE, N. Y.

LOCATION.—Half a mile below mouth of Wallomsac River, 1½ miles southeast of Eagle Bridge, Rensselaer County, and 22 miles above mouth.

DRAINAGE AREA.—512 square miles (measured on topographic maps).

RECORDS AVAILABLE.—August 13, 1910, to March 31, 1922; July 25, 1923, to September 30, 1925. Comparable records at station at Buskirk, 4 miles below, September 25, 1903, to December 31, 1908.

GAGE.—Au 7-day graph water-stage recorder on left bank, installed August 17, 1925, and previous to this a Gurley 7-day graph water-stage recorder at same location; gages inspected by J. E. Sherman.

DISCHARGE MEASUREMENTS.—Made from cable half a mile below gage or by wading.

CHANNEL AND CONTROL.—Gravel, occasionally shifting.

EXTREMES OF DISCHARGE.—Maximum open-water stage during year from water-stage recorder, 11.12 feet at 3 p. m. February 12 (discharge, 11,200 second-feet); minimum stage, 2.23 feet at 11 a. m. November 22 (discharge, 77 second-feet.)

1910–1922; 1923–1925: Maximum stage recorded, 13.5 feet at 7.30 a. m. July 9, 1915 (discharge, about 16,700 second-feet), possibly higher stages previous to August 17, 1914, as gage was inaccessible at extremely high water; minimum stage, 6.1 feet (old datum) at 5 p. m. September 14, 1913 (discharge, practically zero).

ICE.—Stage-discharge relation affected by ice.

REGULATION.—During medium and low stages there is considerable diurnal fluctuation in flow caused by the power plant of Walter A. Wood Co. at Hoosick Falls, about 3½ miles above gage and by sawmills on Walloomsac River.

ACCURACY.—Stage-discharge relation practically permanent except as affected by ice. Rating curve fairly well defined between 50 and 10,000 second-feet. Operation of water-stage recorder satisfactory except as indicated in footnote to daily-discharge table. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of gage-height graph or, for days of considerable fluctuation, by averaging discharge for intervals of day. Records good except during periods of ice effect and estimate, for which they are fair.

Discharge measurements of Hoosic River near Eagle Bridge, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 10	3.40	424	Feb. 19	4.38	877	July 10	4.38	959
Nov. 25	4.33	873	Apr. 4	5.05	1,570	Aug. 17	3.56	456
Jan. 24	*3.78	218	Apr. 29	4.57	1,070			

*Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Hoosic River near Eagle Bridge, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,800	186	377	280	200	1,410	1,940	1,180	708	680	879	199
2	1,130	142	414	280	220	2,420	1,620	1,140	970	555	811	194
3	735	190	366	300	220	1,410	1,450	1,040	880	451	693	196
4	598	181	377	320	220	1,180	1,370	940	735	388	584	208
5	485	183	286	340	220	1,000	1,330	910	625	358	535	255
6	475	183	512	280	200	1,110	1,180	910	510	451	596	232
7	428	174	714	320	220	1,370	1,080	820	405	405	712	357
8	428	185	714	260	220	1,330	970	762	414	545	599	496
9	363	129	2,180	280	420	1,410	910	708	338	495	472	338
10	374	164	1,540	260	950	1,290	880	664	363	577	521	256
11	364	204	972	190	4,000	1,530	1,040	940	330	612	590	248
12	296	162	763	260	10,000	1,890	940	1,490	304	401	457	278
13	330	162	680	260	4,800	1,450	970	1,080	364	336	383	728
14	301	161	625	280	2,520	2,640	1,040	910	262	290	716	4,140
15	266	170	500	260	1,840	3,320	1,220	880	255	263	852	1,570
16	288	120	500	240	1,840	1,990	1,840	790	625	271	534	1,190
17	281	148	550	220	1,570	1,700	1,290	762	669	857	489	1,100
18	252	201	550	180	1,140	1,750	1,140	880	401	514	407	892
19	207	199	480	220	1,000	2,040	1,180	790	401	367	371	755
20	235	149	500	240	1,040	2,140	2,250	680	350	312	436	622
21	254	151	400	240	970	1,620	1,660	625	327	284	412	585
22	244	195	420	240	1,250	1,530	1,660	525	350	847	345	526
23	234	2,510	380	220	1,800	1,450	1,750	555	410	1,600	296	458
24	234	1,420	400	200	2,700	1,250	1,620	625	342	770	305	430
25	227	851	380	170	2,040	1,220	1,370	680	308	523	267	427
26	186	651	360	240	1,840	1,180	1,450	735	446	423	265	375
27	218	499	360	240	1,220	1,220	1,330	708	428	2,230	243	346
28	208	486	340	220	1,080	3,580	1,110	636	598	3,310	226	431
29	206	450	320	200	-------	4,610	1,040	570	910	2,020	207	460
30	218	437	360	190	-------	3,190	1,040	581	762	1,200	182	377
31	190	-------	340	240	-------	2,360	-----	625	-------	903	214	-----

NOTE.—Discharge Oct. 3-9, Dec. 13-14, Jan. 1-11, 15-24, 23-31, Feb. 15 to Apr. 4, Apr. 15-21, 27-30, May 1, 11-15, 18, 21-22, 31, June 1-2, 9, 16-18, 28, July 9, and July 27-28 obtained from gage heights determined from range lines and available record on recorder graphs; recorder not operating properly. Discharge Dec. 16 to Feb. 13 determined from gage heights corrected for ice effect from 1 discharge measurement, study of gage-height graph and weather records, and comparison with record of Batten Kill at Battenville.

Monthly discharge of Hoosic River near Eagle Bridge, N. Y., for the the year ending Sepiember 30, 1925

[Drainage area, 512 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	2,800	186	421	0.822	0.95
November	2,510	120	368	.719	.80
December	2,180	286	570	1.11	1.28
January	340	170	247	.482	.56
February	10,000	200	1,630	3.18	3.31
March	4,610	1,000	1,860	3.63	4.18
April	2,250	880	1,320	2.58	2.88
May	1,490	525	811	1.58	1.82
June	970	255	491	.959	1.07
July	3,310	263	750	1.46	1.68
August	879	182	471	.920	1.06
September	4,140	194	622	1.21	1.35
The year	10,000	120	791	1.54	20.94

MOHAWK RIVER AT VISCHER FERRY DAM, N. Y.

LOCATION.—At Vischer Ferry Dam of Barge Canal (Lock No. 7), 1 mile above Stony Creek and Vischer Ferry, 7 miles below Schenectady, Schenectady County, and 11 miles above mouth.

DRAINAGE AREA.—3,430 square miles (measured on topographic maps).

RECORDS AVAILABLE.—Discharge, June 24, 1913, to September 30, 1919; water surface elevations only, October 1, 1919, to September 30, 1925.

GAGE.—Stevens continuous water-stage recorder (showing head on crest of spillway) in the southern corner of the basin near upper end of Barge Canal Lock. Staff gage in masonry of outer lock wall just above upper gates. Datum of staff gage 12.1 feet lower than that of recorder. Recorder inspected and staff gage read by J. J. Hannon, lock tender.

CHANNEL AND CONTROL.—Control is crest of spillway.

EXTREMES OF STAGE.—Maximum stage during year from water-stage recorder, 4.19 feet at 2.30 p. m. October 1; minimum stage, 0.32 foot at 6.30 p. m. June 24.

1913–1925: Maximum stage from water-stage recorder, 7.6 feet just before noon March 28, 1914, determined by leveling from floodmarks. This stage lasted but a few moments and was caused by the breaking of an ice jam near Schenectady. Minimum stage occurred during periods when the floodgates were opened and water drawn below crest of spillway.

EXTREMES OF DISCHARGE.—1913–1919: Maximum discharge, about 140,000 second-feet just before noon March 28, 1914 (estimated by engineers of the Department of New York State Engineer and Surveyor); minimum discharge, about 290 second-feet from 4 to 5 a. m. and 4 to 6 p. m. October 31, 1914.

DIVERSIONS.—Barge Canal Lock No. 7 at south end of dam was put in operation May 15, 1915. Discharge records included flow over spillway and through lock and water wheels.

REGULATION.—Considerable diurnal fluctuation is caused by operation of Lock No. 7, floodgates at dam, and movable dams upstream. Seasonal regulation affected by operation of Hinckley and Delta Reservoirs.

Daily gage height, in feet, of Mohawk River at Vischer Ferry Dam, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.8	0.54	0.53	------	------	1.33	1.92	1.21	0.85	1.27	0.77	0.39
2	2.6	.50	.57	------	------	1.29	1.70	1.25	.96	.88	.69	.39
3	1.65	.46	.50	------	------	1.39	1.53	1.18	.83	.75	.61	.41
4	1.29	.49	.54	------	------	1.30	1.38	1.03	.76	.70	.61	.44
5	1.07	.47	.55	------	------	------	1.30	1.20	.75	.58	.58	.47
6	.92	.48	.52	------	------	------	1.19	1.16	.71	.57	.57	.47
7	.89	.49	.46	------	------	------	1.02	1.07	.70	.62	.56	.48
8	.86	.48	.70	------	------	------	.83	1.03	.64	.59	.56	.50
9	.80	.45	1.18	------	------	------	.71	.99	.60	.56	.54	.56
10	.74	.45	1.09	------	------	------	.78	.78	------	.57	.54	.53
11	.69	.43	.72	------	------	------	.85	.88	------	.77	1.01	.48
12	.59	.42	.72	------	------	------	.88	1.03	------	.74	.92	.51
13	.54	.42	.52	------	------	------	.94	.95	------	.64	.72	.72
14	.58	.42	.56	0.52	------	------	------	.91	.56	.54	.63	1.27
15	.60	.44	.63	.55	1.86	------	------	.75	.48	.53	.85	1.03
16	.51	.49	.81	.60	1.67	------	1.50	.69	.51	.52	.89	.86
17	.58	.47	.60	.55	1.55	------	1.47	.70	.74	.92	.61	.87
18	.55	.43	.63	.54	1.36	------	1.22	.85	.58	.84	.61	.84
19	.54	.48	.89	.55	1.18	------	1.12	.83	.50	.64	.57	.68
20	.46	.45	.93	.56	1.14	------	2.2	.70	.56	.54	.65	.54

Daily gage height, in feet, of Mohawk River at Vischer Ferry Dam, N. Y., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	0.42	0.44	0.55	0.57	1.26	------	2.15	0.74	0.52	0.47	0.64	0.57
22	.50	.49	.63	.55	1.51	------	1.81	.67	.44	.81	.56	.55
23	.52	1.45	.62	.51	2.1	------	1.19	.61	.41	1.20	.53	.57
24	.53	1.25	.67	.47	2.9	------	1.04	.74	.46	1.30	.52	.57
25	.54	.97	.67	------	3.1	------	1.25	.78	.74	1.02	.57	.55
26	.52	.72	------	------	2.9	------	1.27	.76	.92	.75	.56	.35
27	.49	.62	------	------	2.15	------	1.32	.70	.75	1.06	.54	.49
28	.50	.61	------	------	1.52	------	1.25	.60	1.03	1.23	.51	.51
29	.58	.65	------	------	------	------	1.02	.68	1.49	1.14	.40	.66
30	.56	.69	------	------	------	------	1.03	.81	1.52	1.16	.37	.68
31	.56	------	------	------	------	2.15	------	.72	------	.93	.39	------

NOTE.—Mean daily gage height Nov. 9, Jan. 24, Apr. 10–13, 16, June 14, and Aug. 19, partly estimated. No gage-height record Dec. 26 to Jan. 13, Jan. 25 to Feb. 14, Mar. 5–30, Apr. 14–15, and June 10–13; recorder not operating satisfactorily.

MOHAWK RIVER AT CRESCENT DAM, N. Y.

LOCATION.—At Crescent Dam of Barge Canal, 3 miles above mouth of river at Cohoes, Albany County.

DRAINAGE AREA.—3,490 square miles (furnished by the department of State engineer and surveyor).

RECORDS AVAILABLE.—December 1, 1917, to July 16, 1925, when station was discontinued.

GAGE.—Au continuous water-stage recorder on left bank 50 feet above guard gate at head of Waterford flight of locks and 200 yards from left end of spillway; inspected by Mark Gribbon.

DISCHARGE MEASUREMENTS.—Made from steel highway bridge at Crescent, 1½ miles upstream. Low-stage measurements have been made from private bridge across headrace canal of Cohoes Power & Light Corporation, in Cohoes.

CHANNEL AND CONTROL.—Control is crest of spillway.

EXTREMES OF DISCHARGE.—Maximum stage from water-stage recorder during period, October 1, 1924, to July 16, 1925, 8.88 feet at 6 p. m. October 1 (discharge, 57,500 second-feet); minimum daily discharge, 1,450 second-feet January 3.

1917–1925: Maximum stage from water-stage recorder, 9.60 feet from 11 p. m. April 7 to 1 a. m. April 8, 1924 (discharge, 71,500 second-feet); minimum daily discharge, 880 second-feet July 9, 1919.

ICE.—Stage-discharge relation not affected by ice.

DIVERSIONS.—Water is diverted at this point for canal purposes through Lock 6 and is not returned to the river. The following tables of discharge include the flow over spillway, through Barge Canal power house, and that diverted through and around Lock 6.

REGULATION.—Seasonal distribution of flow regulated by the Delta Reservoir on the upper Mohawk and by Hinckley Reservoir on West Canada Creek. Large diurnal fluctuations occur during low water caused by operation of movable dams upstream.

ACCURACY.—Stage-discharge relation permanent; not affected by ice. Rating curve well defined between 1,000 and 50,000 second-feet. Operation of water-stage recorder satisfactory except as indicated in footnote to daily-discharge table. Daily discharge over spillway ascertained by applying to rating table mean daily gage height determined by inspection of gage-height graph or, for days of considerable fluctuation, by averaging discharge for intervals of day. To discharge over spillway is added the discharge through power plant, computed from records of run of turbines and diversion through and around Lock 6. Records good.

Discharge measurements of Mohawk River at Crescent Dam, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 30	6.86	24,000	June 25	4.68	2,360	July 6	4.68	2,220
June 23	4.45	1,300	June 26	5.04	4,660			

Daily discharge, in second-feet, of Mohawk River at Crescent Dam, N. Y., for the period October 1, 1924, to July 16, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1	48,500	2,210	2,460	2,010	2,520		18,100	7,700	4,140	9,690
2	31,200	2,040	2,690	1,490	2,090		15,200	8,010	6,040	5,190
3	14,100	1,680	1,920	1,450	1,930		12,700	5,770	4,280	4,750
4	9,590	1,860	2,180	1,920	1,980	9,000	10,900	4,770	3,430	3,180
5	6,780	1,790	1,970	2,020	2,090		9,980	6,790	3,310	3,010
6	5,110	1,950	2,550	1,770	2,030		9,410	6,930	2,940	2,450
7	4,980	2,000	1,570	1,820	2,140	8,030	7,940	6,540	2,600	2,920
8	4,530	2,210	2,830	2,080	2,080	9,610	6,250	6,360	2,170	2,950
9	4,040	1,840	7,630	2,130	2,140	12,000	5,060	5,530	1,800	2,690
10	3,730	1,790	7,920	2,130	2,570	14,800	5,210	4,340	2,310	2,950
11	3,620	1,740	4,380	1,970	9,670	15,800	6,010	4,670	2,010	4,290
12	2,910	1,830	3,960	1,980	31,700	22,600	6,090	6,780	2,030	4,490
13	2,760	1,800	2,040	2,020	32,800	16,400	5,850	6,190	2,150	3,370
14	2,940	1,870	3,130	2,130	23,200	24,500	6,780	5,790	1,950	2,870
15	3,160	1,910	2,890	2,130	17,500	38,300	8,030	4,400	1,880	2,340
16	2,530	2,320	4,490	2,300	14,200	21,200	11,400	3,520	2,100	2,590
17	3,110	2,300	3,640	2,350	12,400	15,200	11,500	3,980	3,590	
18	2,890	1,770	2,630	1,960	10,200		8,820	4,570	2,800	
19	2,660	1,890	4,880	1,980	8,210	14,800	7,140	5,310	2,020	
20	2,240	1,870	6,460	2,090	7,230		19,800	3,980	2,370	
21	1,930	1,860	2,690	2,130	7,140	14,700	22,000	4,050	2,180	
22	2,070	2,290	2,940	1,970	8,720	12,100	16,500	3,860	1,690	
23	2,290	9,990	2,690	2,090	18,200	10,800	10,100	3,380	1,490	
24	2,210	11,300	3,190	1,970		9,220	5,930	4,150	1,700	
25	2,180	6,330	3,250	2,120		8,660	9,010	4,750	2,620	
26	1,860	4,320	2,640	1,970	25,500	8,940	8,930	4,350	5,580	
27	1,710	2,930	2,020	1,880		9,030	9,940	4,030	4,310	
28	1,670	2,730	2,080	1,980		20,000	6,370	3,010	5,680	
29	2,290	3,120	2,030	2,300		32,700	4,670	3,610	10,700	
30	2,120	3,210	1,830	2,940		24,600	6,670	4,350	12,100	
31	2,210		2,190	2,700		21,200		3,610		

NOTE.—Discharge Feb. 24 to Mar. 6 and Mar. 18-20 estimated by comparison with record of Mohawk River at Vischer Ferry Dam; water-stage recorder not operating satisfactorily.

Monthly discharge of Mohawk River at Crescent Dam, N. Y., for the period October 1, 1924, to July 16, 1925

[Drainage area, 3,490 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	48,500	1,670	5,930	1.70	1.96
November	11,300	1,680	2,890	.828	.92
December	7,920	1,570	3,220	.923	1.06
January	2,940	1,450	2,060	.590	.68
February	32,800	1,930	12,500	3.58	3.73
March	38,300	8,030	15,100	4.33	4.99
April	22,000	4,670	9,740	2.79	3.11
May	8,010	3,010	5,000	1.43	1.65
June	12,100	1,490	3,470	.994	1.11
July 1-16	9,690	2,340	3,730	1.07	1.23

WEST CANADA CREEK AT HINCKLEY, N. Y.

LOCATION.—1 mile below Hinckley Dam at Hinckley, Oneida County, 1½ miles above Prospect, and 4 miles above Trenton Falls.

DRAINAGE AREA.—373 square miles (measured on topographic maps).

RECORDS AVAILABLE.—June 14, 1919, to September 30, 1925.

GAGE.—Gurley 7-day graph water-stage recorder on right bank; inspected by Charles D. Cady.

DISCHARGE MEASUREMENTS.—Made from cable 1,000 feet above gage.

CHANNEL AND CONTROL.—Large boulders on solid rock bottom; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 6.94 feet at 1 a. m. March 29 (discharge, 5,240 second-feet); minimum stage, 3.21 feet from 8 a. m. to 4 p. m. October 26 (discharge, 163 second-feet).

1919–1925: Maximum stage recorded, 8.93 feet at 2 p. m. April 12, 1922 (discharge, 10,800 second-feet); minimum stage, 2.50 feet from 1 to 4 p. m. August 31, 1924 (discharge practically zero; caused by closing of gates in dam).

ICE.—Stage-discharge relation not affected by ice.

REGULATION.—Seasonal flow regulated by storage in Hinckley Reservoir, Consolidated Water Co.'s reservoir on Black Creek at Gray and several small lakes. Diurnal flow may be slightly affected at low stages by operation of Fibre Co.'s mill at Hinckley.

Accuracy.—Stage-discharge relation permanent. Rating curve well defined. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of gage-height graph or, for days of considerable fluctuation, by averging discharge for intervals of day. Records excellent.

The following discharge measurements were made:

February 19, 1925: Gage height, 4.44 feet; discharge, 963 second-feet.

March 24, 1925: Gage height, 5.08 feet; discharge, 1,690 second-feet.

September 11, 1925: Gage height, 4.12 feet; discharge, 624 second-feet.

Daily discharge, in second-feet, of West Canada Creek at Hinckley, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	704	842	767	580	545	1,140	2,530	1,820	647	1,740	930	749
2	1,530	785	758	587	538	1,140	2,120	1,820	601	1,320	785	731
3	2,530	767	749	587	532	1,140	1,890	1,820	594	980	695	722
4	1,890	767	740	587	526	1,130	1,740	1,600	601	852	679	722
5	1,410	758	740	587	532	1,130	1,740	1,740	601	722	679	722
6	1,200	749	731	587	500	1,110	1,740	1,820	601	663	687	367
7	1,170	749	722	580	480	1,090	1,740	1,670	601	615	687	631
8	1,080	740	722	580	480	1,090	1,820	1,490	601	608	695	631
9	950	740	740	580	480	1,110	1,960	1,310	601	608	695	631
10	930	731	722	580	480	1,130	2,040	1,170	594	615	695	631
11	920	713	631	580	486	1,140	2,120	1,170	594	623	785	631
12	910	749	631	573	532	1,150	2,200	1,410	587	679	823	631
13	900	823	623	580	601	1,160	2,440	1,330	601	663	823	639
14	890	832	601	587	704	1,170	2,440	1,190	608	623	852	631
15	880	832	594	587	722	1,170	3,260	1,040	615	615	861	631
16	880	832	594	587	740	1,190	4,160	900	615	615	776	639
17	890	804	601	587	740	1,170	3,160	1,060	608	608	722	639
18	461	758	601	580	852	1,140	2,360	1,670	608	640	722	639
19	390	749	601	580	950	1,150	2,120	1,500	608	671	731	647
20	842	722	608	580	960	1,170	2,040	1,230	601	631	731	647

Daily discharge, in second-feet, of West Canada Creek at Hinckley, N. Y., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	861	713	608	573	960	1,290	1,890	1,000	601	623	740	704
22	861	731	601	580	960	1,890	1,740	852	594	814	767	776
23	852	749	594	559	970	1,960	1,890	823	587	1,600	767	767
24	842	758	594	532	1,000	1,740	2,700	804	587	1,460	767	767
25	443	758	594	519	1,070	1,740	3,060	749	594	1,130	767	758
26	352	767	601	519	1,100	1,740	3,250	695	594	980	758	767
27	890	767	601	526	1,150	2,180	3,250	687	615	2,290	749	767
28	900	767	601	538	1,150	4,400	2,790	679	623	2,280	740	767
29	900	776	594	552	-------	4,700	2,200	671	1,220	1,890	749	767
30	900	776	587	566	-------	3,450	1,890	671	1,890	1,560	749	758
31	890	-------	587	552	-------	2,880	-------	671	-------	1,150	758	-------

Monthly discharge of West Canada Creek at Hinckley, N. Y., for the year ending September 30, 1925

[Drainage area, 373 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	2,530	352	969	2.60	3.00
November	842	713	767	2.06	2.30
December	767	587	646	1.73	1.99
January	587	519	570	1.53	1.76
February	1,150	480	741	1.99	2.07
March	4,700	1,090	1,640	4.40	5.07
April	4,160	1,740	2,340	6.27	7.00
May	1,820	671	1,200	3.22	3.71
June	1,890	587	666	1.79	2.00
July	2,290	608	996	2.67	3.08
August	930	679	754	2.02	2.33
September	776	367	684	1.83	2.04
The year	4,700	352	998	2.68	36.35

NOTE.—The monthly discharge in second-feet per square mile and run-off in inches shown by the table do not represent the natural flow from the basin because of artificial storage mainly in Hinckley Reservoir. The yearly discharge and run-off doubtless represent very nearly the natural flow.

WEST CANADA CREEK AT KAST BRIDGE, N. Y.

LOCATION.—500 feet below highway bridge in Kast Bridge, Herkimer County, and 4 miles above mouth at Herkimer.

DRAINAGE AREA.—575 square miles (from report of State engineer and surveyor).

RECORDS AVAILABLE.—May 15, 1905, to December 31, 1910; January 1, 1912, to December 31, 1913; October 1, 1920, to September 30, 1925.

GAGE.—Gurley 7-day graph water-stage recorder on left bank; inspected by engineers from department of State engineer and surveyor.

DISCHARGE MEASUREMENTS.—Made from downstream side of highway bridge or by wading.

CHANNEL AND CONTROL.—Small boulders and coarse gravel; shifting occasionally.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 7.15 feet at 11 p. m. February 11 (discharge, 14,300 second-feet); minimum stage, 0.95 foot at 8 a. m. October 27 (discharge, about 50 second-feet).

1920–1925: Maximum stage recorded, 7.30 feet at 11 a. m. June 21, 1922 (discharge, about 16,500 second-feet); minimum stage, that of October 27, 1924.

ICE.—Stage-discharge relation affected by ice.

REGULATION.—Seasonal flow regulated by storage in Hinckley Reservoir, Consolidated Water Co.'s reservoir on Black Creek at Gray, and several small lakes. Diurnal flow affected by operation of mills and power plants upstream.

DIVERSIONS.—Consolidated Water Co. of Utica diverts water supply for Utica from Hinckley Reservoir. Water is diverted below Trenton Falls power plant during navigation season through Ninemile feeder and Ninemile Creek into Barge Canal.

A continuous record of the amount of diversion through Ninemile feeder from West Canada Creek at Trenton Falls during the navigation season is published as a separate station, "Ninemile feeder near Holland Patent, N. Y."

ACCURACY.—Stage-discharge relation changed slightly during high water in March. Rating curves well defined between 200 and 5,000 second-feet. Operation of water-stage recorder satisfactory except as indicated in footnote to daily-discharge table. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of gage-height graph or, for days of considerable fluctuation, by averaging discharge for intervals of day. Records excellent, except during periods of ice effect and estimate, for which they are fair.

Discharge measurements of West Canada Creek at Kast Bridge, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 11	2.41	1,260	Mar. 24	3.20	2,440	Sept. 28	2.42	1,200
Feb. 8	*2.30	609	June 13	2.02	751			

*Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of West Canada Creek at Kast Bridge, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,000	861	856	700	750		3,460	2,490	1,290	2,060	1,250	660
2	1,680	772	828	700	650		2,960	2,400	1,020	1,660	1,030	654
3	2,910	841	829	800	700		2,580	2,320	894	1,290	916	703
4	2,470	764	760	650	700	1,450	2,400	2,060	850	1,070	861	794
5	1,880	774	736	700	700		2,230	2,320	839	960	828	792
6	1,520	793	954	750	700		2,230	2,320	817	850	863	702
7	1,390	728	890	700	800	1,420	2,060	2,230	795	808	903	673
8	1,390	800	1,360	750	850	1,760	2,140	1,930	771	767	866	775
9	1,220	742	2,000	700	1,000	2,200	2,320	1,720	775	709	1,040	730
10	1,130	675	1,060	650	2,200	2,300	2,400	1,520	729	1,060	2,110	700
11	1,110	771	795	650	4,800	3,880	2,490	1,830	754	887		710
12	1,010	739	884	700	6,000	2,690	2,490	1,760	730	796	1,220	700
13	1,070	744	938	750	2,910	2,040	2,960	1,740	719	772		776
14	1,060	918	696	700	2,300	4,830	3,260	1,530	711	773		1,140
15	1,010	959	850	650	2,010	2,900	4,110	1,380	750	740	1,140	795

Daily discharge, in second-feet, of West Canada Creek at Kast Bridge, N. Y., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	947	783	800	650	1,780	2,120	4,700	1,190	1,350	1,150	1,010	845
17	993	884	800	750	1,610	2,030	3,890	1,400	838	1,130	938	881
18	956		800	700	1,460	2,110	2,960	1,870	826	905	883	727
19	496		800	700	1,600	3,280	3,300	1,900	735	850	925	793
20	908	800	750	650	1,550	2,560	3,930	1,570	783	733	872	692
21	884		650	650	1,450	2,220	2,860	1,330	676	796	861	864
22	884	1,260	800	700	2,050	2,640	2,580	1,180	716	2,800	897	811
23	848	1,890		600	4,180	2,640	2,490	1,250	720	2,230	918	816
24	857	1,240		600	4,450	2,470	2,960	1,150	700	1,900	781	831
25	790	997	750	700	2,890	2,470	3,460	1,100	1,230	1,490	839	819
26	211	881		700	2,640	2,470	3,670	996	997	1,410	839	844
27	610	872	750	650	1,640	3,070	3,670	927	825	2,070	817	725
28	908	860	650		1,450	5,280	3,260	916	1,450	2,770	690	1,200
29	947	884	750	650	-------	5,720	2,680	1,070	1,770	2,580	670	850
30	909	848	700		-------	4,940	2,400	972	2,440	1,950	700	795
31	881	------	700		-------	4,110	-------	949	-------	1,560	664	------

NOTE.—Discharge Oct. 19, Nov. 18-21, Dec. 17-19, 22-26, Dec. 29 to Jan. 3, Jan. 28-31, Feb. 28, Mar. 1-6 and Aug. 11-15, estimated from gage-height graph and weather records; water-stage recorder not in satisfactory operation. Discharge Dec. 15 to Feb. 12 determined from gage heights corrected for ice effect from 1 discharge measurement and study of gage-height graph and weather records.

Monthly discharge of West Canada Creek at Kast Bridge, N. Y., for the year ending September 30, 1925

[Drainage area, 575 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	3,000	211	1,190	2.07	2.39
November	1,890	675	883	1.54	1.72
December	2,000	650	851	1.48	1.71
January	800	600	684	1.19	1.37
February	6,000	650	1,990	3.46	3.65
March	5,720	----------	2,670	4.64	5.35
April	4,700	2,060	2,960	5.15	5.75
May	2,490	916	1,590	2.77	3.19
June	2,440	676	950	1.65	1.84
July	2,800	709	1,340	2.33	2.69
August	2,110	664	967	1.68	1.94
September	1,200	654	793	1.38	1.54
The year	6,000	211	1,400	2.43	33.09

NOTE.—The monthly discharge in second-feet per square mile and run-off in inches shown by the table do not represent the natural flow from the basin because of artificial storage, mainly in Hinckley Reservoir. The yearly discharge and run-off doubtless represent very nearly the natural flow, except for the diversion from the basin, during the navigation season, through the Ninemile feeder and Ninemile Creek into Barge Canal.

NINEMILE FEEDER NEAR HOLLAND PATENT, N. Y.

LOCATION.—At mouth of Ninemile feeder, 4 miles east of Holland Patent, Oneida County, half a mile below highway bridge near farm of P. A. Wade, and 4 miles south and 1 mile west of Barneveld.

RECORDS AVAILABLE.—June 5, 1919, to September 30, 1925. Operation of station was assumed by department of State engineer and surveyor, July 1, 1921.

GAGE.—Gurley 7-day graph water-stage recorder on right bank; inspected by D. G. Humphrey.

DISCHARGE MEASUREMENTS.—Made from highway bridge half a mile above gage or by wading.

CONTROL.—Suppressed weir of concrete with a lip about 1.5 feet high and a spillway inclined about 1 : 2; permanent.

REGULATION.—Flow in the feeder is regulated by gates at the intake of the canal just below the power plant at Trenton Falls.

ICE.—Feeder canal not in operation during ice period.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve well defined. Operation of water-stage recorder satisfactory, except as indicated in footnote to daily-discharge table. Daily discharge ascertained by applying to rating table mean daily gage height, determined by inspection of gage height graph or, for days of considerable fluctuation, by averaging discharge for intervals of day. Records excellent.

The following discharge measurements were made:

September 11, 1925: Gage height, 0.84 foot; discharge, 32.8 second-feet.
September 12, 1925: Gage height, 0.84 foot; discharge, 33.0 second-feet.
September 26, 1925: Gage height, 0.83 foot; discharge, 33.5 second-feet.

Daily discharge, in second-feet, of Ninemile feeder near Holland Patent, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Aug.	Sept.	Day	Oct.	Nov.	Dec.	Aug.	Sept.
1	25	114	108	-------	136	16	51	109	-------	-------	34
2	6	113	116	-------	136	17	51	109	-------	-------	34
3	11	112	109	-------	94	18	50	108	-------	-------	33
4	59	112	108	-------	35	19	47	108	-------	-------	33
5	58	112	117	-------	35	20	65	108	-------	-------	33
6	56	112	111	-------	34	21	115	108	-------	-------	34
7	56	112	109	-------	37	22	116	117	-------	-------	33
8	56	112	114	-------	34	23	116	118	-------	-------	33
9	53	111	100	-------	34	24	115	112	-------	-------	33
10	53	111	-------	-------	34	25	113	110	-------	-------	33
11	53	110	-------	-------	34	26	107	109	-------	-------	47
12	52	111	-------	-------	33	27	115	109	-------	-------	101
13	52	111	-------	-------	37	28	116	108	-------	111	105
14	51	111	-------	-------	36	29	116	109	-------	132	102
15	51	110	-------	-------	34	30	115	110	-------	132	102
						31	115	-------	-------	136	-------

NOTE.—Discharge Oct 24, 25. Nov. 29, and Dec. 9, estimated from gage-height graph; water-stage recorder not operating satisfactorily. Diversion discontinued for winter Dec. 9; resumed Aug. 27.

Monthly discharge of Ninemile feeder near Holland Patent, N. Y., for the year ending September 30, 1925

Month	Discharge in second-feet			Month	Discharge in second-feet		
	Maximum	Minimum	Mean		Maximum	Minimum	Mean
October	116	6	71.5	August 28-31	136	111	128
November	118	108	111	September	136	33	52.4
December 1-9	117	100	110				

FOX CREEK AT WEST BERNE, N. Y.

LOCATION.—500 feet above highway bridge in West Berne, Albany County, and 1 mile below mouth of Switz Kill.

DRAINAGE AREA.—66 square miles (measured on topographic maps).

RECORDS AVAILABLE.—August 26, 1924, to September 30, 1925.

GAGE.—Staff in two sections on right bank; read by I. B. Schoonmaker.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Control is solid ledge; permanent. Bed is covered with small boulders. During summer there is considerable weed growth in channel.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period August 26, 1924, to September 30, 1925, 6.6 feet during night of February 11, 1925 (discharge, about 3,160 second-feet); minimum stage, 1.44 feet August 31, 1925 (discharge, about 3.4 second-feet).

ICE.—Stage-discharge relation slightly affected by ice.

ACCURACY.—Stage-discharge relation practically permanent except as affected by ice. Rating curve fairly well defined between 10 and 500 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table or, for days of great range in stage, by averaging discharge for intervals of day. Open-water records, except during periods of low discharge, fair; records during periods of ice effect and extremely low water, poor.

Discharge measurements of Fox Creek at West Berne, N. Y., during the period August 26, 1924, to September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
1924	*Feet*	*Sec.-ft.*	1925	*Feet*	*Sec.-ft.*	1925	*Feet*	*Sec.-ft.*
Aug. 26	1.96	37.9	Feb. 20	2.38	123	June 9	1.75	17.2
Aug. 27	1.83	24.6	Mar. 31	3.13	370	July 22	1.62	9.38
Sept. 7	1.69	10.0	Apr. 1	2.82	247	Aug. 8	1.67	9.70
Dec. 9	2.26	72.7	Apr. 20	3.20	370			
			Apr. 23	2.58	166			
1925			May 5	2.55	154			
Jan. 29	a 1.85	15.8	May 28	1.95	47.5			

a Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Fox Creek at West Berne, N. Y., for the years ending September 30, 1924 and 1925

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1924			1924			1924		
1		7.6	11		31	21		6.0
2		7.0	12		19	22		7.6
3		7.6	13		14	23		14
4		5.8	14		16	24		11
5		5.5	15		11	25		7.0
6		10	16		10	26	42	5.8
7		11	17		9.2	27	26	5.5
8		8.7	18		8.7	28	16	5.2
9		9.8	19		7.0	29	11	4.5
10		51	20		6.5	30	8.2	137
						31	6.5	

Daily discharge, in second-feet, of Fox Creek at West Berne, N. Y., for the years ending September 30, 1924 and 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1924–25												
1	571	14	28	15	17	110	288	236	69	21	14	3.5
2	204	13	20	16	17	129	220	162	98	13	11	3.6
3	109	11	16	12	16	124	190	129	82	9.8	9.2	3.8
4	82	14	14	11	15	106	162	111	54	8.7	8.7	4.0
5	64	14	11	11	14	82	134	162	45	8.7	8.2	4.2
6	54	11	24	10	15	109	106	124	29	8.7	7.6	3.8
7	48	8.7	44	10	16	146	98	111	21	9.8	8.7	4.0
8	51	9.2	64	10	16	190	90	102	19	12	10	5.0
9	48	8.7	90	10	20	190	88	86	19	10	11	5.2
10	40	5.5	62	10	373	190	86	84	17	14	16	4.8
11	37	5.5	50	11	1,770	345	86	90	17	11	22	3.9
12	30	6.5	51	11	1,920	253	84	78	16	7.6	16	4.0
13	24	8.7	34	12	385	204	115	64	16	5.5	11	58
14	21	7.0	29	14	326	338	102	54	16	5.0	19	102
15	20	6.5	19	14	236	345	96	53	14	4.5	17	59
16	21	6.0	26	14	236	570	111	48	24	5.0	16	124
17	26	8.2	29	14	200	306	90	45	17	17	14	115
18	28	11	34	15	200	190	86	47	12	9.2	9.8	98
19	21	6.5	40	15	160	253	117	42	8.7	5.5	7.6	68
20	19	6.5	51	15	140	220	448	38	6.5	5.0	7.0	34
21	24	11	45	14	162	162	270	30	8.7	5.5	6.5	31
22	19	26	41	14	470	162	220	29	7.0	7.6	6.5	26
23	16	625	34	14	645	124	175	42	6.5	19	6.0	21
24	17	385	28	14	710	106	134	54	6.5	12	5.8	17
25	17	148	19	16	405	106	134	64	7.6	7.6	5.2	16
26	12	111	18	16	340	106	148	66	7.0	51	5.0	13
27	10	84	18	15	260	102	134	58	7.6	98	4.5	12
28	12	78	17	14	170	1,190	102	42	16	51	3.8	11
29	15	59	17	15	-------	448	90	48	17	68	3.6	11
30	13	34	18	16	-------	425	162	82	18	42	3.5	8.7
31	14	-------	16	17	-------	365	-------	78	-------	19	3.4	------

NOTE.—Discharge Nov. 30 to Dec. 5, Jan. 10 to Feb. 9, Feb. 17–20, and Feb. 26 to Mar. 1 determined from gage heights corrected for ice effect from 1 discharge measurement and study of gage-height graph and weather records.

Monthly discharge of Fox Creek at West Berne, N. Y., for the years ending September 30, 1924 and 1925

[Drainage area, 66 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
1924					
August 26–31	42	6.5	18.3	0.277	0.06
September	137	4.5	15.3	.232	.26
1924–25					
October	571	10	54.4	.824	.95
November	625	5.5	58.1	.880	.98
December	90	11	32.5	.492	.57
January	17	10	13.4	.203	.23
February	1,920	14	330	5.00	5.21
March	1,190	82	248	3.76	4.34
April	448	84	146	2.21	2.47
May	236	29	79.3	1.20	1.38
June	98	6.5	23.4	.355	.40
July	98	4.5	18.4	.279	.32
August	22	3.4	9.60	.145	.17
September	124	3.5	29.2	.442	.49
The year	1,920	3.4	85.1	1.29	17.51

POESTEN KILL NEAR TROY, N. Y.

LOCATION.—500 feet below steel highway bridge on Troy-Eagle Mills Road, 1½ miles west of Eagle Mills, Rensselaer County, 3 miles east of Troy, and 4½ miles below mouth of Quaken Kill.

DRAINAGE AREA.—88 square miles (measured on topographic maps).

RECORDS AVAILABLE.—July 15, 1923, to September 30, 1925.

GAGE.—Au 60-day continuous water-stage recorder on left bank; inspected by engineers from Albany office of United States Geological Survey.

DISCHARGE MEASUREMENTS.—Made by wading or from cable 500 feet below gage.

CHANNEL AND CONTROL.—Solid rock ledge; permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, 6.2 feet February 12, determined from floodmarks (discharge, about 3,280 second-feet); minimum stage from water-stage recorder, 0.93 foot at 4.30 a. m. July 16 (discharge, 5.0 second feet).

1923–1925: Maximum stage, that of February 12, 1925; minimum stage recorded, 0.89 foot at 5 p. m. July 23 and 7.30 a. m. July 24, 1923 (discharge, 4.5 second-feet).

ICE.—Stage-discharge relation usually slightly affected by ice.

REGULATION.—Some regulation on Quaken Kill due to storage reservoirs for water supply for city of Troy.

DIVERSIONS.—Water is diverted for the Troy water supply from Quaken Kill about 1 mile below Quaken Kill. This diversion is said to approximate 5 second-feet and during low water amounts to the entire flow of Quaken Kill.

ACCURACY.—Stage-discharge relation permanent. Rating curve fairly well defined between 2 and 2,000 second-feet. Operation of water-stage recorder unsatisfactory as indicated in footnote to daily-discharge table. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of gage-height graph or, for days of considerable fluctuation, by averaging discharge for intervals of day. Records good except during periods of estimate, for which they are fair.

Discharge measurements of Poesten Kill near Troy, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 15	1.42	31.2	Feb. 19	2.18	198	July 11	1.22	16.2
Dec. 10	2.31	227	Mar. 19	2.50	302			
Jan. 22	1.20	15.0	Apr. 3	2.22	206			

Daily discharge, in second-feet, of Poesten Kill near Troy, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	904	30	98	34	12	304	306				64	23
2	400	37	102	33	12	472	255				60	24
2	204	38	82	33	11	306	204				40	26
4	137	38	60	31	11	248	176				28	30
5	98	36	54	30	11	214	152				20	23
6	82	36	60	30	11	230	130	100	50	50	18	13
7	67	34	78	29	12	266	118				25	17
8	64	33	88	28	17	306	100				25	20
9	58	31	248	27	28	266	90				19	13
10	47	31	230	26	60	230	90				16	9.0

Daily discharge, in second-feet, of Poesten Kill near Troy, N. Y., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	41	31	149	24	540	286	132			15	24	7.0
12	33	30	120	22	2,730	350	111			13	25	15
13	30	30	116	21	1,140	266	150			8.0	27	101
14	27	33	102	20	645	440	149			6.3	95	624
15	24	34	109	19	490	672	226			5.7	128	252
16	22	33	109	18	350	350	319			12	69	192
17	21	26	116	18	266	237	211			147	40	149
18	20	23	102	17	214	230	162			80	29	120
19	20	23	82	16	190	278	224			42	20	84
20	19	27	98	15	165	274	659		50	26	19	64
21	16	28	75	15	154	217	404	100		20	18	47
22	15	62	64	14	251	190	294			75	17	84
23	16	614	60	13	430	157	227			171	15	30
24	15	359	57	12	570	137	187			82	14	25
25	13	237	54	13	404	139	169			41	13	38
26	22	165	50	14	324	134	244			29	13	44
27	29	116	47	13	198	134	184			32	11	44
28	30	96	44	13	190	973	139			248	9.3	60
29	31	86	41	13	-------	851	116			273	9.3	54
30	30	78	37	13	-------	566	94			144	9.3	46
31	30	-------	34	12	-------	395	-------		-------	82	15	------

NOTE.—Discharge Dec. 5-9, Dec. 15 to Jan. 21, Jan. 23 to Feb. 19, Feb. 28, Mar. 3-16, and Apr. 30 determined from gage-height hydrograph; automatic record faulty or missing. Discharge May 1-31, June 1-30, and July 1-10 estimated from comparative studies; no automatic gage-height record.

Monthly discharge of Poesten Kill near Troy, N. Y., for the year ending September 30, 1925

[Drainage area, 88 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	904	13	82.7	0.940	1.08
November	614	23	82.5	.938	1.05
December	248	34	89.2	1.01	1.16
January	34	12	20.5	.233	.27
February	2,730	11	337	3.83	3.99
March	973	134	326	3.70	4.27
April	659	90	201	2.28	2.54
May	-------	-------	100	1.14	1.31
June	-------	-------	50	.568	.63
July	273	5.7	66.2	.752	.87
August	128	9.3	30.2	.343	.40
September	624	7.0	74.3	.844	.94
The year	2,730	5.7	120	1.35	18.51

NOTE.—The monthly discharge in second-feet per square mile and run-off in inches shown by the table do not represent the natural flow from the basin because of diversion from Quaken Kill by the city of Troy.

WALLKILL RIVER AT PELLETS ISLAND MOUNTAIN, N. Y.

LOCATION.—At highway bridge in Pellets Island Mountain, Orange County, 4½ miles south of Middletown and 5½ miles below mouth of Pochuck Creek.

DRAINAGE AREA.—385 square miles (measured on topographic maps).

RECORDS AVAILABLE.—December 29, 1919, to September 30, 1925.

GAGE.—Chain gage on downstream side of highway bridge; read by Michael Meduski.

DISCHARGE MEASUREMENTS.—Made from downstream side of highway bridge or by wading 2 miles below.

CHANNEL AND CONTROL.—Channel mostly silt. Control coarse gravel; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 10.3 feet at 5 p. m. February 15 (discharge, 4,100 second-feet); minimum discharge, 42 second-feet at 5 p. m. November 18 and 8 a. m. November 19, corresponding to gage height 2.60 feet.

1920–1925: Maximum stage recorded, 20.7 feet (old datum) at 7.30 a. m. March 16, 1920 (discharge, 8,350 second-feet); minimum stage, 7.39 feet (old datum) from 5 p. m. August 20 to 7 a. m. August 24, 1923 (discharge, 18 second-feet).

ICE.—Stage-discharge relation usually affected by ice.

ACCURACY.—Stage-discharge relation changed at time of flood February 15. Rating curve well defined below 3,000 second-feet. Gage read to quarter-tenths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table. Records good, except during period of ice effect, for which they are fair.

Discharge measurements of Wallkill River at Pellets Island Mountain, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 22	2.63	43.8	Apr. 14	4.04	396	May 24	3.36	206
Jan. 13	2.78	62.8	Apr. 16	4.49	552	July 17	2.98	119
Mar. 17	5.38	878	May 2	4.17	444	Aug. 4	3.87	350

Daily discharge, in second-feet, of Wallkill River at Pellets Island Mountain, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug	Sept.
1	650	65	71	65	55	1,360	1,260	338	434	180	323	61
2	860	65	64	65	55	1,460	1,110	418	353	214	451	61
3	770	62	64	55	50	1,410	975	385	308	180	451	61
4	690	58	64	55	48	1,310	887	353	308	128	353	61
5	574	58	71	55	50	1,110	808	323	266	138	294	54
6	434	58	148	55	60	1,110	733	294	226	138	239	55
7	294	58	266	55	70	1,160	624	280	191	128	214	73
8	239	58	308	55	70	1,160	554	252	148	99	180	92
9	190	58	401	55	95	1,160	485	239	138	138	148	118
10	148	58	401	55	190	1,060	451	385	158	326	191	109
11	138	51	354	55	770	1,020	468	536	180	191	280	84
12	119	51	279	55	2,260	1,210	451	660	158	158	280	76
13	110	51	226	60	2,900	1,210	418	589	122	138	239	76
14	110	57	179	55	3,780	1,160	385	451	87	115	214	109
15	110	51	158	55	4,100	1,110	451	369	84	87	214	214
16	99	46	148	55	3,780	975	554	385	122	82	191	266
17	99	44	200	55	3,700	887	519	353	138	180	158	323
18	82	44	250	55	3,060	1,060	385	323	148	239	138	338
19	82	45	308	55	2,540	1,310	353	294	128	214	118	280
20	79	45	226	55	2,260	1,360	485	252	118	169	106	191
21	74	45	138	55	1,990	1,210	485	226	104	120	92	158
22	74	51	130	60	1,930	1,160	434	191	92	126	95	169
23	67	138	130	60	1,810	1,060	385	180	84	308	100	158
24	67	252	120	55	1,810	975	323	226	76	369	100	106
25	67	214	110	55	1,690	887	294	660	92	294	95	76
26	67	168	95	55	1,690	808	369	733	148	266	82	68
27	67	128	95	50	1,510	808	385	696	128	294	68	68
28	67	110	80	50	1,360	1,160	338	660	109	323	68	68
29	67	89	80	55	-------	1,410	280	589	100	252	61	70
30	67	78	70	55	-------	1,410	280	536	100	202	61	70
31	67	-------	65	55	-------	1,360	-------	502	-------	169	61	------

NOTE.—Discharge Dec. 17–18 estimated; gage heights doubtful. Discharge Dec. 22 to Feb. 10 determined from gage heights corrected for ice effect from study of gage-height graph and weather records and by comparison with records for other stations in the same basin.

Monthly discharge of Wallkill River at Pellets Island Mountain, N. Y., for the year ending September 30, 1925

[Drainage area, 385 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	860	67	214	0.556	0.64
November	252	44	78.5	.204	.23
December	401	64	171	.444	.51
January	65	50	55.8	.145	.17
February	4,100	48	1,560	4.05	4.22
March	1,460	808	1,160	3.01	3.47
April	1,260	280	531	1.38	1.54
May	733	180	409	1.06	1.22
June	434	76	162	.421	.47
July	369	82	192	.499	.58
August	451	61	183	.475	.55
September	338	54	124	.322	.36
The year	4,100	44	395	1.03	13.96

WALLKILL RIVER AT GARDINER, N. Y.

LOCATION.—At steel highway bridge three-quarters of a mile northwest of Gardiner, Ulster County, 500 feet below mouth of Shawangunk Kill, and 7 miles above New Paltz.

DRAINAGE AREA.—716 square miles (measured on topographic maps).

RECORDS AVAILABLE.—September 23, 1924, to September 30, 1925.

GAGE.—Friez 7-day graph water-stage recorder on left bank; inspected by John Crispell. From September 23 to October 23, 1924, a temporary vertical staff at nearly the same location, read by engineer in charge of construction of automatic gage installation.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Coarse gravel and boulders; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum daily discharge recorded during period, September 23, 1924, to September 30, 1925, 6,500 second-feet February 12. Minimum stage from water-stage recorder, 2.16 feet at 1.30 p. m. November 10 and 10 a. m. to noon October 26 (discharge, about 37 second-feet).

ICE.—Stage-discharge relation seriously affected by ice.

REGULATION.—Some diurnal fluctuation in flow caused by operation of mills at Walden and Montgomery.

ACCURACY.—Stage-discharge relation permanent except as affected by ice. Rating curve well defined between 100 and 4,000 second-feet. Staff gage, when used, read to hundredths twice daily. Operation of water-stage recorder satisfactory except as indicated in footnote to daily-discharge table. Daily discharge ascertained by applying to rating table mean daily gage height determined from staff gage reading or by inspection of gage-height graph or, for days of considerable fluctuation, by averaging discharge for intervals of day. Records good, except during periods of ice effect and estimate, for which they are fair.

Discharge measurements of Wallkill River at Gardiner, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 22	2.63	127	Apr. 15	3.88	871	May 25	4.18	1,200
Nov. 22	2.73	176	Apr. 21	3.91	910	July 15	2.70	181
Jan. 12	[a] 2.76	101	May 1	3.54	662	July 16	2.44	88.3
Mar. 17	4.52	1,530	May 22	3.10	354	Aug. 4	3.66	701
Apr. 13	3.72	759	May 23	2.96	266			

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Wallkill River at Gardiner, N. Y., for the period September 23, 1924, to September 30, 1925

Day	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	------	1,480	77	130	120	95	1,800	2,020	574	586	272	627	120
2	------	1,220	75	130	110	100	3,620	1,740	685	502	266	757	96
3	------	1,110	93	130	130	85	2,060	1,540	656	445	226	701	99
4	------	916	155	130	100	100	1,880	1,360	607	384	200	562	73
5	------	852	84	130	110	100	1,740	1,240	523	369	235	453	91
6	------	760	90	249	120	110	1,980	1,090	470	323	292	429	80
7	------	498	90	430	100	120	2,320	940	409	226	216	378	261
8	------	388	77	693	120	150	2,070	860	400	262	227	320	466
9	------	361	69	949	110	480	1,900	714	361	220	233	423	282
10	------	272	68	743	120	1,100	1,740	656	334	214	222	810	258
11	------	248	136	633	110	2,400	1,720	730	470	234	303	453	229
12	------	248	92	471	110	6,500	2,790	752	740	236	313	411	214
13	------	222	89	429	110	4,800	2,180	722	722	204	276	453	312
14	------	204	84	410	100	4,400	2,020	601	641	173	185	537	841
15	------	196		383	100	4,600	2,020	775	535	202	158	427	586
16	------	192		460	100	5,500	1,590	893	498	177	132	324	697
17	------	162	85	406	100	5,000	1,620	822	537	147	142	324	720
18	------	162		399	95	4,400	2,410	713	537	164	203	249	605
19	------	94		515	95	3,600	3,370	663	447	196	308	199	477
20	------	181		536	100	3,400	2,950	1,040	411	222	287	176	380
21	------	188	76	400	95	3,200		839	356	141	226	170	378
22	------	134	127	320	95	3,200		704	377	128	452	161	276
23	111	114	314	280	100	3,400		600	287	130	1,160	164	197
24	119	76	348	240	75	3,400		572	232	109	782	166	188
25	94	66	389	180	90	2,800	2,000	510	782	106	536	151	186
26	94	52	344	200	95	2,800		551	1,050	130	672	140	141
27	92	94	240	160	95	2,200		572	940	113	884	130	128
28	75	105	200	150	75	1,800	4,550	502	828	114	850	110	124
29	42	90	170	140	90	------	3,330	491	768	242	607	111	149
30	512	97	140	130	100	------	2,830	453	692	357	423	77	124
31	------	134	------	120	95	------	2,410	------	635	------	345	100	------

NOTE.—Discharge Nov. 6–7, 15–20, Dec. 22–24, Feb. 1, and Mar. 21–28, estimated; gage-height record either faulty or missing. Discharge Nov. 27 to Dec. 5 and Dec. 21 to Feb. 28 determined from gage heights corrected for ice effect from 1 discharge measurement, study of gage-height graphs and weather records, and by comparison with records for other stations in the same basin.

Monthly discharge of Wallkill River at Gardiner, N. Y., for the period September 23, 1924, to September 30, 1925

[Drainage area, 716 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
1924					
September 23-30	512	42	142	0.198	0.06
1925					
October	1,480	52	352	.492	.57
November	389	68	138	.193	.22
December	949	120	344	.480	.55
January	130	75	102	.142	.16
February	6,500	85	2,490	3.48	3.62
March	4,550	1,590	2,290	3.20	3.69
April	2,020	453	856	1.20	1.34
May	1,050	232	565	.789	.91
June	586	106	235	.328	.37
July	1,160	132	375	.524	.60
August	810	77	338	.472	.54
September	841	73	293	.409	.46
The year	6,500	52	687	.959	13.03

SHAWANGUNK KILL AT PINE BUSH, N. Y.

LOCATION.—At Hardenburg Bridge, half a mile northeast of Pine Bush, Orange County, 5¼ miles below Platte Kill, and 10 miles above mouth near Gardiner.

DRAINAGE AREA.—103 square miles (measured on topographic maps).

RECORDS AVAILABLE.—September 24, 1924, to September 30, 1925.

GAGE.—Vertical staff in two sections on left bank. The lower section is fastened to bridge abutment, the upper to an oak tree near by; read by William Low.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Solid rock ledge; probably permanent.

EXTREMES OF DISCHARGE.—Maximum discharge recorded during period September 24, 1924, to September 30, 1925, about 1,860 second-feet at 8.15 a. m. March 28, corresponding to gage height of 5.6 feet; minimum discharge, 10 second-feet, several times during January and February (stage-discharge relation affected by ice).

ICE.—Stage-discharge relation affected by ice.

ACCURACY.—Stage-discharge relation permanent except as affected by ice, Rating curve fairly well defined between 15 and 1,200 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table except for days of great range in stage, when discharge is averaged for intervals of day. Records good, except for periods of ice effect, for which they are fair.

Discharge measurements of Shawangunk Kill at Pine Bush, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 2	1.57	142	Apr. 13	1.24	75.1	May 25	1.94	231
Oct. 8	1.00	29.3	Apr. 15	1.62	161	July 16	.85	13.6
Oct. 19	.86	20.2	Do	1.86	236	Do	.85	14.8
Nov. 22	.95	23.6	Apr. 21	1.44	110	Aug. 4	1.09	60.7
Jan. 12	*1.17	10.8	May 2	1.38	112			
Mar. 17	1.53	159	May 22	1.04	38.6			

*Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Shawangunk Kill at Pine Bush, N. Y., for the period September 24, 1924, to September 30, 1925

Day	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		660	18	15	16	10	179	206	118	45	47	127	14
2		250	18	15	16	10	465	179	102	41	32	114	13
3		87	18	16	16	10	154	154	81	38	27	79	15
4		63	17	18	16	10	127	125	69	36	25	51	16
5		51	18	20	14	11	110	112	69	34	38	38	15
6		40	18	60	14	12	192	100	59	23	73	36	15
7		29	19	100	13	15	395	91	55	21	51	77	77
8		32	20	130	12	24	344	83	49	19	34	36	100
9		36	18	150	12	100	206	73	45	19	49	36	49
10		26	18	75	12	380	179	85	43	38	30	131	40
11		24	18	65	12	1,100	179	129	97	26	36	61	34
12		24	18	80	11	1,400	562	102	166	19	51	41	22
13		21	19	65	12	580	296	91	104	19	26	55	83
14		22	20	40	12	395	265	75	77	19	20	116	267
15		25	19	34	11	465	280	118	81	27	18	81	110
16		19	20	40	11	620	179	131	85	23	18	55	85
17		18	20	60	10	500	235	100	93	20	34	41	71
18		19	22	110	12	265	500	81	67	20	26	29	57
19		18	20	110	12	206	920	112	55	18	21	25	45
20		18	19	95	11	206	638	220	47	18	18	23	36
21		21	19	80	11	265	235	125	41	18	16	28	32
22		41	27	75	12	296	192	93	38	18	165	29	36
23		21	120	65	11	361	154	83	34	18	225	25	29
24	22	18	67	55	11	328	142	75	142	15	85	21	27
25	16	19	43	44	10	312	120	75	220	23	65	20	28
26	15	18	27	34	11	378	120	91	129	28	102	19	22
27	15	18	20	26	11	235	123	71	85	26	154	17	19
28	19	18	18	18	11	114	1,270	63	63	28	131	15	21
29	22	22	16	16	10		620	61	61	45	93	14	20
30	296	18	16	14	10		412	79	59	108	71	14	22
31		18		15	10		312		53		89	14	

NOTE.—Discharge Nov. 27 to Feb. 12, determined from gage heights corrected for ice effect from 1 discharge measurement, study of gage-height graph and weather records, and comparison with records for other stations in the same basin.

Monthly discharge of Shawangunk Kill at Pine Bush, N. Y., for the period September 24, 1924, to September 30, 1925

[Drainage area, 103 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
1924					
September 24–30	296	15	57.9	0.562	0.15
1924–25					
October	660	18	55.3	.537	.62
November	120	16	25.0	.243	.27
December	150	14	56.1	.545	.63
January	16	10	12.0	.117	.13
February	1,400	10	307	2.98	3.10
March	1,270	110	326	3.17	3.66
April	220	61	106	1.03	1.15
May	220	34	80.2	.779	.90
June	108	15	28.3	.275	.31
July	225	16	60.3	.585	.67
August	131	14	47.4	.460	.53
September	267	13	47.3	.459	.51
The year	1,400	10	94.7	.919	12.48

HACKENSACK RIVER BASIN

HACKENSACK RIVER AT NEW MILFORD, N. J.

LOCATION.—At pumping plant of Hackensack Water Co., New Milford, Bergen County, 3½ miles below mouth of Dwars Kill.

DRAINAGE AREA.—113 square miles (revised; measured on State topographic map).

RECORDS AVAILABLE.—October 28, 1921, to September 30, 1925.

GAGES.—Water-stage recorder on right bank 40 feet above south dam. A vertical staff gage in Oradell Reservoir is read once daily. Gages read and recorder operated by employees of Hackensack Water Co.

DISCHARGE MEASUREMENTS.—Measured from highway bridge at Oradell, half a mile upstream.

CHANNEL AND CONTROL.—Two spillways and sluice gates at pumping plant fore bay form control.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 3.86 feet at 4.30 p. m. February 12 (discharge, 1,760 second-feet; diversion not included).

1922–1925: Maximum stage recorded, 4.05 feet at 4 p. m. April 7, 1924 (discharge 1,880 second-feet; diversion not included).

DIVERSION.—Water is diverted above control by Hackensack Water Co. This diversion is measured by Venturi meter and included in the monthly record.

STORAGE.—Water is stored in Oradell Reservoir, 1 mile above gage. Correction for storage has been applied to the monthly record.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined between 40 and 900 second-feet. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying mean daily gage height to rating table or, for days of considerable fluctuation, by averaging discharge for intervals of day. Records good.

The following discharge measurements were made. The total flow of river was measured from bridge and discharge through pumps subtracted to obtain spillway discharge.

September 25, 1925: Gage height, 1.69 feet; discharge, 170 second-feet.

September 25, 1925: Gage height, 1.48 feet; discharge, 84 second-feet.

Daily discharge, in second-feet, of Hackensack River at New Milford, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	443	14	12	16	2	278	366	109	66	2	472	2
2	429	7	11	12	2	808	113	112	30	2	341	2
3	176	2	2	10	2	879	38	109	21	2	147	2
4	145	2	5	18	2	503	69	105	13	2	102	2
5	195	16	6	3	2	412	112	57	10	2	41	2
6	84	15	157	2	2	352	112	32	2	2	81	2
7	78	11	132	2	2	230	46	66	21	2	78	5
8	78	2	101	2	6	190	57	36	10	2	41	2
9	61	2	112	2	5	227	112	8	2	2	11	2
10	35	2	124	11	105	284	45	2	8	22	19	2
11	16	2	97	16	469	278	195	5	8	46	25	3
12	10	2	66	7	1,260	121	228	177	8	30	28	6
13	10	2	69	2	1,310	47	117	228	2	2	27	4
14	2	2	95	2	812	70	54	181	7	2	25	8
15	2	2	35	2	636	116	182	176	2	2	24	2
16	2	2	21	2	636	112	190	172	2	17	18	11
17	2	2	13	2	602	286	51	154	2	235	2	85
18	2	2	11	5	463	192	51	99	2	155	2	41
19	2	2	9	7	310	511	132	40	2	103	6	11
20	2	2	5	2	310	501	102	32	2	35	2	81

Daily discharge, in second-feet, of Hackensack River at New Milford, N. J., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	2	2	25	2	305	248	66	9	3	15	2	48
22	2	113	8	6	310	302	66	5	2	25	2	86
23	2	344	2	9	310	174	66	2	2	25	2	96
24	2	90	2	2	305	101	57	53	3	47	2	79
25	5	2	29	2	354	101	25	433	2	58	2	108
26	10	21	18	2	472	105	30	294	2	78	2	23
27	2	40	17	2	503	105	43	136	2	84	2	8
28	2	34	27	2	355	482	69	47	8	65	2	2
29	2	58	23	2	-------	332	46	97	2	85	2	2
30	2	21	12	2	-------	124	66	154	8	56	2	2
31	26	-------	13	2	-------	323	-------	93	-------	101	2	------

NOTE.—This table does not include diversion nor storage. Discharge estimated Jan. 24-31 and Feb. 28.

Monthly discharge of Hackensack River at New Milford, N. J., for the year ending September 30, 1925

[Drainage area, 113 square miles]

Month	Discharge in second-feet					Run-off in inches
	Observed			Corrected for storage and diversion		
	Maximum	Minimum	Mean	Mean	Per square mile	
October	443	2	59.1	86.9	0.769	0.89
November	344	2	27.3	68.3	.604	.67
December	157	2	40.6	94.8	.839	.97
January	18	2	5.10	55.0	.487	.56
February	1,310	2	352	405	3.58	3.73
March	879	47	284	358	3.12	3.60
April	366	25	96.9	167	1.48	1.65
May	433	2	104	149	1.32	1.52
June	66	2	8.47	53.1	.470	.52
July	235	2	42.1	98.2	.869	1.00
August	472	2	48.8	87.4	.773	.89
September	108	2	24.3	53.6	.474	.53
The year	1,310	2	89.4	138	1.22	16.53

PASSAIC RIVER BASIN

PASSAIC RIVER NEAR MILLINGTON, N. J.

LOCATION.—At highway bridge known as Davis Bridge, 1 mile above Millington, Somerset County, 1½ miles below mouth of Black Brook, three-fourths mile above gaging station formerly maintained at Millington.

DRAINAGE AREA.—55 square miles (measured on State topographic map).

RECORDS AVAILABLE.—November 10, 1921, to September 30, 1925. At Millington November 25, 1903, to July 15, 1906.

GAGE.—Inclined staff on right bank 200 feet below Davis Bridge. Water-stage recorder, on right bank; installed July 3, 1925. Gage read and recorder operated by Mrs. A. H. Schmidt.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading near gage.

CHANNEL AND CONTROL.—Channel coarse gravel. There is a low concrete control 80 feet below gage which is effective during low and medium stages; at high stages riffle 300 feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 6.95 feet at 4 p. m. February 25 (discharge, 718 second-feet); minimum stage, 3.69 feet at 2 a. m. September 3 (discharge, 5.4 second-feet).

1903–1906; 1922–1925: Maximum stage recorded, 7.50 feet March 8, 1904 (discharge, 2,000 second-feet); minimum discharge, 2.5 second-feet from current-meter measurement October 18, 1923.

ICE.—Stage-discharge relation probably not affected by ice during winter.

ACCURACY.—Stage-discharge relation permanent. Rating curve fairly well defined between 5 and 1,200 second-feet. Staff gage was read to hundredths twice a day. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

Discharge measurements of Passaic River near Millington, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 15	4.10	25.6	Jan. 30	[a] 4.15	18.4	Apr. 29	4.18	31.5
Oct. 21	3.97	17.6	Mar. 16	4.71	102	June 16	4.34	45.5
Do	3.96	16.8	Do	4.70	100			

[a] Stage-discharge relations affected by ice.

Daily discharge, in second-feet, of Passaic River near Millington, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	268	17	17	14	18	595	130	60	19	35	315	7.5
2	256	18	14	14	21	525	113	56	21	27	372	7.5
3	219	15	14	14	22	430	102	54	21	19	293	7.1
4	196	14	13	14	22	345	91	42	18	15	243	7.9
5	164	12	27	14	24	280	86	31	18	14	196	9.9
6	134	14	73	14	25	231	70	30	16	14	150	9.5
7	106	15	73	14	25	231	61	28	15	12	113	23
8	73	15	93	14	26	219	56	27	15	12	80	37
9	58	16	100	14	27	196	49	26	14	10	64	28
10	51	14	96	14	29	174	60	27	18	17	78	19
11	47	16	93	14	56	164	56	32	15	23	75	15
12	40	16	86	14	196	164	49	64	14	20	58	13
13	35	17	73	14	430	164	43	52	12	14	50	12
14	30	18	64	14	565	134	56	51		12	42	13
15	27	18	61	14	565	120	86	40		10	36	13
16	24	17	59	14	525	106	113	31	20	11	29	39
17	22	17	59	17	460	110	96	32		34	23	67
18	20	16	56	19	430	144	80	26		35	20	71
19	17	12	51	19	400	306	81	20		24	18	56
20	18	12	50	19	372	372	70	20	19	15	16	36
21	17	13	47	19	358	332	56	19	17	12	16	22
22	18	17	48	19	372	268	54	18	17	13	17	17
23	17	52	56	18	430	174	44	17	18	14	15	14
24	15	44	77	17	565	130	43	24	13	12	12	14
25	17	35	86	16	700	113	44	56	21	12	16	12
26	15	27	80	16	665	100	44	64	31	20	12	9.9
27	16	25	59	16	595	150	43	54	31	28	11	12
28	16	20	37	16	595	164	41	44	25	27	10	12
29	14	19	22	16	-------	138	34	38	22	44	11	11
30	16	18	15	16	-------	126	40	31	38	40	9.1	10
31	17	-------	14	16	-------	130	-------	24	-------	82	8.3	-------

NOTE.—No gage-height record June 14–19; discharge estimated by study of comparison with flow of Whippany River at Morristown

Monthly discharge of Passaic River near Millington, N. J., for the year ending September 30, 1925

[Drainage area, 55 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	268	14	64.0	1.16	1.34
November	52	12	19.3	.351	.39
December	100	13	55.3	1.01	1.16
January	19	14	15.6	.284	.33
February	700	18	304	5.53	5.76
March	595	100	220	4.00	4.61
April	130	34	66.4	1.21	1.35
May	64	17	36.7	.667	.77
June	31	12	19.6	.356	.40
July	82	10	21.8	.396	.46
August	372	8.3	77.7	1.41	1.63
September	71	7.1	20.8	.378	.42
The year	700	7.1	75.4	1.37	18.62

PASSAIC RIVER AT PATERSON, N. J.

LOCATION.—At hydroelectric power plant of Society for Establishing Useful Manufactures in Paterson, Passaic County.

DRAINAGE AREA.—785 square miles.

RECORDS AVAILABLE.—January, 1898, to September 30, 1925.

DETERMINATION OF DISCHARGE.—Observed discharge at Paterson determined by engineers of Society for Establishing Useful Manufactures. This consists of discharge over spillway computed from a theoretic formula, discharge through turbines determined from manufactures' ratings, discharge through the Dyers' pipe line, metered, discharge through the old race measured twice daily by current meter, and discharge to steam-power plant.

DIVERSIONS.—Part of monthly discharge table has been corrected for water diverted above Paterson by Passaic Consolidated Water Co. at Little Falls, Newark waterworks at Macopin intake dam, Jersey City waterworks at Boonton, Commonwealth Water Co. at Canoe Brook well field, East Orange waterworks at Canoe Brook well field, and to April, 1924, by Morris Canal at Wayne. Diversions by Passaic Consolidated Water Co., Newark and Jersey City, measured by Venturi meters; diversions by Commonwealth Water Co. and East Orange measured by piston displacement, and diversion by Morris Canal estimated.

REGULATION.—Correction has been made for storage in the Newark reservoirs at Oak Ridge, Clinton, Canistear, and Echo Lake, in Jersey City Reservoir at Boonton, and in Greenwood Lake. No correction was made for evaporation from the surface of the various reservoirs, which comprise about 1 per cent of the total drainage area.

COOPERATION.—Base data furnished by John H. Cook, deputy governor, Society for Establishing Useful Manufactures, by Passaic Consolidated Water Co., Newark waterworks, Jersey City waterworks, Commonwealth Water Co., and East Orange waterworks.

Monthly discharge of Passaic River at Paterson, N. J., for the years ending September 30, 1921–1925

[Drainage area, 785 square miles]

Month	Discharge in second-feet			Run-off in inches
	Observed mean	Corrected for storage and diversion		
		Mean	Per square mile	
1920–21				
October	1,190	1,460	1.86	2.14
November	1,140	1,420	1.81	2.02
December	2,710	2,960	3.77	4.35
January	1,710	1,950	2.48	2.86
February	1,170	1,430	1.82	1.90
March	3,400	3,660	4.66	5.37
April	1,970	2,200	2.80	3.12
May	1,800	2,060	2.62	3.02
June	226	407	.518	.58
July	395	637	.811	.94
August	366	556	.708	.82
September	90	246	.313	.35
The year	1,520	1,590	2.03	27.47
1921–22				
October	61	195	.248	.29
November	269	530	.675	.75
December	595	935	1.19	1.37
January	190	443	.564	.65
February	1,220	1,610	2.05	2.14
March	3,070	3,500	4.46	5.14
April	1,990	2,210	2.82	3.15
May	1,780	2,070	2.64	3.04
June	1,340	1,600	2.04	2.28
July	1,410	1,640	2.09	2.41
August	417	604	.769	.89
September	457	693	.883	.99
The year	1,060	1,330	1.69	23.10
1922–23				
October	152	304	.387	.45
November	128	272	.346	.39
December	235	425	.541	.62
January	1,500	2,000	2.55	2.94
February	626	904	1.15	1.20
March	3,270	3,680	4.69	5.41
April	1,330	1,610	2.05	2.29
May	1,070	1,340	1.71	1.97
June	425	677	.862	.96
July	66	204	.260	.30
August	30	126	.161	.18
September	69	204	.260	.29
The year	746	983	1.25	17.00
1923–24				
October	385	608	.775	.89
November	400	670	.854	.95
December	1,550	2,150	2.74	3.16
January	2,270	2,700	3.44	3.97
February	992	1,270	1.62	1.75
March	1,620	1,960	2.50	2.88
April	3,890	4,140	5.27	5.88
May	2,840	3,070	3.91	4.51
June	656	871	1.11	1.24
July	564	762	.971	1.12
August	117	249	.317	.37
September	241	366	.466	.52
The year	1,300	1,570	2.00	27.24

Monthly discharge of Passaic River at Paterson, N. J., for the years ending September 30, 1921–1925—Continued

Month	Discharge in second-feet			Run-off in inches
	Observed mean	Corrected for storage and diversion		
		Mean	Per square mile	
1924-25				
October	655	913	1.16	1.34
November	230	361	.460	.51
December	521	778	.991	1.14
January	224	415	.529	.61
February	3,160	3,800	4.84	5.04
March	2,810	3,220	4.10	4.73
April	1,140	1,390	1.77	1.98
May	743	1,030	1.31	1.51
June	292	492	.627	.70
July	336	571	.727	.84
August	614	844	1.08	1.24
September	179	339	.432	.48
The year	895	1,160	1.48	20.12

NOTE.—No correction made for evaporation.

ROCKAWAY RIVER AT BOONTON, N. J.

LOCATION.—At dam of Jersey City waterworks at Boonton, Morris County.

DRAINAGE AREA.—119 square miles (measured on State topographic map).

RECORDS AVAILABLE.—January 1, 1906, to September 30, 1925.

GAGES.—Elevation of water surface in reservoir determined by measuring from a reference point on dam to water surface with a graduated rod. Read once daily by an employee of Jersey City waterworks. Water-stage recorder on left bank one-quarter of a mile below dam. Operated by an employee of the Jersey City waterworks.

DETERMINATION OF DISCHARGE.—Discharge determined at gaging station below dam. Previous to March 3, 1918, discharge over dam was determined from elevation of water surface in reservoir and rating curve for spillway.

DISCHARGE MEASUREMENTS.—For gaging station made by wading near water-stage recorder.

CHANNEL AND CONTROL.—For gaging station coarse gravel, probably permanent.

STORAGE.—Records are corrected for storage above dam.

DIVERSION.—Water diverted to Jersey City through pipe line measured by Venturi meter. Records corrected for this diversion.

COOPERATION.—Gage-height records and records of diversion furnished by the bureau of water, department of streets and public improvements, Jersey City, N. J.

No discharge measurement was made during the year.

Monthly discharge of Rockaway River at Boonton, N. J., for the year ending September 30, 1925

[Drainage area, 119 square miles]

Month	Discharge in second-feet		Run-off in inches	Month	Discharge in second-feet		Run-off in inches
	Mean	Per square mile			Mean	Per square mile	
October	132	1.11	1.28	May	147	1.24	1.43
November	54.6	.459	.51	June	73.8	.620	.69
December	107	.899	1.04	July	97.8	.822	.95
January	72.8	.612	.71	August	114	.958	1.10
February	486	4.08	4.25	September	62.9	529	.59
March	397	3.34	3.85				
April	191	1.61	1.80	The year	159	1.34	18.20

NOTE.—No correction made for evaporation from surface of reservoir.

WHIPPANY RIVER AT MORRISTOWN, N. J.

LOCATION.—At Morristown sewage-disposal plant, three-fourths mile below center of Morristown, Morris County, and 8 miles above mouth of river.

DRAINAGE AREA.—29 square miles (measured on State topographic map).

RECORDS AVAILABLE.—August 26, 1921, to September 30, 1925.

GAGE.—Vertical staff on left bank 150 feet above chlorination house of sewage-disposal plant; read under direction of William H. Frapwell.

DISCHARGE MEASUREMENTS.—Made by wading near gage.

CHANNEL AND CONTROL.—Channel sand and fine gravel. Control is riffle 50 feet below gage. Right bank is overflowed at very high stages.

EXTREMES OF DISCHARGE.—Maximum stage during year, from high-water mark 5.3 feet at 3 a. m. August 1 (discharge, about 680 second-feet); minimum stage, 0.89 foot several times in September (discharge, 11 second-feet).

1921–1925: Maximum stage estimated from hydrograph, 6.50 feet at 4 a. m. April 7, 1924 (discharge, about 830 second-feet); minimum stage, 0.80 foot at 5.30 p. m. October 5 and 7, 1921 (discharge, 6.3 second-feet).

ICE.—Stage-discharge relation affected by ice during extreme cold.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined between 8 and 350 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

COOPERATION.—Gage read by an employee of commissioner of department of public works of Morristown.

The following discharge measurements were made:

October 15, 1924: Gage height, 0.97 foot; discharge, 16.8 second-feet.

February 11, 1925: Gage height, 2.51 feet; discharge, 187 second-feet.

Daily discharge, in second-feet, of Whippany River at Morristown, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	230	16	17	16	21	110	65	46	25	26	360	12
2	70	16	18	18	22	200	60	39	23	22	70	12
3	44	16	19	18	22	98	58	34	23	18	45	12
4	32	18	17	20	22	86	56	33	22	17	34	12
5	26	17	17	18	22	81	52	33	18	23	35	12
6	24	17	110	18	23	104	50	29	17	17	34	13
7	23	17	45	17	29	92	48	31	17	17	31	65
8	23	17	33	18	33	92	48	29	17	20	27	24
9	19	16	70	18	40	86	45	29	17	22	31	16
10	18	16	34	17	86	76	45	29	22	18	70	14
11	17	16	26	17	178	76	70	76	18	18	33	15
12	16	16	25	18	360	81	52	81	17	17	25	13
13	16	16	29	18	170	65	45	45	16	14	30	14
14	16	16	25	18	122	70	43	38	16	12	33	20
15	16	16	22	18	136	60	98	34	16	13	27	16
16	16	16	20	17	170	56	70	29	57	21	23	81
17	17	16	22	36	129	65	50	39	28	142	22	57
18	17	16	25	33	110	92	48	32	18	30	17	25
19	17	14	22	23	81	292	45	29	17	20	18	18
20	17	14	19	18	92	116	48	27	17	18	17	13
21	16	15	16	25	104	86	42	25	17	18	22	16
22	16	33	14	22	129	81	41	25	17	30	22	14
23	17	55	13	20	149	70	39	23	17	29	20	12
24	17	29	33	18	149	70	39	49	16	18	17	12
25	17	22	39	19	129	65	38	110	38	18	16	12
26	17	17	25	21	260	60	39	45	21	45	16	12
27	16	17	17	24	110	60	38	33	17	30	14	11
28	16	17	16	22	86	149	34	29	17	23	12	12
29	16	17	12	22	------	81	34	30	70	35	12	12
30	16	17	12	22	------	86	39	35	81	19	13	12
31	16	------	16	21	------	70	------	29	------	70	12	------

Monthly discharge of Whippany River at Morristown, N. J., for the year ending September 30, 1925

[Drainage area, 29 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	230	16	27.5	0.948	1.09
November	55	14	18.7	.645	.72
December	110	12	26.7	.921	1.06
January	36	16	20.3	.700	.81
February	360	21	107	3.69	3.84
March	292	56	92.8	3.20	3.69
April	98	34	49.3	1.70	1.90
May	110	23	38.5	1.33	1.53
June	81	16	24.2	.834	.93
July	142	12	27.1	.934	1.08
August	360	12	37.4	1.29	1.49
September	81	11	19.6	.676	.75
The year	360	11	40.3	1.39	18.89

RAMAPO RIVER NEAR MAHWAH, N. J.

LOCATION.—At concrete highway bridge 1 mile west of Mahwah, Bergen County, three-fourths mile below mouth of Mahwah River.

DRAINAGE AREA.—118 square miles (measured on State topographic map).

RECORDS AVAILABLE.—February 10, 1903, to July 31, 1914, and from September 1, 1922, to September 30, 1925. Records from 1907 to 1914 consists of gage heights only published by United States Weather Bureau.

GAGE.—Water-stage recorder on right bank just below bridge, installed September 1, 1922; inspected by Clarence Wanamaker.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Coarse gravel; control is gravel riffle 150 feet below bridge; probably permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 7.22 feet at 3 p. m. February 12 (discharge, 1,970 second-feet); minimum stage, 1.80 feet August 31 and September 1 (discharge, 23 second-feet).

1922–1925: Maximum stage recorded, 7.90 feet at 12.30 p. m. April 7, 1924 (discharge, 2,400 second-feet); minimum stage 1.57 feet at 9 a. m. September 20, 1923 (discharge, .11 second-feet).

ICE.—Stage-discharge relation affected by ice only during short periods of extreme weather.

REGULATION.—Daily distribution of flow affected by water powers at points upstream.

ACCURACY.—Stage-discharge relation probably permanent except when affected by ice. Rating curve well defined between 10 and 2,000 second-feet. Operation of water-stage recorder fair. Daily discharge determined by use of discharge integrator. Records fair.

The following discharge measurements were made:

February 13, 1925: Gage height, 6.93 feet; discharge, 1,790 second-feet.

February 13, 1925: Gage height, 6.51 feet; discharge, 1,540 second-feet.

September 25, 1925: Gage height, 1.91 feet;[8] discharge, 22.5 second-feet.

Daily discharge, in second-feet, of Ramapo River near Mahwah, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,480	41	65		58		423	179	174	64	230	
2	741	40	65		80		365	167	144	58	144	
3	424	43	65		81		336	133	142	55	97	
4	273	38	50		69	600	308	125	136	38	81	34
5	209	40	55	60	64		280	114	121	34	76	
6	176	42	150		61		252	109	100	44	78	
7	143	42	215		72	394	212	101	84	58	72	
8	129	40	196		72	365	190	95	81	83	60	
9	113	41	255	61	114	350	176	91	75	144	68	
10	97	39	218	55	425	294	173	83	106	95	123	
11	87	41	175	52	1,330	280	149	121	102	75	85	
12	76	41	160	68	1,960	336	219	203	76	60	68	
13	77	44	150	65	1,650	308	186	148	69	55	67	
14	71	43	170	53	1,040	280	171	124	51	50	56	
15	67	40	150	52	879	280	288	130	66	55	50	
16	69	38	140	53	1,090	252	294	133	67	59		48
17	63	62	129	74	875	225	195	119	70	288		
18	53	40	147	67	671	308	152	112	61	128		
19	51	40	150	85	543	553	137	102	58			
20	68	40	140	73	482	606	164	95	55			
21	61	42	69	70	452	452	160	85	30	110		
22	39	100	97	70	452	350	140	79	48			
23	50	336	78	74	512	320	130	61	51		40	
24	46	239	103	78	512	280	130	365	36			
25	57	157	143	57	482	252	120	512	40	72		
26	39	118	121	64	640	238	147	423	55	81		33
27	60	94	100	57	638	238	136	322	47	98		33
28	40	85	80	69	543	656	113	266	34	82		44
29	40	80	70	74	-------	772	106	235	47	81		45
30	42	65	75	68	-------	606	115	243	72	67		35
31	43	-------	70	68	-------	512	-------	204	-------	74	35	-------

NOTE.—Discharge estimated because recorder was not operating Nov. 19–22, 28–30, Dec. 1–4, 12–15, 19, 20, 27–31, Jan. 1–8, Mar. 1–6, 23, 24, Apr. 21–25, July 11–13, 19–24, Aug. 16–30, and Sept. 1–25; discharge for these periods based on study of precipitation records, hydrograph, and comparison with flow of river at Pompton Lake.

[8] Stage-discharge relation affected by backwater from temporary dam below station.

Monthly discharge of Ramapo River near Mahwah, N. J., for the year ending September 30, 1925

[Drainage area, 118 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	1,480	39	161	1.36	1.57
November	336	38	71.7	.608	.68
December	255	50	124	1.05	1.21
January	85	52	64.1	.543	.63
February	1,960	58	566	4.80	5.00
March		225	423	3.58	4.13
April	423	106	199	1.69	1.89
May	512	61	170	1.44	1.66
June	174	30	76.6	.649	.72
July	288	34	85.7	.726	.84
August	230	35	64.2	.544	.63
September			43.5	.369	.41
The year	1,960	30	168	1.42	19.37

RAMAPO RIVER AT POMPTON LAKES, N. J.

LOCATION.—At municipal hydroelectric plant, borough of Pompton Lakes, Passaic County, 1½ miles above mouth.

DRAINAGE AREA.—160 square miles (measured on State topographic map).

RECORDS AVAILABLE.—October 29, 1921, to September 30, 1925.

GAGES.—Water-stage recorders at right end of dam and on left bank of tailrace respectively. Wicket-gate opening for each turbine is recorded hourly from indicators on turbine governors. Recorders operated and gages read by power-house operators.

DISCHARGE MEASUREMENTS.—For spillway made from cable or by wading 300 feet below dam. For tailrace made from temporary footbridge at gage.

DETERMINATION OF DISCHARGE.—Flow at this station determined by computing the discharge over the spillway and through the two turbines (measured in the tailrace).

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 1.88 feet at 2 p. m. February 12 (discharge, about 3,200 second-feet, stage-discharge relation was affected by ice).

1921–1925: Maximum stage recorded, 2.58 feet at 7 p. m. April 7, 1924 (discharge, about 6,800 second-feet).

REGULATION.—Record indicates flow as released by power plant. No correction made for storage in pond or for evaporation from its surface.

ACCURACY.—Rating curve for spillway well defined between 100 and 2,500 second-feet. Discharge rating for tailrace well defined. Discharge over spillway determined by applying mean daily gage height to rating table and by use of discharge integrator. Discharge through tailrace ascertained by use of discharge integrator; and for periods of backwater from wicket-gate openings. Records good.

COOPERATION.—Borough of Pompton Lakes has provided the shelters for the water-stage recorders and furnishes the power-plant records for computation of discharge.

Measurements of discharge over spillway and in tailrace on Ramapo River at Pompton Lakes, N. J., during the year ending September 30, 1925

Spillway			Tailrace		
Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 14	0.131	43.2	Oct. 14	6.82	5.7
Do	.133	45.4	May 5	7.58	37.0
Feb. 13	[a] 1.485	2,240	Sept. 14	7.56	33.6

[a] Stage-discharge relation affected by ice; total flow of river measured from cable and discharge through turbines subtracted to obtain spillway discharge.

Daily discharge, in second-feet, of Ramapo River at Pompton Lakes, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,750	58	82	70	82	649	540	199	218	93	400	54
2	870	52	81	68	85	1,400	453	204	193	80	258	54
3	384	58	85	86	92	894	414	165	173	79	178	57
4	215	57	62	78	94	694	387	151	170	68	134	56
5	146	57	71	77	86	559	330	149	160	64	117	56
6	185	57	179	77	84	527	305	145	134	72	120	28
7	156	54	234	80	95	541	262	139	107	69	113	41
8	143	56	207	73	95	522	236	134	97	106	103	49
9	130	49	257	75	137	482	214	128	99	183	91	53
10	111	54	243	71	398	417	214	110	111	133	184	55
11	104	55	194	65	1,140	376	296	164	130	107	143	56
12	92	54	169	73	2,970	428	265	288	98	75	102	54
13	85	56	158	84	2,350	414	239	148	88	74	95	51
14	82	54	173	76	1,350	362	207	185	76	70	99	54
15	80	56	151	67	1,170	357	295	174	80		74	57
16	80	49	139	77	1,370	335	314	185	96		59	96
17	78	57	132	86	1,220	306	254	176	91		56	116
18	69	57	148	92	879	401	213	164	84	140	66	91
19	62	59	149	87	691	731	183	143	75		59	74
20	66	54	145	82	599	901	194	131	77		57	69
21	71	54	113	89	569	660	186	126	62		54	53
22	67	66	77	90	548	507	161	109	52	174	56	58
23	56	191	98	87	611	437	152	97	60	289	49	54
24	60	250	115	83	627	387	146	199	62	164	52	55
25	62	166	142	78	600	363	145	612	65	118	51	49
26	60	129	122	87	757	313	144	533	70	108	50	55
27	55	98	110	91	832	295	161	413	70	138	47	51
28	66	94	89	65	582	725	137	331	69	117	50	58
29	56	92	82	85	-------	1,010	124	287	69	112	54	61
30	59	83	91	100	-------	821	137	297	83	98	52	61
31	57	-------	88	82	-------	694	-------	258	-------	112	52	------

NOTE.—Discharge estimated Jan. 24, 25, Feb. 11–14 when stage-discharge relation was affected by ice, and May 12, 13, and July 15–21 when recorder was not operating properly; discharge for these periods based on 1 discharge measurement, weather records, gage-height graph, and study of comparison with records of flow of Ramapo River near Mahwah.

Monthly discharge of Ramapo River at Pompton Lakes, N. J., for the year ending September 30, 1925

[Drainage area, 160 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	1,750	55	179	1.12	1.29
November	250	49	77.5	.484	.54
December	257	62	135	.844	.97
January	100	65	80.0	.500	.58
February	2,970	82	718	4.49	4.68
March	1,400	295	565	3.53	4.07
April	540	124	244	1.52	1.70
May	612	97	211	1.32	1.52
June	218	52	101	.631	.70
July		64	119	.744	.86
August	400	47	99.2	.620	.71
September	116	28	59.2	.370	.41
The year	2,970	28	213	1.33	18.03

NOTE.—Data not corrected for storage in nor evaporation from Pompton Lakes.

GREENWOOD LAKE AT THE GLENS, N. J.

LOCATION.—On Erie Railroad bridge, 100 feet above dam at The Glens, Passaic County.

DRAINAGE AREA.—27 square miles (measured on State topographic maps).

RECORDS AVAILABLE.—June 1, 1898, to November 16, 1903, and June 1, 1907, to September 30, 1925.

GAGE.—Vertical staff on railroad trestle; read to half-tenths once a day by A. Pepitone.

CONTROL.—A masonry dam with two wooden sluice gates. Average elevation of spillway crest at gage height 100.0 feet.

EXTREMES OF STAGE.—Maximum stage recorded during year, 100.85 feet February 16; minimum stage recorded, 98.75 feet several times in December.

1898–1903; 1907–1925: Maximum stage recorded, 102.37 feet several days in March, 1902 (also gage height was reported as "2 feet over gage," approximately 104.0 feet, October 9–14, 1903); minimum stage recorded, 93.25 feet several days in November, 1900.

REGULATION.—Greenwood Lake Dam was constructed to provide a storage reservoir for the water supply of Morris Canal. Morris Canal was taken by the State of New Jersey on March 1, 1923. Navigation was abandoned by act of the State legislature March 13, 1924. Very little regulation of the lake is required for the canal after this date.

COOPERATION.—Records furnished by Morris Canal & Banking Co.

Daily gage height, in feet, of Greenwood Lake at The Glens, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	99.75	99.5	98.75	99.15	99.0	99.95	100.55	100.15	100.35	100.05	100.1	99.65
2	100.05	99.5	98.75	99.15	99.0	100.1	100.55	100.2	100.35	100.0	100.1	99.65
3	100.1	99.45	98.75	99.15	98.95	100.05	100.45	100.2	100.35	100.0	100.1	99.55
4	100.1	99.4	98.75	99.15	98.95	100.0	100.45	100.2	100.25	100.0	100.08	99.55
5	100.1	99.4	98.75	99.15	98.95	99.95	100.4	100.15	100.25	100.0	100.05	99.5
6	100.1	99.35	98.75	99.15	98.95	99.9	100.35	100.15	100.2	100.0	100.05	99.45
7	100.05	99.35	98.75	99.15	98.95	99.85	100.35	100.15	100.2	99.98	100.05	99.45
8	100.05	99.3	98.75	99.15	99.05	99.75	100.35	100.15	100.15	100.0	100.05	99.45
9	100.05	99.3	98.85	99.15	99.15	99.7	100.25	100.15	100.15	100.0	100.05	99.45
10	99.95	99.25	98.9	99.15	99.35	99.65	100.25	100.1	100.2	100.05	100.05	99.45

Daily gage height, in feet, of Greenwood Lake at The Glens, N. J., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	99.95	99.25	98.95	99.15	99.55	99.55	100.25	100.15	100.15	100.05	100.05	99.45
12	99.95	99.2	99.0	99.15	99.15	99.5	100.2	100.15	100.15	100.0	100.05	99.4
13	99.9	99.2	99.05	99.15	99.65	99.6	100.2	100.2	100.1	99.95	100.02	99.4
14	99.9	99.15	99.05	99.1	100.75	99.6	100.2	100.25	100.1	99.95	100.0	99.42
15	99.85	99.15	99.1	99.1	100.75	99.6	100.2	100.25	100.1	99.95	100.0	99.45
16	99.85	99.1	99.1	99.1	100.85	99.6	100.2	100.25	100.05	99.9	99.95	99.45
17	99.85	99.1	99.15	99.1	100.78	99.65	100.25	100.2	100.05	100.05	99.95	99.45
18	99.85	99.05	99.15	99.1	100.65	99.75	100.25	100.2	100.05	100.05	99.95	99.45
19	99.8	99.05	99.15	99.1	100.58	99.8	100.25	100.15	100.05	100.05	99.95	99.45
20	99.8	98.95	99.2	99.1	100.45	100.1	100.25	100.15	100.05	100.0	99.92	99.45
21	99.8	98.95	99.25	99.05	100.3	100.1	100.25	100.15	100.0	100.0	99.9	99.45
22	99.75	98.85	99.25	99.05	100.2	100.15	100.2	100.15	100.0	100.0	99.9	99.45
23	99.65	98.95	99.25	99.05	100.15	100.15	100.15	100.15	100.0	100.0	99.85	99.4
24	99.65	98.9	99.2	99.05	100.15	100.2	100.15	100.35	99.95	100.0	99.8	99.4
25	99.6	98.85	99.2	99.05	100.1	100.2	100.15	100.35	100.0	100.0	99.8	99.35
26	99.6	98.85	99.2	99.05	100.1	100.25	100.15	100.5	100.0	100.0	99.8	99.35
27	99.6	98.85	99.15	99.05	100.1	100.25	100.15	100.4	99.95	100.05	99.75	99.3
28	99.55	98.8	99.15	99.02	100.05	100.25	100.15	100.4	99.95	100.05	99.65	99.3
29	99.55	98.8	99.15	99.02	-------	100.45	100.15	100.35	100.0	100.0	99.65	99.25
30	99.55	98.75	99.15	99.0	-------	100.55	100.15	100.35	100.05	100.0	99.65	99.25
31	99.5	-------	99.15	99.0	-------	100.65	-------	100.35	-------	100.0	99.65	-------

WANAQUE RIVER AT GREENWOOD LAKE, N. J.

LOCATION.—600 feet below dam at outlet of Greenwood Lake, at The Glens, Passaic County.

DRAINAGE AREA.—27.0 square miles (measured on State topographic maps).

RECORDS AVAILABLE.—May 13, 1919, to September 30, 1925.

GAGE.—Vertical staff on left bank; read by an employee of North Jersey District Water Supply Commission.

DISCHARGE MEASUREMENTS.—Made by wading at gage.

CHANNEL AND CONTROL.—Coarse gravel and boulders. Control is riffle of small boulders 200 feet below gage; probably permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 2.57 feet at noon February 16 (discharge, 261 second-feet); minimum stage, 0.28 foot at 7 p. m. June 24 and July 16 (discharge, 8 second-feet).

1919–1925: Maximum stage recorded, 3.72 feet at 5 p. m. April 7, 1924 (discharge, about 600 second-feet); minimum stage occurs whenever gates at Greenwood Lake are closed and no water is passing over spillway.

ICE.—Stage-discharge relation probably not affected by ice.

REGULATION.—Flow regulated by operation of sluice gates at outlet of lake, which is a storage reservoir of Morris Canal.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve well defined between 5 and 200 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

COOPERATION.—Gage heights observed under direction of the North Jersey District Water Supply Commission and furnished by that commission for publication.

Discharge measurements of Wanaque River at Greenwood Lake, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 25	0.93	35.8	Dec. 5	0.60	18.4	Sept. 15	0.42	12.8
Do	.92	34.9	May 7	.81	31.3			

Daily discharge, in second-feet, of Wanaque River at Greenwood Lake, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	22	21	21	21	150	92	31	54	10	24	9
2	30	22	21	21	21	150	86	34	54	11	26	9
3	34	22	21	21	21	150	81	32	50	12	27	30
4	36	22	21	21	21	142	76	31	43	12	25	30
5	38	22	21	21	21	134	67	31	36	12	24	30
6	36	22	21	21	21	134	58	31	31	12	23	30
7	35	22	21	21	21	134	50	31	31	11	21	31
8	33	22	21	21	21	127	46	30	27	14	19	30
9	31	22	21	21	21	127	43	28	31	17	20	30
10	28	22	21	21	21	127	42	26	38	16	19	29
11	28	22	21	21	28	127	42	28	33	13	18	20
12	27	22	21	21	67	86	42	32	25	13	17	13
13	25	22	21	21	142	50	40	31	21	13	16	12
14	24	30	21	21	166	50	37	30	22	11	16	12
15	23	41	21	21	201	50	41	33	17	10	15	12
16	22	41	21	21	261	50	43	35	23	8	13	12
17	21	41	21	21	240	26	39	39	17	18	12	12
18	21	41	21	21	210	9	34	36	16	17	11	12
19	21	41	21	21	192	11	32	32	15	14	11	12
20	22	39	21	21	192	30	36	30	13	14	11	12
21	22	39	21	21	192	30	37	27	12	17	11	12
22	22	39	21	21	183	34	33	26	11	16	10	11
23	22	39	21	21	158	34	31	26	10	17	10	11
24	22	38	21	21	158	37	30	46	9	17	10	11
25	22	38	21	21	150	43	29	72	11	16	9	11
26	22	38	21	21	150	42	32	81	11	18	9	11
27	22	40	21	21	150	43	31	72	10	19	9	11
28	22	28	21	21	150	72	29	67	9	17	9	11
29	22	21	21	21	-------	86	29	67	11	16	9	11
30	22	21	21	21	-------	92	30	62	15	14	9	11
31	22	-------	21	21	-------	92	-------	62	-------	13	9	-----

NOTE:—This table indicates discharge as regulated at Greenwood Lake. No gage-height record May 8–10; discharge estimated.

Monthly discharge of Wanaque River at Greenwood Lake, N. J., for the year ending September 30, 1925

Month	Discharge in second-feet			Month	Discharge in second-feet		
	Maximum	Minimum	Mean		Maximum	Minimum	Mean
October	38	21	25.8	May	81	26	40.0
November	41	21	30.0	June	54	9	23.5
December	21	21	21.0	July	19	8	14.1
January	21	21	21.0	August	27	9	15.2
February	261	21	114	September	31	9	16.6
March	150	9	79.6				
April	92	29	44.6	The year	261	8	36.6

WANAQUE RIVER AT WANAQUE, N. J.

LOCATION.—100 feet below Erie Railroad bridge and 400 feet below highway bridge in Wanaque, Passaic County.

DRAINAGE AREA.—91 square miles (measured on State topographic map).

RECORDS AVAILABLE.—December 16, 1903, to December 31, 1905; May 1, 1912, to May 1, 1915; and May 13, 1919, to September 30, 1925.

GAGE.—Water-stage recorder on left bank; installed April 2, 1922; inspected by an engineer of North Jersey District Water Supply Commission.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Sand and fine gravel. Control is gravel riffle 50 feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder, 5.57 feet at 8 a. m. February 12 (discharge, 2,040 second-feet); minimum stage, 0.43 foot at 5 a. m. December 15 (discharge, 14 second-feet).

1903–1905; 1912–1915; 1919–1925: Maximum stage, 8.35 feet July 22 or 23, 1919, determined by level from high-water marks (discharge uncertain); minimum stage, 0.18 foot at 5 p. m. October 8, 1923 (discharge, 1.4 second-feet).

REGULATION.—Flow regulated by operation of sluice gates at Greenwood Lake 11 miles upstream. See record of Wanaque River at Greenwood Lake, N. J., for effect of this regulation.

ACCURACY.—Stage-discharge relation probably permanent. Rating curve well defined. Daily discharge ascertained by applying mean daily gage height to rating table, except on days of considerable fluctuation when the discharge for intervals of the day were averaged. Records good.

COOPERATION.—Station maintained and gage heights furnished by North Jersey District Water Supply Commission.

Discharge measurements of Wanaque River at Wanaque, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 15	0.79	49.7	May 8	1.00	93
Jan. 31	.81	52	Sept. 15	.60	25.6

Daily discharge, in second-feet, of Wanaque River at Wanaque, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	624	42	35	49	52	374	304	158	158	48	220	21
2	208	42	37	46	52	525	290	150	143	41	116	21
3	140	41	34	46	52	437	276	133	135	40	80	32
4	107	40	39	46	50	358	248	123	128	40	68	37
5	98	39	37	49	50	345	234	121	116	36	61	42
6	89	39	102	54	50	345	206	111	102	37	61	42
7	81	39	114	52	55	345	193	107	86	36	61	68
8	77	38	114	52	62	332	185	102	76	51	52	56
9	74	37	140	50	75	318	169	93	76	76	52	46
10	68	37	109	46	231	304	161	82	116	51	111	44
11	68	55	91	48	723	290	206	91	88	44	66	42
12	66	58	81	45	1,650	248	174	153	72	37	51	30
13	63	56	75	46	860	220	158	135	34	33	48	28
14	58	56	81	45	597	206	145	123	51	31	52	30
15	56	62	60	40	550	193	206	161	36	62	45	30

Daily discharge, in second-feet, of Wanaque River at Wanaque, N. J., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	56	60	72	41	715	177	206	148	78	44	40	76
17	55	56	72	54	585	150	174	130	64	209	37	58
18	52	54	79	62	493	193	158	130	54	84	36	41
19	50	50	77	58	437	361	148	116	51	54	35	35
20	48	54	72	54	410	345	153	107	45	44	33	32
21	44	55	48	50	410	262	145	98	44	40	33	29
22	42	80	42	50	410	248	133	91	42	72	32	26
23	42	126	45	48	437	220	128	78	40	121	31	26
24	41	96	58	42	410	206	123	188	38	66	30	26
25	42	79	85	54	384	193	116	384	42	51	28	25
26	42	74	63	54	465	188	133	290	59	58	26	25
27	42	77	54	54	465	182	130	248	45	66	23	26
28	42	81	52	50	345	407	121	220	41	54	21	26
29	42	50	42	50	-------	384	114	193	40	54	21	26
30	42	45	42	52	-------	332	123	206	59	46	22	26
31	42	-------	48	52	-------	332	-------	180	-------	55	21	------

Monthly discharge of Wanaque River at Wanaque, N. J., for the year ending September 30, 1925

Month	Discharge in second-feet			Month	Discharge in second-feet		
	Maximum	Minimum	Mean		Maximum	Minimum	Mean
October	624	41	83.9	May	384	78	150
November	126	37	57.3	June	158	38	73.9
December	140	34	67.7	July	209	31	56.5
January	62	40	49.6	August	220	21	52.0
February	1,650	50	396	September	76	21	35.7
March	525	150	291				
April	304	114	175	The year	1,650	21	122

PEQUANNOCK RIVER AT MACOPIN INTAKE DAM, N. J.

LOCATION.—At Macopin intake dam of Newark water works, 3 miles above Butler, Morris County.

DRAINAGE AREA.—63.7 square miles (measured on State topographic map).

RECORDS AVAILABLE.—January 1, 1892, to September 30, 1925.

GAGES.—Head on spillway at dam indicated by water-stage recorder in gate-house. Water diverted measured by Venturi meter. Elevation of water surface in various storage reservoirs indicated by staff gages. Gages read by employees of bureau of water, city of Newark.

DETERMINATION OF DISCHARGE.—Rating for spillway of intake dam determined by constructing weir at head of pond and making a series of simultaneous observations of head on the weir and dam Daily discharge computed by bureau of water, city of Newark.

DIVERSIONS.—Water diverted from the stream at intake dam only. Diversion included in the records.

STORAGE.—Flow above the dam regulated by several reservoirs. Gages in reservoirs read daily and storage correction computed in million gallons a month. No correction made for evaporation from reservoirs.

COOPERATION.—Monthly discharge computed from records furnished by city of Newark, department of public affairs, bureau of water.

Monthly discharge of Pequannock River at Macopin intake dam, N. J., for the year ending September 30, 1925

[Drainage area, 63.7 square miles]

Month	Discharge in second-feet		Run-off in inches	Month	Discharge in second-feet		Run-off in inches
	Mean	Per square mile			Mean	Per square mile	
October	42.7	0.670	0.77	May	96.7	1.52	1.75
November	22.2	.349	.39	June	51.7	.812	.91
December	55.2	.867	1.00	July	53.1	.834	.96
January	34.3	.538	.62	August	42.9	.673	.78
February	326	5.12	5.33	September	22.5	.353	.39
March	240	3.77	4.35				
April	101	1.59	1.77	The year	89.1	1.40	19.02

NOTE.—No correction made for evaporation from surfaces of reservoirs.

SADDLE RIVER AT LODI, N. J.

LOCATION.—At highway bridge 1 mile above Lodi, Bergen County, and 2¾ miles above mouth.

DRAINAGE AREA.—55 square miles (measured on State topographic map).

RECORDS AVAILABLE.—September 21, 1923, to September 30, 1925.

GAGE.—Water-stage recorder on left bank at upstream end of bridge; inspected by W. C. Thorne.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Channel coarse gravel and rock. Control is at riffle 75 feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 4.94 feet at 2 p. m. February 12 (discharge, 980 second-feet); minimum stage, 1.46 feet at 4 p. m. September 2 (discharge, 7 second-feet, stage-discharge relation affected by manipulation of dam).

1923–1925: Maximum stage recorded, 5.44 feet at 4 p. m. April 7, 1924 (discharge, about 1,280 second-feet); minimum stage, 1.49 feet at 5.30 p. m. November 22, 1923 (discharge, 5.3 second-feet).

ICE.—Stage-discharge relation affected by ice.

REGULATION.—Daily distribution of flow affected by small water-power plants at points upstream.

ACCURACY.—Stage-discharge relation subject to occasional changes, due to repairs made on small dam 400 feet below control, also affected by ice in winter. Rating curves fairly well defined. Operation of water-stage recorder satisfactory except for a few short periods. Daily discharge ascertained by applying to rating table mean daily gage height, obtained by inspection from recorder charts or, for days of considerable fluctuation, by averaging discharge for intervals of the day. Records fair.

Discharge measurements of Saddle River at Lodi, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 14	1.92	36.1	Nov. 24	2.70	152	Mar. 7	2.67	170
Nov. 13	2.09	55	Nov. 25	2.25	75	Mar. 28	2.54	137
Do	2.07	49.3	Jan. 30	[a]2.25	43.1	June 19	1.84	31.4
Do	1.56	10.3	Feb. 12	4.71	882	July 10	2.30	95
Nov. 23	2.46	108	Do	4.92	978	Sept. 15	1.80	30.4
Do	2.52	118	Feb. 13	3.72	471	Sept. 16	1.91	40.4
Do	2.58	128	Feb. 14	3.22	319			

[a] Stage-discharge relation affected by ice

Daily discharge, in second-feet, of Saddle River at Lodi, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	322	30	39		55	161	140	98	54	81	70	25
2	302	31	37		59	553	116	105	47	43	70	21
3	133	27	32	26	63	318	103	81	45	35	70	21
4	76	30	30		56	225	98	66	43	32	70	21
5	58	30	32	27	53	153	94	59	34	34	70	18
6	51	30	76	33	52	153	85	55	32	43	70	19
7	46	29	105	35	54	164	81	52	30	33	70	45
8	44	28	75	34	58	153	78	48	28	32	38	98
9	44	25	76	39	63	142	74	47	30	74	39	62
10	43	27	82	33	85	130	78	47	35	94	45	36
11	40	26	59		184	122	120	72	32	50	52	32
12	37	29	50		730	128	132	142	27	36	38	30
13	37	29	47		516	136	96	142	27	29	36	30
14	37	33	50	32	325	112	80	80	27	25	38	33
15	35	25	44		238	114	110	66	31	23	36	34
16	32	22	42		282	103	150	68	42	27	32	39
17	34	25	42	37	288	99	100	62	40	98	31	87
18	36	24	51	47	212	150	85	65	35	164	30	60
19	32	20	43	46	164	220	80	51	32	81	28	37
20	31	22	43		151	280	80	47	30	40	27	31
21	30	22	40		153	187	78	45	28	34	26	27
22	30	43	41		164	134	70	43	25	38	30	28
23	29	114	39		175	114	66	40	28	75	30	25
24	33	134	50		175	101	63	60	26	119	25	26
25	30	72	72	38	164	98	62	141	30	56	25	17
26	27	53	99		164	94	65	199	43	46	25	21
27	28	43	45		248	94	68	108	39	52	21	21
28	33	38	40		187	138	60	62	34	47	21	19
29	32	37	35			262	55	56	37	59	21	22
30	25	40	29			187	60	74	78	47	21	21
31	29		26			164		68		51	20	

NOTE.—Discharge estimated Jan. 11-16, 20-31, Feb. 1, when stage-discharge relation was affected by ice, and Jan. 1-4, Feb. 8, Mar. 18-20, Apr. 15-17, Aug. 1-7, when recorder was not operating; discharge determined on basis of gage-height graph, discharge measurements, weather records, and record of flow of Ramapo River near Mahwah.

Monthly discharge of Saddle River at Lodi, N. J., for the year ending September 30, 1925

[Drainage area, 55 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	322	25	57.9	1.05	1.21
November	134	20	37.9	.689	.77
December	105	26	50.7	.922	1.06
January			34.9	.635	.73
February	730	52	183	3.33	3.47
March	553	94	167	3.04	3.50
April	150	55	87.6	1.59	1.77
May	199	40	75.8	1.38	1.59
June	78	25	35.6	.647	.72
July	164	23	54.8	.996	1.15
August		20	39.5	.718	.83
September	98	17	33.5	.609	.68
The year	730	17	70.9	1.29	17.48

ELIZABETH RIVER BASIN

ELIZABETH RIVER AT ELIZABETH, N. J.

LOCATION.—Just above Westfield Avenue Bridge in Elizabeth, Union County, and 2½ miles above mouth.

DRAINAGE AREA.—20 square miles (measured on State topographic map).

RECORDS AVAILABLE.—October 5, 1921, to September 30, 1925.

GAGE.—Water-stage recorder on left bank 10 feet above dam; inspected by Lewis Gallagher.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CONTROL.—Concrete dam, crest 48.5 feet long, at gage-height elevation 5.00 feet, with sluice gate 24 inches in diameter, elevation of invert about gage 0.3 foot. When the sluice gate is open and flowing part full a riffle of small stone below dam becomes control.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 8.18 feet at midnight July 31 (discharge, about 1,260 second-feet).

1921–1925: Maximum stage recorded, 8.18 feet at midnight July 31, 1925 (discharge, about 1,260 second-feet).

DIVERSIONS.—Elizabethtown Water Co. diverts water from Elizabeth River above this point, at the Ursina Lake pumping station and through wells at its Hummock pumping station. Corrections for these diversions have been applied to the monthly table.

ACCURACY.—Stage-discharge relation over spillway permanent. Rating curve well defined below 150 second-feet. Stage-discharge relation through sluice gate probably permanent between shifts. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying mean daily gage height to rating table; on days of considerable fluctuation discharge for several periods of the day are averaged. Records good.

The following discharge measurements were made:

December 16, 1925: Gage height, 5.072 feet; discharge, 2.12 second-feet.

February 12, 1925: Gage height, 6.51 feet;[9] discharge, 298 second-feet.

April 29, 1925: Gage height, 1.20 feet; discharge, 5.76 second-feet.

Daily discharge, in second-feet, of Elizabeth River at Elizabeth, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	54	3.2	4.4	2.6	5.0	188	16	11	5	0.2	260	1.6
2	15	3.2	2.1	3.2	5.0	102	11	8	2	0	16	1.2
3	9.5	5.0	1.6	3.2	6	34	10	8	1	0	7.9	.7
4	7.9	4.4	1.6	4.4	5.7	31	10	7	0	.8	5.7	.7
5	7.1	5.7	27	3.2	5.7	23	11	6	0	8.8	10	1.2
6	7.1	5.7	53	1.6	9.4	27	11	6	0	.2	6.4	1.6
7	7.1	5.0	10	1.6	12	20	11	5	0	0	5.7	72
8	9.9	3.8	7.9	1.6	12	21	9.5	6	0	0	5.7	5.0
9	6.4	5.0	24	2.1	10	19	7.1	4	0	0	19	1.2
10	6.4	6.4	5.7	2.1	79	17	19	1	0	60	31	.1
11	9.5	5.0	4.4	3.2	228	16	24	34	1.2	3	5.0	.4
12	7.9	3.2	6.4	2.6	306	16	11	13	1.2	2.6	4.4	.4
13	7.9	1.6	8.7	2.1	90	13	8.7	2	.7	.7	8	.1
14	4.9	2.1	6.4	2.1	58	17	7.9	4	.7	0	5.7	.4
15	7.1	3.2	3.8	2.1	90	15	49	2	.7	0	6.4	.4
16	5.1	2.6	2.6	2.1	85	13	19	2	64	4	5.0	49
17	3.2	1.6	3.2	8.7	59	40	12	10	1.6	46	2.6	14
18	3.8	1.2	3.2	11	44	24	10	11	.5	.4	2.1	3.2
19	6.4	1.2	3.8	5.0	40	156	12	5	0	0	1.6	2.6
20	5.0	1.2	5.7	4.4	47	33	13	1	3.5	0	2.1	2.1

[9] Tree lodged on spillway, obstruction possibly equivalent to 2 feet of spillway.

Daily discharge, in second-feet, of Elizabeth River at Elizabeth, N. J., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	3.8	0.7	4.4	4.4	42	23	11	1	6.7	0	10	2.1
22	4.4	51	2.6	3.8	43	20	9	1	2.7	13	3.8	2.1
23	4.4	12	2.1	3.8	38	17	9	1	0	3	3.8	0
24	5.0	3.8	40	3.2	34	11	7	48	0	0	2.1	0
25	5.0	3.2	10	4.4	27	13	5	38	72	8	1.6	0
26	3.2	3.2	3.8	4.4	94	14	8	8	18	27	1.6	0
27	3.2	3.8	2.6	5.7	28	14	8	2	.7	2.6	2.1	0
28	3.8	4.4	3.2	3.2	18	47	6	2	0	11	1.6	0
29	3.8	6.0	2.6	3.2	-------	27	6	14	17	12	1.6	.1
30	3.8	5.0	1.6	5.7	-------	19	14	16	14	.1	1.6	.1
31	3.2	-------	1.6	4.4	-------	19	-------	10	-------	119	2.1	-------

NOTE.—This table does not include diversions. Sluice gate open Apr. 15 to June 3, discharge through gate has been applied in the table.

Monthly discharge of Elizabeth River at Elizabeth, N. J., for the year ending September 30, 1925

[Drainage area, 20 square miles]

Month	Discharge in second-feet					Run-off in inches
	Observed			Corrected for diversions		
	Maximum	Minimum	Mean	Mean	Per square mile	
October	54	3.2	7.57	15.8	0.790	0.91
November	51	.7	5.45	14.8	.740	.83
December	53	1.6	8.39	17.3	.865	1.00
January	11	1.6	3.71	12.8	.640	.74
February	306	5.0	54.3	61.9	3.10	3.23
March	188	11	33.8	41.6	2.08	2.40
April	49	5	12.2	20.8	1.04	1.16
May	48	1	9.26	18.7	.935	1.08
June	72	0	7.11	17.4	.870	.97
July	119	0	10.4	21.3	1.07	1.23
August	260	1.6	14.3	23.6	1.18	1.36
September	72	0	5.41	18.5	.925	1.03
The year	306	0	14.1	23.4	1.17	15.94

RAHWAY RIVER BASIN

RAHWAY RIVER AT RAHWAY, N. J.

LOCATION.—At Church Street Bridge in Rahway, Union County, half a mile above mouth of Robinsons Branch of Rahway River.

DRAINAGE AREA.—41 square miles (measured on State topographic map).

RECORDS AVAILABLE.—July 10, 1908, to April 29, 1915; October 1, 1921, to September 30, 1925.

GAGE.—Vertical staff attached to tree on right bank 40 feet below bridge; read by W. M. Ritche.

DISCHARGE MEASUREMENTS.—Made by wading or from highway bridge.

CHANNEL AND CONTROL.—Channel is fine gravel. Control head of riffle about 300 feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 4.25 feet at 3 p. m. February 12 (discharge, 1,000 second-feet); minimum stage, 0.62 foot November 20 and January 1 (discharge, 5 second-feet; stage-discharge relation affected by backwater from temporary dam).

1908–1915; 1921–1925: Maximum stage estimated from hydrograph, 5.1 feet at 2 p. m. July 9, 1924 (discharge, about 1,100 second-feet; stage-discharge relation affected by backwater from brush on control); minimum stage, zero December 1, 1912 (discharge, uncertain).

ICE.—Stage-discharge relation not seriously affected by ice.

DIVERSIONS.—The following water companies divert water from Rahway River above Rahway: Orange Water Co., South Orange waterworks (wells), Short Hills Water Co. (wells), Springfield station of Elizabethtown Water Co. (wells), and Rahway waterworks. The total flow diverted is about 17 second-feet and is included in the monthly record.

ACCURACY.—Stage-discharge relation fairly permanent except for children constructing dam at control.—Rating table fairly well defined. Gage read to hundredths twice a day. Daily discharge ascertained by applying to rating table mean daily gage height corrected for backwater when control is obstructed. Records fair.

Discharge measurements of Rahway River at Rahway, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft*
Oct. 16	0.72	12.3	Feb. 10	2.00	198	Apr. 29	0.78	22.3
Nov. 14	.71	10.2	Feb. 12	4.20	962	June 19	.62	10.2
Dec. 15	.94	32.9	Do	4.14	960	July 22	.67	12.6
Jan. 23	.75	16.4	Mar. 17	.88	31.8	Aug. 25	.61	9.2
Feb. 10	1.79	158	Mar. 28	1.45	115	Sept. 16	1.19	69

Daily discharge, in second-feet, of Rahway River at Rahway, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	212	10	11	5	21	110	73	32	21	16	569	8
2	74	12	8	19	22	569	58	29	18	12	255	8
3	35	10	11	11	22	183	42	25	16	12	80	8
4	21	10	9	12	22	83	38	23	16	11	23	8
5	18	9	10	13	21	71	33	23	15	12	23	8
6	18	10	153	8	22	73	32	22	13	11	18	9
7	16	9	40	7	32	76	28	21	13	11	24	37
8	18	9	26	8	40	67	24	22	18	12	14	91
9	18	10	66	10	42	60	22	20	19	13	16	61
10	16	10	30	11	144	53	29	30	16	16	74	20
11	15	10	20	9	370	47	76	60	13	26	57	11
12	14	9	18	10	830	50	39	74	12	14	26	8
13	14	8	21	8	605	44	31	58	8	10	17	7
14	13	10	17	8	230	46	24	37	9	9	19	8
15	10	10	17	8	162	42	53	22	13	11	14	10
16	12	10	11	14	230	32	61	16	76	12	13	68
17	11	12	12	27	183	47	42	18	44	61	12	51
18	12	9	14	30	122	107	40	16	20	19	11	16
19	11	9	14	22	107	282	40	16	14	12	11	11
20	10	6	14	19	121	268	35	15	12	10	10	9
21	14	10	10	18	124	93	29	15	22	11	10	9
22	10	25	9	19	124	70	26	13	30	12	16	7
23	10	58	10	14	152	64	23	13	22	11	13	7
24	10	20	23	20	142	54	22	61	18	10	12	7
25	11	17	38	18	101	39	20	71	30	12	11	7
26	10	12	14	16	162	35	23	57	93	32	11	7
27	10	11	10	25	133	42	22	42	30	20	10	7
28	11	10	9	25	93	133	22	26	19	16	9	7
29	13	17	7	25	-------	102	23	29	22	53	9	7
30	10	15	10	22	-------	102	29	39	22	16	8	7
31	10	-------	7	25	-------	93	-------	25	-------	22	8	------

NOTE.—This table does not include diversions. Discharge corrected for aquatic growth and temporary obstruction in channel Oct. 1 to Feb. 10 and Sept. 7–30, based on monthly-discharge measurements and inspections.

Monthly discharge of Rahway River at Rahway, N. J., for the year ending September 30, 1925

[Drainage area, 41 square miles]

Month	Discharge in second-feet					Run-off in inches
	Observed			Corrected for diversions		
	Maximum	Minimum	Mean	Mean	Per square mile	
October	212	10	22.2	39.3	0.959	1.11
November	58	6	12.9	29.7	.724	.81
December	153	7	21.6	38.3	.934	1.08
January	30	5	15.7	32.9	.802	.92
February	830	21	156	173	4.22	4.39
March	569	32	101	118	2.88	3.32
April	76	20	35.3	52.3	1.28	1.43
May	74	13	31.3	48.7	1.19	1.37
June	93	8	23.1	41.0	1.00	1.12
July	61	9	16.9	35.7	.871	1.00
August	569	8	46.2	64.2	1.57	1.81
September	91	7	17.6	36.2	.883	.99
The year	830	5	41.0	58.4	1.42	19.35

ROBINSONS BRANCH OF RAHWAY RIVER AT GOODMANS, N. J.

LOCATION.—At Lehigh Valley Railroad station in Goodmans, Union County, 2¾ miles above dam and pumping station of Middlesex Water Co. near Rahway, and 4½ miles above mouth of stream.

DRAINAGE AREA.—12.7 square miles (measured on State topographic map).

RECORDS AVAILABLE.—October 27, 1921, to December 31, 1924, when station was discontinued.

GAGE.—Vertical staff attached to tree on right bank 100 feet below highway bridge; read by Joseph Spinella.

DISCHARGE MEASUREMENTS.—Made by wading.

CHANNEL AND CONTROL.—Channel fine gravel. Banks high. Control is riffle of rocks, probably artificial, 50 feet below gage and is drowned out by backwater from reservoir at medium and high stages when reservoir is full.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period October 1, to December 31, 1.90 feet at 8 a. m. October 1 (discharge, 66 second-feet affected by backwater from dam); minimum stage, 0.24 foot at 5 p. m. November 8 (discharge, 1.5 second-feet).

1921–1924: Maximum stage recorded, 5.40 feet at 8 a. m. April 7, 1924 (discharge not determined); minimum discharge, about 0.5 second-foot all day September 20.

REGULATION.—Swamp just above station gives natural storage.

ACCURACY.—Stage-discharge relation affected by backwater from reservoir at medium and high stages. Rating curve well defined to 10 second-feet. Daily discharge ascertained by applying mean daily effective gage height to rating table. Because of the uncertainty of the record, daily discharge is not published. Records fair.

The following discharge measurements were made:

October 16, 1924: Gage height, 0.25 foot; discharge, 2.79 second-feet.

November 14, 1924: Gage height, 0.27 foot; discharge, 2.87 second-feet.

December 15, 1924: Gage height, 0.36 foot; discharge, 5.1 second-feet.

Monthly discharge of Robinsons Branch of Rahway River at Goodmans, N. J., for the period October 1 to December 31, 1924

[Drainage area, 12.7 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	64	1.7	14.2	1.12	1.29
November	25	1.7	6.30	.496	.55
December	19	2.3	7.09	.558	.64

RARITAN RIVER BASIN

SOUTH BRANCH OF RARITAN RIVER NEAR HIGH BRIDGE, N. J.

LOCATION.—1 mile above High Bridge, Hunterdon County, and 4 miles above mouth of Spruce Run.

DRAINAGE AREA.—65 square miles (measured on topographic map).

RECORDS AVAILABLE.—February 24, 1919, to September 30, 1925.

GAGE.—Water-stage recorder on left bank just above large pine tree; operated by an engineer of Taylor-Wharton Iron & Steel Co.

DISCHARGE MEASUREMENTS.—Made by wading or from highway bridge one-third mile upstream.

CHANNEL AND CONTROL.—Channel very rough with many boulders. Control is a well-defined riffle of rock and boulders 100 feet below gage, probably permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year ending September 30, 1925, not recorded; minimum stage recorded, 4.88 feet at 2.30 a. m. December 15 (discharge, 19 second-feet).

1919–1925: Maximum stage recorded, 10.97 feet at 10.30 a. m. February 2, 1922 (discharge, about 3,600 second-feet); minimum stage, 4.80 feet 6.30 a. m. October 3, 1921 (discharge, 9 second-feet).

ICE.—Stage-discharge relation seriously affected by ice.

REGULATION.—Daily distribution of flow affected by small water powers at points upstream.

ACCURACY.—Stage-discharge relation permanent, except as affected by ice. Rating curve well defined between 30 and 2,500 second-feet. Operation of water-stage recorder satisfactory except for two short periods. Daily discharge ascertained by use of discharge integrator. Records good.

COOPERATION.—Shelter for water-stage recorder erected and instrument operated by Taylor-Wharton Iron & Steel Co.

Discharge measurements of South Branch of Raritan River near High Bridge, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 16	5.27	40.2	July 20	[b]5.33	42.6	Sept. 9	5.31	43.3
Jan. 22	[a]6.23	52	Do	5.24	36.5			

[a] Control entirely covered with rough ice and snow.
[b] A number of small stones had been placed between rocks on control. These were removed after measurement was made.

Daily discharge, in second-feet, of South Branch of Raritan River near High Bridge N. J., for the years ending September 30, 1924 and 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1923-4												
1	30	61	184	128	120	74	102	289	121	71	45	29
2	34	49	97	98	113	79	97	165	116	65	40	30
3	31	44	76	320	110	85	116	138	107	67	37	36
4	30	38	63	192	112	119	179	135	120	63	40	32
5	29	40	104	136	207	246	194	126	114	58	40	33
6	28	41	316	94	230	451	598	119	112	60	64	33
7	26	94	149		155	278	1,170	112	114	58	47	32
8	25	73	106	100	114	168	440	137	104	72	46	31
9	31	52	97		93	156	323	449	108	114	37	36
10	29	45	92		99	150	292	261	96	77	38	42
11	28	41	88	213	97	232	248	210	89	64	35	36
12	28	46	80	182	96	187	216	545	98	54	122	36
13	30	40	73	114	90	145	203	457	115	67	78	33
14	26	44	88	104	85	127	185	299	147	68	58	35
15	26	39	69	88	85	111	165	338	108	58	44	33
16	31	36	67	307	92	93	150	250	89	55	39	34
17	30	36	69	622	104	92	146	223	80	57	42	33
18	29	34	64	220	108	105	258	218	78	49	42	34
19	28	37	60	188	94	113	508	256	82	50	45	33
20	33	38	57		113	104	237	201	77	46	41	30
21	29	38	66		167	105	230	218	72	49	40	34
22	29	37	95	110	132	101	220	202	71	48	38	38
23	39	39	289		110	104	203	168	66	58	38	62
24	200	90	196		90	108	166	157	65	49	32	44
25	102	61	119	514	75	96	152	191	172	44	38	37
26	59	48	105	204	70	106	142	154	181	47	38	38
27	44	51	96	127	70	114	136		97	37	40	33
28	41	48	119	130	72	161	131	140	93	41	35	32
29	40	38	124	130	78	157	139		92	47	35	41
30	41	210	96	141	------	131	164		84	41	35	459
31	86	------	108	132	------	118	------	127	------	39	32	------
1924-25												
1	403	38	53			325	150	102	63	59	497	44
2	124	37	68			460	160	90	70	50	140	42
3	88	41	72			219	141	81	68	47	96	41
4	72	36	45			209	126	80	60	39	80	41
5	67	36	55			202	120	80	54	50	78	40
6	62	40	166	55	60	242	114	77	52	50	81	38
7	61	38	103			254	111	74	49	43	71	85
8	55	36	84			228	106	73	48	42	65	69
9	55	36	133			216	102	73	49	49	104	45
10	51	40	84		750	194	103	72	61	58	229	45
11	49	37	69		750	189	133	153	50	46	92	42
12	47	38	61		750	211	113	189	46	41	74	41
13	47	39	64		750	172	103	106	42	44	76	39
14	47	41	64		310	172	99	91	41	37	79	66
15	46	38	50		335	159	220	88	49	38	72	53
16	47	37	55	38	440	140	161	84	78	51	64	160
17	47	38	60		340	153	120	91	58	85	62	242
18	43	45	64		266	202	111	85	50	54	57	93
19	41	54	62		226	501	106	74	44	44	60	69
20	46	41	55		225	266	109	64	42	43	54	63
21	44	41			246	199	97	69	42	45	59	57
22	44	77			332	188	92	62	44	59	57	55
23	41	117			423	172	91	53	44	78	50	49
24	42	72			405	163	88	102	41	51	55	52
25	40	59			325	157	83	224	51	43	49	48
26	39	49	46	30	520	147	84	111	51	94	48	44
27	39	47			289	151	83	83	47	138	45	39
28	41	50			218	280	78	72	43	90	45	46
29	41	50			------	188	80	68	65	96	40	45
30	41	43			------	181	84	76	92	61	39	41
31	37	------			------	161	------	68	------	166	46	------

NOTE.—The above record of daily discharge for the year ending Sept. 30, 1924, supersedes record published in Water-Supply Paper 581. Discharge determined by graphic study of discharge records, discharge measurements, weather records, and records of flow at other stations in the Raritan River Basin, especially at Stanton, Jan. 7–10, 20–24, 28, 29, Feb. 14, 15, 23–27, Dec. 15, 16, 21–31, 1924, and Jan. 1 to Feb. 7, 1925, when stage-discharge relation was affected by ice; May 27–30, June 15, 16, 1924, Feb. 8–13, and Apr. 1–3, 1925, when recorder was not operating; and June 21 to July 19, 1925, when control was partly obstructed.

Monthly discharge of South Branch of Raritan River near High Bridge, N. J., for the years ending September 30, 1924 and 1925

[Drainage area, 65 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
1923–24					
October	200	25	41.7	0.642	0.74
November	210	34	52.9	.814	.91
December	316	57	110	1.69	1.95
January	622	----------	172	2.65	3.06
February	230	70	110	1.69	1.82
March	451	74	142	2.18	2.51
April	1,170	97	250	3.85	4.30
May	545	112	216	3.32	3.83
June	172	65	102	1.57	1.75
July	114	37	57.2	.880	1.01
August	122	32	44.5	.685	.75
September	459	29	49.6	.763	.89
The year	1,170	25	112	1.72	23.52
1924–25					
October	403	37	62.8	0.966	1.11
November	117	36	46.4	.714	.80
December	166	----------	63.6	.978	1.13
January	----------	----------	40.6	.625	.72
February	----------	----------	301	4.63	4.82
March	501	140	216	3.32	3.83
April	220	78	112	1.72	1.92
May	224	53	90.8	1.40	1.61
June	92	41	53.1	.817	.91
July	166	37	61.0	.938	1.08
August	497	39	85.9	1.32	1.52
September	242	38	61.1	.940	1.05
The year	----------	----------	98.3	1.51	20.50

NOTE.—The above record of monthly discharge for the year ending Sept. 30, 1924, supersedes record published in Water-Supply Paper 581.

SOUTH BRANCH OF RARITAN RIVER AT STANTON, N. J.

LOCATION.—At highway bridge near Lehigh Valley Railroad station in Stanton, Hunterdon County, half a mile above mouth of Prescott Brook and 5 miles below mouth of Cakepoulin Creek.

DRAINAGE AREA.—147 square miles (measured on topographic map).

RECORDS AVAILABLE.—July 2, 1903, to December 31, 1906; and from July 1, 1919, to September 30, 1925.

GAGE.—Water-stage recorder on right bank, 5 feet below bridge. Prior to August 17, 1925, a chain gage on downstream side of bridge near left end was used. Both gages at same datum. Gage read and recorder operated by E. H. Smith.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Bed and banks, gravel. Banks are overflowed at high stages. Control is slight riffle 100 feet below bridge.

EXTREMES OF DISCHARGE.—Maximum stage during year, estimated from hydrograph, 9.8 feet at 8 a. m. February 12 (discharge, about 3,200 second-feet, stage-discharge relation affected by ice); minimum stage recorded, 1.92 feet at 7 a. m. June 23 (discharge, 28 second-feet).

1903–1906; 1919–1925: Maximum stage recorded, 10.5 feet October 9, 1903 (discharge, not determined); minimum stage, 1.85 feet at 5 p. m. September 16, 1921 (discharge, about 24 second-feet).

ICE.—Stage-discharge relation affected by ice during winter.

REGULATION.—Distribution of flow affected by small water-power plants at points upstream.

ACCURACY.—Stage-discharge relation permanent, except as affected by ice or grass on the control. Rating curve well defined between 35 and 1,200 second-feet. Gage read to even hundredths twice a day until installation of recorder. Daily discharge ascertained, for period of chain-gage record, by applying mean daily gage height to rating table, except when affected by ice or grass on control for period of automatic record, by use of discharge integrator. Records good.

Discharge measurements of South Branch of Raritan River at Stanton, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 16	2.42	90	Jan. 21	[a] 3.46	112	Aug. 10	[b] 4.12	606
Oct. 24	2.27	67	July 20	2.14	48.2	Do	[b] 3.70	525

[a] Control completely covered with ice.
[b] Weeds and grass grown up thickly on that part of the control not under water at low stages.

Daily discharge, in second-feet, of South Branch of Raritan River at Stanton, N. J. for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,030	62	131	70	95	860	333	235	116	93	1,100	68
2	495	57	137	60	120	915	354	187	93	76	340	66
3	201	70	106	80	110	545	354	160	102	62	235	63
4	209	61	78	120	100	545	312	151	118	67	187	73
5	190	61	137	90	110	545	292	134	75	76	292	64
6	174	60	495	75	120	595	271	121	70	83	194	61
7	180	54	280	55	120	670	251	116	70	71	180	208
8	140	48	209	60	150	545	247	100	58	80	212	135
9	104	50	333	60	220	545	243	146	67	73	440	81
10	93	76	177	70	600	520	251	146	75	65	700	74
11	80	64	154	70	1,800	545	312	354	70	75	312	73
12	68	73	131	75	2,800	545	267	312	60	64	227	60
13	70	65	146	80	1,300	470	235	187	57	54	231	88
14	70	65	131	60	1,100	398	205	154	64	57	220	158
15	71	62	76	60	1,770	520	545	151	64	51	187	108
16	80	54	85	60	1,210	354	398	146	78	52	150	340
17	68	62	98	110	970	422	312	146	96	255	102	1,000
18	60	75	96	80	750	495	292	140	54	111	126	285
19	65	91	89	75	645	1,850	292	124	53	65	96	187
20	78	68	82	85	670	695	292	111	58	65	107	151
21	70	60	76	95	750	570	267	102	54	68	120	149
22	64	130	71	110	1,490	445	259	100	50	76	109	122
23	65	320	76	100	1,090	445	231	85	50	78	89	104
24	62	128	89	70	1,090	422	180	177	64	82	89	104
25	61	104	106	85	860	398	163	495	82	76	88	97
26	60	71	76	75	1,350	376	160	201	73	143	83	90
27	78	76	68	65	620	398	177	170	61	292	81	83
28	70	75	68	65	595	595	163	137	64	106	71	84
29	64	98	68	75	-------	495	174	154	111	320	67	84
30	67	85	68	75	-------	376	212	177	157	111	68	74
31	64	-------	68	120	-------	354	-------	177	-------	700	63	------

NOTE.—Discharge for the following periods estimated: Dec. 15, 16, and Dec. 22 to Feb. 14, when stage-discharge relation was affected by ice; July 29, 31, Aug. 1, 2, 9, 10, Sept. 16, and 17, when affected by grass; and Oct. 1, 19, 26, Nov. 22, 23, 30, Dec. 7, 14, 18, 21, Aug. 7 and 16, when gage-height record was missing; estimates based on study of discharge measurements, weather records, observer's notes, gage-height graph, and comparison with records at other stations in Raritan Basin.

Monthly discharge of South Branch of Raritan River at Stanton, N. J., for the year ending September 30, 1925

[Drainage area, 147 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	1,030	60	137	0.932	1.07
November	320	48	80.8	.550	.61
December	495	68	129	.878	1.01
January	120	55	78.4	.533	.61
February	2,800	95	807	5.49	5.72
March	1,850	354	563	3.83	4.42
April	545	160	268	1.82	2.03
May	495	85	171	1.16	1.34
June	157	50	75.5	.514	.57
July	700	51	118	.803	.93
August	1,100	63	212	1.44	1.66
September	1,000	60	144	.980	1.09
The year	2,800	48	228	1.55	21.06

RARITAN RIVER AT MANVILLE, N. J.

LOCATION.—At highway bridge between Manville and Finderne, Somerset County, 1¼ miles above mouth of Millstone River and 4½ miles below confluence of North and South Branches of Raritan River.

DRAINAGE AREA.—490 square miles (measured on State topographic map).

RECORDS AVAILABLE.—June 27, 1903, to March 31, 1907; August 10, 1908, to April 30, 1915; and from August 19, 1921, to September 30, 1925.

GAGE.—Water-stage recorder on left bank 5 feet downstream from bridge. Prior to August 15, 1923, chain gage fastened to downstream side of bridge was used. All gage heights at same datum. Recorder operated by Edward McBride.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Red sandstone on left side; sand and gravel on right side; permanent, affected by vegetable growth during summer. Banks are overflowed at very high stages.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 13.36 feet at 1 p. m. February 12 (discharge, about 15,000 second-feet, stage-discharge relation was affected by ice); minimum stage recorded 3.27 feet at 2 a. m. December 15 (discharge, about 89 second-feet).

1903–1907; 1921–1925; Maximum stage recorded, 15.9 feet October 10, 1903 (discharge, about 25,000 second-feet); minimum stage, 3.24 feet at 9 p. m. September 19, 1923 (discharge, about 36 second-feet).

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—Johns-Manville Co. diverts about 2 second-feet from Raritan River at a point about one-fourth mile above the gage. This is not included in the records.

REGULATION.—Daily distribution of flow affected by water powers at Somerville and other points upstream.

ACCURACY.—Stage-discharge relation not permanent; affected by the growth of grass on the control during the summer and by ice during the winter. Operation of recorder satisfactory. Daily discharge ascertained by applying rating table to mean daily gage height corrected for the effect of grass or ice on the control. Records fair.

Discharge measurements of Raritan River at Manville, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 14	[a] 3.72	175	Feb. 14	6.83	3,120	June 20	[a] 3.59	114
Nov. 13	[a] 3.56	108	Do	6.72	3,140	July 20	[a] 3.72	168
Dec. 17	3.88	268	Do	6.64	3,180	Aug. 25	[a] 3.82	205
Jan. 19	[b] 4.34	331	Apr. 24	4.11	459	Sept. 17	[a] 5.72	1,970
Feb. 13	9.80	6,370	May 18	4.02	343			

[a] Grass on control. [b] Stream partly covered by ice at control.

Daily discharge, in second-feet, of Raritan River at Manville, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,440	137	221			2,630	860	570	269	250	5,500	176
2	910	127	192			4,460	860	533	241	189	1,080	158
3	533	124	185			1,660	860	448	217	170	590	158
4	373	137	185			1,480	714	432	213	158	432	158
5	327	129	189			1,240	640	409	199	142	506	176
6	279	132	1,300	320	260	1,420	570	387	189	142	440	170
7	245	137	725			1,600	524	359	179	139	352	464
8	221	134	456			1,540	498	359	170	129	294	387
9	199	132	960			1,480	472	327	164	127	736	233
10	189	127	600			1,240	456	327	161	217	2,480	192
11	182	132	402		7,500	1,180	610	451	150	310	746	189
12	164	132	346			1,180	533	1,320	144	189	448	185
13	170	132	321			1,020	456	650	142	144	387	189
14	158	134	333		3,350	910	416	464	147	132	416	284
15	158	142	244		3,010	860	1,340	352	137	117	333	284
16	158	142	260	220	4,490	725	1,160	333	155	119	294	1,360
17	153	129	274		3,340	801	714	333	185	650	264	2,680
18	150	124	269		2,590	1,300	610	346	176	294	245	910
19	153	122	254		2,250	4,760	560	310	158	210	245	542
20	158	139	250		2,520	2,310	620	284	144	176	233	394
21	153	150	192		2,740	1,600	515	250	134	173	245	333
22	144	217	340		3,360	1,300	448	241	124	179	279	289
23	142	600	259		3,810	1,080	432	241	124	206	245	250
24	139	359	281		3,610	960	424	297	127	221	229	233
25	137	250	714		2,780	860	432	994	119	213	213	229
26	144	213	550	220	4,340	778	440	599	210	373	213	213
27	139	196	340		2,350	746	432	391	173	960	196	217
28	142	189	280		1,730	1,610	402	333	153	402	192	217
29	142	170	220		-------	1,070	440	333	164	1,130	182	210
30	139	185	220		-------	1,020	456	346	333	366	179	206
31	139	-------	206		-------	960	-------	304	-------	550	173	------

NOTE.—Stage-discharge relation affected by ice Dec. 16, 26-30, and Jan. 1, to Feb. 13, gage-height record missing July 31 and Aug. 1; estimated discharge based on 1 discharge measurement, study of weather records, gage-height graph, and comparison with the flow at other stations in the basin. Discharge corrected for aquatic growth on control Oct. 1 to Nov. 22 and June 1 to Sept. 30 on basis of monthly-discharge measurements and study of comparison with record of flow at Far Hills.

Monthly discharge of Raritan River at Manville, N. J., for the year ending September 30, 1925

[Drainage area, 490 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	3,440	137	319	0.651	0.75
November	600	122	172	.351	.39
December	1,300	185	373	.761	.88
January	----------	----------	252	.514	.59
February	----------	----------	2,810	5.73	5.97
March	4,760	725	1,480	3.02	3.48
April	1,340	402	596	1.22	1.36
May	1,320	241	430	.878	1.01
June	333	119	173	.353	.39
July	1,130	117	283	.578	.67
August	5,500	173	592	1.21	1.40
September	2,680	158	390	.796	.89
The year	----------	117	641	1.31	17.78

NORTH BRANCH OF RARITAN RIVER NEAR FAR HILLS, N. J.

LOCATION.—At dam of Somerset Lake & Game Club, 2 miles north of Far Hills, Somerset County, and 2 miles above mouth of Peapack Brook.

DRAINAGE AREA.—26 square miles (measured on State topographic map).

RECORDS AVAILABLE.—February 15, 1922, to September 30, 1925.

GAGE.—Water-stage recorder on left bank 75 feet above dam. Prior to June 18, 1925, hook gage in stilling box at left end of dam was used. Gage read and recorder inspected by John Robinson.

DISCHARGE MEASUREMENTS.—Made by wading 200 feet below dam.

CONTROL.—Masonry dam with flat crest having low-water notch 26 feet long with crest at elevation of gage height, 1.696 feet. Remainder of spillway 137 feet long with crest at elevation of gage height 2.204 feet.

EXTREMES OF DISCHARGE.—Maximum stage during year, estimated from hydrograph, 3.40 feet at 11 p. m. July 31 (discharge, about 692 second-feet); minimum stage from water-stage recorder, 1.94 feet at 2 p. m. July 15 (discharge, 11 second-feet).

1922–1925: Maximum stage, estimated from hydrograph, 5.1 feet at midnight March 7, 1922 (discharge, not determined); minimum stage recorded, 1.79 feet at 9.30 a. m. August 27, 1923 (discharge, 4 second-feet).

ICE.—Stage-discharge relation rarely affected by ice.

DIVERSIONS.—Small turbine takes water from the pond above the dam for operation of a pump. This turbine is operating continuously and uses about 2 second-feet. The diversion is included in the following tables of daily and monthly discharge.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 150 second-feet. Gage read to hundredths twice daily to June 18; after that date water-stage recorder used. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

Discharge measurements of North Branch of Raritan River and tailrace on North Branch near Far Hills, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 15	2.42	88	Apr. 15	----------	1.45
May 28	2.16	23.4	May 28	----------	2.04

Daily discharge, in second-feet, of North Branch of Raritan River near Far Hills, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June	July	Aug.	Sept.
1	75	12	15	12	12	102	62	43	24	27	244	16
2	30	12	14	12	12	140	62	41	23	21	81	15
3	25	12	12	12	12	97	59	36	22	17	71	15
4	25	12	12	12	12	102	52	32	21	15	55	18
5	22	12	12	12	12	102	49	30	19	18	52	18
6	19	12	106	12	12	106	49	30	18	17	49	16
7	19	12	40	12	12	93	47	30	17	14	47	63
8	21	12	28	12	12	89	41	29	17	14	45	28
9	19	12	59	12	16	89	41	28	18	17	49	20
10	18	12	27	12	21	81	41	28	18	20	78	18
11	17	12	25	12		78	62	65	17	19	43	18
12	16	12	21	12		89	43	62	16	14	29	17
13	16	12	23	15		81	38	43	16	13	32	18
14	15	12	22	15	170	81	38	32	16	12	36	28
15	15	12	19	12		65	97	30	16	11	28	21
16	15	12	18	12		59	62	28	45	67	26	68
17	15	12	18	16	110	75	45	41	21	118	24	76
18	15	12	21	16	97	81	45	30	18	28	24	32
19	15	12	21	16	97	349	47	28	16	21	24	25
20	15	12	21	16	93	106	43	25	15	18	23	21
21	15	12	16	16	93	89	41	25	16	18	24	19
22	12	28	12	16	131	89	41	24	15	28	26	18
23	12	41	12	16	140	75	40	23	14	30	24	16
24	12	23	19	12	136	75	40	27	13	20	20	17
25	12	18	21	12	136	71	40	62	18	19	20	16
26	12	14	18	12	349	68	40	38	21	47	19	15
27	12	12	16	12	122	65	36	30	16	45	18	15
28	12	12	15	12	102	106	34	28	15	28	17	16
29	12	14	14	12	-------	68	36	26	53	28	16	15
30	12	15	12	12	-------	81	38	34	59	18	16	14
31	12	-------	12	12	-------	68	-------	27	-------	89	16	-----

NOTE.—Discharge Feb. 11–16, July 31, and Aug. 1, estimated, based on study of gage-height graph and comparison with record of Whippany River at Morristown.

Monthly discharge of North Branch of Raritan River near Far Hills, N. J., for the year ending September 30, 1925

[Drainage area, 26 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	75	12	18.1	0.696	0.80
November	41	12	14.3	.550	.61
December	106	12	22.6	.869	1.00
January	16	12	13.1	.504	.58
February	----------	12	98.5	3.79	3.95
March	349	59	94.2	3.62	4.17
April	97	34	47.0	1.81	2.02
May	65	23	34.0	1.31	1.51
June	59	13	21.1	.812	.91
July	118	11	28.1	1.08	1.24
August	244	16	41.2	1.58	1.82
September	76	14	23.7	.912	1.02
The year	----------	11	37.6	1.45	19.63

NORTH BRANCH OF RARITAN RIVER AT MILLTOWN, N. J.

LOCATION.—At Milltown, Somerset County, 1½ miles above junction of North and South Branches of Raritan River.

DRAINAGE AREA.—190 square miles (measured on State topographic map).

RECORDS AVAILABLE.—June 14, 1923, to September 30, 1925.

GAGE.—Inclined staff on right bank 300 feet above highway bridge at Milltown; read by Joseph Van Fleet.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Channel, clay and fine gravel. Control is remains of foundation of an old dam.

EXTREMES OF DISCHARGE.—Maximum stage during year, 9.00 feet (from floodmarks) at 4 a. m. February 12 (discharge uncertain as stage-discharge relation was affected by ice); minimum stage recorded, 1.95 feet at 9 a. m. December 2 (discharge, about 22 second-feet).

1922–1925: Maximum stage, 9.5 feet (from floodmarks) at 1 a. m. April 7, 1924 (discharge not determined); minimum stage recorded, 1.95 feet at 9 a. m. December 2, 1924 (discharge, about 22 second-feet).

REGULATION.—Slight diurnal fluctuation due to small water powers upstream.

ICE.—Stage-discharge relation affected by ice.

ACCURACY.—Stage-discharge relation permanent except as affected by ice. Rating curve well defined between 30 and 1,600 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

Discharge measurements of North Branch of Raritan River at Milltown, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 19	[a] 2.47	102	Mar. 24	2.97	349	Sept. 9	2.41	99
Mar. 16	2.82	280	Apr. 24	2.63	181			

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of North Branch of Raritan River at Milltown, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	845	61	56	56	110	630	349	205	105	112	3,060	69
2	342	61	44	52	120	890	356	180	98	115	550	54
3	284	60	52	47	120	445	356	153	92	95	410	50
4	272	56	69	95	120	550	310	153	79	65	329	67
5	210	58	77	112	100	515	336	162	72	77	316	50
6	170	63	755	95	120	630	232	128	69	69	342	50
7	149	63	166	87	130	630	226	128	65	61	272	210
8	136	60	190	82	140	590	205	121	65	46	162	132
9	105	67	480	69	190	550	180	118	65	58	215	102
10	95	61	157	67	400	480	175	118	72	85	590	90
11	82	61	157	74		445	232	180	65	121	261	108
12	82	61	145	67		480	220	329	60	61	226	77
13	77	65	153	72		376	205	220	56	54	175	90
14	72	60	145	63		376	190	180	60	44	180	170
15	74	60	65	60	2,300	342	590	166	61	47	157	108
16	72	60	95	65		297	396	149	136	46	136	990
17	72	34	118	118		323	284	149	102	180	128	940
18	67	37	118	149	845	480	249	128	69	136	121	278
19	69	35	108	100	890	4,520	232	125	77	105	115	210
20	69	49	98	100	845	800	180	108	58	108	108	170
21	63	47	58	100	800	590	195	105	56	92	115	149
22	58	85	67	90	1,290	515	200	95	58	95	115	118
23	58	215	56	90	1,400	445	190	92	54	136	98	102
24	63	125	69	90	1,400	390	185	128	47	87	92	102
25	61	121	284	110	1,040	383	166	376	58	92	87	92
26	61	108	87	100	3,760	336	175	215	90	291	85	79
27	61	79	95	110	1,190	310	145	185	67	445	79	79
28	60	69	61	120	590	670	145	145	61	162	69	87
29	61	72	58	110	-------	356	157	128	118	445	69	82
30	63	56	60	120	-------	480	162	141	261	180	67	79
31	60	-------	65	120	-------	383	-------	115	-------	149	69	-------

NOTE.—Stage-discharge relation affected by ice Jan. 19 to Feb. 17; discharge based on study of 1 discharge measurement, weather records, gage-height graph, and comparison with flow at Manville.

Monthly discharge of North Branch of Raritan River at Milltown, N. J., for the year ending September 30, 1925

[Drainage area, 190 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	845	58	129	0.679	0.78
November	215	34	70.3	.370	.41
December	755	44	136	.716	.83
January	149	47	90.0	.474	.55
February	----------	100	1,130	5.95	6.20
March	4,520	310	620	3.26	3.76
April	590	145	241	1.27	1.42
May	376	92	159	.837	.96
June	261	47	79.8	.420	.47
July	445	44	124	.653	.75
August	3,060	67	284	1.49	1.72
September	990	50	166	.874	.98
The year	----------	34	264	1.39	18.83

BLACK RIVER NEAR POTTERSVILLE, N. J.

LOCATION.—1 mile above highway bridge and former gaging station at Pottersville, Somerset County, and 8 miles above mouth of Rockaway Creek.

DRAINAGE AREA.—33 square miles (measured on State topographic map).

RECORDS AVAILABLE.—June 27, 1922, to September 30, 1925, and at Pottersville 1 mile downstream November 8, 1921, to June 30, 1922.

GAGE.—Water-stage recorder on right bank, operated by Theo. Bush.

DISCHARGE MEASUREMENTS.—Made by wading or from highway bridge 1 mile downstream.

CHANNEL AND CONTROL.—Gravel and boulders very rough. Control is riffle of boulders just below gage; probably permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 3.45 feet at 7.30 p. m. July 31 (discharge, about 680 second-feet); minimum stage recorded, 0.84 foot at 3.30 p. m. June 22 (discharge, 5.3 second-feet).

1921–1925: Maximum stage recorded, 3.76 feet at noon July 1, 1922 (discharge, about 880 second-feet); minimum stage, 0.79 foot at 6 a. m. August 4, 1924 (discharge, 4 second-feet).

ICE.—Stage-discharge relation affected by ice.

REGULATION.—Daily fluctuations occasionally caused by operations at small mills upstream.

ACCURACY.—Stage-discharge relation probably permanent, except when affected by ice. Rating curve well defined below 200 second-feet. Operation of water-stage recorder generally satisfactory. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

The following discharge measurements were made:

February 2, 1925: Gage height, 1.19 feet; discharge, 19.0 second-feet.

February 17, 1925: Gage height, 2.20 feet; discharge, 168 second-feet.

July 10, 1925: Gage height, 1.23 feet; discharge, 23.1 second-feet.

Daily discharge, in second-feet, of Black River near Pottersville, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	136	17	18		18	136	86	43	29	37	164	15
2	112	16	18		19	136	81	45	26	34	106	15
3	104	16	17		20	124	75	43	24	24	98	15
4	97	16	16		19	124	67	40	23	19	91	17
5	80	16	26	17	19	124	61	35	21	19	80	17
6	63	16	70		19	124	57	32	19	18	67	16
7	45	15	60		21	122	54	30	18	17	51	40
8	32	15	55		25	118	53	29	17	16	40	30
9	25	15	70		29	114	50	27	17	16	52	27
10	22	15	54	17	162	108	49	26	20	19	57	26
11	19	15	44	16	279	104	48	63	19	19	43	24
12	18	15	36	16	345	106	80	70	17	17	37	20
13	18	15		16	224	95		61	15	15	39	20
14	17	15			170	90	75	57	15	13	38	27
15	17				183	86	85	48	16	12	33	24
16	17		26	20	196	85	81	37	31	48	30	63
17	17	14			170	88	70	38	25	55	30	74
18	16				147	88	66	39	24	48	28	54
19	16				136	126	60	35	19	49	25	48
20	16		24	23	136	126	54	29	17	46	23	44
21	15	14	24	22	126	118	48	26	16	39	23	39
22	15	34	26	20		114	45	24	16	38	23	30
23	15	40	41	19		102	43	23	12	37	23	24
24	15	40	42	19		93	41	51	14	34	22	20
25	16	38	38	22	160	81	38	73	18	32	20	19
26	17	34	28	20		73	38	63	18	51	19	17
27	17	26	20	20		69	37	60	17	63	18	17
28	18	20	16	20	126	97	35	57	28	48	17	17
29	19	18	16	20	-------	93	35	45	46	48	17	17
30	18	18	17	21	-------	93	38	37	45	37	16	17
21	17	-------	17	22	-------	91	------	33	------	138	16	------

NOTE.—Discharge Nov. 15-20, Dec. 13-19, Feb. 22-27, Apr. 12, 13, when recorder was not operating and Dec. 21, 22, 29-31, Jan. 1-9, 14-19, when stage-discharge relation was affected by ice, determined from study of gage-height graph, weather records, and comparison with records of near-by streams.

Monthly discharge of Black River near Pottersville, N. J., for the year ending September 30, 1925

[Drainage area, 33 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	136	15	34.5	1.05	1.21
November	40	14	19.4	.588	.66
December	70	16	31.5	.955	1.10
January	----------	----------	18.9	.573	.66
February	345	18	127	3.85	4.01
March	136	69	105	3.18	3.67
April	86	35	57.7	1.75	1.95
May	73	23	42.5	1.29	1.49
June	46	12	21.4	.648	.72
July	138	12	35.7	1.08	1.24
August	164	16	43.4	1.32	1.52
September	74	15	27.8	.842	.94
The year	345	12	46.5	1.41	19.17

MILLSTONE RIVER AT BLACKWELLS MILLS, N. J.

LOCATION.—At highway bridge in Blackwells Mills, Somerset County, one-quarter mile below mouth of Middlebrush Brook, 1¾ miles above Millstone, and 5 miles above mouth of Millstone River.

DRAINAGE AREA.—258 square miles (measured on State topographic map).

RECORDS AVAILABLE.—August 4, 1921, to September 30, 1925. A station was maintained at Millstone 1¾ miles downstream from June 28, 1903, to December 31, 1904, and from June 7, 1912, to April 30, 1915 (unpublished record of gage height only).

GAGE.—Vertical staff in two sections on downstream side of left bridge abutment; read by Alex Barna.

DISCHARGE MEASUREMENTS.—Made by wading 200 feet downstream from gage or from highway bridge at Millstone.

CHANNEL AND CONTROL.—Channel clay. Banks are overflowed at high stages. Control is foundation of old stone and timber dam 100 feet downstream from gage, gradually disintegrating.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 10.05 feet at 6 a. m. February 12 (discharge, about 5,400 second-feet); minimum stage uncertain as the water level was below gage September 14 and 15 (discharge, estimated 20 second-feet).

1921–1925: Maximum stage estimated from hydrograph, 11.00 feet at 9 a. m. April 7, 1924 (discharge, about 6,200 second-feet); minimum stage recorded, 0.0 foot all day September 16, 1923 (discharge, about 5 second-feet).

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—The Delaware and Raritan Canal takes water from Delaware River and flows northeastward to Raritan River. It passes along right bank of Millstone River for 15 miles above gaging station and for 5 miles below. Canal is above river at all points and loses water to river by leakage, seepage, and by discharge from spillways.

REGULATIONS.—Carnegie Lake and several small mills above gage slightly affect distribution of flow.

ACCURACY.—Stage-discharge relation not permanent. Base rating table fairly well defined, variable correction for shifting control determined from periodic discharge measurements. Daily discharge ascertained by applying corrected mean daily gage height to base rating. Records fair.

Discharge measurements of Millstone River at Blackwells Mills, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 9	1.53	201	Mar. 4	2.69	743	July 20	0.82	68
Nov. 13	1.20	89	Apr. 9	1.60	226	Aug. 26	.50	42.7
Dec. 15	*2.48	102	May 18	1.32	146			
Jan. 9	1.13	93	June 19	1.15	109			

* Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Millstone River at Blackwells Mills, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June	July	Aug.	Sept.
----------	2,270	100	120	83	298	1,050	389	298	141	124	279	43
----------	662	102	105	85	279	2,750	389	260	141	91	341	68
3----------	552	95	93	113	298	1,680	416	226	139	76	185	62
4----------	416	91	118	109	320	820	341	196	137	78	45	90
5----------	320	103	243	107	298	524	341	191	132	95	85	128
6----------	260	111	552	120	298	497	298	185	124	118	113	120
7----------	226	109	279	111	298	497	298	172	116	76	36	226
8----------	226	103	196	128	497	497	226	164	109	80	32	196
9----------	226	93	298	98	955	497	226	164	107	120	44	43
10----------	191	93	226	85	2,570	365	226	159	118	128	128	32
11----------	174	91	185	82	4,610	320	442	226	105	141	116	38
12----------	150	96	157	85	5,100	298	341	470	102	109	91	28
13----------	150	93	147	98	3,630	260	298	279	109	87	82	25
14----------	145	98	120	96	1,730	260	243	226	109	75	88	20
15----------	143	96	110	109	1,480	243	1,050	196	111	91	64	20
16----------	139	103	114	85	1,530	243	580	174	114	98	55	71
17----------	139	91	120	137	1,170	298	416	159	122	102	80	164
18----------	134	90	120	298	910	497	341	152	111	98	61	162
19----------	126	85	107	279	772	1,050	320	150	109	66	70	145
20----------	122	90	102	211	1,000	865	298	145	95	67	62	91
21----------	118	96	91	130	607	580	260	150	93	68	61	100
22----------	120	128	87	100	865	497	226	145	80	76	51	71
23----------	116	211	85	85	1,000	442	226	145	83	68	47	67
24----------	111	172	145	80	865	298	211	134	85	73	61	50
25----------	107	172	524	78	634	167	211	180	96	105	58	55
26----------	111	141	389	103	634	279	193	211	91	150	62	75
27----------	118	116	167	126	580	524	191	180	83	177	43	62
28----------	102	102	152	143	341	662	182	155	71	145	55	67
29----------	107	105	103	226	-------	552	211	152	109	120	63	55
30----------	102	109	91	279	-------	497	260	182	141	98	42	65
31----------	105	-------	78	298	-------	497	-------	164	-------	128	31	------

NOTE.—Discharge computed by indirect method Oct. 12 to Mar. 27, when below 600 second-feet, based on monthly discharge measurements and study of comparison with flow of Lawrence Brook at Patricks Corner. Stage-discharge relation affected by ice Dec. 14, 15, and Jan. 21–24, gage-height record missing Sept. 14 and 15; discharge for these periods estimated on basis of weather records, gage-height graph, and comparison with flow of Lawrence Brook.

Monthly discharge of Millstone River at Blackwells Mills, N. J., for the year ending September 30, 1925

Month	Discharge in second-feet			Month	Discharge in second-feet		
	Maximum	Minimum	Mean		Maximum	Minimum	Mean
October----------	2,270	102	258	May----------	470	134	193
November----------	211	85	110	June----------	141	71	109
December----------	552	78	175	July----------	177	66	101
January----------	298	78	134	August----------	341	31	84.9
February----------	5,100	279	1,200	September----------	226	20	81.3
March----------	2,750	167	597				
April----------	1,050	182	322	The year----------	5,100	20	274

NOTE.—Because of leakage, seepage, and waste water from the Delaware and Raritan Canal, this record does not represent the natural flow from the basin.

GREEN BROOK AT BOUNDBROOK, N. J.

LOCATION.—Near State highway bridge at Boundbrook, Middlesex County, half a mile above mouth.

DRAINAGE AREA.—49 square miles (measured on State topographic map).

RECORDS AVAILABLE.—June 12, 1923, to September 30, 1925.

GAGE.—Vertical staff fastened to willow tree on left bank 300 feet below bridge; read by Joseph Efinger.

DISCHARGE MEASUREMENTS.—Made by wading or from bridge.

CHANNEL AND CONTROL.—Channel, sand and fine gravel. Control is riffle of gravel 200 feet below gage; not permanent; affected by growth of grass during summer.

DIVERSIONS.—Green Brook receives the sewage of Plainfield about 3 miles upstream. A well field of the Elizabethtown Water Co., Consolidated, is located along stream just above station; a well field of Middlesex Water Co. and a second field of the Elizabethtown Water Co., Consolidated, are also located in the drainage area above station.

REGULATION.—Daily distribution of flow slightly affected by water power above gage.

ACCURACY.—Stage-discharge relation not permanent. Base rating curve for indirect determination of discharge not well defined. Gage read to hundredths twice daily. Daily discharge ascertained by applying effective mean daily gage height to rating table, corrections for obtaining effective gage height determined by comparing periodic discharge measurement with base rating. Daily discharge not published for current year. Records fair.

Discharge measurements of Green Brook at Boundbrook, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 14	1.14	27.1	Feb. 10	2.81	195	June 22	0.97	10.0
Nov. 13	1.12	26.2	Feb. 11	4.76	466	July 6	.92	11.0
Dec. 16	1.24	40.8	Mar. 16	1.30	51	July 20	.91	10.7
Jan. 22	1.38	57	Apr. 23	1.28	52	Aug. 26	.94	14.0
Jan. 29	1.05	23.4	May 28	1.06	20.8	Sept. 17	1.49	47.2

Monthly discharge of Green Brook at Boundbrook, N. J., for the year ending September 30, 1925

[Drainage area, 49 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October		24	47.7	0.973	1.12
November	32	18	24.4	.498	.56
December	75	26	42.6	.869	1.00
January		38	42.2	.861	.99
February		35	182	3.71	3.86
March	455	48	103	2.10	2.42
April	140	38	59.3	1.21	1.35
May	79	20	39.5	.806	.93
June	42	11	23.2	.473	.53
July	26	10	16.5	.337	.39
August	268	11	32.7	.667	.77
September	59	12	21.9	.447	.50
The year		10	52.1	1.06	14.42

NOTE.—No correction made for Plainfield sewage or for water diverted through the various well fields in the basin.

LAWRENCE BROOK AT PATRICKS CORNER, N. J.

LOCATION.—Near highway bridge at Patricks Corner, Middlesex County, 3 miles southwest of Milltown, seven-eighths mile above Beaver Brook Dam, and 6¼ miles above mouth.

DRAINAGE AREA.—29 square miles (measured on State topographic map).

RECORDS AVAILABLE.—June 21, 1922, to September 30, 1925.

GAGE.—Water-stage recorder on right bank 150 feet above highway bridge; inspected by Henry Patrick.

DISCHARGE MEASUREMENTS.—Made by wading or from highway bridge.

CHANNEL AND CONTROL.—Banks high. Channel fairly straight. Control is sill of old wooden dam.

During June, 1925, a concrete control was erected on site of natural control; 5.02 feet of the crest of the control are at elevation of gage height 1.99 feet and the remaining 19.95 feet are at elevation of gage height 2.47 feet. The top of the wing walls are at elevation of gage height 4.00 feet. This control is submerged and a channel control becomes effective at very high stages.

EXTREMES OF DISCHARGE.—Maximum stage during year from water-stage recorder 6.57 feet at 11 p. m. February 11 (discharge, about 880 second-feet); minimum stage, 2.17 feet several times in June (discharge, 1.0 second-foot).

1922–1925: Maximum stage, from watermark, 8.70 feet at 3 a. m. April 7, 1924 (discharge uncertain, stage-discharge relation was affected by brush jam below gage); minimum stage recorded, 1.10 feet at 8 a. m. August 27, 1923 (discharge, 0.4 second-feet, stage-discharge relation affected by grass on control).

ICE.—Stage-discharge relation occasionally affected by ice.

REGULATION.—Distribution of flow affected by water power above station.

ACCURACY.—Stage-discharge relation permanent except when affected by grass and brush in channel. Rating curves well defined. Operation of recorder satisfactory. Daily discharge ascertained by use of discharge integrator on recorder charts. Records probably fair until erection of concrete control in June, after which records are good.

Discharge measurements of Lawrence Brook at Patricks Corner, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 9	1.82	26.5	Mar. 3	3.11	81	June 22	2.586	10.0
Jan. 23	[a]2.12	26.6	Mar. 16	1.69	23.5	Aug. 24	2.64	12.4
Feb. 11	5.22	351	Mar. 31	2.41	45.9	Aug. 26	2.407	4.01
Do	5.42	401	Apr. 13	2.00	29.8	Do	2.462	5.31
Feb. 12	5.70	501	May 18	1.60	15.0	Sept. 13	2.247	1.60
Do	5.51	448	June 12	[b]2.675	15.1	Sept. 15	2.595	10.2
Mar. 3	3.20	87	June 13	2.182	1.19			

[a] Stage-discharge relation affected by ice.
[b] First measurement made after completion of concrete control.

Daily discharge, in second-feet, of Lawrence Brook at Patricks Corner, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	194	6	25	10		80	30	34		5.8	10	7.6
2	45	2	7	11		220	31	25		6.9	6.8	6.5
3	35	7	7	9.2	16	98	30	17		6.0	6.4	6.1
4	14	7	9	11		39	23	20		1.7	5.4	6.6
5	10	7	13	12		35	20	16		2.0	5.3	3.2
6	15	9	86	13	18	35	21	15	8	6.6	5.3	1.9
7	12	6	50	10	29	36	19	15		7.0	5.2	4.7
8	15	6	30	11	48	33	16	13		8.4	5.3	7.0
9	15	2	60	10	78	30	15	9		6.8	6.0	6.4
10	13	7	32	12	294	27	21	10		8.8	23	6.8
11	9	9	15	11	497	26	60	26		5.5	6.5	5.5
12	4	7	17	13	496	26	33	47	8.4	1.9	5.0	3.3
13	7	7	14	12	210	24	28	26	8.7	6.5	3.4	2.1
14	11	7	11	12	114	24	22	18	1.7	5.2	4.7	5.7
15	12	3	20	12	112	20	81	17	7.2	2.6	4.8	10
16	9	2	10	12	125	21	49	13	8.0	6.0	3.5	15
17	11	5	11	24	91	30	30	9	7.2	6.5	5.0	15
18	8	9	12	28	71	44	26	14	7.1	3.8	4.7	7.3
19	2	7	11	25	55	85	21	12	5.9	1.5	5.3	6.0
20	12	6	11		54	54	27	11	1.9	5.9	7.5	3.1
21	11	7	9	15	48	34	19	10	1.1	6.2	9.7	3.9
22	9	17	8		51	25	18		5.5	4.0	11	5.5
23	7	24	8		57	26	18		7.3	2.1	7.2	5.0
24	6	30	27		53	21	13		3.9	3.1	8.6	7.2
25	5	22	52	12	40	20	12		1.9	3.4	8.5	6.8
26	2	7	32	15	74	19	11	12	3.4	3.6	8.0	6.9
27	7	8	26		52	21	16		2.3	5.1	7.2	2.4
28	8	12	11		44	85	14		1.2	2.7	6.1	3.5
29	7	14	11	16	-------	49	20		3.5	3.2	4.7	3.1
30	8	26	10		-------	45	25		6.0	3.9	1.9	3.1
31	6	-------	11		-------	42	-------		-------	7.1	4.9	-------

NOTE.—Stage-discharge relation affected by ice Jan. 14, 15, 20–24, 27–31, and Feb. 1–5; discharge estimated based on study of gage-height graph, weather records, and comparison with hydrograph of Whippany River at Morristown. Discharge Dec. 7–9, 26, 27, May 22–31, and June 1–11, estimated by studying comparison with flow of Whippany River at Morristown. May 22 to June 11 obstruction in channel was due to construction of concrete control.

Monthly discharge of Lawrence Brook at Patricks Corner, N. J., for the year ending September 30, 1925

[Drainage area, 29 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	194	2	17.1	0.590	0.68
November	30	2	9.60	.331	.37
December	----------	7	21.2	.731	.84
January	28	9.2	14.2	.490	.56
February	497	----------	99.7	3.44	3.58
March	220	19	44.3	1.53	1.76
April	81	11	25.6	.883	.98
May	47	----- -----	16.0	.552	.64
June	----------	1.1	6.01	.207	.23
July	8.8	1.5	4.83	.167	.19
August	23	1.9	6.67	.230	.27
September	15	1.9	5.91	.204	.23
The year	497	1.1	22.1	.762	10.33

NAVESINK RIVER BASIN

SWIMMING RIVER NEAR RED BANK, N. J.

LOCATION.—At dam of Tintern Manor Water Co., 3 miles above mouth of Swimming River at Red Bank, Monmouth County.

DRAINAGE AREA.—48 square miles (measured on State topographic map).

RECORDS AVAILABLE.—July 28, 1922, to September 30, 1925.

GAGE.—Water-stage recorder on right bank 100 feet above end of dam; operated by employees of Tintern Manor Water Co.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CONTROL.—Dam of stone and concrete, with spillway 148 feet long. In cross section the spillway has a flat top 7 feet wide with downstream edge 1 foot higher than upstream. Some times sandbags are placed on the spillway during the summer. There are two 36-inch "blow-off" sluice gates at dam and one 18-inch "blow-off" sluice gate at pumping station.

DETERMINATION OF DISCHARGE.—Discharge over spillway and through all sluice gates determined from rating curves based on current-meter measurements. Diversion measured by piston displacement method.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 1.87 feet at midnight February 10 (discharge, 600 second-feet, sluice gates were partly open).

1922–1925: Maximum stage from water-stage recorder, 3.05 feet at 9.30 p. m. February 20, 1924 (discharge, about 2,000 second-feet).

DIVERSIONS.—Water diverted from dam to Newman Springs pumping station of the Tintern Manor Water Co. for the periods October to January and May to September. This diversion is included in monthly table of discharge.

STORAGE.—Flow is slightly affected by storage in reservoir. Monthly table corrected for this by use of an approximate capacity curve.

ACCURACY.—Unobstructed spillway rating permanent; for period when spillway was obstructed by sandbags, obstructed spillway rating was permanent. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying mean daily gage height to proper rating table, except that on days of considerable fluctuation discharge for intervals of the day were averaged. The storage correction is so small that possible errors in the capacity curve will not affect the total results. Records good.

COOPERATION.—Station maintained in cooperation with Tintern Manor Water Co.

Discharge measurements on Swimming River near Red Bank, N. J., during the year ending September 30, 1925

Flow over spillway			Flow through two 36-inch sluice gates		
Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec. ft.*
Oct. 10	[c]1.212	29.8	Jan. 7	[b]0.88	20.6
Nov. 11	[c]1.100	27.6	Mar. 31	[b]1.044	46.4
Do	1.098	27.2	Apr. 13	[d]—1.90	47.0
Nov. 12	1.030	28.3			
Feb. 10	[b]1.769	476			
June 12	.95	10.9			
Sept. 19	.985	20.4			
Sept. 28	.968	13.8			

[c] 88 feet of the left end of spillway obstructed by sandbags.
[b] Sluice gates partly open.
[c] 44.8 feet of left end of spillway obstructed by sandbags.
[d] Sluice gates wide open.

Daily discharge, in second-feet, of Swimming River near Red Bank, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	95	28	34	30		64	74	59	28	26	321	12
2	58	30	26	29		218	82	52	26	18	90	9
3	45	28	31	25		71	74	48	20	16	45	11
4	41	30	31	41	94	70	67	41	20	16	34	12
5	39	30	39	39		67	61	41	18	18	34	11
6	37	31	122	36		70	58	38	16	16	41	9
7	35	33	67	29	147	67	56	38	16	16	34	48
8	35	33	55	38	204	63	54	38	16	28	28	34
9	33	31	45	33	250	60	53	34	18	28	34	20
10	31	36	38	32	496	56	53	38	18	31	31	18
11	30	32	46	37	406	53	53	48	14	88	23	16
12	31	31	38	34	365	53	53	59	12	26	20	16
13	30	31	41	40	177	50	53	45	14	18	20	14
14	28	31	37	32	107	50	56	38	14	16	28	16
15	28	28	24	30	94	45	67	38	16	16	23	18
16	30	26	41	34	98	45	77	38	27	18	20	31
17	30	20	42	60	86	54	74	38	20	40	18	31
18	28	20	42	99	75	89	70	37	16	23	18	20
19	28	26	39	70	64	81	67	36	12		18	18
20	28	28	37	61	68	74	64	32	12		16	16
21	28	28	28	113	68	55	62	28	11	45	23	16
22	26	58	26	99	61	49	60	23	11		28	14
23	28	140	24	59	68	49	58	23	14		23	14
24	30	55	45	38	68	44	57	26	9		23	16
25	28	41	88	47	61	47	56	82	12	28	18	16
26	28	34	36	50	71	47	55	45	16	75	16	12
27	28	31	36	65	64	44	54	31	11	55	14	12
28	30	31	32	37	46	62	26	28	27	31	12	12
29	28	38	24	61	-------	52	0	31	38	26	11	12
30	28	45	29	250	-------	52	3	55	64	20	12	14
31	26	-------	32	251	-------	52	---	38	-------	42	11	-----

NOTE.—Discharge includes flow over spillway and through all sluice gates. Dam was partly obstructed by sandbags Oct. 1 to Nov. 9, sluice gates were partly open Dec. 11 to Apr. 28 and May 18–20; corrections made for these conditions. Discharge was estimated because of no gage-height record Feb. 1–6, Apr. 5–14, 20–28, July 19–24 on basis of discharge measurement, study of precipitation record, and hydrograph

Monthly discharge of Swimming River near Red Bank, N. J., for the year ending September 30, 1925

[Drainage area, 48 square miles]

Month	Discharge in second-feet					Run-off in inches
	Observed			Corrected for storage and diversions		
	Maximum	Minimum	Mean	Mean	Per square mile	
October	95	26	33.8	39.9	0.831	0.96
November	140	20	36.1	42.0	.875	.98
December	122	24	41.1	43.1	.898	1.04
January	251	25	61.3	62.3	1.30	1.50
February	496	46	132	132	2.75	2.86
March	218	44	63.0	62.9	1.31	1.51
April	82	0	56.6	56.6	1.18	1.32
May	82	23	40.2	43.2	.900	1.04
June	64	9	18.9	29.6	.617	.69
July	-------	16	32.4	42.8	.892	1.03
August	321	11	35.1	42.8	.892	1.03
September	48	9	17.3	24.6	.512	.57
The year	496	0	46.8	51.3	1.07	14.53

ABSECON CREEK BASIN

ABSECON CREEK AT ABSECON, N. J.

LOCATION.—At dam of Atlantic City Water Department, 1 mile west of Absecon, Atlantic County, and 3 miles above mouth.

DRAINAGE AREA.—16.6 square miles (measured on State topographic map).

RECORDS AVAILABLE.—December 1, 1923, to September 30, 1925.

DETERMINATION OF DISCHARGE.—Discharge is computed by adding the flow over spillway of the reservoir, the flow through a 42-inch wood-stave pipe line 9,930 feet long through which water flows by gravity from the reservoir to the pumping station and an estimated flow that is diverted to a duck farm on left bank of the creek just below the weir. Correction for gain or loss in storage in the reservoir is made to the monthly discharge in order to derive the natural flow. The discharge over the spillway is determined from the record made by a water-stage recorder at right end of a weir 48.5 feet long and 2.5 feet high with a 2-inch plank crest and located in channel of the creek 30 feet below spillway. The weir is submerged for a few hours each day by high tide, but the periods of submergence are easily recognized from the appearance of the gage-height graph. Discharge through the 42-inch pipe line is determined from the loss of head at a 24-inch gate in the pipe line 100 feet below the intake in the reservoir. The head above the gate is indicated by the elevation of the water surface in the reservoir which is measured by a hook gage in a stilling box near the intake. The head below the 24-inch gate is determined by a water-stage recorder in the caretaker's shelter about 100 feet below the gate. This water-stage recorder is over a 12-inch float tank which is connected with the pipe line by ¾-inch pipe. The two gages are set at the same datum. Corrections for gain or loss in storage are based upon readings of hook gage in reservoir. Gages read and recorders inspected by F. J. Trumbore and J. E. Reilly, employees of the Atlantic City Water Department.

DISCHARGE MEASUREMENTS.—Measurements for rating the weir are made from highway bridge 10 feet below weir or by wading. Discharge measurements for rating pipe line are made with a Pitot tube 150 feet below 24-inch gate.

REGULATION.—Flow is regulated by storage in the reservoir.

ACCURACY.—Records fair.

COOPERATION.—Stations installed and maintained in cooperation with Atlantic City Water Department, Mr. L. Van Gilder, chief engineer.

Measurements of discharge over weir on Absecon Creek at Absecon, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
May 22	2.24	11.5	July 22	2.28	17.2
Do	2.36	29.3	Do	2.28	17.7

Daily discharge, in second-feet, of Absecon Creek at Absecon, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50	27	24	18	28	21	17	18	19	16	20	20
2	48	24	17	15	28	31	17	19	18	15	21	20
3	44	16	14	29	24	26	17	18	17	18	21	20
4	38	16	15	24	21	20	17	19	16	19	21	20
5	35	21	13	34	21	23	17	19	17	18	21	20
6	40	24	26	33	21	23	17	19	19	18	21	19
7	33	19	32	32	21	22	18	20	17	17	22	20
8	28	20	26	28	21	23	18	19	17	15	22	19
9	25	19	23	22	22	23	17	19	16	16	22	19
10	24	20	19	21	22	23	17	19	18	17	23	18
11	24	20	16	22	26	37	18	19	18	19	22	18
12	24	19	16	22	32	46	18	19	17	17	22	18
13	25	19	16	23	32	34	19	19	18	19	22	18
14	21	19	17	23	28	24	18	19	16	18	23	16
15	20	19	14	23	24	21	18	20	18	17	23	16
16	17	21	17	23	25	22	18	19	17	17	23	16
17	16	24	18	23	24	24	18	19	16	17	22	16
18	15	21	20	23	25	27	18	19	17	18	22	16
19	18	17	21	23	24	24	17	19	16	18	21	17
20	20	16	18	28	24	21	18	19	17	19	21	16
21	21	18	16	34	23	20	18	19	16	19	19	16
22	21	22	16	32	22	19	18	21	17	19	20	16
23	19	34	17	31	23	20	19	18	16	18	20	14
24	20	36	24	26	23	18	18	17	18	19	20	14
25	21	36	31	25	22	16	18	18	15	20	20	16
26	20	30	33	26	22	16	18	18	17	18	20	16
27	21	22	26	24	22	16	19	19	17	19	20	14
28	21	23	20	19	21	16	18	18	14	18	21	15
29	21	23	18	17	------	16	18	17	17	18	21	15
30	23	23	22	22	------	16	19	19	15	18	20	14
31	27	------	23	26	------	16	------	19	------	16	20	------

NOTE.—This table indicates the flow over weir, through pipe line and 0.3 second-foot diverted to duck farm. The discharge through pipe line Feb. 21 to Mar. 4 when upper gage on pipe line was not working properly, was estimated on basis of loss of head between reservoir and a gage on the lower end of the pipe line.

Monthly discharge of Absecon Creek at Absecon, N. J., for the year ending September 30, 1925

[Drainage area, 16.6 square miles]

Month	Discharge in second-feet					Run-off in inches
	Observed[a]			Corrected for storage		
	Maximum	Minimum	Mean	Mean	Per square mile	
October	50	15	25.8	21.5	1.30	1.50
November	36	16	22.3	22.4	1.35	1.51
December	33	13	20.3	21.9	1.32	1.52
January	34	15	24.9	26.5	1.60	1.84
February	32	21	24.0	22.9	1.38	1.44
March	46	16	22.7	22.1	1.33	1.53
April	19	17	17.8	20.3	1.22	1.36
May	21	17	18.8	18.4	1.11	1.28
June	19	14	16.9	15.1	.910	1.02
July	20	15	17.7	18.6	1.12	1.29
August	23	19	21.2	21.8	1.31	1.51
September	20	14	17.1	15.2	.916	1.02
The year	50	13	20.8	20.6	1.24	16.82

[a] Discharge over weir, through pipe line, and to duck farm.

DELAWARE RIVER BASIN

EAST BRANCH OF DELAWARE RIVER AT FISHS EDDY, N. Y.

LOCATION.—At railroad bridge in Fishs Eddy, Delaware County, 4 miles below mouth of Beaver Kill and 5½ miles above confluence of East and West Branches.

DRAINAGE AREA.—785 square miles (measured on topographic maps).

RECORDS AVAILABLE.—November 19, 1912, to September 30, 1925.

GAGE.—Staff in two sections at downstream end of left pier of bridge, the lower inclined, the upper vertical; read by F. J. McMorris.

DISCHARGE MEASUREMENTS.—Made from highway bridge 200 feet above gage or by wading.

CHANNEL AND CONTROL.—Coarse gravel; occasionally shifting.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 15.7 feet at 9 a. m. October 1 (discharge, about 30,300 second-feet); minimum stage, 1.72 feet at 9 a. m. November 18 (discharge, 97 second-feet).

1912–1925: Maximum stage recorded, about 19.0 feet during night of September 30, 1924, determined from floodmarks (discharge, about 45,000 second-feet); minimum stage, 1.64 feet at 5 p. m. October 12, 14, and 15, 1914 (discharge, 97 second-feet). A minimum discharge of 97 second-feet also occurred during current year.

ICE.—Stage-discharge relation seriously affected by ice.

ACCURACY.—Stage-discharge relation changed presumably at time of flood on February 12. Rating curve used before the change fairly well defined between 150 and 20,000 second-feet; that used subsequently fairly well defined between 200 and 20,000 second-feet. Stage-discharge relation affected by ice and backwater from gravel deposit and eel weir during portions of year. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table, except for days of great range in stage, when discharge is averaged for intervals of day. Records good except for periods of ice effect and backwater from gravel deposit and eel weir, for which they are fair.

Discharge measurements of East Branch of Delaware River at Fishs Eddy, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 7	4.29	1,700	Mar. 15	5.65	3,320	May 27	3.35	962
Nov. 19	2.23	243	Apr. 17	4.20	1,680	July 18	2.50	419
Jan. 15	[a]4.44	341	May 4	4.28	1,760	Aug. 5	[b]3.10	468

[a] Stage-discharge relation affected by ice.
[b] Stage-discharge relation affected by backwater from gravel bar.

Daily discharge, in second-feet, of East Branch of Delaware River at Fishs Eddy, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26,200	269	758	500	260	2,200	3,380	2,090	760	343	800	220
2	8,550	277	665	500	280	2,000	3,000	1,980	700	323	700	220
3	4,690	269	600	440	260	1,900	3,250	1,880	860	303	600	260
4	3,190	261	550	460	260	1,800	3,250	1,780	730	284	550	280
5	2,450	246	460	460	240	1,700	3,120	1,780	640	364	500	280
6	2,000	242	790	420	280	1,600	3,000	1,580	585	364	500	240
7	1,580	239	900	420	320	1,880	2,640	1,580	530	323	550	440
8	1,380	228	980	400	420	1,980	2,420	1,480	505	303	480	550
9	1,200	224	2,220	400	600	1,980	2,090	1,300	530	323	480	360
10	1,020	224	1,890	400	3,600	1,880	1,980	1,300	558	455	1,400	300

Daily discharge, in second-feet, of East Branch of Delaware River at Fishs Eddy, N. Y., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	900	218	1,480	380	16,800	1,980	2,200	2,090	480	530	850	300
12	790	218	1,340	400	18,600	2,420	1,780	2,880	455	408	600	500
13	695	214	1,290	380	10,400	2,200	1,680	2,310	408	343	550	1,500
14	665	218	1,200	380	5,390	2,200	1,580	2,090	408	303	850	6,000
15	610	218	695	340	4,080	3,380	1,780	1,880	385	284	850	2,800
16	555	221	900	340	3,930	2,530	1,880	1,680	430	284	600	3,800
17	528	180	1,160	340	3,380	2,420	1,680	1,680	430	480	500	2,800
18	500	132	2,110	340	2,530	3,000	1,480	1,580	385	455	460	2,200
19	475	201	1,700	320	2,090	3,650	1,390	1,300	343	364	420	1,600
20	450	218	1,500	320	2,090	3,650	3,930	1,130	323	323	400	1,400
21	450	198	950	320	1,980	2,760	3,000	1,050	343	303	420	1,200
22	400	450	850	300	2,310	2,530	2,640	970	323	1,300	420	950
23	400	4,050	800	300	3,250	2,310	2,420	860	323	2,530	360	800
24	376	2,220	800	280	5,030	1,980	2,200	895	303	1,300	340	750
25	352	1,680	750	280	4,380	1,880	1,880	1,210	364	895	320	650
26	343	1,240	700	280	4,080	1,680	2,420	1,130	430	970	280	600
27	335	1,060	650	280	2,800	1,480	1,980	895	364	2,200	260	550
28	318	980	600	260	2,200	5,080	1,780	792	323	1,700	260	550
29	305	860	600	240	------	3,510	1,580	792	364	1,400	240	500
30	301	825	550	240	------	3,000	1,580	895	385	1,000	240	460
31	293	------	550	240	------	3,510	------	792	------	850	220	------

NOTE.—Discharge determined from gage heights corrected for ice effect Dec. 3-5, Dec. 19 to Feb. 10, and Feb. 27 to Mar. 6; for backwater from gravel deposit, July 27 to Sept. 1; for backwater from gravel deposit and eel weir Sept. 2-30. Corrections for ice effect based on 1 discharge measurement, study of gage-height graph, observer's notes, weather records, and comparison with records of Beaver Kill at Cooks Falls. Backwater from gravel deposits and eel weir based on 2 discharge measurements, study of observer's notes, and comparison with the record of other stations in the same basin.

Monthly discharge of East Branch of Delaware River at Fishs Eddy, N. Y., for the year ending September 30, 1925

[Drainage area, 785 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	26,200	293	2,010	2.56	2.95
November	4,050	132	603	.768	.86
December	2,220	460	1,000	1.27	1.46
January	500	240	354	.451	.52
February	18,600	240	3,640	4.64	4.83
March	5,080	1,480	2,450	3.12	3.60
April	3,930	1,390	2,300	2.93	3.27
May	2,880	792	1,470	1.87	2.16
June	860	303	466	.594	.66
July	2,530	284	697	.888	1.02
August	1,400	220	516	.657	.76
September	6,000	220	1,100	1.40	1.56
The year	26,200	132	1,370	1.75	23.65

DELAWARE RIVER AT PORT JERVIS, N. Y.

LOCATION.—At steel highway bridge at Port Jervis, Orange County, 1½ miles above mouth of Neversink River and 6 miles below mouth of Mongaup River.

DRAINAGE AREA.—3,070 square miles (measured on topographic maps).

RECORDS AVAILABLE.—October 12, 1904, to September 30, 1925.

GAGE.—Chain gage on downstream side of left span of highway bridge, and staff in two sections; the upper section, vertical and attached to downstream end of left abutment, and the lower section inclined, 30 feet downstream. Gages read by John Bisland.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Gravel; occasionally shifting.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 14.9 feet at 8 a. m. February 12 (discharge, 83,100 second-feet, stage-discharge relation affected by ice); minimum stage, 1.3 feet at 8 a. m. and 5 p. m. November 20 (discharge, 525 second-feet).

1904–1925:[10] Maximum stage for open water, 16.0 at 8 a. m. March 28, 1914 (discharge, 92,700 second-feet); minimum stage, 0.60 foot at 8 a. m. September 22 and 23, 1908 (discharge, 175 second-feet).

ICE.—Stage-discharge relation seriously affected by ice.

ACCURACY.—Stage-discharge relation changed at time of flood, February 11. Rating curves fairly well defined between 600 and 30,000 second-feet. Gage read to quarter-tenths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table. Records good, except during periods of ice effect, for which they are fair.

Discharge measurements of Delaware River at Port Jervis, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 14	[a] 3.46	1,340	Apr. 22	4.61	8,470	July 17	2.04	1,430
Mar. 16	4.80	9,530	May 3	3.94	5,930	Aug. 5	2.61	2,310
Apr. 14	3.60	4,770	May 24	3.15	3,650			

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Delaware River at Port Jervis, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	73,900	880	2,800	1,800	1,100	12,800	11,800	4,320	3,260	1,540	4,040	940
2	46,800	880	2,470	1,700	1,100	11,800	11,400	6,190	3,510	1,700	3,770	835
3	20,500	880	1,800	1,700	1,100	9,190	10,500	5,860	3,770	1,700	3,260	788
4	13,100	780	1,720	1,600	1,000	7,990	10,900	5,540	3,770	1,700	2,790	740
5	9,010	780	1,980	1,600	1,000	7,240	10,000	5,220	2,900	1,700	2,360	740
6	7,430	732	1,980	1,600	1,000	6,530	9,190	4,910	2,460	3,770	2,360	740
7	6,010	780	2,580	1,600	1,100	7,610	7,990	4,610	2,160	2,900	2,260	1,110
8	5,050	685	3,400	1,500	1,100	7,990	7,610	4,320	1,880	1,880	2,360	1,620
9	4,460	685	4,750	1,500	1,200	7,610	6,530	3,770	1,880	2,260	2,060	1,620
10	3,910	685	4,800	1,500	1,800	7,990	6,530	3,510	3,260	2,160	4,320	1,620
11	3,160	685	3,400	1,400	7,000	7,610	6,190	3,770	2,360	1,880	5,220	1,540
12	3,160	732	3,400	1,400	80,000	9,190	5,540	7,240	2,160	3,510	4,040	1,170
13	2,580	732	3,200	1,400	46,000	8,780	5,220	8,380	1,970	2,460	3,020	1,540
14	2,260	685	3,200	1,300	24,000	7,990	4,910	6,530	1,790	1,880	4,040	4,320
15	2,070	732	2,600	1,300	16,000	9,610	5,220	5,860	1,620	1,380	4,610	15,300
16	2,070	685	2,400	1,300	15,000	8,780	5,540	5,860	1,620	1,240	4,320	10,900
17	1,890	685	2,600	1,300	13,000	8,780	5,220	5,220	1,620	1,460	3,260	13,200
18	1,800	600	3,400	1,200	11,000	9,190	4,910	5,860	1,540	2,790	2,680	8,380
19	1,720	562	6,000	1,200	9,000	10,500	4,610	5,220	1,460	2,680	2,360	6,530
20	1,390	525	6,000	1,100	8,380	11,800	6,190	4,610	1,240	1,880	2,060	5,540
21	1,390	732	4,800	1,100	7,990	10,000	8,380	4,040	1,170	1,540	1,970	4,040
22	1,240	880	3,400	1,100	7,610	8,780	8,780	3,510	1,110	1,790	1,970	3,020
23	1,390	4,750	3,200	1,100	12,800	7,990	7,990	3,140	1,110	7,610	1,790	2,900
24	1,240	11,600	3,000	1,000	19,900	7,610	6,880	3,510	940	7,240	1,790	2,790
25	1,240	6,700	2,800	1,000	19,900	6,190	6,190	4,320	995	5,540	1,620	2,570
26	1,240	5,050	2,400	1,000	16,900	5,860	6,880	5,540	1,540	4,040	1,460	2,460
27	1,180	3,910	2,200	1,000	14,200	5,220	7,240	5,220	1,460	13,700	1,460	2,160
28	1,050	3,650	1,900	1,000	13,700	6,530	6,190	4,610	1,380	9,190	1,240	1,970
29	990	3,160	1,800	1,000	-------	13,700	5,540	3,770	1,380	6,880	1,110	1,880
30	990	3,040	1,800	1,000	-------	10,900	4,610	4,040	1,790	5,540	940	1,620
31	935	-------	1,800	1,100	-------	11,800	-------	3,510	-------	4,320	940	-------

NOTE.—Discharge Dec. 10 to Feb. 19 determined from gage heights corrected for ice effect from 1 discharge measurement, study of gage-height graph, observer's notes, weather records, and comparison with records for other stations in the same basin.

[10] During the flood of Oct. 10–11, 1903, a crest stage of 23.3 feet gage height was observed by Mr. Righter, city engineer of Port Jervis. This gage height corresponds to a discharge of about 155,000 second-feet.

Monthly discharge of Delaware River at Port Jervis, N. Y., for the year ending September 30, 1925

[Drainage area, 3,070 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	73,900	935	7,260	2.36	2.72
November	11,600	525	1,930	.629	.70
December	6,000	1,720	3,020	.984	1.13
January	1,800	1,000	1,300	.423	.49
February	80,000	1,000	12,600	4.10	4.27
March	13,700	5,220	8,820	2.87	3.31
April	11,800	4,610	7,160	2.33	2.60
May	8,380	3,140	4,900	1.60	1.84
June	3,770	940	1,970	.642	.72
July	13,700	1,240	3,540	1.15	1.33
August	5,220	940	2,630	.857	.99
September	15,300	740	3,490	1.14	1.27
The year	80,000	525	4,840	1.58	21.37

DELAWARE RIVER AT BELVIDERE, N. J.

LOCATION.—At Belvidere, Warren County, just below mouth of Pequest River.

DRAINAGE AREA.—4,540 square miles.

RECORDS AVAILABLE.—October 27, 1922, to September 30, 1925.

GAGE.—Inclined staff on left bank bolted to downstream side of storm sewer outlet at foot of Second Street, Belvidere; read by Alexander Rush.

DISCHARGE MEASUREMENTS.—Made by boat 1,000 below gage for low water or from highway bridge half a mile upstream during high water. Pequest River measured separately when highway bridge is used.

CHANNEL AND CONTROL.—Channel is heavy gravel and boulders. Control is ledge and boulders about three-fourths mile below gage known as Little Foul Rift.

EXTREMES OF DISCHARGE.—Maximum stage during year, determined from high-water mark, 19.3 feet at 2 p. m. October 1 (discharge, about 118,000 second-feet); minimum stage recorded, 2.77 feet at 6 p. m. November 21 (discharge, 1,170 second-feet).

1922–1925: Maximum stage, 19.3 at 2 p. m. on October 1, 1924, determined by levels from high-water mark (discharge, about 118,000 second-feet); minimum stage recorded, 2.45 feet in July and August 1923 (discharge, 895 second-feet.)

ICE.—Stage-discharge relation affected by ice during extremely cold periods.

ACCURACY.—Stage-discharge relation permanent except when affected by ice. Rating curve well defined between 900 and 60,000 second-feet. Gage read to half-tenths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table except when affected by ice. Records good.

The following discharge measurements were made:

September 23, 1925: Gage height, 4.55 feet; discharge, 4,570 second-feet.

September 24, 1925: Gage height, 4.29 feet;[11] discharge, 3,850 second-feet.

[11] Discharge measured from highway bridge on main stream and above mouth on Pequest River.

Daily discharge, in second-feet, of Delaware River at Belvidere, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	91,000	1,700	3,600	2,940	2,360	13,700	15,500	6,620	5,120	2,940	6,620	1,500
2	66,000	1,700	3,600	2,740	2,270	14,600	15,000	7,610	5,120	2,940	5,990	1,430
3	30,800	1,700	2,940	2,550	2,180	12,800	14,100	7,610	5,400	2,550	5,120	1,310
4	18,900	1,630	2,940	2,940	2,010	11,900	13,200	6,940	4,850	2,270	4,580	1,310
5	13,700	1,630	2,940	3,150	2,100	10,600	12,800	6,620	4,850	2,180	3,830	1,370
6	10,600	1,560	3,830	2,940	2,100	10,200	11,900	6,300	4,070	2,550	3,600	1,370
7	9,050	1,560	4,580	2,800	2,180	10,600	10,600	5,990	3,600	3,830	3,600	1,500
8	7,610	1,560	5,120	2,600	2,270	11,400	9,810	5,690	3,150	3,150	3,370	1,850
9	6,620	1,500	6,940	2,600	2,740	11,900	8,680	5,400	2,740	2,940	3,600	2,360
10	5,990	1,500	7,610	2,400	3,370	11,900	7,960	5,120	3,830	3,150	4,580	2,550
11	5,400	1,430	7,610	2,460	6,940	11,400	7,960	5,690	4,070	2,740	5,990	2,360
12	4,850	1,370	6,300	2,400	96,000	11,400	7,610	8,320	3,600	3,150	5,690	2,010
13	4,070	1,370	5,990	2,200	68,000	13,200	7,610	11,000	2,940	3,830	4,850	2,360
14	3,830	1,370	5,690	2,200	38,400	12,800	7,270	9,430	2,460	2,940	4,850	3,150
15	3,600	1,370	4,850	2,200	25,600	12,300	6,940	8,680	2,550	2,740	5,990	15,000
16	3,370	1,370	4,580	2,180	26,200	13,200	7,960	7,960	2,740	2,100	5,690	11,900
17	3,370	1,430	4,320	2,270	22,700	12,300	7,960	7,960	2,740	2,270	4,850	13,700
18	3,150	1,500	4,580	2,270	18,900	12,300	7,610	7,610	2,460	1,930	4,070	10,200
19	2,940	1,310	6,940	2,180	15,900	15,000	6,940	7,270	2,270	3,150	3,600	7,960
20	2,740	1,200	7,960	2,100	14,100	17,900	6,940	6,620	2,180	2,740	3,370	6,620
21	2,740	1,200	7,270	2,100	13,200	15,000	12,800	5,690	1,850	2,460	2,940	5,400
22	2,550	1,700	4,580	1,900	13,700	13,700	11,400	5,400	1,850	2,360	2,940	4,580
23	2,550	4,070	3,150	1,800	16,400	11,900	9,810	4,850	1,630	4,320	2,740	4,320
24	2,360	11,900	3,600	1,800	21,600	10,600	8,680	5,120	1,500	10,200	2,550	3,830
25	2,180	9,810	4,070	1,800	28,100	9,430	7,960	6,940	1,930	6,620	2,360	3,370
26	2,010	6,940	3,600	2,360	25,000	8,680	7,610	8,680	2,010	5,400	2,180	2,940
27	1,930	5,990	3,400	2,550	21,600	7,960	7,960	7,960	2,100	6,620	2,010	2,740
28	1,930	4,850	3,200	2,200	15,900	9,810	7,960	6,620	2,180	12,300	1,850	2,550
29	1,850	4,320	3,000	1,800	-------	13,700	6,940	6,300	2,270	8,680	1,700	2,550
30	1,850	3,830	2,940	1,800	-------	16,400	6,300	5,690	2,550	6,940	1,630	2,360
31	1,780	-------	3,600	2,000	-------	15,000	-------	5,400	-------	6,300	1,560	-------

NOTE.—Stage-discharge relation affected by ice Dec. 26–29, Jan. 7–10, 12–15, 22–25, and 28–31; discharge estimated by study of weather records, gage-height graph, and comparison with flow at Riegelsville. Discharge estimated Sept. 13.

Monthly discharge of Delaware River at Belvidere, N. J., for the year ending September 30, 1925

[Drainage area, 4,540 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	91,000	1,780	10,400	2.29	2.64
November	11,900	1,200	2,810	.619	.69
December	7,960	2,940	4,690	1.03	1.19
January	3,150	1,800	2,330	.513	.59
February	96,000	2,010	18,300	4.03	4.20
March	17,900	7,960	12,400	2.73	3.15
April	15,500	6,300	9,390	2.07	2.31
May	11,000	5,120	6,870	1.51	1.74
June	5,400	1,500	3,020	.665	.74
July	12,300	1,930	4,140	.912	1.05
August	6,620	1,560	3,820	.841	.97
September	15,000	1,310	4,220	.929	1.04
The year	96,000	1,200	6,790	1.50	20.31

DELAWARE RIVER AT RIEGELSVILLE, N. J.

LOCATION.—At suspension bridge between Riegelsville, Warren County, N. J., and Riegelsville, Bucks County, Pa., 600 feet above mouth of Musconetcong River and 9 miles below Lehigh River.

DRAINAGE AREA.—6,190 square miles.

RECORDS AVAILABLE.—July 3, 1906, to September 30, 1925.

GAGE.—Water-stage recorder on left bank (New Jersey side) 20 feet above bridge; inspected by J. H. Brotzman.

DISCHARGE MEASUREMENTS.—Made from bridge.

CHANNEL AND CONTROL.—Rock outcrop and large boulders; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 24.2 feet at 6 p. m. October 1 (discharge, 132,000 second-feet); minimum stage, 2.16 feet 7 p. m. November 20 (discharge, 1,530 second-feet).

1906–1925: Maximum stage recorded, 25 feet March 28, 1913 (discharge, 144,000 second-feet); minimum stage, 1.55 feet at 8 a. m. September 20, 1908 (discharge, 870 second-feet).

The flood of October 10–11, 1903, reached a stage of 35.9 feet determined by levels from three good floodmarks. Maximum discharge during this flood has been estimated 275,000 second-feet at Riegelsville from observations made at Lambertville.

ICE.—Stage-discharge relation affected by ice during severe winters only.

DIVERSIONS.—The Delaware division of the Pennsylvania Canal diverts about 230 second-feet from Lehigh River near its mouth from about the last of March to the middle of December each year.

ACCURACY.—Stage-discharge relation permanent, not affected by ice. Rating curve well defined. Operation of water-stage recorder satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height, determined from inspection of recorder graph or, for days of considerable fluctuation, by averaging discharge for intervals of day. Records good.

Discharge measurements of Delaware River at Riegelsville, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 2	19.75	94,600	Oct. 3	12.66	44,900	Feb. 4	2.82	2,860
Do	17.61	77,600	Do	11.71	40,200	Sept. 21[a]	4.19	6,760

[a] Discharge of Pennsylvania Canal at Riegelsville, Pa., measured this date and found to contain 220 second-feet.

Daily discharge, in second-feet, of Delaware River at Riegelsville, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	117,000	2,600	4,930	4,120	3,080	19,900	18,600	8,170	7,560	4,120	11,500	2,160
2	89,600	2,480	4,390	3,330	3,330	21,700	18,100	9,100	6,950	3,850	9,100	1,960
3	43,300	2,480	4,390	4,120	3,080	19,000	17,300	9,410	7,000	3,590	7,860	1,860
4	27,400	2,480	4,120	4,660	3,080	17,300	16,100	8,790	6,950	3,200	6,650	1,770
5	19,900	2,370	4,120	4,660	3,080	15,700	15,300	8,170	6,650	3,200	6,070	1,860
6	15,300	2,370	5,490	4,390	3,200	14,500	14,100	7,860	6,070	3,590	5,490	1,770
7	12,900	2,370	6,360	4,390	3,330	14,900	13,000	7,560	5,210	4,930	5,210	2,370
8	11,100	2,260	6,650	4,120	3,330	15,300	12,000	7,260	4,660	4,120	4,930	2,840
9	9,720	2,370	8,480	4,120	3,850	15,700	11,000	6,950	4,390	4,120	5,780	3,080
10	8,790	2,160	10,000	3,850	5,490	15,700	11,000	6,650	4,660	4,660	6,950	3,080

Daily discharge, in second-feet, of Delaware River at Riegelsville, N. J., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	7,860	2,160	10,000	3,850	18,400	14,900	9,720	6,950	5,780	4,120	8,380	3,200
12	6,950	2,160	8,790	3,330	99,800	15,700	9,720	10,800	4,930	4,390	7,860	2,840
13	6,360	2,160	7,860	3,330	93,200	17,700	9,100	13,700	4,390	4,930	6,650	2,600
14	5,780	2,060	7,560	3,200	53,600	16,100	8,790	12,200	3,850	3,850	6,070	3,850
15	5,490	1,960	6,070	2,840	41,200	15,700	9,720	11,100	3,850	3,200	7,260	12,200
16	5,210	1,960	5,780	2,720	37,800	16,900	10,000	10,400	3,850	2,960	7,260	14,500
17	4,930	1,960	6,070	3,080	34,500	15,700	9,720	10,000	4,120	3,080	6,360	14,500
18	4,660	1,960	6,070	3,590	29,400	15,700	9,720	10,400	3,850	3,330	5,490	12,500
19	4,390	1,770	7,560	3,330	24,500	19,900	8,790	9,720	3,330	3,330	4,660	9,410
20	4,390	1,590	9,100	3,200	21,700	23,600	8,480	8,790	3,200	3,850	4,390	7,560
21	3,850	1,680	8,480	3,080	20,800	22,200	9,410	7,860	3,080	3,330	4,120	6,650
22	3,850	2,640	6,650	3,200	20,800	19,000	13,300	7,260	2,840	3,330	3,850	5,780
23	3,590	3,850	4,390	3,080	24,500	16,500	11,800	6,650	2,600	5,790	3,850	5,490
24	3,590	11,100	4,390	2,840	31,400	14,900	10,800	7,260	2,600	10,400	3,850	4,930
25	3,330	12,200	5,490	2,720	36,200	13,300	9,720	11,100	2,840	8,790	3,330	4,120
26	3,080	9,410	4,390	2,960	34,500	13,300	9,410	12,200	3,200	7,860	3,080	3,850
27	3,080	7,560	4,390	3,200	30,900	13,300	9,410	11,100	3,330	8,270	2,840	3,330
28	2,960	6,360	4,390	2,840	23,600	13,700	9,720	9,720	3,200	14,300	2,600	3,330
29	2,960	5,780	3,850	2,600	-------	20,400	8,790	8,790	3,590	11,400	2,370	3,080
30	2,720	5,490	3,590	2,840	-------	20,800	8,170	8,480	4,120	9,100	2,160	3,080
31	2,720	-------	4,390	2,960	-------	18,100	-------	7,860	-------	8,480	2,160	-------

NOTE.—This table indicates river discharge only, does not include the diversion by the Pennsylvania Canal which was open Oct. 1 to Dec. 5 and Mar. 24 to Sept. 30. Staff gage readings used Apr. 11–21. Discharge Apr. 7–10 and June 3 estimated, based on comparison with flow at Belvidere, N. J.

Monthly discharge of Delaware River at Riegelsville, N. J., for the year ending September 30, 1925

[Drainage area, 6,190 square miles]

Month	Discharge in second-feet					Run-off in inches
	Observed			Corrected for diversions		
	Maximum	Minimum	Mean	Mean	Per square mile	
October	117,000	2,720	14,400	14,600	2.36	2.72
November	12,200	1,590	3,660	3,890	.628	.70
December	10,000	3,590	6,070	6,110	.987	1.14
January	4,660	2,600	3,440	3,440	.556	.64
February	99,800	3,080	25,400	25,400	4.10	4.27
March	23,600	13,300	17,000	17,100	2.76	3.18
April	18,600	8,170	11,400	11,600	1.87	2.09
May	13,700	6,650	9,110	9,340	1.51	1.74
June	7,560	2,600	4,420	4,650	.751	.84
July	14,300	2,960	5,400	5,630	.910	1.05
August	11,500	2,160	5,420	5,650	.913	1.05
September	14,500	1,770	4,980	5,220	.843	.94
The year	117,000	1,590	9,130	9,290	1.50	20.36

DELAWARE RIVER AT TRENTON, N. J.

LOCATION.—On Calhoun Street Bridge, Trenton, Mercer County, 1 mile above Pennsylvania Railroad bridge and half a mile above mouth of Assunpink Creek.

DRAINAGE AREA.—6,800 square miles.

RECORDS AVAILABLE.—February 24, 1913, to September 30, 1925.

GAGE.—Chain gage on downstream side of bridge 100 feet from left abutment; read by United States Weather Bureau.

DISCHARGE MEASUREMENTS.—Made from upstream side of bridge.

CHANNEL AND CONTROL.—Rocky and permanent at the rapids a few hundred feet below bridge.

EXTREMES OF DISCHARGE.—Maximum stage during year, from high-water mark, 13.0 feet at 1 a. m. February 13 (discharge, 154,000 second-feet); minimum discharge recorded, 1,720 second-feet November 21 and 22.

1913–1925: Maximum stage recorded, 13.3 feet during night of March 28, 1913 (discharge, 160,000 second-feet); minimum stage, −0.40 foot several times in October and November, 1914 (discharge, 1,240 second-feet).

ICE.—Stage-discharge relation affected by ice.

DIVERSIONS.—Delaware division of the Pennsylvania Canal diverts about 50 second-feet around gaging station from about March 31 to December 15 each year. Delaware and Raritan feeder canal diverts about 140 second-feet from the first of March to the last of December each year. Trenton power canal diverts about 210 second-feet around the gage daily.

ACCURACY.—Stage-discharge relation permanent except during ice-affected periods. Rating curve well defined between 1,700 and 90,000 second-feet. Gage read to hundredths once a day. Daily discharge ascertained by applying daily gage height to rating table. Records fair.

COOPERATION.—Gage readings furnished by United States Weather Bureau.

Discharge measurements of Delaware River at Trenton, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 28	0.49	3,240	May 13	2.71	15,300	Aug. 3	1.83	8,800
May 13	2.57	14,000	July 3	.68	3,840	Sept. 19	2.25	11,700

Discharge measurements of canals which divert water around gaging station on Delaware River at Trenton, N. J., during the year ending September 30, 1925

Date	Delaware and Raritan feeder, Trenton	Power canal, Trenton	Pennsylvania Canal, Morrisville, Pa.
	Sec.-ft.	*Sec.-ft.*	*Sec.-ft.*
Oct. 28	140	210	71
Apr. 28	147	235	63
July 23	109	192	36

Daily discharge, in second-feet, of Delaware River at Trenton, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June	July	Aug.	Sept.
1	105,000	2,560	5,000			24,700	18,900	8,500	8,600	4,200	13,000	2,190
2	108,000	2,560	5,000			22,900	18,100	9,150	8,100	4,200	11,600	2,190
3	55,800	2,560	4,220			21,300	17,300	9,750	8,100	3,520	8,600	2,080
4	32,400	2,300	3,860			19,700	17,300	9,150	7,600	3,520	7,500	2,080
5	22,900	2,300	4,220	3,390	3,200	17,300	16,500	9,150	7,100		6,500	1,990
6	17,300	2,300	5,000			16,500	15,100	9,150	7,100		5,800	2,000
7	14,400	2,300	7,100			15,800	15,100	8,600	5,400	4,400	5,800	2,600
8	12,300	2,300	6,650			16,500	14,400	8,100	5,400		5,400	2,800
9	11,000	2,300	8,600			16,500	12,300	8,100	5,400		6,650	3,200
10	9,150	2,080	10,400		13,700	16,500	12,300	8,100	5,400		8,000	3,180

Daily discharge, in second-feet, of Delaware River at Trenton N. J., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	8,600	2,080	11,000		15,800	15,800	12,300		4,600	5,000		3,200
12	7,100	1,990	9,750		89,300	15,100	12,300		4,600	4,220		2,800
13	6,650	2,080	8,600		110,000	15,100	10,400		4,220	3,860	8,000	3,020
14	6,200	2,080	8,600		62,300	15,800	9,750	12,000	4,220	3,860		3,180
15	5,800	1,990	5,800		43,300	15,100	10,400		4,220	3,860		14,000
16	5,400	2,080	5,000		43,300	16,500	11,600		4,220	4,220	8,100	17,300
17	4,600	1,900	5,800		36,500	16,500	11,000	11,000	4,220	3,180	8,100	15,100
18	4,600	1,810	6,200		33,400	16,500	10,400	10,400	3,860	3,180	7,600	15,100
19	4,220	1,810	6,650		27,400	18,000	10,400	9,750	3,520	3,020	5,400	11,000
20	3,860	1,900	8,600		23,800	22,100	9,150	9,750	3,180	3,020	4,600	9,150
21	3,860	1,720	9,150	3,390	22,900	24,700	10,000	9,750	2,860	3,180	4,200	8,600
22	3,860	1,720	7,100		22,900	21,300	16,000	9,150	2,860	3,180	4,200	6,650
23	3,860	1,990			24,700	18,000	15,000	7,600	2,860	6,000	4,220	5,800
24	3,020	7,100			31,400	17,000	12,000	7,100	2,710	12,000	4,220	5,400
25	3,180	14,400			28,400	15,100	11,000		2,710	9,000	3,520	5,000
26	3,180	11,000			36,500	14,400	10,400		2,710	8,500	3,180	5,000
27	2,860	8,600	4,600		34,400	13,700	9,750	12,000	3,180	9,150	2,860	3,860
28	2,860	7,100			26,500	12,300	9,750		3,180	13,700	2,710	3,180
29	2,710	6,650			--------	12,300	9,000		3,800	15,000	2,430	3,020
30	2,710	5,800			--------	13,700	8,500	8,600	4,200	10,000	2,430	2,860
31	2,560	--------			--------	19,700	--------	8,600	-------	9,150	2,300	-----

NOTE.—This table indicates flow in river only. Diversion by canals included in monthly table. Gage-height record missing Dec. 23 to Feb. 9, Mar. 19, 23, 24, Apr. 21–24, 29, 30, May 1, 11–16, 25–29, June 29, 30, July 1, 2, 5–10, 23–26, 29, 30, Aug. 1, 4, 5, 10–15, 20–22, Sept. 6–9, 11, 12, and 15; discharge estimated by study of comparison with flow at Riegelsville and Belvidere.

Monthly discharge of Delaware River at Trenton, N. J., for the year ending September 30, 1925

[Drainage area, 6,800 square miles]

Month	Discharge in second-feet					Run off in inches
	Observed			Corrected for diversions		
	Maximum	Minimum	Mean	Mean	Per square mile	
October	108,000	2,560	15,500	15,900	2.34	2.70
November	14,400	1,720	3,650	4,050	.596	.66
December	11,000	3,860	6,250	6,470	.951	1.10
January	----------	----------	3,390	3,600	.529	.61
February	110,000	----------	27,400	27,600	4.06	4.23
March	24,700	12,300	17,300	17,500	2.57	2.96
April	18,900	----------	12,500	12,900	1.90	2.12
May	----------	7,100	10,000	10,400	1.53	1.76
June	8,600	2,710	4,670	5,070	.746	.83
July	----------	3,020	5,750	6,150	.904	1.04
August	----------	2,300	6,090	6,490	.954	1.10
September	17,300	1,990	5,580	5,980	.879	.98
The year	110,000	1,720	9,710	10,000	1.47	20.09

BEAVER KILL AT COOKS FALLS, N. Y.

LOCATION.—At covered highway bridge in Cooks Falls, Delaware County, 5½ miles below mouth of Willowemoc Creek and 10 miles above mouth.

DRAINAGE AREA.—241 square miles (measured on topographic maps).

RECORDS AVAILABLE.—July 25, 1913, to September 30, 1925.

GAGE.—Vertical staff in three sections, bolted to rock on left bank under bridge; read by H. B. Couch.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Coarse gravel, boulders, and solid ledge; shifts occasionally.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 13.0 feet at 7 a. m. October 1 (discharge, about 10,400 second-feet); minimum stage, 1.24 feet at 7 a. m. July 16 and 7 a. m. and 3 p. m. September 2 (discharge, 72 second-feet).

1913–1925: Maximum stage recorded, about 15.0 feet during night of September 30, 1924, determined from floodmarks (discharge, about 13,400 second-feet); minimum stage, 0.60 foot September 14–16, 1913 (discharge, about 23 second-feet).

ICE.—Stage-discharge relation affected by ice.

ACCURACY.—Stage-discharge relation changed at time at time of flood on October 1. Rating permanent during year except as affected by ice. Rating used during year fairly well defined below 3,000 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table except for days of great range in stage when discharge is averaged for intervals of day. Records good, except during periods of ice effect, for which they are fair.

Discharge measurements of Beaver Kill at Cooks Falls, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 20	1.35	83.2	Apr. 16	3.15	558	July 18	1.55	120
Jan. 15	*1.79	111	May 3	3.03	545	Aug. 5	1.75	157
Mar. 15	4.30	1,100	May 26	2.63	391			

*Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Beaver Kill at Cooks Falls, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9,700	97	320	180	120	1,100	1,080	720	286	101	233	76
2	2,720	97	280	180	110	850	965	675	272	92	198	72
3	1,540	97	240	170	110	750	1,020	515	259	88	186	79
4	1,250	97	200	170	110	650	965	515	233	82	186	88
5	1,080	97	180	160	120	555	965	495	209	198	156	95
6	555	89	240	160	130	555	860	475	198	128	209	97
7	635	89	280	150	130	720	810	458	186	94	209	186
8	375	85	420	140	150	765	765	458	186	92	186	198
9	345	85	1,400	140	200	675	675	440	176	89	186	128
10	360	82	1,000	140	1,100	675	675	422	165	98	810	106
11	390	82	650	130	3,880	765	635	765	165	97	300	105
12	330	82	600	130	5,500	765	595	965	156	95	259	186
13	259	74	550	120	3,680	750	595	675	156	92	272	965
14	246	82	340	110	2,370	1,540	595	675	128	84	315	2,050
15	221	82	280	110	1,820	1,140	595	635	128	77	300	765
16	209	82	420	110	1,200	860	595	555	120	80	233	1,200
17	198	82	650	120	1,020	1,020	555	595	111	146	186	720
18	221	82	800	110	860	1,260	515	555	108	111	165	635
19	209	82	700	100	765	2,130	515	515	108	95	156	495
20	176	82	600	110	765	1,600	1,080	440	105	80	146	405
21	176	82	480	110	675	1,200	860	405	105	79	165	360
22	146	156	400	110	675	1,080	675	390	101	1,150	156	300
23	146	965	360	100	1,080	860	635	375	97	555	137	259
24	137	1,080	300	100	1,820	720	635	375	94	375	120	246
25	128	595	280	100	1,500		595	495	128	286	111	233
26	128	475	260	100	1,400	850	675	405	120	422	106	209
27	128	440	260	90	1,300		555	345	108	595	95	186
28	111	390	220	85	1,100		495	315	95	405	88	209
29	111	305	200	90	-------		475	300	128	330	83	186
30	105	345	200	90	-------	1,080	495	286	120	259	80	165
31	105	-------	190	100	-------	1,260	-------	286	------	246	77	------

NOTE.—Discharge Oct. 4, Nov. 8, 9, Jan. 13, 14, Mar. 13, 25–29, estimated by comparison with record of East Branch of Delaware River at Fishs Eddy and otherwise; no gage-height record. Discharge, Dec. 1 to Feb. 10 and Feb. 25 to Mar. 4, determined from gage heights corrected for ice effect from 1 discharge measurement, study of gage-height graph and weather records, and comparison with Fishs Eddy record.

Monthly discharge of Beaver Kill at Cooks Falls, N. Y., for the year ending September 30, 1925

[Drainage area, 241 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	9,700	105	724	3.00	3.46
November	1,080	74	221	.917	1.02
December	1,400	180	429	1.78	2.05
January	180	85	123	.510	.59
February	5,500	110	1,200	4.98	5.19
March	2,130	555	954	3.96	4.56
April	1,080	475	705	2.93	3.27
May	965	286	501	2.08	2.40
June	286	94	152	.631	.70
July	1,150	77	217	.900	1.04
August	810	77	197	.817	.94
September	2,050	72	367	1.52	1.70
The year	9,700	72	478	1.98	26.92

LITTLE BEAVER KILL NEAR LIVINGSTON MANOR, N. Y.

LOCATION.—On farm of Emory Keene, 2½ miles southeast of Livingston Manor, Sullivan County, and 2½ miles below Parksville. Cattail Brook enters 3½ miles below.

DRAINAGE AREA.—19.8 square miles (measured on topographic maps).

RECORDS AVAILABLE.—July 26, 1924, to September 30, 1925.

GAGE.—Staff gage on right bank in two sections; the lower inclined, the upper vertical. Vertical section attached to right abutment of farm bridge; inclined section about 25 feet below. From July 26 to November 21, 1924, a temporary vertical staff attached to upstream side of abandoned bridge abutment at practically the same section was used. Gages read by Emory Keene.

DISCHARGE MEASUREMENTS.—Made from farm bridge or by wading.

CHANNEL AND CONTROL.—Control is of gravel; shifting occasionally.

EXTREMES OF DISCHARGE.—Maximum stage recorded during the period, July 26, 1924, to September 30, 1925, above 5.6 feet at 5 p. m. September 30, 1924 (discharge probably about 1,700 second-feet); minimum stage, 0.68 foot several times August 11 to September 5, 1924 (discharge, 2.7 second-feet).

ICE.—Stage-discharge relation slightly affected by ice.

ACCURACY.—Stage-discharge relation changed slightly in April, 1925. Rating curves well defined below 100 second-feet. Stage-discharge relation affected by ice December to March. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table or for days of great range in stage, by averaging discharge for intervals of day. Open-water records good for range in stage covered by rating tables; for other stages and during periods of ice effect, records are fair.

Discharge measurements of Little Beaver Kill near Livingston Manor, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 7	1.23	24.9	Apr. 15	1.62	62.6	May 26	1.30	28.8
Nov. 21	.76	4.26	Apr. 16	1.43	40.1	July 18	.98	8.63
Jan. 14	.97	9.86	Apr. 22	1.40	32.8	Aug. 5	.96	7.93
Mar. 16	1.69	68.1	May 3	1.33	30.7			

Daily discharge, in second-feet, of Little Beaver Kill near Livingston Manor, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	311	4.9	12	14	8	60	94	38	16	5.5	12	4.8
2	132	4.9	12	14	9	55	80	35	18	5.7	10	4.6
3	66	4.7	11	16	10	50	72	27	16	4.8	9.3	6.0
4	48	4.7	10	13	10	46	63	23	13	4.4	8.1	6.2
5	35	4.5	10	12	10	40	56	21	11	29	8.1	5.3
6	29	4.5	15	10	9	54	50	19	8.7	8.4	19	4.8
7	25	4.3	24	10	9	63	43	18	8.1	6.8	14	44
8	21	4.1	47	10	14	68	37	18	8.1	11	9.3	14
9	18	4.1	111	10	30	70	34	16	9.7	9.0	12	8.7
10	16	4.5	47	10	260	63	37	15	8.7	27	94	7.4
11	14	4.3	33	10	380	84	39	84	6.8	18	31	10
12	13	4.9	29	10	380	91	33	62	6.0	9.3	20	22
13	11	4.9	29	10	140	71	31	38	5.7	7.4	53	86
14	10	5.4	26	10	100	88	34	31	6.8	5.3	57	278
15	9.6	4.9	22	11	80	94	47	31	6.8	4.4	30	75
16	8.9	4.5	24	10	70	62	43	25	5.7	4.8	21	112
17	8.9	4.5	30	11	60	70	34	42	5.0	16	17	70
18	8.2	3.9	50	10	50	107	31	31	5.0	8.7	14	49
19	7.5	3.3	44	10	50	154	35	24	4.8	6.2	13	39
20	7.5	3.3	30	9	44	100	63	20	4.8	5.3	10	30
21	7.0	4.1	30	9	42	71	39	18	5.3	12	18	27
22	6.5	56	24	9	50	63	34	17	5.0	166	15	24
23	6.5	100	24	9	100	57	29	16	4.4	47	11	18
24	5.9	43	26	9	170	51	27	21	4.1	20	9.0	18
25	5.9	27	24	8	120	47	27	40	13	14	7.8	16
26	5.9	21	24	9	95	44	31	28	8.4	31	6.2	14
27	5.4	18	22	9	75	42	30	21	5.7	30	6.8	14
28	5.4	18	22	9	70	311	24	18	6.0	18	6.2	17
29	5.4	16	19	9	-------	122	20	20	9.7	18	5.7	13
30	5.2	14	18	8	-------	122	27	18	7.4	13	5.3	12
31	5.2	-------	17	9	-------	118	-------	16	-------	12	5.3	-------

NOTE.—Discharge Dec. 1–7 and Dec. 14 to Mar. 5 determined from gage heights corrected for ice effect from 1 discharge measurement, study of observer's notes, gage-height graph, and weather records.

Monthly discharge of Little Beaver Kill near Livingston Manor, N. Y., for the year ending September 30, 1925

[Drainage area, 19.8 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	311	5.2	27.9	1.41	1.63
November	100	3.3	13.5	.682	.76
December	111	10	27.9	1.41	1.63
January	16	8	10.2	.515	.59
February	380	8	87.3	4.41	4.59
March	311	40	81.9	4.14	4.77
April	94	20	41.5	2.16	2.34
May	84	15	27.5	1.39	1.60
June	18	4.1	8.12	.410	.46
July	166	4.4	18.6	.939	1.08
August	94	5.3	18.0	.909	1.05
September	278	4.6	35.0	1.77	1.98
The year	380	3.3	32.8	1.66	22.48

WEST BRANCH OF DELAWARE RIVER AT HALE EDDY, N. Y.

LOCATION.—At highway bridge in Hale Eddy, Delaware County, 8 miles below Deposit and 8½ miles above confluence with East Branch.

DRAINAGE AREA.—603 square miles (measured on topographic maps).

RECORDS AVAILABLE.—November 15, 1912, to September 30, 1925.

GAGE.—Vertical staff in four sections, attached to rocks near right abutment of bridge and to abutment; read by W. J. Shanly.

DISCHARGE MEASUREMENTS.—Made from cable 400 feet below gage or by wading.

CHANNEL AND CONTROL.—Coarse gravel and boulders; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 14.3 feet at 8 a. m. February 12 (discharge, about 22,000 second-feet); minimum discharge, 75 second-feet November 19 and 20 (stage-discharge relation affected by ice).

1912–1925:[12] Maximum stage recorded, about 15.8 feet during night of September 30, 1924, determined from graph of plotted gage readings (discharge, about 26,500 second-feet); minimum stage, 1.0 foot at 6 p. m. September 21, 1913 (discharge, 34 second-feet).

ICE.—Stage-discharge relation seriously affected by ice.

ACCURACY.—Stage-discharge relation practically permanent, except as affected by ice. Rating curve fairly well defined below 24,000 second-feet. Gage read to tenths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table, except for days of great range in stage, when discharge is averaged for intervals of day. Records fair, except during periods of ice effect, for which they are poor.

Discharge measurements of West Branch of Delaware River at Hale Eddy, N. Y. during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 19	*1.72	81.0	Mar. 15	4.99	1,990	July 19	2.83	555
Jan. 16	*3.59	150	Apr. 17	3.91	1,170	Aug. 6	2.49	360

* Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of West Branch of Delaware River at Hale Eddy, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15,200	175	500	380	120	1,790	1,360	1,700	600	410	725	146
2	6,630	175	480	380	110	1,520	1,520	1,610	525	370	675	120
3	3,560	175	440	360	110	1,360	1,700	1,520	600	272	550	133
4	2,770	175	400	320	130	1,210	1,880	1,520	500	220	525	108
5	2,770	190	360	300	120	1,280	2,270	1,360	432	175	432	133
6	1,790	175	480	280	150	1,360	1,970	1,280	390	190	390	205
7	1,360	175	600	280	200	1,360	1,700	1,280	350	175	410	370
8	930	175	800	280	240	1,520	1,700	1,210	290	175	410	370
9	930	146	1,000	240	320	1,440	1,610	1,210	310	146	455	330
10	840	175	800	240	2,800	1,520	1,520	1,070	350	946	780	272
11	750	120	600	240	16,000	1,360	1,210	1,520	330	1,210	650	233
12	700	120	500	200	20,500	1,360	1,070	1,880	310	840	478	205
13	625	120	480	220	7,010	1,520	930	1,700	272	432	550	1,610
14	525	120	480	180	4,640	1,790	930	1,210	272	238	870	4,640
15	478	120	460	150	3,090	1,700	870	1,210	310	272	870	3,820

[12] The observer states that on Oct. 10, 1903, water rose to an elevation indicated by a nail in a tree near the gage. This nail is at gage height 20.3 feet, corresponding to a discharge of about 46,000 second-feet.

Daily discharge, in second-feet, of West Branch of Delaware River at Hale Eddy, N. Y., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	350	97	480	150	2,670	1,610	930	930	370	310	650	3,320
17	272	120	650	150	2,070	1,520	1,210	930	330	1,070	500	2,470
18	255	110	850	130	1,700	1,520	1,070	870	310	870	432	1,880
19	272	75	850	120	1,440	1,360	1,700	840	290	650	410	1,700
20	238	75	800	120	1,520	1,520	4,080	780	220	410	410	1,360
21	255	110	700	130	1,700	1,440	2,870	600	238	410	455	1,360
22	238	272	650	120	2,070	1,360	2,370	575	205	3,000	432	1,070
23	238	1,070	600	130	3,090	1,360	2,070	650	146	2,470	350	930
24	238	1,000	600	120	2,980	1,360	1,700	575	133	1,360	290	780
25	238	840	550	120	2,670	1,360	1,360	675	190	870	220	600
26	220	725	500	110	2,470	1,360	1,140	625	238	1,000	272	550
27	205	675	500	100	2,270	1,210	1,070	525	205	2,470	205	525
28	205	625	460	110	2,270	1,210	1,070	478	310	1,700	175	500
29	175	550	400	110	-------	1,140	1,210	600	500	1,360	146	455
30	175	550	400	120	-------	1,210	1,210	550	525	1,070	146	410
31	146	-------	380	120	-------	1,070	-------	575	-------	780	146	------

NOTE.—Discharge Dec. 8-10 estimated; gage heights questionable. Discharge Nov. 18-21 and Nov. 29 to Feb. 11 determined from gage heights corrected for ice effect from 2 discharge measurements, study of gage-height graph and weather records, and comparison with records of East Branch of Delaware River at Fishs Eddy and Delaware River at Port Jervis.

Monthly discharge of West Branch of Delaware River at Hale Eddy, N. Y., for the year ending September 30, 1925

[Drainage area, 603 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	15,200	146	1,410	2.34	2.70
November	1,070	75	308	.511	.57
December	1,000	360	573	.950	1.10
January	380	100	194	.322	.37
February	20,500	110	3,020	5.01	5.22
March	1,790	1,070	1,410	2.34	2.70
April	4,080	870	1,580	2.62	2.92
May	1,880	478	1,030	1.71	1.97
June	600	133	335	.556	.62
July	3,000	146	835	1.38	1.59
August	870	146	452	.750	.86
September	4,640	108	1,020	1.69	1.89
The year	20,500	75	999	1.66	22.51

FLAT BROOK NEAR FLATBROOKVILLE, N. J.

LOCATION.—1 mile above Flatbrookville, Sussex County, and 1½ miles above mouth.

DRAINAGE AREA.—65 square miles (measured on State topographic map).

RECORDS AVAILABLE.—July 8, 1923, to September 30, 1925.

GAGE.—Inclined staff on right bank; read by Wesley Gariss.

DISCHARGE MEASUREMENTS.—Made from footbridge or by wading.

CHANNEL AND CONTROL.—Channel, fine to coarse gravel. Control is bar of heavy gravel 50 feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage during year, from high-water mark, 7.1 feet at 5 p. m. February 11 (discharge, about 2,350 second-feet); minimum stage recorded, 1.50 feet at 4 p. m. September 25 (discharge, 11 second-feet).

1923–1925: Maximum stage from high-water mark, 7.1 feet April 7, 1924, and February 11, 1925 (discharge, about 2,350 second-feet); minimum stage recorded, 1.35 feet at 7 a. m. September 6 and 7, 1923 (discharge, 4 second-feet).

ICE.—Stage-discharge relation affected by ice.

REGULATION.—Daily distribution of flow affected by water power 3 miles above gage.

ACCURACY.—Stage-discharge relation permanent, except when affected by ice Rating curve well defined below 600 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying to rating table mean daily gage height, corrected for ice effect during winter. Records good.

Discharge measurements of Flat Brook near Flatbrookville, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 23	1.80	36.4	Dec. 10	2.20	107	Apr. 30	2.13	89
Nov. 7	1.79	35.3	Feb. 5	[a]1.84	26.8	Sept. 10	1.64	20.9
Dec. 10	2.26	120	Apr. 29	2.05	76	Sept. 25	1.50	10.8

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Flat Brook near Flatbrookville, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	980	29	36			267	179	125	85	34	111	19
2	466	30	50			364	170	108	95	31	75	14
3	162	29	39			185	151	93	77	31	53	18
4	120	28	32			170	135	85	70	26	44	16
5	104	28	47			143	130	81	64	36	42	16
6	93	32	85	26	42	143	118	73	58	50	43	15
7	75	34	99			170	106	75	50	31	47	19
8	75	36	111			156	102	66	43	25	36	31
9	70	35	168			143	95	64	47	81	36	26
10	68	26	116			151	95	64	50	44	102	31
11	58	26	93		1,620	140	106	75	39	34	66	18
12	50	25	81		1,080	185	89	156	39	32	50	18
13	47	24	77		444	162	83	106	35	34	52	28
14	46	30	75		304	143	77	87	32	27	63	42
15	50	44	60		285	135	125	118	35	26	47	43
16	49	44	60	24	364	118	130	108	60	23	39	36
17	47	32	63		285	135	104	104	36	38	31	34
18	50	31	73		216	216	95	97	39	39	31	28
19	64	22	73		179	267	85	85	31	30	31	22
20	55	21	68		162	285	118	75	31	26	25	23
21	56	21	44		162	216	104	68	30	30	28	22
22	46	34			185	179	85	66	28	75	30	19
23	36	116			216	162	85	58	26	185	25	16
24	35	81			232	143	81	106	30	89	23	28
25	39	47			200	135	75	285	35	58	21	25
26	36	40	50	34	216	130	102	200	53	63	19	14
27	31	35			185	118	95	151	53	68	19	16
28	32	32			156	323	81	120	29	53	18	18
29	30	30			-------	285	75	111	32	43	18	15
30	30	31			-------	232	77	120	34	38	17	13
31	30	-------			-------	216	-------	102	-------	60	16	-----

NOTE.—Stage-discharge relation affected by ice Dec. 14, 15, 22-31, and Jan. 1 to Feb. 10; discharge estimated, based on study of 1 discharge measurement, weather records, gage-height graph, and comparison with record on Pequest River at Pequest.

Monthly discharge of Flat Brook near Flatbrookville, N. J., for the year ending September 30, 1925

[Drainage area, 65 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	980	30	101	1.55	1.79
November	116	21	35.8	.551	.61
December	168	----------	66.1	1.02	1.18
January	----------	----------	28.2	.434	.50
February	1,620	----------	247	3.80	3.96
March	364	118	188	2.89	3.33
April	179	75	105	1.62	1.81
May	285	58	104	1.60	1.84
June	95	26	45.5	.700	.78
July	185	23	47.1	.725	.84
August	111	16	40.6	.625	.72
September	43	13	22.8	.351	.39
The year	1,620	13	85.0	1.31	17.75

PAULINS KILL AT BLAIRSTOWN, N. J.

LOCATION.—At highway bridge in Blairstown, Warren County, 200 feet above mouth of Blairs Creek and 9 miles above mouth of Paulins Kill.

DRAINAGE AREA.—128 square miles (measured on State topographic map).

RECORDS AVAILABLE.—October 20, 1921, to September 30, 1925.

GAGE.—Water-stage recorder on right bank just above highway bridge; inspected by Mrs. G. W. Croupe.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Channel sand and gravel. Control riffle of small boulders at downstream side of bridge.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 7.0 feet at 10.30 a. m. February 12 (discharge, about 1,800 second-feet); minimum stage, 1.42 feet several days in November (discharge, 8 second-feet).

1921–1925: Maximum stage recorded, 7.0 feet at 4 p. m. March 8, 1922, and at 10.30 a. m. February 12, 1925 (discharge, about 1,800 second-feet); minimum stage, 1.34 feet at 3 p. m. November 1, 1922 (discharge, about 2.8 second-feet).

ICE.—Stage-discharge relation affected by ice during winter.

REGULATION.—Distribution of flow affected by storage in Swartswood Lake and by water power above station.

ACCURACY.—Stage-discharge relation probably permanent, except when affected by ice. Rating curve well defined below 1,500 second-feet. Daily discharge ascertained by use of discharge integrator, corrected for ice effect during winter. Records good.

Discharge measurements of Paulins Kill at Blairstown, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 23	2.11	81.5	Jan. 28	a 1.92	37.3	Mar. 26	2.93	239
Nov. 7	2.13	74.1	Mar. 5	3.06	279	Apr. 21	2.45	144
Do	1.58	15.3	Mar. 19	4.46	644	Sept. 10	2.00	61
Nov. 8	2.10	70	Mar. 20	4.21	595			
Dec. 11	2.29	108	Do	4.09	567			

a Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Paulins Kill at Blairstown, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	580	69	45			384	286	136	96	98	304	52
2	322	63	41			580	286	128	140	77	269	50
3	228	65	48			384	262	109	113	71	201	53
4	153	62	48			334	239	101	97	62	155	54
5	140	59	54			286	217	97	85	62	137	51
6	120	58	95	50	85	298	195	93	78	72	143	49
7	110	61	153			384	184	85	70	68	145	83
8	130	59	139			359	174	83	67	59	125	98
9	110	53	174			334	174	82	62	107	146	86
10	100	56	147			310	153	77	71	95	410	70
11	95	60	112		647	298	170	112	65	84	359	66
12	91	47	104		1,520	372	174	200	59	70	257	61
13	68	45	95		1,060	346	153	152	55	63	200	63
14	75	47	95		745	310	143	121	51	47	211	114
15	73	51	81	55	643	298		138	64	48	199	128
16	75	50	91		745	250		132	114	58	159	179
17	70	47	72		710	262		123	130	86	133	187
18	73	47	85		550	359	170	118	94	87	122	147
19	63	40	92		463	498		99	72	73	109	119
20	70	26	92		436	580		88	69	56	100	96
21	70	31	70		463	436		84	63	57	96	89
22	70	50	59		550	359	135	75	53	87	101	76
23	70	123	57		643	310	126	73	48	182	93	70
24	71	109	63		643	286	121	101	52	141	82	67
25	70	73	70		580	262	120	251	62	114	75	65
26	65	63	70	65	611	250	126	212	92	139	71	62
27	69	55	64		550	250	124	153	86	210	67	51
28	66	53	50		410	436	110	121	64	153	63	51
29	63	52	51		-------	436	101	109	77	124	59	47
30	67	42	45		-------	372	109	122	103	103	48	49
31	64	-------	47		-------	334	-------	110	-------	119	56	-------

NOTE.—Discharge Oct. 5-11, 20-23, and Apr. 15-21, when recorder was not operating properly, Dec. 25, 26, and Jan. 1 to Feb. 10, when stage-discharge relation was affected by ice, estimated on basis of study of discharge measurement, weather records, gage-height graph, and comparison with records of flow of Pequest River.

Monthly discharge of Paulins Kill at Blairstown, N. J., for the year ending September 30, 1925

[Drainage area, 128 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	580	63	113	0.883	1.02
November	123	26	57.2	.447	.50
December	174	41	80.9	.632	.73
January	----------	----------	56.9	.445	.51
February	1,520	----------	458	3.58	3.72
March	580	250	353	2.76	3.18
April	286	101	169	1.32	1.47
May	251	73	119	.93	1.07
June	140	48	78.4	.613	.68
July	210	47	92.6	.723	.83
August	410	48	151	1.18	1.36
September	187	47	81.1	.634	.71
The year	1,520	26	149	1.16	15.78

PEQUEST RIVER AT PEQUEST, N. J.

LOCATION.—At Pequest station, Warren County, on Lehigh & Hudson River Railroad, 100 feet above railroad bridge, 300 feet below mouth of Furnace Brook, and 6¾ miles above mouth of Pequest River.

DRAINAGE AREA.—108 square miles (measured on State topographic map).

RECORDS AVAILABLE.—November 7, 1921, to September 30, 1925.

GAGE.—Vertical staff attached to face of former bridge abutment on right bank 100 feet above railroad bridge; read by Marcus Beers.

DISCHARGE MEASUREMENTS.—Made by wading or from footbridge 15 feet above gage.

CHANNEL AND CONTROL.—Channel fine gravel. Control riffle of large stones, probably remains of old diversion dam 50 feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 2.91 feet at 5 p. m. February 18 (discharge, 694 second-feet); minimum stage, 0.39 foot at 7.30 a. m. December 15 and January 2 (discharge, 21 second-feet).

1921–1925: Maximum stage recorded, 2.91 feet at 5 p. m. March 19, 1923, and February 18, 1925 (discharge, 694 second-feet); minimum stage, 0.31 foot at 7.30 a. m. September 20 and 21, 1924 (discharge, 16 second-feet).

ICE.—Stage-discharge relation probably not seriously affected by ice.

ACCURACY.—Stage-discharge relation probably permanent. Rating curve well defined. Gage read to hundredths twice a day. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

Discharge measurements of Pequest River at Pequest, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Jan. 27	0.69	47.4	Apr. 23	1.16	121	Sept. 11	0.65	42.1
Apr. 22	1.18	132	Do	1.16	121			

Daily discharge, in second-feet, of Pequest River at Pequest, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	277	36	42	44	44	414	221	109	100	64	262	39
2	221	36	38	28	46	414	208	109	119	58	196	40
3	150	34	46	29	47	414	196	100	129	48	129	36
4	109	34	44	36	47	360	196	100	100	46	100	44
5	86	33	42	46	47	343	172	91	86	54	91	36
6	77	34	119	46	50	309	172	100	71	55	89	38
7	65	36	129	44	53	343	150	87	72	46	91	56
8	62	32	109	44	45	326	150	87	62	46	87	55
9	65	34	140	45	62	309	140	80	66	65	86	50
10	58	32	109	42	119	293	140	80	72	76	119	47
11	59	31	91	44	326	277	150	109	68	62	109	41
12	53	32	84	40	605	309	150	172	65	55	91	42
13	54	34	80	41	378	262	140	119	55	50	89	42
14	50	34	86	43	414	248	129	109	55	48	109	60
15	46	36	42	38	565	234	161	119	53	50	100	79
16	45	32	69	40	645	208	184	109	87	44	74	129
17	50	31	68	44	690	208	161	119	77	53	66	184
18	44	27	77	52	645	262	150	100	68	47	56	119
19	44	31	80	49	605	326	140	89	60	48	56	100
20	42	31	71	48	565	309	140	87	55	53	54	79
21	38	31	36	40	565	277	129	82	55	48	59	68
22	40	62	53	44	565	248	119	77	48	62	60	60
23	40	100	46	46	565	221	119	84	49	59	55	54
24	39	84	55	42	527	208	109	129	47	55	53	53
25	41	65	62	42	508	208	109	277	55	52	50	50
26	42	54	52	44	527	196	109	221	58	62	47	42
27	38	56	48	48	451	184	100	150	53	172	40	45
28	32	53	46	48	432	277	109	129	48	109	47	54
29	36	52	40	42	-------	277	100	119	55	109	42	44
30	37	46	38	44	-------	262	109	119	89	79	42	44
31	33	-------	44	42	-------	234	-------	109	-------	100	43	-------

Monthly discharge of Pequest River at Pequest, N. J., for the year ending September 30, 1925

[Drainage area, 108 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	277	32	66.9	0.619	0.71
November	100	27	42.1	.390	.44
December	140	36	67.3	.623	.72
January	52	28	42.7	.395	.46
February	690	44	362	3.35	3.49
March	414	184	283	2.62	3.02
April	221	100	145	1.34	1.50
May	277	77	115	1.06	1.22
June	129	47	69.2	.641	.72
July	172	44	63.7	.590	.68
August	262	40	83.6	.774	.89
September	184	36	61.0	.565	.63
The year	690	27	115	1.06	14.48

BEAVER BROOK NEAR BELVIDERE, N. J.

LOCATION.—500 feet above mouth of brook and 2 miles east of Belvidere, Warren County.

DRAINAGE AREA.—36 square miles (measured on State topographic map).

RECORDS AVAILABLE.—May 24, 1922, to September 30, 1925.

GAGE.—Water-stage recorder on right bank; inspected by M. F. Hildebrant.

DISCHARGE MEASUREMENTS.—Made by wading or from highway bridge one-fourth mile above gage.

CHANNEL AND CONTROL.—Gravel and ledge rock. Control is solid rock outcrop 25 feet below gage, improved by having rough cavities filled with concrete.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 4.09 feet at noon February 12 (discharge, about 600 second-feet, stage-discharge relation affected by ice); minimum stage, 1.32 feet at noon January 3 (discharge, 4.8 second-feet).

1922–1925: Maximum stage recorded, 3.83 feet at 11 a. m. March 17, 1923 (discharge, 760 second-feet); minimum stage, 1.21 feet September 4, 5, and October 18, 1923 (discharge, 3.1 second-feet).

REGULATION.—Daily distribution of flow often irregular because of operation of small gristmill some distance upstream.

ACCURACY.—Stage-discharge relation not permanent. Rating curves well defined. Operation of water-stage recorder fairly satisfactory. Daily discharge ascertained by applying mean daily gage height to rating table or, for days of considerable fluctuation, by averaging discharge for intervals of day. Records good.

Discharge measurements of Beaver Brook near Belvidere, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 11	1.87	32.5	Sept. 10	1.54	13.0	Sept. 23	1.57	13.7
Jan. 27	*1.66	16.2	Sept. 11	1.51	10.9			

*Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Beaver Brook near Belvidere, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	134	9.7		15			69	36	27	12	100	11
2	80	8.9		12			69	32	24	11	88	11
3	59	8.9	10	9		130	64	29	25	10	70	10
4	49	9.3					59	29	21	9.5	57	10
5	43	8.2	11			110		27	19	12	55	9.2
6	35	8.2	42		17	110		27	17	11	53	10
7	33	9.8	49	18		119		24	15	10	47	15
8	32	7.5	45			110		23	14	12	42	22
9	29	7.2	60			104	50	22	16	16	45	17
10	26	8.2	47			97		21	19	13	61	14
11	23	7.8	32			95		29	14	12	52	12
12	20	8.2	30			104		59	13	10	43	12
13	19	7.8	32			93		42	12	9.8	44	
14	18	7.5	33			89		33	11	8.2	56	
15	17	8.2	29					33	14	7.4	45	
16	14	7.5	28	18	250			31	20	11	37	
17	15		28			100		30	14	12	32	26
18	14		33				50	29	13	10	28	
19	12	7	31					24	11	8.5	26	
20	13		27					22	11	8.2	23	
21	12	7	24			119		21	11	11	25	
22	11	21	26			110		19	11	13	27	
23	11	48	30			100	37	18	9.5	16	23	18
24	11	32	39			91	35	26	8.5	12	21	13
25	11	22	22		190	84	34	78	12	10	18	12
26	11	18	19	17		78	34	56	15	14	16	12
27	9.7	14	15			74	30	43	11	74	15	13
28	10	14	14			100	29	36	10	86	13	14
29	10	13	13			82	30	33	18	64	13	14
30	9.7	12	13			81	30	34	18	49	12	12
31	9.3		14			74		29		64	12	

NOTE.—Discharge estimated Dec. 12, 13, 15, 20–24, 26–30, Jan. 4 to Mar. 4, when stage-discharge relation was affected by ice, and Nov. 17–20, 30, Dec. 1–4, Feb. 9, 16–23, Mar. 15–20, 28, Apr. 5–22, 26, 27, Sept. 6, 13–22, when recorder was not operating properly, discharge determined from study of gage-height graph, 1 discharge measurement, weather record, and records of flow of Pequest River at Pequest and Paulins Kill at Blairstown.

Monthly discharge of Beaver Brook near Belvidere, N. J., for the year ending September 30, 1925

[Drainage area, 36 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	134	9.3	25.8	0.717	0.83
November	48	7.0	12.1	.336	.37
December	60		26.6	.739	.85
January		9	17.1	.475	.55
February			150	4.17	4.34
March		74	101	2.81	3.24
April		29	47.3	1.31	1.46
May	78	18	32.1	.892	1.03
June	27	8.5	15.1	.419	.47
July	86	7.4	20.2	.561	.65
August	100	12	38.7	1.08	1.24
September		9.2	17.4	.483	.54
The year		7.0	41.3	1.15	15.57

MUSCONETCONG RIVER NEAR HACKETTSTOWN, N. J.

LOCATION.—500 feet above Delaware, Lackawanna & Western Railroad bridge half a mile below Saxton Falls Dam of Morris Canal, and 3 miles above Hackettstown, Warren County.

DRAINAGE AREA.—70 square miles (measured on State topographic map).

RECORDS AVAILABLE.—September 24, 1921, to September 30, 1925.

GAGE.—Water-stage recorder on left bank installed August 21, 1923; inspected by Clifford Strand and Roy Mattison.

DISCHARGE MEASUREMENTS.—Made from railroad bridge or by wading.

CHANNEL AND CONTROL.—Channel of coarse gravel. Control, coarse gravel riffle 75 feet below gage; probably permanent.

EXTREMES OF DISCHARGE.—Maximum stage from water-stage recorder, 5.12 feet at 1 p. m. February 12 (discharge, about 1,080 second-feet); minimum stage, 1.14 feet at 2 p. m. June 8 (discharge, 5 second-feet).

1921–1925: Maximum stage recorded, 5.12 feet at 1 p. m. February 12, 1925 (discharge, about 1,080 second-feet); minimum stage, 1.05 feet at 5.30 p. m. May 1, 1922 (discharge, about 3 second-feet).

ICE.—Stage-discharge relation affected by ice during winter.

DIVERSIONS.—Lake Hopatcong, about 9 miles above this station, was formerly the source of supply for the Morris Canal. Navigation was abandoned in the canal by act of the State legislature March 13, 1924, after which date there was no diversion.

REGULATION.—Distribution of flow is affected by operation of sluice gates at Lake Hopatcong and possibly at other structures of the former Morris Canal. See "Diversions."

ACCURACY.—Stage-discharge relation permanent except as affected by ice. Rating curve well defined between 10 and 450 second-feet. Operation of water-stage recorder fairly satisfactory. Daily discharge ascertained by applying to rating table mean daily gage height determined by inspection of gage-height record or, for days of considerable fluctuation, by averaging discharge for intervals of the day. Records good.

Discharge measurements of Musconetcong River near Hackettstown, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 6	1.38	17.1	Jan. 29	[a]2.45	32.0	Sept. 11	2.32	125
Do	2.04	84	Apr. 8	1.97	83.2			
Do	2.02	82	Sept. 11	2.31	128			

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Musconetcong River near Hackettstown, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	290	16	23				115	58	68	38	184	16
2	202	14	20			275	107	58	115	30	123	16
3	160	14	20				100	53	85	28	78	16
4	150	15	20				79	47	66	30	48	16
5	141	16	24	23	46	214	100	49	58	30	45	
6	132	18	59			250	100	45	53	30	46	
7	123	15	66			276	100	43	50	27	42	52
8	123	16	63			263	77	40	31	27	38	
9	123	17	71			250	85	37	19	28	38	
10	115	17	62		220	238	78	36	42	29	44	

Daily discharge, in second-feet, of Musconetcong River near Hackettstown, N. J., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11	68	17	53		800	225	85	50	32	36	42	52
12	50	17	48		990	238	85	107	26	21	38	
13	49	16	47		945	225	78	68	25	20	37	170
14	39	18	51		690	214	67	59	25	18	48	191
15	31	24	45	27	412	202	79	54	27	18	44	202
16	27	21	43		379	191	107	68	52	20	38	225
17	28	19	43		518	191	85	62	42	33	32	238
18	29	16	32		263	202	78	68	34	33	30	225
19	28	16	34		214	250	75	63	29	26	28	214
20	26	15	36		214	276	70	47	28	23	26	225
21	22	15			191	263	66	41	27	23	25	202
22	20	32			202	263	59	39	24	31	26	191
23	19	71			238	290	57	35	23	42	24	138
24	18	60			276	290	53	68	20	34	22	78
25	17	48				225	55	202	24	28	21	44
26	17	37	21	40	260	191	57	141	28	38	22	41
27	18	30				170	54	115	26	60	20	40
28	18	41				191	48	92	23	49	18	50
29	19	35			-------	290	49	85	46	59	17	28
30	21	24			-------	290	52	85	51	50	17	36
31	17	-------	13		-------	160	-------	76	-------	53	16	------

NOTE.—Stage-discharge relation affected by ice Dec. 15, 16, 21–30, Jan. 1 to Feb. 11, and water-stage recorder did not operate Feb. 25 to Mar. 4 and Sept. 5–12. Discharge for these periods estimated by study of discharge measurement, weather records, and comparison with flow of Musconetcong River near Bloomsbury.

Monthly discharge of Musconetcong River near Hackettstown, N. J., for the year ending September 30, 1925

[Drainage area, 70 square miles]

Month	Discharge in second-feet			Month	Discharge in second-feet		
	Maximum	Minimum	Mean		Maximum	Minimum	Mean
October	290	17	69.0	May	202	35	67.4
November	71	14	24.3	June	115	19	40.0
December	71	-------	34.9	July	60	18	32.6
January	-------	-------	30.3	August	184	16	41.2
February	990	-------	279	September	238	-------	101
March	-------	160	240				
April	115	48	76.7	The year	990	-------	85.0

MUSCONETCONG RIVER NEAR BLOOMSBURY, N. J.

LOCATION.—At highway bridge 1½ miles above Bloomsbury, Hunterdon County, and 9 miles above mouth.

DRAINAGE AREA.—143 square miles (measured on State topographic map).

RECORDS AVAILABLE.—July 4, 1903, to March 31, 1907; July 26, 1921, to September 30, 1925.

GAGE.—Water-stage recorder on right bank just below bridge; inspected by Howard Person.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Channel gravel. Control gravel riffle 150 feet below gage. Banks are overflowed at high stages.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 5.90 feet at 11 p. m. February 11 (discharge, about 2,050 second-feet); minimum stage, 0.73 foot at 1 p. m. November 18 (discharge, 30 second-feet.

1903–1907; 1921–1925: Maximum stage recorded, 8.0 feet October 10 or 11, 1903 (discharge, not determined); minimum discharge, 21 second-feet November 19, 1921.

ICE.—Stage-discharge relation affected by ice.

DIVERSION AND STORAGE.—Lake Hopatcong at head of Musconetcong River was formerly the source of supply for Morris Canal. Through this canal water passed westward to Delaware River at Phillipsburg and eastward down Passaic Valley to Newark. Water left in the Musconetcong by the canal was measured by the gaging station near Hackettstown. Navigation in the canal was abandoned by act of the State legislature March 13, 1924, when diversion was discontinued. Gates at the outlet of the lake have since been used to regulate the flow of the river to some extent.

REGULATION.—Distribution of flow affected by several small water powers above station.

ACCURACY.—Stage-discharge relation practically permanent except when affected by ice. Rating curve fairly well defined between 75 and 1,000 second-feet. Operation of water-stage recorder satisfactory. Daily discharge ascertained by use of discharge integrator. Records good.

COOPERATION.—Station established in cooperation with the Warren Manufacturing Co.

Discharge measurements of Musconetcong River near Bloomsbury, N. J., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 16	1.14	88	Aug. 31	0.93	47.4
Feb. 5	1.22	104	Do	1.23	100

Daily discharge, in second-feet, of Musconetcong River near Bloomsbury, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	527	63	78	66	80	473	261	155	148	104	400	
2	330	67	66	65	89	605	242	151	157	89	280	
3	255	75	73	80	93	472	230	133	170	86	190	75
4	225	73	74	116	85	431	207	145	140	74	160	
5	215	68	81	80	80	383	196	135	127	93	130	
6	209	70	145	75	74	433	208	131	113	91	121	66
7	193	74	132	82	70	456	204	130	107	85	121	111
8	190	66	131	77	79	431	194	122	114	79	114	95
9	184	60	152	85	95	406	181	114	95	85	219	84
10	182	77	132	74	306	382	188	110	103	103	241	90
11	164	67	116	70	1,240	373	199	177	102	80	157	153
12	126	73	113	83	1,580	391	186	217	88	79	123	179
13	118	65	100	70	955	364	189	184	81	81	137	211
14	101	78	102	65	693	352	172	154	75	66	139	271
15	87	65	92	60	718	337	239	147	86	69	130	258
16	92	62	93	65	707	319	229	140	142	74	117	400
17	85	78	102	79	598	332	204	160	115	86	120	441
18	72	75	93	80	487	355	181	151	101	82	106	315
19	78	60	85	85	432	499	177	152	90	76	102	283
20	91	69	78	80	426	448	181	138	73	78	100	291
21	82	66	75	76	412	415	165	121	79	74	96	287
22	88	107	70	70	444	418	160	113	87	90	100	259
23	72	148	70	70	497	424	156	106	81	108	88	235
24	70	126	95	65	530	424	149	160	74	93	94	173
25	65	107	91	75	468	381	140	319	77	81	87	132
26	65	93	85	88	565	336	136	264	85	105	96	101
27	78	77	75	83	441	311	153	208	75	147	83	97
28	69	76	70	75	454	356	137	178	72	152	84	112
29	74	100	70	70	-------	378	141	174	109	155	76	108
30	77	75	73	70	-------	409	144	164	131	120	71	94
31	78	-------	73	75	-------	341	-------	155	-------	277	79	------

NOTE.— Dec. 21-23, 26-29; Jan. 2, 3, 14-16, 22-25, 28-31, and Feb. 1, when stage-discharge relation was affected by ice and Sept. 1-5 when gage was not operating properly the discharge was estimated by studying the weather records, observer's notes, and comparison with flow of Musconetcong River near Hackettstown.

Monthly discharge of Musconetcong River near Bloomsbury, N. J., for the year ending September 30, 1925

[Drainage area, 143 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	527	65	140	0.979	1.13
November	148	60	78.7	.550	.61
December	152	66	93.1	.651	.75
January			75.9	.531	.61
February	1,580	70	453	3.17	3.30
March	605	311	401	2.80	3.23
April	261	136	185	1.29	1.44
May	319	106	158	1.10	1.27
June	170	72	103	.720	.80
July	277	66	98.8	.691	.80
August	400	71	134	.937	1.08
September	441		174	1.22	1.36
The year	1,580	60	173	1.21	16.38

ASSUNPINK CREEK AT TRENTON, N. J.

LOCATION.—At Chambers Street Bridge in Trenton, Mercer County, 1½ miles above mouth.

DRAINAGE AREA.—89 square miles (measured on State topographic map).

RECORDS AVAILABLE.—July 20, 1923, to September 30, 1925.

GAGE.—Water-stage recorder on left bank 50 feet above Chambers Street Bridge; operated by engineers of United States Geological Survey.

DISCHARGE MEASUREMENTS.—Made by wading or from Monmouth Street Bridge 400 feet below gage.

CHANNEL AND CONTROL.—Channel, sand and gravel. Control is bar of gravel and large stone placed 40 feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 6.89 feet at 11 p. m. February 11 (discharge, 1,900 second-feet); minimum stage 1.71 feet at 4 p. m. August 16 (discharge, 9 second-feet).

1923–1925: Maximum stage recorded, 7.85 feet at 4 a. m. April 7, 1924 (discharge, 2,400 second-feet); minimum stage, 1.71 feet at 4 p. m. August 16, 1925 (discharge, 9 second-feet).

ICE.—Stage-discharge relation not affected by ice because water is used for condensing at steam power plant just above gage.

REGULATION.—Large daily fluctuations in flow at low stages due to water powers upstream.

ACCURACY.—Stage-discharge relation not permanent. Rating curve used through June 30 well defined between 10 and 2,200 second-feet; curve used thereafter well defined between 15 and 200 second-feet. Operation of water-stage recorder satisfactory. Daily discharge ascertained by use of discharge integrator. Records good.

The following discharge measurements were made:

May 14, 1925: Gage height, 2.60 feet; discharge, 122 second-feet.

May 15, 1925: Gage height, 1.96 feet; discharge, 22.2 second-feet.

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Daily discharge, in second-feet, of Assunpink Creek at Trenton, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	380	23	63	27	148	194	132	112	54	26	41	18
2	214	38	59	45	147	497	130	104	37	27	56	25
3	196	54	51	34	161	278	125	88	14	21	72	29
4	180	34	49	51	155	244	102	80	21	19	61	22
5	158	34	66	56	138	224	95	54	23	21	67	16
6	131	46	176	44	131	190	88	60	38	27	43	12
7	91	48	155	53	151	160	64	45	16	29	42	33
8	76	25	135	48	195	150	64	41	43	27	20	41
9	71	37	162	48	325	139	58	41	18	45	29	24
10	72	48	140	31	1,180	135	64	29	23	48	54	26
11	48	53	107	38	1,540	113	112	58	27	42	36	25
12	51	44	84	52	1,210	128	107	74	26	31	33	17
13	65	44	66	48	585	73	93	66	23	50	34	19
14	49	44	93	43	346	79	82	59	11	20	31	40
15	46	20	59	35	318	86	125	42	38	27	27	25
16	48	36	52	44	311	81	114	30	18	31	14	53
17	37	40	55	76	241	84	98	32	32	35	29	57
18	29	48	60	190	194	118	91	49	25	24	18	36
19	44	35	60	133	163	220	84	29	31	15	22	32
20	52	34	59	103	154	174	88	37	26	35	18	29
21	54	27	52	102	109	152	74	32	14	24	20	26
22	39	37	49	100	115	131	66	27	33	32	12	28
23	41	98	41	95	132	103	59	43	20	28	11	32
24	44	108	79	52	136	76	54	26	25	28	34	16
25	20	87	140	84	119	68	48	88	23	30	25	33
26	39	86	100	81	154	63	45	84	34	48	26	23
27	54	85	65	73	139	114	59	48	18	74	19	15
28	42	79	40	58	103	234	58	52	18	42	25	28
29	49	59	38	57	-------	194	86	47	32	47	16	29
30	41	58	38	126	-------	181	93	23	24	28	12	17
31	42	-------	48	154	-------	155	-------	37	-------	48	14	-------

NOTE.—Discharge estimated Dec. 17–19 and 25–30; based on study of hydrograph and comparison with record on Lawrence Brook at Patricks Corner.

Monthly discharge of Assunpink Creek at Trenton, N. J., for the year ending September 30, 1925

[Drainage area, 89 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	380	20	80.7	0.907	1.05
November	108	20	50.3	.565	.63
December	176	38	78.7	.884	1.02
January	190	27	70.4	.791	.91
February	1,540	103	314	3.53	3.68
March	497	63	156	1.75	2.02
April	132	45	85.3	.958	1.07
May	112	23	52.8	.593	.68
June	54	11	26.2	.294	.33
July	74	15	33.2	.373	.43
August	72	11	31.0	.348	.40
September	57	12	27.5	.309	.34
The year	1,540	11	82.4	.926	12.56

NORTH BRANCH OF RANCOCAS CREEK AT PEMBERTON, N. J.

LOCATION.—Near highway bridge at Pemberton, Burlington County, 11 miles above confluence with South Branch.

DRAINAGE AREA.—111 square miles (measured on State topographic map).

RECORDS AVAILABLE.—September 15, 1921, to September 30, 1925.

GAGE.—Water-stage recorder on left bank 800 feet downstream from highway bridge; inspected by William Jones.

DISCHARGE MEASUREMENTS.—Made from highway bridge, from boat near gage, or by wading.

CHANNEL AND CONTROL.—Sand, shifting. Banks are overflowed at high stages. This station has a channel control.

REGULATION.—Distribution of flow greatly affected by operation of gristmill at Pemberton and regulation of its pond.

ACCURACY.—Stage-discharge relation not permanent. An arbitrary curve assumed for base rating. Daily discharge ascertained by applying variable correction to mean daily gage height and then applying corrected gage height to base rating. Variable correction determined from periodic discharge measurements. Records fair.

Discharge measurements of North Branch of Rancocas Creek at Pemberton, N. J., during the year ending September 30, 1925

Date	Gage height		Discharge		Date	Gage height		Discharge	
	Mean	Rate of change	Measured	Reduced to constant stage		Mean	Rate of change	Measured	Reduced to constant stage
	Feet	*Feet per hour*	*Sec.-ft.*	*Sec.-ft.*		*Feet*	*Feet per hour*	*Sec.-ft.*	*Sec.-ft.*
Oct. 8	1.63	−0.39	90	163	Mar. 10	1.88	+0.22	159	141
Do	1.28	−.27	68	104	Apr. 20	1.77	−.01	143	144
Do	1.19	−.30	67	107	May 20	.64	−.174	56	64
Nov. 12	.74	−.12	56	63	Do	.58	−.04	63	----
Do	.73	+.147	72	65	June 16	.82	+.048	77	75
Do	.75	−.042	60	62	Do	.83	+.02	75	----
Dec. 3	1.08	+.02	82	----	June 17	.36	+.144	56	53
Do	1.08	+.014	84	----	Do	.54	----	63	----
Jan. 8	.94	+.14	81	74	July 21	.96	+.02	76	----
Feb. 13	2.72	+.15	216	----	Aug 24	.76	−.034	65	67

Daily discharge, in second-feet, of North Branch of Rancocas Creek at Pemberton, N. J., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	259	91	91	102	271	182	136	163	120	34	365	84
2	365	61	112	105	271	284	136	154	105	38	336	70
3	192	77	102	105	271	259	120	154	77	38	284	56
4	163	67	98	98	247	235	98	182	61	38	224	84
5	172	74	120	94	202	213	102	336	84	74	259	70
6	182	67	172	102	182	202	105	323	67	61	271	58
7	145	80	136	98	192	192	105	213	70	50	284	46
8	172	80	154	98	182	163	105	136	67	58	192	61
9	163	70	154	98	192	154	105	163	58	202	182	67
10	128	77	128	94	235	145	112	128	56	224	182	70
11	182	74	112	94	259	145	145	145	56	154	284	61
12	145	77	98	102	284	145	112	284	48	120	213	58
13	120	80	105	94	259	136	136	145	58	91	145	58
14	105	74	105	94	224	136	128	105	61	74	120	74
15	136	74	105	94	213	128	128	172	70	58	128	67
16	98	80	105	105	202	120	128	98	64	48	120	77
17	120	77	112	112	192	128	105	102	53	105	112	84
18	98	77	105	136	182	145	136	94	53	120	88	91
19	105	67	98	154	182	182	145	77	48	102	98	70
20	105	67	91	192	163	128	163	64	56	91	80	67
21	112	61	91	172	154	136	163	61	88	70	84	64
22	98	120	91	192	145	136	163	61	74	61	112	58
23	98	182	88	202	145	136	154	61	56	98	94	64
24	102	182	163	202	145	128	145	58	56	98	84	56
25	91	154	120	182	145	120	182	70	74	80	67	48
26	91	145	130	192	163	120	192	105	56	120	64	48
27	98	112	136	182	154	136	120	105	48	163	74	46
28	74	94	120	145	154	154	136	105	40	112	64	48
29	91	136	70	202	----	136	145	128	50	120	64	56
30	80	136	88	310	----	154	163	145	36	80	64	50
31	74	----	84	247	----	154	----	154	----	154	70	----

NOTE.—Discharge Mar. 8–11 and 26–28 estimated; based on study of gage-height graph.

Monthly discharge of North Branch of Rancocas Creek at Pemberton, N. J., for the year ending September 30, 1925

[Drainage area, 111 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	365	74	134	1.21	1.40
November	182	61	93.8	.845	.94
December	172	70	112	1.01	1.16
January	310	94	142	1.28	1.48
February	284	145	200	1.80	1.87
March	284	120	159	1.43	1.65
April	192	98	134	1.21	1.35
May	336	58	138	1.24	1.43
June	120	36	63.7	.574	.64
July	224	34	94.7	.853	.98
August	365	64	155	1.40	1.61
September	91	46	63.7	.574	.64
The year	365	34	124	1.12	15.15

SUSQUEHANNA RIVER BASIN

SUSQUEHANNA RIVER AT COLLIERSVILLE, N. Y.

LOCATION.—A quarter of a mile below dam and power plant of New York State Gas & Electric Corporation, half a mile north of Colliersville, Otsego County, and 1 mile above mouth of Schenevus Creek.

DRAINAGE AREA.—353 square miles (measured on topographic maps).

RECORDS AVAILABLE.—July 22, 1924, to September 30, 1925.

GAGE.—Gurley 7-day graph water-stage recorder on right bank; inspected by operators from power plant.

DISCHARGE MEASUREMENTS.—Made from cable 75 feet below gage or by wading.

CHANNEL AND CONTROL.—Bed is of coarse gravel and control is of the multiple type approaching conditions of channel control. Control points may be expected to shift under extreme conditions of stage.

EXTREMES OF DISCHARGE.—Maximum stage from water-stage recorder during period July 22, 1924, to September 30, 1925, 6.09 feet at 6 p. m. February 12, 1925 (discharge, 3,610 second-feet); minimum stage, 1.28 feet at 9 a. m. May 23 (discharge, 13 second-feet).

ICE.—Stage-discharge relation not affected by ice.

REGULATION.—During large parts of year the daily flow is completely regulated by power-plant operation. On account of small amount of storage this regulation can extend only over very short periods.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve fairly well defined between 25 and 2,500 second-feet. Daily discharge ascertained by discharge integration except for days of slight change in stage when mean gage heights are determined from inspection of gage-height graph and mean discharge obtained by direct application to rating table. Records good.

Discharge measurements of Susquehanna River at Colliersville, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 6	3.14	715	Mar. 31	4.64	1,990	June 9	2.21	288
Oct. 21	2.64	503	Apr. 18	2.69	501	July 21	2.04	195
Nov. 13	1.44	30.9	Apr. 23	3.94	1,280	July 22	1.62	63.4
Dec. 12	2.18	300	May 5	3.14	642	Do	2.79	553
Mar. 13	4.24	1,630	May 27	2.62	517	Aug. 7	2.39	343

Daily discharge, in second-feet, of Susquehanna River at Colliersville, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,600	164	184	184	180	1,500	1,820	758	298	991	168	134
2	1,670	70	176	222	438	2,210	1,700	865	309	759	190	109
3	1,200	175	288	247	172	1,860	1,590	613	506	524	155	115
4	896	175	160	190	124	1,640	1,500	776	313	583	175	125
5	705	170	177	233	123	1,500	1,340	817	220	551	205	134
6	618	215	433	245	122	1,420	1,300	822	241	676	210	139
7	470	180	127	230	384	1,420	1,120	738	139	417	260	502
8	487	140	511	150	373	1,380	975	771	191	411	214	227
9	562	90	328	184	257	1,540	925	685	240	380	103	129
10	528	200	504	190	534	1,420	867	435	383	456	504	152
11	448	187	242	352	1,240	1,460	879	677	196	478	536	144
12	315	169	277	66	3,070	1,640	670	516	190	294	293	192
13	514	66	353	186	2,870	1,460	816	469	154	274	344	611
14	382	72	152	203	2,000	1,820	754	495	105	223	357	1,190
15	255	114	284	192	1,650	2,860	667	500	210	220	409	882
16	315	89	272	232	1,530	2,520	696	456	440	415	244	685
17	340	156	562	298	1,380	2,160	648	400	237	147	305	465
18	261	149	378	135	1,250	2,110	476	437	207	283	257	491
19	226	91	562	168	1,130	2,210	500	386	197	238	216	339
20	321	66	561	212	1,060	2,210	1,400	359	129	178	198	287
21	265	64	194	175	1,040	1,940	1,380	151	251	259	269	502
22	251	563	247	146	1,280	1,770	1,280	213	124	405	256	301
23	215	593	231	66	1,980	1,680	1,190	323	112	223	136	249
24	242	540	246	226	2,990	1,460	1,100	375	161	228	238	282
25	246	202	258	80	3,020	1,420	1,060	343	536	187	299	282
26	94	176	276	381	2,740	1,340	947	394	435	364	239	230
27	218	211	287	154	2,160	1,280	995	414	347	465	212	164
28	205	230	200	90	1,770	1,820	856	191	400	238	129	281
29	216	261	259	100	-------	1,700	792	353	868	179	72	251
30	236	200	252	125	-------	1,720	633	362	1,140	208	45	217
31	180	-------	233	232	-------	1,860	-------	343	-------	222	80	------

NOTE.—Discharge Oct. 3, 17, Nov. 2-10, 30, Jan. 25, 28-30, Feb. 22, Mar. 1, 28, May 17, June 14-16, Aug. 2-7, 30, and 31, estimated largely from records of power operation; gage-height record either faulty or missing.

Monthly discharge of Susquehanna River at Colliersville, N. Y., for the year ending September 30, 1925

[Drainage area, 353 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	2,600	94	499	1.41	1.63
November	593	64	193	.547	.61
December	562	127	297	.841	.97
January	381	66	190	.538	.62
February	3,070	122	1,320	3.74	3.90
March	2,860	1,280	1,750	4.96	5.72
April	1,820	476	1,030	2.92	3.26
May	865	151	498	1.41	1.63
June	1,140	105	309	.875	.98
July	991	147	370	1.05	1.21
August	536	45	236	.669	.77
September	1,190	109	327	.926	1.03
The year	3,070	45	580	1.64	22.33

SUSQUEHANNA RIVER AT CONKLIN, N. Y.

LOCATION.—At steel highway bridge just below Conklin, Broome County, 5 miles below Big Snake Creek and 9 miles above mouth of Chenango River at Binghamton.

DRAINAGE AREA.—2,350 square miles.

RECORDS AVAILABLE.—November 13, 1912, to September 30, 1925.

GAGE.—Gurley printing water-stage recorder on left bank just below highway bridge; inspected by Mrs. Helena M. Smith.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Coarse gravel and boulders; shifting occasionally.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 17.04 feet at 7 a. m. February 12 (discharge, 44,900 second-feet); minimum stage, 2.44 feet at 9 p. m. November 16 (discharge, 429 second-feet).

1912–1925: Maximum stage recorded, 18.3 feet on morning of March 28, 1913 (discharge, 52,000 second-feet); minimum stage, 1.32 feet at 8.20 a. m. and 4 p. m. September 16, 1913 (discharge, 106 second-feet).

ICE.—Stage-discharge relation affected by ice.

ACCURACY.—Stage-discharge relation permanent except as affected by ice. Rating curve well defined. Operation of water-stage recorder satisfactory except as indicated in footnote to daily-discharge table. Chain gage on bridge read during periods when recorder was out of operation. Daily discharge ascertained by applying to rating table mean daily gage height determined by averaging the hourly gage heights or, for days of considerable fluctuation, by averaging the hourly discharge. Records good, except during periods of ice effect and estimate, for which they are fair.

Discharge measurements of Susquehanna River at Conklin, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 20	3.42	1,280	Mar. 14	6.39	6,400	July 20	3.57	1,490
Dec. 11	4.44	2,630	Apr. 17	5.32	4,030	Aug. 6	3.31	1,120
Jan. 17	[a] 3.72	908	June 10	3.25	1,120			

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Susquehanna River at Conklin, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41,300	823	1,400	1,100	800	9,240	10,000	4,040	1,750	4,640	1,630	593
2	32,700	798	1,300	1,000	800	9,240	9,240	4,640	1,570	3,590	1,510	472
3	15,400	772	1,200	1,000	750	9,240	9,240	4,640	1,570	2,750	1,400	484
4	8,280	668	1,200	1,100	750		8,280	3,860	1,570	2,280	1,240	510
5	6,170	645	1,200	1,100	750	7,200	7,100	3,950	1,510	2,360	1,150	558
6	4,740	652	1,200	1,100	750		5,940	4,330	1,240	2,280	1,170	586
7	3,950	660	1,400	1,100	850	5,060	5,500	4,230	1,060	2,210	1,970	715
8	3,330	645	2,200	1,000	1,000	5,940	4,640	3,950	958	1,810	2,590	1,010
9	3,240	593	2,600	1,100	1,200	6,860	3,860	3,590	1,120	1,630	2,550	1,810
10	2,990	615	3,000	1,100	10,000	6,860	3,330	3,240	1,080	2,210	3,860	1,270
11	2,590	530	2,600	1,000	25,000	6,400	3,500	3,590	1,160	3,500	3,330	1,023
12	2,280	544	2,200	1,000	42,200	7,100	3,680	4,330	1,230	2,990	3,860	900
13	2,070	600	1,900	950	34,600	6,860	3,330	3,950	978	1,940	3,080	2,490
14	1,880	615	1,700	950	22,500	6,400	3,160	3,240	849	1,450	3,840	8,410
15	1,810	544	1,600	900	14,900	10,500	3,330	2,750	806		4,190	9,240
16	1,570	504	1,700	900	12,100	11,500	4,430	2,510	731	1,600	2,990	8,520
17	1,450	504	1,800	900	10,800	8,760	4,140	2,440	787		2,280	6,630
18	1,400	524	2,600	900		8,280	3,500	2,510	1,510	1,690	1,880	4,740
19	1,340	498	3,400	850	6,500	9,000	3,430	2,360	1,220	1,570	1,690	3,860
20	1,260	504	4,200	850		9,500	7,800	2,000	940	1,400	1,510	3,240

Daily discharge, in second-feet, of Susquehanna River at Conklin, N. Y., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
21	1,170	498	3,800	850	5,720	8,280	10,800	1,810	840	1,200	1,400	3,240
22	1,180	1,110	2,200	800	7,100	6,860		1,630	723	3,100	1,400	3,080
23	1,120	6,040	1,700	800	11,700	5,940	7,500	1,340	798	5,280	1,400	2,590
24	1,060	6,630	1,500	800	17,700	5,280		1,400	707	3,720	1,280	2,000
25	1,020	4,330	1,300	750	19,400	4,640	4,840	1,880	731	2,440	1,040	1,810
26	987	2,910	1,300	750	16,800	4,430	5,940	2,140	876	1,810	1,020	1,630
27	968	2,210	1,200	850	13,100	4,230	5,500	1,940	1,850	3,310	987	1,450
28	840	1,880	1,100		9,740	8,520	4,430	1,750	1,810	3,860	921	1,400
29	858	1,600	1,100	750		10,800	3,680	1,630	1,680	2,910	832	1,340
30	858	1,500	1,100			8,760	3,500	1,570	3,210	2,360	723	1,340
31	832		1,100	800		9,740		1,940		1,940	707	

NOTE.—Discharge Dec. 19, Jan. 28–30, Feb. 18–20, Mar. 4–6, Apr. 22–24, and July 15–17, estimated as indicated in above table; no gage-height record. Discharge Nov. 29 to Feb. 11 determined from gage heights corrected for ice effect from 1 discharge measurement, study of gage-height graph and weather records and comparison with records of streams in adjacent drainage areas. Chain-gage readings used Nov. 29 to Dec. 10, Dec. 20–27, Mar. 7 to Apr. 15, and July 18.

Monthly discharge of Susquehanna River at Conklin, N. Y., for the year ending September 30, 1925

[Drainage area, 2,350 square miles]

Month	Discharge in second-feet				Ruu-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	41,300	832	4,860	2.07	2.39
November	6,630	498	1,360	.579	.65
December	4,200	1,100	1,860	.792	.91
January	1,100		921	.392	.45
February	42,200	750	10,700	4.55	4.74
March	11,500	4,230	7,610	3.24	3.74
April	10,800	3,160	5,620	2.39	2.67
May	4,640	1,340	2,880	1.23	1.42
June	3,210	707	1,230	.523	.58
July	5,280	1,200	2,480	1.06	1.22
August	4,190	707	1,920	.817	.94
September	9,240	472	2,560	1.09	1.22
The year	42,200	472	3,620	1.54	20.93

SUSQUEHANNA RIVER AT HARRISBURG, PA.

LOCATION.—At 15-span highway bridge at Walnut Street, Harrisburg, Dauphin County.

DRAINAGE AREA.—24,100 square miles.

RECORDS AVAILABLE.—January 1, 1891, to September 30, 1925. Records for January 1, 1914, to September 30, 1918, and October 1, 1921, to September 30, 1924, are contained in annual report of the Water Supply Commission of Pennsylvania.

GAGE.—Chain attached to upstream side of bridge; read by employees of State department of forests and waters. Elevation of gage zero, 289.4 feet (United States Geological Survey datum).

DISCHARGE MEASUREMENTS.—Made from downstream side of bridge.

CHANNEL AND CONTROL.—Banks high and not subject to overflow. Bed is composed of gravel and boulders. A low dam 4,200 feet below gage, built in 1916, is control for all except high stages.

EXTREMES OF DISCHARGE.—Maximum stage during year, 18.8 feet from 7.15 to 8.50 a. m. February 13 (discharge, 378,800 second-feet); minimum stage recorded, 3.13 feet at 4.10 p. m. September 11 (discharge, 3,540 second-feet).

1891–1925: Maximum stage during period determined from high-water mark, by level, 25.7 feet May 22, 1894 (discharge, about 613,000 second-feet); minimum stage recorded, −0.04 foot September 28 and 29, 1900 (discharge, about 2,300 second-feet, including flow in "Pennsylvania Canal" of about 360 second-feet).

ICE.—Stage-discharge relation usually affected by ice.

ACCURACY.—Stage-discharge relation permanent except when affected by ice. Rating curve well defined between 4,000 and 330,000 second-feet. Gage read to hundredths twice daily; during high stages more frequently. Daily discharge ascertained by applying to rating table—mean daily gage height, corrected for ice effect when necessary. Records very good.

COOPERATION.—Records furnished by the department of forests and waters, State of Pennsylvania.

The following discharge measurements were made:

October 21, 1924: Gage height, 3.78 feet; discharge, 10,300 second-feet.

September 3, 1925: Gage height, 3.18 feet; discharge, 4,070 second-feet.

Daily discharge, in second-feet, of Susquehanna River at Harrisburg, Pa., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	218,800	7,200	9,500	6,500	6,500	60,000	49,300	22,500	22,500	7,200	15,000	4,280
2	202,800	7,200	9,000	6,000	6,500	50,000	47,200	24,100	20,900	9,200	15,000	4,370
3	159,000	6,960	8,500	6,000	8,000	42,000	45,100	25,800	18,600	9,600	13,600	4,020
4	112,800	6,840	9,000	7,000	9,000	36,000	43,000	29,300	18,600	12,200	12,200	3,940
5	73,200	6,840	9,000	9,000	9,000	34,000	40,900	33,000	17,900	15,000	10,900	3,940
6	51,400	6,720	9,500	9,500	9,500	31,100	36,900	31,100	17,200	12,900	9,600	3,860
7	38,900	6,480	9,500	10,000	10,000	31,100	33,000	31,100	15,000	12,900	9,600	3,940
8	31,100	6,240	9,600	10,000	12,000	31,100	29,300	36,900	13,600	12,900	9,600	3,780
9	27,500	6,120	10,900	9,500	16,000	31,100	27,500	33,000	13,600	12,200	9,600	3,620
10	22,500	6,120	10,900	10,000	26,000	33,000	25,800	31,100	12,200	12,900	12,200	3,700
11	20,900	6,000	12,200	9,500	101,800	36,900	22,500	29,300	11,600	12,200	15,000	3,620
12	19,400	6,000	16,400	9,000	332,500	38,900	20,900	47,200	12,200	10,900	15,000	3,860
13	17,900	6,000	16,400	8,500	363,300	40,900	20,900	57,800	10,900	9,600	13,600	4,100
14	16,400	5,800	15,000	8,500	281,500	40,900	20,900	53,500	9,600	11,600	12,200	5,000
15	15,000	5,800	14,000	8,000	177,700	40,900	20,200	49,300	9,200	12,200	11,600	7,200
16	14,300	5,900	14,000	7,000	132,600	38,900	20,200	40,900	9,200	10,900	12,900	7,800
17	13,600	5,900	14,000	7,000	106,200	47,200	19,400	36,900	8,400	11,600	12,200	9,600
18	12,200	5,800	13,000	6,500	84,200	51,400	18,600	34,900	8,400	10,200	11,600	18,600
19	12,200	5,500	13,000	7,000	71,000	47,200	19,400	34,900	8,400	9,200	12,200	17,900
20	11,600	5,500	13,000	8,000	57,800	47,200	19,400	31,100	7,200	8,400	10,200	16,400
21	10,900	6,000	19,000	7,000	49,300	55,600	19,400	29,300	6,600	7,800	9,600	13,600
22	9,600	6,480	22,000	6,500	47,200	60,000	20,900	27,500	6,480	8,400	9,200	11,600
23	9,600	8,400	22,000	7,000	47,200	53,500	34,900	24,100	6,240	13,600	7,800	10,900
24	9,600	10,200	18,000	7,000	60,000	45,100	31,100	22,500	6,480	16,400	7,200	10,200
25	9,200	11,600	13,000	7,000	95,200	40,900	27,500	25,800	6,960	17,200	6,960	9,600
26	8,400	10,900	9,000	7,000	106,200	34,900	24,100	33,000	6,720	19,400	6,120	9,600
27	8,400	17,200	8,000	7,000	97,400	33,000	22,500	36,900	5,800	18,600	6,000	8,400
28	8,400	15,700	8,000	7,000	80,000	33,000	22,500	34,900	7,800	15,700	5,600	7,200
29	8,400	12,900	9,000	6,500	-------	36,900	25,800	31,100	8,400	14,300	5,300	6,720
30	7,800	10,900	8,000	6,500	-------	45,100	24,100	29,300	8,400	13,600	5,000	6,240
31	7,800	-------	7,000	6,500	-------	51,400	-------	25,800	-------	14,300	4,640	-------

NOTE.—Stage-discharge relation affected by ice Nov. 19–21, Dec. 15 to Feb. 10, and Feb. 28 to Mar. 5; estimated discharge based on study of weather records, gage-height graph, and comparison with record of flow at Holtwood.

Monthly discharge of Susquehanna River at Harrisburg, Pa., for the year ending September 30, 1925

[Drainage area, 24,100 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	218,800	7,800	38,400	1.59	1.83
November	17,200	5,500	7,840	.325	.36
December	22,000	7,000	12,200	.506	.58
January	10,000	6,000	7,660	.318	.37
February	363,300	6,500	85,800	3.56	3.71
March	60,000	31,100	41,900	1.74	2.01
April	49,300	18,600	27,800	1.15	1.28
May	57,800	22,500	33,400	1.39	1.60
June	22,500	5,800	11,200	.465	.52
July	19,400	7,200	12,400	.515	.59
August	15,000	4,640	10,200	.423	.49
September	18,600	3,620	7,590	.315	.35
The year	363,300	3,620	24,300	1.01	13.69

UNADILLA RIVER NEAR NEW BERLIN, N. Y.

LOCATION.—At steel highway bridge, 1½ miles north of New Berlin, Chenango County, a quarter of a mile below mouth of Shawler Brook, and 2 miles above mouth of Wharton Creek.

DRAINAGE AREA.—192 square miles (measured on topographic maps).

RECORDS AVAILABLE.—July 1, 1924, to September 30, 1925.

GAGE.—Staff in two sections on right bank; read by John T. Gaffney.

DISCHARGE MEASUREMENTS.—Made from cable or by wading.

CHANNEL AND CONTROL.—Control is of gravel, probably subject to shift. During the summer, backwater may be expected from weed growth in the channel.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, July 1, 1924, to September 30, 1925, 7.6 feet at 6 p. m. February 12 (discharge, about 3,750 second-feet); minimum discharge, 18 second-feet September 1, 1924.

ICE.—Stage-discharge relation affected by ice.

ACCURACY.—Stage-discharge relation permanent except as affected by ice and by backwater from weeds. Rating curve well defined between 50 and 3,000 second-feet. Daily discharge ascertained by applying mean daily gage height to rating table or, for days of great range in stage, by averaging discharge for intervals of day. Records fair, except during periods of backwater effect from ice and weeds, for which they are poor.

Discharge measurements of Unadilla River near New Berlin, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 6	[a] 2.99	393	Apr. 1	4.24	921	May 27	2.08	176
Oct. 21	[a] 1.78	105	Apr. 15	2.68	334	June 9	2.11	189
Nov. 13	1.58	73.9	Apr. 18	2.23	222	July 21	[a] 1.91	105
Jan. 19	[b] 1.66	79.4	Apr. 23	3.02	440	Aug. 7	[a] 2.17	134
Mar. 12	4.21	937	May 5	2.99	421			

[a] Stage-discharge relation affected by weeds. [b] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Unadilla River near New Berlin, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,240	81	158	120	70	770	960	356	158	420	75	42
2	1,700	74	158	110	75	645	815	463	220	340	75	34
3	950	74	151	120	80	532	685	356	194	260	100	38
4	650	67	149	120	80	497	605	300	145	220	80	55
5	480	71	154	120	85	385	532	431	115	280	70	32
6	400	72	182	120	90	400	463	400	77	220	110	36
7	340	72	300	120	95	497	416	416	95	170	140	180
8	320	69	341	130	100	770	370	385	84	160	110	160
9	300	60	463	110	110	910	327	313	182	140	80	130
10	260	58	327	110	480	815	313	286	115	200	160	80
11	240	67	259	95	1,880	1,010	327	416	101	200	110	320
12	220	74	246	95	3,750	960	300	400	90	150	100	140
13	180	72	259	100	2,680	685	272	313	64	120	140	260
14	170	79	170	95	2,210	1,450	286	246	58	95	160	1,200
15	160	81	136	100	1,800	1,960	356	246	77	70	160	700
16	150	74	194	95	1,590	1,160	313	207	327	90	110	600
17	140	58	286	95	1,330	910	272	233	286	340	110	440
18	130	48	356	90	1,110	960	233	246	158	220	90	380
19	120	42	431	90	860	1,390	327	207	115	150	70	340
20	120	36	568	90	605	1,160	1,110	158	88	130	95	280
21	110	38	320	85	497	860	725	154	105	110	120	300
22	100	313	280	85	1,010	725	497	145	111	140	100	220
23	100	1,060	260	85	1,730	645	431	170	99	260	90	200
24	90	568	240	80	2,780	532	400	272	84	200	100	170
25	85	356	220	80	2,210	532	370	233	259	120	75	130
26	85	272	200	80	1,960	497	385	233	431	110	80	170
27	75	259	190	75	1,010	463	313	170	259	110	60	160
28	91	207	170	75	815	1,210	272	147	313	100	60	170
29	84	194	150	75	-------	1,010	259	233	463	110	46	190
30	88	182	140	75	-------	910	246	246	645	110	32	150
31	81	-------	130	75	-------	1,010	-------	182	-------	110	42	------

NOTE.—Discharge Oct. 2–27 and July 1 to Sept. 30 determined from gage heights corrected for backwater effect from weeds from 6 discharge measurements. Discharge, Nov. 18–21 and Dec. 21 to Feb. 10 determined from gage heights corrected for ice effect from 1 discharge measurement and study of gage-height graph and weather records.

Monthly discharge of Unadilla River near New Berlin, N. Y., for the year ending September 30, 1925

[Drainage area, 192 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	3,240	75	363	1.89	2.18
November	1,060	36	159	.828	.92
December	568	130	245	1.28	1.48
January	130	75	96.6	.503	.58
February	3,750	70	1,110	5.78	6.02
March	1,960	385	847	4.41	5.08
April	1,110	233	439	2.29	2.56
May	463	145	276	1.44	1.66
June	645	58	184	.958	1.07
July	420	70	176	.917	1.06
August	160	32	95.2	.496	.57
September	1,200	32	244	1.27	1.42
The year	3,750	32	348	1.81	24.60

CHENANGO RIVER NEAR CHENANGO FORKS, N. Y.

LOCATION.—1½ miles below Chenango Forks, Broome County, and mouth of Tioughnioga River and 11½ miles above mouth at Binghamton.

DRAINAGE AREA.—1,490 square miles (measured on topographic maps).

RECORDS AVAILABLE.—November 11, 1912, to September 30, 1925.

GAGE.—Gurley printing water-stage recorder on left bank; inspected by Erastus Ingraham.

DISCHARGE MEASUREMENTS.—Made from cable 300 feet above gage or by wading.

CHANNEL AND CONTROL.—Sand, gravel, and small cobblestones; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 13.05 feet at 4.30 a. m. February 12 (discharge, about 31,900 second-feet); minimum stage, 2.65 feet from 7 to 11 a. m. November 19 (discharge, 328 second-feet).

1912–1925: Maximum stage recorded, 13.7 feet on afternoon of March 27, 1913 (discharge, 35,500 second-feet); minimum stage, 2.20 feet several times in August and September, 1913 (discharge, 92 second-feet).

ICE.—Stage-discharge relation seriously affected by ice.

ACCURACY.—Stage-discharge relation permanent except as affected by ice. Rating curve well defined between 150 and 15,000 second-feet. Operation of water-stage recorder erratic during parts of year. Staff gage readings used when available at times when water-stage recorder was not in operation. Daily discharge ascertained by applying to rating table mean daily gage height determined by averaging the hourly gage heights or, for days of considerable fluctuation, by averaging the hourly discharge. Records good except during periods of ice effect and estimate, for which they are fair.

Discharge measurements of Chenango River near Chenango Forks, N. Y., for the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 18	2.68	370	Mar. 14	5.46	4,840	June 10	3.26	864
Jan. 18	[a]4.44	721	Apr. 18	3.99	1,860	Aug. 6	3.29	871

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Chenango River near Chenango Forks, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26,500	540	1,100	800	600	5,500	5,450	3,000	1,040	2,180	982	388
2	14,700	510	1,000	750	600	5,320	5,080	3,500	1,020	1,540	910	367
3	7,870	510	950	800	500		4,490	3,610	1,080	1,380	833	367
4	5,200	510	900	800	500		4,040		970	1,120	748	388
5	3,820	510	900	800	500	4,400	3,610		811	1,710	706	409
6	3,100	510	950	800	500		3,100	3,000	706	1,330	888	402
7	2,530	510	1,300	850	600		2,810		628	970	1,760	564
8	2,530	510	1,900	850	850	3,820	2,530		591	888	1,200	706
9	2,260	470	3,000	850	2,000	6,220	2,260		648	877	946	686
10	1,900	470	2,200	750	3,800	5,700	2,000	2,530	844	3,200	1,260	600
11	1,680	470	1,800	800	13,000	6,220	2,180		676	2,500	1,520	519
12	1,500	430	1,500	800	30,000	6,490	2,090		591	1,820	1,230	686
13	1,340	430	1,300	800	20,600	5,200	1,920	2,500	537	1,190	1,110	811
14	1,220	423	1,200	800	15,000	7,170	1,780		494	934	2,180	2,440
15	1,130	430	1,100	750	10,500	11,800	2,530		494	811	1,510	2,440

Daily discharge, in second-feet, of Chenango River near Chenango Forks, N. Y., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	1,040	446	1,200	750		7,870	2,810	2,500	478	768	1,150	2,440
17	970	423	1,500	700		6,090	2,180		676	1,230	946	2,000
18	910	380	2,200	700		5,960	1,920	2,180	768	1,480	822	1,570
19	877	340	2,800	650	6,500	9,040	1,520	1,700	600	1,110	748	1,510
20	822	360	4,800	650		8,160		1,510	519	888	716	1,270
21	779	420	2,400	600		5,960		1,360	470	768	716	1,360
22	758	922	1,900	600	5,700	4,960	4,200	1,240	430	1,020	758	1,420
23	726	5,200	1,500	600		4,260		1,150	438	2,530	686	1,070
24	695	3,610	1,300	550		3,610		1,200	409	2,260	628	922
25	666	2,440	1,100	550		3,400		1,290	528	1,520	582	844
26	648	2,000	950	550	9,500	3,400	3,610	1,320	958	1,390	519	779
27	619	1,630	900	550		3,200		1,190	958	1,600	494	716
28	600	1,460	850	550		6,490	3,000	1,030	822	1,240	462	706
29	582	1,330	850	550	-------	6,220		1,030	1,390	1,540	446	768
30	573	1,190	900	550	-------	5,450		1,340	3,100	1,500	416	758
31	560	-------	800	550	-------	5,960	-------	1,130	-------	1,130	402	-----

NOTE.—Discharge Oct. 31, Nov. 1, Jan. 22–24, Feb. 7, 9, 10, 14, 16–21, 23–28, Mar. 1, 3–7, Apr. 20–25, 27–30, May 1, 2, 4–9, 11–17, and July 11 estimated as indicated in above table largely by comparison with record of Susquehanna River at Conklin; gage-height record either faulty or missing. Discharge Nov. 18–21 and Dec. 2 to Feb. 12 determined from gage heights corrected for ice effect from 1 discharge measurement, study of gage-height graph and weather records, and comparison with records of streams in adjacent drainage areas. Staff gage readings used Nov. 2–13, Jan. 25 to Feb. 6, Feb. 8, 15, 22, Mar. 2, 8–13, Apr. 19, 26, May 3, 10, and 18; recorder not in operation.

Monthly discharge of Chenango River near Chenango Forks, N. Y., for the year ending September 30, 1925

[Drainage area, 1,490 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	26,500	560	2,870	1.93	2.22
November	5,200	340	979	.657	.73
December	4,800	800	1,520	1.02	1.18
January	850	550	698	.468	.54
February	30,000	500	7,190	4.83	5.03
March	11,800	3,200	5,660	3.80	4.38
April	5,450	1,520	3,170	2.13	2.38
May	3,610	1,030	2,160	1.45	1.67
June	3,100	409	789	.530	.59
July	3,200	768	1,430	.960	1.11
August	2,180	402	912	.612	.71
September	2,440	367	997	.669	.75
The year	30,000	340	2,330	1.56	21.29

TIOGA RIVER NEAR ERWINS, N. Y.

LOCATION.—At steel highway bridge a quarter of a mile below mouth of Canisteo River near Erwins, Steuben County, and 3 miles above Painted Post where Cohocton and Tioga Rivers unite to form Chemung River.

DRAINAGE AREA.—1,320 square miles (furnished by Mr. Robert O. Hayt).

RECORDS AVAILABLE.—July 12, 1918, to September 30, 1925.

GAGE.—Chain gage on downstream side of bridge near left abutment; read by Miss Jane Sexton.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Bed and control composed of well-compacted gravel; fairly permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 14.2 feet at 8 a. m. February 12 (discharge, 35,300 second-feet); minimum stage, 0.78 foot at 5 p. m. September 2 (discharge, 56 second-feet).

1918–1925: Maximum stage recorded, 16.4 feet at 4 p. m. May 22, 1919 (discharge, about 46,700 second-feet); minimum discharge, 30 second-feet several times August 24 to September 2, 1921.

ICE.—Stage-discharge relation affected by ice.

REGULATION.—Storage not sufficient to affect seasonal flow.

ACCURACY.—Stage-discharge relation changed slightly, presumably at time of high water in February. Rating curves fairly well defined below 15,000 second-feet. Gage read to quarter-tenths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table or, for days of great range in stage, by averaging discharge for intervals of day. Open-water records good except during low-water season, when daily discharge, determined from the mean of two gage readings a day, may be considerably in error owing to fluctuations in stage caused by power operations upstream. Records during period of ice effect fair.

Discharge measurements of Tioga River near Erwins, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft*		*Feet*	*Sec.-ft.*
Oct. 19	1.39	216	Mar 1	*2.88	1,120	June 14	1.21	164
Jan. 14	*1.90	144	Apr. 16	2.20	719	Aug. 23	1.20	169

*Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Tioga River near Erwins, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12,100	157	95	160		1,100	1,960	2,080	640	489	210	71
2	3,080	136	90	160		900	1,840	2,620	602	369	200	59
3	1,840	139	90	160		1,100	1,960	1,840	640	374	188	67
4	1,280	139	85	160		800	1,620	1,620	482	332	178	71
5	980	130	90	170	130	700	1,420	4,450	397	800	680	69
6	820	128	100	180		700	1,180	2,340	327	470	241	63
7	660	119	140	160		680	1,100	1,960	233	353	217	81
8	590	113	189	150		1,420	960	1,620	254	482	229	93
9	562	116	275	160	7,000	1,840	840	1,320	275	523	203	98
10	485	119	402	150	19,400	1,420	760	1,140	258	920	284	91
11	420	113	286	140	17,000	1,620	840	1,420	218	502	369	81
12	390	125	235	160	28,000	1,960	750	1,840	188	348	254	75
13	336	116	216	160	7,110	1,320	720	1,230	178	275	229	98
14	308	120	142	150	3,580	1,840	720	1,000	168	199	403	158
15	286	120	165	140	3,080	3,580	680	920	317	181	602	548
16	265	110	198	140	2,200	1,620	720	800	271	180	523	258
17	255	95	235	130	2,000	1,730	640	1,840	294	374	322	241
18	235	80	1,240	140	1,300	1,960	565	1,520	225	386	203	237
19	216	80	1,420	140	1,300	5,560	*565	1,100	168	322	181	218
20	216	100	1,730	130	1,300	3,580	4,930	920	155	237	168	254
21	198	110	500	130	1,420	3,240	2,210	800	130	195	199	432
22	184	119	340	120	3,080	1,960	1,620	680	127	353	195	551
23	180	172	280		7,010	1,420	1,320	565	142	800	178	298
24	184	216	260		7,450	1,280	1,140	720	142	403	130	237
25	180	184	220		4,090	1,140	960	1,000	218	229	125	203
26	161	150	200	120	3,750	1,140	2,480	1,140	254	233	114	178
27	165	139	180		2,600	1,000	1,620	880	241	210	116	155
28	157	136	180		1,300	3,080	1,230	720	241	237	93	161
29	150	136	170			2,770	1,050	680	420	233	89	136
30	150	110	140			2,080	960	1,180	880	280	98	136
31	157		160			2,340		800		225	77	

NOTE.—Discharge Jan. 23–31, Feb. 1–9, 27, Apr. 12, 19, July 16, and Aug. 2 estimated from comparative studies; no gage-height record. Discharge Nov. 14–21, Nov. 30 to Dec. 7, Dec. 21 to Feb. 9, Feb. 16–20, and Feb. 28 to Mar. 6 determined from gage heights corrected for ice effect from 2 discharge measurements, study of gage-height graph and weather records and comparison with record for Chemung River.

Monthly discharge of Tioga River near Erwins, N. Y., for the year ending September 30, 1925

[Drainage area, 1,320 square miles].

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	12,100	150	877	0.664	0.77
November	216	80	128	.097	.11
December	1,730	85	324	.245	.28
January	180	120	141	.107	.12
February	28,000		4,460	3.38	3.52
March	5,560	680	1,830	1.39	1.60
April	4,930	565	1,310	.992	1.11
May	4,450	565	1,380	1.05	1.21
June	880	127	303	.230	.26
July	920	180	371	.281	.32
August	680	77	235	.178	.21
September	551	59	181	.137	.15
The year	28,000	59	939	.711	9.66

CHEMUNG RIVER AT CHEMUNG, N. Y.

LOCATION.—At steel highway bridge midway between Chemung, Chemung County, N. Y., and Willawana, Pa., half a mile upstream from State line and 10 miles above mouth.

DRAINAGE AREA.—2,440 square miles.

RECORDS AVAILABLE.—September 7, 1903, to September 30, 1925.

GAGE.—Tape gage at upstream side of right span of bridge; read by R. C. Farrow.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Sand and gravel; occasionally shifting.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 15.2 feet at 5 p. m. February 12 (discharge, 47,400 second-feet); minimum stage, 1.57 feet at 4.30 p. m. November 18 (discharge, 134 second-feet).

1903–1925: Maximum stage recorded, 17.96 feet at 7 a. m. March 15, 1918 (discharge, about 67,000 second-feet); minimum discharge, 49 second-feet at 7 a. m. August 14, 1911.

ICE.—Stage-discharge relation affected by ice.

ACCURACY.—Stage-discharge relation at low stages changed presumably at time of high water February 12. Rating curve used before the change fairly well defined between 200 and 45,000 second-feet. Curve used subsequently fairly well defined between 100 and 45,000 second-feet. Stage-discharge relation affected by ice during periods from November to February. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table except for days of great range in stage, when discharge is averaged for intervals of day. Records good except during periods of ice effect, for which they are fair.

Discharge measurements of Chemung River at Chemung, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 19	2.31	509	Apr. 16	3.30	1,410	Aug. 23	2.12	362
Jan. 13	a 2.73	254	June 11	2.39	571			

a Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Chemung River at Chemung, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26,300	346	220	340	220	3,280	4,240	3,280	1,150	1,050	380	219
2	7,850	346	220	300	220	2,600	4,040	4,860	1,000	770	380	194
3	4,440	317	200	280	200	1,860	4,040	3,840	1,050	690	380	182
4	2,930	312	180	300	200	1,730	3,460	2,930	950	652	350	179
5	2,140	307	170	300	200	1,860	2,930	6,750	815	950	350	179
6	1,730	301	260	300	220	1,600	2,440	4,860	690	1,000	545	186
7	1,360	296	256	280	240	1,730	2,140	3,840	580	770	442	211
8	1,200	291	286	280	280	2,290	1,860	3,280	545	690	442	228
9	1,100	281	436	280	1,300	2,930	1,730	2,600	510	815	442	228
10	960	281	532	280	28,000	2,760	1,540	2,290	510	860	615	224
11	870	275	565	260	27,800	2,760	1,540	2,140	545	905	730	219
12	790	275	468	260	43,300	4,040	1,730	3,280	475	815	615	228
13	710	265	405	260	20,600	2,930	1,480	2,290	410	652	545	245
14	672	265	405	260	9,700	2,930	1,300	1,860	380	510	652	295
15	635	270	291	240	7,560	7,850	1,250	1,600	350	442	1,000	410
16	565	275	436	240	5,300	4,040	1,300	1,480	350	410	860	615
17	565	260	500	240	5,300	3,280	1,250	1,730	442	475	615	615
18	532	190	500	220	3,650	3,460	1,100	2,760	510	770	510	615
19	500	180	1,360	220	2,760	7,850	1,050	2,000	442	615	442	652
20	468	200	2,290	220	2,760	8,440	5,820	1,730	380	510	410	652
21	468	260	1,480	220	2,760	5,300	5,170	1,420	322	442	410	1,000
22	436	296	700	240	4,860	4,240	3,280	1,300	295	442	410	1,100
23	405	286	550	220	9,380	3,460	2,600	1,150	295	1,150	380	860
24	405	296	480	220	16,400	2,930	2,140	1,050	275	860	350	652
25	405	296	440	220	10,700	2,600	1,860	1,300	350	615	322	580
26	374	296	400	200	9,380	2,600	3,460	1,730	410	510	295	475
27	374	275	380	200	6,490	2,290	3,460	1,480	580	442	270	410
28	374	286	360	200	2,930	5,080	2,440	1,250	545	475	250	380
29	346	281	340	190	------	5,530	2,000	1,150	770	442	236	380
30	346	242	320	200	------	4,440	1,860	1,540	1,100	475	228	350
31	346	------	320	200	------	4,650	------	1,480	------	442	228	------

NOTE.—Discharge Nov. 18-21, Dec. 1-6, and Dec. 22 to Feb. 10, determined from gage heights corrected or ice effect from 1 discharge measurement and study of gage-height graph and weather records.

Monthly discharge of Chemung River at Chemung, N. Y., for the year ending September 30, 1925

[Drainage area, 2,440 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	26,300	346	1,950	0.799	0.92
November	346	180	278	.114	.13
December	2,290	170	508	.208	.24
January	340	190	247	.101	.12
February	43,300	200	7,950	3.26	3.40
March	8,440	1,600	3,660	1.50	1.73
April	5,820	1,050	2,480	1.02	1.14
May	6,750	1,050	2,400	.984	1.13
June	1,150	275	568	.233	.26
July	1,150	410	666	.273	.31
August	1,000	228	454	.186	.21
September	1,100	179	425	.174	.19
The year	43,300	170	1,760	.721	9.78

CANACADEA CREEK AT HORNELL, N. Y.

LOCATION.—At Seneca Street Bridge in Hornell, Steuben County, a quarter of a mile above Canisteo River and mouth.

DRAINAGE AREA.—58.5 square miles (measured on topographic maps).

RECORDS AVAILABLE.—October 18, 1924, to September 30, 1925.

GAGE.—Vertical staff on downstream side of left bridge abutment; read by an employee of city engineer.

DISCHARGE MEASUREMENTS.—Made by wading or from bridge.

CHANNEL AND CONTROL.—Control for low stages is a gravel bar 150 feet below gage. During medium and high stages channel control conditions exist. Bed consists of gravel and is subject to shift.

EXTREMES OF DISCHARGE.—Maximum stage during year occurred on February 11, gage not read; minimum stage, 0.98 foot at 8 a. m. November 4 (discharge, about 2.7 second-feet).

ICE.—Stage-discharge relation affected by ice.

ACCURACY.—Stage-discharge relation permanent except as affected by ice. Rating curve fairly well defined between 4 and 300 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying to rating table mean daily gage height or for days of great range in stage by averaging discharge for intervals of day. Records fair except during periods of ice effect and estimate, for which they are poor.

Discharge measurements of Canacadea Creek at Hornell, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 18	1.15	9.38	Apr. 17	1.31	23.4	Aug. 24	1.05	4.88
Jan. 16	[a] 1.30	8.40	Apr. 20	2.14	168			
Mar. 4	[a] 1.67	21.8	June 16	1.16	8.57			

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Canacadea Creek at Hornell, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		11	12	8		50	77	35		16	9.8	5.1
2		11	12	9		28	86	29		20	9.2	5.1
3		6.2	12	8		28	76	37		17	9.2	5.4
4		4.8	12	9	10	24	69	29	11	14	8.7	5.1
5		9.8	14	16		18	53	31		13	8.2	5.1
6		9.8	17	11		15	38	34		11	8.2	5.1
7		9.8	19	10		28	37	32	7.0	9.8	7.0	5.1
8		9.8	21	11	50	60	35	29	6.5	14	7.3	5.4
9		9.8	27	11	180	65	30	27	10	11	7.6	5.8
10		8.7	34	11	560	70	29	21	7.0	42	7.0	5.4
11		8.7	27	10	1,100	200	27		7.0	20	7.0	5.8
12		8.2	18	11	550	74	25		7.0	19	6.5	5.8
13		9.8	17	10	288	53	24		6.2	15	6.5	12
14		9.8	18	9	112	61	25		5.8	11	6.2	45
15		9.8	16	6	85	67	26		6.2	11	6.5	50
16		9.8	20	8	77	81	25		12	11	6.2	36
17		9.8	45	7	52	66	21		8.7	9.8	5.8	42
18	9.8	9.8	76	6	49	67	19		6.5	9.2	5.8	40
19	9.8	9.8	346	5	40	236	20		6.2	9.8	6.2	24
20	9.8	11	130	7	49	100	164		7.0	9.2	5.4	
21	9.8	11	55	8	56	70	69	18	6.5	9.8	5.8	
22	9.8	11	38	8	166	52	50		7.6	9.2	5.4	
23	9.8	12	32	7	543	40	38		25	9.8	5.4	
24	9.8	11	26	7	276	36	30		16	9.8	5.4	
25	9.8	10	19	9	142	40	26		9.8	9.8	5.1	20
26	9.8	9.8	17	9	110	38	20		6.5	9.8	5.1	
27	9.2	9.8	15	9	75	36	20		13	9.8	4.8	
28	9.2	11	12	9	60	142	23		30	9.2	5.1	
29	9.2	12	12	9	-------	86	22		16	9.2	5.1	
30	8.7	12	11	9	-------	76	32		25	9.8	5.8	
31	8.7	-------	10	9	-------	98	-------		-------	9.2	5.4	

NOTE.—Discharge Jan. 30 to Feb. 9, 11, 12, May 11 to June 6, Aug. 8, and Sept. 20–30 estimated from comparative studies; no gage-height record. Discharge Dec. 20 to Jan. 29, and Feb. 26 to Mar. 9 determined from gage heights corrected for ice effect from 2 discharge measurements, study of gage-height graph and weather records, and comparison with records from stations in adjacent drainage areas.

Monthly discharge of Canacadea Creek at Hornell, N. Y., for the year ending September 30, 1925

[Drainage area, 58.5 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October 18-31	9.8	8.7	9.51	0.163	0.08
November	12	4.8	9.89	.169	.19
December	346	10	36.8	.629	.73
January	16	5	8.90	.152	.18
February	1,100	----------	168	2.87	2.99
March	236	15	67.9	1.16	1.34
April	164	19	41.2	.704	.79
May	37	----------	22.0	.376	.43
June	30	5.8	10.8	.185	.21
July	42	9.2	12.8	.219	.25
August	9.8	4.8	6.54	.112	.13
September	50	5.1	17.8	.304	.34

COHOCTON RIVER NEAR CAMPBELL, N. Y.

LOCATION.—At steel highway bridge 2 miles above Campbell, Steuben County, and 11 miles above confluence of Cohocton and Tioga Rivers, which form Chemung River at Painted Post.

DRAINAGE AREA.—480 square miles (furnished by Mr. Robert O. Hayt).

RECORDS AVAILABLE.—July 11, 1918, to September 30, 1925.

GAGE.—Chain gage on downstream side of bridge near left abutment; read by Miss Dora Wood.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Bed and control composed of well-compacted gravel; fairly permanent. Heavy aquatic growth is present in channel during summer.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 7.4 feet at 7 a. m. February 12 (discharge, 8,630 second-feet); minimum stage, 0.70 foot at 4.50 p. m. November 28 and 9 a. m. November 29 (stage-discharge relation affected by ice); minimum discharge, about 38 second-feet at 9 a. m. September 5.

1918–1925: Maximum discharge recorded, 11,300 second-feet at noon March 12, 1920; minimum stage, 0.68 foot at 5 p. m. October 7, 1921 (backwater correction of 0.33 foot due to aquatic growth; discharge, about 13 second-feet).

ICE.—Stage-discharge relation affected by ice.

REGULATION.—Seasonal distribution of flow is probably not affected by small reservoirs above.

ACCURACY.—Stage-discharge relation practically permanent except as affected by aquatic growth and by ice. Rating curve fairly well defined between 200 and 4,000 second-feet. Gage read to quarter-tenths twice daily. Daily discharge ascertained by applying to rating table mean daily gage height corrected when necessary for weed or ice effect on basis of discharge measurements. Records during open-water periods, fair; during periods of weed or ice effect, poor.

31500—30——16

Discharge measurements of Cohocton River near Campbell, N. Y., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 19	[a]1.00	138	Mar. 2	[b]2.01	662	June 15	[a]0.91	88.8
Jan. 14	[b]1.34	85.8	Apr. 17	1.25	276	Aug. 24	[a]1.31	88.1

[a] Stage-discharge relation affected by weeds.
[b] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Cohocton River near Campbell, N. Y., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,200	110	60	85	60	900	682	450	160	180	95	44
2	1,400	130	60	90	65	800	720	450	150	190	100	42
3	900	120	55	90	60	650	720	422	150	170	90	44
4	600	110	50	100	55	550	645	370	140	140	85	46
5	480	110	48	100	55	480	575	450	130	130	90	42
6	400	90	55	100	65	450	480	395	110	130	75	46
7	340	85	65	90	95	480	480	365	110	120	75	65
8	300	90	85	90	170	542	422	340	100	100	85	60
9	280	100	95	85	1,800	645	380	303	160	100		50
10	260	100	140	85	5,500	645	375	289	170	140		48
11	220	95	110	85	7,000	875	385	375	130	180		46
12	200	90	110	85	7,200	955	340	322	110	140		50
13	180	80	95	80	3,450	795	317	280	100	110		50
14	170	75	80	80	2,500	1,400	307	272	95	95		140
15	160	70	90	80	1,900	1,220	307	234	80	90		95
16	150	65	100	80	1,500	998	298	238	120	75	140	140
17	150	60	140	80	1,220	915	280	450	140	90		160
18	140	60	200	80	955	915	254	254	140	100		140
19	140	55	240	75	875	1,790	238	238	120	95		190
20	130	60	260	75	720	1,300	955	221	95	110		150
21	130	65	240	70	915	1,040	645	217	80	110		200
22	130	75	180	70	1,500	875	542	213	100	120		220
23	120	85	150	75	3,030	758	480	213	95	110	90	160
24	110	100	140	75	4,360	682	395	229	95	95	90	110
25	110	95	130	70	3,030	645	390	205	200	85	85	100
26	110	90	120	70	1,590	610	450	179	200	90	70	85
27	110	80	110	70	1,300	575	365	172	190	90	65	85
28	100	70	110	70	1,000	915	355	158	360	110	60	85
29	110	65	95	70	-------	720	307	161	260	110	55	75
30	95	65	85	65	-------	758	326	172	220	100	50	75
31	90	-------	85	60	-------	758	-------	172	-------	95	46	-------

NOTE.—Discharge Aug. 9–22 estimated from comparative studies; no gage-height record. Discharge Oct. 1 to Nov. 14 and June 1 to Sept. 30 determined from gage heights corrected for weed effect from 3 discharge measurements. Discharge Nov. 15 to Feb. 10 and Feb. 27 to Mar. 5 determined from gage heights corrected for ice effect from 2 discharge measurements, study of gage-height graph and weather records, and comparison with Chemung River and Tioga River records.

Monthly discharge of Cohocton River near Campbell, N. Y., for the year ending September 30, 1925

[Drainage area, 480 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	2,200	90	323	0.673	0.78
November	130	55	84.8	.177	.20
December	260	48	116	.242	.28
January	100	60	80.0	.167	.19
February	7,200	55	1,860	3.88	4.04
March	1,790	450	827	1.72	1.98
April	955	238	447	.931	1.04
May	450	158	284	.592	.68
June	360	80	144	.300	.33
July	190	75	116	.242	.28
August		46	105	.219	.25
September	220	42	94.8	.198	.22
The year	7,200	42	363	.756	10.27

JUNIATA RIVER AT NEWPORT, PA.

LOCATION.—At 4-span steel highway bridge at Newport, Perry County.

DRAINAGE AREA.—3,380 square miles.

RECORDS AVAILABLE.—March 21, 1899, to July 14, 1906; January 7, 1907, to September 30, 1925. Records for January 1, 1914, to September 30, 1918, and October 1, 1921, to September 30, 1924, are contained in annual reports of the Water Supply Commission of Pennsylvania.

GAGE.—Chain gage attached to downstream side of bridge; read by A. R. Bortel. Elevation of gage zero, 363.32 feet (United States Geological Survey datum).

DISCHARGE MEASUREMENTS.—Made from downstream side of bridge or by wading at same section.

CHANNEL AND CONTROL.—Banks are high and not subject to overflow. Bed is composed of hard material. Low-water control is a riffle about 400 feet below gage.

EXTREMES OF DISCHARGE.—Maximum stage during year, estimated from hydrograph, 16.00 feet at midnight February 12 (discharge, 50,500 second-feet); minimum stage recorded, 2.71 feet 8 a. m. August 27 (discharge, 260 second-feet; stage-discharge relation affected by grass in channel).

ICE.—Stage-discharge relation usually affected by ice.

ACCURACY.—Stage-discharge relation permanent, except when affected by ice or grass in channel. Rating curve fairly well defined below 10,000 second-feet and well defined from 10,000 to 70,000 second-feet. Gage read twice daily to hundredths below 3.30 feet and to half-tenths above, during high stages more frequently. Daily discharge ascertained by applying to rating table mean daily gage height, when necessary corrected for ice or grass effect. Records fair.

COOPERATION.—Records furnished by the department of forests and waters, State of Pennsylvania.

Discharge measurements of Juniata River at Newport, Pa., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 22	3.55	1,550	Oct. 30	3.22	907	Sept. 5	a 3.13	608
Do	3.49	1,440	Do	3.20	886			

a Stage-discharge relation affected by grass in river channel.

Daily discharge, in second-feet, of Juniata River at Newport, Pa., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18,300	772	954	900	1,200	4,000	3,290	3,290	2,370	1,200	1,600	440
2	12,800	990	750	900	1,300	3,400	3,290	4,930	1,900	850	1,800	550
3	8,080	884	740	1,100	1,300	3,200	3,020	5,240	2,020	650	1,700	440
4	5,240	936	750	1,100	1,500	3,000	3,020	4,930	2,250	750	1,400	400
5	4,320	936	800	1,100	1,800	3,000	2,880	4,620	1,790	1,500	950	600
6	3,870	884	1,080	1,100	2,600	3,200	2,620	4,320	1,790	1,100	1,400	600
7	3,290	884	1,180	1,100	4,600	3,430	2,500	3,720	1,790	900	1,400	500
8	2,750	900	1,230	1,000	5,500	3,430	2,130	3,580	1,790	950	1,100	420
9	2,620	954	1,080	1,100	7,000	4,020	2,020	3,430	1,350	800	1,300	420
10	2,250	884	1,470	1,100	11,000	4,020	2,250	2,880	2,200	800	850	360
11	2,020	918	1,680	1,100	24,600	3,870	2,130	4,930	1,800	850	900	650
12	1,790	972	1,310	1,100	40,300	4,930	2,130	15,400	2,200	750	800	600
13	1,580	868	1,230	1,100	42,600	4,930	2,130	17,600	1,800	850	950	750
14	1,580	670	1,180	1,100	25,100	4,930	1,680	12,100	1,200	800	800	750
15	1,370	884	900	1,100	15,000	4,930	2,020	8,720	1,000	550	800	650
16	1,370	1,030	800	1,100	13,500	4,320	2,130	7,120	850	800	700	650
17	1,470	990	750	1,100	12,100	4,320	2,130	6,800	1,200	1,500	700	850
18	1,330	900	900	1,100	9,690	4,020	2,130	6,480	1,000	1,200	1,000	698
19	1,370	740	1,430	1,100	7,760	5,240	1,790	5,860	1,000	700	750	1,310
20	990	936	1,900	1,100	6,800	5,240	2,130	4,620	950	600	800	712
21	1,080	852	2,130	1,100	6,170	5,550	1,580	4,320	950	650	700	587
22	1,580	1,270	1,080	1,100	5,860	5,550	2,020	4,020	700	1,900	650	483
23	1,210	1,470	900	1,100	6,170	4,930	1,900	3,720	850	2,400	700	446
24	1,210	1,470	900	1,100	7,120	4,620	1,790	3,430	600	3,400	600	362
25	936	1,370	900	1,100	6,800	4,320	2,020	4,020	950	2,200	650	434
26	1,030	1,310	1,100	1,000	6,000	3,870	1,790	4,930	800	1,600	480	422
27	972	1,120	1,100	1,000	5,000	3,290	1,790	3,290	1,200	1,200	300	339
28	1,080	1,030	1,100	900	4,400	4,620	1,680	3,020	1,200	1,900	380	446
29	1,140	1,080	1,100	900	------	5,860	2,130	2,620	850	1,500	380	434
30	972	1,230	1,000	1,000	------	4,020	2,500	2,750	850	1,500	320	470
31	1,010	------	1,000	1,200	------	4,020	------	2,750	------	1,300	320	------

NOTE.—Discharge estimated because of ice effect Dec. 2, 4, 5, 16–18, Dec. 23 to Feb. 10, and Feb. 26 to Mar. 6, and because of grass in channel June 10 to Sept. 17, on basis of discharge measurements, weather records, study of gage-height graph, and comparison with records at other stations in same drainage area.

Monthly discharge of Juniata River at Newport, Pa., for the year ending September 30, 1925

[Drainage area, 3,380 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	18,300	936	2,920	0.864	1.00
November	1,470	670	1,000	.296	.33
December	2,130	740	1,110	.328	.38
January	1,200	900	1,060	.314	.36
February	42,600	1,200	10,100	2.99	3.11
March	5,860	3,000	4,260	1.26	1.45
April	3,290	1,580	2,220	.657	.73
May	17,600	2,620	5,470	1.62	1.87
June	2,370	600	1,370	.405	.45
July	3,400	550	1,210	.358	.41
August	1,800	300	877	.259	.30
September	1,310	339	559	.165	.18
The year	42,600	300	2,640	.781	10.57

PATUXENT RIVER BASIN

PATUXENT RIVER NEAR BURTONSVILLE, MD.

LOCATION.—At Columbia Turnpike Bridge, 1½ miles northeast of Burtonsville, Montgomery County, and 4 miles northwest of Laurel.

DRAINAGE AREA.—127 square miles.

RECORDS AVAILABLE.—July 21, 1911, to June 15, 1912 (records furnished by United States Engineer Corps); July 21, 1913, to September 30, 1925.

GAGE.—Au water-stage recorder on left bank 80 feet below highway bridge; installed August 8, 1922; inspected by Arthur Beall.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Banks lined with trees and brush; overflowed at stage of about 10 feet. Control poorly defined. Point of zero flow determined as at gage height 1.23 feet January 31, 1924, and at 1.30 feet September 26, 1924.

EXTREMES OF DISCHARGE.—Maximum stage during year, from water-stage recorder, 8.5 feet during period February 9–11 (discharge, 1,730 second-feet); minimum stage, 1.91 feet at 2.30 a. m. September 27 (discharge, 23 second-feet).

1911–1925: Maximum stage recorded, 14.6 feet about 9 a. m. January 12, 1915 (discharge, about 4,000 second-feet; revised); minimum stage, 0.18 foot August 25, 1911 (discharge, 6 second-feet).

ICE.—Stage-discharge relation affected by ice.

REGULATION.—Fluctuation at low stages has been noted and is probably caused by operation of a power plant above gage.

ACCURACY.—Stage-discharge relation shifted several times during year. Rating curves fairly well defined. Operation of water-stage recorder satisfactory except as indicated in footnote to table of daily discharge. Daily discharge ascertained by applying mean daily gage height determined from recorder graph to rating table or by applying bihourly gage height to rating table. Records fair.

Discharge measurements of Patuxent River near Burtonsville, Md., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 23	[a]2.85	71.8	Apr. 18	2.69	147	Sept. 22	2.06	33.4
Feb. 18	3.19	227	June 19	1.97	39.4			
Mar. 20	2.93	188	Aug. 21	2.28	55.9			

[a] Stage-discharge relation affected by ice.

Daily discharge, in second-feet, of Patuxent River near Burtonsville, Md., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	693			78	127		132	172	73	44		46
2	184			170	127		132	140	71	40	123	37
3	144			274	206	140	132	124	68	40		33
4	127			197			124	116	64	37	52	34
5	119				146		124	124	61	61	56	31
6	111			108		164	116	116	58	42	62	40
7	104					164	116	108	61	60	57	388
8	96				322	148	116	101	57	87	52	60
9	92				492	148	108	101	58	81	59	48
10	88			104		140	116	100	54	73	59	40
11	86			93	1,270	140	124	101	48	61	88	43
12	82		110	93		140	116	116	47	106	59	37
13	81			90	348	132	108	101	47	92	55	361
14	78			88	282	140	108	100	47	61	52	188
15	78	125			318	132	137	95	47	61	48	61
16	77			174	338	124	116	90	45	57	42	53
17	75				264	148	108	88	42	54	44	48
18	73				230	164	148	85	43	50	39	42
19	73			179	204	286	132	82	48		38	38
20	70			254	196	188	140	80	42		37	37
21				215	188	156	116	78	38		95	35
22					188	148	108	75	37		85	35
23					180	140	108	73	40		49	33
24					196	132	108	153	43		43	34
25					172	132	108	385	158	123	42	35
26	125			125	196	132	165	108	98		41	35
27			104		172	140	124	92	47		38	30
28					140	178	116	86	43		37	33
29					-------	148	156	82	42		34	33
30				274	-------	140	172	83	61		34	31
31		-------		179	-------	140	-------	79	-------		32	-----

NOTE.—Discharge estimated, because of ice, from climatic data and observer's notes and 1 discharge measurement, Dec. 23–31, Jan. 2, 5–9, 15–18, 22–29, 31, Feb. 4–7, 28, and Mar. 1–5. Because of no gage-height record, discharge Oct. 21 to Dec. 23 was estimated by comparison with records for Northwest Branch of Anacostia River near Colesville, and July 19 to Aug. 3, by comparison with records for Great Seneca Creek near Gaithersburg.

Monthly discharge of Patuxent River near Burtonsville, Md., for the year ending September 30, 1925

[Drainage area, 127 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	693	70	130	1.02	1.18
November	----------	----------	125	.984	1.10
December	----------	----------	108	.850	.98
January	274	78	146	1.15	1.33
February	----------	127	331	2.61	2.72
March	286	----------	150	1.18	1.36
April	172	108	124	.976	1.09
May	385	73	111	.873	1.01
June	158	37	56.3	.443	.49
July	----------	37	87.3	.687	.79
August	----------	32	58.0	.457	.53
September	388	30	66.6	.524	.58
The year	693	30	123	.969	13.16

POTOMAC RIVER BASIN

NORTH BRANCH OF POTOMAC RIVER AT BLOOMINGTON, MD.

LOCATION.—At highway bridge at Bloomington, Garrett County, 2 miles above Piedmont, W. Va. Savage River enters 600 feet below.

DRAINAGE AREA.—287 square miles (measured on topographic maps).

RECORDS AVAILABLE.—October 30, 1924, to September 30, 1925.

GAGE.—Chain gage near left end of bridge on upstream guard rail; read by W. P. Wagner.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Channel curved above and straight for 200 feet below gage. One channel at gage at all stages; two channels above gage at low water. Right bank rather low, covered with brush and subject to overflow at stage of about 14 feet; left bank high, not subject to overflow. Bed of boulders and bedrock. Control is composed of large, flat, angular pieces broken from rock ledge a short distance above; probably permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 7.25 feet at 8.55 a. m. February 12, 1925 (discharge, 3,140 second-feet); minimum stage, 2.26 feet November 9–10 (discharge, 30 second-feet).

Flood of March 29, 1924, reached a stage of 20.3 feet (determined from débris and floodmarks by residents).

ICE.—Stage-discharge relation affected by ice during severe winters.

REGULATION.—Low-water flow affected by Stony Reservoir on Stony River about 27 miles upstream; reservoir has a capacity of 204 billion cubic feet and drainage area of 114 square miles.

DIVERSIONS.—None.

ACCURACY.—Stage-discharge relation apparently permanent during period. Rating curve well defined. Gage read to hundredths twice daily except as noted in footnote to daily-discharge table. Daily discharge ascertained by applying mean daily gage height to rating table. Records fair.

COOPERATION.—Station maintained in cooperation with West Virginia Pulp & Paper Co.

Discharge measurements of North Branch of Potomac River at Bloomington, Md., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 2	2.55	59.3	Feb. 12	6.79	2,670	Sept. 10	2.50	57.5
Jan. 19	4.33	657	Feb. 13	5.53	1,440			

Daily discharge, in second-feet, of North Branch of Potomac River at Bloomington, Md., for the period ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		53	68	204	464	367	619	1,850	156		164	40
2		62	66	207	464	864	594	2,240	138		128	40
3			73	201	696	504	594	1,340	124		89	44
4			91	180	594	504	750	1,050	112		71	46
5		48	91	175	548	484	644	924	100	120	65	47
6			619	164	750	444	526	750	143		62	42
7			696	153	924	424	464	696	464		104	47
8		32	696	204	1,340	424	424	594	246		76	53
9		30	619	158	1,670	424	367	504	164		59	55
10		30	444	161	2,240	386	348	464	148	126	55	55

Daily discharge, in second-feet, of North Branch of Potomac River at Bloomington, Md., for the period ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
11		32	295	146	2,340	348		1,500	124	150	62	51
12		32	278	146	2,780	405		1,850	93	110	85	53
13		32	348	148	1,500	386		1,120	75	93	216	64
14		32	806	126	1,050	386		864	41	82	150	68
15		38	330	84	1,500	405		696	75	70	122	87
16		62	405	146	1,940	330		571	84	59	82	85
17		100	386	696	1,260	312		526	131	59	64	104
18		89	619	1,340	924	405	316	444	204	62	53	93
19		59	526	644	750	1,420		386	262	62	48	73
20		48	405	484	644	1,050		330	183	56	48	70
21		41	295	367	548	750		312	161	73	78	62
22		464	204	348	504	594		295	95	548	312	82
23		484	158	312	484	526		262	104	262	166	82
24		278	262	210	594	464		295	231	148	82	65
25		210	230	278	548	424	183	504	696	110	66	60
26		158	201	312	526	405	1,120	330	526	102	55	56
27		138	231	2,340	444	405	571	278	312	106	52	56
28		136	231	644	330	806	750	246	183	80	44	51
29		110	213	571	-------	696	1,590	216	146	82	48	52
30	53	85	204	484	-------	571	1,500	204	126	71	43	56
31	53	-------	262	424	-------	526	-------	180	-------	84	41	-------

NOTE.—No gage readings Apr. 11-24 and July 1-9; discharge estimated by comparison with records for other gaging stations and climatic records. Braced figures show mean discharge for periods indicated. No gage readings Oct. 31, Nov. 3-7, Dec. 25, and July 14-15; discharge interpolated.

Monthly discharge of North Branch of Potomac River at Bloomington, Md., for the period ending September 30, 1925

[Drainage area, 287 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
November	484	30	102	0.355	0.40
December	806	66	334	1.16	1.34
January	2,340	84	389	1.36	1.57
February	2,780	330	1,010	3.52	3.66
March	1,420	312	530	1.85	2.13
April	1,590	183	516	1.80	2.01
May	2,240	180	704	2.45	2.82
June	696	41	188	.655	.73
July	548	56	119	.415	.48
August	312	41	90	.314	.36
September	104	40	61.3	.214	.24

POTOMAC RIVER AT POINT OF ROCKS, MD.

LOCATION.—At steel highway bridge at Point of Rocks, Frederick County, one-third mile below Catoctin Creek and 6 miles above Monocacy River.

DRAINAGE AREA.—9,650 square miles.

RECORDS AVAILABLE.—February 17, 1895, to September 30, 1925.

GAGE.—Chain gage attached to downstream side of left span of bridge; read by W. W. Compher. Datum constant since September 2, 1902; prior to this date datum was 0.45 foot higher than at present. Sea-level elevation of gage datum 200.54 feet.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Practically permanent. Control is a rock ledge a few hundred feet below station, the ledge extending completely across river except for one small channel.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 13.50 feet at 4.30 p. m. February 13 (discharge, 76,400 second-feet); minimum stage, 0.54 foot at 4.30 p. m. September 10 and 23 (discharge, 822 second-feet).

1895–1925: Maximum stage recorded, 32.2 feet May 13, 1924 (discharge, 258,000 second-feet); minimum stage, 0.38 foot September 10, 1914 (discharge, 540 second-feet).

Crest of the flood of 1889, as determined by the United States Army Engineers from high-water marks, reached a stage of 40.2 feet (discharge, about 325,000 second-feet).

ICE.—Stage-discharge relation affected by ice during extreme cold winters.

DIVERSIONS.—The Chesapeake & Ohio Canal parallels the Potomac on the Maryland side. Average discharge of canal is 75 to 100 second-feet. Discharge of canal is not included in the records for this station.

REGULATION.—Fluctuation at extreme low stages has been noted and is probably caused by operation of power plants or storage reservoirs on the upper Potomac and tributaries.

ACCURACY.—Stage-discharge relation practically permanent; affected by ice December 29–31. Gage read to hundredths once daily; during high water read oftener. Rating curve well defined between 1,000 and 150,000 second-feet; extended beyond these limits. Daily discharge ascertained by applying gage height to rating table except for period affected by ice when discharge was estimated. Record good.

The following discharge measurement was made:

December 20, 1924: Gage height, 1.87 feet; discharge, 4,370 second-feet.

Daily discharge, in second-feet, of Potomac River at Point of Rocks, Md., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53,700	3,750	3,920	7,300	10,300	8,980	8,130	31,700	3,410	3,920	2,290	1,070
2	36,800	3,410	3,750	10,700	10,300	8,550	7,300	35,500	3,410	2,580	1,990	1,110
3	19,600	3,250	3,580	12,100	11,200	7,710	6,900	26,100	3,250	2,600	1,820	1,000
4	12,600	2,760	3,580	11,600	13,500	8,130	6,510	20,700	3,250	2,290	1,820	1,070
5	8,980	3,080	3,750	8,980	16,000	8,130	6,510	18,600	3,080	2,290	1,820	1,000
6	5,750	2,920	3,920	7,710	17,600	7,710	6,510	14,000	3,080	2,290	1,870	1,000
7	5,750	2,760	3,920	7,710	16,500	7,300	6,510	12,100	2,920	3,250	1,870	870
8	5,750	2,600	4,270	7,710	18,600	7,300	6,510	10,300	2,920	3,580	1,820	854
9	5,370	2,290	3,920	7,710	25,500	6,510	6,130	8,980	2,600	2,600	1,760	838
10	4,270	2,440	4,450	7,710	41,400	6,510	5,750	8,130	2,290	2,140	1,590	822
11	4,270	2,600	5,000	8,550	55,900	6,510	5,750	7,710	2,290	3,080	1,420	870
12	4,270	2,600	8,980	8,980	74,700	6,130	5,370	8,980	2,920	2,600	1,420	870
13	3,920	2,600	8,130	10,300	76,400	5,750	5,370	17,000	3,250	2,140	1,480	1,420
14	3,750	2,920	6,900	10,300	40,000	6,900	5,000	16,500	2,920	1,990	1,590	1,530
15	3,580	3,250	6,130	10,300	29,400	6,510	4,630	13,500	2,600	1,700	1,420	1,070
16	3,250	3,250	5,370	10,300	28,300	6,510	4,270	11,200	2,600	1,700	1,420	1,000
17	2,920	2,920	5,370	10,300	23,900	6,130	4,270	9,850	2,440	1,700	1,420	922
18	2,600	2,760	5,000	10,300	21,200	6,510	4,270	8,550	2,290	1,990	1,420	870
19	2,600	2,760	5,000	15,500	18,600	8,550	4,450	7,710	1,990	1,990	1,420	870
20	2,760	2,600	4,450	18,600	17,000	18,100	4,630	7,300	1,700	2,140	1,420	870
21	2,600	2,760	3,920	15,500	15,000	28,300	4,270	6,900	2,600	2,290	1,590	854
22	2,440	2,920	3,750	11,200	14,000	20,200	4,090	6,130	2,920	2,290	1,420	854
23	2,440	4,630	3,750	11,200	12,600	16,000	3,920	5,370	2,600	1,990	1,590	822
24	2,440	9,410	3,750	10,700	11,600	13,100	3,750	5,370	2,290	2,440	1,700	870
25	2,290	7,710	3,580	10,300	11,200	11,200	3,580	5,750	1,990	2,290	2,290	870
26	2,290	7,710	3,920	8,980	10,700	9,850	3,920	5,750	2,140	1,990	1,700	870
27	2,440	6,510	4,270	9,410	9,850	9,850	5,370	5,000	2,600	2,440	1,420	870
28	2,600	5,750	5,000	9,850	9,410	10,300	8,130	4,630	2,760	2,600	1,110	870
29	2,440	5,000	4,630	10,700	-------	8,980	9,410	4,270	2,920	1,990	1,000	870
30	2,290	4,450	4,270	11,200	-------	9,410	18,600	3,920	3,410	2,440	1,000	870
31	3,250	-------	5,000	10,700	-------	8,550	-------	3,580	-------	2,600	1,000	-------

Monthly discharge of Potomac River at Point of Rocks, Md., for the year ending September 30, 1925

[Drainage area, 9,650 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	53,700	2,290	7,100	0.736	0.85
November	9,410	2,290	3,810	.395	.44
December	8,980	3,580	4,680	.485	.56
January	18,600	7,300	10,400	1.08	1.24
February	76,400	9,410	23,600	2.45	2.55
March	28,300	5,750	9,680	1.00	1.15
April	18,600	3,580	5,990	.621	.69
May	35,500	3,580	11,300	1.17	1.35
June	3,410	1,700	2,710	.281	.31
July	3,920	1,700	2,420	.251	.29
August	2,290	1,000	1,580	.164	.19
September	1,530	822	952	.091	.11
The year	76,400	822	6,920	.717	9.73

SAVAGE RIVER AT BLOOMINGTON, MD.

LOCATION.—At Bloomington, Garrett County, 1,400 feet above mouth and 2 miles above Piedmont, W. Va.

DRAINAGE AREA.—115 square miles (measured on topographic map).

RECORDS AVAILABLE.—May 3, 1905, to July 15, 1906; October 31, 1924, to September 30, 1925.

GAGE.—Vertical staff braced to boulders on right bank; read by W. P. Wagner Sea-level elevation of zero of gage, 970.23 feet.

DISCHARGE MEASUREMENTS.—Made by wading or from highway bridge 1 mile. above gage.

CHANNEL AND CONTROL.—Channel curved above and below gage. Bed composed of small and medium-sized boulders. Banks high and clean; not subject to overflow. Control changed by floods.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 6.18 feet at 4 p. m. February 11 (discharge, 1,800 second-feet); minimum discharge, 2.4 second-feet September 26–28.

ICE.—Stage-discharge relation affected by ice during severe winters.

ACCURACY.—Stage-discharge relation changed during high water February 11–12. Rating curves well defined below and fairly well defined above 400 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

Discharge measurements of Savage River at Bloomington, Md., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Oct. 31	2.45	8.39	Jan. 18	4.19	158	Feb. 18	5.11	703
Do	2.45	9.17	Jan. 19	3.87	99.6	Sept. 10	1.90	2.63
Jan. 18	4.25	152	Feb. 12	5.99	1,580	Do	1.90	2.97

Daily discharge, in second-feet, of Savage River at Bloomington, Md., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		8.9	13.5	23	30	158	176	640	32	15	20	2.8
2		9.3	15	21	30	298	176	714	28	15	14.5	2.7
3			13.5	21	43	236	187	460	26	32	9.8	3.4
4			15	22	70	236	187	370	22	18	7.5	3.5
5		8	19	21	164	210	176	298	19	15	6.7	4.6
6			67	19	234	176	158	251	18	12	6.5	3.3
7			106	16	301	167	158	210	21	9.8	6.1	3.8
8		7.2	120	20	435	187	131	198	23	8.5	5.5	3.8
9		7	106	17	680	187	123	176	22	8.5	5.4	3.5
10		7.2	72	18	995	176	115	158	18	47	6.3	2.8
11		7.2	54	17	1,440	176	108	370	14.5	24	10.0	2.6
12		7.2	47	17	1,480	223	101	514	12	15	13.5	2.6
13		7	88	17	714	198	82	391	11	20	20	2.6
14		7.7	106	15	436	210	70	315	10.5	12	13.5	4.6
15		10.5	72	12.5	574	187	75	251	13	9.5	9.8	4.6
16		14	82	17	574	167	68	210	13	8.5	7.5	3.9
17		16	77	72	460	167	56	187	18	7.5	5.9	3.8
18		12	72	154	351	176	59	158	18	7.8	5.5	3.8
19		8.8	62	106	298	460	63	131	19	7.1	5.2	3.5
20		7.7	54	94	251	487	75	115	13	6.5	4.9	2.9
21		9.3	24	72	223	370	56	101	12	10.5	9.8	3.0
22		46	28	67	198	315	52	101	9.2	65	11.5	3.6
23		44	30	54	210	266	52	88	17	27	10	3.0
24		30	58	35	210	223	52	84	17	15	4.9	2.6
25		25	36	62	198	198	52	94	140	12	4.2	2.5
26		19	15	82	140	167	282	69	75	10	4.6	2.4
27		18	24	408	90	176	223	56	41	9	3.5	2.4
28		20	28	136	75	187	251	48	26	8	3.5	2.4
29		19	22	75	-------	167	370	45	18	8	3.4	3.0
30		14.5	22	45	-------	158	436	42	23	6.9	3.3	2.8
31	8.5	-------	26	35	-------	167	-------	38	-------	8.5	2.8	-----

NOTE.—Stage-discharge relation affected by ice Jan. 29-31, Feb. 1, 2, 4, 26-28; discharge estimated from climatic data and by comparison with records for other stations. No gage readings Nov. 1, 3-7, Dec. 25; discharge interpolated. Braced figure shows mean discharge for period indicated.

Monthly discharge of Savage River at Bloomington, Md., for the year ending September 30, 1925

[Drainage area, 115 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
November	46	7.0	14.1	0.123	0.14
December	120	13.5	50.8	.442	.51
January	408	12.5	57.8	.502	.58
February	1,480	30	389	3.38	3.52
March	487	158	222	1.93	2.22
April	436	52	139	1.21	1.35
May	714	38	222	1.93	2.22
June	140	9.2	25.0	.217	.24
July	65	6.5	15.4	.134	.15
August	20	2.8	7.92	.069	.08
September	4.6	2.4	3.23	.028	.03

CACAPON RIVER NEAR GREAT CACAPON, W. VA.

LOCATION.—At Rock Ford 6½ miles above Great Cacapon, Morgan County, and mouth of river.

DRAINAGE AREA.—670 square miles.

RECORDS AVAILABLE.—December 12, 1922, to September 30, 1925.

GAGE.—Vertical staff nailed to tree on left bank, 150 feet above suspension footbridge; read by C. W. Clingerman.

DISCHARGE MEASUREMENTS.—Made from footbridge or by wading.

CHANNEL AND CONTROL.—Bed composed of bedrock and boulders. Bank subject to overflow. Control at low stages is rock ledge 100 feet below footbridge.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 9.2 feet February 12 (discharge, 8,150 second-feet); minimum stage, 0.38 foot at 5 p. m. September 25 (discharge, 38 second-feet).

1922–1925: Maximum stage recorded, 19.32 feet at 6 p. m. May 12, 1924 (discharge, about 34,000 second-feet); minimum stage, 0.38 foot July 28, 1923, and September 25, 1925 (discharge, 38 second-feet).

ICE.—Stage-discharge relation affected by ice during severe winters.

ACCURACY.—Stage-discharge relation practically permanent, except for periods of ice effect. Rating curve fairly well defined below 30,000 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

Discharge measurements of Cacapon River near Great Cacapon, W. Va., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Nov. 7	0.72	76.4	Nov. 7	0.72	71.8	Feb. 14	4.74	2,130
Do	.72	81.4	Feb. 14	4.82	2,180	Sept. 9	.52	56.9

Daily discharge, in second-feet, of Cacapon River near Great Cacapon, W. Va., for the year ending September 30, 1925

Date	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,330	79	167	155	} 530	359	437	4,610	179	245	81	63
2	906	79	117	155		359	417	3,260	167	191	167	217
3	520	102	115	129	704	341	417	1,890	144	155	167	191
4	341	102	109	133	1,570	341	437	1,420	133	119	133	144
5	245	92	99	113	1,570	291	378	1,140	133	113	108	113
6	204	85	99	113	1,140	307	341	960	113	109	95	78
7	231	79	155	113	1,730	307	341	753	113	113	95	70
8	133	79	191	113	2,240	291	291	704	123	113	89	54
9	121	79	217	113	3,040	275	291	609	111	95	78	52
10	117	79	260	113	4,100	275	275	520	144	155	73	50
11	113	79	260	134	3,260	245	275	542	291	204	70	48
12	95	79	275	155	8,150	245	275	1,140	191	167	70	48
13	89	79	275	}	4,480	245	260	1,730	144	123	67	49
14	87	79	204	} 200	2,240	245	245	1,210	113	104	63	51
15	85	87	204	}	1,570	245	245	906	104	93	64	51
16	82	95	155	155	1,890	307	231	803	95	123	64	51
17	79	95	155	250	1,570	291	231	609	95	291	51	51
18	73	95	167	704	1,280	275	231	542	95	167	54	51
19	67	113	155	1,210	1,020	457	217	457	95	109	54	50
20	64	113	155	}	906	4,610	204	417	104	95	50	49
21	64	113	155	} 1,070	753	2,240	204	359	104	92	52	50
22	70	113	155	}	656	1,420	204	359	95	104	50	49
23	70	609	167	291	609	1,080	191	341	95	113	60	44
24	64	397	167	155	564	854	191	324	95	155	55	42
25	70	397	155	}	564	753	191	341	95	125	47	39
26	70	397	155	}	564	656	324	341	113	102	46	42
27	70	359	155	} 236	499	564	906	307	144	102	50	42
28	82	359	155	}	437	564	753	260	144	82	50	42
29	82	359	155	}	-------	609	1,890	231	123	68	47	42
30	79	167	155	}	-------	520	2,720	204	378	70	44	44
31	144	-------	155	}	-------	478	-------	204	-------	79	44	------

NOTE.—Discharge estimated from observer's notes and climatic data Jan. 13–15, 20–22, 25–31, Feb. 1 and 2 because of ice or missing or apparently erroneous gage readings. Braced figures show mean discharge for such periods. Discharge interpolated Jan. 11 and 17.

Monthly discharge of Cacapon River near Great Cacapon, W. Va., for the year ending September 30, 1925

[Drainage area, 670 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	2,330	64	221	0.323	0.37
November	609	79	168	.251	.28
December	275	99	170	.254	.29
January		113	315	.470	.54
February	8,150	437	1,720	2.57	2.68
March	4,610	245	647	.966	1.11
April	2,720	191	454	.678	.76
May	4,610	204	887	1.32	1.52
June	378	95	136	.203	.23
July	291	68	128	.191	.22
August	167	44	72.2	.108	.12
September	217	39	65.6	.098	.11
The year	8,150	39	407	.607	8.23

SOUTH FORK OF SHENANDOAH RIVER NEAR LURAY, VA.

LOCATION.—At highway bridge 4 miles southwest of Luray, Page County. Hawksbill Creek enters from the right 10 miles below.

DRAINAGE AREA.—1,380 square miles.

RECORDS AVAILABLE.—April 26 to September 30, 1925.

GAGE.—Chain gage attached to downstream side of highway bridge; read by Malcolm Ruffner.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of sand and gravel; probably permanent. Control is gravel bar, probably permanent, some aquatic growth in summer. Banks lined with trees and brush; subject to overflow at high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 6.80 feet at 7 a. m. May 1 (discharge, 5,290 second-feet); minimum stage, 1.78 feet at 7 a. m. September 28 (discharge, 74 second-feet).

ICE.—Stage-discharge relation affected by ice during severe winters.

REGULATION.—Flow during during low water is regulated to some extent by a low dam three-fourths mile above.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

Discharge measurements of South Fork of Shenandoah River near Luray, Va., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Apr. 26	3.09	658	Aug. 2	2.30	239
June 6	2.92	523	Sept. 24	2.27	205

Daily discharge, in second-feet, of South Fork of Shenandoah River near Luray, Va., for the year ending September 30, 1925

Day	Apr.	May.	June	July	Aug.	Sept.	Day	Apr.	May.	June	July	Aug.	Sept.
1	------	4,970	590	414	387	335	16	------	1,250	625	530	184	135
2	------	3,620	625	500	301	335	17	------	1,120	625	470	414	310
3	------	2,640	590	470	442	335	18	------	1,020	530	414	414	414
4	------	2,120	590	414	442	335	19	------	1,020	530	292	387	282
5	------	1,880	590	442	387	260	20	------	935	442	360	310	269
6	------	1,660	560	530	414	211	21	------	935	[a] 400	335	414	260
7	------	1,450	530	470	387	387	22	------	850	360	730	235	335
8	------	1,350	770	850	387	470	23	------	770	442	500	211	414
9	------	1,160	810	695	273	260	24	------	730	470	470	181	360
10	------	1,120	1,070	1,450	301	310	25	------	730	414	442	301	335
11	------	1,120	770	730	335	335	26	695	770	2,370	335	273	310
12	------	1,160	590	560	414	360	27	935	730	470	387	256	199
13	------	1,350	500	530	310	218	28	1,350	660	442	414	282	158
14	------	1,250	500	500	310	251	29	2,500	660	530	360	387	278
15	------	1,250	360	500	335	500	30	4,200	660	442	292	138	310
							31	------	625	------	335	184	------

[a] Interpolated.

Monthly discharge of South Fork of Shenandoah River near Luray, Va., for the year ending September 30, 1925

[Drainage area, 1,380 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
April 26-30	4,200	695	1,940	1.41	0.26
May	4,970	625	1,340	.971	1.12
June	2,370	360	618	.448	.50
July	1,450	292	507	.367	.42
August	442	138	322	.233	.27
September	500	135	309	.224	.25
The period	4,970	135	663	.480	2.82

MIDDLE RIVER NEAR GROTTOES, VA.

LOCATION.—At highway bridge, Mount Meridian, Augusta County, 1½ miles above junction of North and Middle Rivers and 3 miles west of Grottoes, Rockingham County.

DRAINAGE AREA.—360 square miles (measured on topographic maps).

RECORDS AVAILABLE.—February 17 to September 30, 1925.

GAGE.—Chain gage attached to downstream side of highway bridge; read by E. M. Foster.

DISCHARGE MEASUREMENTS.—Made from downstream side of highway bridge or by wading.

CHANNEL AND CONTROL.—Bed at measuring section clean and smooth; composed of gravel and sand; probably shifting during high stages. Control is riffle half a mile below, composed of rock and gravel; clean; probably permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded, 6.22 feet at 5.30 p. m. April 30 (discharge, 1,240 second-feet); minimum stage, 2.08 feet August 1 (discharge, 31 second-feet).

ICE.—Stage-discharge relation affected by ice during winter.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined above 60 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily height to rating table. Records good.

Discharge measurements of Middle River near Grottoes, Va., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Feb. 18	4.55	528	June 5	2.86	139
Apr. 17	3.07	153	Sept. 23	2.56	77

Daily discharge, in second-feet, of Middle River near Grottoes, Va., for the year ending September 30, 1925

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		410	234	720	123	42	31	111
2		410	223	532	111	68	36	104
3		410	223	410	90	91	45	98
4		356	212	356	70	132	50	90
5		382	212	317	65	223	55	81
6		356	201	280	106	317	52	81
7		356	190	256	132	304	46	84
8		330	190	234	160	292	43	90
9		330	180	223	532	280	45	94
10		304	170	212	292	330	49	98
11		280	190	212	150	317	52	101
12		280	180	356	132	268	56	95
13		280	170	330	123	245	59	90
14		280	170	356	114	245	91	87
15		280	170	330	150	223	69	92
16		268	170	330	132	190	71	90
17	602	280	170	317	123	180	68	84
18	566	256	160	280	123	170	69	87
19	468	292	160	256	114	160	74	94
20	468	280	160	234	95	150	80	90
21	468	280	150	212	81	141	87	87
22	468	256	160	201	68	132	92	83
23	468	280	160	180	58	114	97	78
24	532	280	150	160	51	104	103	76
25	500	268	150	132	46	92	108	77
26	468	256	141	98	42	80	111	68
27	438	256	438	74	38	69	114	64
28	410	256	268	80	38	58	123	60
29		245	840	88	37	48	132	57
30		234	1,020	100	34	42	132	54
31		234		109		35	123	

Monthly discharge of Middle River near Grottoes, Va., for the year ending September 30, 1925

[Drainage area, 360 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
February 17-28	602	410	488	1.36	0.61
March	410	234	299	.831	.96
April	1,020	141	240	.667	.74
May	720	74	257	.714	.82
June	532	34	114	.317	.35
July	330	35	166	.461	.53
August	132	31	76.2	.212	.24
September	111	54	84.8	.236	.26

SOUTH RIVER AT HARRISTON, VA.

LOCATION.—At highway bridge at Harriston, Augusta County, 7 miles above junction of Middle and South Rivers.

DRAINAGE AREA.—222 square miles (measured on topographic maps).

RECORDS AVAILABLE.—February 15 to September 30, 1925.

GAGE.—Chain gage attached to downstream side of highway bridge; read by Mrs. Harry Patterson.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Bed rough with rocky bottom. Control 800 feet below composed of gravel and large boulders; clean and probably permanent. Stage of zero flow at gage height 2.34 feet as determined June 5, 1925.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 4.54 feet February 15 (discharge, 623 second-feet); minimum stage, 2.90 feet at 3 p. m. July 23 (discharge, 32 second-feet).

ICE.—Stage-discharge relation affected by ice for short periods.

REGULATION.—Gristmill and low dam three-eighths mile above gage slightly affects natural flow at low water.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined above 50 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

Discharge measurements of South River at Harriston, Va., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Feb. 16	4.50	582	June 5	3.38	109
Apr. 18	3.34	85	Sept. 23	3.12	58

Daily discharge, in second-feet, of South River at Harriston, Va., for the year ending September 30, 1925

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		257	157	416	111	86	62	56
2		257	142	342	108	83	60	53
3		209	145	270	113	75	68	56
4		245	145	240	108	86	72	58
5		240	139	240	104	81	66	54
6		236	142	202	102	84	72	53
7		232	136	187	209	100	68	51
8		209	130	174	202	83	78	62
9		217	136	145	116	120	75	48
10		202	128	174	111	98	72	54
11		198	123	167	116	92	62	54
12		202	116	187	98	102	58	60
13		198	125	221	94	80	66	60
14		194	113	213	98	58	66	51
15	623	180	120	205	111	64	72	113
16	590	177	113	191	111	136	56	56
17	528	174	120	170	90	70	75	58
18	470	180	111	157	90	60	62	54
19	416	177	125	151	78	73	55	50
20	416	184	116	160	90	73	72	51
21	366	167	106	139	86	76	53	60
22	342	163	118	123	84	64	60	56
23	318	160	116	118	86	58	50	55
24	342	167	108	130	83	136	61	54
25	318	160	116	136	94	73	56	53
26	318	145	111	145	86	61	64	44
27	296	151	125	128	83	75	50	51
28	257	160	142	118	73	67	51	50
29		160	296	108	83	64	53	55
30		167	366	104	75	58	45	58
31		151		106		72	58	

Monthly discharge of South River at Harriston, Va., for the year ending September 30, 1925

[Drainage area, 222 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
February 15-28	623	257	400	1.80	0.94
March	257	145	191	.860	.99
April	366	106	140	.630	.70
May	416	104	180	.811	.94
June	209	73	103	.464	.52
July	136	58	80.9	.364	.42
August	78	45	62.5	.282	.38
September	113	44	56.3	.254	.23

NORTH FORK OF SHENANDOAH RIVER AT COOTES STORE, VA.

LOCATION.—At highway bridge at Cootes Store, Rockingham County, 1 mile below Brocks Gap and 3½ miles above Broadway. Linville Creek enters from right 3½ miles below.

DRAINAGE AREA.—215 square miles (measured on topographic maps).

RECORDS AVAILABLE.—February 28 to September 30, 1925.

GAGE.—Chain gage attached to upstream side of highway bridge; read by Edward A. Cootes.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed composed mostly of gravel and sand, with projecting ledge rock in several places; clean and probably permanent. Control is riffle 250 feet below composed of gravel and boulders; clean and permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period 7.55 feet at 9.10 a. m. March 19 (discharge, 2,180 second-feet); minimum stage, 2.10 feet from 4.30 p. m. September 27 to 4.10 p. m. September 30 (discharge, 1.5 second-feet).

ICE.—Stage-discharge relation will be affected by ice during cold winters.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 1,000 second-feet and extended beyond these limits. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

Discharge measurements of North Fork of Shenandoah River at Cootes Store, Va., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Feb. 28	3.14	93	June 5	2.54	17.3
Apr. 15	2.94	55	Sept. 23	2.16	2.0

Daily discharge, in second-feet, of North Fork of Shenandoah River at Cootes Store, Va., for the year ending September 30, 1925

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		82	104	1,620	24	25	12	1.8
2		73	102	885	21	18	11	1.8
3		61	95	565	22	18	10	2.0
4		68	84	420	22	17	8.0	2.1
5		68	80	322	20	86	7.0	2.0
6		63	73	251	17	34	5.6	2.0
7		58	69	207	21	66	5.3	2.0
8		58	61	170	18	34	5.3	1.8
9		56	60	148	80	38	5.3	1.8
10		53	61	126	34	36	4.6	1.8
11		50	63	122	22	28	4.6	1.8
12		48	58	134	17	25	4.6	1.8
13		53	56	134	17	21	4.6	1.8
14		58	51	112	17	18	4.6	1.8
15		58	56	100	14	21	3.9	1.8
16		54	51	95	17	64	3.2	1.9
17		58	47	75	20	23	3.2	1.7
18		61	50	69	21	17	2.4	1.6
19		2,060	48	60	18	17	2.3	1.6
20		1,080	46	57	17	16	2.3	1.6
21		610	42	47	16	16	3.9	1.6
22		420	41	44	15	16	3.9	1.6
23		322	41	43	15	15	3.6	1.8
24		251	37	41	15	13	2.8	1.9
25		217	47	43	21	13	2.3	1.9
26		188	168	41	17	11	2.3	1.7
27		173	268	35	15	11	2.3	1.6
28	89	170	790	34	191	10	2.3	1.5
29		134	1,680	31	109	8.0	2.0	1.5
30		126	1,840	30	34	8.0	2.0	1.5
31		114		26		9.5	1.8	

Monthly discharge of North Fork of Shenandoah River at Cootes Store, Va., for the year ending September 30, 1925

[Drainage area, 215 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
February 28			89	0.414	0.02
March	2,060	48	224	1.04	1.20
April	1,840	37	209	.972	1.08
May	1,620	26	196	.912	1.05
June	191	14	30.2	.140	.16
July	86	8.0	24.3	.113	.13
August	12	1.8	4.48	.021	.02
September	2.1	1.5	1.77	.008	.01

NORTH FORK OF SHENANDOAH RIVER NEAR STRASBURG, VA.

LOCATION.—At highway bridge 2 miles east of Strasburg, Shenandoah County, 9 miles above confluence of North and South Forks of Shenandoah River. Passage Creek enters from right 4 miles below.

DRAINAGE AREA.—772 square miles (measured on topographic maps).

RECORDS AVAILABLE.—March 8 to September 30, 1925.

GAGE.—Chain gage attached to downstream side of highway bridge; read by E. E. Wright.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of ledge rock, sand, and gravel; permanent. Control is rock ledge 150 feet below; permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 7.60 feet at 7 a. m. May 1 (discharge, about 4,520 second-feet); minimum stage, 1.76 feet at 7 a. m. September 29 (discharge, 55 second-feet).

ICE.—Stage-discharge relation may be affected by ice during extremely cold winters.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined below 2,400 second-feet and extended above. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

Discharge measurements of North Fork of Shenandoah River near Strasburg, Va., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 6	2.65	487	June 6	2.22	193
Apr. 17	2.43	325	Sept. 24	1.84	70.2

Daily discharge, in second-feet, of North Fork of Shenandoah River near Strasburg, Va., for the year ending September 30, 1925

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-------	508	4,430	217	271	136	100
2	-------	473	2,930	207	237	217	111
3	-------	473	1,880	207	242	202	114
4	-------	473	1,400	175	212	197	143
5	-------	417	1,160	361	237	136	125
6	-------	417	940	184	904	139	86
7	-------	389	832	184	403	139	103
8	438	389	724	192	389	143	92
9	417	368	688	227	1,640	163	89
10	424	361	580	259	1,240	179	94
11	424	354	544	265	832	163	79
12	403	375	508	222	438	163	94
13	403	348	544	217	348	171	94
14	431	334	508	248	307	150	111
15	410	354	473	192	265	146	163
16	375	320	438	222	288	118	121
17	417	307	403	222	396	118	125
18	424	334	382	197	288	125	94
19	2,280	327	375	232	222	158	89
20	3,440	300	368	212	222	136	94
21	2,040	300	341	212	222	179	89
22	1,400	288	327	171	294	163	89
23	1,090	294	314	222	327	150	84
24	868	277	327	227	283	154	92
25	796	265	314	192	237	158	86
26	724	334	307	222	188	136	92
27	652	473	259	232	158	125	81
28	652	796	248	222	217	108	74
29	652	1,960	248	227	150	103	89
30	580	2,760	227	410	103	94	108
31	508	-------	227	-------	254	108	-------

Monthly discharge of North Fork of Shenandoah River near Strasburg, Va., for the year ending September 30, 1925

[Drainage area, 772 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
March 8–31	3,440	375	844	1.09	0.97
April	2,760	265	512	.663	.74
May	4,430	227	750	.972	1.12
June	410	171	226	.293	.33
July	1,640	103	381	.494	.57
August	217	94	148	.192	.22
September	163	74	100	.130	.14

MONOCACY RIVER NEAR FREDERICK, MD.

LOCATION.—At Ceresville Bridge, 3 miles northeast of Frederick, Frederick County, on road from Frederick to Mount Pleasant. Tuscarora Creek enters 3,000 feet above station.

DRAINAGE AREA.—665 square miles.

RECORDS AVAILABLE.—August 4, 1896, to September 30, 1925.

GAGE.—Chain gage attached to downstream handrail of right span of bridge; read by Edward D. Shriner, jr.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—Bed of gravel and boulders; shifting during very high floods. Banks lined with trees and brush; subject to overflow at high stages. Control not well defined.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 19.6 feet at 7.30 a. m. February 12 (discharge, 12,000 second-feet); minimum stage, 3.73 feet August 27–28 (discharge, 28 second-feet).

1896–1925: Maximum stage recorded, 27.2 feet at 11 a. m. January 13, 1915 (discharge, 19,000 second-feet); minimum stage, 3.54 feet several days in October, 1910 (discharge, 15 second-feet).

ICE.—Stage-discharge relation affected by ice during severe winters only.

ACCURACY.—Stage-discharge relation probably permanent during year. Rating curve well defined. Gage read to hundredths once daily. Daily discharge ascertained by applying daily gage height to rating table. Records fair.

The following discharge measurements were made:

December 19, 1924: Gage height, 4.78 feet; discharge, 250 second-feet.

December 19, 1924: Gage height, 4.77 feet; discharge, 245 second-feet.

Daily discharge, in second-feet, of Monocacy River near Frederick, Md., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June	July	Aug.	Sept.
1	8,930	139	151	158	950	950	660	1,110	198		255	40
2	2,240	139	151	158	1,170	1,050	615	850	171		212	40
3	1,610	139	163	212	1,000	800	570	850	171		122	40
4	1,230	163	163	240	950	485	525	850	171		134	40
5	1,170	163	226	286	800	525	505	660	158		122	40
6	1,110	163	465	134	570	570	445	570	158		146	40
7	1,110	151	465	134	525	660	405	425	134		134	660
8	1,110	151	465	110	1,050	615	388	405	122	60	122	302
9	1,110	151	505	110	1,540	570	370	405	122		110	146
10	1,110	151	505	134	4,640	548	445	370	110		110	92
11	1,050	151	465	212	8,100	570	405	370	99		134	43
12	800	163	505	240	12,000	570	370	405	99		146	30
13	505	163	615	240	4,640	570	370	405	88		134	286
14	255	151	485	184	2,030	615	465	370	88		99	660
15	184	176	465	158	2,390	615	465	370	99	43	88	425

Daily discharge, in second-feet, of Monocacy River near Frederick, Md., for the year ending September 30, 1925—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
16	184	1,230	226	184	6,290	615	425	318	88	50	78	270
17	184	660	255	270	3,060	750	388	302	88	50	68	198
18	184	198	270	485	2,170	950	335	286	88	134	50	171
19	176	151	226	900	2,100	2,240	335	255	88	106	50	99
20	176	127	184	800	2,030	1,480	525	212	88	78	50	59
21	176	151	158	660	1,680	950	485	198	88	92	50	59
22	163	184	171	615	1,680	660	405	184	99	115	212	59
23	163	1,170	184	525	1,540	615	370	184	122	129	117	54
24	163	388	212	370	1,350	570	318	158		106	74	39
25	163	198	226	445	1,290	548	286	525		68	55	37
26	151	184	270	485	1,230	485	270	318		88	34	37
27	151	176	212	370	1,170	505	302	270	162	92	28	37
28	163	176	184	660	1,110	1,230	302	270		106	28	37
29	163	151	184	800	-------	950	445	255		226	34	43
30	139	151	134	1,170	-------	750	660	226		129	34	43
31	139	-------	405	1,000	-------	660	-------	212	-------	122	40	------

NOTE.—Mean discharge estimated, because of missing gage-height record, June 23-30 and July 1-14, by comparison with records for other stations and climatic data.

Monthly discharge of Monocacy River near Frederick, Md., for the year ending September 30, 1925

[Drainage area, 665 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	8,930	139	844	1.27	1.46
November	1,230	139	254	.382	.43
December	615	134	300	.451	.52
January	1,170	110	402	.605	.70
February	12,000	525	2,470	3.71	3.86
March	2,240	485	764	1.15	1.33
April	660	270	428	.644	.72
May	1,110	158	406	.611	.71
June	----------	88	129	.194	.22
July	----------	43	83.0	.125	.14
August	255	28	99.0	.149	.17
September	660	30	138	.208	.23
The year	12,000	28	513	.771	10.48

GREAT SENECA CREEK NEAR GAITHERSBURG, MD.

LOCATION.—At concrete highway bridge on Frederick pike, 2 miles northwest of Gaithersburg, Montgomery County.

DRAINAGE AREA.—41 square miles.

RECORDS AVAILABLE.—March 19, 1925, to September 30, 1925.

GAGE.—Chain gage bolted to downstream guard rail in left span of 3-span concrete bridge; read by W. G. Glynn and L. M. Andrews.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—One channel at all stages, straight for about 100 feet above and below gage. Bed is composed of mud and gravel. Left bank above gage subject to overflow at about stage of 7.0 feet; right bank sloping and subject to overflow at about stage of 4 feet. Banks below gage covered with willows, brush, and grass. Control at low and medium stages is a small gravel riffle 40 feet below gage; shifting. Channel control at high stages.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 6.45 feet at 5.30 a. m. September 13 (discharge, 570 second-feet); minimum stage, 1.20 feet at 6 p. m. September 27 (discharge, 8.1 second-feet).

ICE.—Stage-discharge relation affected by ice during severe winters.

ACCURACY.—Stage-discharge relation fairly permanent. Rating curve well defined below 125 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying to rating table mean daily gage height. Records good.

Discharge measurements of Great Seneca Creek near Gaithersburg, Md., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Mar. 18	1.99	41.1	June 8	1.42	14.6	Sept. 21	1.33	12.5
Do	1.96	41.2	July 9	1.39	13.8			
May 13	1.64	26.6	Aug. 21	1.77	33.9			

Daily discharge, in second-feet, of Great Seneca Creek near Gaithersburg, Md., for the year ending September 30, 1925

Day	Mar.	Apr.	May	June	July	Aug.	Sept.
1		36	35	19.0	14.0	22	11.5
2		37	31	18.5	14.0	15.0	11.0
3		34	28	17.5	14.0	13.5	9.5
4		34	28	16.5	13.0	13.5	9.5
5		32	32	16.5	16.0	19.0	9.5
6		31	27	16.0	13.0	16.5	13.0
7		31	26	15.5	21	14.5	13.0
8		30	24	16.0	14.5	14.0	13.0
9		29	24	16.0	14.5	51	13.0
10		31	23	15.5	16.0	16.0	13.0
11		32	26	14.0	14.5	19.5	13.0
12		30	27	14.0	12.5	15.5	11.5
13		28	24	14.0	12.5	15.5	73
14		28	23	14.5	11.5	14.0	36
15		33	22	14.5	11.5	12.5	16.5
16		28	22	14.0	12.5	12.0	16.0
17		29	21	13.0	11.5	11.5	14.0
18		35	20	14.0	10.5	11.0	11.5
19	85	34	20	14.0	10.0	11.0	11.5
20	48	33	19.5	13.0	9.5	11.5	11.5
21	42	29	19	13.0	12.0	22	11.0
22	40	28	18.5	11.5	78	14.0	10.5
23	37	28	18.5	14.5	16.0	12.0	10.5
24	37	27	31	14.0	12.0	11.5	10.0
25	36	25	34	36	15.5	11.0	10.0
26	36	36	25	16.5	71	10.5	9.5
27	37	28	23	14.5	16.5	10.5	8.5
28	54	29	22	14.5	74	10.0	10.0
29	40	34	21	16.0	17.0	9.5	10.0
30	37	48	21	19.0	12.5	9.5	9.5
31	37		20		112	9.5	

NOTE.—Gage not read Sept. 6-11; discharge estimated from rainfall record and comparison with Northwest Branch of Anacostia River. Discharge Sept. 13 obtained from plotted gage-height graph by averaging mean discharges for intervals of the day.

Monthly discharge of Great Seneca Creek near Gaithersburg, Md., for the year ending September 30, 1925

[Drainage area, 41 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
March 19-31	85	36	43.5	1.06	0.51
April	48	25	31.6	.771	.86
May	35	18.5	24.4	.595	.69
June	36	11.5	15.9	.388	.43
July	112	9.5	22.7	.554	.64
August	51	9.5	14.8	.361	.42
September	73	8.5	14.3	.348	.39

NORTHWEST BRANCH OF ANACOSTIA RIVER NEAR COLESVILLE, MD.

LOCATION.—At highway bridge at site of old Northwest Mills, 1½ miles south-southwest of Colesville, Montgomery County, and 3 miles above Burnt Mills.

DRAINAGE AREA.—21.3 square miles (measured on topographic maps).

RECORDS AVAILABLE.—February 27, 1924, to September 30, 1925.

GAGE.—Vertical staff gage on tree 600 feet above bridge; installed April 7. Staff gage bolted to right abutment of bridge until April 6. Datum of present gage 1.97 feet higher than original gage. Gages read by F. E. Valdenar.

DISCHARGE MEASUREMENTS.—Made from bridge or by wading.

CHANNEL AND CONTROL.—One channel at all stages, curves above and below bridge. Bed of sand and coarse gravel. Banks clean; subject to overflow at extremely high stages. Control is rock section; probably permanent. Point of zero flow 0.84 ± 0.05 foot gage height January 8 and 0.75 ± 0.10 foot July 9.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 4.30 feet February 8 (discharge, 534 second-feet); minimum stage, 1.36 feet at 6 p. m. July 20 (discharge, 2.0 second-feet).

1924–1925: Maximum stage recorded, 7.87 feet at 1.30 p. m. April 6, 1924 (discharge, about 1,600 second-feet); minimum stage, 1.36 feet at 6 p. m. July 20, 1925 (discharge, 2.0 second-feet).

ICE.—Stage-discharge relation affected by ice during severe winters.

ACCURACY.—Stage-discharge relation probably permanent. Rating curve well defined below 400 second-feet and extended above. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table or by subdividing the day. Records fair.

Discharge measurements of Northwest Branch of Anacostia River near Colesville, Md., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Dec. 23	1.55	11.5	May 13	1.58	13.1	Aug. 21	1.55	13.0
Jan. 8	1.56	14.3	June 8	1.46	6.7	Sept. 21	1.41	4.07
Feb. 18	1.70	23.3	July 9	1.45	6.9	Do	1.41	3.75
Mar. 20	1.68	21.8	Do	1.45	6.6			

Daily discharge, in second-feet, of Northwest Branch of Anacostia River near Colesville, Md., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	65	18	17	16.5		23	16.5	24	8.5	4.5	13	34
2		18	16.5	16.5		22	16.5	18.5	7.5	4.5	7.5	5.5
3		18	16.5	18			15.5	15.5	7.5	3.5	6.5	4.5
4		18	17	18	37	20	15	15.5	7.5	3	5.5	4.5
5		18	19.5	16.5		22	14	17	7	5.5	7.5	4.5
6	30	18	24	17		22	14	15	7	4.5	7.5	5
7		18	18	17	106	20	14	14	7	3.5	6.5	29
8		18	22	15.5	200	20	13.5	14	6	9.5	5.5	5.5
9		18	37		184	18.5	13.5	13.5	6	5.5	6.5	5.5
10		18	21	16	195	18	15	14	5.5	15	11	4.5
11	28	18	18		126	18.5	17	15.5	4.5	5.5	22	4.5
12	28	18	18	16.5	56	18	14	18.5	5.5	41	9	4.5
13	28	18	18		34	18.5	14	14	5	7	7.5	15.5
14	28	18	17		31	18.5	14	13.5	5.5	4	6	9
15	34	22	16.5	17	24	17	19.5	13.5	5.5	4	5	6
16	34	24	16.5		31	16.5	17	13.5	5.5	4	3.5	6.5
17	37	18	17	91	29	25	17	13	5	3.5	3.5	6.5
18	39	18	18	68	25	24	22	13	5.5	3	3	5.5
19	39	18	18	36	24	38	20	13	5.5	3	3	5.5
20	39	18	16.5	116	24	22	18	13	4	2	3.5	4.5
21	28	18	16.5	41	24	20	15.5	12	3.5	3.5	9	4.5
22	22	120	16.5		22	18.5	15.5	12	3.5	64	4.5	3.5
23	22	18	16.5	28	24	17	15	12	6.5	12	3.5	4
24	22	18	26		25	16.5	15	14	4.5	5.5	3.5	4
25	22	18	26		22	16.5	15.5	14	24	43	3.5	4
26	22	18	26	37	28	15.5	25	11.5	7	138	5.5	3.5
27	22	18	19.5	40	20	17	17	11.5	4.5	17	4.5	3.5
28	26	18	18			24	15.5	11	4.5	82	4.5	3.5
29	19.5	18	18	46	-------	18.5	26	9.5	4.5	9	4.5	3.5
30	18	18	18	78	-------	17	31	9.5	14	6.5	4.5	4
31	18	-------	17	37	-------	17	-------	8.5	-------	31	5	-------

NOTE.—Mean daily discharge estimated, because of ice, from observer's notes and climatic data, as follows: Jan. 9–11, 13–16, 22–25, 27–28, 31, Feb. 1–6, 27–28, Mar. 2–3. Gage not read Oct. 2–10; discharge estimated by comparison with flow at other stations. Discharge determined by discharge hydrograph Oct. 1; discharge determined by subdividing the day Feb. 7, July 22, 25, 26, Aug. 10–11, Sept. 1, and 7.

Monthly discharge of Northwest Branch of Anacostia River near Colesville, Md., for the year ending September 30, 1925

[Drainage area, 21.3 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	65	18	29.4	1.38	1.59
November	117	18	21.7	1.02	1.14
December	34	16	19.4	.911	1.05
January	116	15.5	32.6	1.53	1.76
February	200	20	53.4	2.51	2.61
March	38	15.5	20.0	.940	1.08
April	31	13.5	17.0	.798	.89
May	24	8.5	13.8	.648	.75
June	24	3.5	6.58	.309	.34
July	138	2.0	17.7	.831	.96
August	22	3.0	6.31	.296	.34
September	34	3.5	6.95	.326	.36
The year	200	2.0	20.2	.948	12.87

RAPPAHANNOCK RIVER BASIN

RAPPAHANNOCK RIVER AT KELLYS FORD, VA.

LOCATION.—At highway bridge at Kellys Ford, Culpeper County, 2 miles above mouth of Mountain Run, 5 miles south of Remington, and 15 miles above Rapidan River.

DRAINAGE AREA.—641 square miles (measured on topographic maps).

RECORDS AVAILABLE.—February 7 to September 30, 1925.

GAGE.—Chain gage on upstream side of highway bridge; read by Billie Roberts.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of sand and gravel below gage and rough ledge rock above. Banks wooded; right bank low and subject to overflow; left bank high. Control 500 feet below composed of ledge rock and gravel; probably permanent.

EXTREMES OF STAGE.—Maximum stage recorded during period, 11.63 feet at 8.45 a. m. February 12 (discharge, 7,730 second-feet); minimum stage, 1.50 feet at 6 p. m. September 9 (discharge, 15 second-feet).

ICE.—Stage-discharge relation affected by ice during cold winters.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined between 25 and 6,000 second-feet. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

The following discharge measurements were made:

February 8, 1925: Gage height, 5.16 feet; discharge, 1,700 second-feet.

April 8, 1925: Gage height, 3.07 feet; discharge, 405 second-feet.

June 3,1925: Gage height, 2.46 feet; discharge, 184 second-feet.

Daily discharge, in second-feet, of Rappahannock River at Kellys Ford, Va., for the year ending September 30, 1925

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-------	663	472	1,300	206	300	137	340
2	-------	663	472	870	182	206	158	160
3	-------	578	472	692	179	155	140	114
4	-------	634	448	606	182	176	123	55
5	-------	634	424	663	158	282	116	58
6	-------	578	380	551	160	212	158	72
7	1,580	524	246	472	155	524	137	37
8	1,720	524	380	424	182	179	135	50
9	2,070	472	360	380	185	282	810	28
10	4,650	472	360	380	551	206	199	25
11	3,690	498	402	380	215	228	145	25
12	6,850	498	360	578	165	174	100	23
13	2,820	472	222	498	150	150	82	25
14	2,140	498	340	402	145	114	145	32
15	1,720	498	340	360	137	109	88	50
16	1,650	448	340	340	179	109	98	47
17	1,300	448	320	320	176	118	105	114
18	1,170	634	402	300	155	109	63	92
19	1,050	810	402	282	137	80	56	55
20	990	1,510	360	282	128	84	45	24
21	930	692	340	264	103	100	32	24
22	870	634	300	246	118	103	63	28
23	810	578	300	246	140	196	65	30
24	990	524	320	264	116	150	52	25
25	930	524	300	448	147	118	62	27
26	810	498	360	282	300	282	58	27
27	750	472	448	228	182	128	44	27
28	663	750	380	228	145	125	50	26
29	-------	634	663	215	1,860	86	48	28
30	-------	524	930	246	1,050	71	27	26
31	-------	498	-------	193	-------	103	37	-------

Monthly discharge of Rappahannock River at Kellys Ford, Va., for the year ending September 30, 1925

[Drainage area, 641 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
February 7-28	6,850	663	1,830	2.85	2.33
March	1,510	448	593	.925	1.07
April	930	222	395	.616	.69
May	1,300	193	417	.651	.75
June	1,860	103	263	.410	.46
July	524	71	170	.265	.31
August	810	27	115	.179	.21
September	340	23	56.5	.088	.10
The period	6,850	23	431	.672	5.92

RAPPAHANNOCK RIVER NEAR FREDERICKSBURG, VA.

LOCATION.—At rear of McWhirt farm, 1½ miles above dam of Spotsylvania Power Co. and 3½ miles above Fredericksburg, Spotsylvania County.

DRAINAGE AREA.—1,590 square miles.

RECORDS AVAILABLE.—September 19, 1907, to September 30, 1925.

GAGE.—Friez water-stage recorder on right bank installed January 6, 1922; inspected by Charles Perry.

DISCHARGE MEASUREMENTS.—Made from cable at gage or by wading.

CHANNEL AND CONTROL.—Bed composed of boulders, somewhat rough. One channel. Banks wooded; water overflows right bank at stage about 15 feet and left bank at about 12 feet. Current sluggish at extremely low water. Control is a rocky section a few hundred feet below the gage; practically permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during year, 15.1 feet during morning of October 1 (discharge, 58,800 second-feet); minimum stage, 0.28 foot from 2 to 5 a. m. September 15 (discharge, 64 second-feet).

1907–1925: Maximum stage recorded, 16.5 feet at 1 a. m. May 13, 1924 (discharge, about 66,000 second-feet); minimum stage, that of September 15, 1925.

ICE.—Ice forms near gage but seldom in sufficient quantity at control to affect stage-discharge relation.

ACCURACY.—Stage-discharge relation practically permanent. Rating curve well defined between 90 and 27,000 second-feet; extended beyond these limits. Operation of water-stage recorder satisfactory, except as indicated in footnote to table of daily discharge. Daily discharge ascertained by applying to rating table mean daily gage height obtained by inspection of recorder graph or by averaging the discharge for intervals of a day. Records good.

The following discharge measurement was made:

October 29, 1924: Gage height, 3.99 feet; discharge, 4,610 second-feet.

Daily discharge, in second-feet, of Rappahannock River near Fredericksburg, Va., for the year ending September 30, 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47,600	1,530	1,260	1,200	2,940	1,890	1,400	3,890	626	1,040	447	149
2	20,400	1,460	1,200	1,330	3,400	2,040	1,330	2,610	576	566	491	582
3	5,960	1,330	1,010	1,600	5,790	1,890	1,330	2,040	491	430	318	324
4	3,490	1,200	1,200	1,740	4,710	1,590	1,260	1,670	456	395	260	219
5	2,910	1,200	1,200	1,890	3,490	1,680	1,200	1,740	402	395	250	143
6	2,370	1,140	2,320	1,890	3,490	1,590	1,200	1,670	381	528	250	129
7	2,200	1,070	2,300	1,890	3,770	1,450	1,140	1,400	367	548	312	113
8	2,030	1,070	1,760	1,890	3,920	1,430	1,140	1,260	360	647	300	90
9	1,860	1,140	3,870	2,200	4,140	1,340	1,070	1,140	596	439	554	76
10	1,700	1,200	3,230	2,040	8,130	1,310	1,070	1,070	1,020	517	708	77
11	1,530	1,160	2,370	2,800	7,280	1,370	1,070	1,070	924	513	352	76
12	1,460	1,120	2,040	3,290	11,600	1,340	891	1,760	556	537	275	65
13	1,330	1,090	1,890	2,730	7,060	1,290	776	1,840	447	409	237	66
14	1,260	1,050	1,740	3,100	5,100	1,400	710	1,330	430	290	191	66
15	1,200	1,010	1,530	2,730	4,140	1,460	710	1,200	360	246	184	156
16	1,200	1,260	1,400	2,200	3,700	1,330	832	1,140	374	633	180	155
17	1,140	1,330	1,400	2,900	3,290	1,330	891	1,010	409	290	163	221
18	1,140	1,140	1,400	5,750	2,910	1,670	1,010	891	388	241	134	409
19	1,070	1,010	1,330	6,200	2,550	1,670	1,140	891	360	206	129	250
20	1,070	950	1,260	6,330	2,370	2,040	1,200	832	342	176	129	188
21	1,010	950	1,140	7,720	2,200	1,670	1,140	776	324	176	118	143
22	950	2,280	1,010	5,460	2,200	1,600	950	720	285	195	105	113
23	950	5,130	720	6,300	2,040	1,460	950	720	295	312	113	98
24	920	2,730	1,070	3,890	3,010	1,400	950	720	318	348	134	98
25	891	2,200	1,330	3,290	4,030	1,400	950	786	300	280	124	102
26	891	1,820	1,070	3,700	2,730	1,400	1,010	1,040	777	228	115	
27	1,010	1,600	1,010	5,110	2,200	1,460	1,260	776	710	617	110	
28	1,800	1,530	1,070	4,200	2,040	2,200	1,460	710	447	246	90	110
29	4,320	1,460	1,260	3,290	-------	1,940	1,990	779	1,790	206	76	
30	2,190	1,400	1,070	5,650	-------	1,530	2,970	832	2,560	163	88	
31	1,670	-------	1,260	8,010	-------	1,460	-------	720	-------	250	79	

NOTE.—Water-stage recorder not operating Oct. 8–10, Nov. 11–14, Mar. 4–13, and Sept. 26–30; daily discharge estimated from study of weather records and comparison with records of Rapidan River at Rapidan and Rappahannock River at Kellys Ford.

Monthly discharge of Rappahannock River near Fredericksburg, Va., for the year ending September 30, 1925

[Drainage area, 1,590 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
October	47,600	891	3,860	2.43	2.80
November	5,130	950	1,490	.937	1.05
December	3,870	720	1,540	.969	1.12
January	8,010	1,200	3,620	2.28	2.63
February	11,600	2,040	4,080	2.57	2.68
March	2,200	1,290	1,570	.987	1.14
April	2,970	710	1,170	.736	.82
May	3,890	710	1,260	.792	.91
June	2,560	285	589	.370	.41
July	1,040	163	389	.245	.28
August	708	76	226	.142	.16
September	582	65	155	.097	.11
The year	47,600	65	1,650	1.04	14.11

RAPIDAN RIVER AT RAPIDAN, VA.

LOCATION.—1,000 feet below highway bridge in Rapidan, Culpeper County. Robinson Branch enters from left, 2 miles above.

DRAINAGE AREA.—446 square miles (measured on topographic maps).

RECORDS AVAILABLE.—February 11 to September 30, 1925.

GAGE.—Staff gage in three sections on left bank; read by J. S. Holladay.

DISCHARGE MEASUREMENTS.—Made from highway bridge or by wading.

CHANNEL AND CONTROL.—Bed composed of sand and gravel. Banks wooded and subject to overflow. Control 500 feet below gage, consists of gravel bar underlain with ledge rock; clean and probably permanent.

EXTREMES OF DISCHARGE.—Maximum stage recorded during period, 7.70 feet at 8 a. m. February 12 (discharge, 3,420 second-feet); minimum stage, 0.31 foot at 7 a. m. August 29 (discharge, 17 second-feet).

ICE.—Stage-discharge relation affected by ice during cold winters.

REGULATION.—Flow regulated to some extent during low water by a dam 1,100 feet above.

DIVERSIONS.—None.

ACCURACY.—Stage-discharge relation permanent. Rating curve well defined between 40 and 3,300 second-feet and extended beyond these limits. Gage read to hundredths twice daily. Daily discharge ascertained by applying mean daily gage height to rating table. Records good.

Discharge measurements of Rapidan River at Rapidan, Va., during the year ending September 30, 1925

Date	Gage height	Discharge	Date	Gage height	Discharge	Date	Gage height	Discharge
	Feet	*Sec.-ft.*		*Feet*	*Sec.-ft.*		*Feet*	*Sec.-ft.*
Feb. 11	4.29	1,460	Apr. 8	1.66	271	Sept. 15	0.71	51.4
Feb. 12	7.35	3,180	June 3	1.23	153			

Daily discharge, in second-feet, of Rapidan River at Rapidan, Va., for the year ending September 30, 1925

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		555	338	825	182	169	169	320
2		555	320	645	169	136	84	100
3		472	320	555	169	534	100	66
4		452	320	492	157	145	92	60
5		512	302	492	136	145	73	50
6		492	302	413	122	169	92	41
7		452	285	394	145	195	90	34
8		452	285	356	169	122	78	37
9		432	269	338	157	169	73	30
10		413	269	320	269	223	88	29
11	1,410	413	302	320	157	145	92	27
12	2,920	413	285	645	127	127	62	30
13	1,780	394	269	432	118	94	73	31
14	1,410	432	253	356	113	88	63	140
15	1,210	394	269	356	113	72	77	84
16	1,310	356	253	320	118	77	40	48
17	960	394	253	285	109	90	40	209
18	870	413	285	285	113	75	33	107
19	780	413	253	253	118	60	42	90
20	735	394	253	253	98	72	34	39
21	690	356	269	238	86	169	42	53
22	645	356	238	223	109	169	43	43
23	645	338	238	223	84	124	39	33
24	1,010	338	223	195	96	96	48	73
25	870	338	223	269	555	62	32	70
26	735	320	253	238	238	58	30	55
27	645	338	432	223	157	78	53	29
28	600	472	356	223	157	44	30	44
29		394	600	195	86	53	18	34
30		375	825	195	285	39	25	34
31		356		195		70	18	

Monthly discharge of Rapidan River at Rapidan, Va., for the year ending September 30, 1925

[Drainage area, 446 square miles]

Month	Discharge in second-feet				Run-off in inches
	Maximum	Minimum	Mean	Per square mile	
February 11–28	2,920	600	1,070	2.40	1.61
March	555	320	412	.924	1.07
April	825	223	311	.697	.78
May	825	195	347	.778	.90
June	555	84	157	.352	.39
July	534	39	125	.280	.32
August	169	18	60.4	.135	.16
September	320	27	68.0	.152	.17

MISCELLANEOUS DISCHARGE MEASUREMENTS

In addition to the records of flow obtained at the gaging stations and reported in the preceding pages, measurements were made at other points, as shown by the following table:

Miscellaneous discharge measurements in North Atlantic slope drainage basins during the year ending September 30, 1925

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
Oct. 18	Connecticut River	Atlantic Ocean	Vernon, Vt.	87.00	2,140
19	do	do	do	84.98	261
19	do	do	do	85.86	945
19	do	do	do	86.45	1,470
20	do	do	do	90.54	10,000
Feb. 16	Ferry Brook	Ashuelot River	Keene, N. H.		14.1
May 1	Diversion canal	Packard Pond	Athol, Mass		12.2
Aug. 13	do	do	do		1.3
7	Schoharie Creek	Mohawk River	Middleburg, N. Y.	1.10	124
May 29	Champlain Canal	do	Cohoes, N. Y.		237
29	Little Falls Canal	do	Waterford, N. Y.		149
June 2	Kinderhook Creek	Hudson River	Stuyvesant Falls, N. Y.	1.33	409
2	do	do	do	1.18	324
2	do	do	do	1.41	455
16	do	do	do	.70	147
16	do	do	do	.89	199
16	do	do	do	1.03	247
Oct. 3	Deep Run	South River	Spring Valley, N. J.		5.9
30	do	do	do		3.1
Nov. 2	do	do	do		3.4
17	do	do	do		3.2
Dec. 19	do	do	do		5.4
Feb. 6	do	do	do		13.2
Mar. 4	do	do	do		13.9
18	do	do	do		14.8
18	do	do	do		14.4
19	do	do	do		19.2
Apr. 14	do	do	do		5.9
28	do	do	do		5.3
May 13	do	do	do		6.9
25	do	do	do		11.7
25	do	do	do		11.1
26	do	do	do		7.9
26	do	do	do		7.9
June 10	do	do	do		2.8
July 20	do	do	do		1.4
Aug. 10	do	do	do		2.2
27	do	do	do		1.1
Sept. 17	do	do	do		2.4

Miscellaneous discharge measurements in North Atlantic slope drainage basins during the year ending September 30, 1925—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
Oct. 3	Deep Run	South River	Browntown, N. J.		13.7
30	do	do	do		4.9
Nov. 17	do	do	do		5.0
Dec. 19	do	do	do		9.0
Feb. 6	do	do	do		16.2
Oct. 3	do	do	Old Bridge, N. J.		19.0
30	do	do	do		6.6
Nov. 17	do	do	do		5.1
Dec. 20	do	do	do		10.8
Feb. 6	do	do	do		21.9
Oct. 3	Tennant Brook	do	Runyon, N. J.		2.4
Nov. 2	do	do	do		.59
17	do	do	do		.38
Dec. 19	do	do	do		1.4
Feb. 6	do	do	do		3.4
Mar. 4	do	do	do		6.9
18	do	do	do		7.4
18	do	do	do		6.5
19	do	do	do		14.6
Apr. 14	do	do	do		1.6
28	do	do	do		1.5
May 13	do	do	do		2.2
May 25	do	do	do		4.9
25	do	do	do		4.2
26	do	do	do		2.3
26	do	do	do		2.1
June 10	do	do	do		.19
July 20	do	do	do		.09
Aug. 10	do	do	do		.34
27	do	do	do		.03
Sept. 17	do	do	do		.56
Nov. 2	Flow from large pond into small pond on Tennant Brook.	do	do		.39
18	do	do	do		.35
Dec. 19	do	do	do		.65
Mar. 4	Matawan Creek	Raritan River	Matawan, N. J.		8.7
18	do	do	do		7.8
18	do	do	do		7.0
19	do	do	do		16.3
Apr. 14	do	do	do		2.2
28	do	do	do		2.5
May 13	do	do	do		3.1
25	do	do	do		7.5
25	do	do	do		7.2
26	do	do	do		4.7
26	do	do	do		4.6
June 10	do	do	do		1.4
July 20	do	do	do		.85
Aug. 10	do	do	do		1.4
27	do	do	do		.84
Sept. 17	do	do	do		2.0
Mar. 4	Thompsons Creek	Matawan Creek	do		1.5
18	do	do	do		1.7
18	do	do	do		1.6
19	do	do	do		2.9
Apr. 14	do	do	do		.40
28	do	do	do		.16
May 13	do	do	do		.33
25	do	do	do		.40
25	do	do	do		.29
26	do	do	do		.24
26	do	d2	do		,24
June 10	do	do	do		.08
July 20	do	do	do		.08
Aug. 10	do	do	do		.08
27	do	do	do		.02
Sept. 17	do	do	do		.13
Jan. 8	Haynes Creek	Pemberton Creek	Eayrestown, N. J.		57
24	do	do	do		111
24	do	do	do		146
24	do	do	do		138
24	do	do	do		131
Mar. 10	do	do	do		94

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