UNITED STATES DEPARTMENT OF THE INTERIOR
RAY LYMAN WILBUR, Secretary
GEOLOGICAL SURVEY
W. C. MENDENHALL, Director

Water-Supply Paper 711

SURFACE WATER SUPPLY *of the* UNITED STATES

1931

PART 1

NORTH ATLANTIC SLOPE DRAINAGE BASINS

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Prepared in cooperation with the States of
CONNECTICUT, MAINE, MARYLAND, MASSACHUSETTS
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CONTENTS

ILLUSTRATION

SURFACE WATER SUPPLY OF NORTH ATLANTIC SLOPE DRAINAGE BASINS, 1931

AUTHORIZATION AND SCOPE OF WORK

This volume is one of a series of 14 reports presenting results of measurements of flow made on streams in the United States during the year ending September 30, 1931.

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, 1895–1932

1895	$12, 500. 00	1908–1910	$100, 000. 00	1926	$165, 000. 00
1896	24, 500. 00	1911–1917	150, 000. 00	1927	151, 000. 00
1897–1899	50, 000. 00	1918	175, 000. 00	1928	147, 000. 00
1900	70, 000. 00	1919	148. 244. 10	1929	270, 500. 00
1901–2	100, 000. 00	1920	175, 000. 00	1930	275, 000. 00
1903–1906	200, 000. 00	1921–1923	180, 000. 00	1931	565, 000. 00
1907	150, 000. 00	1924–25	170, 000. 00	1932	711, 000. 00

In the execution of the work many private and State organizations have cooperated, either by furnishing records 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 10 and 11.

Measurements of stream flow have been made at about 6,270 points in the United States and also at many points in Alaska and the Hawaiian Islands. In July, 1931, 2,660 gaging stations were being maintained by the Geological 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, and acre-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 one 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 natural section or stretch of the channel or artificial structure below the gage which determines the stage-discharge relation at the gage.

EXPLANATION OF DATA

The data presented in this report cover the year beginning October 1, 1930, and ending September 30, 1931. 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 underground 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 consist of records of stage, measurements of discharge, and general information used to

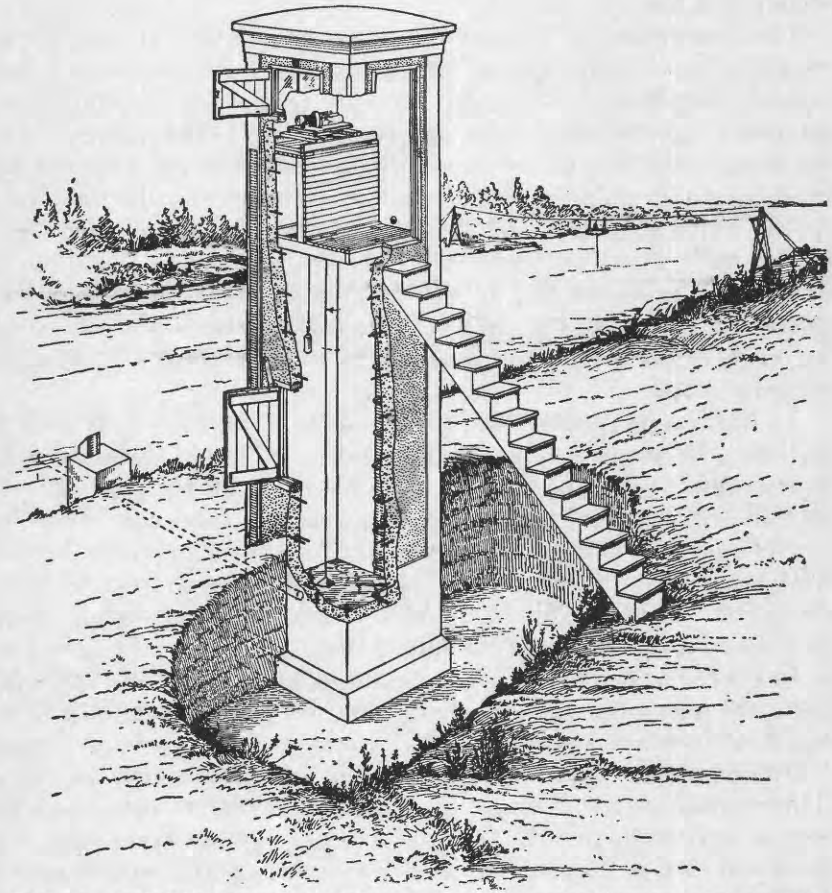

FIGURE 1.—Typical river-measurement station showing concrete well and house for water-stage recorder and staff gages, cable, and car

supplement the gage heights and discharge measurements in determining the daily flow. The records of stage are obtained either from direct readings on a staff or chain gage or from a water-stage recorder that gives a continuous record of the fluctuations. Measurements of discharge are made with a current meter by the general methods 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.

Rating tables giving the discharge for any stage are prepared from the discharge measurements. The application of the daily gage height 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 showing the daily discharge of the stream, and a table of monthly and yearly discharge and run-off.

The description of the station gives, in addition to statements regarding location and type of gage, information as to diversions that decrease the flow at the gage, artificial regulation, maximum and minimum recorded discharges, and the accuracy of the records. The maximum discharge given under "Extremes" does not represent the crest discharge unless a water-stage recorder was in operation or a nonrecording gage was read at the time of the crest.

The table of daily discharge gives, in general, the discharge in second-feet corresponding to the daily gage height, which may be a once-daily reading or the mean of twice-daily readings of a nonrecording gage, or the mean daily gage height obtained from a water-stage recorder graph.

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 using the discharge integrator, an instrument for obtaining mean daily discharge from a continuous gage-height graph and containing as an essential element the rating curve of the station.

In the table of monthly discharge the column headed "Maximum" gives the maximum daily discharge and not the discharge when the water surface was at crest height. Likewise, in the column headed "Minimum" the quantity given is the minimum daily discharge. The column headed "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 permanency of the stage-discharge relation and (2) on the accuracy of observation of stage, measurements of flow, and interpretation of records.

The station description gives a statement in regard to the general accuracy of the records. "Excellent" indicates that records are accurate within 5 per cent; "good," within 10 per cent; "fair," within 15 per cent; and "poor," within 20 per cent or more.

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.

The table of monthly discharge gives a general idea of the flow at the station. The table of daily discharge allows 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.

Many gaging stations on streams in the irrigated areas of the United States are situated above most of the diversions from those streams, and the discharge recorded does not show the water supply available for further development, as prior appropriations below the stations must first be satisfied.

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, underground 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 bulletins, professional papers, monographs, 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 1. North Atlantic slope basins (St. John River to York River).
2. South Atlantic slope and eastern Gulf of Mexico basins (James River to Mississippi River).
3. Ohio River Basin.
4. St. Lawrence River Basin.
5. Hudson Bay and upper Mississippi River Basins.
6. Missouri River Basin.
7. Lower Mississippi River Basin.
8. Western Gulf of Mexico basins.
9. Colorado River Basin.
10. The Great Basin.

Part 11. Pacific slope basins in California.
12. North Pacific slope drainage basins, 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.
Hartford, Conn., 318 State Office Building.
Albany, N. Y., 353 Broadway.
Trenton, N. J., 710 Trenton Trust Building.
Harrisburg, Pa., 604 Claster Building.
Charlottesville, Va., Brooks Museum, University of Virginia.
South Charleston, W. Va., Naval Ordnance Plant.
Asheville, N. C., 220 Post Office Building.
Columbia, S. C., 801 National Loan & Exchange Bank Building.
Ocala, Fla., Post Office Building.
Tuscaloosa, Ala., Post Office Building.
Chattanooga, Tenn., 630 Power Building.
Columbus, Ohio, Engineering Experiment Station, Ohio State University.
Indianapolis, Ind., 319 Federal Building.
Urbana, Ill., 302 University New Agricultural Building.
Madison, Wis., 337N State Capitol.
St. Paul, Minn., 202 Old State Capitol.
Topeka, Kans., 23 Federal Building.
Rolla, Mo., Rolla Building, School of Mines and Metallurgy.
Fort Smith, Ark., Post Office Building.
Austin, Tex., State Capitol.
Santa Fe, N. Mex., State Capitol.
Tucson, Ariz., 210 Post Office Building.
Denver, Colo., 403 Post Office Building.
Salt Lake City, Utah, 303 Federal Building.
Idaho Falls, Idaho, 228 Federal Building.
Boise, Idaho, Federal Building.
Helena, Mont., 416 Power Block.
Tacoma, Wash., 406 Federal Building.
Portland, Oreg., 606 Post Office Building.
San Francisco, Calif., 303 Customhouse.
Los Angeles, Calif., 751 South Figueroa Street, room 510.
Honolulu, Hawaii, Territorial Office Building.

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

Stream-flow records have been obtained at about 6,270 points in the United States, and the data obtained have been published in the reports tabulated on page following.

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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 September, 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	1893–94.
16th A, pt. 2	Descriptive information only	
B 140	Descriptions, measurements, gage heights, ratings, and monthly discharge (also many 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).	1895–96.
W 15	Descriptions, measurements, and gage heights, eastern United States, eastern Mississippi River, and Missouri River above junction with Kansas River.	1897.
W 16	Descriptions, measurements, and gage heights, western Mississippi River below junction of Missouri and Platte Rivers, 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	1907–8.
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	1919–20.
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.
W 621 to 634	do	1926.
W 641 to 654	do	1927.
W 661 to 674	do	1928.
W 681 to 694	do	1929.
W 696 to 709	do	1930.
W 711 to 724	do	1931.

The records at most of the stations discussed in these reports extend over a series of years. Miscellaneous measurements at many points other than regular gaging stations have been made each year and are published under "Miscellaneous discharge measurements" at the end of each report in the same relative order as the regular gaging stations. 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 1931. The data for any particular station will, as a rule, be found in the reports covering the years during which the statior was maintained. For example, data from 1910 to 1920 for any station in the area covered by Part 3 are published in Water-Supply Papers 283, 303, 323, 353, 383, 403, 433, 453, 473, and 503, which contain records for the Ohio River Basin for those years.

Number of water-supply papers containing results of stream measurements, 1899–1931

[For basins included, see p. 5]

Year	1	2	3	4	5	6	7	8	9	10	11	12-A	12-B	12-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, [j] 50	50	50	50	51	51	51	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	[l] 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, [c] 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, [e] 177	176, [r] 177	177	178	178	[i] 177, 178
1906	[n] 201, [o] 202, [p] 203	[p] 203, 204	205	206	207	208	[k] 205, 209	210	211, [e] 213	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
1926	621	622	623	624	625	626	627	628	629	630	631	632	633	634
1927	641	642	643	644	645	646	647	648	649	650	651	652	653	654
1928	661	662	663	664	665	666	667	668	669	670	671	672	673	674
1929	681	682	683	684	685	686	687	688	689	690	691	692	693	694
1930	696	697	698	699	700	701	702	703	704	705	706	707	708	709
1931	711	712	713	714	715	716	717	718	719	720	721	722	723	724

[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 4.
[b] James River only.
[c] Gallatin River.
[d] Green and Gunnison Rivers and Colorado River above junction with Gunnison River.
[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 4.
[h] Wissahickon and Schuylkill Rivers to James River.
[i] Scioto River.
[j] Loup and Platte Rivers near Columbus, Nebr., and all tributaries below junction with Platte River.
[k] Tributaries of Mississippi River 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] The Great Basin in California except Truckee and Carson River Basins.
[s] Below junction with Gila River.
[t] Rogue, Umpqua, and Siletz Rivers only.

COOPERATION

The work in the several States was done under cooperative agreements as follows: In Connecticut with the State Water Commission, George T. Kimball, chairman, Sanford H. Wadhams, director; in Maine with the Public Utilities Commission, Albert J. Stearns, chairman; in Maryland with the State Geological Survey, Dr. E. B. Mathews, State geologist, with the State Department of Health, Abel Wolman, chief engineer, with the city of Baltimore Department of Public Works, Bureau of Water Supply, Edward G. Rost, water engineer, with the city of Salisbury, F. H. Dryden, city engineer, and with the Washington Suburban Sanitary District, Robert B. Morse, chief engineer; in Massachusetts with the Department of Public Works, Frank C. Lyman, chairman, Richard K. Hale, commissioner (waterways), the Metropolitan District Commission, D. B. Keniston, chairman, and with the Metropolitan District Water Supply Commission, D. B. Keniston, chairman; in New Hampshire with the Public Service Commission, Mayland H. Morse, chairman, and with the State Highway Department, Frederick E. Everett, commissioner; in New Jersey, with the State Water Policy Commission, Morris R. Sherrerd, chief engineer, H. T. Critchlow, division engineer; in New York with the State Department of Public Works, Frederick Stuart Greene, superintendent, with the Hudson River Regulating District, and with the city of Albany Board of Water Supply; in Pennsylvania with the Department of Forests and Waters, Lewis E. Staley, secretary, through Water and Power Resources Board, Chas. E. Ryder, chief engineer; in Vermont with the State, Stanley C. Wilson, Governor; in Virginia with the Conservation and Development Commission of Virginia, W. E. Carson, chairman; in West Virginia with the State Geological Survey, James D. Sisler, State geologist, and with the Public Service Commission, I. Wade Coffman, chairman; and in the District of Columbia with the office of Public Buildings and Public Parks of the National Capital, Lieut. Col. U. S. Grant, III, director.

Acknowledgment is due also to the Corps of Engineers, United States Army, for financial assistance in collecting records published herein.

Assistance in collecting records was also rendered by the following municipalities, organizations, corporations, and individuals: In New England by Bangor Hydroelectric Co., Brassua Associates, Brown Co., Connecticut Light & Power Co., Connecticut Power Co., International Paper Co., Milo Electric Light & Power Co., Mascoma River Improvement Co., New Hampshire Public Service Co., Northern Connecticut Power Co., St. Croix Paper Co., Turners Falls Power & Electric Co., Worcester Electric Light Co., and Thomas W. Clark; in New Jersey by cities of Jersey City, Morristown, Newark, and

New Brunswick, by North Jersey District Water Supply Commission, the Society for Establishing Useful Manufactures, Hackensack Water Co., Jersey Central Power & Light Co., Monmouth Consolidated Water Co., Morris Canal & Banking Co., Taylor-Wharton Iron & Steel Co., and Warren Manufacturing Co.; in New York by Rensselaer Polytechnic Institute, Associated Gas & Electric System, Blandy Paper Co., Central Hudson Gas & Electric Corporation, Charles H. Tenney Co., Indian River Co., New York Power & Light Corporation, Streever Construction Co., and Utica Gas & Electric Co.; in Pennsylvania by city of Lancaster, Pennsylvania Power & Light Co., and Susquehanna Power Co.; in Virginia by Virginia Electric & Power Co. and Du Pont Rayon Co.; and in West Virginia by Potomac Edison Co.

DIVISION OF WORK

The data for the stations in the several States were collected and prepared for publication as follows: In Connecticut, except at Thompsonville, by B. L. Bigwood, district engineer, assisted by E. B. Rice and Catherine M. Johnson; in Maine and on Androscoggin and Saco Rivers in New Hampshire by M. R. Stackpole, district engineer, assisted by L. W. Furness, A. O. Patterson, jr., and Alice L. Barentzen; in Maryland, West Virginia, and the District of Columbia, and Licking Creek near Sylvan, Pa., by A. H. Horton, district engineer, assisted by J. W. Mangan, W. D. Mitchell, K. F. Schumacher, R. O. Martin, M. T. Thomson, W. R. Eaton, and L. L. Harrold; in Massachusetts, New Hampshire (except those mentioned in preceding paragraph), Rhode Island, Vermont, and at Thompsonville, Conn., by H. B. Kinnison, district engineer, assisted by J. H. Foster, G. K. Wood, LeRoy Engstrom, E. H. Curtin, A. A. Fischback, jr., G. R. Williams, and Miss T. V.Larsen; in New Jersey by O. W. Hartwell, district engineer, assisted by Otto Lauterhahn, E. G. Barron, W. L. Heckler, R. O. Martin, and Mrs. Alyce B. Savidge; in New York by A. W. Harrington, district engineer, assisted by J. L. Lamson, F. C. Christopherson, J. V. B. Wells, R. H. Brigham, A. A. Fischback, jr., W. B. Hanlon, Kyle Forrest, W. P. Cross, Miss A. D. Buchanan, Miss E. L. Connors, and Miss B. M. Smith; in Pennsylvania, except Licking Creek near Sylvan, Pa., by J. W. Mangan, district engineer, assisted by R. H. Hosmer, P. R. Speer, George Weber, jr., E. L. Phillips, J. M. Snavely, B. G. Lichty, A. P. Powell, and Miss M. E. Frock; in Virginia by J. J. Dirzulaitis, district engineer, assisted by O. D. Mussey, A. R. Green, F. F. Schrader, T. F. Hanly, F. N. Shackelford, H. C. Eagle, A. D. Ash, E. A. Gdaniec, and Miss Sue F. Norris.

The records were reviewed and manuscript assembled by K. N. Phillips.

GAGING-STATION RECORDS

ST. JOHN RIVER BASIN

ST. JOHN RIVER AT FORT KENT, ME.

LOCATION.—Staff gage at cable ferry between Fort Kent, Aroostook County, and Clair, New Brunswick, a quarter of a mile below mouth of Fish River.

DRAINAGE AREA.—5,690 square miles.

RECORDS AVAILABLE.—October, 1926, to September, 1931.

EXTREMES.—Maximum discharge during year, 48,400 second-feet Apr. 24 (gage height, 14.6 feet); minimum, 970 second-feet Mar. 23.

1926–31: Maximum discharge, 96,300 second-feet May 4, 5, 1930 (gage height, 21.6 feet); minimum, that of Mar. 23, 1931.

REMARKS.—Records good except those for period of ice effect, Dec. 1 to Apr. 9, which are fair. Discharge estimated Oct. 9.

Daily and monthly discharge, in second-feet, 1930-31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,890	2,600	7,690	2,390	1,230	1,000	3,060	30,400	9,780	4,890	4,500	1,180
2	5,090	2,350	6,330	2,330	1,180	990	4,270	24,100	12,400	4,500	4,500	1,250
3	3,800	2,230	5,700	2,350	1,170	980	6,120	22,700	10,300	4,140	4,140	1,330
4	3,480	2,350	5,490	2,280	1,160	1,010	6,620	23,600	8,450	3,170	4,140	1,330
5	3,320	2,110	5,290	2,230	1,150	1,000	9,160	25,100	7,940	3,320	4,500	1,500
6	3,320	2,870	5,250	2,230	1,120	995	10,800	25,600	11,200	2,870	4,890	1,250
7	3,170	4,890	5,250	2,170	1,110	990	12,700	23,100	13,700	2,870	4,890	1,690
8	2,730	4,890	5,230	2,130	1,100	980	14,900	18,000	13,700	2,730	4,500	2,870
9	2,550	6,550	5,210	2,070	1,070	980	16,100	19,600	16,800	2,600	4,140	2,730
10	2,350	6,990	4,730	2,000	1,060	975	18,000	18,400	23,600	2,470	3,970	3,640
11	2,350	5,490	4,360	1,980	1,060	1,000	21,300	14,700	23,100	2,470	3,480	3,480
12	2,350	4,320	4,140	1,940	1,050	995	30,400	13,700	15,700	3,970	2,870	3,480
13	2,230	5,700	3,990	1,910	1,050	990	37,300	13,100	15,700	5,290	2,470	3,640
14	2,110	5,090	3,820	1,900	1,040	980	37,300	14,400	12,800	6,550	2,230	3,170
15	2,000	4,690	3,670	1,870	1,040	990	39,100	12,400	11,500	5,490	2,000	2,870
16	2,000	4,690	3,540	1,840	1,040	1,000	37,300	11,800	10,900	4,890	1,890	3,020
17	2,000	4,690	3,500	1,820	1,040	1,010	32,600	11,500	11,200	4,320	1,890	3,970
18	2,110	5,090	3,380	1,800	1,040	1,020	28,200	10,300	13,100	3,970	1,890	4,890
19	2,870	10,600	3,290	1,780	1,030	1,030	26,100	9,780	10,600	3,480	1,690	5,490
20	3,480	16,800	3,200	1,770	1,030	1,010	27,100	9,240	10,100	3,020	1,590	5,700
21	3,170	15,400	3,130	1,740	1,020	980	33,800	8,970	9,780	3,020	1,410	5,090
22	3,170	14,400	3,080	1,690	1,000	980	40,300	8,970	10,100	3,480	1,330	4,140
23	3,170	12,400	3,000	1,650	995	970	47,100	8,970	9,510	5,490	1,410	4,500
24	2,870	10,300	2,930	1,610	990	985	48,400	8,450	7,690	8,970	1,180	6,770
25	2,870	10,300	2,860	1,580	990	1,000	46,500	14,000	7,220	8,450	1,250	8,970
26	2,730	12,100	2,790	1,540	995	1,020	38,500	15,700	6,990	6,330	1,180	13,100
27	3,170	15,000	2,740	1,480	995	1,060	33,200	18,000	6,550	5,700	1,110	14,000
28	2,600	14,400	2,640	1,430	995	1,140	39,100	15,000	6,550	5,090	1,110	14,000
29	3,800	13,400	2,560	1,380	-------	1,300	37,300	11,800	6,120	4,140	990	13,700
30	2,870	9,510	2,480	1,340	-------	1,750	34,300	11,500	5,700	3,640	1,110	11,800
31	2,600	-------	2,410	1,300	-------	2,350	-------	10,600	-------	3,800	1,110	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	5,090	2,000	2,940	0.517	0.60
November	16,800	2,110	7,740	1.36	1.52
December	7,690	2,410	3,990	.701	.81
January	2,390	1,300	1,860	.327	.38
February	1,230	990	1,060	.186	.19
March	2,350	970	1,080	.190	.22
April	48,400	3,060	27,200	4.78	5.33
May	30,400	8,450	15,600	2.74	3.16
June	23,600	5,700	11,300	1.99	2.22
July	8,970	2,470	4,360	.766	.88
August	4,890	990	2,560	.450	.52
September	14,000	1,180	5,150	.905	1.01
The year	48,400	970	7,060	1.24	16.84

FISH RIVER NEAR FORT KENT, ME.

LOCATION.—Water-stage recorder 300 feet above highway bridge at Fort Kent Mills, 2 miles above confluence with St. John River, and 2 miles south of Fort Kent, Aroostook County.

DRAINAGE AREA.—867 square miles.

RECORDS AVAILABLE.—September, 1929, to September, 1931. At site 10 miles above, July, 1903, to December, 1908; May to November, 1911.

EXTREMES.—Maximum discharge during year, 5,110 second-feet Apr. 24, 25 (gage height, 7.4 feet); minimum, 134 second-feet Sept. 5 (gage height, 2.67 feet).

1903–1908, 1911, 1929–1931: Maximum discharge, 9,380 second-feet May 8, 1930 (gage height, 9.86 feet); minimum, 47 second-feet Oct. 13, 14, 1905.

REMARKS.—Records good except those for periods when stage was affected by ice or logs, Nov. 28 to Mar. 26, June 23 to July 6, which are fair. Discharge estimated Oct. 9–11. Large lake area above station has not yet been developed for storage purposes.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	732	395	555	360	260	225	400	4,430	1,480	765	485	158
2	683	375	550	350	260	225	518	4,430	1,430	695	470	158
3	653	370	555	345	255	225	653	4,260	1,330	660	480	155
4	635	365	570	340	250	225	832	4,090	1,280	630	496	150
5	605	350	575	335	250	225	1,000	4,000	1,240	595	460	142
6	575	440	555	335	250	225	1,190	3,760	1,240	565	435	150
7	557	485	540	330	245	225	1,430	3,600	1,240	563	410	171
8	545	545	530	330	245	225	1,580	3,440	1,430	557	385	174
9	540	551	520	325	240	225	1,800	3,200	1,740	557	405	165
10	520	501	510	325	240	225	2,090	2,980	1,860	545	365	160
11	510	496	500	320	240	225	2,550	2,760	1,910	545	345	171
12	490	490	495	320	240	225	2,900	2,690	1,910	551	312	189
13	470	475	490	315	240	225	3,200	2,550	1,910	518	288	189
14	425	470	485	310	240	225	3,600	2,410	1,910	490	276	177
15	410	465	480	310	240	225	3,680	2,280	1,910	480	256	324
16	410	460	475	305	240	225	3,760	2,150	1,860	475	246	390
17	435	455	470	300	235	225	3,840	2,090	1,800	506	242	385
18	480	455	460	300	230	225	3,840	1,970	1,800	490	232	455
19	480	460	455	295	230	225	3,840	1,910	1,690	465	239	420
20	435	465	440	290	230	225	4,000	1,740	1,580	465	222	395
21	425	475	440	290	230	220	4,260	1,530	1,480	435	207	375
22	415	480	435	285	230	220	4,600	1,530	1,380	480	204	400
23	435	475	420	285	230	220	4,940	1,640	1,290	528	207	506
24	425	480	415	280	230	215	5,110	1,690	1,230	528	204	545
25	425	523	410	275	230	215	5,110	1,690	1,150	523	183	581
26	415	540	400	275	230	215	4,940	1,580	1,080	545	165	623
27	415	545	390	270	230	223	4,940	1,640	1,040	528	160	784
28	420	555	385	270	225	228	4,940	1,580	980	512	158	860
29	415	565	375	265	-------	245	4,770	1,580	925	528	148	876
30	405	570	370	260	-------	295	4,600	1,480	875	523	155	876
31	400	-------	365	260	-------	340	-------	1,480	-------	518	158	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	732	400	490	0.565	0.65
November	570	350	476	.549	.61
December	575	365	471	.543	.63
January	360	260	305	.352	.41
February	260	225	239	.276	.29
March	340	215	230	.265	.31
April	5,110	400	3,160	3.64	4.06
May	4,430	1,480	2,520	2.91	3.36
June	1,910	875	1,470	1.70	1.90
July	765	435	541	.624	.72
August	496	148	290	.334	.39
September	876	142	370	.427	.48
The year	5,110	142	880	1.01	13.81

AROOSTOOK RIVER AT WASHBURN, ME.

LOCATION.—Chain gage on Bangor & Aroostook Railroad bridge 1 mile south of railroad station at Washburn, Aroostook County, and one-tenth of a mile below mouth of Salmon Brook.

DRAINAGE AREA.—1,620 square miles.

RECORDS AVAILABLE.—August, 1930, to September, 1931.

EXTREMES.—Maximum discharge during year, 13,500 second-feet Apr. 13, 14 (gage height, 8.0 feet); minimum, 214 second-feet Feb. 3.

1930–31: Maximum discharge, that of Apr. 13, 14, 1931; minimum, that of Feb. 3, 1931.

REMARKS.—Records good except those for period of ice effect, Nov. 30 to Mar. 30, which are fair. Discharge estimated Oct. 1–3. Approximately 2,500,000,000 cubic feet of storage in Squapan Lake.

Daily and monthly discharge, in second-feet, 1930-31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	450	368	1,010	285	215	310	1,540	6,520	2,100	835	1,210	415
2	435	359	1,110	280	215	310	2,300	5,550	2,000	835	998	490
3	425	342	870	275	215	310	4,930	4,930	1,910	835	835	508
4	410	326	540	270	220	305	5,550	4,930	1,720	835	798	508
5	334	303	475	265	315	305	6,520	4,630	1,460	885	760	385
6	318	342	610	260	295	310	7,560	4,330	1,720	835	700	400
7	303	482	590	270	255	310	8,330	3,880	2,200	798	645	700
8	288	1,290	580	350	265	310	8,330	3,450	3,320	835	622	1,140
9	267	720	620	355	320	305	7,560	3,190	6,190	935	525	1,140
10	260	610	580	350	315	300	8,330	3,070	9,570	935	460	1,210
11	274	399	470	355	300	310	10,900	2,950	10,400	998	415	1,210
12	260	399	455	355	290	320	13,100	3,320	8,730	1,210	385	1,290
13	247	530	410	310	290	320	13,500	4,330	7,560	1,290	385	1,370
14	388	465	350	310	295	315	13,500	3,880	5,870	1,140	400	1,540
15	410	422	340	305	300	315	12,600	3,590	4,630	998	400	1,820
16	560	388	335	295	300	315	11,300	3,320	4,330	885	385	2,100
17	388	378	320	290	305	310	10,000	3,070	4,030	935	385	2,000
18	310	378	330	285	310	315	9,150	2,620	3,590	998	385	1,910
19	368	399	330	280	310	330	8,330	2,400	3,450	935	360	1,910
20	435	720	325	280	310	340	8,730	2,300	2,840	935	330	1,540
21	359	780	325	275	310	345	10,000	2,100	2,950	885	330	1,460
22	368	845	330	255	315	350	11,300	2,300	2,510	998	301	1,370
23	326	780	310	255	310	445	12,200	2,200	2,000	1,060	292	2,300
24	326	845	310	255	310	470	11,700	2,000	1,820	1,140	284	2,400
25	359	910	310	255	305	485	10,400	4,330	1,540	1,460	269	3,450
26	359	1,540	310	255	310	490	9,150	4,330	1,370	2,400	262	3,190
27	318	2,300	315	260	310	510	9,150	4,930	1,210	2,300	262	2,950
28	359	2,100	305	270	305	510	9,150	3,450	1,140	2,000	256	2,840
29	359	980	315	245	-------	530	9,150	2,730	1,060	1,910	250	2,510
30	368	965	300	235	-------	570	7,560	2,400	998	1,820	245	2,400
31	359	-------	285	215	-------	1,050	--------	2,100	-------	1,370	310	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	560	247	355	0.219	0.25
November	2,300	303	722	.446	.50
December	1,110	285	454	.280	.32
January	355	215	284	.175	.20
February	320	215	290	.179	.19
March	1,050	300	388	.240	.28
April	13,500	1,540	9,060	5.59	6.24
May	6,520	2,000	3,520	2.17	2.50
June	10,400	998	3,470	2.14	2.39
July	2,400	798	1,170	.722	.83
August	1,210	245	466	.288	.33
September	3,450	385	1,620	1.00	1.12
The year	13,500	215	1,810	1.12	15.15

ST. CROIX RIVER BASIN

ST. CROIX RIVER AT VANCEBORO, ME.

LOCATION.—Water-stage recorder at international highway bridge 400 feet below outlet of Spednic Lake, Vanceboro, Washington County.

DRAINAGE AREA.—435 square miles.

RECORDS AVAILABLE.—October, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,450 second-feet Aug. 3, 4 (gage height, 6.44 feet); minimum, 22 second-feet Sept. 26 (gage height, 2.52 feet). 1928–1931: Maximum discharge, 1,870 second-feet May 13, 1929 (gage height, 7.07 feet); minimum, that of Sept. 26, 1931.

REMARKS.—Records good. Flow regulated by storage in Spednic and Grand Lakes.

Daily and monthly discharge, in second-feet, 1930-31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,020	705	505	412	353	266	188	105	730	615	1,130	965
2	1,050	705	380	408	342	263	210	104	730	615	1,100	938
3	1,020	682	372	404	336	257	124	106	730	615	1,220	910
4	992	682	368	400	332	257	86	108	570	615	1,450	910
5	1,020	660	364	396	328	255	92	109	308	615	1,420	882
6	1,020	682	360	404	325	246	70	106	300	615	1,360	830
7	992	660	360	404	325	246	61	105	300	725	1,360	855
8	992	638	356	400	314	241	64	105	304	810	1,330	855
9	965	615	356	400	314	249	66	104	308	167	1,300	805
10	965	638	455	396	314	257	73	101	245	161	1,270	780
11	938	592	592	388	308	255	73	102	150	165	1,240	780
12	938	592	570	384	304	255	77	105	152	169	1,210	665
13	910	570	570	384	297	255	82	106	152	173	1,210	525
14	910	570	561	384	308	252	86	109	152	173	1,190	525
15	882	566	548	380	311	252	92	115	152	390	1,190	538
16	882	561	534	376	308	249	91	112	152	755	1,160	245
17	855	548	520	400	304	246	91	635	152	755	1,130	39
18	855	543	512	436	300	249	97	1,020	152	755	1,100	30
19	855	680	502	428	297	246	94	780	150	755	1,070	29
20	830	805	498	424	294	244	96	730	150	755	1,070	28
21	830	755	494	420	290	244	96	730	154	730	1,050	27
22	805	730	489	408	287	241	97	730	152	730	1,020	26
23	780	730	484	400	284	241	98	730	150	1,000	992	25
24	780	705	480	396	275	241	98	730	150	1,210	1,040	25
25	780	705	472	384	272	241	96	730	150	1,210	1,190	23
26	780	705	464	380	269	241	96	755	150	1,210	1,130	22
27	780	705	460	372	269	244	98	730	148	1,190	1,070	23
28	755	682	444	368	269	244	98	730	146	1,190	1,050	23
29	730	682	432	360	------	249	99	730	144	1,160	1,020	23
30	730	660	428	364	------	224	101	730	365	1,160	1,020	24
31	730	------	420	356	------	175	------	730	------	1,160	992	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,050	730	883	2.03	2.34
November	805	543	658	1.51	1.68
December	592	356	463	1.06	1.22
January	436	356	394	.906	1.04
February	353	269	305	.701	.73
March	266	175	246	.566	.65
April	210	61	96.3	.221	.25
May	1,020	101	417	.959	1.11
June	730	144	258	.593	.66
July	1,210	161	721	1.66	1.91
August	1,450	992	1,160	2.67	3.08
September	965	22	412	.947	1.06
The year	1,450	22	505	1.16	15.73

ST. CROIX RIVER NEAR BAILEYVILLE, ME.

LOCATION.—Water-stage recorder below power house of St. Croix Paper Co. at Grand Falls, 3½ miles east of Baileyville, Washington County.

DRAINAGE AREA.—1,320 square miles.

RECORDS AVAILABLE.—November, 1919, to September, 1931.

EXTREMES.—Maximum discharge during year, 6,360 second-feet Apr. 13 (gage height, 5.24 feet); minimum, 348 second-feet July 19 (gage height, 1.27 feet).

1919–1931: Maximum discharge, about 23,300 second-feet May 1, 1923 (gage height, 13.90 feet); minimum (estimated), 100 second-feet Dec. 9, 1923, July 20, 27, 1924.

REMARKS.—Records good except those for period when logs affected stage, May 18 to June 20, and those estimated, Jan. 25–27, Feb. 1–4, 8–11, Aug. 8–13, which are fair. About 30,000,000,000 cubic feet of storage developed above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,230	1,090	990	754	720	721	1,740	2,550	1,450	1,740	1,880	1,640
2	1,270	795	1,030	600	940	1,080	2,790	2,630	1,640	1,810	1,110	1,740
3	1,300	990	964	600	950	1,120	2,790	1,150	1,710	1,740	1,500	1,650
4	1,300	1,030	1,140	754	720	1,110	2,870	1,260	1,690	805	1,740	1,880
5	820	990	1,060	820	589	1,280	3,710	1,640	1,550	666	1,680	1,620
6	1,340	1,030	990	677	754	1,290	5,280	1,650	1,910	1,640	1,680	1,060
7	1,120	1,060	775	776	699	1,290	5,460	1,580	1,170	1,880	1,670	795
8	1,200	1,060	977	666	730	988	5,100	1,430	1,500	1,670	1,800	1,370
9	1,260	815	1,030	655	1,070	1,310	4,300	1,680	1,590	1,670	940	1,680
10	1,140	1,120	1,100	666	730	1,320	3,960	910	1,590	1,740	1,440	1,740
11	1,050	938	1,090	880	730	1,470	4,300	1,410	1,590	1,740	1,240	1,520
12	830	1,100	1,100	820	721	1,420	5,280	1,560	1,720	1,050	950	1,810
13	1,130	1,000	1,090	721	688	1,310	5,820	1,540	1,620	1,470	1,110	1,020
14	1,130	1,160	1,020	1,040	952	1,480	5,640	1,680	1,100	1,740	1,310	1,520
15	1,170	1,020	1,000	633	809	940	4,920	1,540	1,380	1,640	1,320	1,740
16	1,100	835	1,020	743	868	1,060	4,560	1,740	1,690	1,740	925	1,470
17	1,130	899	1,060	798	743	1,360	4,380	860	1,640	1,740	1,260	1,620
18	1,070	1,020	964	677	732	1,430	3,790	1,670	1,820	1,740	1,380	1,590
19	800	1,050	785	765	928	1,500	2,330	1,710	1,720	1,020	1,340	1,510
20	1,030	873	785	765	892	1,670	2,390	1,600	1,730	1,480	1,290	1,110
21	1,070	951	977	1,050	832	1,580	2,390	1,620	930	1,880	1,180	1,560
22	1,030	1,000	810	844	776	1,170	1,740	1,550	1,510	1,740	1,160	1,520
23	977	815	687	699	820	1,420	1,740	1,820	1,740	1,650	916	1,540
24	1,090	1,100	1,050	820	644	1,580	1,740	890	1,680	1,810	1,450	1,600
25	990	938	510	675	754	1,410	1,680	1,260	1,740	1,810	1,680	1,580
26	848	1,140	730	1,010	964	1,630	905	1,650	1,880	965	1,740	1,590
27	977	1,070	899	975	1,160	1,380	2,760	1,590	1,880	1,410	1,650	1,130
28	1,060	1,070	1,030	892	1,310	1,470	2,950	1,640	1,110	1,810	1,740	1,450
29	1,130	1,030	810	776	-------	1,040	2,710	1,630	1,560	1,680	1,740	1,550
30	977	895	835	732	-------	1,180	2,630	1,650	1,680	1,680	1,170	1,560
31	1,020	-------	675	699	-------	1,630	-------	1,040	-------	1,680	1,540	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,340	800	1,080	0.818	0.94
November	1,160	795	994	.753	.84
December	1,140	510	935	.708	.82
January	1,050	600	774	.586	.68
February	1,310	589	829	.628	.65
March	1,670	721	1,310	.992	1.14
April	5,820	905	3,420	2.59	2.89
May	2,630	860	1,550	1.17	1.35
June	1,910	930	1,580	1.20	1.34
July	1,880	666	1,580	1.20	1.38
August	1,880	916	1,400	1.06	1.22
September	1,880	795	1,510	1.14	1.27
The year	5,820	510	1,410	1.07	14.52

GRAND LAKE STREAM AT GRAND LAKE STREAM, ME.

LOCATION.—Water-stage recorder at Big Falls, half a mile below outlet dam of Grand Lake, at Grand Lake Stream, Washington County.

DRAINAGE AREA.—249 square miles.

RECORDS AVAILABLE.—October, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 828 second-feet Sept. 29 (gage height, 3.63 feet); minimum, 11 second-feet June 3–6 (gage height, 0.70 foot).

1928–1931: Maximum discharge, 1,520 second-feet May 7, 8, 1929 (gage height, 4.74 feet); minimum, that of June 3–6, 1931.

REMARKS.—Records good except those for periods of ice effect, Dec. 3, 4, 15, 16, Dec. 23 to Feb. 22, and days of estimated discharge, which are fair. Flow regulated by storage in Grand Lake.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	439	279	a15	265	325	264	44	36	12	273	132	228
2	430	273	35	265	325	261	54	31	a12	270	132	210
3	422	267	67	265	320	258	55		11	270	132	150
4	414	264	67	260	315	255	55		a11	270	132	150
5	406	261	66	260	315	252	54		a11	267	132	150
6	390	264	66	260	315	249	55	a20	11	264	132	152
7	383	261	66	260	310	249	56		a15	261	132	152
8	372	255	64	260	305	243	59		19	240	132	148
9	369	252	64	255	300	252	58		a18	136	132	143
10	366	252	66	255	295	258	60		18	132	134	145
11	358	243	66	255	290	258	68	17	a16	132	134	145
12	355	240	66	255	290	252	66	16	14	134	141	145
13	348	240	66	250	290	252	63		a14	132	143	145
14	341	240	66	250	290	249	57		a15	134	141	145
15	320	240	66	250	285	246	52	a15	15	134	141	148
16	299	237	66	250	285	243	50		a15	134	141	148
17	296	234	96	250	280	240	49		a15	134	141	148
18	296	237	130	250	280	246	50	14	a15	136	141	148
19	292	234	127	250	280	246	47		a15	134	141	145
20	285	231	127	250	275	243	45	a15	16	132	141	145
21	279	228	127	245	275	240	44		a15	132	141	325
22	276	222	127	245	275	237	43		a15	132	141	493
23	270	219	124	245	276	237	43	16	15	134	141	493
24	267	216	124	245	273	237	41	a16	15	134	141	493
25	276	166	122	245	270	237	36	16	a15	136	141	493
26	285	39	182	245	264	234	33	a16	180	136	141	480
27	279		275	240	270	234	41	17	276	134	141	480
28	276	a15	270	240	267	234	38	a16	276	134	141	480
29	276		270	235	-------	243	38	a15	276	134	141	670
30	282		265	330	-------	104	38	14	276	134	172	816
31	279	-------	265	330	-------	42	-------	a13	-------	132	228	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	439	267	330	1.33	1.53
November	279	15	205	.823	.92
December	275	15	116	.466	.54
January	330	240	257	1.03	1.19
February	325	264	291	1.17	1.22
March	264	42	235	.944	1.09
April	68	33	49.7	.200	.22
May	36	13	17.7	.071	.08
June	276	11	54.9	.220	.25
July	273	132	167	.671	.77
August	228	132	142	.570	.66
September	816	143	277	1.11	1.24
The year	816	11	178	.715	9.71

a Estimated.

MACHIAS RIVER BASIN

MACHIAS RIVER AT WHITNEYVILLE, ME.

LOCATION—Water-stage recorder 800 feet below highway bridge at Whitneyville, Washington County.

DRAINAGE AREA.—465 square miles.

RECORDS AVAILABLE.—October, 1903, to September, 1921; September, 1929, to September, 1931.

EXTREMES.—Maximun discharge during year, 4,690 second-feet Apr. 3 (gage height, 9.23 feet); minimum, 34 second-feet Oct. 17 (gage height, 2.87 feet).
1903–1921, 1929–1931: Maximum discharge, about 11,100 second-feet Sept. 30,1909 (gage height, 14.7 feet); minimum, about 10 second-feet Oct. 6, 1906 (gage height, 2.5 feet).

REMARKS.—Records good except those below 100 second-feet and those for periods of ice effect, Dec. 11-14, 16, Dec. 18 to Mar. 28, which are fair. Some storage on lakes above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	121	310	547	240	166	245	4,290	2,460	499	405	400	276
2	114	254	975	230	150	250	4,390	2,300	553	410	346	272
3	104	270	806	220	142	260	4,590	2,140	529	405	430	294
4	97	250	619	205	136	275	4,290	1,980	511	400	356	360
5	94	270	511	205	136	290	3,700	1,420	535	385	431	475
6	83	267	420	230	136	280	3,150	1,010	442	370	420	470
7	80	220	385	275	140	280	2,620	812	410	380	395	607
8	78	190	370	320	142	275	2,300	715	405	725	431	832
9	73	150	370	330	150	260	2,060	655	800	1,500	571	722
10	75	225	365	315	158	260	1,980	691	1,980	1,420	625	577
11	75	215	295	275	150	260	2,380	767	2,710	1,110	559	517
12	73	200	250	260	140	260	3,060	1,420	2,540	910	499	547
13	73	186	240	270	140	260	2,880	1,460	2,140	754	631	535
14	66	130	230	315	150	265	2,380	1,140	1,560	643	812	475
15	68	156	215	370	250	270	1,940	1,040	1,220	583	703	436
16	70	111	205	355	375	285	1,640	975	1,040	553	577	405
17	45	125	190	320	400	300	1,460	878	1,040	625	505	395
18	64	250	182	290	375	305	1,360	806	910	655	426	385
19	61	299	178	265	345	310	1,280	673	800	613	385	375
20	132	327	178	245	320	315	1,140	673	673	553	360	365
21	128	294	194	230	300	355	1,110	800	613	529	341	356
22	136	263	174	220	280	435	1,040	878	553	505	332	351
23	116	236	210	210	265	475	975	878	505	499	294	510
24	102	219	250	205	255	545	1,180	942	481	505	304	910
25	74	350	260	205	240	615	1,560	1,420	499	541	285	975
26	186	1,240	250	190	230	630	1,780	1,500	475	589	285	845
27	425	1,160	250	186	230	655	3,150	1,110	470	589	285	691
28	425	845	250	182	240	685	3,790	800	470	541	285	631
29	365	565	245	182	------	1,010	3,330	661	464	475	281	553
30	310	436	235	178	------	2,970	2,880	529	410	431	258	475
31	315	------	230	170	------	4,590	------	481	------	405	285	------

Month	Maximum	Minimun	Mean	Per square mile	Run-off in inches
October	425	45	136	0.292	0.34
November	1,240	111	334	.718	.80
December	975	174	325	.699	.81
January	370	170	248	.533	.61
February	400	136	219	.471	.49
March	4,590	245	596	1.28	1.48
April	4,590	975	2,460	5.29	5.90
May	2,460	481	1,100	2.37	2.73
June	2,710	405	875	1.88	2.10
July	1,500	370	613	1.32	1.52
August	812	258	422	.908	1.05
September	975	272	521	1.12	1.25
The year	4,590	45	653	1.40	19.08

EAST MACHIAS RIVER NEAR EAST MACHIAS, ME.

LOCATION.—Staff gage just below outlet of Hadley Lake and 3 miles above village of East Machias, Washington County. Zero of gage is 3°.00 feet above mean sea level.

DRAINAGE AREA.—234 square miles.

RECORDS AVAILABLE.—October, 1926, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,780 second-feet Apr. 6 (gage height, 5.57 feet); minimum, 23 second-feet Oct. 7–15.

1926–1931: Maximum discharge, 2,140 second-feet May 23, 24, 1929; minimum, that of Oct. 7–15, 1930.

REMARKS.—Records good. Possibly slight regulation at station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	82	288	163	170	171	995	700	340	198	180	126
2	26	82	300	163	156	171	1,290	665	318	180	171	126
3	27	89	360	156	149	171	1,500	665	297	180	162	132
4	26	89	360	156	135	a 180	1,610	630	297	171	171	132
5	25	89	360	149	128	189	1,720	630	256	154	171	139
6	25	108	360	163	128	189	1,780	630	256	154	162	a 150
7	23	102	330	177	122	198	1,500	630	236	146	171	162
8	23	a 102	315	191	115	189	1,670	630	236	171	162	171
9	23	102	288	191	108	216	1,610	595	256	256	154	171
10	23	102	275	191	115	216	1,500	595	297	297	154	171
11	23	96	264	191	168	216	1,500	560	385	340	154	189
12	23	102	275	191	108	207	1,590	560	495	362	171	198
13	23	96	241	213	108	207	1,450	595	560	362	189	198
14	23	96	241	241	120	207	1,450	595	560	340	207	198
15	23	96	230	252	132	189	1,340	630	560	340	226	198
16	25	96	222	264	132	198	1,240	595	560	340	236	198
17	24	96	206	264	146	198	1,140	595	525	340	226	198
18	25	96	a 188	264	154	207	1,040	525	495	318	226	198
19	26	96	170	252	162	207	995	495	465	318	226	189
20	26	96	177	252	162	a 205	950	495	435	297	207	a 184
21	25	96	177	252	171	207	995	495	410	297	198	180
22	24	96	170	252	180	216	780	465	362	276	189	180
23	25	96	a 174	252	180	226	700	465	340	276	171	216
24	a 30	a 102	177	230	180	236	665	465	297	256	162	276
25	a 36	122	177	222	171	256	630	435	276	256	171	276
26	42	170	170	213	171	276	560	435	256	256	162	276
27	44	198	170	206	171	297	700	435	256	236	146	297
28	49	222	163	191	171	318	700	410	226	226	146	276
29	53	230	163	184	-------	a 455	740	385	216	216	139	276
30	65	230	156	184	-------	595	740	385	207	216	132	276
31	74	-------	156	177	-------	820	-------	340	-------	a 200	132	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	74	23	30.8	0.132	0.15
November	230	82	116	.496	.55
December	360	156	236	1.01	1.16
January	264	149	208	.889	1.02
February	180	108	145	.620	.65
March	820	171	253	1.08	1.24
April	1,780	560	1,170	5.00	5.58
May	700	340	540	2.31	2.66
June	560	207	356	1.52	1.70
July	362	146	257	1.10	1.27
August	236	132	177	.756	.87
September	297	126	199	.850	.95
The year	1,780	23	306	1.31	17.80

a Estimated.

UNION RIVER BASIN

WEST BRANCH OF UNION RIVER AT AMHERST, ME.

LOCATION.—Water-stage recorder 200 feet above site of old tannery dam 1 mile north of Amherst, Hancock County.

DRAINAGE AREA.—139 square miles.

RECORDS AVAILABLE.—July, 1929, to September, 1931. July, 1909, to September, 1919, at site 1 mile below.

EXTREMES.—Maximum discharge during year, 1,200 second-feet Apr. 12 (gage height, 6.32 feet); minimum, 7 second-feet Oct. 7 (gage height, 3.03 feet). 1909–1919, 1929–1931: Maximum discharge, 2,160 second-feet Mar. 21, 1913 (gage height, 12.8 feet at old station); minimum, that of Oct. 7, 1930.

REMARKS.—Records excellent except those for periods of ice effect, Dec. 2–4, Dec. 12 to Mar. 31, which are fair. Some storage on lakes above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	47	110	38	32	58	514	510	298	127	89	53
2	10	47	110	35	32	59	660	470	275	118	82	60
3	9	47	130	34	32	62	770	454	240	110	83	73
4	9	48	106	34	31	64	798	430	216	10[illegible]	96	72
5	9	50	94	32	29	67	798	394	196	9[illegible]	80	65
6	8	60	94	35	29	68	798	359	191	89	75	94
7	8	60	92	43	27	68	885	334	172	8[illegible]	75	134
8	8	56	87	40	26	67	945	312	406	210	65	110
9	8	53	83	40	26	67	978	292	855	39[illegible]	60	100
10	8	52	76	40	29	83	978	275	770	29[illegible]	60	94
11	8	47	73	40	31	76	1,100	309	742	30[illegible]	58	91
12	8	46	70	40	32	72	1,200	344	688	32[illegible]	83	87
13	8	46	58	47	32	72	1,160	309	660	28[illegible]	175	82
14	8	44	47	52	33	72	1,100	292	638	268	140	80
15	8	40	47	48	59	72	1,070	278	616	25[illegible]	131	78
16	10	39	46	47	64	70	1,070	278	605	243	134	75
17	10	39	50	47	60	68	1,010	281	575	22[illegible]	134	70
18	15	67	43	46	58	72	945	265	542	210	129	68
19	13	64	32	44	60	72	885	249	497	19[illegible]	123	62
20	11	62	34	42	60	72	798	246	450	188	116	59
21	9	62	35	39	59	76	742	231	394	180	108	64
22	9	65	33	38	59	85	671	216	337	172	100	70
23	9	65	29	38	59	94	610	208	295	160	91	131
24	10	65	33	38	59	96	560	458	256	148	85	118
25	30	102	32	39	58	91	514	434	228	145	80	123
26	44	110	34	39	56	94	492	394	205	136	73	116
27	26	100	37	39	58	100	742	382	191	129	68	134
28	23	104	37	38	59	116	644	363	172	12[illegible]	64	138
29	32	134	37	35	-------	162	580	341	155	11[illegible]	62	134
30	46	106	37	37	-------	465	550	316	140	10[illegible]	64	129
31	47	-------	40	34	-------	500	-------	295	-------	10[illegible]	59	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	47	8	15.2	0.109	0.13
November	134	39	64.2	.46[illegible]	.52
December	130	29	60.2	.433	.50
January	52	32	39.9	.2[illegible]	.33
February	64	26	44.6	.32[illegible]	.33
March	500	58	105	.7[illegible]	.87
April	1,200	492	819	5.89	6.57
May	510	208	333	2.40	2.77
June	855	140	400	2.8[illegible]	3.21
July	394	89	182	1.31	1.51
August	175	58	91.7	.66[illegible]	.76
September	138	53	92.1	.663	.74
The year	1,200	8	187	1.3[illegible]	18.24

PENOBSCOT RIVER BASIN

WEST BRANCH OF PENOBSCOT RIVER AT MILLINOCKET, ME.

LOCATION.—Water-stage recorder at Quakish Lake Dam and Millinocket mill of Great Northern Paper Co., Millinocket, Penobscot County.
DRAINAGE AREA.—1,910 square miles.
RECORDS AVAILABLE.—January, 1901 to September, 1931.
REMARKS.—Flow regulated by storage in North Twin and Ripogenus Lakes, having combined capacity of about 45,000,000,000 cubic feet. Discharge is combined flow over dam and through water wheels, log sluices, and filters. When discharge is less than 3,500 second-feet all water passes through wheels. Records furnished by Great Northern Paper Co.

Monthly discharge, in second-feet, 1930–31

Month	Observed mean	Corrected for storage		
		Mean	Per square mile	Run-off in inches
October	2,840	1,190	0.623	0.72
November	2,560	1,920	1.01	1.13
December	2,670	1,330	.696	.80
January	2,680	513	.269	.31
February	2,660	232	.121	.13
March	2,580	270	.141	.16
April	2,460	8,250	4.32	4.82
May	2,740	5,600	2.93	3.38
June	2,720	5,260	2.75	3.07
July	2,750	2,300	1.20	1.38
August	2,650	1,030	.539	.62
September	2,660	1,270	.665	.74
The year	2,670	2,430	1.27	17.26

WEST BRANCH OF PENOBSCOT RIVER NEAR MEDWAY, ME.

LOCATION.—Water-stage recorder just above Nichatou Rapids and l ⁄lf a mile above mouth of East Branch of Penobscot River and village of Medway, Penobscot County.

DRAINAGE AREA.—2,120 square miles.

RECORDS AVAILABLE.—February, 1916, to September, 1931.

EXTREMES.—Maximum discharge during year, 5,800 second-feet July 13 (gage height, 5.05 feet); minimum, 535 second-feet Sept. 13 (gage height, 1.24 feet).
1916–1931: Maximum discharge, 24,100 second-feet May 27, 1928 (gage height, 9.64 feet); minimum (estimated), 100 second-feet at times during 1923 and 1924.

REMARKS.—Records good except those for period of ice effect, Jan. 20 to Mar. 9, which are fair. Discharge estimated Sept. 21. Flow regulated by storage reservoirs above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,390	2,840	2,840	3,010	2,590	2,540	3,290	3,200	2,840	3,390	3,100	3,200
2	3,390	2,340	3,100	2,920	2,670	2,750	4,020	3,200	3,390	3,010	2,370	3,290
3	3,390	2,840	3,100	3,100	3,120	2,940	3,800	2,560	3,390	3,100	2,920	3,200
4	3,390	2,920	3,290	2,480	3,060	2,920	3,700	2,920	3,100	2,100	3,490	3,100
5	3,010	2,920	3,010	2,840	2,900	2,920	2,920	3,600	3,100	2,030	3,290	3,200
6	3,200	3,200	3,200	3,290	2,890	2,970	3,910	3,200	3,390	3,230	3,390	2,920
7	3,290	2,840	2,670	3,200	2,530	3,290	4,130	3,600	2,750	3,600	2,880	1,990
8	3,390	2,840	2,750	3,200	2,620	2,590	3,910	3,390	3,100	3,350	3,700	2,730
9	3,290	2,520	3,100	3,100	2,780	3,030	3,700	3,490	4,240	3,800	2,500	3,010
10	3,290	3,010	3,010	3,100	3,200	3,100	3,800	3,210	4,840	3,800	2,580	3,100
11	3,290	3,100	3,100	2,580	3,100	3,100	4,240	3,010	4,590	3,800	3,200	3,200
12	3,240	3,100	3,100	2,750	3,100	3,200	3,600	3,390	4,240	2,830	3,200	3,390
13	3,290	2,840	3,010	3,200	3,010	3,390	3,910	3,390	3,800	4,020	3,290	2,480
14	3,290	3,010	2,580	3,200	3,160	3,490	3,600	3,390	3,010	3,700	3,490	3,010
15	3,200	3,010	2,840	3,100	2,650	2,590	3,390	3,800	3,490	3,600	3,390	3,290
16	3,290	2,440	3,010	3,050	2,800	2,750	3,390	3,100	3,800	3,390	2,670	3,290
17	3,290	2,590	3,010	2,750	3,050	3,290	3,390	2,590	3,390	3,200	3,010	3,100
18	3,010	2,750	3,010	2,760	2,890	3,100	3,600	3,010	3,910	3,490	3,390	3,390
19	2,920	2,840	3,200	2,840	2,920	3,490	2,920	3,290	3,700	2,510	3,490	3,290
20	2,840	2,920	3,200	3,200	3,290	3,100	2,840	3,040	3,700	2,840	3,290	2,840
21	3,200	2,840	2,500	3,180	2,870	3,100	3,200	3,290	2,750	3,390	3,200	2,800
22	3,200	2,840	2,750	2,990	2,560	2,590	3,600	3,390	3,600	3,490	3,200	2,700
23	3,010	2,440	2,840	2,990	2,640	2,670	3,290	2,920	3,600	3,490	2,590	3,490
24	2,840	2,590	2,840	2,990	2,850	3,290	3,200	3,100	3,600	3,490	2,840	3,390
25	3,010	2,920	2,340	2,530	3,030	3,700	3,600	3,290	3,600	3,390	3,290	3,390
26	2,800	2,920	2,920	2,750	2,890	3,200	2,750	3,490	3,600	2,590	3,290	3,100
27	2,590	2,900	2,920	3,100	2,990	3,290	3,010	3,390	3,600	3,100	3,100	2,750
28	2,920	2,920	2,380	2,920	3,210	3,390	3,200	3,200	2,460	3,290	2,920	3,200
29	3,100	2,840	2,670	3,030	-------	2,670	3,290	3,570	3,010	3,390	3,100	3,290
30	3,200	2,440	3,010	3,290	-------	3,390	3,700	3,290	3,490	3,390	2,750	3,200
31	2,840	-------	3,010	3,100	-------	3,390	-------	2,520	-------	3,290	3,200	-------

Month	Observed			Corrected for storage		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	3,390	2,590	3,140	1,490	0.703	0.81
November	3,200	2,340	2,820	2,190	1.03	1.15
December	3,290	2,340	2,910	1,570	.741	.85
January	3,290	2,480	2,990	820	.387	.45
February	3,290	2,530	2,910	480	.226	.24
March	3,700	2,540	3,070	760	.358	.41
April	4,240	2,750	3,500	9,290	4.38	4.89
May	3,800	2,520	3,220	6,080	2.87	3.31
June	4,840	2,460	3,500	6,040	2.85	3.18
July	4,020	2,030	3,260	2,810	1.33	1.53
August	3,700	2,370	3,100	1,480	.699	.80
September	3,490	1,990	3,080	1,690	.797	.89
The year	4,840	1,990	3,130	2,890	1.36	18.51

PENOBSCOT RIVER AT WEST ENFIELD, ME.

LOCATION.—Water-stage recorder at highway bridge 1,000 feet below mouth of Piscataquis River and 1 mile southwest of West Enfield, Penobscot County.

DRAINAGE AREA.—6,600 square miles.

RECORDS AVAILABLE.—November, 1901, to September, 1931.

EXTREMES.—Maximum discharge during year, 44,300 second-feet June 10 (gage height, 11.78 feet); minimum, 2,660 second-feet Nov. 16 (gage height, 1.51 feet).

1901–1931: Maximum discharge, 153,000 second-feet May 1, 1923 (gage height, 25.15 feet); minimum, 1,470 second-feet Oct. 29, 1905 (gage height, 1.0 foot).

REMARKS.—Records good. Stage affected by ice Dec. 2 to Mar. 28, and by aquatic vegetation Oct. 1–31, Aug. 1 to Sept. 30; discharge for these periods based on frequent measurements. Discharge estimated Nov. 2. Flow regulated by storage on West Branch of Penobscot River. Gage-height record furnished by Thomas W. Clark.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,400	4,740	5,980	4,420	4,000	5,140	19,800	17,300	10,000	7,470	7,060	5,160
2	4,400	4,200	5,750	4,320	3,830	4,830	24,000	14,600	10,900	7,210	6,270	5,200
3	4,380	4,210	5,290	4,210	3,730	4,850	31,800	12,900	10,600	6,460	5,860	5,140
4	4,500	4,210	5,070	4,100	4,210	5,200	35,900	12,500	10,000	6,340	6,390	5,250
5	4,060	4,210	4,850	4,100	4,210	5,200	35,300	13,200	9,410	5,400	7,290	5,180
6	4,360	4,320	5,520	4,210	4,080	5,180	33,500	13,200	10,000	5,860	7,060	5,450
7	4,250	4,520	5,520	4,320	4,210	4,850	32,900	12,500	10,300	6,710	6,680	5,540
8	4,210	4,960	5,400	4,320	3,790	5,070	30,700	12,200	10,300	7,730	5,980	5,540
9	4,250	4,520	5,070	4,320	4,020	4,420	29,100	11,200	25,000	0,000	6,240	5,640
10	4,190	4,520	5,200	4,320	4,000	4,500	28,500	10,600	41,900	0,900	5,930	5,570
11	4,230	4,420	4,740	4,000	4,170	5,070	30,700	9,700	40,100	3,200	5,540	5,380
12	3,610	4,320	4,630	4,420	4,210	4,830	37,700	10,900	33,500	5,400	6,200	5,450
13	4,080	4,320	4,740	4,100	4,230	5,090	36,500	12,200	28,500	3,900	7,310	5,750
14	4,170	4,320	4,100	4,420	4,210	5,180	34,700	11,900	25,000	2,500	8,980	5,160
15	4,080	4,210	4,320	4,960	4,290	5,290	33,500	11,500	21,200	0,600	8,580	5,610
16	4,190	3,590	4,100	4,630	4,420	4,960	30,700	11,500	21,600	9,700	7,970	5,680
17	4,060	4,100	4,320	4,630	4,290	4,960	28,000	10,300	22,000	9,120	6,910	5,770
18	4,080	4,420	4,320	4,210	4,850	5,180	25,000	9,700	20,300	8,270	6,480	5,340
19	3,530	5,180	4,420	4,320	4,920	5,640	22,500	10,000	18,600	8,270	6,480	5,680
20	4,040	5,980	4,630	4,380	4,960	5,980	20,300	8,830	15,800	6,840	5,910	5,730
21	3,940	5,860	4,630	4,520	4,850	6,220	20,300	9,120	14,300	7,210	5,680	5,450
22	3,980	5,400	5,070	4,630	4,700	6,200	20,300	9,410	12,200	7,470	5,380	5,290
23	4,020	4,960	4,420	4,520	4,210	5,980	20,300	9,120	11,900	9,700	5,070	5,590
24	3,830	4,740	4,630	4,420	4,420	6,840	19,400	10,600	10,900	10,300	5,310	7,060
25	3,610	5,180	4,210	4,420	4,760	7,860	18,200	19,000	10,300	9,120	5,030	7,550
26	4,000	7,730	4,000	4,210	5,030	8,410	16,900	16,900	9,700	9,120	5,000	7,390
27	5,250	8,830	4,320	4,140	4,920	8,830	17,700	14,600	8,830	8,550	4,870	7,180
28	4,870	7,730	4,420	4,500	4,960	9,120	22,000	13,600	8,550	8,270	4,810	7,040
29	4,740	6,220	4,420	4,480	------	9,410	20,300	11,900	6,460	7,730	4,520	7,420
30	4,810	5,640	4,320	4,380	------	13,200	19,400	11,900	7,730	7,470	4,550	6,880
31	4,810	------	4,630	4,290	------	19,400	------	10,300	------	7,470	5,290	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	5,250	3,530	4,220	0.639	0.74
November	8,830	3,590	5,050	.765	.85
December	5,980	4,000	4,740	.718	.83
January	4,960	4,000	4,360	.661	.76
February	5,030	3,730	4,370	.662	.69
March	19,400	4,420	6,540	.991	1.14
April	37,700	16,900	26,500	4.02	4.48
May	19,000	8,830	12,000	1.82	2.10
June	41,900	6,460	16,500	2.50	2.79
July	15,400	5,400	8,820	1.34	1.54
August	8,980	4,520	6,150	.932	1.07
September	7,550	5,140	5,870	.889	.99
The year	41,900	3,530	8,750	1.33	17.98

EAST BRANCH OF PENOBSCOT RIVER AT GRINDSTONE, ME.

LOCATION.—Water-stage recorder 500 feet below Bangor & Aroostook Railroad bridge half a mile south of Grindstone, Penobscot County, and 9½ miles above confluence with West Branch of Penobscot River.

DRAINAGE AREA.—1,070 square miles; includes about 240 square miles of Chamberlain Lake drainage area through Telos Canal.

RECORDS AVAILABLE.—October, 1902, to September, 1931.

EXTREMES.—Maximum discharge during year, 8,130 second-feet June 10 (gage height, 8.77 feet); minimum, 244 second-feet Nov. 11 (gage height, 4.21 feet). 1902–1931: Maximum discharge, 35,100 second-feet Apr. 30, 1923 (gage height, 16.5 feet); minimum (estimated), 30 second-feet Feb. 28, 1904.

REMARKS.—Records excellent except those for period of ice effect, Dec. 1 to Mar. 26, which are fair. Discharge estimated May 21 to June 1. Flow regulated by dams at outlets of several lakes and ponds.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	414	390	820	335	300	325	2,330	3,130	2,730	1,060	919	508
2	396	352	700	325	300	315	3,130	2,420	2,500	1,030	910	502
3	384	330	610	300	295	310	4,670	2,420	2,330	1,000	919	564
4	362	310	580	310	295	305	5,560	2,590	2,160	1,030	1,060	536
5	340	310	580	320	290	305	5,170	2,500	2,080	1,280	1,030	496
6	330	450	570	335	290	290	4,670	2,420	2,000	1,060	928	502
7	325	638	565	310	290	280	4,430	2,330	1,650	982	937	910
8	310	476	565	335	285	275	4,100	2,330	2,190	1,270	910	829
9	305	444	555	350	280	300	3,990	2,330	6,300	1,420	919	724
10	295	390	535	360	285	275	4,100	2,160	7,550	1,220	1,220	608
11	285	320	515	355	295	310	5,560	1,950	6,080	1,760	1,220	578
12	280	310	500	350	295	360	7,550	2,080	4,790	2,770	1,010	692
13	267	374	480	350	290	380	6,730	2,330	4,320	1,840	1,120	732
14	254	330	470	345	300	380	6,470	2,160	3,990	1,340	1,220	652
15	258	335	450	345	325	360	6,210	2,000	3,690	1,150	1,170	615
16	280	335	425	345	350	350	5,690	1,900	4,550	1,080	1,070	645
17	320	325	415	340	360	355	5,300	1,810	4,210	1,100	955	645
18	340	420	415	340	355	375	5,040	1,630	3,590	1,110	838	796
19	357	716	410	335	345	400	4,910	1,510	3,220	1,030	796	812
20	340	660	400	330	335	430	5,040	1,690	3,040	973	756	692
21	325	585	395	330	335	445	5,300		2,950	946	716	638
22	295	536	390	330	335	450	5,690		2,680	1,730	660	638
23	280	522	390	325	335	450	5,690	1,670	2,500	2,770	608	764
24	272	522	385	325	335	500	5,300		2,330	1,660	571	874
25	300	724	380	325	330	550	4,790		2,160	1,340	515	928
26	482	1,470	375	325	325	620	4,320	3,860	1,840	1,300	456	865
27	476	1,260	370	330	335	692	4,550		1,460	1,220	438	856
28	420	937	355	325	335	764	5,300		1,420	1,120	426	919
29	390	910	350	320	-------	883	4,670		1,260	1,050	432	847
30	463	592	345	315	-------	1,290	3,990	2,340	1,120	1,010	550	772
31	444	-------	345	305	-------	2,000	-------		-------	955	550	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	482	254	342	0.320	0.37
November	1,470	310	542	.507	.57
December	820	345	472	.441	.51
January	360	300	331	.309	.36
February	360	280	315	.294	.31
March	2,000	275	494	.462	.53
April	7,550	2,330	5,010	4.68	5.22
May	----------	1,510	2,350	2.20	2.54
June	7,550	1,120	3,090	2.89	3.22
July	2,770	946	1,310	1.22	1.41
August	1,220	426	833	.779	.90
September	928	496	705	.659	.74
The year	7,550	254	1,310	1.22	16.68

MATTAWAMKEAG RIVER AT MATTAWAMKEAG, ME.

LOCATION.—Water-stage recorder at Gordon Falls, 3 miles above Mattawamkeag, Penobscot County, and 3½ miles above mouth of river.

DRAINAGE AREA.—1,500 square miles.

RECORDS AVAILABLE.—August, 1902, to September, 1931.

EXTREMES.—Maximum discharge during year, 13,900 second-feet Apr. 14 (gage height, 9.00 feet); minimum, 107 second-feet Oct. 15 (gage height, 0.62 foot).
1902–1931: Maximum discharge, 43,900 second-feet May 1, 1923 (gage height, 19.55 feet); minimum, 86 second-feet Oct. 4–12, 1905, Sept. 19, Oct. 6, 1906, Sept. 24-29, 1908, Oct. 14–17, 1910.

REMARKS.—Records good except those for periods of ice effect, Dec. 10 to Jan. 28, Mar. 6 to Apr. 1, and those estimated, Nov. 18 to Dec. 9, which are fair. Some storage on lakes above station.

Daily and monthly discharge, in second-feet, 1930-31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	218	318		235	218	307	3,880	4,230	2,520	1,230	890	385
2	210	297		240	214	302	5,330	3,820	2,400	1,150	798	380
3	194	279		250	222	350	7,520	3,600	2,190	1,070	751	395
4	186	256		235	218	428	9,950	3,600	1,990	974	800	405
5	178	248	645	215	218	440	11,500	3,680	1,790	928	830	410
6	166	252		220	218	420	12,300	3,600	1,640	860	704	410
7	155	274		235	214	400	12,600	3,320	1,110	838	665	430
8	147	318		300	214	370	12,300	2,870	1,090	1,190	576	468
9	144	344		620	206	360	11,800	2,300	2,360	1,840	529	502
10	140	350	470	635	206	345	10,700	2,040	4,320	2,190	502	518
11	136	318	475	520	202	335	11,000	1,990	6,400	2,350	474	546
12	125	297	465	500	202	330	12,300	2,400	7,520	2,690	468	632
13	114	293	450	375	198	330	13,600	2,630	7,520	2,870	639	822
14	111	279	495	335	214	320	13,900	2,870	6,840	2,690	852	920
15	111	270	530	380	231	330	13,400	2,870	6,180	2,350	1,030	942
16	118	261	585	480	239	350	12,300	2,810	5,960	2,090	1,070	966
17	122	256	620	435	248	370	11,000	2,630	5,740	1,990	920	1,020
18	125	440	635	355	270	380	9,690	2,400	5,530	1,840	758	1,080
19	129		635	350	284	395	8,440	2,190	5,140	1,590	639	1,030
20	129		560	330	297	400	7,520	1,940	4,320	1,400	570	1,080
21	136		530	325	307	405	7,060	1,790	3,530	1,230	529	958
22	136		525	330	318	400	6,620	1,790	3,000	1,150	512	905
23	136		530	340	318	430	6,180	2,040	2,570	1,230	485	920
24	136		565	340	328	495	5,960	2,190	2,300	1,400	458	1,020
25	155	875	655	340	328	615	5,530	1,990	2,090	1,440	436	1,190
26	198		640	315	323	715	4,950	1,640	1,840	1,490	410	1,270
27	284		480	275	339	800	4,760	1,590	1,790	1,440	395	1,310
28	377		475	255	328	940	4,580	1,790	1,690	1,270	385	1,400
29	404		410	250	-------	1,200	4,760	1,990	1,490	1,110	385	1,440
30	382		345	239	-------	1,770	4,580	2,240	1,350	1,110	390	1,310
31	350	-------	285	231	-------	2,770	---------	2,460	-------	1,020	395	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	404	111	182	0.121	0.14
November	-------	248	514	.343	.38
December	-------	285	554	.369	.43
January	635	215	338	.225	.26
February	339	198	254	.169	.18
March	2,770	302	574	.383	.44
April	13,900	3,880	8,870	5.91	6.59
May	4,230	1,590	2,560	1.71	1.97
June	7,520	1,090	3,470	2.31	2.58
July	2,870	838	1,550	1.03	1.19
August	1,070	385	621	.414	.48
September	1,440	380	832	.555	.62
The year	13,900	111	1,690	1.13	15.26

PISCATAQUIS RIVER NEAR FOXCROFT, ME.

LOCATION.—Water-stage recorder at Lows Bridge, three-quarters of a mile above mouth of Black Stream and 4½ miles above Foxcroft, Piscataquis County.

DRAINAGE AREA.—286 square miles.

RECORDS AVAILABLE.—August, 1902, to September, 1931.

EXTREMES.—Maximum discharge during year, 6,870 second-feet June 10 (gage height, 8.93 feet); minimum not determined.

1902–1931: Maximum discharge, 21,700 second-feet Sept. 29, 1919; minimum, 5 second-feet Aug. 6, 1905, Nov. 22, 1908.

REMARKS.—Records good except those for period of ice effect, Dec. 1 to Mar. 31, and those estimated, Sept. 21–30, which are fair. Low-water flow regulated by operation of power plants upstream.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	76	390			126	2,000	1,020	704	187	166	139
2	74	113	390			200	3,120	838	627	164	155	124
3	74	176	400			144	3,360	1,150	480	150	244	155
4	76	75	415			138	3,240	1,250	393	141	460	161
5	47	148	275	99		134	2,720	1,100	388	205	393	92
6	61	420	210			124	2,450	980	898	205	274	158
7	60	405	200			74	2,150	890	592	200	240	456
8	61	247	220		100	166	1,850	760	2,390	215	131	301
9	60	202	220			235	1,850	613	5,570	235	121	205
10	60	181	200	92		156	2,100	537	5,570	220	235	150
11	54	150	230	116		150	3,240	732	3,000	465	160	134
12	40	180	158	138		146	3,600	1,250	2,150	585	174	128
13	50	146	144	102		150	2,450	1,060	1,550	361	495	45
14	57	134	215	108		138	2,450	860	1,060	274	462	96
15	60	98	205	124		235	2,200	816	972	236	255	134
16	66	118		136	172	265	1,850	732	1,500	205	196	61
17	72	156		58	68	250	1,700	725	1,150	205	266	86
18	86	415		90	102	164	1,550	641	950	113	180	118
19	71	875		146	96	150	1,550	557	711	118	193	66
20	130	625		92	86	136	1,600	499	550	205	184	38
21	94	450		108	51	235	1,700	462	438	144	178	
22	87	325		104	99	245	1,650	480	388	280	123	
23	58	263			158	360	1,450	398	350	711	38	
24	71	285	141		80	500	1,300	2,180	319	474	142	
25	134	1,090			78	535	1,200	2,200	283	310	94	
26	641	1,700			74	520	1,100	1,400	263	415	89	350
27	340	965		78	71	480	2,000	1,020	255	306	66	
28	225	669			48	470	1,900	802	319	240	60	
29	180	468			-------	550	1,400	669	292	236	91	
30	158	404			-------	2,560	1,200	518	240	263	98	
31	140	-------			-------	2,350	-------	492	-------	266	236	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	641	40	112	0.392	0.45
November	1,700	75	385	1.35	1.51
December	415	----------	198	.692	.80
January	----------	----------	97.0	.339	.39
February	----------	----------	95.8	.335	.35
March	2,560	74	390	1.36	1.57
April	3,600	1,100	2,060	7.20	8.03
May	2,200	398	891	3.12	3.60
June	5,570	240	1,150	4.02	4.48
July	711	113	269	.941	1.08
August	495	38	200	.699	.81
September	456	38	212	.741	.83
The year	5,570	----------	503	1.76	23.90

PISCATAQUIS RIVER AT MEDFORD, ME.

LOCATION.—Water-stage recorder 1¾ miles above lower ferry in Medford, Piscataquis County, and 3½ miles below Pleasant River.

DRAINAGE AREA.—1,170 square miles.

RECORDS AVAILABLE.—June, 1924, to September, 1931.

EXTREMES.—Maximum discharge during year, 20,200 second-feet June 10 (gage height, 9.00 feet); minimum, 231 second-feet Oct. 12 (gage height, 1.54 feet).

1924–1931: Maximum discharge, 27,600 second-feet May 4, 1929; minimum, 172 second-feet Nov. 10, 1924.

Maximum known stage, 20.8 feet at lower ferry gage May 1, 1923.

REMARKS.—Records good except those for period of ice effect, Dec. 3 to Apr. 1, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	386	561	1,240	430	335	715	6,610	4,380	2,150	970	1,150	900
2	397	519	1,200	450	360	1,020	8,680	3,270	2,460	900	940	855
3	366	442	1,180	455	415	990	11,200	2,890	2,220	846	900	873
4	442	505	1,130	440	465	965	11,200	3,170	2,000	785	1,100	900
5	355	499	1,090	430	460	945	10,100	2,980	1,800	819	1,290	891
6	312	598	1,020	455	490	915	9,040	2,460	2,630	837	1,110	920
7	286	936	805	485	405	885	8,000	2,630	2,630	810	990	1,270
8	294	978	735	505	360	795	6,700	2,380	4,530	1,110	920	1,330
9	304	858	650	535	375	955	6,860	2,380	14,400	1,330	828	1,170
10	304	733	650	540	415	1,140	6,400	2,150	19,300	1,150	750	837
11	304	659	635	525	455	1,220	8,000	2,080	15,300	1,500	802	693
12	255	523	560	555	500	1,190	10,100	3,170	10,800	2,380	793	734
13	244	554	520	540	455	1,170	8,000	3,170	8,680	1,660	1,540	645
14	251	547	430	540	590	1,180	7,660	2,540	7,020	1,560	1,860	500
15	259	492	395	600	385	1,010	7,500	2,460	5,680	1,390	1,560	608
16	278	455	400	615	455	1,180	6,550	2,380	5,680	1,030	1,290	622
17	267	474	395	600	650	1,220	5,820	2,080	5,820	1,000	930	528
18	286	775	385	540	675	1,260	4,260	2,080	5,000	930	891	507
19	290	1,570	360	540	665	1,120	3,690	2,150	4,140	873	784	470
20	274	1,750	345	635	650	1,030	3,270	1,860	3,080	819	725	428
21	290	1,300	335	575	590	820	3,370	1,860	2,630	864	742	381
22	330	1,070	350	605	575	735	3,690	1,860	2,150	1,020	750	457
23	335	1,010	335	620	575	820	4,020	1,860	1,800	1,800	701	920
24	322	925	360	605	615	1,280	3,800	4,400	1,540	1,660	742	1,500
25	403	1,370	375	560	590	1,620	3,270	8,000	1,500	1,480	776	1,570
26	848	3,050	385	555	590	1,470	2,890	5,260	1,220	1,730	701	1,250
27	1,180	2,590	410	555	590	1,390	3,800	3,910	1,090	1,500	653	1,250
28	886	1,750	395	520	585	1,610	7,020	3,690	1,120	1,250	669	1,350
29	733	1,180	375	485	-------	1,930	5,820	3,080	1,030	1,220	685	1,120
30	676	1,200	425	465	-------	4,000	5,130	2,630	940	1,240	750	1,000
31	598	-------	425	440	-------	6,760	-------	1,860	-------	1,220	810	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,180	244	411	0.351	0.40
November	3,050	442	996	.851	.95
December	1,240	335	590	.504	.58
January	635	430	530	.453	.52
February	675	335	510	.436	.45
March	6,760	715	1,400	1.20	1.38
April	11,200	2,890	6,420	5.49	6.12
May	8,000	1,860	2,940	2.51	2.89
June	19,300	940	4,680	4.00	4.46
July	2,380	785	1,220	1.04	1.20
August	1,860	653	940	.803	.93
September	1,570	381	883	.755	.84
The year	19,300	244	1,790	1.53	20.72

SEBEC RIVER AT SEBEC, ME.

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

DRAINAGE AREA.—344 square miles.

RECORDS AVAILABLE.—October, 1924, to September, 1931.

EXTREMES.—Maximum discharge during year, 3,650 second-feet June 11 (gage height, 7.17 feet); minimum, about 2 second-feet Oct. 14–17 (gage height, 0.87 foot).

1924–1931: Maximum discharge, 3,870 second-feet May 6, 1929 (gage height, 7.49 feet); minimum, that of Oct. 14–17, 1930.

REMARKS.—Records good except those below 10 second-feet and those estimated, Jan. 31 to Feb. 3, Feb. 28, Mar. 24–28, Aug. 10, 13, which are fair. Flow ordinarily completely regulated by dams and storage reservoirs.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	215	18	33	180		145	1,060	1,600	880	245	230	315
2	335	19	34	260	240	255	1,990	1,020	870	235	69	315
3	425	39	34	260		250	2,430	755	835	210	225	335
4	385	17	34	180	270	245	2,750	745	850	190	225	310
5	332	17	74	280	245	230	2,800	665	840	115	225	270
6	178	17	45	265	240	260	2,710	655	815	285	220	56
7	129	37	59	270	220	285	2,300	670	728	290	240	235
8	131	22	79	255	130	140	2,060	660	1,310	260	215	315
9	131	20	41	290	240	180	1,910	710	2,890	205	62	275
10	134	38	41	280	230	245	1,640	690	3,480	180	220	230
11	137	27	40	190	230	230	1,520	655	3,570	200	220	240
12	143	23	42	295	230	255	1,260	620	3,480	66	225	230
13	48	20	44	285	245	230	1,750	580	3,220	245	220	47
14	2	20	47	280	235	250	2,060	605	2,960	255	200	215
15	2	20	89	280	50	130	1,980	655	2,800	220	150	190
16	2	20	48	295	195	225	1,940	675	2,460	225	67	160
17	8	104	48	320	275	250	1,500	505	2,300	220	240	73
18	23	23	48	225	260	230	755	625	2,220	185	235	75
19	22	23	48	375	265	270	525	620	1,770	58	235	72
20	42	24	120	335	275	275	480	610	1,260	220	255	43
21	23	26	65	270	270	430	325	620	1,090	210	240	73
22	17	26	160	325	185	350	340	610	830	230	210	69
23	14	24	170	355	245	495	355	525	665	195	64	71
24	14	44	180	390	195		400	465	665	195	260	75
25	17	32	170	245	220		390	575	470	210	305	85
26	18	28	255	385	220	400	256	710	240	67	300	79
27	48	29	235	250	235		1,320	800	250	230	305	52
28	71	32	160	355	240		1,790	820	125	220	315	80
29	16	33	255	375	------	115	1,750	840	280	235	305	205
30	16	33	225	250	------	310	1,680	785	295	205	245	210
31	17	------	250	260	------	740	------	725	------	220	310	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	425	2	99.8	0.290	0.33
November	104	17	28.5	.083	.09
December	255	33	102	.297	.34
January	390	180	286	.831	.96
February	------	50	227	.660	.69
March	740	115	291	.846	.98
April	2,800	256	1,470	4.27	4.76
May	1,600	465	703	2.04	2.35
June	3,570	125	1,480	4.30	4.80
July	290	58	204	.593	.68
August	315	62	221	.642	.74
September	335	43	167	.485	.54
The year	3,570	2	438	1.27	17.26

PLEASANT RIVER NEAR MILO, ME.

LOCATION.—Water-stage recorder 2 miles northwest of Milo, Piscataquis County, and 8¼ miles above confluence with Piscataquis River.

DRAINAGE AREA.—322 square miles.

RECORDS AVAILABLE.—June, 1929, to September, 1931. June, 1920, to May, 1929, at site 2 miles below.

EXTREMES.—Maximum discharge during year, 7,310 second-feet June 10 (gage height, 7.23 feet); minimum not determined.

1920–1931: Maximum discharge, 24,400 second-feet Apr. 30, 1923; minimum, 22 second-feet July 29, Aug. 2, Sept. 11, 1921.

REMARKS.—Records good except those for period of ice effect, Dec. 3 to Mar. 31, which are fair. Flow partly regulated by power development at Brownville and by storage dams.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	179	200	398	128	128	250	1,410	1,160	672	335	484	257
2	179	182	398	114	136	230	1,870	560	600	330	360	270
3	176	176	410	98	146	220	2,270	765	532	320	376	270
4	165	165	420	100	146	215	2,200	945	464	311	458	270
5	158	168	410	98	134	210	1,940	819	370	316	398	257
6	158	248	400	92	128	210	1,870	624	640	306	370	311
7	155	275	355	148	142	205	1,580	891	584	298	360	408
8	149	275	306	200	78	210	1,300	765	2,280	403	325	350
9	139	257	290	196	128	225	1,620	837	5,820	386	306	298
10	139	215	255	192	114	210	1,280	774	6,560	350	311	266
11	133	190	250	176	110	230	2,200	680	4,530	664	298	252
12	108	179	235	158	108	245	2,640	1,040	3,190	909	316	223
13	133	172	210	148	108	230	2,130	729	2,340	608	576	223
14	124	168	182	142	128	210	2,130	819	1,870	696	518	219
15	119	162	172	134	122	210	2,000	846	1,100	576	518	215
16	111	162	168	118	180	235	1,740	729	1,090	381	408	208
17	114	168	158	110	182	225	1,540	553	1,420	376	298	212
18	114	325	152	116	182	220	1,150	696	1,040	355	252	234
19	103	484	152	108	180	210	999	648	846	340	248	223
20	127	470	176	92	162	210	864	570	640	335	226	223
21	119	370	200	110	154	176	1,150	545	616	320	306	223
22	114	325	190	110	168	200	1,480	640	425	464	252	270
23	111	288	190	100	168	275	1,940	590	392	576	223	386
24	114	262	190	98	158	400	1,800	2,870	381	490	219	458
25	152	484	182	108	162	405	1,460	3,270	370	600	215	511
26	376	765	172	118	168	390	1,240	2,000	360	828	212	411
27	376	648	158	114	168	400	2,200	1,400	392	616	208	497
28	257	484	148	116	158	405	2,130	1,690	392	576	208	425
29	234	539	148	128	------	440	1,740	1,130	360	584	226	311
30	215	532	146	122	------	1,390	1,600	884	345	576	284	302
31	208	------	146	118	------	1,620	------	360	------	560	270	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	376	103	163	0.506	0.58
November	765	162	311	.966	1.08
December	420	146	238	.739	.85
January	200	92	126	.391	.45
February	182	78	144	.447	.47
March	1,620	176	339	1.05	1.21
April	2,640	864	1,720	5.34	5.96
May	3,270	360	994	3.09	3.56
June	6,560	345	1,350	4.19	4.68
July	909	298	477	1.48	1.71
August	576	208	324	1.01	1.16
September	511	208	299	.929	1.04
The year	6,560	78	540	1.68	22.75

PASSADUMKEAG RIVER AT LOWELL, ME.

LOCATION.—Water-stage recorder half a mile below dam and highway bridge at Lowell, Penobscot County, and 10 miles above confluence with Penobscot River.

DRAINAGE AREA.—301 square miles.

RECORDS AVAILABLE.—October, 1915, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,560 second-feet Apr. 14 (gage height, 4.54 feet); minimum, 48 second-feet Oct. 15 (gage height, 0.74 foot).

1915–1931: Maximum discharge, 5,680 second-feet May 2, 1923; minimum, about 5 second-feet several times in July and August, 1921.

REMARKS.—Records good except those for period of ice effect, Dec. 2 to Mar. 15, and those estimated, which are fair. Flow partly regulated by storage reservoirs above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	76	213	252	98	97	126	742	675	437	225	310	252
2	74	203	230	98	97	118	885	630	429	219	202	255
3	73	a188	210	98	97	118	1,010	585	415	211	286	261
4	70	a172	190	98	97	114	1,100	526	397	206	289	292
5	69	a166	176	100	97	112	1,180	488	383	209	281	307
6	66	a156	160	110	97	108	1,230	462	404	206	275	304
7	63	a142	152	118	97	104	1,290	437	408	206	275	320
8	60	a126	144	114	97	100	1,290	426	422	295	261	355
9	57	a108	138	112	97	172	1,290	366	585	376	249	372
10	56	a100	134	112	97	160	1,260	304	810	458	247	355
11	53	98	128	112	97	136	1,320	278	1,040	545	241	342
12	52	a98	124	110	97	122	1,470	295	1,180	608	266	317
13	50	a98	120	106	97	124	1,530	352	1,260	608	411	286
14	49	a98	118	104	102	126	1,530	411	a1,270	585	506	266
15	49	98	114	102	110	130	1,500	444	a1,150	565	565	252
16	50	a100	112	100	110	139	1,440	455	a1,030	630	585	222
17	52	a108	110	98	110	139	1,380	462	a935	720	565	204
18	60	124	108	97	110	141	1,320	455	a845	720	526	198
19	64	a136	106	97	110	150	1,260	440	a765	742	488	193
20	64	a150	104	97	110	161	1,180	429	a700	698	451	193
21	66	a164	102	97	110	172	1,070	419	a650	630	411	198
22	66	172	102	97	110	186	1,010	408	a575	545	376	204
23	66	a174	100	97	110	204	910	390	a514	469	342	244
24	67	a176	100	97	112	228	835	440	440	433	317	278
25	92	178	100	97	124	252	675	506	383	437	295	298
26	136	270	100	97	130	269	545	545	342	426	275	310
27	162	273	98	97	130	281	a410	526	314	411	261	332
28	188	273	98	97	130	298	a575	526	278	390	252	322
29	206	301	98	97	------	346	a675	506	252	366	249	301
30	222	288	98	97	------	526	675	469	238	355	252	289
31	222	------	98	97	------	675	------	451	------	336	252	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	222	49	87.1	0.289	0.33
November	301	98	165	.548	.61
December	252	98	130	.433	.50
January	118	97	102	.339	.39
February	130	97	106	.353	.37
March	675	100	195	.648	.75
April	1,530	410	1,090	3.62	4.04
May	675	278	455	1.51	1.74
June	1,270	238	628	2.09	2.33
July	742	206	446	1.48	1.71
August	585	241	344	1.14	1.31
September	372	193	277	.921	1.03
The year	1,530	49	335	1.11	15.11

a Estimated.

KENNEBEC RIVER BASIN

MOOSEHEAD LAKE AT EAST OUTLET, ME.

LOCATION.—Staff gage at wharf at east outlet of lake at Moosehead, Piscataquis County. Zero of gage is 1,011.20 feet above mean sea level.
DRAINAGE AREA.—1,240 square miles.
RECORDS AVAILABLE.—April, 1895, to September, 1931.
REMARKS.—Lake regulated to capacity of 23,735,000,000 cubic feet. Records show only fluctuations in lake level and are used in studies of regulation of lake and in computing natural flow of Kennebec River. Record furnished by Hollingsworth & Whitney Co.

Daily gage height, in feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14.35		14.2				10.45	12.9	15.2	16.35		
2				13.1	11.2	10.5						15.1
3	14.25	13.05	14.25				10.6		15.35		15.8	
4					11.15	10.45		13.1		16.2		15.1
5		13.0	14.25	12.95					15.5		15.85	
6	14.05				11.05	10.4	10.95	13.2		16.1		
7		13.0		12.85							15.85	15.05
8	13.9		14.3				11.15	13.3	15.7	16.05		
9				12.8	10.95	10.4						15.05
10	13.8	13.0	14.3				11.25		15.9	16.0	15.85	
11					10.85	10.4		13.55				15.0
12		12.9		12.7					16.1		15.8	
13	13.6		14.2		10.8	10.4	11.5	13.8		16.0		
14		13.0		12.5							15.85	14.95
15	13.5		13.9				11.65	14.0	16.3	15.9		
16				12.3	10.8	10.4						14.8
17	13.45	13.1	13.7				11.85		16.5	15.9	15.8	
18					10.7	10.3		14.15				14.7
19		13.4	13.5	12.0					16.5		15.8	
20	13.3				10.65	10.3	12.0	14.3		15.8		
21		13.55		11.9							15.7	14.5
22	13.25		13.4				12.15	14.45	16.5	15.9		
23				11.8	10.6	10.25						14.5
24	13.15	13.75	13.4				12.25		16.5	15.95	15.55	
25					10.6	10.25		14.7				14.55
26		13.9	13.35	11.6					16.5		15.4	
27	13.2				10.55	10.25	12.5	14.85		15.95		
28		14.1		11.5							15.25	14.6
29	13.15		13.3				12.7	14.95	16.45	15.9		
30				11.4		10.35						14.55
31	13.15		13.2							15.9	15.2	

KENNEBEC RIVER AT MOOSEHEAD, ME.

LOCATION.—Water-stage recorder one-eighth of a mile below east outlet dam on Moosehead Lake and half a mile northwest of Moosehead, Piscataquis County.

DRAINAGE AREA.—1,240 square miles.

RECORDS AVAILABLE.—October, 1919, to September, 1931.

EXTREMES.—Maximum discharge during year, 8,260 second-feet Dec. 12 (gage height, 7.31 feet); minimum, 173 second-feet Mar. 29 (gage height, 2.28 feet).

1919–1931: Maximum discharge, 13,600 second-feet May 9, 1929 (gage height, 9.19 feet); minimum, about 62 second-feet Apr. 7–15, 1923.

REMARKS.—Records good except those for period when logs affected control, May 14 to June 19, which are fair. Leakage and occasional opening of gates in west outlet dam diverts some water down west channel. Flow regulated by storage in Moosehead and Brassua Lakes; monthly mean discharge corrected for storage.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,120	1,390	1,250	3,120	1,980	1,010	184	315	425	2,560	940	2,080
2	2,160	1,370	1,000	3,280	1,920	990	190	320	615	2,900	930	1,600
3	2,160	1,350	1,430	3,160	1,840	960	204	320	600	2,860	735	614
4	2,140	1,340	1,810	3,070	1,790	960	212	325	430	2,590	614	1,010
5	2,180	1,270	1,800	2,980	1,750	930	215	330	700	1,600	614	1,390
6	2,140	675	1,670	3,000	1,700	912	227	340	770	1,320	614	1,360
7	2,170	418	1,480	2,960	1,650	940	239	345	970	2,220	614	865
8	2,200	412	1,480	2,500	1,590	950	247	350	480	1,750	614	606
9	2,120	406	1,650	1,830	1,530	970	260	350	775	1,870	614	606
10	2,140	406	1,800	1,800	1,510	970	273	350	1,310	2,230	614	1,100
11	2,160	850	1,920	1,780	1,460	960	286	345	815	1,680	622	1,340
12	2,170	1,380	5,310	2,580	1,420	950	278	345	470	1,400	622	1,570
13	2,160	1,470	7,990	4,190	1,380	940	273	360	630	1,600	622	1,930
14	2,120	1,300	6,930	4,190	1,400	930	278	400	515	1,840	890	2,100
15	2,180	1,260	5,610	4,020	1,370	912	278	350	510	1,980	1,280	2,330
16	2,220	1,170	5,380	3,800	1,350	903	278	470	895	2,000	1,450	2,850
17	2,070	990	5,190	3,620	1,330	876	278	420	1,250	2,110	930	2,870
18	1,940	620	4,200	3,450	1,300	867	282	490	1,180	2,040	694	2,360
19	1,940	460	3,040	3,300	1,280	849	282	350	1,000	1,940	1,150	2,340
20	1,880	466	2,160	3,230	1,250	822	282	590	734	1,930	1,580	2,440
21	1,900	472	1,570	3,090	1,220	849	291	460	786	1,580	1,850	2,390
22	1,940	478	1,580	2,930	1,200	840	291	490	813	590	1,840	1,460
23	1,960	472	1,580	2,830	1,180	822	291	515	804	590	2,100	640
24	1,960	620	1,570	2,720	1,160	742	291	375	742	590	2,140	548
25	804	580	1,570	2,610	1,130	614	296	470	686	598	2,500	548
26	406	478	1,550	2,480	1,100	614	291	465	686	590	2,460	548
27	412	484	1,550	2,380	1,110	614	296	485	1,130	583	2,400	548
28	418	484	1,540	2,290	1,050	410	296	540	2,440	1,460	2,510	541
29	424	490	1,530	2,200	-------	176	305	490	2,830	2,730	2,350	541
30	424	975	1,760	2,140	-------	180	305	400	2,320	1,890	1,960	541
31	885	-------	2,330	2,070	-------	180	-------	585	-------	950	1,760	-------

Month	Observed			Gain or loss in storage (millions of cubic feet)	Corrected for storage		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	2,220	406	1,740	−4,687	(a)	(a)	(a)
November	1,470	406	818	+518	1,020	0.823	0.92
December	7,990	1,000	2,620	−4,679	870	.702	.81
January	4,190	1,780	2,890	−6,023	640	.516	.59
February	1,980	1,050	1,430	−2,362	454	.366	.38
March	1,010	176	795	−414	640	.516	.59
April	305	184	267	+13,055	5,310	4.28	4.78
May	590	315	411	+7,892	3,360	2.71	3.12
June	2,830	425	944	+3,463	2,280	1.84	2.05
July	2,900	583	1,700	−1,926	981	.791	.91
August	2,510	614	1,310	−2,549	358	.289	.33
September	2,870	541	1,390	−2,001	618	.498	.56
The year	7,990	176	1,360	+287	1,370	1.10	15.04

(a) Apparent depletion of storage slightly exceeded total discharge past gage.

NOTE.—No correction for evaporation. Diversion at west outlet dam, not included in above table, estimated as follows: Oct. 1–14, 135 second-feet; Oct. 15 to June 21, 10 to 90 second-feet leakage; June 22, 230 second-feet; June 23, 380 second-feet; June 24, 230 second-feet; June 25 to Sept. 23, 70 to 140 second-feet; and Sept. 24–30, leakage of 45 second-feet.

KENNEBEC RIVER AT THE FORKS, ME.

LOCATION.—Water-stage recorder at The Forks, Somerset County, half a mile above highway bridge and one mile above mouth of Dead River.

DRAINAGE AREA.—1,570 square miles.

RECORDS AVAILABLE.—September, 1901, to September, 1931.

EXTREMES.—Maximum discharge during year, 8,980 second-feet Dec. 13 (gage height, 6.19 feet); minimum, 562 second-feet Mar. 29 (gage height, 1.97 feet).

1901–31: Maximum discharge, about 23,700 second-feet June 18, 1917 (gage height, 10.1 feet); minimum, 215 second-feet Oct. 27, 1911 (gage height, 0.3 foot).

REMARKS.—Records good. Frequent discharge measurements made during period of ice effect, Dec. 23 to Mar. 4. Flow regulated by storage in Moosehead and Brassua Lakes; monthly mean discharge corrected for storage.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,370	1,230	1,540	3,250	2,130	1,050	890	1,350	1,320	2,760	1,410	2,030
2	2,370	1,540	1,470	3,660	2,030	1,040	1,350	1,180	1,750	3,450	1,230	2,640
3	2,370	1,540	1,470	3,550	1,950	1,030	1,600	1,120	1,150	3,150	1,230	1,180
4	2,370	1,660	2,030	3,270	1,890	1,020	1,950	1,070	930	2,970	1,120	920
5	2,370	1,800	2,190	3,150	1,840	1,010	1,870	860	1,180	2,890	1,070	1,540
6	2,370	1,660	2,030	3,210	1,800	990	1,870	830	1,010	2,280	1,070	1,660
7	2,370	910	1,870	3,150	1,760	990	1,800	793	1,630	2,840	1,070	1,600
8	2,460	698	1,800	3,070	1,730	980	1,600	775	1,070	2,700	1,010	1,180
9	2,370	643	1,800	2,140	1,730	1,000	1,540	766	2,040	1,950	830	1,470
10	2,370	608	2,030	1,970	1,660	1,020	1,730	739	3,430	2,370	1,310	1,540
11	2,370	622	2,280	1,890	1,590	1,010	2,550	920	3,070	2,460	900	1,950
12	2,370	1,230	4,140	2,460	1,560	1,000	3,030	1,180	1,950	1,870	802	2,110
13	2,370	1,950	8,690	4,150	1,560	1,000	3,230	1,230	1,650	1,800	840	2,460
14	2,370	1,540	8,400	4,250	1,520	1,000	3,230	1,230	1,270	1,870	870	2,740
15	2,370	1,470	6,740	4,200	1,520	1,000	2,840	1,230	1,070	2,190	1,230	2,840
16	2,460	1,470	6,470	4,150	1,460	970	2,460	1,290	1,350	2,280	1,600	3,030
17	2,370	1,290	6,200	3,840	1,420	950	2,190	1,230	2,590	2,370	1,540	3,330
18	2,190	1,230	5,680	3,410	1,400	950	2,190	1,180	2,210	2,460	920	2,740
19	2,110	1,120	4,320	3,270	1,360	920	2,030	1,070	1,430	2,280	850	2,640
20	2,110	1,070	3,230	3,150	1,340	920	1,950	940	1,230	2,190	1,470	2,640
21	2,030	990	2,110	2,930	1,300	910	1,950	900	1,120	2,280	1,870	2,740
22	2,030	910	1,870	2,680	1,240	900	1,950	900	1,120	3,130	2,110	2,460
23	2,110	840	1,860	2,640	1,230	900	1,660	910	1,070	2,110	2,110	1,470
24	2,110	802	1,830	2,590	1,200	900	1,470	1,660	1,070	1,660	2,140	1,070
25	2,030	1,120	1,810	2,510	1,150	802	1,410	2,030	1,070	1,410	2,620	1,020
26	1,020	1,230	1,810	2,460	1,120	748	1,410	1,870	1,070	1,230	2,700	950
27	706	1,180	1,810	2,410	1,090	757	1,470	1,660	1,270	1,070	2,620	960
28	650	1,029	1,810	2,350	1,060	784	1,540	1,290	2,800	1,120	2,740	930
29	629	1,010	1,810	2,300	-------	594	1,600	1,230	3,090	2,280	2,740	880
30	643	930	1,870	2,240	-------	643	1,540	1,180	3,140	3,230	2,550	820
31	658	-------	2,370	2,210	-------	748	-------	1,120	-------	2,460	1,870	-------

Month	Observed			Corrected for storage		Run-off in inches
	Maximum	Minimum	Mean	Mean	Per square mile	
October	2,460	629	1,980	230	0.146	0.17
November	1,950	608	1,180	1,380	.879	.98
December	8,690	1,470	3,080	1,330	.847	.98
January	4,250	1,890	2,980	730	.465	.54
February	2,130	1,060	1,520	544	.346	.36
March	1,050	594	920	765	.487	.56
April	3,230	890	1,930	6,970	4.44	4.95
May	2,030	739	1,150	4,100	2.61	3.01
June	3,430	930	1,670	3,010	1.92	2.14
July	3,450	1,070	2,290	1,570	1.00	1.15
August	2,740	802	1,560	608	.387	.45
September	3,330	820	1,850	1,080	.688	.77
The year	8,690	594	1,850	1,860	1.18	16.06

KENNEBEC RIVER AT BINGHAM, ME.

LOCATION.—Water-stage recorder 200 feet below highway bridge half a mile below mouth of Austin Stream, at Bingham, Somerset County.

DRAINAGE AREA.—2,710 square miles.

RECORDS AVAILABLE.—June, 1907, to June, 1910; October, 1930, to September, 1931.

EXTREMES.—Maximum discharge during year, about 23,100 second-feet Apr. 22 (gage height, 10.75 feet); minimum, 530 second-feet Sept. 7 (gage height, 4.95 feet).

1907–1910, 1930–31: Maximum discharge, 32,500 second-feet May 11, 12, 1909; minimum, that of Sept. 7, 1931.

REMARKS.—Records good except those for period when pulpwood affected control, May 30 to June 9, and those estimated, Aug. 16, 17, which are fair. Corrections for periods of ice effect, Dec. 16, Jan. 7 to Mar. 9, based on several discharge measurements and records from power station just above. Flow regulated by storage in Moosehead and Brassua Lakes and pondage above Wyman Dam; mean monthly discharge corrected for storage. Gage-height record furnished by Brassua Associates.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,680	2,160	2,090	2,470	2,520	2,680	1,160	5,300	3,000	2,980	2,500	2,900
2	2,680	2,200	2,240	2,710	2,620	2,680	965	4,690	2,830	2,880	2,070	2,840
3	2,640	2,280	2,460	2,710	2,570	2,850	894	4,530	3,100	2,260	2,760	2,750
4	2,660	2,350	2,000	2,590	2,620	2,660	948	3,380	3,200	675	2,930	2,720
5	2,660	2,260	2,950	2,310	2,520	2,730	894	3,470	3,130	2,100	2,580	2,650
6	2,640	1,770	2,460	2,320	2,500	2,730	1,070	2,730	3,260	2,890	2,730	1,590
7	2,620	1,860	2,320	2,520	2,500	2,570	768	2,590	2,900	3,100	2,790	565
8	2,640	1,930	2,220	2,500	2,550	2,570	1,120	2,600	2,900	2,870	3,020	2,460
9	2,640	1,970	2,520	2,430	2,620	2,620	1,360	2,780	3,200	2,780	2,370	2,800
10	2,590	2,020	2,430	2,500	2,660	2,550	1,550	2,640	8,600	2,730	2,850	2,940
11	2,590	2,060	2,430	2,500	2,590	2,460	1,840	3,690	6,340	2,880	2,670	3,020
12	2,570	2,220	2,410	2,520	2,590	2,390	2,310	5,130	6,060	2,330	2,770	2,800
13	2,570	2,200	2,390	2,570	2,550	2,430	5,510	5,080	5,140	2,580	2,820	2,330
14	2,550	2,080	2,410	2,570	2,390	2,480	9,950	5,040	3,860	2,710	2,550	2,970
15	2,520	2,030	2,590	2,520	2,460	2,570	9,510	5,320	3,490	2,680	2,540	2,950
16	2,500	1,970	2,660	2,550	2,480	2,680	8,220	4,640	4,180	2,730	2,100	2,860
17	2,520	1,910	2,590	2,500	2,500	2,730	7,800	4,050	4,670	2,610	2,500	2,960
18	2,460	1,510	2,520	2,500	2,460	2,710	7,010	3,200	4,440	2,800	2,720	2,780
19	2,460	1,070	2,500	2,520	2,410	2,750	5,000	4,710	3,190	2,340	2,750	2,850
20	2,500	1,440	2,480	2,570	2,390	2,710	6,500	3,460	3,010	2,740	2,870	2,120
21	2,430	1,640	2,370	2,570	2,390	2,640	6,770	2,810	2,660	2,580	2,830	2,810
22	2,390	1,730	2,350	2,550	2,460	2,590	7,550	3,360	2,840	3,210	2,980	2,280
23	2,350	1,740	2,410	2,570	2,350	2,550	8,540	3,680	3,040	3,520	2,360	2,180
24	2,320	1,890	2,290	2,590	2,480	2,260	12,700	9,130	3,120	3,430	2,950	2,480
25	2,370	1,560	1,730	2,520	2,480	2,000	9,130	7,860	3,240	2,840	2,940	2,440
26	1,730	1,050	2,410	2,430	2,520	2,140	3,240	7,370	3,220	2,190	2,760	2,510
27	1,910	1,720	2,430	2,570	2,590	2,080	5,400	6,100	2,850	3,140	2,720	2,180
28	1,820	1,990	2,580	2,550	2,730	1,850	5,700	4,440	2,840	2,710	2,880	3,050
29	1,890	2,120	2,360	2,520	-------	1,550	3,420	3,980	2,900	2,970	3,120	2,720
30	2,320	2,180	2,450	2,500	-------	680	5,480	3,310	2,980	2,530	1,880	2,810
31	2,200	-------	2,350	2,500	-------	620	-------	3,130	-------	2,620	2,630	-------

Month	Observed			Gain or loss in storage (millions of cubic feet)	Corrected for storage		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	2,680	1,730	2,430	−4,777	646	0.23	0.27
November	2,350	1,050	1,900	+1,678	2,550	.941	1.05
December	2,950	1,730	2,400	−1,939	1,680	.620	.71
January	2,710	2,310	2,520	−3,723	1,130	.417	.48
February	2,730	2,350	2,520	−4,662	593	.219	.23
March	2,850	620	2,370	−2,874	1,300	.480	.55
April	12,700	768	4,740	+19,205	12,200	4.50	5.02
May	9,130	2,590	4,330	+7,962	7,300	2.69	3.10
June	8,600	2,660	3,670	+3,003	4,830	1.78	1.99
July	3,520	675	2,690	−1,466	2,140	.790	.91
August	3,120	1,880	2,680	−2,609	1,710	.631	.73
September	3,050	565	2,580	−1,981	1,820	.672	.75
The year	12,700	565	2,900	+7,797	3,150	1.16	15.79

KENNEBEC RIVER AT WATERVILLE, ME.

LOCATION.—Staff gages and water-stage recorder 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, 1892, to September, 1931.

REMARKS.—Discharge computed from flow over dam and through logway and water wheels of mill. Numerous power plants and much storage above station; records not corrected for storage. Comparative studies of monthly averages with gaging stations above Waterville indicate that record as published below is small for low flows, the discrepancy ranging from 1 to 20 per cent for the low-water months, but the high-water months and the yearly average compare fairly closely with records from gaging stations above. Records furnished by Hollingsworth & Whitney Co.

Daily discharge, in second-feet, 1928–1931

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1928–29												
1	4,430	3,300	3,680	4,780	4,300	3,760	7,010	30,500	8,850	4,800	2,710	2,120
2	4,380	2,880	2,870	5,020	3,980	3,740	7,610	26,800	12,100	4,110	3,480	2,150
3	3,970	3,190	3,300	5,100	3,920	2,840	5,790	36,600	13,900	3,790	1,940	2,710
4	3,770	4,080	4,460	4,140	4,620	4,120	5,360	66,400	12,600	2,230	2,470	2,180
5	3,540	3,530	4,690	6,810	3,840	3,970	5,420	58,600	11,600	3,530	2,800	2,500
6	3,090	3,500	4,000	8,760	3,860	4,500	7,560	50,400	8,350	3,600	3,120	2,540
7	1,430	3,630	3,920	8,210	3,860	4,780	9,340	49,200	7,790	2,020	2,740	2,900
8	2,980	3,520	3,760	9,220	3,700	4,700	17,600	41,600	8,230	3,730	3,390	1,900
9	3,820	3,480	2,490	8,830	4,180	4,400	19,700	36,700	7,410	3,420	2,980	2,290
10	3,650	3,260	4,260	5,840	3,950	3,430	22,900	31,900	6,920	3,500	2,950	2,920
11	3,100	2,400	4,410	5,700	4,210	4,090	19,000	28,200	6,560	4,250	1,840	2,460
12	3,620	2,810	3,900	5,280	3,890	3,920	15,700	26,300	4,470	4,000	2,720	2,550
13	2,460	2,740	5,540	4,110	3,720	4,950	12,200	24,100	4,460	3,160	3,010	2,470
14	2,110	2,770	4,690	4,860	3,830	5,230	18,900	22,000	4,270	2,140	2,780	2,920
15	3,550	2,690	4,420	4,490	3,830	4,840	16,400	17,700	3,780	4,180	2,930	2,180
16	3,900	3,090	2,590	4,320	3,530	4,990	15,800	17,600	2,000	3,790	3,660	2,240
17	3,000	3,240	4,990	3,910	3,520	6,130	24,100	15,800	3,960	3,220	3,380	2,630
18	3,390	2,570	6,550	4,060	4,210	6,040	33,500	15,300	4,460	3,100	1,760	2,770
19	8,100	5,730	7,350	5,040	4,480	5,550	30,100	13,400	4,040	3,590	3,190	2,720
20	9,400	8,020	6,580	6,460	3,690	6,420	26,400	14,900	4,050	3,960	3,390	2,660
21	7,540	9,070	5,730	6,240	3,880	7,620	23,400	16,500	3,900	2,640	2,660	2,920
22	6,130	8,560	4,300	5,810	3,720	8,610	21,500	17,000	3,660	2,560	2,470	1,390
23	5,500	7,340	2,720	5,180	3,370	9,380	19,900	17,000	2,220	3,280	2,400	2,240
24	4,340	6,070	3,480	5,230	3,070	8,150	17,100	13,300	3,880	3,650	2,660	2,560
25	6,760	3,980	3,270	5,210	3,940	7,580	17,100	10,700	3,990	3,740	2,990	2,700
26	5,770	3,360	5,010	4,940	3,680	6,190	23,300	8,330	4,620	3,720	2,580	2,490
27	4,310	3,420	4,740	3,950	3,670	6,260	28,800	9,890	4,840	3,360	2,630	2,470
28	2,580	3,610	6,500	5,020	3,810	6,970	30,600	7,960	4,210	2,080	2,750	2,530
29	3,980	2,360	9,950	4,000	-------	6,030	33,600	7,330	4,070	2,820	2,710	1,140
30	3,820	3,060	6,860	3,880	-------	5,820	38,300	5,660	4,420	3,800	2,470	2,450
31	3,690	-------	5,140	3,870	-------	7,620	--------	8,490	-------	3,590	2,430	------

Daily discharge, in second-feet, of Kennebec River at Waterville, Me., 1928–1931— Continued.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1929–30												
1	2,790	2,170	783	1,860	2,260	3,980	6,850	17,700	13,800	4,230	4,050	2,950
2	2,610	2,630	1,690	1,740	1,470	4,300	5,930	19,800	9,660	4,650	3,480	2,670
3	2,600	1,370	1,960	2,010	2,040	3,180	5,640	26,800	10,500	6,530	3,410	2,870
4	3,320	3,340	1,780	2,060	2,160	3,830	4,660	25,400	11,100	5,540	3,170	3,160
5	2,640	2,800	1,870	1,750	2,410	3,820	8,760	25,700	9,300	3,510	3,780	2,920
6	1,350	2,680	1,600	1,700	2,350	3,760	10,400	24,200	8,210	3,890	3,670	4,120
7	2,430	2,650	1,670	2,230	2,340	3,740	17,400	22,300	7,910	3,780	3,620	1,840
8	2,520	2,220	1,500	2,380	2,440	4,740	36,700	21,800	5,450	4,400	3,220	2,750
9	2,500	2,570	1,580	3,370	1,260	8,020	20,800	19,300	7,170	4,320	3,640	3,240
10	2,200	1,510	1,890	2,950	2,200	10,000	14,600	17,400	8,170	4,260	3,340	3,040
11	2,280	703	1,770	3,330	2,520	9,900	12,700	14,800	8,230	4,190	3,230	2,920
12	2,220	2,070	1,880	2,250	2,330	14,300	12,000	11,900	9,360	3,000	3,610	2,740
13	1,010	2,120	1,820	2,340	2,400	15,200	23,800	11,400	9,840	2,740	3,760	2,740
14	2,110	2,480	1,550	2,860	2,400	11,800	22,800	11,200	7,010	3,690	3,430	1,480
15	2,350	3,330	1,470	2,960	2,640	8,010	24,000	11,900	5,390	5,340	4,040	1,940
16	2,290	3,180	1,710	2,900	1,980	5,840	25,500	13,100	6,840	6,220	3,900	2,890
17	2,240	2,770	1,680	2,880	2,460	6,820	21,700	13,500	5,720	5,870	3,580	3,040
18	2,270	2,570	1,650	2,530	2,560	6,060	19,400	12,700	4,260	4,540	3,760	2,560
19	2,280	3,150	2,270	1,750	2,510	6,050	16,900	11,500	4,260	3,790	4,010	2,700
20	1,150	3,360	1,830	2,340	2,480	5,770	18,000	12,100	5,790	3,430	3,900	2,660
21	2,210	2,670	1,920	2,350	2,820	5,730	17,200	8,560	6,670	3,490	3,870	1,610
22	2,440	2,260	1,400	2,380	2,540	5,290	20,400	8,570	5,790	3,740	3,760	2,820
23	2,560	2,310	1,320	2,360	2,620	4,440	19,400	9,300	4,880	3,000	3,600	3,160
24	2,840	1,000	1,490	2,150	3,850	3,350	17,200	8,540	5,810	3,690	2,840	2,840
25	2,690	2,070	1,320	2,240	4,510	3,830	13,300	6,470	5,870	3,890	3,510	2,790
26	2,390	2,690	1,580	1,390	5,100	6,930	12,600	8,610	4,680	3,970	4,350	2,840
27	1,620	2,370	1,950	2,040	5,100	14,700	10,700	19,600	4,520	4,360	3,730	3,060
28	2,060	1,480	1,670	2,240	4,290	12,000	12,800	20,600	5,040	3,500	3,350	1,510
29	2,330	2,190	1,310	2,200	------	8,760	17,500	20,300	3,200	4,090	3,370	2,530
30	2,150	1,910	1,550	2,230	------	8,380	17,700	13,400	3,610	4,280	3,380	2,820
31	2,170	------	2,130	2,420	------	7,230	------	13,700	------	4,200	3,690	------
1930–31												
1	2,820	3,340	4,220	3,060	2,250	3,860	19,400	9,720	10,200	2,960	3,180	3,100
2	2,820	2,350	4,410	3,080	2,530	2,640	24,800	8,580	9,910	3,290	1,500	3,370
3	2,640	3,030	3,630	2,980	2,930	3,020	23,000	7,050	12,000	3,820	3,030	3,370
4	2,450	2,990	3,720	2,340	2,980	3,520	22,100	8,470	8,740	2,230	3,150	3,710
5	1,590	2,880	3,260	3,550	3,080	3,550	16,800	7,070	8,470	1,180	3,780	3,720
6	2,610	3,760	3,750	3,190	3,000	3,640	16,300	5,360	11,000	2,820	3,880	3,480
7	2,710	4,840	3,800	2,950	2,380	3,330	11,700	4,180	10,400	3,400	3,090	3,180
8	2,550	3,390	3,370	2,590	2,140	3,180	6,870	6,000	12,400	3,840	3,100	2,890
9	2,350	3,810	3,570	2,600	2,460	3,000	8,540	4,330	17,400	3,510	2,490	3,180
10	2,530	3,800	3,700	2,310	2,620	3,480	10,100	3,880	29,400	2,620	3,140	3,410
11	2,690	3,730	3,390	2,320	2,670	3,320	11,200	6,040	26,700	3,020	3,330	3,470
12	848	2,680	3,380	2,840	2,820	3,320	14,900	11,000	22,100	3,320	3,210	4,610
13	2,440	3,210	3,490	3,300	2,860	3,300	17,500	9,070	21,700	3,350	4,270	1,370
14	2,760	2,830	3,050	3,150	2,460	3,330	17,600	9,080	17,300	3,930	4,650	2,080
15	2,690	2,960	2,740	3,110	2,570	2,900	19,300	8,790	8,590	4,240	4,440	2,790
16	2,740	2,050	3,000	3,030	2,310	3,350	15,800	9,910	8,560	3,420	2,160	3,080
17	2,480	3,910	2,880	2,730	3,080	4,060	13,600	8,890	10,800	3,340	3,250	2,710
18	2,470	5,120	3,320	2,030	3,170	4,020	13,900	7,790	9,810	2,910	3,670	2,920
19	3,520	6,550	3,300	3,050	3,030	4,490	11,400	6,870	8,850	1,150	2,700	3,040
20	2,710	5,660	3,110	3,140	3,080	4,850	10,400	7,280	7,730	2,310	2,730	1,160
21	2,730	3,900	2,980	2,940	2,300	5,220	11,600	5,650	4,470	3,030	3,230	2,860
22	2,640	3,350	2,940	3,090	2,900	4,450	14,200	4,660	4,770	3,590	3,710	3,550
23	2,760	3,280	3,300	3,100	2,560	4,440	13,500	6,100	4,130	5,680	2,000	5,960
24	2,490	3,470	2,980	2,660	2,090	5,680	15,500	10,600	3,460	6,220	2,350	5,950
25	2,990	6,890	2,510	1,880	3,040	4,020	15,400	24,600	3,550	4,780	2,950	5,850
26	7,730	7,220	1,790	2,850	3,220	4,750	14,200	18,700	3,320	2,960	2,890	5,130
27	4,450	6,970	2,720	3,100	3,370	5,900	11,500	15,900	4,770	3,080	2,840	4,450
28	3,800	5,760	2,480	3,040	3,570	5,740	14,700	12,900	3,740	3,400	2,250	4,190
29	3,440	5,210	2,670	3,040	------	8,470	9,490	9,950	4,180	3,550	2,990	4,840
30	3,270	2,820	3,010	3,130	------	14,200	8,690	9,500	3,520	3,530	1,790	3,860
31	3,200	------	3,090	2,700	------	15,600	------	8,370	------	2,790	2,280	------

Monthly discharge, in second-feet, of Kennebec River at Waterville, Me., 1928–31

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
1928–29					
October	9,400	1,430	4,260	0.998	1.15
November	9,070	2,360	4,040	.946	1.06
December	9,950	2,490	4,710	1.10	1.27
January	9,220	3,870	5,430	1.27	1.46
February	4,620	3,070	3,870	.906	.94
March	9,380	2,840	5,570	1.30	1.50
April	38,300	5,360	19,100	4.47	4.99
May	66,400	5,660	24,100	5.64	6.50
June	13,900	2,000	5,990	1.40	1.56
July	4,800	2,020	3,400	.796	.92
August	3,660	1,760	2,770	.649	.75
September	2,920	1,140	2,420	.567	.63
The year	66,400	1,140	7,160	1.68	22.73
1929–30					
October	3,320	1,010	2,280	.534	.62
November	3,360	703	2,350	.550	.61
December	2,270	783	1,660	.389	.45
January	3,370	1,330	2,330	.546	.63
February	5,100	1,260	2,720	.637	.66
March	15,200	3,180	7,090	1.66	1.91
April	36,700	4,660	16,200	3.79	4.23
May	26,800	6,470	15,600	3.65	4.21
June	13,800	3,200	6,930	1.62	1.81
July	6,530	2,740	4,200	.984	1.13
August	4,350	3,170	3,610	.845	.97
September	4,120	1,480	2,710	.635	.71
The year	36,700	703	5,650	1.32	17.94
1930–31					
October	7,730	848	2,900	.679	.78
November	7,220	2,050	4,060	.951	1.06
December	4,410	1,790	3,210	.752	.87
January	3,550	1,880	2,870	.672	.77
February	3,570	2,090	2,770	.649	.68
March	15,600	2,640	4,790	1.12	1.29
April	24,800	6,870	14,500	3.40	3.79
May	24,600	3,880	8,910	2.09	2.41
June	29,400	3,320	10,400	2.44	2.72
July	6,220	1,150	3,330	.780	.90
August	4,650	1,500	3,030	.710	.82
September	5,960	1,160	3,580	.838	.94
The year	29,400	848	5,350	1.25	17.03

DEAD RIVER AT THE FORKS, ME.

LOCATION.—Water-stage recorder 1½ miles west of The Forks, Somerset County.

DRAINAGE AREA.—878 square miles.

RECORDS AVAILABLE.—September, 1901, to August, 1907; March, 1910, to September, 1931.

EXTREMES.—Maximum discharge during year, 15,700 second-feet May 11 (gage height, 8.34 feet); minimum, 158 second-feet Feb. 8.

1901–1907, 1910–1931: Maximum discharge, 23,800 second-feet Apr. 30, 1923; minimum stage, 0.2 foot Sept. 12, 13, 17, 1918 (discharge not determined).

REMARKS.—Records good. Frequent discharge measurements made during period of ice effect, Dec. 2 to Apr. 2. Stage affected by pulpwood on control July 18 to Aug. 5. Discharge estimated Oct. 20. Some regulation by storage on lakes for power and log sluicing.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	287	640	770	415	220	205	1,940	3,140	1,290	430	680	330
2	273	590	770	390	196	196	1,930	1,880	1,270	448	820	338
3	259	515	715	360	205	205	2,060	943	1,220	448	895	360
4	245	454	670	330	220	215	2,400	2,550	714	360	1,030	382
5	233	438	695	315	225	220	2,580	2,060	690	352	1,270	422
6	227	580	660	320	205	220	2,580	2,260	690	352	1,700	439
7	215	854	540	360	184	210	2,490	3,170	1,150	345	1,120	648
8	209	903	490	350	158	210	2,200	3,360	1,150	360	995	894
9	203	759	480	350	168	205	2,200	1,240	1,340	455	400	762
10	197	650	460	345	196	215	2,680	1,450	2,180	405	1,150	566
11	191	620	430	350	215	210	4,190	2,490	2,880	338	2,510	473
12	180	506	405	345	215	210	5,780	3,180	2,680	398	2,580	414
13	174	533	420	340	210	210	5,520	2,980	2,400	480	1,810	345
14	174	524	430	330	210	220	5,650	2,470	2,060	338	1,400	317
15	174	497	440	320	215	225	4,660	3,650	1,300	385	1,250	298
16	191	570	445	315	196	240	5,020	2,880	1,860	360	1,100	291
17	209	630	455	310	190	235	4,300	2,880	1,760	368	1,020	291
18	227	866	455	295	184	245	3,170	1,850	1,410	450	1,050	278
19	259	1,360	445	250	190	220	3,350	3,090	1,100	430	798	278
20	275	1,580	440	265	196	280	3,020	1,790	882	595	702	259
21	259	1,460	415	265	196	285	4,250	2,200	658	255	606	265
22	252	1,190	390	260	205	285	5,160	2,260	616	465	538	338
23	233	994	380	245	210	340	5,390	2,000	596	1,190	490	1,020
24	227	854	390	245	205	360	5,110	4,110	585	1,200	448	1,410
25	345	916	400	240	205	375	4,170	4,300	585	725	405	1,470
26	671	1,420	405	240	205	440	3,550	4,300	547	625	375	1,300
27	842	1,630	420	250	205	505	3,260	2,580	538	605	345	1,260
28	818	1,300	440	245	205	515	2,810	2,090	490	390	324	1,340
29	726	1,010	455	240	-------	660	2,760	1,990	482	315	310	1,230
30	630	878	470	240	-------	1,020	3,030	1,620	430	350	330	1,010
31	630	-------	455	225	-------	1,750	-------	1,290	-------	640	330	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	842	174	324	0.369	0.43
November	1,630	438	857	.976	1.09
December	770	380	491	.559	.64
January	415	225	302	.344	.40
February	225	158	201	.229	.24
March	1,750	196	353	.402	.46
April	5,780	1,930	3,570	4.07	4.54
May	4,300	943	2,520	2.87	3.31
June	2,880	430	1,190	1.36	1.52
July	1,200	255	479	.546	.63
August	2,580	310	928	1.06	1.22
September	1,470	259	634	.722	.81
The year	5,780	158	987	1.12	15.29

CARRABASSETT RIVER NEAR NORTH ANSON, ME.

LOCATION.—Water-stage recorder 3 miles above North Anson, Somerset County.
DRAINAGE AREA.—351 square miles.
RECORDS AVAILABLE.—August, 1925, to September, 1931. November, 1901, to May, 1907, at site 1 mile upstream.
EXTREMES.—Maximum discharge during year, 5,140 second-feet Apr. 11 (gage height, 8.47 feet); minimum, 48 second-feet Oct. 1 (gage height, 2.49 feet).
1925–1931: Maximum discharge, 18,600 second-feet Nov. 4, 1927 (gage height, 17.83 feet); minimum, 18 second-feet Oct. 29, 1929 (gage height, 2.02 feet).
REMARKS.—Records excellent except those for period of ice effect, Dec. 13 to Mar. 25, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	61	285	522	124	99	118	1,660	925	661	151	193	235
2	70	238	724	116	98	124	3,000	737	614	146	142	204
3	71	216	930	112	98	132	3,510	792	375	144	144	255
4	71	198	828	118	96	134	3,250	1,220	327	135	380	327
5	66	238	385	120	98	134	2,050	995	280	164	359	335
6	62	1,000	332	122	98	134	2,410	1,060	276	158	248	367
7	70	743	332	126	93	132	1,950	995	269	139	195	737
8	66	485	332	130	93	114	1,610	820	771	131	179	581
9	65	390	345	132	99	132	1,340	855	2,300	128	164	581
10	68	336	314	128	102	138	1,800	806	4,030	151	174	238
11	64	292	322	128	104	128	4,030	1,100	2,760	351	201	195
12	65	266	235	132	108	142	3,900	1,520	2,300	548	207	171
13	61	266	245	140	110	148	2,410	1,140	1,380	327	520	151
14	65	259	255	140	118	128	2,580	960	799	228	470	146
15	62	277	270	140	120	122	2,250	1,180	724	187	335	142
16	78	309	250	132	126	126	1,380	1,100	1,260	166	805	135
17	98	332	196	128	130	128	1,700	1,140	1,100	154	925	128
18	106	1,040	166	128	130	128	1,430	1,140	625	148	520	128
19	144	1,560	156	132	130	132	1,100	995	363	144	266	124
20	131	895	150	146	124	146	1,800	625	320	133	235	120
21	108	704	150	144	118	160	2,200	692	283	128	201	139
22	98	594	148	140	114	180	2,000	637	248	1,180	176	455
23	91	556	146	132	106	260	1,800	532	235	1,200	158	1,030
24	88	460	140	120	108	375	1,430	3,040	228	718	148	750
25	450	1,010	138	114	110	430	995	2,760	201	655	142	960
26	1,000	1,660	134	114	114	495	1,030	1,850	190	335	128	614
27	717	895	132	118	118	559	1,850	1,220	187	259	122	620
28	743	629	130	120	118	757	1,560	711	184	225	114	625
29	730	544	128	118	-------	980	1,340	608	171	204	124	456
30	350	415	128	112	-------	2,650	1,300	456	156	242	359	371
31	350	-------	126	100	-------	2,460	-------	411	-------	259	308	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,000	61	202	0.575	0.66
November	1,660	198	570	1.62	1.81
December	930	126	284	.809	.93
January	146	100	126	.359	.41
February	130	93	110	.313	.33
March	2,650	114	385	1.10	1.27
April	4,030	995	2,020	5.75	6.42
May	3,040	411	1,070	3.05	3.52
June	4,030	156	787	2.24	2.50
July	1,200	128	298	.849	.98
August	925	114	279	.795	.92
September	1,030	120	377	1.07	1.19
The year	4,030	61	541	1.54	20.94

SANDY RIVER NEAR MERCER, ME.

LOCATION.—Water-stage recorder at Davis ferry, 3 miles north of Mercer, Somerset County.
DRAINAGE AREA.—534 square miles.
RECORDS AVAILABLE.—October, 1928, to September, 1931.
EXTREMES.—Maximum discharge during year, 6,550 second-feet Apr. 4 (gage height, 7.64 feet); minimum, 64 second-feet Oct. 14 (gage height, 2.37 feet).
1928–1931: Maximum discharge, 15,100 second-feet Apr. 8, 1930 (gage height, 10.96 feet); minimum, 35 second-feet Oct. 6, 1929 (gage height, 2.05 feet).
REMARKS.—Records excellent except those for period of ice effect, Dec. 12 to Mar. 30, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	105	500	790	225	265	300	3,370	1,360	850	307	299	352
2	112	411	820	215	215	255	5,640	1,180	835	287	257	291
3	114	379	593	205	250	280	5,640	1,130	670	285	268	331
4	94	357	614	205	240	285	5,860	1,260	551	287	425	445
5	98	397	628	205	240	275	4,680	1,130	494	268	752	440
6	78	1,160	614	205	225	275	4,060	1,180	455	261	450	460
7	89	1,180	537	250	225	255	3,460	1,180	435	257	379	835
8	90	752	518	240	210	215	3,090	1,090	1,290	246	370	628
9	85	551	551	285	176	196	3,560	1,010	2,850	239	311	435
10	80	476	551	305	215	225	3,660	1,010	5,000	253	311	357
11	80	460	470	270	220	240	4,990	1,420	3,280	308	323	315
12	77	388	410	235	215	255	5,530	2,100	2,650	730	357	280
13	68	402	395	270	220	270	3,460	1,640	2,030	524	775	242
14	64	392	365	320	240	270	3,660	1,360	1,360	383	805	207
15	68	392	290	320	196	250	3,180	1,640	1,220	323	537	203
16	74	402	265	300	215	270	2,400	1,410	1,360	291	406	246
17	78	445	270	285	320	310	2,030	1,310	1,090	327	370	272
18	119	1,430	290	265	305	315	1,820	1,130	1,010	291	335	249
19	168	1,820	305	265	255	290	1,760	970	820	272	319	246
20	164	1,260	305	305	255	310	1,890	865	722	268	299	235
21	171	1,010	300	310	330	325	2,100	812	572	272	283	235
22	177	820	280	315	325	370	2,320	842	524	490	283	495
23	171	708	270	300	240	580	2,100	745	470	1,620	264	2,100
24	149	649	280	295	320	790	1,640	3,840	440	812	242	1,310
25	380	1,530	255	255	275	900	1,360	3,330	415	544	177	1,180
26	1,760	2,240	255	210	290	940	1,260	1,890	379	406	144	888
27	970	1,460	245	265	285	985	3,000	1,410	370	362	141	842
28	692	1,010	230	265	295	1,340	2,560	1,090	383	311	228	1,090
29	586	685	235	295	------	1,760	1,820	902	383	290	253	812
30	558	635	230	300	------	2,240	1,640	760	335	261	291	635
31	572	------	230	285	------	4,060	------	670	------	361	370	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,760	64	261	0.489	0.56
November	2,240	357	810	1.52	1.70
December	820	230	400	.749	.86
January	320	205	267	.500	.58
February	330	176	252	.472	.49
March	4,060	196	633	1.19	1.37
April	5,860	1,260	3,120	5.84	6.52
May	3,840	670	1,340	2.51	2.89
June	5,000	335	1,110	2.08	2.32
July	1,620	239	396	.742	.86
August	805	141	356	.667	.77
September	2,100	203	555	1.04	1.16
The year	5,860	64	789	1.48	20.08

SEBASTICOOK RIVER NEAR PITTSFIELD, ME.

LOCATION.—Water-stage recorder 1¾ miles above mouth of Twentyfivemile Stream and 4 miles south of Pittsfield, Somerset County.

DRAINAGE AREA.—598 square miles.

RECORDS AVAILABLE.—October, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 6,850 second-feet Apr. 6 (gage height, 8.66 feet); minimum, 21 second-feet Jan. 10 (gage height, 0.83 foot). 1928–1931: Maximum discharge, 7,440 second-feet Apr. 20, 1929 (gage height, 8.81 feet); minimum, 20 second-feet May 9, 1930 (gage height, 0.80 foot).

REMARKS.—Records good except those for periods of ice effect, Dec. 14–18, Dec. 23 to Mar. 22, which are fair. Distribution of flow affected by storage and pondage above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	108	355	960	265	136	88	3,980	1,000	980	370	325	200
2	174	220	985	245	435	490	4,890	928	900	400	140	285
3	186	225	870	400	260	425	5,720	872	840	405	345	400
4	184	192	795	225	320	265	6,420	830	775	305	330	375
5	110	190	715	270	580	260	6,700	767	725	330	315	225
6	176	182	615	340	540	290	6,700	697	610	515	300	340
7	168	285	530	335	425	250	6,280	664	505	285	285	495
8	220	310	675	470	92	410	5,720	664	785	355	225	540
9	164	55	485	440	305	650	5,300	638	1,350	430	136	470
10	260	340	475	270	540	490	4,890	625	2,800	435	345	375
11	154	285	510	35	275	435	4,500	619	4,630	535	295	305
12	26	300	410	250	430	430	4,370	844	5,160	350	300	335
13	166	270	350	172	355	435	4,240	907	5,020	430	600	138
14	166	144	340	166	275	450	3,980	879	4,630	380	630	300
15	245	300	365	260	310	430	3,600	837	4,110	365	720	265
16	200	47	340	320	350	355	3,130	781	3,480	380	450	250
17	154	255	340	200	300	465	2,690	711	3,020	450	605	168
18	97	405	360	150	295	520	2,210	490	2,580	425	480	355
19	176	645	355	330	380	510	1,810	365	2,160	116	270	100
20	230	625	380	290	350	540	1,440	310	1,750	425	345	93
21	176	570	335	265	320	505	1,260	230	1,400	275	305	385
22	130	505	500	250	88	595	1,030	77	1,160	285	340	305
23	220	350	355	250	365	644	795	410	940	330	75	365
24	240	490	340	210	270	802	718	595	620	365	330	490
25	190	615	285	350	300	921	670	840	485	305	380	550
26	360	840	505	440	265	963	638	965	310	275	158	530
27	555	920	305	310	435	1,000	802	1,130	39	380	245	480
28	465	1,110	345	260	355	1,090	935	1,410	300	310	275	600
29	405	1,050	200	250	-------	1,170	1,000	1,300	445	305	215	550
30	400	910	340	260	-------	2,160	1,020	1,130	380	300	158	515
31	410	-------	310	305	-------	3,020	-------	1,030	-------	280	460	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	555	26	223	0.373	0.43
November	1,110	47	433	.724	.81
December	985	200	473	.791	.91
January	470	35	277	.463	.53
February	580	88	334	.559	.58
March	3,020	88	679	1.14	1.31
April	6,700	638	3,250	5.43	6.06
May	1,410	77	760	1.27	1.46
June	5,160	39	1,760	2.94	3.28
July	535	116	358	.599	.69
August	720	75	335	.560	.65
September	600	93	359	.600	.67
The year	6,700	26	766	1.28	17.38

COBBOSSEECONTEE STREAM AT GARDINER, ME.

LOCATION.—Staff gage at dam of Gardiner Water Power Co., in Gardiner, Kennebec County.

DRAINAGE AREA.—220 square miles.

RECORDS AVAILABLE.—June, 1890, to September, 1931.

REMARKS.—Discharge determined from flow over dam, through gates and water wheels, and from leakage. Daily discharge computed from tables based on coefficients and experiments. Flow regulated by numerous lakes in basin. Daily-discharge record furnished by S. D. Warren Co.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	210	210	200	210	13	13	1,010	290	405	270	230	270
2	210	13	200	160	280	210	1,320	290	445	270	13	270
3	210	210	200	110	280	210	1,480	13	465	270	155	270
4	210	210	200	13	260	235	1,540	310	459	140	210	270
5	13	210	200	210	210	260	1,430	305	380	13	220	230
6	220	215	155	210	210	260	1,190	280	296	135	230	13
7	230	220	13	210	190	260	970	270	330	270	230	60
8	225	220	155	210	13	13	845	270	465	270	170	190
9	220	13	215	210	170	260	880	270	1,240	270	13	270
10	220	220	230	210	160	260	965	13	1,980	270	250	270
11	220	220	230	13	160	260	905	270	1,780	270	270	270
12	13	220	230	180	160	260	605	270	1,560	13	270	190
13	220	220	166	260	160	260	408	270	1,540	270	270	13
14	215	220	13	260	150	260	355	270	1,460	270	270	270
15	210	220	170	260	13	13	310	270	1,400	270	270	270
16	210	13	230	260	170	260	310	270	675	270	13	270
17	210	220	230	260	170	260	310	13	276	270	170	270
18	210	220	230	13	170	260	310	270	280	270	230	270
19	13	220	230	260	170	260	13	270	270	13	230	270
20	205	220	230	260	170	260	290	270	270	270	230	13
21	200	220	13	260	170	260	290	270	13	270	230	270
22	200	220	220	260	13	13	290	270	270	270	165	270
23	200	13	210	260	200	270	290	270	270	270	13	270
24	195	210	210	225	200	290	290	13	270	270	170	270
25	195	200	110	13	205	290	290	277	270	230	230	270
26	13	200	110	185	210	290	13	340	270	13	230	270
27	200	100	210	270	210	290	290	403	270	270	230	13
28	205	200	13	280	210	290	290	395	13	270	230	270
29	210	200	160	280	-------	13	290	380	270	270	170	270
30	210	13	210	280	-------	290	290	190	270	270	13	270
31	210	-------	210	280	-------	590	-------	13	-------	270	250	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	230	13	185	0.841	0.97
November	220	13	177	.805	.90
December	230	13	174	.791	.91
January	280	13	206	.936	1.08
February	280	13	168	.764	.80
March	590	13	233	1.06	1.22
April	1,540	13	602	2.74	3.06
May	403	13	244	1.11	1.28
June	1,980	13	605	2.75	3.07
July	270	13	229	1.04	1.20
August	270	13	190	.864	1.00
September	270	13	222	1.01	1.13
The year	1,980	13	269	1.22	16.62

ANDROSCOGGIN RIVER BASIN

ANDROSCOGGIN RIVER NEAR GORHAM, N. H.

LOCATION.—Water-stage recorder at Pulsifer Rips, 2 miles below mouth of Dead River and 4 miles above Gorham, Coos County.

DRAINAGE AREA.—1,390 square miles.

RECORDS AVAILABLE.—March, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year, 6,820 second-feet June 10 (gage height, 6.19 feet); minimum, about 978 second-feet Oct. 27 (gage height, 2.37 feet).

1929–1931: Maximum discharge, 13,900 second-feet May 4, 1929 (gage height, 8.38 feet); minimum, about 958 second-feet Jan. 10, 1930 (gage height, 2.32 feet).

REMARKS.—Records excellent. Regulation from about 29,600,000,000 cubic feet of storage in Rangeley system of lakes.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,660	1,520	1,660	1,570	1,520	1,570	1,660	1,760	1,660	1,760	1,710	1,660
2	1,710	1,480	1,710	1,570	1,620	1,620	1,760	1,760	1,620	1,820	1,710	1,660
3	1,710	1,520	1,710	1,570	1,620	1,620	1,870	1,870	1,820	1,710	1,710	1,710
4	1,760	1,480	1,710	1,620	1,620	1,570	1,930	1,870	1,710	1,660	1,760	1,660
5	1,710	1,570	1,660	1,660	1,620	1,570	1,870	1,930	1,760	1,710	1,760	1,660
6	1,820	1,820	1,620	1,620	1,570	1,570	1,870	1,930	1,760	1,710	1,660	1,660
7	1,820	1,760	1,570	1,620	1,570	1,620	1,870	2,240	1,760	1,660	1,660	1,660
8	1,760	1,660	1,660	1,570	1,570	1,660	1,760	2,380	1,870	1,660	1,660	1,710
9	1,710	1,570	1,620	1,620	1,570	1,660	1,870	2,240	4,310	1,710	1,660	1,660
10	1,710	1,620	1,620	1,660	1,570	1,570	2,110	1,990	6,070	1,710	1,660	1,660
11	1,660	1,570	1,570	1,620	1,570	1,570	3,600	1,990	3,820	1,820	1,660	1,660
12	1,660	1,570	1,620	1,660	1,570	1,520	4,420	2,310	2,690	1,710	1,710	1,660
13	1,710	1,520	1,570	1,620	1,570	1,570	3,360	2,460	2,050	1,660	1,660	1,660
14	1,620	1,570	1,570	1,570	1,520	1,520	4,120	2,380	1,620	1,660	1,710	1,660
15	1,620	1,620	1,620	1,570	1,570	1,570	4,320	3,010	1,710	1,660	1,710	1,660
16	1,620	1,570	1,570	1,570	1,570	1,570	4,950	2,770	1,820	1,660	1,710	1,660
17	1,570	1,660	1,660	1,620	1,570	1,570	4,320	2,240	1,760	1,660	1,660	1,660
18	1,620	1,760	1,820	1,660	1,570	1,520	4,020	1,930	1,710	1,660	1,660	1,660
19	1,660	1,570	1,660	1,620	1,570	1,520	3,920	1,820	1,710	1,760	1,620	1,620
20	1,620	1,570	1,660	1,570	1,520	1,520	4,020	1,820	1,710	1,660	1,660	1,660
21	1,570	1,480	1,620	1,620	1,570	1,520	4,120	1,870	1,710	1,710	1,660	1,660
22	1,570	1,520	1,660	1,620	1,570	1,520	4,530	1,870	1,760	1,990	1,660	1,930
23	1,570	1,570	1,620	1,570	1,570	1,570	4,320	1,760	1,710	1,930	1,620	2,240
24	1,570	1,570	1,620	1,570	1,570	1,570	4,530	2,770	1,760	1,660	1,660	1,870
25	1,660	1,660	1,570	1,570	1,620	1,520	3,180	2,530	1,760	1,710	1,660	1,760
26	1,480	1,710	1,620	1,660	1,620	1,480	3,180	2,240	1,760	1,710	1,620	1,660
27	1,520	1,520	1,620	1,660	1,620	1,570	2,930	2,180	1,760	1,710	1,660	1,870
28	1,570	1,480	1,620	1,660	1,570	1,620	2,610	1,990	1,760	1,660	1,620	1,820
29	1,570	1,570	1,620	1,570	-------	1,620	2,050	1,820	1,760	1,760	1,660	1,660
30	1,620	1,570	1,570	1,570	-------	1,710	1,870	1,760	1,760	1,930	1,660	1,660
31	1,570	-------	1,620	1,570	-------	1,710	-------	1,660	-------	1,760	1,660	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,820	1,480	1,650	1.19	1.37
November	1,820	1,480	1,590	1.14	1.27
December	1,820	1,570	1,630	1.17	1.35
January	1,660	1,570	1,610	1.16	1.34
February	1,620	1,520	1,580	1.14	1.19
March	1,710	1,480	1,580	1.14	1.31
April	4,950	1,660	3,100	2.23	2.49
May	3,010	1,660	2,100	1.51	1.74
June	6,070	1,620	2,080	1.50	1.67
July	1,990	1,660	1,730	1.24	1.43
August	1,710	1,620	1,670	1.20	1.38
September	2,240	1,620	1,710	1.23	1.37
The year	6,070	1,480	1,830	1.32	17.91

ANDROSCOGGIN RIVER AT RUMFORD, ME.

LOCATION.—Staff gages above each of two dams and in tailrace of power station of Rumford Falls Power Co., at Rumford, Oxford County.
DRAINAGE AREA.—2,090 square miles.
RECORDS AVAILABLE.—May, 1892, to September, 1931.
REMARKS.—Discharge computed from flow over dams and through wheels. Regulation from about 29,600,000,000 cubic feet of storage in Rangeley system of lakes. Records furnished by Rumford Falls Power Co.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,880	2,200	3,230	1,870	1,560	1,670	3,610	3,540	3,230	2,280	2,190	2,060
2	1,660	1,800	2,290	1,770	1,810	1,840	4,430	3,200	2,750	2,600	1,620	2,040
3	1,730	1,980	1,870	1,940	1,790	1,920	4,840	3,780	2,710	2,180	2,250	2,080
4	1,870	1,960	2,200	1,830	1,790	1,820	5,930	4,210	2,600	2,190	2,170	1,880
5	2,060	2,400	2,350	1,860	1,810	1,760	5,320	4,030	2,560	2,310	2,110	2,130
6	1,990	4,490	1,900	1,920	1,720	1,770	5,270	4,970	2,410	2,410	2,310	2,270
7	1,740	3,240	2,190	1,810	1,730	1,630	4,680	5,130	2,790	2,130	1,900	2,350
8	2,030	2,500	2,340	1,710	1,600	1,660	4,200	4,900	4,620	2,110	1,920	2,320
9	1,660	2,280	2,380	1,770	1,830	1,760	4,500	5,420	16,600	2,140	1,900	2,570
10	2,000	2,360	2,210	1,450	1,840	1,900	6,020	4,760	20,200	1,990	2,260	2,050
11	1,670	2,190	1,740	1,800	1,810	1,810	11,300	4,930	12,800	2,840	2,030	1,840
12	1,640	1,990	2,210	1,980	1,830	1,750	12,200	4,870	10,700	2,910	1,960	1,710
13	1,770	2,080	1,600	1,950	1,880	1,750	8,760	4,440	7,450	2,480	2,470	2,080
14	1,930	2,000	1,630	2,020	1,650	1,670	10,400	4,300	5,130	2,160	2,210	2,100
15	1,690	2,400	1,710	1,810	1,630	1,550	8,980	6,190	4,110	2,240	1,980	2,070
16	1,770	2,500	1,720	1,700	1,760	1,850	8,300	5,920	3,710	2,050	2,220	2,150
17	1,870	3,550	1,700	1,450	1,820	1,940	7,960	5,180	3,460	2,140	2,360	1,980
18	1,920	5,230	1,920	1,880	1,840	1,950	7,360	3,980	3,050	1,760	1,850	2,090
19	1,920	4,580	2,340	2,150	1,830	1,840	7,860	3,330	2,900	2,050	2,080	1,870
20	1,760	3,530	2,150	1,840	1,830	2,200	8,840	3,460	2,770	2,310	1,950	1,910
21	1,800	2,840	1,810	1,760	1,770	2,170	10,200	3,610	2,690	1,980	1,920	2,340
22	1,790	2,560	1,850	1,930	1,660	1,990	10,400	3,770	2,530	4,780	1,710	3,230
23	1,710	2,470	2,010	2,000	2,020	2,440	9,240	4,470	2,410	4,140	1,920	4,440
24	1,850	2,700	2,100	1,830	1,900	2,510	7,580	14,100	2,390	2,370	2,120	3,470
25	3,070	3,260	1,990	1,550	1,680	2,540	6,900	9,340	2,480	2,320	1,950	3,030
26	3,130	3,920	1,770	1,780	1,890	2,440	6,370	6,090	2,500	2,390	1,810	2,900
27	2,560	3,130	1,850	1,830	1,900	2,560	8,000	4,650	2,320	2,450	1,940	3,620
28	2,160	2,020	1,630	1,900	1,730	2,990	6,450	3,900	2,430	2,130	2,020	3,500
29	1,950	1,540	1,970	1,910	-------	3,590	5,030	3,320	2,460	2,160	1,930	2,640
30	2,490	2,220	2,020	1,960	-------	4,250	4,180	3,220	2,320	2,500	1,870	2,260
31	2,320	-------	1,830	1,620	-------	3,830	-------	3,180	-------	2,570	2,410	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	3,130	1,640	1,980	0.947	1.09
November	5,230	1,540	2,730	1.31	1.46
December	3,230	1,600	2,020	.967	1.11
January	2,150	1,450	1,830	.876	1.01
February	2,020	1,560	1,780	.852	.89
March	4,250	1,550	2,170	1.04	1.20
April	12,200	3,610	7,170	3.43	3.83
May	14,100	3,180	4,840	2.32	2.68
June	20,200	2,320	4,700	2.25	2.51
July	4,780	1,760	2,420	1.16	1.34
August	2,470	1,620	2,040	.976	1.13
September	4,440	1,710	2,430	1.17	1.30
The year	20,200	1,450	3,010	1.44	19.55

ANDROSCOGGIN RIVER NEAR AUBURN, ME.

LOCATION.—Water-stage recorder 1½ miles below mouth of Little Androscoggin River in Auburn, Androscoggin County.

DRAINAGE AREA.—3,260 square miles.

RECORDS AVAILABLE.—November, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year not determined; minimum, about 609 second-feet Oct. 5 (gage height, 0.83 foot).

1928–1931: Maximum discharge, 41,900 second-feet Apr. 7, 1930 (gage height, 12.28 feet); minimum, that of Oct. 5, 1930.

REMARKS.—Records good except those for periods when discharge was below 800 second-feet, and those estimated, which are fair. Regulation from about 29,600,000,000 cubic feet of storage in Rangeley system of lakes and by operation of power plants above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,510	3,420	4,020	2,580	1,160	825	12,000	e 8,500	e 5,700	e 2,980	2,700	e 2,700
2	2,810	1,450	4,080	2,750	2,730	3,220	13,900	e 7,500	e 5,800	e 2,960	1,560	e 2,600
3	2,480	2,780	3,400	2,840	2,500	3,050	15,100	e 6,900	e 5,000	e 3,000	2,980	e 2,600
4	1,480	2,990	2,930	1,100	2,600	2,760	16,300	e 6,450	e 4,600	1,840	3,000	e 2,000
5	1,150	3,690	2,770	2,710	2,360	3,050	15,900	e 7,250	e 4,200	e 3,250	3,180	e 2,600
6	2,530	3,390	e 2,100	2,620	2,290	2,890	14,700	e 7,250	e 3,900	3,500	3,020	725
7	2,520	5,450	1,320	2,710	2,350	2,200	13,500	e 7,300	e 3,700	3,440	2,490	1,910
8	2,500	4,800	e 3,300	2,670	1,180	1,080	12,400	e 7,450	4,290	3,660	1,300	3,130
9	2,500	2,860	e 3,600	2,370	2,750	3,440	12,400	e 7,450	6,550	3,410	685	e 2,960
10	2,540	4,320	2,510	2,320	2,680	2,700	12,800	e 7,450	e 21,500	3,190	3,140	e 2,900
11	1,650	3,000	e 3,350	1,530	2,440	2,700	14,300	e 7,700	e 26,000	2,350	2,860	2,950
12	1,260	3,900	e 3,300	1,940	2,430	2,760	19,200	e 8,400	19,700	830	3,640	e 2,200
13	2,710	3,930	e 3,130	1,780	2,400	2,620	18,800	e 8,200	17,800	3,660	3,520	700
14	2,420	3,180	e 1,340	2,370	1,630	1,920	16,700	e 8,000	13,500	3,540	3,520	2,430
15	2,510	2,580	e 2,500	2,560	1,350	1,460	17,100	e 8,250	9,900	3,100	3,070	e 2,600
16	2,650	1,200	e 2,500	2,370	2,640	3,030	14,700	e 8,750	8,990	3,700	740	e 2,580
17	2,660	4,230	e 2,600	1,440	2,520	2,890	13,900	e 9,400	7,640	3,300	e 2,900	e 2,500
18	1,460	4,580	e 2,800	745	2,420	3,000	13,500	e 8,250	6,040	1,690	e 2,880	e 2,420
19	1,250	8,100	e 3,000	2,630	2,520	3,170	10,700	e 7,000	6,230	1,050	e 3,020	e 2,440
20	2,900	6,880	e 3,020	2,450	2,720	2,940	12,400	e 6,650	4,830	e 2,650	e 2,920	e 2,430
21	2,800	5,300	e 2,000	2,400	2,370	2,980	12,100	e 6,700	4,660	e 2,800	e 2,800	2,450
22	2,380	4,040	e 2,800	2,390	1,110	3,120	13,000	e 6,700	3,820	e 3,100	e 1,600	e 2,700
23	2,460	3,740	e 2,900	2,330	2,840	3,770	11,800	e 8,750	e 3,470	e 6,500	690	e 4,700
24	2,570	4,300	e 2,700	1,480	2,580	4,980	13,400	e 14,500	e 3,700	e 4,700	e 2,490	e 4,900
25	3,140	5,670	1,120	2,030	2,700	5,660	11,200	e 18,000	e 3,500	e 4,300	e 2,440	e 5,500
26	4,170	5,560	e 2,700	2,620	2,790	5,900	9,650	13,900	4,040	2,810	e 2,360	e 4,000
27	5,900	6,560	e 2,780	2,400	2,820	6,190	12,700	11,400	3,500	3,640	e 2,430	e 3,980
28	4,980	5,840	1,560	2,400	2,500	5,910	13,300	9,010	e 3,360	3,160	e 2,360	4,300
29	4,930	3,560	2,380	2,620	-------	5,770	12,000	7,750	e 3,200	2,920	e 1,540	3,980
30	3,610	2,770	2,650	2,840	-------	10,700	9,600	6,440	e 3,100	3,340	960	e 3,800
31	3,180	-------	2,620	2,250	-------	11,900	-------	4,140	-------	2,750	2,900	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	5,900	1,150	2,730	0.837	0.96
November	8,100	1,200	4,140	1.27	1.42
December	4,080	1,120	2,700	.828	.95
January	2,840	745	2,270	.696	.80
February	2,840	1,110	2,340	.718	.75
March	11,900	825	3,830	1.17	1.35
April	19,200	9,600	13,600	4.17	4.65
May	18,000	4,140	8,430	2.59	2.99
June	26,000	3,100	7,410	2.27	2.53
July	6,500	830	3,130	.960	1.11
August	3,640	685	2,440	.748	.86
September	5,500	700	2,950	.905	1.01
The year	26,000	685	4,660	1.43	19.38

e Estimated.

MAGALLOWAY RIVER AT AZISCOHOS DAM, ME.

LOCATION.—Staff gage at Aziscohos Dam, Oxford County, 15 miles above mouth.
DRAINAGE AREA.—233 square miles.
RECORDS AVAILABLE.—January, 1912, to September, 1931.
REMARKS.—Discharge determined from readings of gate openings. Storage of about 9,593,000,000 cubic feet is completely regulated. Discharge records furnished by Union Water Power Co.

Monthly discharge, in second-feet, 1930–31

Month	Observed			Corrected for storage in Aziscohos Reservoir		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	811	121	613	111	0.476	0.55
November	91	0	11.5	211	.906	1.01
December	659	0	124	134	.575	.66
January	853	580	703	96	.412	.48
February	899	617	678	58	.249	.26
March	874	0	682	94	.403	.46
April	313	0	10.4	1,090	4.68	5.22
May	0	0	0	823	3.53	4.07
June	430	0	14.3	375	1.61	1.80
July	931	308	740	281	1.21	1.40
August	1,000	0	572	337	1.45	1.67
September	767	0	488	423	1.82	2.03
The year	1,000	0	387	337	1.45	19.61

SWIFT RIVER NEAR ROXBURY, ME.

LOCATION.—Water-stage recorder 2½ miles below Roxbury, Oxford County, and 6 miles above confluence with Androscoggin River. Zero of gage is 615.51 feet above mean sea level.

DRAINAGE AREA.—86 square miles.

RECORDS AVAILABLE.—June, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year, 3,580 second-feet May 24 (gage height, 6.85 feet); minimum, 12 second-feet Aug. 27, 28 (gage height, 1.13 feet).

1929–1931: Maximum discharge, 4,570 second-feet Apr. 7, 1930 (gage height, 7.52 feet); minimum (estimated), 6.0 second-feet Aug. 2, 3, 1929.

REMARKS.—Records excellent except those for period of ice effect, Dec. 15 to Mar. 25, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	92	226	38	27	26	165	247	189	38	27	24
2	17	73	151	38	25	26	335	226	139	61	21	26
3	16	61	118	38	24	26	406	438	108	45	24	46
4	16	54	124	39	24	26	451	379	89	35	260	65
5	16	98	100	40	24	26	366	424	78	35	78	59
6	15	410	91	37	24	25	322	492	85	27	44	70
7	15	186	85	36	24	25	290	424	90	26	30	108
8	15	122	83	36	23	24	264	384	540	25	24	54
9	15	102	78	36	23	27	318	370	1,620	28	24	35
10	15	94	73	36	24	28	496	322	1,130	37	46	26
11	15	70	82	35	24	28	1,220	530	605	56	40	21
12	15	68	68	35	24	28	880	460	765	96	41	18
13	15	67	64	35	24	28	605	410	388	49	155	16
14	14	80	62	34	24	27	1,040	370	240	32	83	16
15	15	126	58	33	24	27	660	515	181	26	51	15
16	19	118	55	32	24	27	530	384	170	23	40	17
17	26	245	54	32	24	27	496	318	142	21	34	26
18	54	464	52	32	25	28	474	226	118	34	25	44
19	58	415	49	30	25	30	575	186	94	26	27	28
20	34	264	47	30	26	34	795	189	76	20	25	25
21	26	181	46	30	26	38	1,040	198	64	21	19	67
22	24	153	45	30	26	45	980	198	52	530	18	920
23	22	139	44	30	26	52	798	480	49	192	16	725
24	22	116	42	29	26	62	545	2,400	48	89	15	357
25	285	425	41	29	25	72	424	825	44	54	15	279
26	215	388	41	28	25	85	388	510	39	40	14	165
27	122	201	40	29	25	112	590	335	82	29	13	370
28	96	131	40	29	25	148	415	247	70	26	15	213
29	94	122	39	29	------	186	357	189	45	26	30	142
30	158	124	39	29	------	302	326	155	35	82	67	106
31	131	------	38	29	------	186	------	148	------	44	34	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	285	14	52.2	0.607	0.70
November	464	54	173	2.01	2.24
December	226	38	70.2	.816	.94
January	40	28	33.0	.384	.44
February	27	23	24.6	.286	.30
March	302	24	59.1	.687	.79
April	1,220	165	552	6.42	7.16
May	2,400	148	419	4.87	5.62
June	1,620	35	246	2.86	3.19
July	530	20	60.4	.702	.81
August	260	13	43.7	.508	.59
September	920	15	136	1.58	1.76
The year	2,400	13	155	1.80	24.54

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, Cumberland County.
DRAINAGE AREA.—436 square miles.
RECORDS AVAILABLE.—January, 1887, to September, 1931.
REMARKS.—Discharge computed from flow through wheels and water wasted at regulating gates. Diversion by Portland Water District and leakage through dam, totaling about 18 second-feet, not included in discharge tables. Flow completely regulated by storage in Sebago Lake (area, 46 square miles). Record furnished by S. D. Warren Co.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	626	389	281	705	116	314	626	684	239	850	171	833
2	591	487	790	608	589	323	521	190	726	845	442	834
3	555	409	702	0	825	821	526	326	660	52[illegible]	489	830
4	86	694	674	466	810	811	0	275	708	13[illegible]	836	453
5	0	572	618	280	789	756	0	804	433	339	835	282
6	481	585	167	787	653	629	214	767	136	28[illegible]	833	22
7	713	543	469	703	404	112	718	724	285	83[illegible]	779	357
8	601	141	289	670	372	302	640	702	222	82[illegible]	210	586
9	581	6	779	619	367	344	642	171	590	79[illegible]	369	829
10	555	410	742	189	787	820	375	331	645	76[illegible]	495	824
11	87	784	729	329	813	793	0	255	701	370	833	660
12	0	685	603	276	796	705	367	732	0	29[illegible]	823	172
13	429	642	148	785	708	676	256	698	190	314	768	392
14	740	605	390	776	560	0	822	731	158	83[illegible]	778	292
15	653	0	289	711	365	434	761	659	303	82[illegible]	215	815
16	650	0	831	523	359	320	737	165	843	83[illegible]	284	716
17	492	384	795	134	793	819	624	307	1,160	616	389	816
18	77	747	787	278	736	803	184	307	1,030	167	837	528
19	0	564	717	275	727	730	0	778	478	214	830	157
20	327	528	435	828	716	627	267	776	284	28[illegible]	834	385
21	752	605	341	808	376	331	756	754	215	83[illegible]	693	309
22	594	0	269	743	309	124	683	702	697	83[illegible]	144	833
23	568	0	831	720	333	267	645	434	900	83[illegible]	284	834
24	434	404	832	297	822	802	445	88	717	620	325	834
25	57	758	353	415	812	729	117	268	733	173	834	787
26	0	671	545	284	786	686	334	759	40	340	832	212
27	367	558	378	824	659	606	305	713	447	29[illegible]	788	501
28	745	631	397	826	119	0	778	689	40	83[illegible]	613	268
29	662	272	273	806	-------	0	734	685	281	87[illegible]	121	833
30	626	0	789	762	-------	376	661	126	836	83[illegible]	291	833
31	562	-------	703	535	-------	684	-------	306	-------	67[illegible]	351	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	752	0	439	1.01	1.16
November	784	0	436	1.00	1.12
December	832	148	547	1.25	1.44
January	828	0	547	1.25	1.44
February	825	116	589	1.35	1.41
March	821	0	508	1.17	1.35
April	822	0	458	1.05	1.17
May	804	88	513	1.18	1.36
June	1,160	0	490	1.12	1.25
July	871	139	584	1.34	1.54
August	837	121	559	1.28	1.48
September	834	22	568	1.30	1.45
The year	1,160	0	520	1.19	16.17

SACO RIVER BASIN

SACO RIVER NEAR CONWAY, N. H.

LOCATION.—Water-stage recorder at Odell Falls, 1 mile below mouth of Swift River and Conway, Carroll County.

DRAINAGE AREA.—385 square miles.

RECORDS AVAILABLE.—February, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year, about 15,400 second-feet June 9 (gage height, 10.12 feet); minimum, 84 second-feet Feb. 28 (gage height, 2.00 feet).

1929–1931: Maximum stage, 12.97 feet May 3, 1929 (discharge not determined); minimum discharge, 69 second-feet Sept. 4, 1929 (gage height, 1.92 feet).

REMARKS.—Records good except those for periods of ice effect, Dec. 12, 14, 15, Dec. 17 to Mar. 25, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	176	389	2,170	235	188	162	927		1,060	410	273	284
2	167	327	1,410	205	184	162	1,200		903	660	270	296
3	162	296	912	220	178	162	1,330		799	472	296	406
4	153	284	872	255	176	168	1,680		698	410	258	438
5	151	630	777	245	172	164	1,680		667	389	240	327
6	143	1,480	714	230	170	142	1,620		631	356	206	258
7	140	833	665	196	176	138	1,420	2,690	596	339	197	240
8	138	592	630	172	176	136	1,330		1,890	335	190	226
9	138	508	611	184	178	120	1,380		12,400	331	194	226
10	138	461	560	215	178	146	1,730		9,350	352	206	226
11	138	433	508	215	178	178	3,860		4,420	745	213	213
12	133	397	480	210	182	172	3,820		3,800	679	226	173
13	133	372	456	210	184	162	2,530		2,600	456	251	164
14	130	402	425	210	188	158	3,960		1,950	356	281	187
15	135	477	385	194	188	164	2,910	2,680	1,620	327	292	206
16	167	508	304	200	225	172	2,260	2,010	1,520	304	255	216
17	194	1,520	335	205	225	168	2,130	1,840	1,380	300	234	213
18	237	2,440	370	205	215	170	2,010	1,470	1,240	323	223	213
19	292	1,800	355	205	215	170	2,260	1,330	943	281	220	203
20	240	1,280	350	200	225	176	2,530	1,520	858	273	216	187
21	216	1,080	325	205	225	190	3,580	1,520	799	292	210	319
22	197	920	310	205	205	215	4,040	1,420	685	2,600	200	339
23	167	880	310	205	194	250	3,580	1,330	655	1,290	190	461
24	162	749	305	210	184	390	2,680	5,070	667	718	184	364
25	555	912	295	215	182	370		2,460	607	549	184	381
26	749	1,180	290	230	176	415		2,010	572	451	184	360
27	477	848	285	230	150	482	2,480	1,620	572	402	210	655
28	381	679	290	225	140	625		1,330	520	385	364	525
29	348	611	290	210	------	685		1,150	472	343	451	402
30	477	679	275	205	------	1,130		1,060	433	327	424	335
31	472	------	260	194	------	959	------	1,090	------	343	372	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	749	130	242	0.629	0.73
November	2,440	284	799	2.08	2.32
December	2,170	260	533	1.38	1.59
January	255	172	211	.548	.63
February	225	140	188	.488	.51
March	1,130	120	284	.738	.85
April	4,040	----------	2,380	6 18	6.90
May	5,070	1,060	2,210	5 74	6.62
June	12,400	433	1,840	4 78	5.33
July	2,600	273	510	1 32	1.52
August	451	184	249	.647	.75
September	655	164	301	.782	.87
The year	12,400	120	812	2.11	28.62

SACO RIVER AT CORNISH, ME.

LOCATION.—Water-stage recorder just above highway bridge at Cornish, York County, and half a mile below mouth of Ossipee River.

DRAINAGE AREA.—1,300 square miles.

RECORDS AVAILABLE.—June, 1916, to September, 1931.

EXTREMES.—Maximum discharge during year, 11,700 second-feet June 13 (gage height, 9.23 feet); minimum, about 278 second-feet Sept. 20 (gage height, 2.16 feet).

1916–1931: Maximum discharge, 23,000 second-feet May 2, 1923 (gage height, 14.72 feet); minimum, 90 second-feet Oct. 1, 1921 (gage height, 0.03 foot).

REMARKS.—Records good except those for the period of ice effect, Dec. 12 to Apr. 2, which are fair. Discharge estimated Nov. 28. Flow partly regulated by power development at Great Falls.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	803	1,090	2,100	1,060	970	880	3,320	6,140	3,990	1,840	1,060	803
2	803	1,090	2,160	1,050	945	935	3,830	5,960	3,680	1,550	968	792
3	770	1,150	2,040	1,080	925	955	4,470	5,600	3,380	1,340	968	847
4	730	1,120	1,900	1,020	890	935	5,270	5,270	3,080	1,470	902	858
5	650	1,170	1,900	970	890	990	5,600	4,790	2,860	1,440	957	814
6	750	1,300	1,970	1,020	900	1,010	5,780	4,630	2,710	1,370	946	781
7	640	1,490	1,970	945	900	1,000	5,960	4,470	2,500	1,330	913	814
8	625	1,580	2,100	925	890	980	6,140	4,470	3,000	1,270	869	814
9	630	1,590	2,300	935	880	1,010	6,500	4,470	3,910	1,240	792	781
10	610	1,550	2,230	935	890	1,040	6,680	4,630	6,680	1,200	957	770
11	535	1,480	2,040	935	870	1,040	7,040	5,430	8,550	1,230	946	760
12	580	1,400	1,690	945	870	1,020	7,220	5,780	10,800	1,200	1,010	740
13	670	1,380	1,470	980	870	1,010	7,220	5,780	11,700	1,240	935	686
14	670	1,340	1,320	970	845	1,000	7,400	5,960	11,000	1,230	891	740
15	640	1,290	1,170	970	670	1,020	7,580	6,320	9,780	1,240	869	720
16	650	1,270	1,090	1,000	880	1,020	7,580	6,320	8,750	1,150	814	720
17	645	1,510	1,020	1,100	880	1,020	7,580	5,960	7,770	1,080	880	740
18	690	2,040	970	1,060	880	1,010	7,400	4,950	7,040	1,040	869	710
19	740	2,360	1,010	1,020	845	990	7,040	4,470	6,140	972	858	710
20	803	2,430	980	1,000	890	1,020	6,500	4,150	5,430	946	847	480
21	781	2,500	1,010	990	880	1,070	6,140	3,910	4,630	891	836	750
22	740	2,430	1,100	1,000	845	1,100	5,960	3,680	4,150	934	814	750
23	720	2,300	1,180	1,000	880	1,200	5,780	3,600	3,760	1,320	750	814
24	730	2,160	1,160	1,000	900	1,230	5,780	4,310	3,380	1,730	803	814
25	792	2,230	1,080	1,000	900	1,290	5,780	4,470	3,080	1,730	760	847
26	1,010	2,430	1,040	1,010	900	1,330	5,960	4,630	2,780	1,720	740	847
27	1,110	2,360	980	1,030	880	1,420	6,500	4,790	2,570	1,630	600	902
28	1,110	2,160	1,020	1,060	870	1,590	6,680	4,790	2,300	1,470	690	957
29	1,140	2,040	1,040	1,040	-------	2,020	6,500	4,630	2,160	1,340	600	968
30	1,090	1,900	1,100	1,020	-------	2,680	6,500	4,310	1,970	1,230	570	968
31	1,080	-------	1,090	990	-------	2,920	-------	4,070	-------	1,140	803	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,140	535	772	0.594	0.68
November	2,500	1,090	1,740	1.34	1.50
December	2,300	970	1,460	1.12	1.29
January	1,100	925	1,000	.769	.89
February	970	670	880	.677	.71
March	2,920	880	1,220	.938	1.08
April	7,580	3,320	6,260	4.82	5.38
May	6,320	3,600	4,930	3.79	4.37
June	11,700	1,970	5,120	3.94	4.40
July	1,840	891	1,310	1.01	1.16
August	1,060	570	846	.651	.75
September	968	480	790	.608	.68
The year	11,700	480	2,190	1.68	22.89

SACO RIVER AT WEST BUXTON, ME.

LOCATION.—Gages in pond above dam and in tailrace at hydroelectric plant of Cumberland County Power & Light Co., at West Buxton, York County.

DRAINAGE AREA.—1,550 square miles.

RECORDS AVAILABLE.—October, 1907, to September, 1916; January, 1919, to September, 1931.

REMARKS.—Discharge over dam and through wheels of power plant determined by means of hourly gage readings. Flow partly regulated by power developments above station. Records furnished by Cumberland County Power & Light Co.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,060	1,320	2,760	1,250	1,090	1,100	5,670	7,350	5,960	1,870	1,280	1,140
2	1,020	932	2,690	1,260	1,130	1,040	5,710	6,980	5,710	2,140	958	959
3	938	1,460	2,010	1,380	1,210	1,250	5,960	6,560	5,180	2,470	1,160	1,110
4	1,100	1,410	2,570	1,220	1,130	1,160	6,720	6,400	4,060	1,480	1,210	1,050
5	702	1,510	2,120	1,230	1,090	1,060	7,260	5,880	3,440	1,470	1,110	1,020
6	780	1,630	2,390	1,280	1,100	1,120	7,430	5,480	2,840	1,790	1,130	1,020
7	754	1,610	1,790	1,160	1,060	1,090	7,050	5,240	2,670	1,530	1,220	947
8	822	1,830	2,630	1,010	932	1,000	7,060	4,920	3,450	1,890	1,300	1,140
9	793	1,790	2,710	1,090	988	1,410	7,420	5,060	4,140	1,540	921	1,040
10	840	2,220	2,670	1,340	1,020	1,130	7,620	5,050	7,340	1,380	1,060	1,080
11	1,180	1,490	2,510	940	1,130	1,260	7,850	5,860	9,030	1,140	1,110	900
12	302	2,040	1,900	1,150	1,040	1,130	8,230	5,960	10,400	1,620	1,510	921
13	893	1,560	2,370	1,130	1,020	1,120	9,590	5,780	10,400	1,500	1,410	526
14	944	1,570	1,670	1,200	1,040	1,180	9,410	5,620	9,460	1,650	1,270	1,010
15	1,030	1,620	1,590	1,060	809	1,270	9,280	6,070	8,560	1,470	1,080	1,020
16	954	894	1,370	1,120	990	1,190	9,080	6,110	7,620	1,440	1,110	978
17	909	2,030	1,400	1,170	1,170	1,200	9,050	5,540	6,900	1,470	1,020	841
18	1,410	2,450	1,410	1,060	1,150	1,190	8,740	5,710	6,130	1,140	1,120	945
19	454	2,790	1,390	1,200	1,150	1,190	8,360	5,380	5,260	1,280	1,160	1,120
20	1,040	2,730	1,080	1,210	913	1,300	7,990	5,190	4,280	1,200	1,090	724
21	1,110	2,810	1,460	1,300	1,230	1,400	7,630	5,060	3,490	1,300	1,140	844
22	1,020	2,970	1,450	1,210	1,090	1,580	7,220	4,300	4,180	1,530	1,160	979
23	991	2,500	1,640	1,340	855	1,930	6,960	4,410	3,480	1,440	612	1,070
24	1,000	3,300	1,480	1,340	1,220	1,700	6,950	5,930	3,370	2,260	1,090	1,050
25	1,320	3,120	1,390	975	1,130	1,900	6,710	6,280	3,300	2,130	1,100	1,140
26	1,310	2,930	568	1,220	1,120	1,920	6,230	6,070	3,070	1,650	1,000	1,030
27	1,460	2,040	1,480	1,380	1,120	2,340	8,040	5,770	2,700	2,280	879	864
28	1,340	3,150	1,160	1,260	1,110	2,380	8,090	5,860	2,460	1,890	807	1,110
29	1,380	2,910	1,310	1,200	-------	2,400	7,750	5,430	3,370	1,630	900	1,210
30	1,280	2,530	1,420	1,350	-------	4,410	7,600	5,170	2,310	1,470	800	1,280
31	1,370	-------	1,460	1,280	-------	4,640	-------	5,000	-------	1,570	982	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,460	454	1,020	0.658	0.76
November	3,300	894	2,100	1.35	1.51
December	2,760	568	1,800	1.16	1.34
January	1,380	940	1,200	.774	.89
February	1,230	809	1,070	.690	.72
March	4,640	1,000	1,610	1.04	1.20
April	9,590	5,670	7,620	4.92	5.49
May	7,350	4,300	5,660	3.65	4.21
June	10,400	2,310	5,150	3.32	3.70
July	2,470	1,140	1,630	1.05	1.21
August	1,510	612	1,090	.703	.81
September	1,280	526	1,000	.645	.72
The year	10,400	454	2,580	1.66	22.56

OSSIPEE RIVER AT CORNISH, ME.

LOCATION.—Water-stage recorder at highway bridge in Cornish, York County, 1¼ miles above confluence with Saco River.

DRAINAGE AREA.—455 square miles.

RECORDS AVAILABLE.—July, 1916, to September, 1931.

EXTREMES.—Maximum discharge during year, 3,840 second-feet June 12 (gage height, 5.47 feet); minimum, 68 second-feet Oct. 10 (gage height, −0.03 foot).
1916–1931: Maximum discharge, 6,740 second-feet Apr. 30, 1923 (gage height, 8.76 feet); minimum, 28 second-feet Sept. 7, 1929 (gage height, −0.40 foot).

REMARKS.—Records excellent except those for period of ice effect, Dec. 11 to Mar. 25, which are fair. Flow affected by storage in Great Ossipee Lake and power development at Kezar Falls.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	295	243	580	420	365	305	1,260	1,680	1,010	515	353	262
2	295	246	630	430	380	285	1,380	1,550	910	490	341	255
3	272	381	600	435	375	280	1,620	1,460	815	459	325	272
4	238	385	575	420	365	280	2,070	1,340	730	446	325	255
5	246	432	550	405	355	290	2,330	1,150	694	418	414	265
6	225	486	555	415	345	295	2,330	1,080	662	397	410	278
7	235	450	530	415	345	290	2,420	1,080	645	389	389	281
8	200	428	515	440	350	285	2,510	975	910	369	361	272
9	232	418	515	450	355	285	2,600	940	1,390	373	410	250
10	195	405	505	430	355	290	2,510	940	2,980	397	454	246
11	223	401	470	410	350	295	2,780	1,010	3,650	393	446	235
12	232	405	460	405	345	300	2,880	1,040	3,750	385	500	215
13	249	450	440	405	340	305	2,880	1,010	3,460	361	401	204
14	262	450	420	395	335	305	2,780	1,080	2,980	345	381	218
15	268	446	395	390	325	310	2,600	1,220	2,600	345	389	204
16	285	446	390	395	335	315	2,420	1,260	2,240	325	385	191
17	292	550	380	395	325	315	2,200	1,220	2,020	303	377	210
18	329	600	345	380	315	315	2,020	1,120	1,810	299	361	194
19	337	472	335	385	330	315	1,940	1,040	1,460	292	365	191
20	329	405	305	390	365	320	1,810	975	1,220	281	349	194
21	314	428	355	395	365	325	1,640	940	1,040	285	345	223
22	295	450	335	395	365	365	1,600	875	940	345	337	240
23	285	414	325	395	355	410	1,500	875	875	381	349	306
24	288	401	335	390	340	450	1,460	1,260	785	459	361	295
25	454	446	320	380	335	495	1,340	1,220	730	468	349	314
26	329	605	305	370	320	545	1,300	1,150	694	454	329	314
27	255	580	310	355	320	560	1,720	1,120	662	450	306	353
28	225	565	390	355	310	620	1,890	1,040	620	423	299	345
29	240	535	405	375	-------	700	1,940	955	580	401	299	341
30	225	515	430	385	-------	1,010	1,810	875	545	385	292	337
31	229	-------	430	380	-------	1,080	-------	875	-------	353	275	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	454	195	270	0.593	0.68
November	605	243	448	.985	1.10
December	630	305	433	.952	1.10
January	450	355	400	.879	1.01
February	380	310	345	.758	.79
March	1,080	280	405	.890	1.03
April	2,880	1,260	2,050	4.51	5.03
May	1,680	875	1,110	2.44	2.81
June	3,750	545	1,450	3.19	3.56
July	515	281	387	.851	.98
August	500	275	364	.800	.92
September	353	191	259	.569	.63
The year	3,750	191	658	1.45	19.64

SALMON FALLS RIVER BASIN

SALMON FALLS RIVER NEAR LEBANON, ME.

LOCATION.—Water-stage recorder at Stair Falls, 2½ miles above Little River and 1½ miles south of South Lebanon, York County.

DRAINAGE AREA.—147 square miles.

RECORDS AVAILABLE.—November, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, about 1,560 second-feet June 10 (gage height, 4. 90 feet); minimum, 11 second-feet Aug. 22, 23 (gage height, 1. 10 feet).

1928–1931: Maximum discharge, 2,430 second-feet Mar. 27, 1930 (gage height, 5. 84 feet); minimum, about 7 second-feet Oct. 20, 1929 (gage height, 1. 00 foot).

REMARKS.—Records good except those estimated, Oct. 2–4, June 1–3, 9–13, which are fair. Dams at outlet of several ponds above station control flow to large extent.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	120	49	110	120	33	53	456	283	910	205	73	107
2	95	34	110	97	172	184	660	237	1,110	205	16	110
3	95	90	100	38	123	151	710	169	555	172	134	123
4	55	90	97	34	113	151	930	291	295	148	137	110
5	25	100	95	107	100	129	1,160	226	222	38	129	87
6	102	107	45	123	95	143	792	215	195	175	131	21
7	95	87	45	115	57	102	738	201	198	157	129	16
8	97	42	102	115	31	45	792	212	240	151	90	75
9	92	27	102	97	145	184	765	198	600	148	17	95
10	92	85	126	49	151	143	560	71	1,450	154	118	92
11	51	92	126	28	154	154	546	300	1,200	129	131	90
12	20	95	102	126	145	129	615	259	715	55	145	71
13	51	97	53	126	113	126	615	184	660	154	163	15
14	90	87	33	118	78	105	335	219	466	148	151	61
15	90	31	113	107	34	65	353	271	279	145	85	95
16	92	38	120	102	160	178	279	208	358	140	36	90
17	95	134	118	51	148	143	251	85	533	129	123	92
18	57	172	118	28	154	140	244	157	565	90	102	90
19	28	148	97	126	129	131	240	160	380	26	97	73
20	87	129	47	123	123	148	263	160	259	160	100	23
21	87	102	30	123	85	140	247	151	222	151	100	129
22	87	65	126	113	45	113	271	145	222	181	57	107
23	92	51	120	100	163	251	263	166	233	148	12	102
24	92	95	118	71	148	251	271	279	244	151	105	102
25	73	145	61	28	145	263	247	300	226	107	105	97
26	55	137	51	126	154	247	259	317	208	38	97	75
27	92	75	40	137	160	304	461	287	188	169	100	30
28	92	55	30	140	126	287	335	247	65	134	115	87
29	95	63	120	131	-------	510	304	184	226	140	73	100
30	87	47	120	131	-------	685	279	145	212	134	31	97
31	80	-------	120	75	-------	484	-------	60	-------	120	123	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	120	20	79.4	0.540	0.62
November	172	27	85.6	.582	.65
December	126	30	90.2	.614	.71
January	140	28	96.9	.659	.76
February	172	31	117	.796	.83
March	685	45	198	1.35	1.56
April	1,160	240	475	3.23	3.60
May	317	60	206	1.40	1.61
June	1,450	65	441	3.00	3.35
July	205	26	136	.925	1.07
August	163	12	97.6	.664	.77
September	129	15	82.1	.559	.62
The year	1,450	12	175	1.19	16.15

MERRIMACK RIVER BASIN

EAST BRANCH OF PEMIGEWASSET RIVER NEAR LINCOLN, N. H.

LOCATION.—Water-stage recorder 1⅛ miles below Hancock Branch and 2¾ miles northeast of Lincoln, Grafton County.
DRAINAGE AREA.—103 square miles.
RECORDS AVAILABLE.—November, 1928, to September, 1931.
EXTREMES.—Maximum discharge during year, 3,540 second-feet July 22 (gage height, 5.35 feet); minimum (estimated), 32 second-feet Feb. 1.
1928–1931: Maximum discharge, 8,000 second-feet May 3, 1929 (gage height, 7.47 feet); minimum, that of Feb. 1, 1931.
REMARKS.—Records good except those during periods of ice effect, Dec. 1–6, Dec. 11 to Feb. 25, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	56	102	523	44	32	50	90	436	346	114	88	52
2	54	82	281	44	33	41	131	462	286	148	82	55
3	54	73	256	54	35	67	172	905	246	100	82	144
4	52	71	227	57	40	38	205	670	218	90	79	103
5	50	120	205	62	42	38	172	793	205	81	71	88
6	49	313	192	60	43	38	180	1,040	188	77	63	86
7	47	172	176	60	42	38	201	1,040	236	77	62	79
8	47	137	159	57	41	134	176	1,060	642	75	59	63
9	47	100	144	57	42	86	201	1,120	2,510	73	63	55
10	47	104	137	55	44	102	381	922	1,250	86	81	52
11	46	97	120	54	43	71	1,220	817	857	281	70	50
12	46	92	103	50	39	59	833	692	753	144	82	48
13	44	84	94	46	38	45	738	614	572	92	110	48
14	43	110	84	43	39	39	1,050	745	462	82	75	53
15	46	124	73	40	37	42	708	897	424	77	63	194
16	56	172	62	40	38	37	586	785	392	70	65	210
17	53	579	57	41	39	37	572	700	381	67	63	120
18	100	558	59	41	39	37	586	537	308	62	59	131
19	77	392	60	42	39	38	678	516	261	60	73	90
20	57	302	62	42	38	41	889	621	232	59	60	103
21	53	251	60	41	38	41	1,230	649	205	107	55	308
22	52	236	60	40	38	47	1,330	544	188	1,680	52	330
23	48	214	57	37	38	54	1,120	642	184	510	48	386
24	53	188	55	36	37	63	897	990	184	302	48	266
25	82	313	54	36	37	68	700	692	155	227	47	308
26	81	313	54	36	39	60	753	621	155	184	46	302
27	68	232	54	36	41	79	1,160	496	159	148	46	516
28	67	192	54	36	50	103	708	424	144	127	57	324
29	102	180	53	34	------	102	607	392	114	114	70	251
30	223	346	49	34	------	188	510	346	100	137	65	201
31	144	------	48	34	------	110	------	398	------	102	55	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	223	43	65.9	0.640	0.74
November	579	71	208	2.02	2.25
December	523	48	118	1.15	1.33
January	62	34	44.8	.435	.50
February	50	32	39.3	.382	.40
March	188	37	64.3	.624	.72
April	1,330	90	626	6.08	6.78
May	1,120	346	696	6.76	7.79
June	2,510	100	412	4.00	4.46
July	1,680	59	179	1.74	2.01
August	110	46	65.8	.639	.74
September	516	48	167	1.62	1.81
The year	2,510	32	224	2.17	29.53

PEMIGEWASSET RIVER AT PLYMOUTH, N. H.

LOCATION.—Water-stage recorder at bridge in Plymouth, Grafton County, three-quarters of a mile below mouth of Bakers River.

DRAINAGE AREA.—615 square miles.

RECORDS AVAILABLE.—January, 1886, to September, 1931; gage heights only prior to 1903.

EXTREMES.—Maximum discharge during year, 12,600 second-feet June 9 (gage height, 10.42 feet); minimum, 55 second-feet Aug. 23 (gage height, 0.09 foot).

1903–1931: Maximum discharge, 60,000 second-feet Nov. 4, 1927 (gage height, 27.4 feet); minimum, 45 second-feet several times in August, September, October, 1923.

REMARKS.—Records good except those for periods of ice effect, Dec. 4–17, 22, 27–30, Jan. 2 to Feb. 4, Feb. 8 to Mar. 18, which are fair. Diurnal fluctuation at low stages caused by operation of power plants above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	178	510	1,700	a174	119	119	1,620	1,620	1,170	290	364	167
2	174	328	1,590	158	103	122	1,520	1,470	950	406	a320	150
3	174	305	1,140	154	92	130	1,720	2,000	812	382	296	290
4	170	305	965	146	89	138	2,110	1,940	700	296	334	632
5	166	294	830	162	a89	143	2,560	1,670	646	241	213	454
6	170	804	689	158	a96	138	2,380	2,000	837	307	196	307
7	92	830	593	162	a103	138	2,160	2,060	700	236	192	241
8	122	454	548	150	100	138	2,060	1,940	1,520	252	188	217
9	146	427	489	138	89	142	2,110	2,110	7,880	241	a258	209
10	146	388	447	134	103	150	2,380	2,000	8,170	280	302	167
11	142	375	408	146	119	146	4,340	1,940	3,670	1,280	382	180
12	142	305	375	146	122	142	4,900	1,940	3,160	1,140	324	159
13	138	316	351	146	119	134	2,740	1,670	2,110	724	525	a160
14	138	288	328	146	122	126	3,930	1,840	1,620	538	448	163
15	146	316	328	154	142	119	2,920	3,410	1,370	412	329	180
16	154	420	300	150	146	119	2,220	2,330	1,370	352	a308	544
17	170	1,400	305	142	146	122	2,060	2,060	1,520	285	290	460
18	246	2,220	a288	146	170	119	1,940	1,670	1,470	258	246	388
19	351	1,450	a294	146	217	a138	2,060	1,420	1,110	a230	226	394
20	266	1,120	a288	142	212	a170	2,220	1,370	896	a222	307	a600
21	212	911	a283	150	208	a246	2,800	1,420	732	a252	a232	756
22	204	779	272	154	212	a388	3,280	1,520	700	7,550	a180	812
23	191	737	a266	154	191	a570	2,920	1,570	604	3,660	146	1,130
24	183	681	a256	154	178	a684	2,220	5,750	639	1,780	188	788
25	440	697	a246	138	162	a820	1,840	2,920	525	1,320	146	788
26	705	1,300	a227	130	150	a950	1,780	2,500	473	914	138	716
27	510	548	208	142	138	1,100	5,750	1,940	466	646	a137	1,510
28	408	334	199	150	126	1,370	2,980	1,520	329	590	167	1,050
29	382	246	191	146	-------	1,470	2,160	1,320	454	466	352	812
30	578	261	191	138	-------	1,890	2,000	1,120	274	551	a435	684
31	681	-------	a187	130	-------	1,890	-------	1,110	-------	442	a315	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	705	92	256	0.416	0.48
November	2,220	246	645	1.05	1.17
December	1,700	187	477	.776	.89
January	174	130	148	.241	.28
February	217	89	138	.224	.23
March	1,890	119	454	.738	.85
April	5,750	1,520	2,590	4.21	4.70
May	5,750	1,110	1,970	3.20	3.69
June	8,170	274	1,560	2.54	2.83
July	7,550	222	856	1.39	1.60
August	525	137	274	.446	.51
September	1,510	150	504	.820	.91
The year	8,170	89	823	1.34	18.14

a Estimated.

MERRIMACK RIVER AT FRANKLIN JUNCTION, N. H.

LOCATION.—Water-stage recorder at railroad bridge 1 mile below confluence of Pemigewasset and Winnepesaukee Rivers, at Franklin Junction, Merrimack County. Zero of gage is 250.4 feet above mean sea level.

DRAINAGE AREA.—1,510 square miles (revised).

RECORDS AVAILABLE.—July, 1903, to September, 1931.

EXTREMES.—Maximum discharge during year, 18,900 second-feet June 10 (gage height, 14.24 feet); minimum, 615 second-feet Feb. 22 (gage height, 3.32 feet). 1903–31: Maximum discharge, 67,000 second-feet Nov. 5, 1927 (gage height, 30.85 feet); minimum, 250 second-feet Oct. 4, 1903.

REMARKS.—Records good except those during periods of ice effect, Dec. 15–17, Dec. 23 to Feb. 28, which are fair. Flow regulated by storage in Winnepesaukee, Squam, and Newfound Lakes.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,010	1,280	1,710	872	740	872	3,560	3,210	2,410	1,330	1,200	975
2	975	1,080	2,800	840	785	905	3,860	2,660	2,350	1,120	1,080	940
3	975	1,040	1,880	812	785	940	4,480	2,600	1,820	1,040	1,010	1,080
4	905	975	1,610	785	785	975	5,470	3,490	1,660	1,160	1,120	1,280
5	872	1,040	1,880	785	785	1,010	5,820	3,000	1,610	1,010	1,120	1,460
6	905	1,160	1,710	872	812	1,010	4,960	3,070	1,560	1,010	1,200	1,240
7	975	1,560	1,460	872	840	1,010	4,640	3,350	1,560	1,040	1,330	1,080
8	940	1,560	1,370	840	720	905	4,800	3,280	2,290	905	1,240	905
9	905	905	1,460	812	812	940	5,300	3,420	8,820	1,040	1,120	975
10	905	840	1,420	812	905	975	6,000	3,350	16,000	1,040	975	1,200
11	940	1,040	1,240	812	840	975	7,510	3,350	8,300	1,160	905	1,040
12	785	1,010	1,200	840	740	975	9,500	3,640	6,180	2,110	940	1,010
13	762	1,010	1,200	840	740	975	6,180	3,000	4,960	1,560	1,510	905
14	812	1,160	1,080	812	740	1,010	6,000	3,070	3,560	1,420	1,420	905
15	785	1,010	1,040	812	740	940	5,820	4,960	3,070	1,370	1,240	1,010
16	785	975	1,040	812	762	940	4,640	4,640	2,860	1,120	1,120	1,010
17	740	1,610	1,040	812	785	1,040	4,160	3,640	3,280	1,120	1,040	1,420
18	840	3,420	1,120	785	785	1,080	4,010	3,210	4,010	1,160	1,460	1,120
19	905	3,070	1,120	812	785	1,080	3,780	2,730	3,070	840	1,200	1,040
20	940	2,410	1,080	812	762	1,120	3,860	2,530	2,600	1,080	872	940
21	940	1,990	1,040	785	762	1,160	4,160	2,530	1,770	1,010	940	1,280
22	905	1,710	1,040	785	762	1,240	4,800	2,660	1,770	4,100	840	1,560
23	840	1,370	1,010	812	785	1,460	4,640	2,530	1,710	8,220	940	1,770
24	872	1,370	975	812	812	1,880	3,860	7,410	1,610	3,860	872	1,770
25	1,280	1,510	940	785	840	2,170	3,420	6,560	1,510	2,660	940	1,560
26	1,420	1,820	905	812	872	2,230	2,930	5,300	1,560	1,940	905	1,610
27	1,280	1,880	905	840	872	2,350	6,610	4,160	1,460	1,660	940	1,710
28	1,080	2,930	905	812	872	3,000	6,000	3,420	1,330	1,510	1,040	2,230
29	1,200	1,370	905	762	-------	3,280	4,160	2,860	1,370	1,370	1,040	1,770
30	1,160	1,080	872	740	-------	4,480	3,710	2,170	1,370	1,420	1,120	1,560
31	1,330	-------	872	740	-------	4,160	-------	2,110	-------	1,370	975	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,420	740	967	0.640	0.74
November	3,420	840	1,510	1.00	1.12
December	2,800	872	1,250	.828	.95
January	872	740	811	.537	.62
February	905	720	794	.526	.55
March	4,480	872	1,520	1.01	1.16
April	9,500	2,930	4,950	3.28	3.66
May	7,410	2,110	3,480	2.30	2.65
June	16,000	1,330	3,250	2.15	2.40
July	8,220	840	1,700	1.13	1.30
August	1,510	840	1,090	.722	.83
September	2,230	905	1,280	.848	.95
The year	16,000	720	1,880	1.25	16.93

MERRIMACK RIVER AT MANCHESTER, N. H.

LOCATION.—At dam of Amoskeag Manufacturing Co., in Manchester, Hillsborough County, 2 miles above Piscataquog River and 9½ miles below Suncook River.

DRAINAGE AREA.—2,840 square miles.

RECORDS AVAILABLE.—January, 1924, to September, 1931.

REMARKS.—Discharge ascertained from flow over dam and through wheels and gates. Some storage in Lake Winnepesaukee and other reservoirs; diurnal regulation by power plants upstream. Daily-discharge record furnished by Amoskeag Manufacturing Co.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	954	1,570	1,800	895	516	727	13,800	6,570	4,920	2,280	1,710	1,730
2	942	1,160	3,110	1,380	870	1,110	14,600	5,630	5,370	2,210	1,270	1,170
3	960	1,530	2,410	1,240	807	1,130	16,200	4,390	4,500	1,980	1,770	1,450
4	1,150	1,450	2,660	962	963	1,260	17,700	4,740	4,020	1,590	1,310	1,460
5	602	1,170	2,460	1,360	967	1,400	19,400	4,920	3,480	1,530	1,450	1,550
6	841	1,530	2,420	1,190	871	1,470	17,700	4,630	3,170	1,780	1,370	1,590
7	1,050	1,790	1,760	1,250	1,080	1,370	16,000	4,780	2,340	1,670	1,670	1,520
8	1,000	2,030	2,160	1,000	641	947	15,600	4,720	3,660	1,620	1,480	1,270
9	1,010	1,280	1,900	953	760	1,680	17,700	5,050	9,280	1,660	994	977
10	1,040	1,200	1,840	1,150	862	1,370	18,000	5,260	23,000	1,570	1,500	1,230
11	678	920	1,990	722	965	1,500	19,800	5,340	20,800	1,860	1,230	1,460
12	726	1,270	1,800	1,290	942	1,490	23,300	6,240	15,900	1,810	1,560	1,180
13	874	1,210	1,730	1,020	1,110	1,490	22,100	6,070	13,100	2,820	2,040	886
14	981	1,290	1,110	997	1,190	1,580	18,900	5,900	9,940	2,030	2,150	626
15	1,010	1,460	1,640	1,120	560	951	17,300	7,110	7,910	2,000	1,920	1,120
16	794	844	1,380	942	892	1,480	14,600	8,650	6,500	1,930	1,400	1,350
17	889	1,760	1,240	1,160	981	1,560	12,600	7,800	6,710	1,900	1,660	1,180
18	480	3,750	1,480	728	1,280	1,560	11,400	5,450	9,200	1,640	1,490	1,600
19	419	4,570	1,640	1,200	1,160	1,570	11,200	4,640	8,650	1,300	1,800	1,020
20	1,090	3,920	1,280	940	1,210	1,920	9,840	4,190	6,890	1,420	1,500	939
21	1,010	3,580	990	1,110	1,340	2,240	9,000	4,190	5,280	1,590	1,150	1,570
22	1,010	2,600	1,500	1,160	779	1,970	9,090	3,930	4,200	2,570	1,020	1,500
23	960	1,820	1,530	1,050	897	3,300	9,160	4,170	3,770	9,660	1,010	1,820
24	983	2,340	1,380	1,090	979	3,330	8,390	10,100	3,450	6,020	1,100	1,960
25	1,580	2,200	903	569	1,160	4,570	7,000	13,900	3,210	4,450	980	2,080
26	1,280	2,570	1,360	967	1,290	5,000	7,120	12,600	2,830	3,040	1,210	1,960
27	1,820	2,530	1,210	966	1,270	5,560	9,120	10,700	2,820	2,340	1,070	1,580
28	1,590	2,580	897	967	1,550	6,150	11,600	7,550	2,320	2,030	1,280	2,800
29	1,460	2,310	1,230	1,180	-------	8,440	8,680	6,250	2,500	1,960	1,540	2,200
30	1,580	1,290	1,060	1,080	-------	15,400	7,410	4,850	2,190	1,940	1,160	1,880
31	1,650	-------	1,310	1,300	-------	14,300	-------	3,680	-------	1,890	1,320	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,820	419	1,050	0.370	0.43
November	4,570	844	1,980	.697	.78
December	3,110	897	1,650	.581	.67
January	1,380	569	1,060	.373	.43
February	1,550	516	996	.351	.37
March	15,400	727	3,160	1.11	1.28
April	23,300	7,000	13,800	4.86	5.42
May	13,900	3,680	6,260	2.20	2.54
June	23,000	2,190	6,730	2.37	2.64
July	9,660	1,300	2,390	.842	.97
August	2,150	944	1,420	.500	.58
September	2,800	626	1,490	.525	.59
The year	23,300	419	3,490	1.23	16.70

MERRIMACK RIVER AT LAWRENCE, MASS.

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

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

RECORDS AVAILABLE.—January, 1880, to September, 1931.

REMARKS.—Discharge ascertained from flow over dam and through wheels and gates. It includes water wasted from diversions of Metropolitan Water District of Boston in South Branch of Nashua, Sudbury, and Cochituate drainage basins. Wasted water is deducted from observed monthly mean flow to give net discharge from net drainage area. Flow partly regulated by operation of power plants and storage in Lake Winnepesaukee and other reservoirs. Record furnished by J. R. Baldwin, chief engineer of Essex County; estimate of quantities wasted into Merrimack River furnished by Metropolitan Water & Sewerage Board of Boston.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	454	1,483	2,718	889	478	1,532	21,490	9,530	5,920	3,734	1,728	2,706
2	927	905	2,878	1,905	2,277	3,566	20,892	8,236	6,677	2,993	1,125	2,538
3	1,248	2,706	2,875	1,770	2,123	3,444	21,814	6,859	7,212	2,918	2,662	2,540
4	1,397	2,368	3,110	684	2,024	3,517	21,639	7,831	6,330	1,550	2,991	2,440
5	451	2,293	2,793	2,028	1,931	3,415	22,510	7,162	5,434	2,029	2,671	1,619
6	1,209	2,230	2,221	2,817	1,887	3,237	22,757	7,025	4,451	3,781	2,669	672
7	1,419	2,275	1,519	2,756	1,542	2,397	19,810	6,607	3,205	3,403	2,265	1,404
8	1,590	1,607	2,730	2,569	421	2,556	19,132	6,701	4,695	3,084	1,403	3,094
9	1,543	1,384	3,065	2,311	1,969	5,742	21,312	6,716	6,007	3,397	552	2,734
10	1,428	2,212	2,891	1,731	2,027	6,532	22,342	7,022	17,806	3,338	2,165	2,557
11	996	1,620	2,725	846	2,035	6,527	22,207	8,517	31,007	3,387	2,345	2,427
12	301	2,376	2,430	2,479	1,921	6,401	24,447	9,254	27,242	2,746	2,316	1,719
13	553	2,318	2,540	2,189	1,961	6,050	26,132	9,904	20,650	4,247	2,517	652
14	1,530	2,063	1,660	2,407	1,914	5,462	22,180	9,717	16,267	4,707	3,120	1,821
15	1,672	1,372	3,046	2,529	743	5,295	18,952	9,765	14,007	3,516	4,040	2,274
16	1,840	610	2,758	2,481	2,492	6,272	16,762	11,166	11,457	3,171	2,934	2,162
17	1,436	2,753	2,308	1,861	2,903	6,349	14,240	10,845	11,287	3,070	3,541	2,208
18	938	4,571	1,936	580	3,111	5,480	12,642	9,447	12,755	2,617	3,339	1,847
19	254	5,056	1,811	1,851	2,996	5,679	11,090	8,381	14,120	1,583	2,843	1,063
20	1,307	5,387	1,527	1,857	2,913	5,736	10,397	7,526	11,917	2,995	2,742	120
21	1,561	4,454	899	1,964	2,289	6,294	10,065	6,735	9,797	3,097	2,429	1,731
22	1,445	3,674	2,252	1,939	1,085	5,977	9,506	6,221	8,300	3,179	1,901	2,236
23	1,304	1,894	2,408	1,815	1,638	7,777	9,780	5,680	6,950	3,372	991	2,370
24	1,382	2,838	2,386	1,490	3,349	8,634	9,944	7,150	6,187	8,630	2,434	2,532
25	1,394	3,185	1,183	685	3,449	8,987	8,467	13,539	5,725	5,454	2,480	2,503
26	888	3,040	2,328	2,009	3,338	10,459	7,652	14,086	5,384	3,928	2,132	1,960
27	2,513	1,718	2,333	2,145	3,188	11,491	9,181	12,372	4,904	4,220	2,190	1,324
28	2,755	3,090	1,217	2,129	2,570	12,562	12,057	10,297	4,051	3,561	2,168	3,116
29	2,694	2,510	2,583	2,130	-------	14,482	13,062	8,437	5,217	2,736	1,606	3,513
30	2,434	1,616	2,603	2,172	-------	20,910	10,644	6,277	4,659	2,800	936	3,233
31	2,236	-------	2,225	1,729	-------	23,427	-------	5,054	-------	2,543	2,907	-------

Month	Observed	Wasted into the Merrimack	Corrected for net area	Per square mile (corrected)	Run-off in inches (corrected)	Rainfall in inches (mean of 33 stations)
October	1,390	5	1,385	0.311	0.359	3.52
November	2,520	19	2,501	.562	.627	3.56
December	2,321	13	2,308	.518	.597	1.95
January	1,895	14	1,881	.423	.488	2.93
February	2,163	36	2,127	.478	.498	2.24
March	7,296	161	7,135	1.603	1.848	4.46
April	16,437	119	16,318	3.665	4.090	2.90
May	8,518	73	8,445	1.897	2.187	4.07
June	9,987	162	9,825	2.207	2.463	6.06
July	3,412	48	3,364	.756	.872	3.14
August	2,327	10	2,317	.520	.600	4.97
September	2,104	6	2,098	.471	.526	2.55
The year	5,025	56	4,969	1.116	15.155	42.35

BAKERS RIVER NEAR RUMNEY, N. H.

LOCATION.—Water-stage recorder 150 feet above mouth of Eastman Brook and 1½ miles upstream from Rumney, Grafton County.

DRAINAGE AREA.—140 square miles.

RECORDS AVAILABLE.—November, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 4,500 second-feet July 22 (gage height, 7.31 feet); minimum, 21 second-feet Oct. 14, 15 (gage height, 1.21 feet).

1928–1931: Maximum discharge, 5,320 second-feet (revised) Apr. 7, 1930 (gage height, 9.32 feet); minimum, that of Oct. 14, 15, 1930.

Maximum stage known, 17.4 feet Nov. 3, 1927.

REMARKS.—Records good except those estimated Jan. 15 to Feb. 8, Aug. 13–16, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	81	318	52	38	44	350	288	171	45	56	44
2	25	68	168	41	38	44	520	242	136	73	49	40
3	25	60	130	46	38	44	605	346	115	56	46	140
4	26	56	145	45	38	48	885	301	99	46	48	134
5	25	63	123	45	37	45	775	245	109	44	45	86
6	24	161	109	46	37	45	650	264	179	39	39	68
7	23	113	101	46	37	44	628	245	147	38	34	58
8	23	86	97	48	37	41	628	221	560	37	32	48
9	22	76	91	52	37	45	725	268	1,260	41	34	43
10	22	69	68	52	38	48	915	221	1,010	191	99	37
11	22	59	69	49	39	46	1,780	252	540	762	69	35
12	22	59	76	48	39	46	1,210	268	396	374	64	33
13	22	59	59	48	40	46	725	218	271	215	220	31
14	21	59	61	48	43	46	975	430	198	151	228	31
15	21	59	61	46	43	49	650	761	168	119	130	39
16	26	69	48	45	45	52	477	484	212	95	75	61
17	27	274	52	45	44	48	430	368	360	73	52	55
18	44	360	56	45	45	52	416	268	298	61	45	66
19	61	209	58	44	46	59	424	218	184	53	48	52
20	41	151	56	44	45	66	441	206	138	48	48	55
21	34	123	56	43	45	71	484	198	113	66	39	236
22	30	107	56	43	45	101	466	218	95	2,460	34	132
23	30	95	56	41	45	145	396	1,110	86	716	31	132
24	32	86	56	41	44	198	308	1,580	91	364	29	99
25	94	105	55	41	44	245	236	828	76	221	28	105
26	113	179	55	40	45	218	339	605	73	174	26	103
27	87	119	53	40	45	340	1,050	413	62	132	25	268
28	71	74	52	40	43	388	502	298	59	101	55	151
29	90	69	52	39	------	406	406	227	51	82	95	111
30	134	87	52	39	------	582	374	184	45	76	76	89
31	102	------	52	39	------	410	------	179	------	66	56	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	134	21	44.0	0.314	0.36
November	360	56	108	.771	.86
December	318	48	82.0	.586	.68
January	52	39	44.5	.318	.37
February	46	37	41.4	.296	.31
March	582	41	131	.936	1.08
April	1,780	236	626	4.47	4.99
May	1,580	179	386	2.76	3.18
June	1,260	45	243	1.74	1.94
July	2,460	37	226	1.61	1.86
August	228	25	63.1	.451	.52
September	268	31	86.1	.615	.69
The year	2,460	21	173	1.24	16.84

SMITH RIVER NEAR BRISTOL, N. H.

LOCATION.—Staff gage at highway bridge in South Alexandria, 3 miles southwest of Bristol, Grafton County.

DRAINAGE AREA.—83.6 square miles (revised).

RECORDS AVAILABLE.—May, 1918, to September, 1931.

EXTREMES.—Maximum discharge during year, 918 second-feet May 23 (gage height, 3.59 feet); minimum, 1.3 second-feet Oct. 5 (gage height, 0.41 foot). 1918–1931: Maximum discharge, 5,800 second-feet Nov. 4, 1927 (gage height, 7.02 feet); minimum, that of Oct. 5, 1930.

REMARKS.—Records good. Stage-discharge relation affected by ice Dec. 14 to Mar. 15.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.1	38	164	30	20	33	324	168	115	32	41	22
2	7.5	31	175	26	24	32	447	146	92	30	32	18
3	11	30	92	28	23	32	466	144	75	41	41	40
4	4.0	22	103	28	26	38	565	129	67	28	44	37
5	4.7	37	78	29	23	33	565	111	61	28	38	48
6	2.8	50	71	35	23	33	525	98	52	25	29	44
7	8.9	50	58	23	22	33	466	92	72	22	29	30
8	6.1	44	52	36	20	33	466	85	135	23	25	24
9	3.4	32	54	35	24	33	565	104	294	26	21	18
10	3.7	26	50	26	21	33	649	115	607	27	23	17
11	10	36	85	33	20	35	779	180	410	76	24	17
12	9.6	21	76	33	21	35	779	204	280	87	56	17
13	8.9	19	51	35	22	36	649	153	204	48	67	17
14	2.8	19	54	35	24	36	565	180	148	48	51	17
15	10	22	54	35	26	37	466	280	106	46	42	19
16	13	35	45	38	28	38	340	242	96	41	38	20
17	12	112	41	23	30	51	280	168	357	32	30	24
18	23	175	44	19	30	48	254	131	357	27	25	32
19	17	112	41	23	33	65	242	109	216	24	20	9.5
20	14	80	38	30	36	67	229	92	129	26	19	22
21	14	62	44	30	33	56	204	87	89	21	17	35
22	14	51	37	29	32	100	192	96	72	280	18	48
23	13	51	41	26	33	83	168	392	64	357	19	40
24	15	38	45	24	33	131	148	779	68	324	20	31
25	96	56	41	22	32	180	133	735	65	229	17	27
26	98	74	35	26	33	180	153	505	58	144	17	30
27	63	65	32	25	38	254	340	294	58	104	17	58
28	52	48	31	24	42	340	280	204	48	75	22	54
29	44	71	29	28	------	294	216	157	40	65	23	42
30	44	63	35	26	------	392	192	123	33	54	26	31
31	46	------	35	20	------	340	------	115	------	48	20	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	98	2.8	21.9	0.262	0.30
November	175	19	52.3	.626	.70
December	175	29	59.1	.707	.82
January	38	19	28.4	.340	.39
February	42	20	27.6	.330	.34
March	392	32	101	1.21	1.40
April	779	133	388	4.64	5.18
May	779	85	207	2.48	2.86
June	607	33	149	1.78	1.99
July	357	22	78.9	.944	1.09
August	67	17	29.4	.352	.41
September	58	9.5	29.6	.354	.40
The year	779	2.8	97.6	1.17	15.88

CONTOOCOOK RIVER AT PENACOOK, N. H.

LOCATION.—Water-stage recorder in Penacook, Merrimack County, half a mile above mouth.
DRAINAGE AREA.—763 square miles.
RECORDS AVAILABLE.—November, 1928, to September, 1931.
EXTREMES.—Maximum discharge during year, 10,900 second-feet Apr. 13 (gage height, 5.82 feet); minimum, 170 second-feet Oct. 17, Sept. 16.
1928–1931: Maximum discharge, that of Apr. 13, 1931; minimum, 70 second-feet Sept. 28, 1929.
REMARKS.—Records good except those for periods of ice effect, Dec. 15–18, 22–26, Dec. 30 to Jan. 4, Jan. 7 to Feb. 15, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	197	378	468	275	275	300	4,070	1,820	1,600	682	342	236
2	197	315	579	290	295	265	4,370	1,580	1,820	654	295	213
3	211	300	613	295	280	343	4,530	1,370	1,560	654	290	285
4	222	300	656	300	270	445	5,200	1,220	1,340	601	280	400
5	225	438	630	322	275	511	5,950	1,280	1,180	435	258	387
6	225	468	570	357	290	452	5,750	1,180	996	374	231	320
7	208	438	528	329	290	422	5,200	1,070	752	494	208	267
8	190	400	452	305	270	415	5,030	1,040	1,040	510	204	240
9	182	343	400	285	261	357	5,560	1,110	2,040	510	236	231
10	175	300	494	265	257	385	5,750	1,110	6,150	558	249	222
11	182	265	494	285	275	385	7,160	1,280	7,160	567	240	195
12	194	285	545	295	290	468	9,510	1,890	6,350	486	272	188
13	208	300	545	280	280	511	10,900	1,900	4,530	463	348	188
14	197	295	536	265	275	622	8,260	1,790	3,190	478	407	192
15	190	257	502	249	280	588	6,350	1,870	2,390	442	478	184
16	185	241	477	253	295	502	5,030	1,840	2,000	407	380	170
17	170	336	460	265	290	536	3,930	1,580	2,250	394	348	174
18	172	870	438	290	430	545	3,290	1,380	3,410	348	325	184
19	175	1,020	415	300	430	630	2,890	1,290	3,180	320	320	178
20	190	1,060	408	290	408	622	2,390	1,160	2,580	300	305	184
21	190	880	385	265	371	638	2,260	1,060	1,850	361	315	192
22	185	753	357	253	329	762	2,140	984	1,470	414	320	184
23	175	604	322	253	315	850	2,000	1,170	1,350	486	272	236
24	190	511	305	261	329	1,120	1,920	3,080	1,260	567	236	361
25	343	545	295	275	322	1,350	1,770	3,790	1,180	610	240	374
26	477	647	285	300	305	1,510	1,650	3,530	1,090	534	244	374
27	460	681	270	305	315	1,710	2,160	2,790	948	442	226	320
28	392	554	261	280	343	2,120	2,580	2,120	741	394	208	300
29	494	486	257	270	------	2,600	2,390	1,690	635	368	254	300
30	486	452	270	265	------	3,530	2,090	1,380	711	368	267	267
31	430	------	270	265	------	3,930	------	1,200	------	320	244	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	494	170	249	0.326	0.38
November	1,060	241	491	.644	.72
December	656	257	435	.570	.66
January	357	249	283	.371	.43
February	430	257	309	.405	.42
March	3,930	265	949	1.24	1.43
April	10,900	1,650	4,400	5.77	6.44
May	3,790	984	1,660	2.18	2.51
June	7,160	635	2,230	2.92	3.26
July	682	300	469	.615	.71
August	478	204	285	.374	.43
September	400	170	252	.330	.37
The year	10,900	170	998	1.31	17.76

NUBANUSIT BROOK NEAR PETERBORO, N. H.

LOCATION.—Water-stage recorder at highway bridge 1½ miles above Peterboro, Hillsborough County.

DRAINAGE AREA.—48.1 square miles.

RECORDS AVAILABLE.—November, 1920, to September, 1931 (discontinued).

EXTREMES.—Maximum discharge during year, 1,130 second-feet Apr. 11 (gage height, 5.59 feet); minimum, 0.6 second-foot Dec. 18 (gage height, 1.51 feet). 1920–1931: Maximum discharge, that of Apr. 11, 1931; minimum, 0.4 second-foot Aug. 15, 1926.

REMARKS.—Records good except those estimated and those during periods of ice effect, Dec. 9, 16–18, 23, 24, Jan. 1–4, 9–13, and Jan. 17 to Mar. 20, which are fair. Flow regulated by several storage reservoirs.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	15	a43	41	2.0	3.0	207	133	112	40	2.8	48
2	37	a2.0	49	39	38	39	245	111	142	42	1.8	38
3	26	a39	49	10	41	41	319	90	110	36	40	14
4	12	a41	44	2.0	42	42	368	83	85	3.5	42	8.4
5	.9	a43	a35	a39	40	40	391	74	74	4.0	42	4.2
6	38	a42	a17	a41	39	39	368	63	39	41	9.0	2.5
7	41	39	a3.0	a42	11	11	316	51	38	41	3.5	4.8
8	42	3.4	a38	a42	2.0	3.0	284	62	57	40	5.1	4.8
9	26	a39	48	39	39	38	350	104	69	38	3.0	5.9
10	a15	a41	a47	9.0	41	42	403	119	286	28	37	a7.0
11	a7.0	3.5	a46	2.0	42	42	830	142	375	10	39	a7.0
12	a2.0	5.4	43	39	41	42	752	135	324	3.2	48	a8.0
13	a39	26	18	41	38	42	532	144	254	7.2	15	a9.0
14	a42	7.5	6.5	a41	9.0	39	438	131	220	3.8	6.2	a10
15	a42	4.3	43	a42	2.0	3.0	387	142	201	4.1	13	11
16	a36	3.0	44	a38	39	39	326	135	177	3.5	18	12
17	a19	a7.0	46	11	41	41	278	122	251	3.5	50	13
18	a7.0	11	45	3.0	41	42	251	78	194	3.7	56	15
19	a2.0	a43	20	38	40	40	238	69	232	2.5	46	16
20	a38	a43	15	42	39	36	199	68	218	2.3	19	18
21	a41	a42	1.8	42	14	23	160	48	215	4.3	3.7	52
22	a42	a11	a15	41	6.0	28	142	20	194	5.4	3.2	a47
23	a37	a3.0	39	38	39	70	126	65	106	4.0	2.5	a40
24	a20	a40	42	10	41	83	91	138	65	4.8	46	a28
25	a6.0	47	a2.0	2.0	42	86	87	259	58	8.8	43	17
26	a2.0	50	a30	38	42	96	101	204	46	13	40	8.8
27	a38	7.1	a15	41	39	92	97	158	35	47	13	3.4
28	42	40	a2.0	42	11	99	182	131	33	40	7.0	20
29	43	16	a38	40	-------	135	151	113	53	40	3.0	19
30	42	2.8	a42	38	-------	225	133	94	42	5.3	23	5.9
31	44	-------	a2.0	9.0	-------	225	-------	96	-------	2.8	46	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	44	0.9	28.0	0.582	0.67
November	50	2.0	23.9	.497	.55
December	49	1.8	30.0	.624	.72
January	42	2.0	30.4	.632	.73
February	42	2.0	30.8	.640	.67
March	225	3.0	58.9	1.22	1.41
April	830	87	292	6.07	6.77
May	259	20	109	2.27	2.62
June	375	33	144	2.99	3.34
July	47	2.3	17.2	.358	.41
August	56	1.8	23.4	.486	.56
September	52	2.5	16.6	.345	.38
The year	830	0.9	66.7	1.39	18.83

a Estimated.

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

LOCATION.—Staff gage at North Branch, Hillsborough County, 4 miles northwest of Antrim and 6 miles above confluence with Contoocook River.

DRAINAGE AREA.—54.5 square miles.

RECORDS AVAILABLE.—August, 1924, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,060 second-feet Apr. 12 (gage height, 5.02 feet); minimum, 4.0 second-feet Sept. 11–14 (gage height, 0.40 foot).

1924–1931: Maximum discharge, 2,100 second-feet Nov. 5, 1927 (gage height, 6.30 feet); minimum, 4 second-feet Sept. 26, 29, 1925, Sept. 11–14, 1931 (gage height, 0.40 foot).

REMARKS.—Records good. Stage-discharge relation affected by ice Dec. 14 to Mar. 25. Small storage regulation at Long Pond and others.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.9	15	76	20	21	26	194	186	120	133	13	12
2	6.5	14	80	20	20	26	228	170	113	78	12	13
3	6.5	12	76	19	20	26	256	202	108	50	12	26
4	6.5	11	71	18	19	26	316	126	93	39	13	27
5	6.3	13	62	19	18	29	316	120	83	35	11	20
6	6.3	18	62	22	18	28	365	103	73	32	9.2	16
7	6.3	18	58	23	18	27	365	93	73	31	8.0	11
8	6.1	16	58	23	18	26	391	93	93	34	7.6	7.3
9	6.1	14	58	22	17	30	418	103	275	29	6.4	6.2
10	6.1	13	62	22	17	38	418	103	515	25	5.7	5.2
11	6.1	12	54	21	18	42	815	126	418	25	5.4	4.2
12	6.1	11	50	21	19	42	1,060	126	480	22	8.0	4.0
13	6.1	11	46	22	19	38	990	126	448	19	20	4.0
14	6.1	12	36	22	20	35	870	133	295	18	18	4.0
15	6.5	11	30	22	24	34	765	140	237	16	15	6.2
16	8.2	15	26	22	22	33	590	140	194	15	13	8.9
17	8.0	39	27	22	21	32	515	120	210	14	12	8.6
18	11	80	28	21	20	31	418	113	194	13	9.8	8.6
19	12	80	26	21	23	32	391	83	140	13	9.2	8.6
20	10	80	26	22	26	32	365	73	133	13	8.6	9.8
21	9.0	76	24	23	30	34	340	62	113	14	7.6	14
22	8.5	71	23	23	30	46	316	53	103	22	6.7	14
23	8.2	62	22	23	30	50	316	98	98	25	6.2	14
24	9.9	58	21	22	29	54	295	228	93	32	5.7	13
25	20	66	20	21	29	62	256	237	219	32	5.2	12
26	32	71	20	21	28	73	246	228	202	29	5.2	12
27	31	66	21	21	28	126	256	219	202	22	5.2	12
28	25	62	22	21	27	113	228	186	194	18	8.3	11
29	20	62	22	20	-------	120	210	162	178	17	11	10
30	18	62	22	20	-------	162	202	126	162	16	13	9.5
31	16	-------	21	21	-------	186	-------	113	-------	14	13	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	32	6.1	11.0	0.202	0.23
November	80	11	38.4	.705	.79
December	80	20	40.3	.739	.85
January	23	18	21.3	.391	.45
February	30	17	22.5	.413	.43
March	186	26	53.5	.982	1.13
April	1,060	194	424	7.78	8.68
May	237	53	135	2.48	2.86
June	515	73	195	3.58	3.99
July	133	13	28.9	.530	.61
August	20	5.2	9.81	.180	.21
September	27	4.0	11.1	.204	.23
The year	1,060	4.0	82.1	1.51	20.46

BLACKWATER RIVER NEAR CONTOOCOOK, N. H.

LOCATION.—Chain gage at highway bridge 150 feet north of Webster-Hopkinton town line and 3½ miles north of Contoocook, Merrimack County.

DRAINAGE AREA.—134 square miles.

RECORDS AVAILABLE.—May, 1918, to September, 1920; February, 1927, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,720 second-feet Apr. 13 (gage height, 10.42 feet); minimum, 20 second-feet Oct. 4 (gage height, 1.94 feet). 1918–1920, 1927–1931: Maximum discharge, 2,730 second-feet Mar. 29, 1920 (gage height, 15.0 feet); minimum, 20 second-feet Aug. 4, 1919, Oct. 4, 1930 (gage height, 1.9 feet).

REMARKS.—Records good. Stage-discharge relation affected by ice Dec. 11–15, Dec. 21 to Mar. 22. Slight diurnal regulation and small seasonal storage in Pleasant Pond.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	72	88	52	43	54	688	287	308	102	60	39
2	21	68	103	49	43	53	732	256	308	102	56	38
3	21	62	111	47	44	54	760	245	245	102	54	40
4	20	56	146	53	45	54	822	224	174	88	48	39
5	21	52	119	56	46	54	890	204	148	82	49	47
6	21	58	103	54	46	54	890	194	140	76	51	58
7	22	72	96	54	46	54	834	184	140	72	52	54
8	21	75	88	53	46	54	822	174	204	72	50	52
9	27	73	82	52	46	57	846	184	374	69	44	47
10	26	65	76	53	46	61	890	194	860	72	40	44
11	26	56	72	52	47	65	1,160	224	1,260	76	36	38
12	24	54	67	52	49	67	1,560	266	1,070	116	45	34
13	24	54	62	50	50	65	1,690	287	746	116	51	32
14	22	53	59	48	52	62	1,260	266	523	88	72	31
15	22	50	56	45	53	61	846	287	352	82	82	33
16	22	49	56	43	57	61	760	330	266	74	72	32
17	21	74	60	43	59	61	642	287	330	69	67	32
18	23	165	60	47	58	61	523	224	559	66	60	34
19	22	238	60	49	56	65	440	194	626	62	55	37
20	26	228	60	45	58	69	396	184	506	59	49	36
21	30	175	57	45	57	82	352	156	308	56	42	44
22	32	136	56	45	56	111	308	148	224	59	38	41
23	31	119	53	45	56	140	287	214	184	116	36	88
24	31	103	52	44	56	174	266	658	174	194	34	76
25	51	96	52	45	56	256	245	875	156	165	33	62
26	82	103	53	50	55	287	234	810	148	140	32	58
27	103	119	53	49	54	330	352	559	140	116	30	56
28	96	119	53	47	54	396	462	374	131	95	33	56
29	82	96	54	47	------	523	440	266	124	82	34	64
30	73	88	54	46	------	642	330	224	109	76	39	66
31	70	------	53	45	------	688	------	204	------	67	39	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	103	20	36.7	0.274	0.32
November	238	49	94.3	.704	.79
December	146	52	71.4	.533	.61
January	56	43	48.5	.362	.42
February	59	43	51.2	.382	.40
March	688	53	155	1.16	1.34
April	1,690	234	691	5.16	5.76
May	875	148	296	2.21	2.55
June	1,260	109	361	2.69	3.00
July	194	56	90.7	.677	.78
August	82	30	47.8	.357	.41
September	88	31	46.9	.350	.39
The year	1,690	20	165	1.23	16.77

SUNCOOK RIVER AT NORTH CHICHESTER, N. H.

LOCATION.—Water-stage recorder at North Chichester, Merrimack County, 2½ miles above mouth of Little Suncook River.

DRAINAGE AREA.—157 square miles.

RECORDS AVAILABLE.—May, 1918, to November, 1927 (incomplete); November, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,530 second-feet Mar. 29 (gage height, 7.26 feet); minimum, 3.1 second-feet Oct. 13 (gage height, 0.81 foot). 1918–1931: Maximum discharge, 4,300 second-feet Apr. 7, 1923 (gage height, 13.0 feet); minimum, 0.4 second-foot Sept. 4, 1926 (gage height, 0.82 foot).

REMARKS.—Records excellent except those for period of ice effect, Dec. 15 to Mar. 28, which are good. Flow regulated by storage at several points above Pittsfield.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	30	97	10	22	40	945	222	322	129	78	11
2	17	9.9	44	93	16	30	1,090	172	425	127	10	11
3	25	30	58	70	50	53	1,120	142	355	128	118	20
4	23	34	52	10	48	61	1,210	224	296	17	119	15
5	11	38	54	21	45	68	1,180	160	244	14	122	13
6	23	34	80	50	50	60	990	144	144	132	118	11
7	14	14	11	70	46	58	842	144	162	122	122	11
8	10	28	127	91	31	40	897	142	216	130	74	11
9	9.9	9.0	102	65	20	52	1,030	99	336	126	7.5	11
10	9.9	27	48	30	18	75	905	65	701	130	58	11
11	8.7	26	56	8	18	70	851	258	820	59	58	12
12	4.7	26	136	30	24	66	809	274	679	12	118	11
13	3.5	30	75	37	33	63	679	264	518	137	139	11
14	6.0	36	12	28	55	56	562	238	377	136	136	12
15	7.0	26	99	45	35	48	447	414	310	130	76	17
16	6.0	9.0	96	32	20	60	382	361	306	128	15	21
17	4.8	64	68	36	37	72	324	296	460	130	89	26
18	6.2	150	43	8	50	65	287	258	567	54	50	23
19	4.9	124	48	20	54	67	268	212	409	14	50	21
20	4.3	130	30	47	55	91	262	187	295	126	48	18
21	6.0	117	10	48	52	110	258	182	242	125	50	24
22	6.5	63	28	40	38	126	228	176	225	132	38	22
23	6.5	14	38	47	32	305	214	127	185	124	11	20
24	8.7	44	43	46	30	350	188	269	156	136	94	21
25	14	58	12	11	58	396	150	270	155	74	44	23
26	11	109	100	8	60	445	172	234	160	17	43	15
27	40	19	70	47	58	515	292	196	90	132	44	15
28	46	134	10	41	56	612	296	174	20	108	66	23
29	39	89	82	40	------	1,030	268	157	143	124	76	21
30	40	14	60	47	------	1,310	242	42	130	125	14	17
31	33	------	61	45	------	979	------	114	------	124	11	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	46	3.5	15.0	0.094	0.11
November	150	9.0	51.2	.326	.36
December	136	10	59.7	.380	.44
January	93	8	39.4	.251	.29
February	60	16	39.7	.253	.26
March	1,310	30	238	1.52	1.75
April	1,210	150	580	3.69	4.12
May	414	42	201	1.28	1.48
June	820	20	315	2.01	2.24
July	137	12	103	.656	.76
August	139	7.5	67.6	.431	.50
September	26	11	16.6	.106	.12
The year	1,310	3.5	144	.917	12.43

SOUHEGAN RIVER AT MERRIMACK, N. H.

LOCATION.—Water-stage recorder at head of Atherton Falls, at Merrimack, Hillsborough County, 1½ miles above confluence with Merrimack River.
DRAINAGE AREA.—168 square miles.
RECORDS AVAILABLE.—July, 1909, to September, 1931.
EXTREMES.—Maximum discharge during year, 3,790 second-feet June 10 (gage height, 7.68 feet); minimum, 14 second-feet Oct. 14 (gage height, 1.90 feet).
1909–1931; Maximum discharge, 10,400 second-feet Apr. 8, 1924 (gage height, 11.82 feet); minimum, 13 second-feet Sept. 9, 1926 (gage height, 1.88 feet).
REMARKS.—Records good. Discharge determined from gage readings taken two or three times a day, Dec. 17 to Jan. 3.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	58	143	66	65	115	1,440	363	236	130	36	54
2	18	52	167	65	57	111	1,940	319	253	120	30	66
3	18	37	120	60	61	120	1,890	292	204	111	29	70
4	23	52	143	45	66	130	2,070	311	167	98	37	79
5	23	52	130	61	70	122	1,980	278	151	79	30	72
6	17	77	118	65	66	120	1,510	242	128	84	33	40
7	22	115	107	73	63	128	1,400	232	109	98	32	33
8	16	98	104	65	60	109	1,360	228	162	120	27	44
9	20	77	104	65	50	132	1,890	447	800	122	28	55
10	49	48	104	63	55	189	1,940	470	3,040	122	25	45
11	30	58	102	46	63	192	2,560	654	2,240	118	27	57
12	22	45	104	44	65	181	2,410	720	1,220	86	48	29
13	16	34	107	52	63	178	1,400	515	830	100	232	23
14	14	44	65	53	73	170	1,220	506	595	100	239	25
15	16	45	65	52	79	181	1,040	676	474	86	167	35
16	26	84	53	53	98	181	830	525	506	72	120	31
17	24	148	73	54	115	198	692	411	890	75	120	29
18	32	638	82	46	135	192	621	355	1,010	75	113	30
19	34	474	83	40	130	216	575	295	600	65	84	45
20	24	307	77	53	111	242	525	260	406	50	77	34
21	24	228	65	60	120	246	470	242	295	60	77	43
22	32	181	68	61	104	311	420	246	250	75	75	46
23	40	148	73	61	100	434	380	284	216	63	48	54
24	34	145	76	54	109	530	402	1,130	216	61	42	58
25	60	138	73	52	120	676	367	720	207	55	45	61
26	135	175	68	50	122	860	347	496	178	46	30	52
27	138	181	62	61	111	920	950	375	184	45	26	38
28	102	145	57	66	109	1,010	643	299	195	52	36	28
29	72	100	60	75	-------	1,290	483	253	173	38	37	48
30	65	107	64	65	-------	2,260	429	195	154	32	53	45
31	61	-------	65	70	-------	1,710	-------	187	-------	32	58	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	138	14	39.6	0.236	0.27
November	638	34	136	.810	.90
December	167	53	89.7	.534	.62
January	75	40	57.9	.345	.40
February	135	50	87.1	.518	.54
March	2,260	109	434	2.58	2.97
April	2,560	347	1,140	6.79	7.58
May	1,130	187	404	2.40	2.77
June	3,040	109	536	3.19	3.56
July	130	32	79.4	.473	.55
August	239	25	66.5	.396	.46
September	79	23	45.6	.271	.30
The year	3,040	14	259	1.54	20.92

SOUTH BRANCH OF NASHUA RIVER AT CLINTON, MASS

LOCATION.—Venturi meter at Wachusett Dam, 1 mile south of Clinton, Worcester County.
DRAINAGE AREA.—108.84 square miles since 1914.
RECORDS AVAILABLE.—July, 1896, to September, 1931.
REMARKS.—Flow regulated by storage in Wachusett Reservoir and other ponds. Discharge corrected for storage. Record furnished by water division of Metropolitan District Commission.

Monthly discharge and rainfall, 1930–31

Month	Run-off in million gallons	Discharge per square mile		Run-off in inches	Rainfall in inches
		Million gallons per day	Second-feet		
October	1,237.9	0.367	0.568	0.655	3.55
November	1,532.8	.469	.726	.810	3.92
December	1,250.7	.371	.574	.661	2.61
January	1,666.1	.494	.764	.881	3.44
February	2,086.8	.635	1.059	1.103	2.71
March	8,596.8	2.548	3.942	4.545	5.00
April	7,568.3	2.318	3.586	4.001	2.98
May	4,270.3	1.266	1.959	2.258	5.01
June	5,842.0	1.789	2.768	3.089	6.07
July	1,313.1	.389	.602	.694	2.71
August	2,048.6	.607	.939	1.083	6.95
September	978.2	.300	.464	.517	2.04
The year	38,391.6	.966	1.494	20.297	46.99

SUDBURY RIVER AT FRAMINGHAM CENTER, MASS.

LOCATION.—Venturi meter at dam of Framingham Reservoir No. 1, half a mile above outlet of Farm Pond and three-quarters of a mile southwest of Framingham Center, Middlesex County.
DRAINAGE AREA.—75.2 square miles since 1881.
RECORDS AVAILABLE.—January, 1875, to September, 1931.
REMARKS.—Discharge corrected for storage and diversions. Municipal water supplies of surrounding towns are diverted from reservoirs above station. Wachusett Reservoir on South Branch of Nashua River is diverted into Sudbury Reservoir. Records furnished by water division of Metropolitan District Commission.

Monthly discharge and rainfall, 1930–31

Month	Run-off in million gallons	Discharge per square mile		Run-off in inches	Rainfall in inches
		Million gallons per day	Second-feet		
October	68.4	0.029	0.045	0.052	4.37
November	1,124.4	.498	.771	.860	4.36
December	328.2	.141	.218	.251	2.56
January	1,086.8	.466	.721	.832	3.95
February	2,155.2	1.024	1.584	1.649	2.57
March	8,048.9	3.453	5.342	6.159	5.89
April	4,376.6	1.943	3.006	3.349	3.12
May	2,770.6	1.188	1.839	2.120	3.87
June	4,449.6	1.972	3.052	3.405	7.18
July	727.5	.312	.483	.557	1.66
August	300.1	.129	.199	.229	4.93
September	−230.6	−.102	−.158	−.176	1.19
The year	25,205.7	.918	1.420	19.287	45.65

LAKE COCHITUATE OUTLET AT COCHITUATE, MASS.

LOCATION.—Venturi meter at outlet three-eighths of a mile north of Cochituate railroad station, Middlesex County, and 1¼ miles above confluence with Sudbury River.

DRAINAGE AREA.—17.58 square miles since 1911.

RECORDS AVAILABLE.—January, 1863, to September, 1931.

REMARKS.—Discharge corrected for storage and diversions. Municipal water supplies of surrounding towns are diverted from lake. Records furnished by water division of Metropolitan District Commission.

Monthly discharge and rainfall, 1930–31

Month	Run-off in million gallons	Discharge per square mile		Run-off in inches	Rainfall in inches
		Million gallons per day	Second-feet		
October	126.6	0.232	0.359	0.41	4.55
November	226.0	.429	.663	.74	4.30
December	154.4	.283	.438	.50	2.98
January	394.5	.724	1.120	1.291	3.76
February	611.4	1.242	1.922	2.001	2.65
March	1,612.0	2.958	4.577	5.276	6.27
April	875.9	1.663	2.573	2.867	2.92
May	641.0	1.176	1.820	2.098	4.02
June	1,149.0	2.179	3.376	3.761	6.96
July	304.9	.559	.866	.998	2.22
August	289.6	.530	.822	.948	5.62
September	152.3	.289	.447	.499	1.57
The year	6,537.6	1.019	1.576	21.389	47.82

IPSWICH RIVER BASIN

IPSWICH RIVER NEAR IPSWICH, MASS.[1]

LOCATION.—Water-stage recorder 200 feet below Willowdale Dam, 1½ miles below Howlett Brook, and 4 miles above Ipswich, Essex County.

DRAINAGE AREA.—122 square miles.

RECORDS AVAILABLE.—June, 1930, to September, 1931.

EXTREMES.—Maximum discharge, 948 second-feet Mar. 31 (gage height, 5.13 feet); minimum, 1.5 second-feet Oct. 3 (gage height, 2.32 feet).

1930–31: Maximum discharge, that of Mar. 31, 1931; minimum, that of Oct. 3, 1930.

REMARKS.—Records good. Monthly mean discharge corrected for diversions for municipal use to Reading, Lynn, Peabody, Danvers, Salem, and Beverly, Mass.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.0	28	73	62	72	325	894	350	144	179	37	56
2	2.0	28	73	57	70	302	894	320	130	164	33	53
3	1.5	26	72	53	68	288	832	292	120	152	30	52
4	1.7	23	68	51	64	279	776	274	112	141	30	49
5	2.6	37	64	49	61	258	707	254	106	130	28	46
6	2.7	40	60	88	60	288	628	241	101	130	27	43
7	2.2	37	57	97	61	283	588	222	95	135	24	37
8	2.4	34	57	106	66	283	600	212	91	158	23	33
9	3.4	32	54	117	64	396	607	212	102	161	22	30
10	3.9	28	52	125	56	656	607	208	164	179	21	27
11	3.9	24	51	128	57	911	574	219	245	189	21	24
12	3.9	22	54	125	60	911	530	233	381	186	31	22
13	3.4	22	53	130	58	894	480	245	486	176	46	21
14	2.7	20	45	128	66	824	434	279	523	170	53	18.7
15	12.7	17.6	41	122	73	768	396	311	511	161	54	22
16	27	21	37	117	79	722	365	335	499	152	56	30
17	26	46	33	112	83	670	345	340	536	144	56	33
18	24	86	30	108	117	628	315	335	588	138	53	31
19	21	104	29	104	176	574	297	311	594	133	53	29
20	18.1	108	32	102	237	548	279	283	594	128	51	29
21	16.1	106	35	99	325	542	258	262	568	122	45	31
22	14.5	102	33	97	402	542	245	245	511	115	40	30
23	14.0	99	33	93	396	536	233	245	452	106	35	29
24	17.1	99	33	90	391	530	222	254	391	101	33	27
25	28	104	31	88	391	523	216	249	345	93	32	24
26	33	104	32	84	381	562	219	237	302	84	29	23
27	33	102	43	83	360	628	254	222	262	76	29	23
28	35	97	49	79	330	663	302	205	237	68	39	22
29	32	79	60	78	-------	730	350	189	216	58	52	21
30	29	66	58	74	-------	850	365	173	195	49	57	19.4
31	28	-------	58	73	-------	939	-------	155	-------	43	58	-------

Month	Observed			Diversions in million gallons	Corrected for diversions		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	35	1.5	14.4	87.6	18.8	0.154	0.18
November	108	17.6	58.1	555.3	86.7	.711	.79
December	73	29	48.4	356.3	66.2	.543	.63
January	130	49	94.2	603.1	124	1.02	1.18
February	402	56	165	269.0	180	1.48	1.54
March	939	258	576	136.0	583	4.78	5.51
April	894	216	460	45.8	463	3.80	4.24
May	350	155	255	49.4	258	2.11	2.43
June	594	91	320	50.0	323	2.65	2.96
July	189	43	130	55.7	132	1.08	1.24
August	58	21	38.6	56.6	41.5	.340	.39
September	56	18.7	31.2	54.2	34.0	.279	.31
The year	939	1.5	182	2,319.0	192	1.57	21.40

[1] Published in 1930 report as "at Willowdale."

CHARLES RIVER BASIN

CHARLES RIVER AT WALTHAM, MASS.

LOCATION.—Water-stage recorder between Elm and Moody Streets, in Waltham.
DRAINAGE AREA.—248 square miles.
RECORDS AVAILABLE.—August and September, 1931.
EXTREMES.—Maximum discharge during period, 193 second-feet Aug. 16 17 (gage height, 1.69 feet); minimum, about 1 second-foot several times when plants were shut down.
REMARKS.—Records good. Low flow completely regulated by Boston Manufacturing Co. About one-third of all flow diverted through Mother Brook 13½ miles above station; also other small diversions for water supply.

Daily and monthly discharge, in second-feet, 1931

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1	------	122	11	40	75	21	137	57
2	------	119	12	97	75	22	129	57
3	------	116	13	146	74	23	114	57
4	45	114	14	148	54	24	81	56
5	38	114	15	157	37	25	81	56
6	38	112	16	193	37	26	81	57
7	42	101	17	193	37	27	107	56
8	54	75	18	189	40	28	122	56
9	40	75	19	163	47	29	119	50
10	41	77	20	148	57	30	119	37
						31	124	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
August 4-31	193	38	107	0.43	0.45
September	122	37	69.9	.282	.31

TAUNTON RIVER BASIN

TAUNTON RIVER AT STATE FARM, MASS.

LOCATION.—Inverted staff gage at State Farm, Plymouth County, 1 mile upstream from mouth of Saw Mill Brook.

DRAINAGE AREA.—259 square miles.

RECORDS AVAILABLE.—October, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1930, 1,550 second-feet Feb. 15 (gage height, 3.50 feet); minimum, 21 second-feet Sept. 30 (gage height, 8.96 feet).

Maximum discharge during year ending Sept. 30, 1931, 2,880 second-feet June 12 (gage height, 1.12 feet); minimum, 14 second-feet Oct. 14 (gage height, 9.12 feet).

REMARKS.—Records good. Monthly records corrected for diversions from Nemasket River to cities of Taunton and New Bedford and for pumpage from Silver Lake into Taunton River Basin for Brockton and other cities. Gage-height record furnished by State Farm.

Daily and monthly discharge, in second-feet, 1929–1931

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1929-30												
1	60	108	124	540	440	640	540	294	189	75	60	54
2	60	306	108	615	342	640	440	270	294	43	60	60
3	92	306	124	590	440	540	440	294	246	75	54	60
4	85	211	108	590	440	590	415	306	142	92	60	60
5	75	158	282	515	415	515	440	270	124	92	54	68
6	92	342	108	590	440	490	440	270	234	108	47	60
7	85	158	124	515	306	306	490	306	189	108	47	85
8	124	142	142	440	490	465	665	234	234	124	42	75
9	108	142	124	465	306	830	665	270	246	158	47	68
10	100	124	142	490	490	740	615	270	366	142	108	68
11	92	92	306	270	366	690	440	270	342	108	124	60
12	100	234	124	342	211	740	465	270	306	75	178	75
13	92	246	92	565	294	715	440	234	440	75	158	68
14	68	116	178	590	1,220	690	465	234	366	68	108	100
15	68	124	246	665	1,550	665	490	342	306	178	108	85
16	92	75	390	770	1,260	540	440	342	178	124	124	85
17	158	211	366	690	1,220	590	342	270	158	108	108	75
18	92	415	270	740	860	590	342	306	178	68	47	75
19	60	440	590	830	690	565	390	270	234	75	54	60
20	60	211	770	800	690	590	390	306	342	75	60	60
21	75	366	690	590	690	590	465	306	178	60	54	60
22	124	222	590	665	830	565	440	294	189	60	189	54
23	108	142	665	640	860	465	440	189	178	92	75	68
24	142	246	615	440	830	515	342	178	142	124	60	68
25	124	342	342	590	860	540	342	178	189	92	54	68
26	92	270	465	590	800	565	342	366	158	60	54	68
27	92	124	540	515	740	590	366	342	142	75	60	60
28	92	142	440	440	770	590	306	270	92	68	60	26
29	60	306	515	415	-------	615	270	246	142	36	68	22
30	60	158	540	465	-------	565	270	234	92	75	60	21
31	142	-------	540	490	-------	565	-------	211	-------	36	60	-------

Daily and monthly discharge, in second-feet, of Taunton River at State Farm, Mass., 1929–1931—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	22	234	234	440	222	515	1,700	515	366	290	211	390
2	22	234	440	415	306	440	1,650	366	440	342	108	306
3	22	92	306	342	342	465	1,600	366	390	270	134	366
4	22	47	142	178	178	515	1,450	490	342	168	144	366
5	26	75	75	246	211	490	1,220	415	342	168	120	366
6	26	246	234	665	246	540	1,020	366	294	258	71	306
7	22	124	142	665	178	440	1,020	342	168	490	75	246
8	22	108	75	830	178	565	860	440	246	490	144	306
9	22	47	234	366	142	1,350	890	490	390	465	318	318
10	28	32	92	342	158	1,900	890	490	1,400	465	200	306
11	26	124	142	246	211	1,950	890	800	2,640	266	189	258
12	21	26	234	490	178	1,700	800	860	2,820	286	189	211
13	17	22	108	440	124	1,450	770	740	2,580	290	318	114
14	14	60	124	366	615	1,220	740	860	2,100	290	306	92
15	22	92	142	440	690	1,060	665	1,220	1,600	278	270	96
16	60	36	60	540	590	920	640	1,260	1,180	234	211	158
17	60	234	47	234	515	830	490	1,220	1,100	246	246	222
18	30	415	60	282	715	740	540	1,020	980	246	258	246
19	26	390	178	490	1,400	740	440	860	950	154	294	168
20	26	306	60	590	1,500	715	415	690	800	271	189	85
21	22	246	47	590	1,220	665	440	640	715	234	146	92
22	22	282	75	640	980	590	465	615	665	234	178	108
23	22	270	158	615	800	590	366	690	615	246	178	100
24	75	294	211	342	590	590	366	615	565	258	222	118
25	92	270	108	440	615	615	390	665	515	282	222	200
26	75	189	92	294	590	770	440	690	490	246	150	234
27	47	178	440	282	590	770	615	590	465	218	124	134
28	36	189	615	246	540	1,600	690	490	342	218	258	104
29	36	178	590	222	------	1,550	740	490	490	306	440	75
30	92	168	665	246	------	1,900	665	440	366	258	440	88
31	294	------	590	222	------	1,900	------	306	------	258	440	------

Month	Observed			Diversions in millions of gallons	Corrected for diversions		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
1929–30							
October	158	60	92.7	283.9	107	0.413	0.48
November	440	75	216	281.1	230	.888	.99
December	770	92	344	287.2	358	1.38	1.59
January	830	270	563	241.1	575	2.22	2.56
February	1,550	211	673	192.2	684	2.64	2.75
March	830	306	590	240.0	602	2.32	2.68
April	665	270	431	244.3	444	1.71	1.91
May	366	178	272	218.7	283	1.09	1.26
June	440	92	221	190.9	230	.888	.99
July	178	36	88.7	280.1	103	.398	.46
August	189	42	78.8	292.6	93.4	.361	.42
September	100	21	63.9	296.8	79.2	.306	.34
The year	1,550	21	301	3,048.9	314	1.21	16.43
1930–31							
October	294	14	43.5	278.7	57.4	.222	.26
November	415	22	174	249.5	186	.718	.80
December	665	47	217	290.3	231	.892	1.03
January	830	178	411	274.6	425	1.64	1.89
February	1,500	124	522	245.2	536	2.07	2.16
March	1,950	440	970	224.7	982	3.79	4.37
April	1,700	366	796	259.0	809	3.12	3.48
May	1,260	306	646	218.2	657	2.54	2.93
June	2,820	168	879	237.9	891	3.44	3.84
July	490	154	303	251.8	315	1.22	1.41
August	440	71	219	238.6	231	.892	1.03
September	390	75	206	294.9	221	.853	.95
The year	2,820	14	448	3,063.4	461	1.78	24.15

WADING RIVER NEAR NORTON, MASS.

LOCATION.—Staff gage at highway bridge three-quarters of a mile above confluence with Rumford River and 1½ miles southeast of Norton, Bristol County.

DRAINAGE AREA.—42.4 square miles.

RECORDS AVAILABLE.—June, 1925, to September, 1931.

EXTREMES.—Maximum discharge during year, 768 second-feet June 11 (gage height, 9.25 feet); minimum, 0.8 second-foot several times in October (gage height, 4.50 feet).

1925–1931: Maximum discharge, that of June 11, 1931; minimum, 0.3 second-foot Sept. 10, 1926.

REMARKS.—Records fair. Monthly mean discharge corrected for diversions for Attleboro municipal supply. Some diurnal regulation from power plants and week-end storage.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.1	7.0	50	44	54	74	232	105	91	64	23	40
2	1.1	7.0	46	31	59	105	242	85	61	48	10	36
3	.8	6.4	31	27	38	98	242	91	45	28	8.6	32
4	1.5	6.2	22	23	33	105	232	79	48	22	11	33
5	1.6	10	14	27	44	105	186	79	50	22	22	27
6	1.4	9.2	14	85	57	98	195	74	40	46	20	13
7	1.4	10	12	136	45	98	186	68	25	64	20	13
8	2.1	15	15	120	31	144	186	68	34	74	18	15
9	2.1	7.0	18	64	38	434	168	91	85	85	9.2	22
10	2.6	8.1	18	46	44	389	144	152	622	68	8.1	26
11	3.3	8.6	18	38	50	302	98	204	718	57	13	21
12	2.6	8.9	19	50	44	282	105	152	622	58	48	20
13	2.2	8.6	20	74	36	282	120	160	503	66	37	9.2
14	1.6	8.9	17	74	91	232	85	223	389	59	34	12
15	5.9	10	15	74	85	177	79	223	282	58	30	21
16	44	11	16	74	59	177	74	204	242	41	32	16
17	17	15	17	52	74	160	68	186	223	54	20	10
18	11	22	15	37	128	152	79	160	228	23	24	10
19	11	53	12	64	252	144	68	120	177	15	23	10
20	11	52	15	79	168	144	74	112	152	45	28	8.9
21	16	33	18	74	120	136	66	105	128	29	29	8.6
22	6.4	33	17	85	112	120	38	105	98	33	26	10
23	5.9	28	17	79	120	112	23	98	91	46	11	8.1
24	1.1	27	18	74	112	105	31	136	85	50	14	11
25	1.4	34	20	61	112	98	54	136	79	37	22	17
26	1.4	37	21	37	98	152	59	105	74	42	20	20
27	1.9	25	23	30	91	195	152	98	64	57	18	9.6
28	2.6	23	50	29	79	186	168	98	68	83	42	8.6
29	6.4	23	61	33	-------	214	136	59	74	25	44	15
30	17	23	50	43	-------	323	128	25	64	24	31	11
31	7.0	-------	49	47	-------	252	-------	64	-------	34	29	-------

Month	Observed			Diversions in million gallons	Corrected for diversions		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	44	0.8	6.21	16.8	7.05	0.166	0.19
November	53	6.2	19.0	16.1	19.8	.467	.52
December	61	12	24.1	14.6	24.9	.587	.68
January	136	23	58.4	15.2	59.2	1.40	1.61
February	252	31	81.2	15.2	82.1	1.94	2.02
March	434	74	180	17.5	181	4.27	4.92
April	242	23	124	17.8	125	2.95	3.29
May	223	25	118	17.4	119	2.81	3.24
June	718	25	182	18.4	183	4.32	4.82
July	85	15	45.4	17.7	46.3	1.09	1.26
August	48	8.1	23.4	18.7	24.3	.573	.66
September	40	8.1	17.1	16.0	18.0	.425	.47
The year	718	.8	73.1	201.4	73.9	1.74	23.68

PROVIDENCE RIVER BASIN

BLACKSTONE RIVER AT WORCESTER, MASS.

LOCATION.—Water-stage recorder at Webster Street Bridge, Worcester, Worcester County, three-quarters of a mile above Tatnuck Brook.

DRAINAGE AREA.—31.5 square miles.

RECORDS AVAILABLE.—August, 1923, to September, 1931.

EXTREMES.—Maximum discharge during year, 935 second-feet June 10 (gage height, 5.32 feet); minimum, 0.7 second-foot Oct. 12 (gage height, 0.07 foot). 1923–31: Maximum discharge, that of June 10, 1931; minimum, 0.3 second-foot Nov. 12, 13, 1926.

REMARKS.—Records good. Diversions from about 7.0 square miles of drainage area above station. Flow regulated by storage reservoirs.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.7	8.9	9.1	8.1	11	46	138	38	26	25	12	11
2	2.5	6.8	8.4	7.1	9.4	47	180	29	27	21	11	17
3	3.1	4.8	7.1	6.6	8.6	46	151	27	28	12	13	14
4	2.0	4.2	6.1	6.6	8.4	47	135	33	26	8.1	13	13
5	1.2	8.1	5.9	7.0	8.4	41	127	30	21	7.8	10	10
6	3.5	11	5.7	20	7.8	32	106	28	18	21	8.1	8.1
7	4.2	7.8	5.3	17	7.3	29	88	26	12	23	7.6	6.1
8	3.1	6.4	5.3	14	7.6	47	96	33	15	21	8.1	5.3
9	4.3	5.3	5.5	11	8.6	157	99	38	64	24	7.8	8.1
10	4.3	3.9	5.5	8.9	10	154	86	45	626	26	8.1	11
11	1.5	3.7	5.3	7.8	10	119	70	62	522	31	8.6	14
12	2.6	4.4	5.9	7.6	8.4	98	62	56	298	13	29	8.3
13	1.5	7.5	5.9	12	8.4	94	60	54	192	17	44	2.5
14	4.3	8.1	5.7	14	20	91	48	63	142	24	26	7.3
15	2.8	4.2	5.7	12	23	91	44	66	107	26	14	15
16	2.8	5.5	5.3	9.4	23	92	38	55	88	25	12	24
17	4.2	19	4.2	8.4	21	78	42	49	114	24	14	17
18	6.8	41	4.8	7.8	50	68	33	46	115	18	13	12
19	5.7	39	5.3	10	62	84	30	38	85	12	10	11
20	3.3	18	5.7	14	49	102	32	30	67	17	9.7	10
21	4.2	9.7	5.5	12	35	98	33	26	47	18	8.9	9.7
22	5.3	13	5.3	11	29	125	29	29	48	19	8.6	9.1
23	3.8	8.6	7.3	12	29	131	28	46	29	22	7.6	13
24	4.0	7.1	8.1	8.6	28	134	29	80	44	18	8.1	11
25	10	8.1	8.1	7.3	29	126	23	67	36	10	8.4	8.6
26	7.8	7.6	8.6	6.8	31	142	28	49	30	7.6	12	9.4
27	5.3	6.8	13	8.1	37	151	105	41	26	6.4	28	9.7
28	4.8	6.1	11	8.9	41	127	81	28	12	5.7	34	8.1
29	5.9	5.3	8.4	11	------	193	57	25	22	9.0	23	7.8
30	6.8	5.3	8.4	12	------	308	46	21	28	15	12	12
31	8.6	------	8.6	12	------	180	------	21	------	9.7	16	------

Month	Observed			Corrected for diversion
	Maximum	Minimum	Mear	Mean
October	10	1.2	4.32	7.35
November	41	3.7	9.84	12.8
December	13	4.2	6.77	9.63
January	20	6.6	10.3	16.8
February	62	7.3	22.2	31.9
March	308	29	106	115
April	180	23	70.8	82.0
May	80	21	41.3	51.5
June	626	12	97.2	108
July	31	5.7	17.3	25.8
August	44	7.6	14.4	23.0
September	24	2.5	10.8	19.0
The year	626	1.2	34.2	41.9

BLACKSTONE RIVER AT WOONSOCKET, R. I.

LOCATION.—Water-stage recorder in Woonsocket, Providence County, 50 feet below mouth of Peters River.

DRAINAGE AREA.—415 square miles.

RECORDS AVAILABLE.—February, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year, 9,760 second-feet June 11 (gage height, 9.80 feet).

1929–1931: Maximum discharge, that of June 11, 1931.

Maximum discharge known, about 22,200 second-feet in November, 1927 (gage height, 14.0 feet).

REMARKS.—Records good; not corrected for storage at headwaters for water supply at Worcester or for 4 second-feet diverted around gage in Woonsocket Canal. Monthly mean discharge corrected for diversion from Nashua River to Blackstone River. Discharge estimated Dec. 16, 17, Jan. 2, 3, Feb. 1–5.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	270	114	271	124	154	546	2,360	768	510	535	156	298
2	186	126	310	224	234	802	2,690	663	684	508	151	277
3	108	246	302	264	249	816	2,520	466	594	516	270	318
4	100	250	196	116	234	834	2,100	635	524	314	300	393
5	37	251	264	236	214	887	1,880	663	470	204	285	318
6	75	228	232	354	202	812	1,690	572	320	532	285	164
7	96	236	110	478	188	685	1,480	550	158	712	251	160
8	120	148	230	510	142	1,020	1,560	604	329	660	264	274
9	148	112	233	430	254	4,570	1,570	876	872	612	143	213
10	95	159	199	352	266	3,900	1,460	862	6,440	584	236	274
11	92	211	228	226	338	2,870	1,260	1,200	8,440	480	230	238
12	40	282	238	323	310	2,160	988	1,340	5,520	330	414	164
13	36	251	193	419	266	1,840	904	1,380	3,290	456	568	154
14	103	188	144	436	329	1,610	958	1,480	2,360	514	478	272
15	198	153	206	396	358	1,540	918	1,570	1,800	436	394	287
16	188	112	214	274	444	1,590	736	1,340	1,640	380	346	262
17	204	268	204	254	501	1,570	682	948	1,670	400	417	232
18	130	412	170	192	956	1,360	604	960	1,770	300	408	230
19	164	457	198	278	1,510	1,310	446	904	1,490	244	346	178
20	166	338	170	346	1,030	1,480	564	758	1,030	341	372	167
21	115	294	135	370	780	1,400	562	670	854	396	332	277
22	154	238	160	342	626	1,340	598	718	850	367	252	338
23	150	132	258	302	734	1,630	594	598	733	336	272	278
24	112	176	232	224	680	1,620	610	620	720	363	370	291
25	103	288	180	186	688	1,590	453	892	697	286	372	203
26	77	292	182	280	710	1,630	441	892	682	218	365	182
27	202	217	304	304	782	1,930	1,410	690	606	308	318	152
28	179	194	203	292	652	1,710	1,530	632	369	368	380	223
29	180	216	290	264	------	2,260	1,160	598	508	324	364	182
30	216	130	268	255	------	4,160	984	410	554	308	225	192
31	164	------	228	196	------	3,050	------	294	------	226	298	------

Month	Observed			Corrected for diversion, mean
	Maximum	Minimum	Mean	
October	270	36	136	117
November	457	112	224	216
December	310	110	218	190
Jannary	510	116	298	289
February	1,510	142	494	483
March	4,570	546	1,760	1,760
April	2,690	441	1,190	1,190
May	1,570	294	824	824
June	8,440	158	1,550	1,550
July	712	204	405	396
August	568	143	318	309
September	393	152	240	225
The year	8,440	36	637	628

THAMES RIVER BASIN

QUINEBAUG RIVER AT PUTNAM, CONN.

LOCATION.—Water-stage recorder in Putnam, Windham County, 600 feet below outlet of Woodstock Pond and 3 miles below junction of Quinebaug and French Rivers.

DRAINAGE AREA.—332 square miles.

RECORDS AVAILABLE.—December, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year, 3,460 second-feet June 11 (gage height, 8.4 feet); minimum, 9.8 second-feet Oct. 13 (gage height, 1.41 feet). 1929–1931: Maximum discharge, that of June 11, 1931; minimum, that of Oct. 13, 1930.

REMARKS.—Records excellent. Flow regulated by numerous storage reservoirs.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47	60	252	50	40	352	2,310	616	564	400	111	285
2	38	16	138	140	160	454	2,300	494	524	450	28	229
3	74	94	148	95	140	480	2,090	314	506	400	126	213
4	82	112	138	31	160	480	1,890	647	466	150	142	147
5	11	96	154	147	170	416	1,690	494	378	35	173	144
6	88	103	122	236	160	370	1,550	506	275	500	158	79
7	50	102	56	150	115	270	1,440	306	142	550	166	78
8	60	50	136	170	40	418	1,380	554	378	400	106	208
9	50	20	116	175	142	942	1,270	578	581	364	28	152
10	64	110	116	139	176	1,150	1,150	500	2,200	424	131	174
11	26	100	126	46	160	1,030	1,070	850	3,330	224	130	183
12	11	110	127	262	165	894	951	835	2,610	82	360	162
13	56	68	79	298	165	883	926	822	1,860	351	447	31
14	50	113	26	154	250	774	814	793	1,440	342	380	124
15	68	66	131	155	80	720	769	823	1,170	327	286	132
16	68	21	142	155	234	806	712	706	1,100	190	172	116
17	96	111	116	90	301	800	572	588	1,250	245	311	146
18	58	280	126	52	431	646	594	722	1,250	167	268	142
19	15	134	111	180	430	746	304	632	1,060	43	250	106
20	115	242	85	242	573	814	422	539	825	245	254	168
21	108	172	21	174	294	868	523	450	604	175	209	104
22	63	92	114	150	225	954	514	522	695	173	117	104
23	62	26	146	150	506	1,290	384	508	504	224	78	114
24	94	191	109	95	454	1,290	400	815	584	176	142	136
25	51	148	25	45	303	1,400	326	1,000	518	142	136	144
26	17	140	124	199	376	1,590	344	918	484	100	164	131
27	99	24	138	155	391	1,730	1,010	818	320	132	214	66
28	106	122	38	176	230	1,600	1,000	620	244	138	212	118
29	109	78	123	143	------	1,970	912	550	175	175	228	124
30	100	38	136	150	------	3,050	804	334	450	168	145	157
31	100	------	138	115	------	2,780	------	414	------	151	268	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	115	11	65.7	0.198	0.23
November	280	16	101	.304	.34
December	252	21	115	.346	.40
January	298	31	146	.440	.51
February	573	40	245	.738	.77
March	3,050	270	1,030	3.10	3.57
April	2,310	304	1,010	3.04	3.39
May	1,000	306	622	1.87	2.16
June	3,330	142	883	2.66	2.97
July	550	35	247	.744	.86
August	447	28	192	.578	.67
September	285	31	141	.425	.47
The year	3,330	11	400	1.20	16.34

QUINEBAUG RIVER AT JEWETT CITY, CONN.

LOCATION.—Water-stage recorder 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.

RECORDS AVAILABLE.—July, 1918, to September, 1931.

EXTREMES.—Maximum discharge during year, 5,550 second-feet Mar. 30 (gage height, 11.7 feet); minimum, 25 second-feet Oct. 3 (gage height, 3.61 feet).
1918–1931: Maximum discharge, about 12,500 second-feet Nov. 5, 1927 (gage height, 16.6 feet); minimum, that of Oct. 3, 1930.

REMARKS.—Records good except those estimated, which are fair. Flow regulated by numerous storage reservoirs.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	192	66	508	288	38	754	4,310	1,570	e1,200	e786	40	611
2	173	e47	489	254	428	1,130	4,260	1,180	e1,150	640	40	660
3	44	e225	410	350	525	e1,200	4,040	860	e1,150	692	267	580
4	40	e200	362	35	376	e1,200	3,500	1,170	e1,100	e410	474	468
5	28	e312	356	410	420	e1,150	3,200	1,300	e1,050	e48	311	546
6	49	298	185	576	363	e1,050	3,020	1,060	e900	e900	458	40
7	202	230	42	624	158	e900	2,610	1,060	e400	e1,050	e400	38
8	144	e56	e300	564	46	e1,500	2,520	952	e800	e1,020	e360	478
9	114	e39	e350	588	473	e3,500	2,420	1,570	1,030	934	43	453
10	109	e250	e300	492	447	e3,950	2,190	e1,400	2,790	860	332	538
11	104	e175	e300	38	610	2,990	1,940	e1,850	4,980	e750	570	412
12	32	e250	e300	599	460	2,440	1,680	e2,050	4,980	e150	702	52
13	118	e250	e125	646	e400	2,210	1,860	e2,260	3,660	e700	1,120	32
14	120	e300	e40	790	e500	1,970	1,760	2,320	2,650	e800	1,080	334
15	132	e90	e350	596	704	1,670	1,550	2,300	2,490	667	837	392
16	167	e40	e300	526	830	2,020	1,460	e2,050	2,380	740	688	354
17	121	e500	e350	384	814	1,970	1,350	e1,700	2,700	425	626	354
18	111	e550	e300	191	1,000	1,850	1,090	e1,900	2,610	458	536	366
19	48	e500	e268	562	1,750	1,710	864	e1,700	2,190	86	673	67
20	173	e500	e59	632	1,600	1,910	1,120	e1,400	1,660	424	596	34
21	170	e400	39	606	1,270	1,860	1,040	e1,200	1,180	490	545	418
22	182	e300	276	656	858	1,730	1,060	e1,250	e1,300	600	230	433
23	158	e45	300	552	960	2,220	1,050	1,300	e1,100	549	44	452
24	225	e328	363	338	1,160	2,390	947	2,010	e1,200	524	486	446
25	130	336	35	38	e1,030	2,390	728	2,280	1,140	383	368	392
26	39	396	206	440	913	2,670	710	2,080	e1,100	192	374	112
27	e225	45	182	448	1,030	3,080	2,380	e1,770	e800	346	406	39
28	e175	352	396	572	841	2,810	2,620	e1,400	690	533	490	283
29	e178	93	368	412	-------	2,980	2,150	e1,200	487	456	288	306
30	194	52	438	403	-------	5,120	1,870	e900	972	448	262	335
31	182	-------	412	312	-------	5,030	-------	e1,000	-------	328	395	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	225	28	132	0.185	0.21
November	550	39	241	.338	.38
December	508	35	281	.395	.46
January	790	35	449	.631	.73
February	1,750	38	714	1.00	1.04
March	5,120	754	2,240	3.15	3.63
April	4,310	710	2,040	2.87	3.20
May	2,320	860	1,550	2.18	2.51
June	4,980	400	1,730	2.43	2.71
July	1,050	48	561	.788	.91
August	1,120	40	453	.636	.73
September	660	32	334	.469	.52
The year	5,120	28	893	1.25	17.03

e Estimated.

SHETUCKET RIVER AT SOUTH WINDHAM, CONN.

LOCATION.—Water-stage recorder at highway bridge at South Windham, Windham County, 4 miles below Willimantic and confluence of Willimantic and Natchaug Rivers. Zero of gage is 125.20 feet above mean sea level.

DRAINAGE AREA.—406 square miles.

RECORDS AVAILABLE.—November, 1919, to September, 1921; September, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 4,600 second-feet Mar. 30; minimum not determined but probably less than 50 second-feet.

1919–1921, 1928–1931: Maximum discharge, 8,900 second-feet Dec. 15, 1920 (gage height, 9.0 feet); minimum, 25 second-feet Sept. 27, 1920, Sept. 10, 1921 (gage height, 1.45 feet).

REMARKS.—Records fair. Stage-discharge relation affected by power operations at plant of Connecticut Light & Power Co. at Scotland Station, 3½ miles below gage. Discharge computed on basis of slope determinations, waste gate and spillway ratings, and input-output curve, derived from base data recorded at power plant and gaging station. Low-water discharge partly estimated Oct. 1 to Dec. 26. Discharge estimated July 5–9, Aug. 20–23. Regulation from mills upstream. Power plant data furnished by Connecticut Light & Power Co.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	115	115	223	182	200	502	1,860	691	584	286	135	114
2	110	110	296	203	200	520	2,300	637	680	263	100	117
3	110	150	190	160	200	590	1,830	556	585	250	109	152
4	90	125	175	207	150	600	1,400	600	470	225	134	153
5	75	120	224	186	220	543	1,290	538	409	220	134	129
6	110	110	125	340	180	500	1,190	506	344	290	129	117
7	110	120	105	478	140	472	1,210	486	261	470	134	109
8	115	120	245	360	200	682	1,440	505	428	400	134	122
9	110	110	155	340	240	2,890	1,210	1,430	829	335	108	96
10	156	110	195	286	220	2,370	1,130	1,310	2,700	362	134	111
11	110	115	190	232	240	1,450	984	1,440	3,560	313	147	102
12	75	125	160	261	240	1,140	952	1,390	2,120	249	370	86
13	110	120	140	320	240	1,050	868	1,270	1,380	276	862	108
14	105	125	125	320	400	1,020	777	1,200	1,020	282	635	105
15	125	120	145	280	380	1,110	706	1,300	840	250	404	111
16	115	178	125	240	400	1,040	654	1,140	1,080	243	356	122
17	100	264	135	240	400	1,070	587	970	1,560	238	246	122
18	95	433	135	207	500	880	605	810	1,760	268	290	131
19	75	387	120	260	750	1,020	580	700	1,210	246	250	130
20	100	341	130	260	750	1,010	529	680	850	252	245	114
21	110	242	110	280	550	1,080	520	612	617	238	210	119
22	120	222	115	240	500	1,270	501	630	504	211	140	126
23	105	203	125	254	480	1,280	514	835	475	225	140	124
24	110	200	135	220	505	1,330	495	2,030	430	248	157	150
25	90	185	115	150	487	1,380	441	1,500	414	195	138	138
26	75	245	135	227	470	1,980	554	1,220	364	140	142	102
27	120	176	220	190	522	1,980	1,630	910	370	214	120	102
28	120	207	236	237	517	1,680	1,340	688	256	170	124	135
29	125	140	250	231	-------	2,170	1,160	653	261	153	145	145
30	125	95	241	200	-------	4,100	850	571	314	157	116	129
31	157	-------	241	160	-------	2,420	-------	373	-------	147	136	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	157	75	109	0.268	0.31
November	433	95	177	.436	.49
December	296	105	170	.419	.48
January	478	150	250	.616	.71
February	750	140	367	.904	.94
March	4,100	472	1,330	3.28	3.78
April	2,300	441	1,000	2.46	2.74
May	2,030	373	909	2.24	2.58
June	3,560	256	889	2.19	2.44
July	470	140	252	.621	.72
August	862	100	214	.527	.61
September	153	86	121	.298	.33
The year	4,100	75	483	1.19	16.13

NATCHAUG RIVER AT WILLIMANTIC, CONN.

LOCATION.—Water-stage recorder 200 feet below New York, New Haven & Hartford Railroad bridge and 1 mile northeast of Willimantic, Windham County.
DRAINAGE AREA.—170 square miles.
RECORDS AVAILABLE.—October, 1930, to September, 1931.
EXTREMES.—Maximum discharge during period, 2,520 second-feet Mar. 30 (gage height, 7.5 feet); minimum, 8.8 second-feet Sept. 13 (gage height, 0.97 foot).
REMARKS.—Records good except those for period of ice effect, Dec. 29 to Feb. 16, and those for period of backwater from bridge-pier construction, Aug. 7–22, which are fair. City of Willimantic diverts water for domestic supply at reservoir 2 miles above gage.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-------	26	92	65	70	249	984	330	254	96	30	53
2	-------	57	180	60	75	280	1,300	284	284	89	19	57
3	-------	56	101	55	65	310	1,020	284	222	78	26	54
4	-------	54	106	65	65	298	825	270	181	73	28	52
5	-------	18	96	75	60	250	736	244	160	71	23	54
6	10	28	78	150	70	256	620	221	136	80	34	54
7	11	34	76	240	60	258	548	198	123	226	35	50
8	11	39	78	200	65	324	604	227	190	178	29	23
9	16	40	76	160	70	1,400	550	728	363	156	30	25
10	59	34	74	120	75	1,240	469	606	1,500	142	26	18
11	11	39	76	110	70	815	437	618	1,630	130	28	23
12	10	41	69	120	75	640	418	570	1,020	108	150	25
13	10	38	66	140	95	588	366	568	694	90	430	31
14	10	38	67	150	130	510	337	526	487	91	238	22
15	16	46	64	140	160	530	306	560	378	86	163	20
16	14	69	67	120	170	516	281	496	418	89	148	32
17	13	110	60	100	192	496	270	418	722	78	114	24
18	16	230	66	85	262	418	270	549	785	70	98	28
19	15	200	60	100	446	512	258	440	483	60	84	35
20	16	144	64	130	368	594	230	289	347	56	74	30
21	16	104	33	120	314	600	223	260	264	53	62	40
22	16	82	18	95	288	702	213	264	210	64	52	30
23	16	69	42	80	254	720	207	403	181	55	52	30
24	17	62	48	65	261	752	210	952	190	62	48	35
25	18	64	48	75	256	791	200	638	172	53	50	20
26	18	93	66	75	270	1,080	240	454	146	52	53	25
27	27	88	80	80	254	1,070	1,110	346	136	56	34	30
28	26	68	80	85	272	869	736	276	122	50	15	20
29	31	54	75	80	-------	1,170	488	232	96	50	62	24
30	62	56	70	75	-------	2,210	405	197	96	50	52	22
31	62	-------	65	80	-------	1,310	-------	188	-------	57	51	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October 6–31	62	10	21.0	0.124	0.12
November	230	18	69.4	.408	.46
December	180	18	72.3	.425	.49
January	240	55	106	.624	.72
February	446	60	172	1.01	1.05
March	2,210	249	702	4.13	4.76
April	1,300	200	495	2.91	3.25
May	952	188	408	2.40	2.77
June	1,630	96	400	2.35	2.62
July	226	50	85.5	.503	.58
August	430	15	75.4	.444	.51
September	57	18	32.9	.194	.22

YANTIC RIVER AT YANTIC, CONN.

LOCATION.—Water-stage recorder 700 feet below highway bridge at Yantic, New London County, and 1 mile below Susquetonscut Brook.
DRAINAGE AREA.—89.0 square miles.
RECORDS AVAILABLE.—October, 1930, to September, 1931.
EXTREMES.—Maximum discharge during period, 1,900 second-feet Mar. 8 (gage height, 8.0 feet); minimum, 2.9 second-feet Oct. 13 (gage height, 0.41 foot).
REMARKS.—Records good except those estimated, Jan. 30 to Feb. 12, which are fair. Low-water flow completely regulated at Yantic Mills, 700 feet above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-------	15	71	53	20	153	390	158	122	61	30	49
2	-------	13	106	54	55	183	514	135	121	59	8.8	48
3	-------	13	64	39	65	167	371	137	92	18	8.5	73
4	-------	13	19	14	55	153	305	140	88	11	11	102
5	-------	13	36	47	60	132	270	110	71	11	8.8	77
6	5.3	11	32	113	55	117	232	88	38	53	8.5	46
7	6.6	14	14	169	20	101	221	82	44	185	8.5	43
8	6.9	12	62	138	20	518	260	114	92	143	9.2	97
9	6.6	10	56	106	55	1,480	227	302	145	112	10	73
10	5.6	14	60	62	70	780	186	280	582	73	59	53
11	4.8	11	14	51	120	459	175	280	481	50	59	52
12	4.0	11	24	101	90	344	158	241	318	53	195	36
13	3.3	11	30	114	76	318	159	265	229	71	264	11
14	5.8	11	9.2	131	277	278	133	278	162	61	228	58
15	11	13	21	110	259	265	126	262	137	58	128	53
16	8.8	52	30	102	184	253	113	214	249	58	114	54
17	26	113	10	26	141	228	110	220	543	15	113	57
18	8.8	121	9.4	37	320	200	103	196	483	15	90	59
19	8.5	115	9.0	102	391	198	110	152	296	17	86	37
20	10	68	29	108	252	206	121	132	193	58	81	11
21	11	62	7.4	107	183	200	99	124	135	68	14	57
22	10	35	9.2	91	148	195	92	136	115	74	45	62
23	11	11	10	96	137	188	78	259	89	66	12	64
24	12	63	12	19	152	166	74	405	92	67	79	51
25	10	35	8.5	18	145	179	88	293	85	22	81	46
26	7.4	40	61	69	154	302	205	219	76	14	12	29
27	11	12	42	63	148	303	521	168	45	58	9.6	11
28	11	14	19	58	136	237	350	130	38	57	36	59
29	13	12	79	19	-------	565	244	91	76	56	63	62
30	13	8.8	62	55	-------	794	189	85	66	58	25	57
31	15	-------	60	20	-------	455	-------	83	-------	57	61	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October 6–31	26	3.3	9.48	0.107	0.10
November	121	8.8	31.6	.355	.40
December	106	7.4	34.7	.390	.45
January	169	14	73.9	.830	.96
February	391	20	135	1.52	1.58
March	1,480	101	326	3.66	4.22
April	521	74	207	2.33	2.60
May	405	82	186	2.09	2.41
June	582	38	177	1.99	2.22
July	185	11	57.4	.645	.74
August	264	8.5	63.2	.710	.82
September	102	11	52.9	.594	.66

CONNECTICUT RIVER BASIN

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

LOCATION.—Water-stage recorder a quarter of a mile below dam at First Connecticut Lake and 6 miles northeast of Pittsburg, Coos County.

DRAINAGE AREA.—82.5 square miles.

RECORDS AVAILABLE.—April, 1917, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,650 second-feet Nov. 16 (gage height, 3.92 feet); minimum, 5.4 second-feet Mar. 23 (gage height, 1.46 feet). 1917–1931: Maximum discharge, 1,810 second-feet May 27, 1930; minimum, 2.8 second-feet Mar. 16, 1929 (gage height, 1.40 feet).

REMARKS.—Records good. Discharge interpolated Oct. 24–27. Storage developed above station, 3,840 million cubic feet. Monthly mean discharge corrected for storage in First and Second Connecticut Lakes.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	12	113	642	285	114	6.6	11	13	13	14	15
2	40	12	12	642	285	100	6.6	11	13	13	14	15
3	80	12	12	399	285	92	7.0	11	13	13	14	15
4	235	95	12	195	285	84	7.0	11	13	13	14	15
5	235	249	12	199	290	79	7.0	11	13	13	14	15
6	240	239	12	199	290	76	7.0	11	13	13	14	15
7	240	210	12	195	285	107	7.0	11	13	13	14	15
8	245	12	184	195	285	123	7.6	11	13	13	14	15
9	245	12	413	391	285	114	7.6	11	13	13	14	15
10	240	12	413	501	290	100	7.6	11	13	13	14	15
11	240	12	413	501	290	92	8.8	11	13	13	14	29
12	240	12	413	494	290	92	8.2	11	13	13	14	15
13	240	12	406	501	290	94	8.2	12	13	13	14	15
14	240	12	406	508	290	110	8.2	12	13	13	14	15
15	240	149	406	516	290	117	8.2	12	13	13	14	15
16	240	320	406	508	290	104	8.8	12	13	13	14	15
17	235	12	406	420	290	94	8.8	12	13	13	14	15
18	128	12	406	280	290	87	9.4	12	13	13	14	15
19	28	12	400	280	296	81	9.4	12	13	13	14	15
20	23	12	400	280	296	74	9.4	12	13	13	14	15
21	12	12	400	280	285	67	9.4	12	13	14	14	16
22	39	12	400	280	249	62	9.4	12	13	13	14	16
23	97	12	406	280	221	49	10	12	13	13	14	16
24	90	12	406	280	195	5.8	10	12	13	13	14	17
25	90	12	453	280	170	5.8	10	13	13	13	14	16
26	90	12	632	285	152	5.8	11	13	13	13	14	16
27	90	12	622	290	137	6.2	11	13	13	13	14	16
28	84	12	622	290	123	6.2	11	13	13	13	14	16
29	57	161	622	290	-------	6.2	11	13	13	14	15	16
30	12	301	622	290	-------	6.2	11	13	13	14	15	16
31	12	-------	632	285	-------	6.6	-------	13	-------	14	15	-------

Month	Observed			Gain or loss in storage (millions of cubic feet)	Corrected for storage		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	245	12	141	−266.4	41.4	0.502	0.58
November	320	12	66.3	+136.3	119	1.44	1.61
December	632	12	357	−688.5	100	1.21	1.40
January	642	195	354	−786.8	60.3	.731	.84
February	296	123	261	−519.1	46.5	.564	.59
March	123	5.8	69.7	−61.5	46.7	.566	.65
April	11	6.6	8.74	+1,301.0	511	6.19	6.91
May	13	11	11.8	+946.7	365	4.42	5.10
June	13	13	13.0	+335.0	142	1.72	1.92
July	14	13	13.1	+208.3	90.9	1.10	1.27
August	15	14	14.1	+159.3	73.6	.892	1.03
September	29	15	15.8	+475.5	199	2.41	2.69
The year	642	5.8	110	+1,239.8	149	1.81	24.59

CONNECTICUT RIVER AT NORTH STRATFORD, N. H.

LOCATION.—Water-stage recorder in North Stratford, Coos County, 400 feet below mouth of Nulhegan River. Zero of gage is 880.00 feet above mean sea level.

DRAINAGE AREA.—797 square miles.

RECORDS AVAILABLE.—August, 1930, to September, 1931.

EXTREMES.—Maximum discharge during year, 12,800 second-feet Apr. 12 (gage height, 9.62 feet); minimun, 204 second-feet July 4 (gage height 2.71 feet. 1930–31: Maximum discharge, that of Apr. 12, 1931; minimum, 51 second-feet Sept. 11, 1930 (gage height, 2.19 feet).

REMARKS.—Records excellent except those during period of ice effect, Dec. 14 to Mar. 25, which are good. Flow regulated by storage in First and Second Connecticut Lakes. Storage above station, 3,840,000,000 cubic feet Monthly mean discharge corrected for storage in First and Second Connecticut Lakes.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	313	746	1,580	1,040	515	370	1,470	1,960	1,110	309	1,470	258
2	309	626	1,360	1,020	515	355	1,830	1,760	946	287	978	332
3	318	530	1,100	1,030	510	330	2,900	2,680	732	253	1,310	518
4	309	488	1,190	750	510	315	3,540	3,300	580	241	3,970	612
5	377	696	1,110	445	505	305	2,980	2,530	512	245	2,460	500
6	424	2,020	889	425	505	305	2,760	2,230	567	258	1,350	512
7	436	1,760	768	425	505	305	2,830	2,020	696	241	946	946
8	430	1,210	739	420	500	320	2,760	1,700	732	230	746	783
9	424	1,960	753	425	500	335	3,380	1,640	2,790	266	654	580
10	424	882	994	575	500	320	4,440	1,580	4,630	1,200	761	419
11	419	798	1,010	730	500	305	9,270	1,760	2,680	1,760	732	327
12	403	710	1,010	730	500	300	11,500	2,090	1,700	1,000	675	282
13	408	725	913	730	500	300	6,910	1,640	1,290	689	798	270
14	419	798	845	735	505	300	6,910	1,700	986	567	768	270
15	403	835	800	730	510	320	6,000	3,380	874	518	605	296
16	430	897	748	735	510	330	3,970	2,760	1,290	476	612	382
17	447	1,080	734	735	505	360	3,300	3,540	1,160	488	605	494
18	626	962	734	635	500	350	3,220	2,600	921	408	494	768
19	696	938	741	525	505	360	3,880	1,760	718	322	476	612
20	506	851	762	520	505	380	3,790	1,440	524	327	382	500
21	441	761	785	520	505	435	4,340	1,280	488	561	357	798
22	352	682	800	520	485	505	4,530	1,350	447	2,120	300	4,520
23	296	619	792	520	475	600	3,970	1,160	398	2,380	282	6,220
24	309	555	778	520	460	760	3,220	1,960	388	1,270	266	4,440
25	633	689	770	520	445	915	2,460	2,460	342	978	253	4,630
26	1,030	1,130	785	520	430	994	1,900	2,160	327	882	245	2,980
27	1,040	970	1,010	515	405	1,140	2,900	1,580	377	805	237	3,140
28	874	574	1,060	515	395	1,520	2,900	1,200	555	640	237	2,530
29	970	567	1,090	515	-------	1,760	2,380	1,000	459	764	245	1,830
30	1,120	661	1,100	515	-------	2,020	2,380	835	388	3,140	258	1,420
31	938	-------	1,080	515	-------	1,760	-------	843	-------	2,090	270	------

Month	Observed			Gain or loss in storage (millions of cubic feet)	Corrected for storage		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	1,120	296	533	−266.4	434	0.545	0.63
November	2,020	488	891	+136.3	943	1.18	1.32
December	1,580	734	930	−688.5	673	.844	.97
January	1,040	420	615	−786.8	321	.403	.46
February	515	395	489	−519.1	275	.345	.36
March	2,020	300	612	−61.5	589	.739	.85
April	11,500	1,470	3,950	+1301.0	4,460	5.60	6.25
May	3,540	835	1,930	+946.7	2,290	2.87	3.31
June	4,630	327	987	+335.0	1,120	1.41	1.57
July	3,140	230	830	+208.3	907	1.14	1.31
August	3,970	237	766	+159.3	825	1.04	1.20
September	6,220	258	1,410	+475.5	1,590	1.99	2.22
The year	11,500	230	1,160	+1,239.8	1,200	1.51	20.45

CONNECTICUT RIVER AT WATERFORD, VT.

LOCATION.—Chain gage at bridge at Waterford, Caledonia County, 10 miles above mouth of Passumpsic River. Gage reads elevation above mean sea level.

DRAINAGE AREA.—1,600 square miles.

RECORDS AVAILABLE.—March, 1927, to September, 1931.

EXTREMES.—Maximum discharge during year, 15,300 second-feet Apr. 13 (gage height, 661.45 feet); minimum, 262 second-feet Oct. 6 (gage height, 654.00 feet).

1927–1931: Maximum discharge, 43,800 second-feet Apr. 9, 1928 (gage height, 677.45 feet); minimum, 231 second-feet Aug. 8, 1927 (gage height, 654.18 feet).

REMARKS.—Records good. Stage-discharge relation affected by ice Dec. 16 to Mar. 27. Slight diurnal regulation. Storage developed above station, 3,840 million cubic feet. Monthly mean discharge corrected for storage in First and Second Connecticut Lakes. Gage-height record furnished by New England Power Construction Co.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	742	1,820	1,340	1,130	670	572	3,470	4,420	1,820	985	2,980	544
2	742	1,510	2,670	1,130	635	544	4,020	3,650	2,090	1,030	2,090	544
3	635	900	2,370	1,180	635	544	4,420	3,650	1,690	1,080	1,030	780
4	742	1,400	1,950	1,130	635	515	6,380	5,280	1,400	572	2,090	780
5	310	940	1,820	1,030	635	515	6,160	5,280	1,340	346	4,020	1,180
6	410	2,370	1,820	940	635	544	5,720	4,420	1,080	435	2,820	1,030
7	572	3,300	1,820	780	635	544	5,280	4,420	1,030	780	1,950	900
8	742	3,300	1,450	544	635	515	5,060	4,220	1,450	742	1,400	742
9	670	2,230	1,820	604	635	435	5,280	3,830	2,980	460	1,130	1,280
10	705	1,820	1,510	670	635	460	6,160	3,650	7,750	940	1,030	1,030
11	705	1,820	1,450	705	635	488	9,150	4,020	8,010	1,400	940	780
12	742	1,400	1,570	820	635	460	14,200	4,420	5,280	2,370	1,280	780
13	572	1,230	1,570	900	635	488	15,300	4,420	3,830	1,510	1,230	544
14	860	1,340	1,400	1,030	705	488	13,100	3,650	2,520	1,340	1,180	365
15	780	1,510	985	940	635	488	11,700	5,280	2,370	1,180	1,180	705
16	705	1,570	940	860	572	572	9,750	6,380	2,090	985	1,080	572
17	705	1,510	900	985	670	572	7,270	5,720	2,670	940	705	705
18	860	2,670	940	820	705	544	6,380	5,500	2,090	860	940	820
19	1,400	2,370	985	820	670	604	6,380	4,420	1,820	780	820	1,030
20	1,450	2,230	985	820	742	705	7,040	3,300	1,280	365	860	1,400
21	1,230	1,820	1,030	742	670	820	7,500	3,140	1,180	544	820	1,130
22	820	1,820	1,030	705	670	820	8,010	2,980	1,130	1,230	780	1,450
23	860	1,570	1,030	635	670	1,030	8,570	2,980	1,080	2,670	705	8,010
24	780	1,400	1,030	572	705	1,280	7,500	3,470	1,030	2,980	780	8,010
25	1,510	1,690	940	544	670	1,820	6,160	3,860	1,080	1,820	460	6,820
26	1,820	2,090	940	515	604	1,950	4,630	4,840	1,030	1,450	460	6,160
27	2,090	2,670	940	742	705	2,520	5,280	4,020	660	1,080	572	5,280
28	1,950	1,690	985	742	604	3,140	6,600	3,140	770	1,400	604	5,280
29	1,690	1,340	1,080	705	-------	3,830	5,280	2,670	1,340	1,130	460	4,020
30	1,950	1,130	1,130	670	-------	4,630	4,630	2,020	1,230	1,950	635	3,300
31	2,090	-------	1,230	670	-------	4,420	-------	1,690	-------	3,830	488	-------

Month	Observed			Gain or loss in storage (millions of cubic feet)	Corrected for storage		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	2,090	310	1,030	−266.4	928	0.580	0.67
November	3,300	900	1,820	+136.3	1,870	1.17	1.30
December	2,670	900	1,340	−688.5	1,090	.681	.79
January	1,180	515	809	−786.8	515	.322	.37
February	742	572	653	−519.1	439	.274	.29
March	4,630	435	1,190	−61.5	1,170	.731	.84
April	15,300	3,470	7,210	+1,301.0	7,710	4.82	5.38
May	6,380	1,690	4,020	+946.7	4,370	2.73	3.15
June	8,010	770	2,180	+335.0	2,310	1.44	1.61
July	3,830	346	1,260	+208.3	1,340	.838	.97
August	4,020	460	1,210	+159.3	1,270	.794	.92
September	8,010	365	2,200	+475.5	2,380	1.49	1.66
The year	15,300	310	2,070	+1,239.8	2,110	1.32	17.95

CONNECTICUT RIVER AT SOUTH NEWBURY, VT.

LOCATION.—Water-stage recorder below bridge at South Newbury, Orange County, 4 miles above mouth of Waits River.

DRAINAGE AREA.—2,830 square miles.

RECORDS AVAILABLE.—July, 1918, to September, 1931 (incomplete).

EXTREMES.—Maximum discharge during year, 20,100 second-feet Apr. 14 (gage height, 16.73 feet); minimum, 316 second-feet Sept. 13, 14 (gage height, 0.04 foot).

1918–1931: Maximum discharge, 78,000 second-feet Nov. 5, 1927 (gage height, 35.4 feet); minimum, that of Sept. 13, 14, 1931.

REMARKS.—Records excellent except those during period of ice effect, Dec. 14 to Mar. 24, which are good. Slight diurnal regulation. Storage developed above station, 5,140 million cubic feet. Monthly mean discharge corrected for storage in First and Second Connecticut Lakes and at Fifteenmile Falls.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	732	2,280	2,500	1,810	610	1,200	7,740	6,540	2,360	1,840	4,480	870
2	995	1,420	3,940	1,520	650	940	6,420	5,140	3,640	1,980	2,200	995
3	1,030	960	3,540	1,420	1,080	1,670	7,140	5,250	2,950	1,660	2,050	1,150
4	696	1,420	3,740	1,090	1,250	2,000	10,100	4,810	3,440	900	1,980	1,770
5	810	1,770	2,950	1,450	1,260	1,850	8,700	7,500	2,520	756	3,840	1,560
6	768	2,680	2,280	1,720	1,020	1,760	7,020	9,090	1,770	960	4,480	465
7	690	3,640	1,560	1,600	1,000	1,450	10,300	7,980	1,490	1,350	2,680	390
8	1,060	4,810	2,360	1,760	600	960	8,960	6,900	1,910	1,090	2,120	768
9	995	3,200	2,680	1,160	750	980	10,000	6,300	8,830	1,180	1,490	1,840
10	900	2,520	2,770	700	1,240	1,450	10,700	3,640	16,400	1,980	930	1,740
11	630	2,570	2,120	440	1,240	1,960	13,700	5,470	13,800	8,460	1,700	1,660
12	930	1,770	2,200	470	910	1,700	16,900	7,500	10,800	3,860	1,980	530
13	465	1,880	1,840	1,590	920	1,200	19,500	6,780	6,060	2,050	2,280	336
14	1,120	2,200	1,400	1,610	900	1,180	19,300	8,220	2,360	2,360	1,840	607
15	870	1,520	870	1,240	740	1,060	17,400	10,100	2,280	2,050	1,910	1,180
16	1,350	2,080	1,950	1,230	930	1,200	14,900	9,870	3,940	1,840	1,600	1,840
17	995	3,210	1,620	930	1,270	1,500	14,300	7,500	4,700	1,700	840	1,740
18	995	6,500	1,350	400	1,480	1,650	10,100	7,020	4,150	1,180	1,420	1,700
19	1,240	3,800	970	330	1,460	1,740	7,140	8,220	2,950	960	1,460	1,320
20	1,210	3,640	1,290	1,370	1,330	1,750	9,740	7,140	1,840	840	1,520	465
21	1,560	3,040	1,390	1,380	1,110	1,740	11,000	5,580	1,060	1,150	1,280	1,410
22	1,560	2,440	900	1,590	680	1,850	11,800	4,700	2,360	3,840	1,210	2,520
23	1,420	1,460	1,950	1,510	800	2,550	12,100	4,920	1,600	5,820	995	10,000
24	1,060	1,150	2,020	1,030	1,100	3,300	12,800	8,700	2,680	3,640	612	13,100
25	1,560	1,980	1,040	1,150	1,300	5,030	10,400	7,260	1,420	2,680	1,030	11,500
26	3,240	2,860	1,160	800	1,500	5,820	7,020	9,090	1,380	2,200	780	10,100
27	2,770	2,950	1,550	1,400	1,500	6,540	7,380	8,340	1,910	1,630	840	6,540
28	4,480	2,200	1,880	1,340	1,100	5,580	10,100	7,020	1,420	1,770	810	4,370
29	3,640	2,200	980	1,450	-------	5,820	9,480	4,480	1,180	1,910	995	6,300
30	3,090	1,380	1,640	1,370	-------	7,980	8,960	2,120	1,660	2,700	870	4,590
31	2,520	-------	1,600	940	-------	8,700	-------	1,980	-------	5,580	672	-------

Month	Observed			Gain or loss in storage (millions of cubic feet)	Corrected for storage		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	4,480	465	1,460	−520.8	1,270	0.449	0.52
November	6,500	960	2,520	+468.1	2,700	.954	1.06
December	3,940	870	1,940	−709.9	1,670	.590	.68
January	1,810	330	1,220	−816.3	915	.323	.37
February	1,500	600	1,060	−482.8	862	.305	.32
March	8,700	940	2,710	−570.4	2,500	.883	1.02
April	19,500	6,420	11,000	+1,459.1	11,600	4.10	4.57
May	10,100	1,980	6,620	+1,442.2	7,160	2.53	2.92
June	16,400	1,060	3,830	+459.4	4,010	1.42	1.58
July	8,460	756	2,320	+28.8	2,330	.823	.95
August	4,480	612	1,710	+167.3	1,770	.625	.72
September	13,100	336	3,110	+760.6	3,410	1.20	1.34
The year	19,500	330	3,290	+1,685.3	3,350	1.18	16.05

CONNECTICUT RIVER AT WHITE RIVER JUNCTION, VT.

LOCATION.—Water-stage recorder below railroad bridge at White River Junction, Windsor County immediately below mouth of White River. Zero of gage is 321.59 feet above mean sea level. Prior to Nov. 3, 1930, chain gage with same datum at same location.

DRAINAGE AREA.—4,120 square miles.

RECORDS AVAILABLE.—November, 1911, to September, 1931.

EXTREMES.—Maximum discharge during year, 30,100 second-feet Apr. 11 (gage height, 14.90 feet); minimum, 640 second-feet Oct. 12 (gage height, 3.70 feet).

1911–1931: Maximum discharge, 148,000 second-feet Nov. 4, 1927 (gage height, 35.0 feet); minimum, 560 second-feet Sept. 8, 1913 (gage height, 2.8 feet).

REMARKS.—Records good except those for periods of ice effect, Dec. 13–20, Dec. 31 to Mar. 15, and estimated discharge Oct. 1, which are fair. Monthly mean discharge corrected for storage in First and Second Connecticut Lakes and at Fifteenmile Falls.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,100	3,340	3,420	2,480	1,450	1,900	11,700	10,800	4,130	2,460	6,260	1,150
2	970	2,670	4,900	2,300	1,450	1,900	11,700	8,660	4,600	2,810	4,600	1,300
3	1,150	1,940	4,900	2,100	1,620	1,820	11,400	8,660	5,200	2,670	3,030	1,820
4	1,300	1,500	5,000	1,950	2,000	2,500	16,300	7,660	4,400	2,140	2,960	2,260
5	890	1,940	5,200	1,800	2,000	3,000	16,900	8,400	4,600	1,500	3,340	2,670
6	1,060	4,400	4,130	2,280	1,750	2,800	12,300	10,800	4,400	1,350	4,900	2,070
7	930	4,900	3,420	2,590	1,680	2,500	15,600	11,100	3,340	1,500	4,800	1,150
8	850	5,400	2,880	2,410	1,400	2,100	15,600	9,190	4,400	1,820	3,260	850
9	1,250	5,400	3,770	2,470	1,120	1,800	15,900	8,920	9,730	1,940	2,740	850
10	1,250	3,600	4,040	1,800	1,400	1,850	16,900	7,420	21,400	4,680	2,400	1,940
11	1,150	3,510	3,510	1,500	1,800	2,750	23,700	6,260	19,600	11,400	2,000	2,200
12	745	3,030	3,180	1,200	1,870	3,050	27,200	9,190	15,600	9,460	2,670	2,000
13	1,100	2,600	2,850	985	1,450	2,500	24,800	8,920	11,700	5,200	3,260	970
14	930	3,030	2,300	1,780	1,260	2,100	24,400	9,730	7,180	4,040	3,340	866
15	1,010	2,740	2,000	2,000	1,300	1,950	24,800	13,800	4,400	3,770	2,740	794
16	1,150	2,600	2,250	2,160	1,370	1,940	21,100	13,500	5,400	3,340	2,810	1,760
17	1,660	3,100	2,450	2,200	1,570	2,070	19,300	11,700	7,900	2,880	2,140	2,600
18	1,450	7,420	2,600	1,600	1,950	2,260	17,200	8,400	7,900	2,460	1,600	2,530
19	1,400	6,720	2,590	1,400	2,060	2,400	14,100	10,000	6,260	2,070	2,070	2,400
20	1,710	5,400	2,400	1,320	2,060	2,530	12,600	9,460	4,900	1,760	2,200	1,760
21	1,550	5,000	2,260	1,780	2,000	2,600	15,300	8,150	3,180	2,290	2,140	1,880
22	1,940	4,130	2,960	2,270	1,690	2,740	15,900	7,180	2,670	10,000	1,820	2,960
23	1,940	3,340	2,140	2,420	1,400	3,340	15,900	7,900	3,680	9,730	1,660	5,820
24	1,880	2,460	2,880	2,180	1,650	4,130	15,600	15,000	3,260	7,900	1,350	12,600
25	1,710	2,330	3,260	1,750	1,920	5,000	14,700	12,000	4,040	5,610	1,060	12,300
26	2,670	3,420	2,530	1,740	2,250	5,610	12,300	12,600	2,740	4,600	1,280	12,000
27	4,500	4,130	2,000	1,600	2,450	7,180	12,300	12,000	2,670	3,770	1,200	10,000
28	3,950	3,420	2,070	1,800	2,300	8,920	13,800	10,300	2,880	2,960	1,230	6,720
29	5,400	2,880	2,600	1,800	-------	9,460	14,100	8,400	2,330	3,030	1,450	6,720
30	4,400	2,740	2,200	2,000	-------	9,190	13,500	6,040	2,000	3,100	1,500	7,180
31	3,770	-------	2,320	1,680	-------	12,000	--------	4,310	-------	4,900	1,450	------

Month	Observed			Gain or loss in storage (millions of cubic feet)	Corrected for storage		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	5,400	745	1,830	−520.8	1,640	0.398	0.46
November	7,420	1,500	3,640	+468.1	3,820	.927	1.03
December	5,200	2,000	3,060	−709.9	2,800	.680	.78
January	2,590	985	1,910	−816.3	1,610	.391	.45
February	2,450	1,120	1,720	−482.8	1,520	.369	.38
March	12,000	1,800	3,740	−570.4	3,530	.857	.99
April	27,200	11,400	16,600	+1,459.1	17,100	4.15	4.63
May	15,000	4,310	9,560	+1,442.2	10,100	2.45	2.82
June	21,400	2,000	6,220	+459.4	6,390	1.55	1.73
July	11,400	1,350	4,100	+28.8	4,110	.998	1.15
August	6,260	1,060	2,560	+167.3	2,620	.636	.73
September	12,600	794	3,740	+760.6	4,030	.978	1.09
The year	27,200	745	4,880	+1,685.3	4,940	1.20	16.24

CONNECTICUT RIVER AT TURNERS FALLS, MASS.

LOCATION.—At dam of Turners Falls Power & Electric Co., Turners Falls, Franklin County, just above mouth of Falls River.

DRAINAGE AREA.—7,250 square miles.

RECORDS AVAILABLE.—January, 1915, to September, 1931.

REMARKS.—Record is summation of discharge over and through dam, discharge of factories along canal which diverts around dam, and of power stations Nos. 1 and 2 of Turners Falls Power & Electric Co., by whom record is furnished. Diurnal regulation by power plants. Monthly mean discharge corrected for storage in Connecticut Lakes, Fifteenmile Falls, four reservoirs in Mascoma River Basin, and Lake Sunapee.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,890	6,000	10,900	2,500	2,060	2,030	27,600	17,900	11,000	3,630	6,800	2,540
2	1,450	1,840	8,700	3,730	2,000	3,370	28,400	15,900	10,700	4,820	3,460	2,540
3	1,730	3,460	7,040	3,420	2,560	3,680	26,200	14,800	10,100	4,330	4,450	3,240
4	1,520	2,950	5,660	957	2,300	4,350	33,800	15,400	8,140	2,920	4,630	4,870
5	416	2,520	6,750	4,540	2,130	3,880	35,700	13,600	7,840	2,820	4,830	5,920
6	1,560	4,880	8,560	4,770	2,880	3,800	26,300	15,800	6,690	3,140	5,970	1,350
7	1,580	7,920	4,950	4,330	2,790	4,750	26,200	15,300	7,050	2,950	7,510	599
8	2,440	8,530	5,270	4,620	1,430	2,490	29,800	13,700	13,200	3,450	5,600	2,360
9	2,280	3,270	5,880	5,000	2,520	3,780	33,900	12,000	25,000	3,530	1,270	1,690
10	2,270	5,900	4,910	3,230	2,410	4,810	37,800	11,300	42,700	13,900	3,000	2,980
11	983	3,620	5,500	1,200	1,900	3,870	53,900	15,700	37,300	19,500	3,810	4,080
12	327	4,080	5,460	2,230	1,610	3,530	52,500	16,800	27,300	17,900	3,900	2,740
13	216	4,030	5,560	2,340	2,620	3,700	42,400	15,900	28,200	10,300	4,310	321
14	2,010	3,950	2,540	2,200	2,030	3,160	46,000	16,200	15,200	6,860	5,590	1,630
15	3,000	7,040	2,530	2,270	2,000	1,970	39,300	28,300	7,800	6,660	5,180	1,980
16	2,450	2,020	2,320	2,160	3,080	4,560	31,800	22,500	8,880	6,380	2,080	2,820
17	2,540	9,820	2,210	2,340	3,130	4,170	29,000	19,200	23,400	5,630	5,140	3,490
18	2,040	10,600	2,430	877	3,760	3,940	27,000	17,300	20,300	4,960	4,970	3,520
19	486	10,300	3,440	3,230	3,490	4,430	23,200	15,400	15,900	2,950	6,390	3,150
20	2,020	9,510	4,080	2,930	3,730	4,800	24,200	14,200	13,400	3,780	6,250	1,980
21	2,620	6,260	2,650	2,100	3,820	6,170	29,100	13,500	8,020	5,740	5,370	3,920
22	3,230	6,060	3,170	3,240	2,120	5,840	22,500	13,000	6,630	32,400	1,480	6,590
23	2,270	2,600	3,160	3,260	3,710	9,200	23,900	26,000	7,530	21,000	599	10,000
24	3,310	4,140	3,850	3,870	2,130	12,100	21,600	40,500	7,380	18,300	1,910	12,800
25	6,590	4,670	2,920	1,440	2,700	14,100	19,800	29,500	6,760	11,300	2,340	12,900
26	1,410	4,930	4,740	2,780	3,770	15,200	19,800	19,500	6,310	8,610	1,270	13,000
27	4,370	5,270	5,660	2,740	4,290	14,400	26,300	20,600	6,620	6,040	1,310	12,100
28	5,650	5,470	1,340	2,840	4,960	18,400	24,100	17,700	4,130	5,840	1,870	9,350
29	5,320	4,600	3,220	3,060	-------	22,200	21,100	17,000	5,450	6,340	560	8,820
30	5,590	2,630	2,540	3,080	-------	28,500	21,100	13,400	4,590	7,400	395	7,240
31	6,350	-------	4,210	1,860	-------	27,100	-------	7,690	-------	7,020	1,810	-------

Month	Observed			Gain or loss in storage (millions of cubic feet)	Corrected for storage		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	6,590	216	2,580	−858.8	2,260	0.312	0.36
November	10,600	1,840	5,300	+406.6	5,450	.752	.84
December	10,900	1,340	4,590	−884.6	4,260	.588	.68
January	5,000	877	2,880	−1,060.0	2,480	.342	.39
February	4,960	1,430	2,780	−589.5	2,540	.350	.36
March	28,500	1,970	8,010	−294.4	7,900	1.09	1.26
April	53,900	19,800	30,100	+2,400.5	31,100	4.29	4.79
May	40,500	7,690	17,600	+1,747.0	18,300	2.52	2.90
June	42,700	4,130	13,500	+479.4	13,600	1.88	2.10
July	32,400	2,820	8,400	+76.1	8,430	1.16	1.34
August	7,510	395	3,680	−245.9	3,590	.495	.57
September	13,000	321	5,020	+537.3	5,220	.720	.80
The year	53,900	216	8,700	+1,713.7	8,750	1.21	16.39

CONNECTICUT RIVER AT MONTAGUE CITY, MASS.

LOCATION.—Water-stage recorder in Montague City, Franklin County, 600 feet below mouth of Deerfield River. Zero of gage is 100.00 feet above mean sea level.

DRAINAGE AREA.—7,950 square miles.

RECORDS AVAILABLE.—October, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year, 77,000 second-feet Apr. 12 (gage height, 26.74 feet); minimum not determined.

1929–1931: Maximum discharge, that of Apr. 12, 1931; minimum not determined.

Maximum discharge known, 165,000 second-feet Nov. 5, 1927 (gage height, 42.70 feet).

REMARKS.—Records excellent except those during periods of ice effect, Dec. 16, 17, Jan. 3, 5–10, 12–17, Jan. 19 to Mar. 14, which are good. Diurnal regulation and seasonal storage in reservoirs above station; monthly mean discharge corrected for change in storage.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,780	6,680	8,550	4,540	2,200	3,360	28,400	21,200	13,200	5,180	8,330	4,710
2	2,400	2,380	11,500	4,990	2,660	4,000	32,700	18,800	12,200	5,260	5,140	4,660
3	2,660	4,060	7,620	4,640	3,300	4,730	31,900	15,900	12,000	6,270	5,440	5,810
4	1,950	4,050	7,710	2,420	3,110	5,360	37,000	16,500	10,200	4,970	6,350	6,350
5	1,430	3,520	7,380	4,440	2,930	5,000	42,300	14,900	8,880	3,700	5,910	7,330
6	2,070	5,430	8,840	5,450	3,720	5,200	36,600	16,800	7,760	4,130	6,910	2,470
7	2,600	7,620	7,140	5,370	3,570	5,400	32,700	17,900	6,800	4,650	7,420	1,340
8	3,300	9,770	5,760	5,550	2,300	3,550	36,200	15,700	12,600	5,160	8,040	3,170
9	3,080	4,490	7,700	5,940	4,100	5,100	41,000	15,100	25,200	5,410	2,170	3,170
10	2,920	6,820	6,350	4,500	3,380	5,600	45,100	14,600	60,700	12,400	4,160	4,300
11	1,790	4,410	6,720	2,660	2,810	5,200	58,900	17,300	48,300	19,400	5,420	5,320
12	856	5,020	7,270	3,190	2,750	4,620	73,200	19,700	36,200	20,000	5,850	3,730
13	641	4,780	6,860	3,420	3,010	4,400	57,900	20,000	30,500	14,500	5,580	1,180
14	2,840	4,880	3,570	3,180	2,900	4,000	57,900	18,200	22,600	9,590	6,960	2,530
15	3,550	7,330	3,590	3,130	2,260	2,960	54,500	27,700	10,900	7,440	7,120	3,790
16	2,850	3,800	3,850	2,800	3,730	5,270	44,200	25,700	10,800	8,170	3,620	3,860
17	2,840	10,300	3,950	2,930	3,870	5,690	37,900	20,600	19,900	7,150	6,200	5,350
18	2,710	14,400	3,990	1,730	4,600	5,330	35,400	18,800	24,700	6,860	6,320	5,180
19	1,820	12,300	4,900	3,920	4,300	5,590	31,200	17,900	19,100	3,850	7,650	4,570
20	2,480	11,400	5,710	4,170	4,700	6,150	29,400	16,500	14,500	4,870	7,960	2,660
21	3,350	9,050	3,460	3,080	4,500	5,930	29,800	14,600	9,990	5,890	7,010	5,210
22	3,550	6,500	4,130	3,820	3,190	7,680	30,500	14,900	8,340	24,900	3,320	6,520
23	3,080	4,050	4,380	4,090	4,720	9,080	25,400	21,400	8,270	29,100	1,540	9,810
24	3,630	4,320	4,610	4,640	3,560	11,500	25,100	48,800	9,180	20,300	2,960	13,100
25	6,450	5,580	4,180	2,680	3,870	15,400	24,100	35,100	8,560	13,600	4,070	13,900
26	3,550	5,300	5,780	3,270	4,860	16,000	21,500	27,700	7,880	10,100	2,970	14,100
27	4,780	6,500	7,380	3,460	5,330	17,900	28,700	22,800	7,630	7,560	3,170	13,800
28	6,760	6,510	2,600	3,610	6,000	19,400	25,100	21,200	5,080	7,340	3,910	11,800
29	6,030	5,210	4,270	3,800	-------	24,100	24,400	19,100	6,120	7,950	2,080	9,960
30	6,350	3,250	3,720	3,800	-------	30,500	24,400	15,200	6,220	9,110	1,310	8,310
31	6,730	-------	5,250	3,300	-------	29,100	-------	9,520	-------	7,980	2,660	-------

Month	Observed			Gain or loss in storage (millions of cubic feet)	Corrected for storage		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	6,760	641	3,280	−1,579.8	2,690	0.338	0.39
November	14,400	2,380	6,320	+498.6	6,520	.820	.91
December	11,500	2,600	5,770	−1,735.6	5,120	.644	.74
January	5,940	1,730	3,820	−1,661.0	3,200	.403	.46
February	6,000	2,200	3,650	−1,046.5	3,220	.405	.42
March	30,500	2,960	9,150	−171.4	9,090	1.14	1.31
April	73,200	21,500	36,800	+7,229.5	39,600	4.98	5.56
May	48,800	9,520	20,000	+2,662.0	21,000	2.64	3.04
June	60,700	5,080	16,100	+436.4	16,300	2.05	2.29
July	29,100	3,700	9,770	−151.9	9,710	1.22	1.41
August	8,330	1,310	5,080	−1,195.9	4,640	.584	.67
September	14,100	1,180	6,270	−136.7	6,210	.781	.87
The year	73,200	641	10,500	+3,147.7	10,600	1.33	18.07

CONNECTICUT RIVER AT SUNDERLAND, MASS.

LOCATION.—Water-stage recorder at highway bridge at Sunderland, Franklin County, 8 miles below mouth of Deerfield River. Zero of gage is 99.00 feet above mean sea level.

DRAINAGE AREA.—8,000 square miles.

RECORDS AVAILABLE.—March, 1904, to September, 1931.

EXTREMES.—Maximum discharge during year, 69,800 second-feet Apr. 12 (gage height, 21.16 feet); minimum (estimated), 1,000 second-feet Oct. 6.

1904–1931: Maximum discharge, 165,000 second-feet Nov. 5, 1927 (gage height, 34.08 feet); minimum, 450 second-feet Aug. 29, 1921 (gage height, 0.0 foot).

REMARKS.—Records good. Stage-discharge relation affected by ice Dec. 14 to Mar. 16. Flow regulated by storage reservoirs above station; monthly mean discharge corrected for change in storage.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,690	6,030	6,850	5,400	2,500	6,200	24,600	26,400	12,600	5,600	8,440	3,960
2	2,320	3,690	12,400	5,100	3,000	3,500	26,400	24,900	11,900	5,100	6,360	4,260
3	2,110	3,720	8,080	4,800	3,300	5,500	27,200	16,800	11,600	6,000	5,310	5,000
4	1,960	3,530	7,410	3,000	3,400	5,400	28,700	16,100	10,200	5,200	6,090	5,840
5	1,980	3,300	6,860	4,400	3,100	5,600	32,900	15,800	8,550	4,320	5,870	7,200
6	1,720	3,670	8,180	5,300	3,700	5,300	31,700	14,400	7,410	4,790	5,920	5,410
7	2,130	6,610	8,260	5,800	3,900	5,700	30,600	18,100	6,670	4,640	6,660	2,420
8	2,770	9,600	6,150	5,650	2,600	4,000	31,300	13,200	10,100	5,340	8,580	3,350
9	2,840	5,380	6,620	6,100	3,300	4,600	33,300	14,400	20,900	5,000	3,820	3,040
10	2,680	6,410	6,260	5,100	4,200	5,700	35,600	15,800	54,000	10,200	3,950	4,120
11	2,290	5,580	6,400	2,900	3,400	5,800	52,300	16,100	48,300	19,900	5,060	4,670
12	1,580	4,280	6,630	2,900	2,900	5,000	67,400	19,500	38,700	22,400	5,540	4,150
13	1,110	4,290	6,220	3,300	2,900	4,600	57,600	19,900	33,600	17,100	5,080	2,610
14	2,150	4,240	4,500	3,400	3,200	4,100	55,200	18,500	26,400	11,200	6,640	2,410
15	3,060	5,260	4,100	3,200	2,600	3,400	54,800	27,900	13,800	7,780	7,020	3,250
16	2,860	5,240	3,950	2,900	3,800	4,200	43,500	27,200	10,500	8,050	5,220	3,540
17	2,540	7,960	3,800	3,000	4,000	5,960	39,900	21,300	18,000	7,400	5,460	4,660
18	2,200	14,300	3,700	2,000	4,700	4,540	38,700	18,800	26,800	7,300	6,160	2,970
19	2,800	12,000	4,300	3,100	4,500	3,990	36,400	17,800	21,300	4,840	6,490	4,420
20	2,340	11,200	5,500	4,300	4,800	5,190	34,000	16,100	16,400	4,140	7,780	2,940
21	3,630	9,620	4,200	3,300	4,800	4,420	32,900	14,400	11,500	5,520	6,810	4,870
22	3,500	6,250	4,200	3,350	3,600	6,620	35,200	14,100	9,200	17,800	4,470	5,320
23	3,400	4,580	4,100	3,500	4,800	8,040	30,600	17,800	8,200	29,800	2,230	8,860
24	3,210	4,690	4,150	4,700	4,800	10,900	30,600	40,300	9,300	22,800	2,940	13,200
25	5,540	4,680	4,420	3,400	3,700	14,900	29,000	35,200	9,000	18,800	4,060	13,800
26	4,670	5,070	5,700	3,000	4,100	17,100	27,900	29,800	8,200	14,200	3,180	13,900
27	4,260	5,260	7,400	3,400	4,600	18,800	29,800	23,500	7,800	12,800	3,040	13,900
28	6,180	6,730	4,300	3,600	5,500	19,500	30,900	22,800	6,000	7,200	3,520	12,000
29	6,170	6,020	3,750	4,000	-------	23,800	29,000	21,000	5,800	7,300	2,690	9,810
30	5,720	4,490	3,550	3,900	-------	26,400	29,000	17,800	6,500	8,540	2,310	8,600
31	5,810	-------	4,850	3,500	-------	24,200	-------	9,810	-------	8,400	2,590	-------

Month	Observed			Gain or loss in storage (millions of cubic feet)	Corrected for storage		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	6,180	1,110	3,170	−1,579.8	2,580	0 322	0.37
November	14,300	3,300	6,120	+498.6	6,320	.790	.88
December	12,400	3,550	5,700	−1,735.6	5,050	.631	.73
January	6,100	2,000	3,910	−1,661.0	3,290	.411	.47
February	5,500	2,500	3,780	−1,046.5	3,340	.418	.44
March	26,400	3,400	8,810	−171.4	8,740	1.09	1.26
April	67,400	24,600	36,200	+7,229.5	39,000	4 88	5.44
May	40,300	9,810	20,200	+2,662.0	21,200	2.65	3.06
June	54,000	5,800	16,300	+436.4	16,500	2 06	2 30
July	29,800	4,140	10,300	−151.9	10,200	1.28	1.48
August	8,580	2,230	5,140	−1,195.9	4,690	.586	.68
September	13,900	2,410	6,150	−136.7	6,100	.762	.85
The year	67,400	1,110	10,500	+3,147.7	10,600	1.32	17.96

CONNECTICUT RIVER AT THOMPSONVILLE, CONN.

LOCATION.—Water-stage recorder in pool above Enfield Dam 1 mile below Thompsonville, Hartford County. Zero of gage is 38.48 feet above mean sea level.

DRAINAGE AREA.—9,740 square miles.

RECORDS AVAILABLE.—July, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 78,100 second-feet Apr. 12 (gage height, 7.46 feet); minimum, 1,230 second-feet Oct. 12.

1928–1931: Maximum discharge, 84,800 second-feet Mar. 25, 1929; minimum, 970 second-feet Sept. 29, 1929.

Maximum stage known, 12.3 feet Nov. 4, 1927 (discharge not determined).

REMARKS.—Records good. Monthly mean discharge corrected for storage in lakes and reservoirs above station. Water diverted at Enfield Dam by canal of Northern Connecticut Power Co., determined by a water-stage recorder, is included in daily and monthly records.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,020	7,230	6,820	3,190	2,960	5,690	36,500	26,000	16,100	7,000	8,250	4,410
2	3,680	5,360	11,200	4,170	3,280	6,760	41,700	22,200	16,700	6,780	7,760	4,600
3	2,790	5,230	10,700	5,140	3,260	6,850	43,200	19,600	15,700	5,830	7,430	4,870
4	2,990	5,530	8,910	3,650	3,500	6,610	44,800	19,200	14,100	4,220	7,040	6,230
5	2,160	4,760	8,080	3,930	4,390	5,910	50,900	18,700	11,800	4,460	6,720	6,130
6	1,880	4,600	7,820	6,080	3,830	6,130	48,900	17,000	9,960	5,980	7,040	5,710
7	2,030	5,370	8,400	7,190	3,200	5,540	42,400	18,800	8,970	7,110	6,420	3,240
8	3,080	6,850	8,530	6,550	2,480	4,780	42,600	18,800	10,400	6,750	6,120	3,620
9	3,750	8,050	8,090	6,100	3,000	6,580	47,300	19,400	19,300	6,630	5,740	4,780
10	3,860	6,480	7,690	4,830	4,420	7,680	51,200	19,500	57,000	7,000	4,900	3,870
11	2,800	7,170	7,570	4,050	4,540	7,990	59,000	22,600	67,700	15,800	5,240	4,360
12	1,490	6,310	7,090	4,040	4,360	8,300	73,800	24,600	50,400	20,800	6,570	4,020
13	1,680	5,460	5,980	4,680	4,120	7,700	71,800	24,700	38,900	19,300	7,130	2,890
14	1,920	5,730	5,790	4,630	3,730	6,330	61,200	23,300	32,900	13,300	6,670	3,300
15	3,100	5,570	5,940	4,530	2,500	4,480	61,200	28,200	21,800	10,200	6,550	4,050
16	3,730	4,860	5,120	4,010	2,940	6,700	53,200	33,400	14,600	8,500	6,720	3,940
17	3,870	8,240	4,430	3,130	4,450	8,550	45,400	26,900	16,800	7,920	6,040	4,130
18	3,130	16,000	4,110	2,180	6,040	8,690	41,500	23,200	28,500	7,050	7,570	5,090
19	1,820	14,900	3,930	2,180	6,520	8,370	37,900	21,400	25,500	5,730	7,940	4,840
20	1,820	13,400	4,000	3,840	6,580	9,120	34,000	19,600	19,900	6,040	7,780	3,600
21	2,300	12,100	3,030	5,180	5,990	8,230	31,700	17,900	15,500	6,840	7,480	3,600
22	3,570	8,970	5,130	4,520	4,380	7,660	35,100	16,700	12,200	8,930	6,300	5,930
23	3,980	6,280	5,920	4,280	5,250	12,300	29,100	22,200	10,400	30,400	3,050	6,970
24	4,040	7,490	5,670	3,720	6,040	14,300	27,500	52,900	10,800	24,000	4,420	10,400
25	4,420	7,680	3,780	3,080	6,030	18,100	25,700	51,400	10,900	18,400	5,510	13,400
26	5,260	6,900	4,280	3,280	5,300	22,300	24,800	38,500	9,930	12,500	4,540	13,300
27	4,460	4,140	4,970	4,050	6,060	23,600	27,200	27,900	8,880	10,800	3,760	13,500
28	5,760	5,270	5,250	4,460	6,210	24,200	31,200	26,800	8,130	8,800	3,980	12,900
29	7,530	6,200	5,240	4,460	-------	29,500	27,500	22,700	7,780	8,110	3,380	10,800
30	7,720	5,110	5,750	4,360	-------	40,700	26,700	20,400	7,230	8,090	2,850	9,880
31	7,860	-------	4,940	4,150	-------	39,000	-------	16,100	-------	8,550	3,640	-------

Month	Observed			Gain or loss in storage (millions of cubic feet)	Corrected for storage		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	7,860	1,490	3,600	−1,579.8	3,010	0.309	0.36
November	16,000	4,140	7,240	+498.6	7,430	.763	.85
December	11,200	3,030	6,260	−1,735.6	5,620	.577	.67
January	7,190	2,180	4,310	−1,661.0	3,690	.379	.44
February	6,580	2,480	4,480	−1,046.5	4,040	.415	.43
March	40,700	4,480	12,200	−171.4	12,200	1.25	1.44
April	73,800	24,800	42,500	+7,229.5	45,300	4.65	5.19
May	52,900	16,100	24,500	+2,662.0	25,500	2.62	3.02
June	67,700	7,230	20,000	+436.4	20,100	2.06	2.30
July	30,400	4,220	10,400	−151.9	10,300	1.06	1.22
August	8,250	2,850	5,950	−1,195.9	5,510	.566	.65
September	13,500	2,890	6,280	−136.7	6,230	.640	.71
The year	73,800	1,490	12,300	+3,147.7	12,400	1.27	17.28

PASSUMPSIC RIVER AT PASSUMPSIC, VT.

LOCATION.—Water-stage recorder 1 mile below dam at Passumpsic, Caledonia County.

DRAINAGE AREA.—423 square miles.

RECORDS AVAILABLE.—November, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 4,730 second-feet Apr. 11 (gage height, 8.28 feet); minimum, 9.8 second-feet Sept. 15 (gage height, 0.69 foot).

1928–1931: Maximum discharge, 7,540 second-feet May 4, 1929 (gage height, 10.80 feet); minimum, that of Sept. 15, 1931.

REMARKS.—Records excellent except those during period of ice effect, Dec. 10 to Mar. 14, which are fair. Considerable diurnal fluctuation.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	158	318	836	118	141	155	901	916	667	152	476	152
2	168	265	906	106	138	157	1,240	803	413	154	280	247
3	154	282	1,500	118	136	152	1,540	904	364	146	283	534
4	132	224	1,010	123	133	163	1,880	986	281	127	451	494
5	124	414	337	126	133	160	1,540	783	282	118	348	318
6	188	1,500	337	130	138	173	1,400	703	382	124	252	264
7	129	866	318	133	146	173	1,360	632	321	138	196	400
8	135	516	393	123	136	160	1,360	564	774	138	212	304
9	148	464	313	118	133	182	1,540	694	3,340	177	174	229
10	140	470	318	133	144	176	1,780	690	2,970	1,150	401	200
11	162	349	280	116	149	182	3,910	828	1,530	2,070	332	142
12	84	313	241	130	144	179	3,530	860	890	770	270	148
13	164	337	199	136	133	176	2,230	744	679	468	331	95
14	140	313	179	128	141	179	2,230	854	528	308	268	156
15	124	324	155	123	166	228	1,780	1,730	480	287	260	259
16	168	308	136	118	192	257	1,320	1,220	590	250	269	538
17	124	535	116	118	176	249	1,200	1,000	754	212	272	379
18	252	684	118	118	176	257	1,230	784	556	163	232	476
19	412	522	123	123	170	304	1,330	618	392	145	234	372
20	333	431	138	130	160	284	1,220	651	297	160	248	247
21	244	374	141	138	155	294	1,250	519	265	376	182	748
22	202	318	141	144	155	393	1,230	784	308	818	172	2,460
23	184	280	136	141	157	522	1,100	1,060	244	668	94	3,890
24	183	330	123	146	155	698	968	1,950	266	346	162	2,120
25	544	337	113	138	146	866	828	1,240	222	273	105	1,850
26	960	632	123	146	144	880	722	988	224	231	108	1,290
27	650	386	113	146	144	1,160	1,790	757	278	236	116	1,760
28	470	280	120	155	160	1,260	1,410	602	251	181	178	1,250
29	438	296	128	152	-------	1,290	1,120	499	240	186	208	898
30	492	196	130	146	-------	1,560	1,080	416	167	2,050	176	662
31	370	-------	126	144	-------	1,060	-------	416	-------	922	234	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	960	84	264	0.62	0.72
November	1,500	196	429	1.01	1.13
December	1,500	113	302	.714	.82
January	155	106	131	.310	.36
February	192	133	150	.355	.37
March	1,560	152	449	1.06	1.22
April	3,910	722	1,530	3.62	4.04
May	1,950	416	845	2.00	2.31
June	3,340	167	632	1.49	1.66
July	2,070	118	437	1.03	1.19
August	476	94	243	.574	.66
September	3,890	95	763	1.80	2.01
The year	3,910	84	514	1.22	16.49

MOOSE RIVER AT ST. JOHNSBURY, VT.

LOCATION.—Chain gage at highway bridge three-quarters of a mile above mouth of river in St. Johnsbury, Caledonia County.

DRAINAGE AREA.—112 square miles.

RECORDS AVAILABLE.—August, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, about 1,980 second-feet Apr. 11 (gage height, 4.90 feet, temporary gage); minimum, 15 second-feet Oct. 12 (gage height, 2.02 feet).

1928–1931: Maximum discharge, 5,720 second-feet Apr. 30, 1929 (gage height, 8.09 feet); minimum, 10 second-feet Sept. 3–5, 1929 (gage height, 1.86 feet).

REMARKS.—Records fair. Stage-discharge relation affected by ice Nov. 25 to Dec. 2, Dec. 12 to Feb. 14. Discharge estimated Feb. 15 to Mar. 31, Sept. 5–30.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	60	95	46	32	43	211	211	136	38	197	32
2	22	54	113	46	32	44	311	184	98	32	38	73
3	23	48	122	47	30	44	420	240	78	28	34	160
4	25	50	74	48	30	43	582	292	68	22	35	152
5	24	55	60	49	30	42	472	198	56	17	34	125
6	22	80	44	50	31	42	395	184	78	24	34	100
7	21	107	45	50	32	41	395	172	90	23	37	76
8	22	130	54	50	35	41	395	140	198	24	38	59
9	21	122	57	50	39	41	445	184	1,260	31	33	49
10	19	100	49	47	39	41	582	184	1,340	198	34	40
11	18	86	48	45	40	42	1,660	226	552	350	32	34
12	17	80	49	44	40	43	1,740	240	257	97	29	29
13	16	93	49	43	41	44	842	184	160	82	35	27
14	16	100	49	42	43	45	807	198	120	67	39	54
15	18	74	48	40	45	50	706	582	111	65	36	86
16	20	80	47	39	46	57	445	420	128	62	37	125
17	22	100	47	38	47	60	350	274	184	53	33	164
18	29	146	47	37	47	62	330	211	126	48	30	140
19	44	122	47	36	46	63	420	149	89	43	32	99
20	44	107	47	35	46	65	395	136	72	38	29	80
21	45	93	47	35	45	72	420	160	66	32	26	134
22	40	100	47	34	45	82	472	226	59	45	24	265
23	36	86	47	31	44	97	372	198	64	38	22	520
24	34	80	47	30	44	110	274	642	52	34	19	460
25	62	107	47	30	44	144	198	395	59	30	18	270
26	274	116	47	31	43	215	172	257	50	29	17	203
27	222	103	47	32	43	265	582	184	61	34	17	310
28	197	83	46	30	42	345	472	138	65	32	25	140
29	154	71	46	29	-------	385	274	104	48	36	31	98
30	114	68	46	27	-------	590	274	104	30	87	33	82
31	80	-------	46	30	-------	350	-------	87	-------	254	32	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	274	16	55.6	0.496	0.57
November	146	48	90.0	.804	.90
December	122	44	55.0	.491	.57
January	50	27	39.4	.352	.41
February	47	30	40.0	.357	.37
March	590	41	116	1.04	1.20
April	1,740	172	514	4.59	5.12
May	642	87	229	2.04	2.35
June	1,340	30	192	1.71	1.91
July	350	17	64.3	.574	.66
August	197	17	35.8	.320	.37
September	520	27	140	1.25	1.40
The year	1,740	16	131	1.17	15.83

WHITE RIVER NEAR BETHEL, VT.

LOCATION.—Water-stage recorder a third of a mile above mouth of Locust Brook and 2 miles southwest of Bethel.
DRAINAGE AREA.—240 square miles.
RECORDS AVAILABLE.—May to September, 1931.
EXTREMES.—Maximum discharge during period, 2,440 second-feet June 9 (gage height, 3.04 feet); minimum, 49 second-feet Sept. 13 (gage height, 0.85 foot).
REMARKS.—Records good.

Daily and monthly discharge, in second-feet, 1931

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1		406	112	102	64	16		528	167	98	150
2		326	112	91	64	17		722	139	91	108
3		272	102	91	142	18		510	123	80	139
4		240	102	116	135	19		369	116	88	98
5		241	94	98	98	20		299	116	80	113
6		355	88	84	88	21		272	323	71	662
7		326	88	75	84	22		227	806	66	259
8		660	127	73	69	23		227	421	64	179
9		1,640	150	75	64	24		279	259	62	162
10		1,740	424	156	60	25		208	196	58	173
11		980	1,170	120	56	26		191	221	54	226
12		702	445	116	54	27		173	167	58	649
13		519	299	135	53	28		146	139	129	326
14		413	234	120	53	29		131	123	91	227
15		369	196	102	84	30		120	150	80	179
						31	469		120	71	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
June	1,740	120	453	1.89	2.11
July	1,170	88	236	.983	1.13
August	156	54	90.2	.37*	.43
September	662	53	161	.671	.75

WHITE RIVER AT WEST HARTFORD, VT.

LOCATION.—Water-stage recorder 500 feet above highway bridge at West Hartford, Windsor County, and 7 miles above mouth of river. Zero of gage is 374.22 feet above mean sea level.

DRAINAGE AREA.—687 square miles.

RECORDS AVAILABLE.—June, 1915, to September, 1931 (incomplete).

EXTREMES.—Maximum discharge during year, 14,200 second-feet Apr. 11 (gage height, 11.25 feet); minimum, 93 second-feet Oct. 12 (gage height, 2.79 feet).
1915–1931: Maximum discharge, 140,000 second-feet Nov. 4, 1927 (gage height, 29.3 feet); minimum, 19 second-feet June 27, 1923 (gage height, 2.05 feet).

REMARKS.—Records excellent except those during periods of ice effect, Dec. 15, 16, 24, Jan. 7 to Feb. 28, which are good. No storage above station since flood of November, 1927.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	185	278	1,460	306	215	473	1,990	1,930	1,200	434	354	231
2	182	248	1,120	274	215	496	2,510	1,710	995	418	323	202
3	171	245	682	241	212	473	3,030	1,990	859	377	323	282
4	174	221	902	341	218	479	4,640	1,870	782	364	323	408
5	166	278	761	350	228	502	4,270	1,660	761	323	319	354
6	166	1,820	682	323	228	479	3,820	1,560	955	319	282	266
7	156	1,040	630	282	221	456	3,820	1,460	895	310	266	259
8	156	688	623	238	215	456	4,000	1,370	1,610	350	245	238
9	151	579	598	215	228	445	4,450	1,460	3,900	585	241	215
10	149	507	554	255	238	445	5,700	1,370	4,380	1,810	445	166
11	146	364	456	293	241	536	11,800	1,560	2,510	2,510	413	185
12	144	382	484	285	248	484	8,410	1,370	1,870	1,470	413	187
13	141	377	456	285	255	473	5,500	1,280	1,510	1,040	424	161
14	149	364	341	293	293	490	6,920	1,560	1,280	817	403	163
15	141	341	293	241	382	451	5,110	2,580	1,160	708	323	190
16	176	354	282	238	424	468	4,000	1,870	1,420	623	323	285
17	209	917	263	255	392	462	3,460	1,560	2,050	490	302	336
18	224	1,610	413	293	392	473	3,460	1,320	1,560	451	259	319
19	278	1,120	418	278	392	513	3,640	1,200	1,240	434	274	302
20	255	866	403	255	392	554	3,460	1,120	1,040	403	278	245
21	202	740	429	293	392	567	3,820	1,080	902	714	255	800
22	190	649	382	289	392	694	3,550	1,160	810	2,170	218	682
23	196	591	359	263	392	895	3,030	2,240	789	1,360	212	445
24	185	542	336	224	392	1,120	2,370	4,730	902	895	202	382
25	259	531	341	231	413	1,320	1,930	2,950	747	688	193	403
26	462	616	341	255	424	1,200	1,820	2,580	708	682	182	387
27	424	542	359	274	451	1,660	4,450	1,930	688	554	185	965
28	341	373	359	270	456	1,870	2,950	1,610	610	490	212	754
29	306	310	364	255	------	1,930	2,510	1,370	525	445	285	536
30	314	364	345	228	------	2,650	2,370	1,200	403	456	266	456
31	289	------	341	215	------	2,050	------	1,200	------	429	248	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	462	141	216	0.314	0.36
November	1,820	221	595	.866	.97
December	1,460	263	509	.741	.85
January	350	215	269	.392	.45
February	456	212	319	.464	.48
March	2,650	445	825	1.20	1.38
April	11,800	1,820	4,090	5.95	6.64
May	4,730	1,080	1,740	2.53	2.92
June	4,380	403	1,300	1.89	2.11
July	2,510	310	746	1.09	1.26
August	445	182	290	.422	.49
September	965	161	360	.524	.58
The year	11,800	141	936	1.36	18.49

MASCOMA RIVER AT MASCOMA, N. H.

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

DRAINAGE AREA.—148 square miles.

RECORDS AVAILABLE.—August, 1923, to September, 1931.

EXTREMES.—Maximum discharge during year, 2,240 second-feet July 23 (gage height, 5.23 feet); minimum, 53 second-feet Mar. 1-8, 13 (gage height, 1.88 feet).

1923–1931: Maximum discharge, 3,700 second-feet Mar. 30, 1925 (gage height, 6.25 feet); minimum, 1.2 second-feet June 28, 1925 (gage height, 1.03 feet).

REMARKS.—Records good. Discharge estimated from records of gate openings in dam above station Nov. 29, 30, Dec. 1–3, 16–24, Jan. 3–7, 9–14, 16, 17, July 8 to Aug. 26, Sept. 7, 8. Flow regulated by 1,500,000,000 cubic feet of storage developed above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	111	99	118	105	75	54	130	282	192	149	140	115
2	111	92	119	105	80	53	137	248	180	149	129	113
3	111	103	121	104	77	53	146	222	178	146	147	113
4	105	107	119	96	74	53	154	210	175	144	144	113
5	92	107	123	109	72	54	172	197	169	141	144	105
6	109	107	117	107	72	53	262	189	167	139	143	94
7	109	109	107	107	71	53	446	180	164	128	140	116
8	105	101	123	103	69	53	516	178	162	113	132	114
9	103	94	125	102	68	55	548	175	183	128	121	115
10	103	109	125	95	66	54	598	175	383	128	137	111
11	99	111	123	88	66	54	662	172	587	135	136	111
12	90	109	123	99	65	54	817	172	560	124	134	101
13	103	107	113	96	61	53	894	178	451	150	134	94
14	101	107	103	96	56	54	716	183	343	150	133	109
15	101	101	117	98	56	54	632	300	258	150	124	109
16	101	92	118	94	55	54	532	407	216	149	114	109
17	99	109	116	89	54	54	442	371	248	149	130	113
18	92	113	116	94	54	55	375	300	383	140	128	111
19	85	113	116	103	55	56	339	242	379	128	128	111
20	98	115	111	101	55	59	310	210	293	147	125	92
21	98	117	102	98	55	63	286	189	222	152	123	113
22	96	103	116	98	55	65	268	180	189	596	116	117
23	94	98	116	96	54	66	242	203	178	1,940	107	117
24	94	117	114	90	54	69	219	411	175	1,660	122	117
25	94	119	113	82	54	75	206	754	169	947	122	119
26	85	119	115	92	54	80	206	692	167	515	119	111
27	103	119	105	90	54	87	252	516	164	332	119	99
28	103	117	96	89	54	96	351	383	159	248	119	121
29	105	113	109	87	------	105	335	293	154	197	107	121
30	105	104	107	85	------	115	310	232	151	168	98	119
31	107	------	111	80	------	123	------	206	------	161	115	------

Month	Observed			Gain or loss in storage (millions of cubic feet)	Corrected for storage		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	111	85	100	−236.0	12.3	0.083	0.09
November	119	92	108	− 27.5	97.1	.656	.73
December	125	96	115	−123.7	68.5	.463	.53
January	109	80	96.1	−175.7	30.5	.206	.24
February	80	54	62.0	− 72.7	31.9	.216	.22
March	123	53	65.4	+259.0	162	1.09	1.26
April	894	130	383	+482.4	570	3.85	4.30
May	754	172	279	+ 98.8	316	2.14	2.47
June	587	151	247	+ 20.0	254	1.72	1.92
July	1,940	113	313	+134.3	363	2.45	2.82
August	147	98	127	−243.2	36.0	.243	.28
September	121	92	111	−121.3	64.0	.432	.48
The year	1,940	53	168	− 5.6	167	1.13	15.34

OTTAUQUECHEE RIVER AT NORTH HARTLAND, VT.

LOCATION.—Water-stage recorder at highway bridge in North Hartland, Windsor County, 1,600 feet above mouth.

DRAINAGE AREA.—221 square miles.

RECORDS AVAILABLE.—October, 1930, to September, 1931.

EXTREMES.—Maximum discharge during year, 5,510 second-feet July 22 (gage height, 8.10 feet); minimum, 12 second-feet Oct. 12 (gage height, 1.30 feet). Maximum known stage, 21.5 feet in November, 1927 (discharge not determined).

REMARKS.—Records good except those during periods of ice effect, Dec. 15–19, 26, 27, Jan. 1–3, Jan. 7 to Feb. 24, and those estimated, Oct. 1, 2, 12–21, Apr. 1–13, Apr. 22 to May 11, July 24 to Sept. 8, which are fair. Some diurnal regulation. Small seasonal storage in reservoir at Plymouth.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51	66	485	75	55	92	610	670	438	129	155	114
2	49	61	326	67	54	97	780	620	376	141	139	104
3	48	72	268	60	56	91	940	720	312	119	137	140
4	39	58	265	81	57	100	1,440	680	276	104	135	224
5	31	63	220	100	57	102	1,340	600	265	102	133	190
6	36	329	189	91	57	96	1,200	560	240	113	120	131
7	45	262	178	72	56	97	1,200	520	265	97	113	128
8	39	151	178	62	56	94	1,300	500	746	100	106	117
9	26	113	172	58	58	102	1,380	520	1,530	144	103	106
10	34	106	141	63	60	88	1,780	500	1,650	1,520	215	86
11	31	88	124	71	63	98	4,100	560	980	1,310	185	86
12	18	88	138	71	65	104	2,500	429	890	740	190	52
13	27	86	126	71	69	104	1,600	392	655	492	190	70
14	36	79	89	71	78	100	2,180	593	535	429	170	81
15	35	79	79	65	92	98	1,580	920	470	400	135	154
16	42	94	74	64	113	115	1,220	640	460	312	140	304
17	50	331	77	65	104	108	1,080	530	890	265	125	192
18	54	550	98	67	100	113	1,180	447	710	224	110	169
19	67	336	117	68	84	131	1,180	404	506	204	116	124
20	62	240	117	69	85	148	1,120	364	404	208	117	124
21	56	198	113	70	85	164	1,120	364	348	618	108	474
22	46	169	108	70	85	220	1,020	396	300	3,380	93	332
23	47	148	104	65	85	286	900	1,670	276	1,260	90	254
24	51	146	102	60	85	368	710	1,720	344	500	85	195
25	65	143	91	61	84	452	570	1,120	268	335	80	186
26	100	159	90	63	92	429	540	980	237	290	80	207
27	100	133	91	64	88	585	1,400	740	224	240	78	506
28	84	98	92	65	91	605	940	630	195	220	90	324
29	73	79	102	65	------	625	920	525	175	200	130	240
30	80	98	94	63	------	770	850	456	148	195	125	204
31	83	------	86	60	------	645	------	452	------	183	120	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	100	18	51.8	0.234	0.27
November	550	58	154	.697	.78
December	485	74	146	.661	.76
January	100	58	68.3	.309	.36
February	113	54	75.5	.342	.36
March	770	88	233	1.05	1.21
April	4,100	540	1,290	5.84	6.52
May	1,720	364	652	2.95	3.40
June	1,650	148	504	2.28	2.54
July	3,380	97	470	2.13	2.46
August	215	78	126	.570	.66
September	506	52	187	.846	.94
The year	4,100	18	330	1.49	20.26

SUGAR RIVER AT WEST CLAREMONT, N. H.

LOCATION.—Water-stage recorder below Redwater Brook at West Claremont, Sullivan County.

DRAINAGE AREA.—270 square miles.

RECORDS AVAILABLE.—October, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 3,380 second-feet Apr. 11 (gage height, 5.27 feet); minimum, 19 second-feet Oct. 4 (gage height, 0.80 foot).

1928–1931: Maximum discharge, that of Apr. 11, 1931; maximum discharge previously published for Mar. 8, 1930, would be reduced to 3,310 second-feet by use of 1931 rating; minimum discharge, 12 second-feet Sept. 25, 1930 (gage height, 0.69 foot).

REMARKS.—Records good. Discharge estimated Jan. 18–20. Stage-discharge relation affected by ice Dec. 15, Jan. 15 to Feb. 13. Monthly mean discharge corrected for storage in Lake Sunapee.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47	123	321	89	124	91	945	444	356	112	153	98
2	43	105	301	96	142	110	1,180	375	273	120	129	85
3	49	111	208	93	130	96	1,300	382	216	112	149	181
4	37	90	217	101	132	101	1,660	362	188	93	202	189
5	36	90	195	108	113	96	1,610	321	172	96	172	135
6	54	136	165	96	111	93	1,430	294	167	112	137	101
7	49	150	159	97	124	87	1,340	256	202	99	120	106
8	45	116	169	108	116	96	1,300	252	408	106	98	103
9	39	97	147	103	136	115	1,610	295	771	105	98	81
10	41	111	144	111	126	98	1,860	305	1,660	433	132	78
11	43	85	126	93	123	101	3,240	550	1,100	512	118	79
12	31	102	129	125	119	103	2,490	595	982	325	135	73
13	47	90	109	126	110	103	1,610	468	757	222	171	66
14	55	83	83	103	88	101	1,560	520	602	208	156	96
15	45	80	94	115	89	105	1,260	809	500	210	128	93
16	45	90	80	125	110	115	982	621	465	173	118	98
17	47	243	106	108	97	123	848	471	1,620	157	129	105
18	57	413	115	97	96	125	777	384	1,330	136	110	101
19	49	276	116	105	93	138	770	316	848	118	98	82
20	62	206	113	102	91	154	695	260	639	126	91	116
21	55	174	110	95	91	174	646	254	500	146	88	245
22	49	155	126	89	89	206	608	268	447	1,420	80	186
23	45	129	108	110	98	315	512	618	398	1,060	74	147
24	57	129	110	150	96	400	459	1,610	414	701	98	142
25	94	156	76	129	91	528	387	945	311	565	80	119
26	140	216	113	156	98	576	382	764	243	459	78	140
27	135	175	108	135	93	677	880	584	209	356	79	182
28	123	140	98	91	89	783	683	436	153	301	114	169
29	137	91	115	96	-------	945	584	345	155	239	112	140
30	155	116	101	106	-------	1,100	520	265	136	220	103	121
31	144	-------	105	113	-------	945	-------	278	-------	189	118	-------

Month	Discharge			Gain or loss in storage (millions of cubic feet)	Corrected for storage		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	155	31	66.3	−102	28.2	0.104	0.12
November	413	80	143	−34	129	.478	.53
December	321	76	138	−51	119	.441	.51
January	156	89	109	−68	83.4	.309	.36
February	142	88	108	−34	93.6	.347	.36
March	1,100	87	284	+17	290	1.07	1.23
April	3,240	382	1,140	+459	1,310	4.85	5.41
May	1,610	252	472	+206	549	2.03	2.34
June	1,660	136	541	0	541	2.00	2.23
July	1,420	93	298	−87	265	.981	1.13
August	202	74	118	−170	54.8	.203	.23
September	245	66	122	−102	82.6	.306	.34
The year	3,240	31	294	+34	295	1.09	14.79

BLACK RIVER AT NORTH SPRINGFIELD, VT.

LOCATION.—Water-stage recorder in North Springfield, Windsor County, 1,300 feet above Great Brook.
DRAINAGE AREA.—163 square miles.
RECORDS AVAILABLE.—November, 1929, to September, 1931.
EXTREMES.—Maximum discharge during year, 8,420 second-feet July 22 (gage height, 13.75 feet); minimum, 18 second-feet Nov. 3 (gage height, 1.93 feet). 1929–1931: Maximum discharge, that of July 22, 1931; minimum, that of Nov. 3, 1930.
REMARKS.—Records good. Diurnal regulation from mills above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47	55	378	79	43	63	602	458	282	89	142	71
2	43	57	172	48	49	63	865	391	222	129	119	53
3	48	31	139	36	59	74	840	503	182	100	136	97
4	36	49	160	54	53	82	1,840	434	172	76	125	108
5	26	48	136	43	53	82	940	383	138	68	112	86
6	22	222	123	73	50	77	890	361	141	82	106	64
7	30	98	125	81	52	77	890	324	149	80	85	90
8	34	78	123	64	50	68	1,070	316	663	85	81	85
9	34	72	92	65	39	59	1,140	446	2,060	112	70	76
10	32	40	100	57	40	83	1,420	383	2,070	494	83	78
11	34	47	86	55	54	79	2,730	602	906	626	87	71
12	22	56	81	43	59	69	1,960	418	712	332	102	74
13	20	63	81	78	63	87	1,390	353	490	240	159	44
14	22	60	57	83	74	87	1,810	935	370	262	122	24
15	27	49	60	70	70	77	1,330	1,270	325	230	108	64
16	36	74	62	55	77	83	1,040	767	338	234	81	118
17	36	319	45	72	81	94	940	552	1,530	172	90	88
18	55	314	71	63	70	104	965	430	774	156	89	106
19	47	163	57	38	74	116	990	353	478	118	78	95
20	30	118	54	56	72	134	940	316	349	131	57	122
21	43	103	61	68	73	147	890	306	274	633	63	231
22	38	87	52	65	64	190	865	324	226	5,040	50	187
23	35	55	81	55	59	232	815	1,880	212	1,380	52	165
24	39	72	83	55	67	280	625	1,530	235	819	38	159
25	83	103	81	46	68	368	482	930	186	478	57	154
26	115	98	46	38	73	337	673	689	154	370	44	170
27	59	72	68	56	74	482	1,140	486	167	288	39	192
28	71	50	61	54	71	490	719	384	124	220	50	159
29	71	43	56	58	------	525	602	318	120	192	81	149
30	57	73	92	55	------	672	574	264	90	218	56	108
31	73	------	86	55	------	534	------	268	------	167	55	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	115	20	44.0	0.270	0.31
November	319	31	92.3	.566	.63
December	378	45	95.8	.588	.68
January	83	36	58.6	.360	.42
February	81	39	61.8	.379	.39
March	672	59	191	1.17	1.35
April	2,730	482	1,070	6.56	7.32
May	1,880	264	560	3.44	3.97
June	2,070	90	471	2.89	3.22
July	5,040	68	439	2.69	3.10
August	159	38	84.4	.518	.60
September	231	24	110	.675	.75
The year	5,040	20	273	1.67	22.74

WEST RIVER AT NEWFANE, VT.

LOCATION.—Water-stage recorder at highway bridge 1¼ miles northeast of Newfane, Windham County. Prior to June 27, 1931, chain gage with same datum at same location.

DRAINAGE AREA.—310 square miles.

RECORDS AVAILABLE.—September, 1919, to September, 1923; October, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 9,100 second-feet July 22 (gage height, 10.80 feet); minimum, 22 second-feet Oct. 6 (gage height, 3.77 feet).

1919–1923, 1928–1931: Maximum discharge, that of July 22, 1931; minimum, 19 second-feet Sept. 22, 1930 (gage height, 3.74 feet).

Maximum known discharge, 45,000 second-feet Nov. 3, 1927 (gage height, 23.0 feet).

REMARKS.—Records good. Stage-discharge relation affected by ice Nov. 28, Dec. 13–22, Dec. 28 to Mar. 19.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	119	2,730	104	81	169	1,010	1,160	436	107	152	70
2	26	113	782	99	79	173	1,840	916	397	110	127	63
3	36	84	336	104	79	169	1,720	1,110	341	133	119	341
4	29	76	436	110	79	169	2,210	1,160	264	102	331	363
5	28	91	346	116	76	169	2,080	1,110	219	9[illegible]	195	180
6	24	658	273	122	76	169	1,960	1,110	250	8[illegible]	130	130
7	26	380	246	110	74	169	2,080	963	250	79	113	102
8	26	206	202	107	74	159	1,600	826	1,600	83	97	89
9	31	169	210	107	79	166	2,080	1,380	3,560	203	86	74
10	25	127	195	107	84	176	2,860	963	6,320	1,560	91	65
11	39	116	176	107	81	173	7,660	2,340	3,140	2,280	102	58
12	45	104	173	107	84	169	4,790	1,380	2,340	907	130	54
13	39	102	166	107	86	173	3,140	1,060	1,490	547	306	52
14	29	116	143	104	94	176	5,960	1,110	658	573	199	50
15	48	113	116	102	99	180	3,560	3,420	539	570	146	67
16	52	162	107	99	113	191	2,730	1,600	504	341	124	136
17	97	1,270	107	94	169	206	2,860	1,270	1,380	250	119	149
18	102	1,380	110	94	188	232	3,000	870	2,600	199	180	191
19	119	698	119	91	188	255	3,140	740	782	180	152	136
20	110	403	122	89	188	255	2,860	539	504	166	130	107
21	60	311	119	86	169	250	3,000	468	316	273	104	423
22	54	287	110	79	156	264	3,140	578	280	5,100	89	282
23	47	215	104	76	156	380	3,000	3,420	268	1,660	104	357
24	67	184	107	76	166	403	2,340	3,420	331	992	70	228
25	86	202	113	79	166	658	1,320	1,960	268	641	65	224
26	122	184	119	79	166	698	1,380	1,270	224	489	65	169
27	143	156	124	76	166	826	3,420	963	282	331	65	526
28	122	110	113	76	166	1,060	1,840	698	199	257	84	316
29	113	104	110	76	------	1,160	1,490	539	156	202	89	206
30	139	116	107	76	------	1,490	1,380	436	133	232	89	159
31	136	------	99	79	------	1,220	------	403	------	206	76	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	143	24	66.4	0.214	0.25
November	1,380	76	279	.900	1.00
December	2,730	99	268	.865	1.00
January	122	76	94.8	.306	.35
February	188	74	121	.390	.41
March	1,490	159	391	1.26	1.45
April	7,660	1,010	2,720	8.77	9.78
May	3,420	403	1,260	4.06	4.68
June	6,320	133	1,000	3.23	3.60
July	5,100	79	612	1.97	2.27
August	331	65	127	.410	.47
September	526	50	179	.577	.64
The year	7,660	24	592	1.91	25.90

ASHUELOT RIVER NEAR GILSUM, N. H.

LOCATION.—Water-stage recorder at stone-arch bridge on Keene-Newport road 1 mile below Gilsum, Cheshire County.

DRAINAGE AREA.—71.1 square miles.

RECORDS AVAILABLE.—August, 1922, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,300 second-feet Apr. 11 (gage height, 7.90 feet); minimum, 1.7 second-feet Sept. 11 (gage height, 0.62 foot). 1922–1931: Maximum discharge, 2,760 second-feet Nov. 4, 1927 (gage height, 11.34 feet); minimum, about 1 second-foot Oct. 6, 1922, July 10, 1923.

REMARKS.—Records good except those during periods of ice effect and those estimated, Sept. 1–8, 17–25, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.7	27	a 65	a 16	a 9.6	16	359	189	210	21	28	13
2	6.2	20	a 51	a 15	a 9.5	17	427	154	199	21	17	25
3	8.7	17	a 38	a 15	a 9.3	a 16	523	140	143	21	13	32
4	8.2	17	a 29	19	a 9.3	17	632	129	104	14	14	40
5	9.1	17	a 24	18	a 9.1	25	632	109	80	20	20	9.6
6	10	30	a 20	17	a 8.4	15	595	101	66	15	20	9.0
7	9.5	21	a 18	17	a 8.4	17	558	90	79	12	8.7	9.8
8	9.6	18	17	a 18	a 8.2	20	490	86	126	25	14	11
9	9.6	16	21	a 17	8.2	17	570	104	202	14	13	12
10	10	16	22	a 17	8.2	19	722	109	496	22	11	13
11	13	14	20	14	a 9.1	20	1,150	184	520	52	11	6.5
12	9.3	15	a 19	15	a 10	37	1,070	202	406	48	26	14
13	8.6	15	a 18	a 13	a 12	22	826	182	296	79	31	14
14	9.3	15	a 16	a 12	11	28	748	182	210	30	24	11
15	9.8	14	a 15	a 12	11	21	670	226	153	18	15	20
16	18	19	a 15	a 11	a 12	24	532	202	122	14	20	13
17	8.2	75	a 17	9.8	15	21	438	171	268	15	18	22
18	9.8	122	a 21	9.8	16	24	385	138	438	12	15	17
19	12	76	a 22	14	20	27	375	113	315	15	18	13
20	13	56	a 19	22	13	29	365	97	218	20	16	20
21	9.1	26	a 16	17	a 13	27	355	90	149	16	17	22
22	10	24	a 18	14	a 12	53	325	90	104	49	9.1	32
23	8.9	18	a 21	a 13	a 12	51	296	193	82	72	14	27
24	11	15	a 20	a 11	a 14	88	268	508	83	78	17	24
25	28	25	a 20	a 11	16	91	226	462	69	28	9.3	13
26	56	50	a 19	a 11	a 16	128	210	355	58	29	17	15
27	26	30	a 17	19	15	149	296	259	53	28	8.9	10
28	29	a 23	a 17	14	a 16	194	296	186	51	23	24	20
29	33	a 19	a 17	12	-------	288	259	136	29	32	12	18
30	41	a 22	a 17	a 11	-------	350	242	104	23	44	20	17
31	29	-------	a 17	a 10	-------	359	-------	110	-------	17	20	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	56	6.2	15.5	0.218	0.25
November	122	14	29.1	.409	.46
December	65	15	22.1	.311	.36
January	22	9.8	14.3	.201	.23
February	20	8.2	11.8	.166	.17
March	359	15	71.3	1.00	1.15
April	1,150	210	495	6.96	7.76
May	508	86	174	2.45	2.82
June	520	23	178	2.50	2.79
July	79	12	29.2	.411	.47
August	31	8.7	16.8	.236	.27
September	40	6.5	17.4	.245	.27
The year	1,150	6.2	89.2	1.25	17.00

a Stage-discharge relation affected by ice.

ASHUELOT RIVER AT HINSDALE, N. H.

LOCATION.—Chain gage at highway bridge in Hinsdale, Cheshire County, a quarter of a mile below dam and 1½ miles above mouth of river.

DRAINAGE AREA.—420 square miles.

RECORDS AVAILABLE.—February, 1907, to December, 1909; July, 1914, to September, 1931.

EXTREMES.—Maximum discharge during year, 4,310 second-feet Apr. 12 (gage height, 6.88 feet); minimum, 1.0 second-foot Sept. 16 (gage height, 2.10 feet). 1907–1909, 1914–1931: Maximum discharge, 8,940 second-feet Mar. 29, 1920 (gage height, 9.98 feet); minimum, that of Sept. 16, 1931.

REMARKS.—Records good. Stage-discharge relation affected by ice Dec. 6, Dec. 15 to Feb. 28. Flow partly regulated by storage reservoir.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	181	292	119	78	135	2,090	775	1,050	249	207	30
2	48	185	380	119	107	203	2,230	735	1,100	188	63	129
3	90	185	344	104	138	170	2,660	627	952	203	107	144
4	119	207	276	50	148	154	2,660	562	697	375	157	292
5	26	151	237	132	144	170	2,660	562	562	154	200	264
6	126	154	207	154	132	154	2,660	530	470	196	129	14
7	65	135	200	110	107	196	2,510	500	410	226	144	141
8	65	74	245	101	90	16	2,510	500	500	160	126	122
9	65	135	230	92	78	249	2,660	660	775	181	31	174
10	101	138	230	78	84	215	2,810	735	1,500	203	113	141
11	81	200	237	48	98	226	3,410	860	2,090	218	101	122
12	84	126	230	154	98	330	4,310	1,000	1,820	181	126	110
13	90	148	222	69	81	211	4,010	905	1,440	241	192	22
14	101	101	122	54	110	253	3,260	860	1,000	218	138	36
15	101	84	203	54	63	215	2,810	905	815	135	215	24
16	71	30	245	54	58	276	2,230	905	815	141	78	24
17	11	272	203	52	56	313	1,820	735	1,050	177	144	81
18	67	562	151	50	74	196	1,560	697	1,690	141	185	122
19	18	595	116	50	135	253	1,440	595	1,500	16	132	74
20	78	390	78	110	92	313	1,320	530	1,100	76	138	69
21	98	301	48	113	122	344	1,150	470	905	129	144	203
22	107	276	92	107	119	272	1,100	530	562	203	126	218
23	78	200	110	101	113	562	1,000	775	500	284	41	203
24	122	196	107	95	113	627	952	2,090	500	288	126	60
25	101	177	90	90	116	640	815	2,370	442	357	126	98
26	177	237	71	81	141	680	815	1,820	366	257	21	211
27	170	268	63	74	110	790	1,000	1,320	405	245	29	46
28	261	276	58	45	148	930	1,100	905	305	288	2.0	119
29	200	192	95	78	------	1,400	905	775	309	174	181	141
30	200	222	116	107	------	1,800	815	595	288	141	3.2	76
31	144	------	119	101	------	2,050	------	697	------	46	129	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	261	11	100	0.238	0.27
November	595	30	213	.507	.57
December	380	48	175	.417	.48
January	154	45	88.6	.211	.24
February	148	56	105	.250	.26
March	2,050	16	463	1.10	1.27
April	4,310	815	2,040	4.86	5.42
May	2,370	470	856	2.04	2.35
June	2,090	288	864	2.06	2.30
July	375	16	196	.467	.54
August	215	2.0	118	.281	.32
September	292	14	117	.279	.31
The year	4,310	2.0	444	1.06	14.33

OTTER BROOK NEAR KEENE, N. H.

LOCATION.—Water-stage recorder at bridge on Keene-Sullivan highway 3½ miles northeast of Keene, Cheshire County, and 3½ miles above confluence with Minnewawa Brook.

DRAINAGE AREA.—41.8 square miles.

RECORDS AVAILABLE.—October, 1923, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,300 second-feet Apr. 11 (gage height, 5.46 feet); minimum, 4.2 second-feet Oct. 16 (gage height, 1.94 feet). 1923–1931: Maximum discharge, 2,000 second-feet Nov. 4, 1927 (gage height, 6.87 feet); minimum, 1.9 second-feet Oct. 14, 15, 1929.

REMARKS.—Records good except those estimated because of ice or lack of gage-height record, Nov. 25 to Feb. 21, May 31, July 5, Aug. 1–7, Sept. 6, 7, which are fair. Little if any utilization of storage above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	12	22	10	6.7	16	218	74	119	15	19	7.7
2	9.1	9.6	24	9.6	9.5	18	280	66	96	14	11	8.4
3	7.7	10	19	9.1	11	19	315	64	66	12	9.0	32
4	6.8	8.4	20	6.7	12	17	365	58	54	12	10	20
5	5.5	11	20	8.8	12	16	337	52	43	11	13	14
6	6.8	17	18	9.1	12	16	307	46	36	9.6	13	10
7	8.1	13	17	10	12	17	277	43	43	10	6.0	8.0
8	9.1	12	15	8.8	10	18	267	45	76	12	9.6	6.5
9	9.1	8.7	15	8.8	11	34	353	72	144	17	9.1	6.1
10	9.1	9.1	15	8.8	13	28	520	60	414	16	10	6.8
11	6.8	9.6	15	7.7	13	25	1,220	88	267	20	7.7	8.7
12	5.5	8.7	15	8.8	12	23	689	80	193	16	15	7.1
13	5.3	13	16	8.8	14	18	458	69	133	12	20	6.1
14	6.8	10	9.6	9.1	18	18	454	80	96	11	12	6.1
15	6.8	9.6	8.1	8.8	14	18	365	91	76	10	9.6	7.7
16	6.1	12	7.4	8.8	15	17	284	77	67	9.6	9.6	15
17	8.4	52	13	9.1	15	17	241	69	180	8.1	8.7	10
18	14	49	14	8.1	14	18	229	58	155	8.1	8.7	11
19	9.1	35	14	8.1	13	25	218	48	104	8.1	8.7	9.6
20	8.1	35	13	9.1	13	25	198	44	80	8.1	8.4	17
21	7.7	32	12	12	13	28	175	45	56	11	8.1	32
22	7.1	25	12	12	14	36	155	47	40	23	6.8	19
23	6.5	23	12	12	17	41	135	155	38	34	6.8	18
24	5.5	19	12	11	18	61	123	307	45	80	5.8	17
25	20	19	12	10	17	62	103	206	38	40	5.5	13
26	25	27	11	11	16	70	98	151	36	28	5.5	10
27	19	28	10	12	16	99	117	111	33	19	5.8	8.1
28	17	23	9.6	13	18	123	99	86	25	15	15	5.5
29	16	14	10	13	-------	212	91	72	19	12	12	5.1
30	14	15	10	9.5	-------	232	88	61	17	13	11	4.8
31	14	-------	10	10	-------	209	-------	86	-------	11	8.7	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	25	5.3	10.1	0.242	0.28
November	52	8.4	19.0	.455	.51
December	24	7.4	13.9	.333	.38
January	13	6.7	9.73	.233	.27
February	18	6.7	13.5	.323	.34
March	232	16	50.8	1.22	1.41
April	1,220	88	293	7.01	7.82
May	307	43	84.2	2.01	2.32
June	414	17	93.0	2.22	2.48
July	80	8.1	17.0	.407	.47
August	20	5.5	9.97	.239	.28
September	32	4.8	11.7	.280	.31
The year	1,220	4.8	51.9	1.24	16.87

SOUTH BRANCH OF ASHUELOT RIVER AT WEBB, NEAR MARLBORO, N. H.

LOCATION.—Water-stage recorder at bridge a quarter of a mile from Webb railroad station, Marlboro, Cheshire County.

DRAINAGE AREA.—36.6 square miles.

RECORDS AVAILABLE.—November, 1920, to September, 1931.

EXTREMES.—Maximum discharge during year, 660 second-feet Apr. 11 (gage height, 4.61 feet); practically no flow Mar. 22 (gage height, 0.60 foot).

1920–1931: Maximum discharge, 3,560 second-feet Nov. 4, 1927 (gage height, 7.15 feet); minimum, that of Mar. 22, 1931.

REMARKS.—Records good except those estimated and those during periods of ice effect, which are fair. Flow regulated by several small storage ponds above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.1	28	a 32	a 12	16	b 4.0	193	64	150	18	5.0	7.5
2	1.3	3.4	a 55	4.1	2.8	a 14	288	58	90	12	4.7	15
3	8.8	20	a 58	a 8.0	5.6	a 13	326	58	61	11	4.8	24
4	1.1	14	a 38	a 12	a 28	a 15	381	80	56	9.2	7.5	16
5	1.0	1.7	a 25	2.2	a 29	a 13	355	90	45	8.2	5.7	19
6	1.0	23	a 15	8.0	7.4	a 16	291	90	25	8.6	5.0	7.5
7	1.1	32	a 17	7.4	6.2	a 13	266	86	26	8.2	3.9	6.1
8	1.2	7.4	a 18	8.4	17	a 10	256	92	46	9.2	3.4	7.3
9	1.1	9.4	a 15	11	3.6	a 13	339	127	108	8.2	4.1	5.9
10	1.2	14	a 17	a 18	5.6	a 12	384	74	314	7.8	3.8	11
11	7.0	11	a 13	6.4	5.6	a 17	638	171	169	9.6	3.8	14
12	1.4	8.1	a 15	9.0	5.6	a 20	438	119	114	8.2	7.5	13
13	1.2	1.2	a 18	9.3	5.8	a 16	311	91	82	7.8	b 7.6	6.1
14	1.2	13	a 12	15	14	a 17	272	84	59	7.0	7.8	5.7
15	1.4	10	a 15	12	b 3.0	a 7	210	120	102	6.6	6.8	8.2
16	5.0	b 35	a 12	10	a 6.0	a 14	187	86	127	5.7	7.3	14
17	1.1	b 57	b 13	a 18	a 8.0	a 13	142	76	283	5.2	10	14
18	1.5	b 79	a 15	2.6	a 11	a 15	127	71	182	5.2	9.6	14
19	1.1	b 57	a 7.0	6.7	a 12	a 13	114	97	102	5.4	7.3	14
20	1.1	b 38	6.0	6.7	a 11	a 14	105	76	64	5.4	6.4	b 14
21	2.3	27	6.7	10	a 14	a 12	95	48	36	8.2	5.9	14
22	2.4	12	a 13	a 13	a 2.0	7.2	b 85	55	56	24	5.7	b 15
23	23	6.9	3.4	6.2	a 5.0	5.7	b 73	226	40	23	5.4	b 20
24	6.0	16	7.0	6.2	a 7.0	13	66	329	45	11	4.8	22
25	9.5	33	9.0	15	a 8.0	48	49	294	38	8.6	4.5	16
26	10	47	8.7	3.4	a 8.0	95	83	119	35	7.5	4.3	19
27	31	25	a 13	5.3	a 7.0	111	182	90	33	7.0	4.3	8.2
28	23	10	3.0	a 17	a 6.0	117	106	64	24	6.6	11	7.8
29	22	16	a 6.0	a 16	------	222	86	59	18	5.7	10	7.5
30	14	16	a 11	4.9	------	288	74	34	16	5.4	8.2	7.3
31	17	------	5.7	4.9	------	210	------	48	------	5.2	8.2	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	31	1.0	6.49	0.177	0.20
November	79	1.2	22.4	.612	.68
December	58	3.0	16.2	.443	.51
January	18	2.2	9.31	.254	.29
February	29	2.0	9.29	.254	.26
March	288	4.0	45.1	1.23	1.42
April	638	49	217	5.93	6.62
May	329	34	102	2.79	3.22
June	314	16	84.9	2.32	2.59
July	24	5.2	9.01	.246	.28
August	11	3.4	6.27	.171	.20
September	24	5.7	12.4	.339	.38
The year	638	1.0	45.0	1.23	16.65

a Stage-discharge relation affected by ice. b Estimated.

MILLERS RIVER NEAR WINCHENDON, MASS.

LOCATION.—Water-stage recorder at Nolan's Bridge, half a mile below mouth of Sip Pond Brook and 2 miles west of Winchendon, Worcester County.
DRAINAGE AREA.—80 square miles.
RECORDS AVAILABLE.—June, 1916, to September, 1931.
EXTREMES.—Maximum discharge, 906 second-feet Apr. 14 (gage height, 7.15 feet); minimum, 3.1 second-feet Oct. 4, 5 (gage height, 2.55 feet).
1916–1931: Maximum discharge, 1,760 second-feet June 25, 1922 (gage height, 8.65 feet); practically no flow Sept. 20, 1918, Jan. 14, 1925.
REMARKS.—Records good except those estimated, Jan. 23 to Feb. 12, June 26 to July 1, and those during periods of ice effect, Dec. 14–19, Dec. 29–31, Jan. 1–3, 5–22, Feb. 13 to Mar. 21, which are fair. Flow regulated by storage in Lake Monomona and other reservoirs.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	41	72	36	21	48	350	149	182	64	40	61
2	29	20	98	39	43	92	452	154	180	76	29	63
3	11	52	96	27	41	89	548	150	134	66	56	64
4	3.1	54	59	18	40	87	457	192	118	30	94	56
5	5.3	60	43	35	39	85	497	160	126	24	70	33
6	33	52	26	56	44	90	490	118	102	48	90	22
7	30	36	21	47	29	46	502	106	78	99	60	18
8	34	27	56	39	21	87	546	105	97	66	40	36
9	54	15	58	46	42	85	614	131	180	85	26	36
10	46	28	48	28	41	83	640	108	468	100	42	43
11	37	15	56	21	40	80	740	226	673	93	60	34
12	7.1	70	44	50	39	85	714	222	657	36	124	24
13	26	52	24	59	41	70	740	206	454	78	101	12
14	34	51	35	61	30	55	768	188	304	74	66	19
15	40	38	56	32	21	44	616	160	259	105	72	45
16	36	15	55	39	94	85	351	168	244	68	32	38
17	40	84	48	42	90	80	343	146	238	65	65	46
18	33	60	53	21	87	64	310	182	248	60	108	48
19	7.1	74	51	51	83	56	244	156	184	35	80	24
20	30	90	24	57	80	50	258	126	110	72	65	14
21	39	61	20	54	89	42	230	110	90	80	67	58
22	50	44	44	49	45	33	180	80	146	68	35	60
23	28	41	52	42	100	90	158	84	138	64	22	60
24	44	114	55	35	98	106	150	275	104	84	60	49
25	52	92	33	21	96	111	180	348	99	72	55	38
26	13	60	53	55	95	118	130	275	91	25	62	19
27	64	30	25	58	100	150	276	200	68	53	68	11
28	76	54	18	57	60	147	215	152	78	70	70	28
29	64	49	34	50	------	236	187	120	69	70	48	40
30	50	23	53	52	------	382	154	58	62	66	24	45
31	74	------	44	27	------	336	------	84	------	55	61	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	76	3.1	36.0	0.450	0.52
November	114	15	50.1	.626	.70
December	98	18	46.9	.586	.68
January	61	18	42.1	.526	.61
February	100	21	58.9	.736	.77
March	382	33	104	1.30	1.50
April	768	130	401	5.01	5.59
May	348	58	159	1.99	2.29
June	673	62	199	2.49	2.78
July	105	24	66.2	.828	.95
August	124	22	61.0	.762	.88
September	64	11	38.1	.476	.53
The year	768	3.1	105	1.31	17.80

MILLERS RIVER AT ERVING, MASS.

LOCATION.—Water-stage recorder a quarter of a mile below dam at Erving, Franklin County, 8 miles above mouth, and below all important tributaries.
DRAINAGE AREA.—372 square miles.
RECORDS AVAILABLE.—August, 1914, to September, 1931.
EXTREMES.—Maximum discharge during year, 3,020 second-feet Mar. 30 (gage height, 4.70 feet); minimum, 3.1 second-feet Dec. 28 (gage height, 0.87 foot).
1914–1931: Maximum discharge, 6,350 second-feet Nov. 4, 1927 (gage height, 5.85 feet); practically no flow at times in 1915 and 1916.
REMARKS.—Records good except those estimated, Jan. 24 to Feb. 10, Feb. 22, and those during periods of ice effect, Jan. 7–23, Feb. 11–21, Feb. 23 to Mar. 7, which are fair. Flow regulated by storage in reservoirs above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82	174	254	77	40	155	2,200	772	744	216	83	144
2	49	53	278	143	97	162	2,200	691	822	258	68	162
3	30	177	230	58	121	140	2,440	526	704	228	117	202
4	32	78	254	80	137	148	2,520	681	568	109	152	232
5	68	69	222	142	150	158	2,700	667	460	144	107	212
6	54	200	250	147	159	170	2,520	540	487	208	123	84
7	28	186	30	185	95	182	2,360	542	218	228	131	74
8	33	140	224	220	44	146	2,360	520	450	202	147	165
9	34	112	151	180	90	245	2,610	840	794	205	63	145
10	89	156	161	150	112	188	2,520	872	1,350	254	116	138
11	66	50	176	50	132	252	2,520	1,150	1,700	317	134	136
12	110	146	145	132	154	292	2,610	1,200	1,770	95	146	82
13	23	145	196	139	120	226	2,520	1,090	1,570	228	293	39
14	142	136	60	158	79	226	2,360	1,010	1,100	186	380	78
15	109	272	160	182	140	164	1,980	992	878	210	262	146
16	58	36	137	231	161	270	1,570	908	1,100	216	274	95
17	72	284	132	209	174	212	1,210	751	1,230	196	234	73
18	96	427	109	50	193	234	1,110	733	1,250	161	196	116
19	18	467	116	154	204	329	942	674	1,040	87	252	117
20	46	340	123	137	170	323	804	586	764	192	243	92
21	40	286	60	102	140	421	853	464	536	172	190	155
22	95	348	154	187	105	444	792	516	486	216	166	204
23	99	11	132	230	147	537	611	925	494	190	140	132
24	131	228	132	130	165	654	580	1,570	420	181	160	146
25	127	218	92	43	145	908	654	1,640	430	151	186	362
26	140	262	80	130	152	1,060	517	1,380	363	74	139	95
27	152	172	59	140	140	1,110	1,080	1,150	274	174	151	81
28	170	220	52	161	133	1,370	1,100	937	311	156	212	68
29	142	129	84	180	-------	1,910	1,020	734	266	151	237	92
30	198	52	82	201	-------	2,520	922	447	210	147	118	114
31	182	-------	108	120	-------	2,360	-------	390	-------	148	171	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	198	18	87.6	0.235	0.27
November	467	11	186	.500	.56
December	278	30	143	.384	.44
January	231	43	143	.384	.44
February	204	40	132	.355	.37
March	2,520	140	565	1.52	1.75
April	2,700	517	1,670	4.49	5.01
May	1,640	390	835	2.24	2.58
June	1,770	210	760	2.04	2.28
July	317	74	184	.495	.57
August	380	63	174	.468	.54
September	362	39	133	.358	.40
The year	2,700	11	417	1.12	15.21

SIP POND BROOK NEAR WINCHENDON, MASS.

LOCATION.—Water-stage recorder a quarter of a 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, 1916, to September, 1931.

EXTREMES.—Maximum discharge during year, 249 second-feet Apr. 12 (gage height, 8.82 feet); minimum, 1.1 second-feet Oct. 13–15 (gage height, 4.89 feet).

1916–1931: Maximum discharge, 340 second-feet Nov. 4, 1927 (gage height, 9.62 feet); minimum, 0.1 second-foot Aug. 25, 1924.

REMARKS.—Records good except those estimated, Dec. 17–28, Jan. 1–4, Feb. 3–12, May 28 to June 1, Aug. 6–15, and those during periods of ice effect, Dec. 15, 16, Jan. 15 to Feb. 2, Feb. 13 to 26, which are fair. Flow regulated by storage in Pearly and Sip Ponds.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.9	9.3	17	2.1	2.1	6.0	100	42	20	11	4.8	5.3
2	1.8	4.4	15	4.3	5.3	11	110	39	31	8.9	3.0	6.8
3	1.8	4.7	17	5.2	6.4	11	128	34	23	11	7.7	6.8
4	1.8	3.9	12	2.6	7.6	6.4	154	36	25	4.6	7.0	3.7
5	1.3	5.8	13	4.7	5.0	10	169	30	21	3.9	4.2	3.8
6	1.2	13	11	3.1	5.5	8.6	159	28	22	8.3	2.9	2.2
7	1.2	12	6.2	3.2	3.0	9.0	146	26	20	11	4.5	2.0
8	1.2	9.8	13	3.7	2.3	5.0	141	28	21	11	3.4	4.0
9	1.2	3.5	14	4.6	5.0	8.6	150	34	29	8.1	2.8	2.3
10	1.2	7.6	10	6.4	6.2	8.6	169	42	48	8.6	8.4	2.3
11	1.2	3.6	9.5	4.0	5.0	12	224	51	72	5.1	8.0	2.1
12	1.2	5.0	13	6.0	4.4	11	239	48	69	3.2	4.8	2.2
13	1.2	5.0	9.8	2.1	4.6	8.6	189	43	51	6.5	2.7	1.9
14	1.1	7.1	3.6	2.8	10	9.4	154	43	40	6.9	3.4	2.6
15	1.2	7.8	5.8	4.6	5.3	7.2	128	44	37	7.0	4.6	2.8
16	1.2	4.0	7.1	5.0	6.2	11	101	45	36	5.6	3.6	5.6
17	1.3	14	8.2	6.2	9.1	11	88	42	39	5.8	6.3	2.2
18	1.6	15	9.5	3.6	13	12	74	38	49	6.2	5.0	6.0
19	1.4	16	9.3	8.2	18	14	65	26	45	3.1	2.6	2.6
20	1.3	14	8.2	5.3	16	13	57	27	33	5.8	5.2	2.6
21	1.3	14	3.0	4.9	19	12	42	28	29	5.6	2.4	3.1
22	1.3	12	5.3	7.3	6.7	10	42	28	27	6.8	2.7	2.7
23	1.3	6.4	7.1	3.9	13	17	40	35	23	2.1	2.8	4.4
24	1.6	15	6.4	2.6	21	19	37	47	19	2.4	4.4	3.6
25	3.3	18	2.3	3.3	17	21	33	60	18	5.2	5.2	3.0
26	3.9	15	7.6	6.9	11	23	35	51	19	2.4	5.3	3.4
27	3.5	10	7.5	6.4	9.2	32	53	36	13	8.3	2.4	2.2
28	8.8	12	2.6	12	11	32	56	26	9.3	7.0	8.5	2.2
29	3.6	14	6.0	3.7	------	51	53	24	14	4.5	5.2	2.2
30	6.4	6.2	6.2	3.0	------	69	45	20	11	3.2	2.8	8.8
31	5.3	------	2.8	2.6	------	89	------	17	------	3.5	9.3	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	8.8	1.1	2.18	0.116	0.13
November	18	3.5	9.60	.511	.57
December	17	2.3	8.68	.462	.53
January	12	2.1	4.65	.247	.28
February	21	2.1	8.85	.471	.49
March	89	5.0	18.3	.973	1.12
April	239	33	106	5.64	6.29
May	60	17	36.1	1.92	2.21
June	72	9.3	30.4	1.62	1.81
July	11	2.1	6.21	.330	.38
August	9.3	2.4	4.71	.251	.29
September	8.8	1.9	3.51	.187	.21
The year	239	1.1	19.8	1.05	14.31

PRIEST BROOK NEAR WINCHENDON, MASS.

LOCATION.—Staff gage at 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, 1916, to September, 1931.

EXTREMES.—Maximum discharge during year, 262 second-feet Apr. 11, 12 (gage height, 4.79 feet); minimum, 1.5 second-feet Sept. 13 (gage height, 2.32 feet).

1916-1931: Maximum discharge, 1,000 second-feet Nov. 4, 1927 (gage height, 6.8 feet); minimum, 0.08 second-foot several times in September, 1929 (gage height, 2.18 feet).

REMARKS.—Records fair. Stage-discharge relation affected by ice Dec. 5 to Feb. 12.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.3	11	15	2.8	3.1	10	155	47	38	3.2	1.8	2.6
2	2.2	7.7	14	2.7	3.1	8.4	164	39	30	3.0	2.3	4.0
3	2.5	4.3	10	2.7	3.1	8.4	173	34	23	4.0	1.6	4.6
4	3.1	2.9	10	2.8	3.2	9.5	214	32	14	2.8	2.4	2.8
5	2.8	2.9	11	2.8	3.2	9.5	204	28	11	2.9	3.6	4.6
6	2.3	7.7	11	3.8	3.4	9.5	183	21	10	2.8	4.0	2.0
7	2.2	5.0	12	8.1	3.6	9.5	183	15	11	5.3	3.6	1.8
8	2.3	3.1	12	11	3.8	8.4	193	21	15	7.0	3.4	1.7
9	2.4	2.9	12	11	4.0	10	193	57	24	4.0	2.6	5.0
10	2.2	2.5	12	10	4.6	9.5	204	74	82	4.0	2.0	2.2
11	1.9	2.5	12	9.1	6.0	9.5	250	65	133	3.8	2.0	2.4
12	1.9	2.4	11	7.7	7.7	9.5	250	68	120	2.8	8.8	2.6
13	1.9	2.4	10	6.7	10	9.5	193	65	88	2.4	8.8	1.6
14	1.9	2.4	9.1	5.0	14	10	148	64	26	3.1	3.0	1.6
15	1.9	2.4	7.7	4.3	14	10	133	64	21	2.6	4.6	3.6
16	1.9	3.6	6.7	4.3	10	11	100	59	41	2.4	4.6	3.6
17	2.4	17	6.0	4.0	10	11	82	51	36	2.0	2.6	1.8
18	2.4	17	5.3	3.8	9.5	11	74	40	58	2.0	3.1	2.4
19	2.3	14	4.6	3.6	10	12	61	23	59	2.2	3.2	3.2
20	2.0	14	5.0	3.6	11	12	51	19	40	2.0	3.6	2.2
21	2.4	15	5.3	3.6	9.5	13	38	19	23	2.0	3.4	4.0
22	2.6	9.1	5.7	3.4	9.5	15	30	22	16	3.6	3.0	2.8
23	2.9	10	5.0	3.4	9.1	20	23	31	16	2.8	2.4	2.7
24	6.7	10	4.0	3.2	9.5	34	20	106	15	2.6	1.8	4.0
25	6.7	10	3.6	3.1	9.5	36	26	113	11	2.8	1.6	4.6
26	12	13	2.9	3.2	9.5	38	26	106	9.8	2.2	2.6	3.2
27	10	9.1	2.8	3.6	10	76	65	76	8.4	1.8	3.6	2.6
28	9.1	7.7	2.8	3.8	9.5	94	74	41	5.3	2.2	5.3	2.4
29	8.4	6.7	2.8	3.8	------	106	63	28	3.8	2.4	2.6	3.8
30	8.4	10	2.8	3.6	------	173	55	21	3.8	2.8	2.2	4.6
31	10	------	2.8	3.4	------	164	------	14	------	2.6	2.0	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	12	1.9	4.00	0.213	0.25
November	17	2.4	7.61	.405	.45
December	15	2.8	7.64	.406	.47
January	11	2.7	4.77	.254	.29
February	14	3.1	7.62	.405	.42
March	173	8.4	31.2	1.66	1.91
April	260	20	121	6.44	7.18
May	113	14	47.2	2.51	2.89
June	133	3.8	33.1	1.76	1.96
July	7.0	1.8	2.97	.158	.18
August	8.8	1.6	3.29	.175	.20
September	5.0	1.6	3.03	.161	.18
The year	260	1.6	22.7	1.21	16.38

EAST BRANCH OF TULLY RIVER NEAR ATHOL, MASS.

LOCATION.—Staff gage at highway bridge half a mile below mouth of Lawrence Brook and 3½ miles north of Athol, Worcester County.

DRAINAGE AREA.—50.2 square miles.

RECORDS AVAILABLE.—June, 1916, to September, 1931.

EXTREMES.—Maximum discharge during year, 472 second-feet Apr. 4, 5 (gage height, 3.26 feet); minimum not determined.

1916–1931: Maximum discharge, 1,610 second-feet Nov. 4, 1927 (gage height, 5.10 feet); minimum, 1.4 second-feet Sept. 4–7, 1929 (gage height, 0.20 foot).

REMARKS.—Records good except those estimated, Oct. 1 to Jan. 7, which are poor.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.0	14	36	10	11	18	348	100	94	15	5.2	11
2	3.7	12	36	10	12	18	384	82	106	13	4.3	7.4
3	3.6	11	36	9.5	12	18	402	77	88	12	4.3	8.3
4	3.4	10	35	9.0	11	19	472	72	67	11	5.8	13
5	3.3	12	33	9.8	12	20	472	62	49	9.8	5.2	10
6	3.4	17	32	11	11	19	410	62	41	9.3	4.6	9.6
7	3.6	16	30	12	11	19	371	50	34	12	4.3	7.4
8	3.9	14	29	11	10	20	352	54	45	12	3.9	6.7
9	3.9	12	27	8.9	11	22	371	112	67	12	3.9	8.6
10	3.8	11	26	9.2	11	24	390	134	172	12	3.9	5.6
11	3.5	10	25	9.2	12	24	430	143	223	12	3.9	4.8
12	3.2	10	25	9.2	11	22	430	152	183	13	8.0	4.8
13	3.1	12	24	9.8	12	23	352	143	152	13	22	5.0
14	3.3	11	22	9.8	13	22	284	126	106	11	19	4.1
15	3.6	10	20	9.8	14	25	237	126	77	10	19	3.9
16	3.8	19	18	9.5	15	26	183	112	126	9.3	15	4.3
17	5.2	40	17	9.8	16	27	143	100	152	8.3	12	4.1
18	7.5	54	18	9.8	18	28	126	77	183	7.4	13	4.3
19	11	72	18	10	20	31	106	67	162	6.9	9.8	3.9
20	9.5	68	18	10	20	38	94	58	119	6.5	10	5.8
21	8.5	62	16	10	19	43	82	54	88	6.9	7.1	8.6
22	8.0	58	15	10	18	54	77	58	58	9.6	7.4	7.6
23	7.4	52	15	10	18	72	67	82	42	12	5.6	11
24	8.0	46	14	10	18	88	67	267	43	11	4.8	10
25	15	43	13	10	17	125	62	284	37	12	4.3	6.5
26	28	46	13	9.8	18	163	62	209	31	9.3	3.9	6.7
27	26	49	12	9.5	18	196	119	162	29	6.9	4.8	6.0
28	21	45	12	9.5	18	244	134	119	24	6.5	10	6.5
29	18	37	11	9.8	-------	316	126	94	20	5.6	13	7.4
30	16	35	11	9.8	-------	461	112	67	17	5.8	13	5.2
31	15	-------	10	11	-------	421	-------	62	-------	5.8	9.8	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	28	3.1	8.43	0.168	0.19
November	72	10	30.3	.604	.67
December	36	10	21.5	.428	.49
January	12	8.9	9.89	.197	.23
February	20	10	14.5	.289	.30
March	461	18	85.4	1.70	1.96
April	472	62	242	4.82	5.38
May	284	50	109	2.17	2.50
June	223	17	87.8	1.75	1.95
July	15	5.6	9.90	.197	.23
August	22	3.9	8.41	.168	.19
September	13	3.9	6.94	.138	.15
The year	472	3.1	52.7	1.05	14.24

MOSS BROOK AT WENDELL DEPOT, MASS.

LOCATION.—Staff gage a quarter of a mile above confluence with Millers River and a quarter of a mile north of Wendell Depot, Franklin County.
DRAINAGE AREA.—12.2 square miles.
RECORDS AVAILABLE.—June, 1916, to September, 1931.
EXTREMES.—Maximum discharge during year, 164 second-feet May 24 (gage height, 3.28 feet); minimum, 0.8 second-foot Oct. 1 (gage height, 0.96 foot). 1916–1931: Maximum discharge, 775 second-feet Nov. 4, 1927 (gage height, 5.2 feet); minimum, 0.2 second-foot Sept. 4, 5, 1929 (gage height, 0.90 foot).
REMARKS.—Records good. Stage-discharge relation affected by ice Nov. 27–29, Dec. 1–3, 14–16. Discharge estimated Feb. 1.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	4.7	6.9	3.2	2.5	5.7	98	24	30	4.0	2.0	2.5
2	1.2	3.7	7.7	3.0	2.3	5.7	98	20	26	4.2	1.8	2.0
3	1.2	3.0	6.7	2.9	2.1	5.7	98	18	24	4.0	1.6	4.3
4	1.1	2.4	5.9	2.9	2.5	5.5	111	18	22	4.3	3.6	3.6
5	1.1	3.9	5.4	3.3	2.2	5.4	92	15	22	4.0	2.5	3.0
6	1.1	5.4	5.2	3.7	2.1	5.4	66	14	18	5.0	2.0	2.5
7	1.1	3.9	5.2	4.0	1.9	5.0	61	13	28	5.5	1.8	1.8
8	1.1	3.2	5.5	2.6	2.2	5.5	63	13	22	4.8	1.5	1.5
9	1.2	3.0	5.2	2.4	2.4	5.2	98	16	33	5.2	1.4	1.2
10	1.2	3.2	5.0	2.4	3.0	5.4	92	28	92	5.0	1.8	1.1
11	1.1	2.7	4.7	2.6	3.3	6.3	75	32	63	5.2	1.6	1.1
12	1.1	2.4	5.2	2.5	3.4	6.7	59	34	40	4.5	5.5	1.1
13	1.1	2.9	4.8	3.4	3.4	7.5	49	34	28	3.9	6.7	1.1
14	1.2	2.6	4.5	3.0	3.6	6.9	41	33	21	3.9	5.7	1.1
15	1.2	3.9	4.3	2.3	4.0	6.7	36	32	19	4.0	6.7	1.3
16	1.2	8.8	3.7	1.9	4.2	6.7	30	28	32	3.7	5.5	1.7
17	1.2	19	3.4	2.0	4.3	6.3	26	24	33	3.3	4.5	1.7
18	2.4	20	3.3	1.9	5.2	8.4	24	20	32	2.9	3.3	1.5
19	1.6	12	3.3	1.8	4.8	10	22	16	29	2.7	2.9	1.5
20	1.5	8.6	3.2	1.8	5.7	14	20	16	21	2.7	3.3	2.7
21	1.4	7.1	3.3	2.2	5.9	18	17	15	16	3.0	2.5	4.0
22	1.4	6.5	3.4	2.4	6.5	24	16	16	13	9.3	1.9	3.3
23	1.3	5.5	3.3	2.5	6.3	28	15	37	11	7.5	1.6	5.0
24	2.0	5.2	3.7	2.3	6.3	29	16	140	14	5.7	1.4	4.0
25	3.2	7.1	4.0	2.6	6.5	42	15	86	12	5.0	1.2	3.3
26	7.3	8.2	3.4	2.9	5.7	57	20	40	9.8	4.5	1.1	2.5
27	4.3	7.9	3.6	3.4	5.9	70	25	30	8.4	3.6	2.3	2.5
28	3.0	5.9	3.6	2.6	5.7	86	26	26	7.3	3.2	8.6	2.0
29	3.7	4.5	4.0	1.9	-------	98	34	22	5.7	2.7	5.5	1.6
30	3.7	4.0	3.9	2.4	-------	111	30	20	5.2	2.4	4.7	1.6
31	3.6	-------	3.7	2.2	-------	92	-------	28	-------	2.1	3.0	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	7.3	0.8	1.92	0.157	0.18
November	20	2.4	6.04	.495	.55
December	7.7	3.2	4.48	.367	.42
January	4.0	1.8	2.61	.214	.25
February	6.5	1.9	4.07	.334	.35
March	111	5.0	25.5	2.09	2.41
April	111	15	49.1	4.02	4.48
May	140	13	29.3	2.40	2.77
June	92	5.2	24.6	2.02	2.25
July	9.3	2.1	4.25	.348	.40
August	8.6	1.1	3.21	.263	.30
September	5.0	1.1	2.27	.186	.21
The year	140	.8	13.1	1.07	14.57

DEERFIELD RIVER AT CHARLEMONT, MASS.

LOCATION.—Water-stage recorder 1 mile below Charlemont, Franklin County.
DRAINAGE AREA.—362 square miles.
RECORDS AVAILABLE.—June, 1913, to September, 1931.
EXTREMES.—Maximum discharge during year, 18,900 second-feet June 10 (gage height, 10.12 feet); minimum, 57 second-feet Oct. 5 (gage height, 1.53 feet).
1913–1931: Maximum discharge, 50,600 second-feet July 8, 1915 (gage height, 15.7 feet); practically no flow June 17, 1921.
REMARKS.—Records excellent except those estimated, Oct. 20–22, Dec. 6–10, 13–17, Apr. 6–8, and those during periods of ice effect, Jan. 19, Jan. 22 to Mar. 13, which are good. Flow regulated by Somerset and Davis Bridge Reservoirs; monthly mean discharge corrected for monthly change in contents of reservoirs.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	591	122	691	229	130	150	758	1,070	726	646	90	911
2	544	95	553	589	210	240	1,010	788	762	855	78	868
3	488	358	708	390	280	400	1,130	504	684	794	402	1,020
4	186	457	870	315	350	590	1,470	832	668	279	642	521
5	138	564	868	588	420	500	1,260	1,040	643	159	226	294
6	493	442	775	726	510	400	1,880	1,000	344	558	206	164
7	508	135	463	674	390	210	1,750	1,060	281	842	84	75
8	480	118	588	591	140	180	1,660	1,010	875	827	87	559
9	448	141	895	367	220	300	1,440	1,880	5,870	938	78	770
10	451	225	1,020	249	470	420	2,600	1,540	10,500	836	564	739
11	179	413	878	344	410	500	5,400	1,580	3,410	1,000	753	640
12	75	496	853	560	350	430	3,020	2,630	2,630	450	829	318
13	418	484	812	440	280	340	2,300	2,180	666	146	913	264
14	555	474	463	408	200	207	2,750	1,850	431	320	688	627
15	565	277	639	448	120	152	1,970	2,150	780	276	234	894
16	537	450	842	306	190	423	1,690	850	1,150	350	102	882
17	341	1,260	797	183	270	501	1,500	536	1,340	520	210	944
18	247	966	591	212	350	366	1,320	746	1,040	328	592	901
19	194	526	580	310	420	378	1,390	743	648	110	681	442
20	330	446	330	562	490	256	1,450	592	354	450	554	182
21	413	458	212	616	400	210	1,420	758	294	790	506	540
22	481	356	493	420	260	228	1,180	1,000	707	544	359	508
23	418	212	528	300	190	334	1,070	3,960	964	348	316	382
24	524	502	350	160	380	366	826	5,220	948	146	588	278
25	202	650	274	130	590	548	582	2,110	845	294	855	248
26	133	544	313	220	490	588	719	1,750	916	142	929	114
27	346	210	338	310	410	672	1,530	1,360	510	190	896	106
28	141	212	281	480	340	691	1,440	1,070	146	620	870	246
29	184	321	491	390	------	876	1,250	631	258	640	768	211
30	173	295	489	320	------	1,030	1,020	425	542	437	256	232
31	126	------	553	210	------	825	------	384	------	102	446	------

Month	Observed			Gain or loss in storage (millions of cubic feet)	Corrected for storage		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	591	75	352	−721	82.7	0.228	0.26
November	1,260	95	407	+92	442	1.22	1.36
December	1,020	212	598	−851	280	.773	.89
January	726	130	389	−601	164	.453	.52
February	590	120	331	−457	142	.392	.41
March	1,030	150	429	+123	475	1.31	1.51
April	5,400	582	1,630	+4,829	3,490	9.64	10.76
May	5,220	384	1,400	+915	1,740	4.81	5.54
June	10,500	146	1,330	−43	1,310	3.62	4.04
July	1,000	102	482	−228	397	1.10	1.27
August	929	78	477	−950	123	.340	.39
September	1,020	75	496	−674	236	.652	.73
The year	10,500	75	693	+1,434	738	2.04	27.68

WARE RIVER AT COLD BROOK, MASS.

LOCATION.—Water-stage recorder at bridge at White Valley, 1 mile west of Cold Brook, Worcester County. Zero of gage is 631.91 feet above mean sea level.
DRAINAGE AREA.—98.2 square miles.
RECORDS AVAILABLE.—January, 1928, to September, 1931.
EXTREMES.—Maximum discharge during year, about 1,100 second-feet Apr. 4.
1928–1931: Maximum discharge, that of Apr. 4, 1931.
Maximum discharge known, 1,300 second-feet Nov. 4, 1927 (crest of flood).
REMARKS.—Records good. Daily discharge includes pumpage from tunnel under construction and diversion for Boston water supply; monthly mean discharge corrected for pumpage.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	52	54	28	27	74	893	243	203	51	12	90
2	24	45	45	24	26	35	968	213	193	41	5	74
3	24	38	40	24	25	50	1,040	170	183	39	5	68
4	20	34	40	24	24	59	1,110	149	144	41	16	62
5	19	36	37	26	25	54	1,040	138	120	42	30	48
6	19	40	39	34	26	59	897	133	100	44	25	45
7	19	37	38	45	26	49	784	128	85	161	24	40
8	19	34	36	45	24	49	787	122	93	154	25	49
9	22	30	35	45	20	61	755	302	375	116	15	47
10	20	28	34	36	25	69	697	265	733	99	18	31
11	20	26	33	33	26	49	685	418	762	141	19	31
12	20	24	39	29	27	113	654	342	649	117	143	31
13	21	26	40	28	17	95	575	311	475	89	253	31
14	22	28	36	31	15	118	481	298	323	75	233	20
15	24	31	36	28	39	92	406	288	374	63	180	34
16	26	36	24	23	45	90	343	250	337	52	141	43
17	25	70	25	24	48	85	302	215	309	45	101	43
18	30	124	26	25	53	84	262	181	271	40	75	42
19	30	85	26	26	63	98	235	158	195	39	62	40
20	26	62	27	25	74	116	211	136	206	36	68	41
21	23	49	26	29	67	128	201	141	137	34	56	41
22	22	51	24	28	67	178	169	132	122	35	46	43
23	22	43	24	26	67	197	169	286	116	32	38	41
24	24	38	26	24	80	259	154	389	118	32	32	41
25	39	45	26	23	37	295	151	338	106	39	28	38
26	61	57	27	23	112	336	236	284	94	34	28	41
27	50	47	26	24	70	419	297	220	83	49	65	36
28	38	36	27	27	72	476	234	181	71	92	200	38
29	38	33	25	28	------	790	217	169	63	29	188	37
30	34	33	30	26	------	969	205	154	57	20	147	33
31	36	------	30	26	------	921	------	155	------	20	116	------

Month	Observed			Pumpage from tunnel (second-feet)	Corrected for pumpage		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	61	19	27.5	2.1	25.4	0.259	0.30
November	124	24	43.9	1.6	42.3	.431	.48
December	54	24	32.3	2.3	30.0	.305	.35
January	45	23	28.6	2.0	26.6	.271	.31
February	112	15	43.8	1.8	42.0	.428	.45
March	969	35	209	----------	209	2.13	2.46
April	1,110	151	505	----------	505	5.14	5.74
May	418	122	223	----------	223	2.27	2.62
June	762	57	237	----------	237	2.41	2.69
July	161	20	61.3	----------	61.3	.624	.72
August	253	5	77.2	----------	77.2	.786	.91
September	90	20	43.3	----------	43.3	.441	.49
The year	1,110	5	127	----------	127	1.29	17.52

WARE RIVER AT GIBBS CROSSING, MASS.

LOCATION.—Water-stage recorder half a mile above Gibbs Crossing, Hampshire County, 1¼ miles above mouth of Beaver Brook, and 2½ miles below Ware.
DRAINAGE AREA.—199 square miles.
RECORDS AVAILABLE.—August, 1912, to September, 1931.
EXTREMES.—Maximum discharge during year, 1,540 second-feet Mar. 30 (gage height, 4.33 feet); minimum, 8.5 second-feet Oct. 13 (gage height, 1.07 feet).
1912–1931: Maximum discharge, 2,950 second-feet Apr. 8, 1924 (gage height, 6.25 feet); minimum, 5 second-feet Oct. 26, 1914.
REMARKS.—Records good. Stage-discharge relation affected by ice Jan. 16, 17, 22–24, 30. Discharge estimated Jan. 31 to Feb. 9. Water diverted Mar. 21 to June 14 for Boston water supply not included in daily discharge; monthly mean discharge corrected for this diversion.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	75	123	40	18	106	638	246	352	93	34	202
2	37	20	124	110	45	204	720	215	330	82	15	158
3	27	118	112	62	55	166	655	206	260	71	50	149
4	45	112	49	32	58	87	638	261	232	22	68	141
5	20	82	86	68	58	146	583	246	178	22	68	109
6	22	50	68	114	54	137	550	199	178	138	47	55
7	38	68	35	116	51	108	462	212	138	266	60	71
8	34	78	118	90	51	95	517	241	207	251	35	150
9	24	18	117	101	56	253	701	422	283	217	20	127
10	24	98	54	80	71	243	478	381	856	177	48	122
11	26	94	66	45	72	224	427	643	747	184	54	114
12	12	63	95	94	60	169	367	538	470	180	142	59
13	9.1	39	58	92	61	206	393	422	344	202	462	26
14	25	48	27	104	100	170	352	390	273	202	390	50
15	40	49	105	60	73	198	306	397	340	140	296	51
16	40	28	102	47	127	266	281	332	512	95	234	66
17	41	183	80	36	184	228	283	287	485	116	227	86
18	43	256	54	27	168	195	263	304	426	51	215	86
19	13	247	43	78	182	230	240	278	340	20	166	70
20	20	200	39	98	156	280	220	245	258	108	149	44
21	64	163	22	72	137	296	274	234	220	94	108	84
22	60	90	64	55	132	390	253	234	226	74	58	156
23	60	27	71	44	216	522	248	324	218	57	36	101
24	59	156	52	30	159	530	239	502	182	38	110	124
25	81	143	21	20	162	582	192	429	192	32	82	90
26	28	119	65	71	172	568	205	360	168	21	82	72
27	107	31	60	79	116	632	385	310	92	114	88	47
28	135	141	29	61	115	680	334	272	110	68	366	91
29	99	93	71	50	-------	856	281	235	187	108	432	90
30	38	40	90	41	-------	1,270	264	174	154	110	276	92
31	90	-------	60	32	-------	806	-------	212	-------	61	266	-------

Month	Observed			Diversion for Boston water supply (millions of gallons)	Corrected for diversions		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	135	9.1	45.2	0	45.2	0.227	0.26
November	256	18	97.6	0	97.6	.490	.55
December	124	21	69.7	0	69.7	.350	.40
January	116	20	66.1	0	66.1	.332	.38
February	216	18	104	0	104	.523	.54
March	1,270	87	350	2,244.4	462	2.32	2.68
April	720	192	392	7,030.8	754	3.79	4.23
May	643	174	315	1,800.6	405	2.04	2.35
June	856	92	299	1,738.1	388	1.95	2.18
July	266	20	110	0	110	.553	.64
August	462	15	151	0	151	.759	.88
September	202	26	96.1	0	96.1	.483	.54
The year	1,270	9.1	175	12,813.9	229	1.15	15.63

CHICOPEE RIVER AT BIRCHAM BEND, MASS.

LOCATION.—Water-stage recorder at dam at Bircham Bend, Hampden County, three-quarters of a mile below Higher Brook and 5½ miles above mouth.

DRAINAGE AREA.—703 square miles (revised).

RECORDS AVAILABLE.—August, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 4,840 second-feet Mar. 30 (gage height, 4.71 feet); minimum, 16 second-feet several times during year (leakage through wheels).

1928–1931: Maximum discharge, 6,700 second-feet Mar. 15, 1929 (gage height, 5.44 feet); minimum, 16 second-feet, leakage at times when wheels are stopped.

REMARKS.—Records good. Discharge given is combined flow over dam and through water wheels. Part of monthly discharge table corrected for diversions above station for Boston water supply. Assistance in rating station furnished by Metropolitan District Water Supply Commission.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	172	194	423	16	89	225	3,040	1,030	1,480	488	159	672
2	176	195	523	237	287	778	3,040	832	1,300	413	127	604
3	158	253	449	162	241	646	2,880	815	1,090	403	373	651
4	102	324	358	16	200	569	2,720	1,250	946	223	307	503
5	92	349	284	294	253	540	2,740	938	890	195	396	405
6	211	368	154	343	166	446	2,680	776	857	396	327	456
7	282	262	16	320	114	409	2,410	750	681	731	356	286
8	182	188	255	415	16	225	2,410	778	773	517	255	442
9	151	93	531	313	262	1,180	2,640	1,090	1,080	656	50	359
10	190	268	323	170	271	1,070	2,420	1,360	2,550	591	309	329
11	106	16	367	16	202	977	2,170	1,910	3,320	516	201	444
12	16	443	264	374	262	821	2,080	2,260	2,720	304	447	75
13	53	330	92	389	160	767	2,090	1,910	2,200	702	744	145
14	218	200	16	365	155	650	1,770	1,730	1,960	672	1,040	333
15	218	170	339	369	65	852	1,650	1,790	1,900	614	729	336
16	163	55	343	249	423	1,120	1,390	1,540	1,720	422	737	327
17	181	346	385	160	453	985	1,340	1,460	1,840	327	757	341
18	116	735	294	42	469	820	1,040	1,600	1,770	316	585	261
19	44	770	212	259	684	855	1,110	1,170	1,480	229	532	144
20	94	565	123	248	566	1,030	1,250	1,180	1,150	416	489	16
21	194	596	124	271	359	1,020	1,150	960	1,030	468	482	310
22	122	290	280	244	292	1,370	822	967	1,070	404	403	373
23	126	67	296	253	685	1,670	990	959	919	479	219	354
24	151	507	249	78	570	1,740	878	2,190	832	500	442	441
25	72	529	16	16	507	1,900	805	2,300	804	248	351	322
26	44	449	168	258	533	2,260	627	1,960	722	85	367	162
27	126	128	195	201	520	2,290	1,450	1,680	573	197	365	35
28	198	402	16	231	483	2,310	1,360	1,510	413	368	332	283
29	133	210	306	250	------	2,740	1,250	1,150	773	310	822	475
30	336	79	248	204	------	3,950	1,180	845	592	293	906	344
31	207	------	287	75	------	3,530	------	971	------	269	804	------

Month	Observed			Diversions for Boston water supply (millions of gallons)	Corrected for diversions		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	336	16	149	0	149	0.212	0.24
November	770	16	313	0	313	.445	.50
December	531	16	256	0	256	.364	.42
January	415	16	221	0	221	.314	.36
February	685	16	332	0	332	.472	.49
March	3,950	225	1,280	2,244.4	1,390	1.98	2.28
April	3,040	627	1,780	7,030.8	2,140	3.04	3.39
May	2,300	750	1,340	1,800.6	1,430	2.03	2.34
June	3,320	413	1,310	1,738.1	1,400	1.99	2.22
July	731	85	411	0	411	.585	.67
August	1,040	50	465	0	465	.661	.76
September	672	16	341	0	341	.485	.54
The year	3,950	16	684	12,813.9	738	1.05	14.21

SWIFT RIVER AT WEST WARE, MASS.

LOCATION.—Water-stage recorder 1,000 feet below dam at West Ware, Hampshire County, and 3 miles below confluence of East and West Branches of Swift River.

DRAINAGE AREA.—186 square miles.

RECORDS AVAILABLE.—July, 1910, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,220 second-feet Mar. 31 (gage height, 6.32 feet); minimum, about 12 second-feet Oct. 24 (gage height, 1.66 feet).

1910–1931: Maximum discharge, 2,390 second-feet Apr. 7, 1923 (gage height, 9.08 feet); minimum, 8.5 second-feet Sept. 26, 1930.

REMARKS.—Records fair to Oct. 24, excellent thereafter. Stage-discharge relation affected by ice Jan. 1 to Mar. 7. Numerous lakes, ponds, and reservoirs above station have considerable storage.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	78	109	57	66	100	1,040	352	364	132	102	161
2	32	81	118	57	64	100	935	317	352	130	86	140
3	27	76	91	57	64	98	935	306	317	126	75	126
4	31	72	102	58	62	102	902	282	278	123	84	119
5	31	70	100	57	64	104	935	266	248	119	79	115
6	29	78	98	70	66	111	870	250	223	140	71	104
7	35	83	93	87	66	121	775	234	214	161	65	98
8	31	76	91	85	64	130	744	253	225	142	61	94
9	29	70	93	83	62	166	775	388	315	140	57	84
10	23	68	96	78	68	193	775	465	721	142	59	77
11	28	64	85	76	68	193	744	627	944	144	59	73
12	28	60	81	74	70	175	684	670	838	136	130	71
13	28	58	89	74	74	168	614	614	714	126	177	69
14	28	57	72	72	87	164	560	560	578	117	161	67
15	26	58	70	72	98	175	492	546	452	115	159	65
16	22	74	72	70	96	186	438	492	400	111	161	71
17	23	157	70	70	96	179	400	465	400	104	144	79
18	32	229	70	70	98	179	364	400	388	102	136	75
19	39	222	68	70	121	197	340	340	340	98	128	71
20	42	196	66	72	130	223	317	317	306	92	117	67
21	40	164	66	72	128	260	292	289	278	90	109	81
22	42	142	62	72	121	306	276	278	241	92	96	86
23	42	125	62	72	118	352	260	387	214	88	90	94
24	39	111	62	70	113	413	234	687	214	88	88	100
25	55	111	64	68	109	478	214	762	190	111	88	90
26	74	130	62	70	104	600	255	670	177	119	81	81
27	87	125	62	70	102	655	400	586	168	117	90	79
28	74	107	60	72	100	699	438	478	157	113	190	79
29	66	100	58	72	------	838	426	388	146	104	214	75
30	64	96	57	70	------	1,110	400	328	136	102	200	71
31	68	------	57	68	------	1,180	------	317	------	107	184	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	87	22	40.2	0.216	0.25
November	229	57	105	.565	.63
December	118	57	77.6	.417	.48
January	87	57	70.5	.379	.44
February	130	62	88.5	.476	.50
March	1,180	98	321	1.73	1.99
April	1,040	214	561	3.02	3.37
May	762	234	429	2.31	2.66
June	944	136	351	1.89	2.11
July	161	88	117	.629	.73
August	214	57	114	.613	.71
September	161	65	88.7	.477	.53
The year	1,180	22	197	1.06	14.40

QUABOAG RIVER AT WEST BRIMFIELD MASS.

LOCATION.—Water-stage recorder at highway bridge at West Brimfield, Hampden County, a third of a mile above mouth of Blodgett Mill Brook.

DRAINAGE AREA.—151 square miles (revised).

RECORDS AVAILABLE.—August, 1909, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,070 second-feet Apr. 1 (gage height, 4.59 feet); minimum, 5.9 second-feet Oct. 11 (gage height, 1.59 feet).

1909–1931: Maximum discharge, 1,980 second-feet Mar. 17, 1910 (gage height, 5.3 feet); minimum, 2.5 second-feet Sept. 17, 18, 1910 (gage height, 1.40 feet).

REMARKS.—Records good except those estimated and those during period of ice effect, Dec. 14 to Mar. 9, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	31	78	10	28	102	1,030	220	220	82	36	178
2	17	20	60	62	43	108	1,030	215	226	70	48	172
3	22	50	72	50	28	104	961	194	216	116	63	168
4	11	38	52	43	27	95	997	183	210	154	52	160
5	10	37	48	61	25	95	961	179	196	147	54	145
6	20	47	40	64	24	92	925	163	173	152	46	141
7	20	35	31	54	18	89	858	154	168	125	56	126
8	24	29	71	32	17	86	824	165	162	97	39	114
9	13	20	45	70	58	190	791	207	a 260	95	45	110
10	18	57	38	40	30	184	726	216	a 400	93	61	108
11	7.8	37	46	38	30	180	696	291	a 540	92	49	100
12	14	31	37	98	28	184	634	292	a 665	96	151	90
13	18	41	25	58	37	182	578	296	665	105	164	90
14	24	32	21	56	75	200	515	304	628	a 86	141	86
15	19	28	59	63	75	214	463	315	575	76	126	a 78
16	13	23	58	50	125	214	423	306	506	87	a 135	81
17	18	93	70	27	68	200	378	300	493	87	a 135	77
18	16	87	59	57	105	190	338	288	451	88	a 135	a 70
19	7.8	68	40	98	125	220	313	264	455	89	136	64
20	19	54	29	50	107	250	290	a 247	472	82	129	68
21	22	56	23	42	112	262	269	a 236	427	53	118	84
22	18	41	77	37	113	308	246	a 236	388	70	112	71
23	17	49	50	38	128	345	222	a 260	a 240	57	108	72
24	26	73	32	32	125	383	192	a 340	226	51	106	a 74
25	16	47	20	22	118	443	181	a 366	201	50	100	62
26	21	61	78	75	120	510	196	a 337	173	54	86	50
27	27	35	30	50	115	572	207	a 310	145	68	88	62
28	34	74	29	37	106	606	217	a 280	127	54	180	73
29	22	46	86	28	-------	791	224	a 258	114	48	177	58
30	21	50	54	43	-------	925	219	220	100	58	180	54
31	25	-------	46	34	-------	961	-------	210	-------	54	181	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	34	7.8	18.7	0.124	0.14
November	93	20	46.3	.307	.34
December	86	20	48.5	.321	.37
January	98	10	49.0	.325	.37
February	128	17	71.8	.475	.49
March	961	86	300	1.99	2.29
April	1,030	181	530	3.51	3.92
May	366	154	253	1.68	1.94
June	665	100	327	2.17	2.42
July	154	48	85.0	.563	.65
August	181	36	104	.689	.79
September	178	50	96.2	.637	.71
The year	1,030	7.8	161	1.07	14.43

a Estimated.

WESTFIELD RIVER AT KNIGHTVILLE, MASS.

LOCATION.—Chain gage on Pitcher Bridge, in Knightville, Hampshire County, 1 mile above outlet of Norwich Lake and 3 miles above mouth of Middle Branch of Westfield River.

DRAINAGE AREA.—162 square miles.

RECORDS AVAILABLE.—August, 1909, to September, 1931.

EXTREMES.—Maximum discharge during year, 6,920 second-feet May 23 (gage height, 8.50 feet); minimum, 21 second-feet Oct. 6, 8 (gage height, 0.80 foot). 1909–1931: Maximum discharge, 16,000 second-feet Nov. 3, 1927 (gage height, 15.2 feet); minimum, 4 second-feet Aug. 10, 1913 (gage height, 0.60 foot).

REMARKS.—Records good except those for periods of ice effect, Dec. 3, Dec. 12 to Mar. 29, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct	Nov	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	98	194	40	42	90	760	340	595	70	47	39
2	25	75	129	39	41	90	1,610	208	382	64	42	37
3	25	54	111	39	41	73	1,430	284	264	60	36	48
4	24	47	113	43	41	129	1,910	270	228	56	171	88
5	23	107	120	45	40	132	1,610	250	191	53	70	59
6	21	313	116	80	39	111	1,260	228	162	64	60	44
7	24	134	111	64	39	94	1,520	247	295	96	42	36
8	23	82	134	56	39	86	1,520	316	428	125	38	34
9	24	70	116	53	39	107	1,710	960	2,130	277	43	32
10	23	59	103	50	39	129	2,570	820	4,090	382	55	30
11	23	53	86	47	39	134	3,170	1,340	1,520	405	44	28
12	23	47	84	46	39	120	1,910	760	890	206	62	26
13	24	54	90	45	45	98	1,610	595	570	159	127	26
14	25	48	75	45	56	84	1,340	650	450	107	98	24
15	26	134	60	44	100	122	1,180	1,030	382	86	103	28
16	26	382	45	43	116	94	1,030	622	360	79	120	86
17	24	1,030	36	43	134	107	890	472	678	90	66	53
18	47	545	44	43	127	90	820	405	405	120	53	41
19	49	340	48	43	118	92	705	340	309	96	44	36
20	43	231	52	43	111	103	650	316	228	80	49	43
21	38	165	55	43	105	111	570	284	197	79	47	54
22	35	120	56	43	103	122	520	244	171	960	41	58
23	31	84	56	43	105	146	450	3,290	162	247	36	75
24	39	65	58	42	105	168	382	1,610	231	197	34	59
25	47	120	52	41	107	159	360	890	174	149	30	45
26	41	129	49	43	107	244	428	650	136	111	33	47
27	34	103	49	45	109	382	678	495	118	82	129	42
28	43	70	50	45	111	595	520	382	107	70	96	43
29	39	53	52	45	-------	890	495	316	96	59	79	39
30	36	68	48	44	-------	1,430	428	257	84	52	60	37
31	54	-------	43	42	-------	760	-------	224	-------	54	47	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	54	21	31.8	0.196	0.23
November	1,030	47	163	1.01	1.13
December	194	36	78.5	.485	.56
January	80	39	46.0	.284	.33
February	134	39	76.3	.471	.49
March	1,430	73	229	1.41	1.63
April	3,170	360	1,130	6.98	7.79
May	3,290	224	619	3.82	4.40
June	4,090	84	534	3.30	3.68
July	960	52	153	.944	1.09
August	171	30	64.6	.399	.46
September	88	24	44.6	.275	.31
The year	4,090	21	264	1.63	22.10

WESTFIELD RIVER NEAR WESTFIELD, MASS.

LOCATION.—Water-stage recorder 1 mile below mouth of Big Brook and 3 miles east of Westfield, Hampden County.

DRAINAGE AREA.—496 square miles.

RECORDS AVAILABLE.—June, 1914, to September, 1931.

EXTREMES.—Maximum discharge during year, 16,500 second-feet May 23 (gage height, 15.71 feet); minimum, 73 second-feet Oct. 6 (gage height, 3.22 feet).
1914–1931: Maximum discharge, 42,500 second-feet Nov. 4, 1927 (gage height, 25.41 feet); minimum, 9 second-feet Oct. 2, 1921 (gage height, 2.78 feet).

REMARKS.—Records good except those below 200 second-feet, those estimated, Dec. 20, Dec. 23 to Jan. 3, and those during period of ice effect, Jan. 8–10, which are fair. Water is diverted from Westfield Little River for Springfield water supply; monthly mean discharge corrected for this diversion.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	94	167	378	140	163	319	2,400	841	1,900	332	236	228
2	89	178	440	137	203	341	5,420	726	1,480	285	203	174
3	94	188	252	134	174	332	4,540	714	975	260	236	174
4	94	196	228	150	192	364	5,810	744	810	199	217	217
5	91	214	281	153	150	364	4,780	668	679	192	203	264
6	94	412	240	297	153	293	3,820	581	565	407	264	178
7	97	392	196	228	167	281	3,820	516	511	450	192	174
8	91	210	289	196	137	293	3,460	624	841	354	178	203
9	94	199	260	178	192	440	4,300	2,500	2,560	345	170	160
10	94	156	221	167	150	373	5,290	1,950	10,500	720	178	160
11	109	185	240	160	160	364	8,040	3,240	4,550	975	181	143
12	97	150	224	178	174	328	5,270	2,040	2,700	732	281	163
13	106	160	232	153	199	319	3,240	1,680	1,860	500	354	163
14	112	150	221	181	199	314	3,350	1,900	1,360	416	319	160
15	97	196	174	150	345	378	2,700	3,240	1,120	364	240	143
16	100	496	163	143	260	436	2,080	2,000	1,010	368	228	137
17	94	1,680	156	150	281	436	1,820	1,640	1,950	319	285	143
18	124	1,560	174	160	368	373	1,640	1,280	1,680	248	276	153
19	160	780	167	181	392	445	1,520	1,050	1,080	310	203	178
20	160	576	163	185	407	543	1,360	942	841	383	199	217
21	130	402	163	192	336	624	1,200	841	679	268	221	199
22	130	359	181	156	281	780	1,050	975	668	450	163	181
23	137	272	181	150	354	975	942	6,870	597	708	185	188
24	143	341	174	178	323	1,200	908	5,880	608	440	192	196
25	156	272	160	163	289	1,600	780	2,700	597	511	181	181
26	178	276	160	199	306	1,770	810	2,130	500	416	163	196
27	130	256	181	160	310	2,260	1,600	1,560	373	402	228	153
28	150	217	203	170	285	2,500	1,080	1,200	345	302	500	167
29	134	167	185	163	------	4,090	942	975	480	236	319	188
30	137	181	170	185	------	4,180	1,050	841	345	236	199	185
31	170	------	153	174	------	2,600	------	1,120	------	228	302	------

Month	Observed			Diversion (millions of gallons)	Corrected for diversions		
	Maximum	Minimum	Mean		Mean	Per square mile	Run-off in inches
October	178	89	119	559.64	147	0.296	0.34
November	1,680	150	366	491.80	392	.790	.88
December	440	153	213	498.38	238	.480	.55
January	297	134	171	544.48	198	.399	.46
February	407	137	248	485.75	275	.544	.58
March	4,180	281	965	478.46	989	1.99	2.29
April	8,040	780	2,830	442.19	2,860	5.77	6.44
May	6,870	516	1,740	456.89	1,760	3.55	4.09
June	10,500	345	1,470	486.70	1,500	3.02	3.37
July	975	192	399	552.62	426	.859	.99
August	500	163	235	512.81	261	.526	.61
September	264	137	179	490.52	204	.411	.46
The year	10,500	89	744	6,000.24	770	1.55	21.06

MIDDLE BRANCH OF WESTFIELD RIVER AT GOSS HEIGHTS, MASS.

LOCATION.—Water-stage recorder at highway bridge in Goss Heights, Hampshire County, half a mile above mouth.

DRAINAGE AREA.—53 square miles.

RECORDS AVAILABLE.—July, 1910, to September, 1931.

EXTREMES.—Maximum discharge during year, 2,340 second-feet June 10 (gage height, 6.02 feet); minimum, 4.6 second-feet Oct. 8 (gage height, 0.76 foot). 1910–1931: Maximum discharge, 5,860 second-feet Nov. 3, 1927 (gage height, 8.26 feet); practically no flow Oct. 26, 27, 1914.

REMARKS.—Records good except those above 1,000 second-feet and those estimated, which are fair. Stage-discharge relation affected by ice Dec. 13 to Mar. 16.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.1	16	67	a 12	14	28	306	75	171	23	a 11	8.7
2	5.1	12	a 41	a 11	14	25	586	67	115	21	a 10	7.5
3	5.1	10	a 34	a 12	14	25	545	70	83	19	9.0	9.3
4	5.1	9.1	58	a 14	14	29	742	62	70	18	16	14
5	5.0	17	42	21	13	31	516	67	62	17	15	12
6	5.0	51	27	26	12	29	442	52	58	26	11	9.9
7	5.1	26	22	22	14	24	419	47	49	29	9.0	8.1
8	4.8	18	24	20	14	26	426	108	96	22	8.7	6.6
9	4.8	15	22	19	15	33	588	270	471	24	8.4	6.3
10	5.0	14	20	17	16	37	779	a 222	1,100	55	9.3	6.3
11	5.1	11	20	17	19	36	1,060	a 282	332	76	8.7	6.1
12	5.0	10	19	16	18	32	508	182	199	44	16	4.9
13	5.0	10	16	14	19	29	358	163	139	29	20	5.2
14	5.3	9.7	16	14	23	28	374	a 213	107	23	16	5.2
15	5.3	19	14	13	28	29	260	a 271	90	20	17	5.6
16	5.5	79	11	14	30	31	195	174	90	20	19	7.8
17	5.6	210	8.4	14	32	31	167	152	177	a 20	14	11
18	7.2	118	a 9.4	14	35	35	154	113	107	a 20	10	9.0
19	14	59	a 13	14	37	39	135	92	76	20	9.9	8.4
20	11	39	a 14	14	33	42	115	82	61	19	9.0	8.4
21	7.8	31	a 15	14	32	51	102	78	55	19	9.0	20
22	7.5	26	a 16	14	33	72	90	86	46	60	8.4	17
23	6.7	25	a 16	14	31	86	82	a 1,080	43	41	7.5	20
24	6.5	23	a 15	14	27	112	72	a 526	53	31	7.2	18
25	7.5	24	14	14	27	139	64	263	42	39	6.9	10
26	8.1	24	a 13	14	29	161	89	197	36	24	6.6	a 10
27	8.4	20	a 13	14	27	248	128	144	33	a 21	25	a 11
28	7.5	22	14	14	25	252	87	115	29	a 20	28	12
29	7.5	28	12	14	------	510	96	92	26	a 14	19	9.3
30	7.2	35	12	14	------	399	95	82	24	a 13	13	8.7
31	12	------	12	14	------	238	------	120	------	a 11	12	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	14	4.8	6.64	0.125	0.14
November	210	9.1	33.7	.636	.71
December	67	8.4	21.0	.396	.46
January	26	11	15.2	.287	.33
February	37	12	23.0	.434	.45
March	510	24	93.1	1.76	2.03
April	1,060	64	319	6.02	6.72
May	1,080	47	179	3.38	3.90
June	1,100	24	135	2.55	2.84
July	76	11	27.0	.509	.59
August	28	6.6	12.6	.238	.27
September	20	4.9	9.88	.186	.21
The year	1,100	4.8	72.8	1.37	18.65

a Estimated.

WESTFIELD LITTLE RIVER NEAR WESTFIELD, MASS.

LOCATION.—Water-stage recorder at diversion dam in Russell, 3 miles below confluence of Pebble and Borden Brooks and 3 miles west of Westfield, Hampden County.

DRAINAGE AREA.—48.5 square miles.

RECORDS AVAILABLE.—July, 1905, to September, 1931.

REMARKS.—Discharge table includes flow of river and diversion for municipal supply of Springfield, corrected for storage in Borden Brook Reservoir. Records furnished by Board of Water Commissioners, Springfield, Mass.

Monthly discharge, in second-feet, 1930–31

Month	Mean	Per square mile	Run-off in inches	Month	Mean	Per square mile	Run-off in inches
October	6.63	0.137	0.16	May	201	4.14	4.77
November	49.7	1.02	1.14	June	169	3.48	3.88
December	24.0	.495	.57	July	30.9	.637	.73
January	23.3	.480	.55	August	15.6	.322	.37
February	58.2	1.20	1.25	September	5.27	.109	1.22
March	135	2.78	3.20				
April	313	6.45	7.20	The year	85.8	1.77	25.04

SCANTIC RIVER AT BROAD BROOK, CONN.

LOCATION.—Water-stage recorder 300 feet above highway bridge 1 mile southwest of Broad Brook, Hartford County, half a mile below confluence with Broad Brook, and 5½ miles above mouth.

DRAINAGE AREA.—98.7 square miles.

RECORDS AVAILABLE.—August, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 614 second-feet June 11 (gage height, 4.9 feet); minimum, 13 second-feet Jan. 30 (gage height, 0.22 foot).

1928–1931: Maximum discharge, 1,190 second-feet Mar. 6, 1929 (gage height, 8.3 feet); minimum, that of Jan. 30, 1931.

REMARKS.—Records good. Low-water flow affected by operation of a few small reservoirs above.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	35	41	52	18	108	280	106	150	68	46	48
2	21	28	66	29	27	156	275	111	115	52	25	45
3	19	32	64	28	46	113	262	40	111	34	42	48
4	18	62	57	29	29	113	234	52	90	25	94	30
5	17	69	61	32	27	98	215	84	94	25	53	31
6	19	64	61	112	40	92	220	70	92	37	32	25
7	46	50	34	87	49	82	189	74	48	84	31	23
8	40	29	25	91	26	74	210	105	67	70	29	28
9	25	27	24	78	23	318	205	98	203	75	23	62
10	23	35	38	60	22	363	189	163	434	90	24	47
11	20	61	65	37	19	268	166	215	550	68	25	36
12	18	48	51	35	18	192	156	194	501	42	146	26
13	18	29	30	51	24	200	189	164	282	45	181	21
14	21	26	25	59	64	164	132	174	194	82	220	20
15	45	29	34	31	111	139	145	189	181	79	123	20
16	52	32	62	24	67	205	123	179	173	63	58	22
17	35	59	39	23	94	163	148	156	338	33	92	21
18	42	77	25	22	216	174	118	156	275	37	97	25
19	32	59	29	41	196	156	54	100	244	28	80	17
20	29	61	52	76	140	164	70	98	169	47	71	19
21	27	63	31	48	104	156	103	88	103	60	70	28
22	26	65	24	29	67	145	87	73	130	71	60	31
23	25	46	24	25	107	215	136	212	118	72	37	37
24	26	62	32	26	112	187	82	364	154	68	44	36
25	33	70	39	25	117	220	72	364	132	35	63	35
26	48	67	45	40	136	270	55	257	90	27	46	30
27	53	48	54	65	145	288	84	200	57	35	51	24
28	70	31	38	35	102	248	129	123	34	66	48	56
29	70	24	35	25	------	289	139	110	48	55	39	71
30	70	24	49	20	------	351	108	71	65	31	36	73
31	61	------	68	20	------	377	------	100	------	33	42	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	70	17	35.1	0.356	0.41
November	77	24	47.1	.477	.53
December	68	24	42.6	.432	.50
January	112	20	43.7	.443	.51
February	216	18	76.6	.776	.81
March	377	74	196	1.99	2.29
April	280	54	152	1.54	1.72
May	364	40	145	1.47	1.70
June	550	34	175	1.77	1.98
July	90	25	52.8	.535	.62
August	220	23	65.4	.663	.76
September	73	17	34.5	.350	.39
The year	550	17	88.8	.900	12.22

FARMINGTON RIVER NEAR NEW BOSTON, MASS.

LOCATION.—Water-stage recorder 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, 1913, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,450 second-feet June 10 (gage height, 6.10 feet); minimum, 13 second-feet Oct. 10 (gage height, 2.57 feet).
1913–1931: Maximum discharge, 7,900 second-feet Nov. 3, 1927 (gage height, 9.42 feet); minimum, 4.4 second-feet Aug. 27, 1913 (gage height, 2.22 feet).

REMARKS.—Records fair. Discharge estimated Oct. 11–17, Jan. 22 to Feb. 17, Apr. 30 to May 25, June 23–25, July 20 to Aug. 3, Sept. 1–30. Stage-discharge relation affected by ice Nov. 27 to Dec. 6, Dec. 15–24, Jan. 3–21, Feb. 18–23. Flow regulated by storage in Otis Reservoir, capacity, 880 million cubic feet.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	61	63	92	35	21	56	521	135	490	42	43	40
2	50	119	60	34	40	50	860	115	251	38	35	33
3	17	112	65	37	53	50	816	115	182	34	60	37
4	37	110	60	60	53	43	1,070	110	146	33	98	44
5	65	150	56	55	53	41	795	105	117	28	58	42
6	67	102	51	60	41	40	643	90	95	85	51	39
7	65	51	48	42	31	41	607	85	86	82	49	37
8	60	53	47	30	23	46	578	240	142	66	57	40
9	48	121	44	50	36	50	682	500	512	88	72	39
10	21	114	42	70	50	43	774	350	1,250	138	74	38
11	40	109	39	58	54	43	1,040	430	656	160	75	36
12	75	100	41	58	56	42	767	290	386	98	82	35
13	80	38	48	71	70	42	500	280	257	68	42	45
14	78	34	48	56	60	46	390	530	198	82	35	41
15	72	88	34	31	35	48	318	550	160	59	49	47
16	55	109	45	27	52	47	260	340	142	50	69	50
17	40	266	58	34	80	47	222	320	566	42	54	49
18	102	206	57	60	102	49	203	245	262	37	44	40
19	109	135	55	58	110	59	170	200	184	39	40	27
20	100	96	53	64	90	62	154	170	140	45	40	30
21	100	84	50	60	77	77	138	155	131	85	37	39
22	99	68	48	60	64	114	129	170	99	105	41	52
23	96	59	49	55	62	129	124	840	90	100	39	49
24	30	51	51	44	61	176	112	650	95	105	38	40
25	54	52	40	39	58	217	98	400	80	115	38	27
26	110	54	40	46	56	277	126	304	69	90	36	21
27	105	30	35	54	52	404	184	230	63	75	58	30
28	104	26	38	59	50	408	148	186	54	65	180	44
29	104	25	40	57	------	943	148	140	46	55	109	43
30	69	36	43	50	------	669	150	119	45	48	70	49
31	46	------	39	32	------	455	------	229	------	45	53	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	110	17	69.6	0.751	0.87
November	266	25	88.7	.957	1.07
December	92	34	48.9	.528	.61
January	71	27	49.9	.538	.62
February	110	21	56.8	.613	.64
March	943	40	155	1.67	1.92
April	1,070	98	424	4.57	5.10
May	840	85	278	3.00	3.46
June	1,250	45	233	2.51	2.80
July	160	28	71.0	.766	.88
August	180	35	58.9	.635	.73
September	52	21	39.4	.425	.47
The year	1,250	17	131	1.41	19.17

FARMINGTON RIVER AT RIVERTON, CONN.

LOCATION.—Water-stage recorder a quarter of a mile below mouth of Still River, 1 mile below Riverton, Litchfield County, and 4 miles northeast of Winsted.
DRAINAGE AREA.—217 square miles.
RECORDS AVAILABLE.—September, 1929, to September, 1931.
EXTREMES.—Maximum discharge during year, 3,130 second-feet May 23 (gage height, 5.6, feet); minimum, 25 second-feet Oct. 4 (gage height, 0.76 foot).
1929–1931: Maximum discharge, that of May 23, 1931; minimum, 17 second-feet Sept. 28, 1929 (gage height, 0.64 foot).
REMARKS.—Records good except those for periods of ice effect, Nov. 29, Dec. 15 to Feb. 3, Feb. 19 to Mar. 7, and those estimated, Oct. 12–14, Nov. 4–11, Dec. 3–9, Feb. 4–18, which are fair. Flow regulated by storage in Otis Reservoir.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	92	108	231	65	70	110	1,310	304	1,180	100	76	82
2	97	112	179	75	120	110	2,140	268	714	92	65	70
3	72	136	110	70	120	110	1,830	265	480	86	86	87
4	41	135	120	90	120	100	2,160	265	38[illegible]	77	231	94
5	77	190	150	120	120	100	1,700	241	315	62	126	81
6	93	200	75	170	110	95	1,330	208	316	136	97	69
7	107	150	90	120	75	90	1,290	201	285	213	82	55
8	93	70	100	95	65	187	1,260	552	40[illegible]	146	89	64
9	95	120	100	85	100	266	1,330	1,120	1,110	355	89	62
10	72	140	94	90	110	243	1,330	789	2,840	498	108	62
11	45	130	81	95	110	202	1,560	976	1,680	417	113	58
12	90	134	92	100	110	183	1,230	666	1,030	236	182	50
13	90	91	108	110	140	146	905	659	70[illegible]	156	137	100
14	100	64	83	130	90	152	770	1,230	499	152	99	90
15	119	172	65	120	80	149	655	1,240	413	128	119	107
16	112	277	70	80	110	159	558	800	373	112	170	112
17	78	640	85	80	130	154	498	747	1,270	90	120	111
18	110	480	95	80	180	160	472	571	78[illegible]	85	90	82
19	106	300	90	130	200	205	414	470	53[illegible]	79	82	60
20	107	210	95	130	190	217	374	400	392	89	76	85
21	109	167	85	140	160	270	336	372	30[illegible]	105	71	105
22	108	127	85	140	140	344	314	392	25[illegible]	199	68	116
23	98	106	95	130	150	425	288	1,890	216	193	52	106
24	82	111	100	90	140	532	288	1,480	238	180	66	100
25	50	110	60	80	130	686	264	915	19[illegible]	254	62	72
26	94	127	75	100	120	849	395	782	16[illegible]	173	64	46
27	122	88	80	110	120	1,070	598	597	141	136	68	66
28	119	77	80	120	110	1,840	433	483	112	120	252	96
29	119	70	70	120	-------	2,340	390	367	111	101	181	94
30	119	79	80	110	-------	1,870	391	298	100	88	114	108
31	81	-------	80	80	-------	1,200	-------	478	-------	82	92	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	122	41	93.5	0.431	0.50
November	640	64	164	.756	.84
December	231	60	96.9	.447	.51
January	170	65	105	.484	.56
February	200	65	122	.562	.59
March	2,340	90	470	2.17	2.49
April	2,160	264	894	4.12	4.60
May	1,890	201	646	2.98	3.44
June	2,840	100	584	2.69	3.00
July	498	62	159	.733	.85
August	252	52	107	.493	.57
September	116	46	83	.382	.43
The year	2,840	41	294	1.35	18.38

FARMINGTON RIVER AT TARIFFVILLE, CONN.

LOCATION.—Water-stage recorder at Tariffville, Hartford County, half a mile above Hartford Electric Light Co.'s plant and 12 miles above mouth.

DRAINAGE AREA.—569 square miles.

RECORDS AVAILABLE.—August, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 5,640 second-feet June 11 (gage height, 6.43 feet); maximum stage, 6.60 feet June 11 (backwater from power plant below gage); minimum discharge, 176 second-feet some time between Oct. 1 and Oct. 14 (gage height, 0.88 foot).

1928–1931: Maximum discharge, 7,220 second-feet Aug. 27, 1928, Apr. 22, 1929 (gage height, 7.3 feet); minimum, 164 second-feet Aug. 11, 1930 (gage height, 0.84 foot).

REMARKS.—Records good. Discharge based on operating records from power plant Oct. 1–14, Feb. 7–10, July 16, July 20 to Aug. 20. Backwater from Hartford Electric Light Co.'s dam occurs intermittently, but accurate correction is applied. About 18 million gallons a day diverted from Nepaug River for Hartford water supply. Flow affected by storage in reservoir on East Branch of Farmington River near New Hartford and in Otis Reservoir.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	215	315	205	255	208	490	2,770	832	1,710	435	270	263
2	235	233	354	205	192	388	4,330	735	2,330	435	190	287
3	245	189	349	212	267	502	4,630	652	1,580	432	195	283
4	190	263	263	215	271	502	4,330	735	1,200	335	285	283
5	195	287	283	202	271	496	4,330	702	962	279	405	278
6	195	335	320	359	240	457	3,640	592	865	275	325	215
7	180	363	244	452	270	425	2,890	576	800	444	250	202
8	195	300	240	373	225	448	3,010	641	832	554	245	198
9	220	198	312	335	190	924	2,890	2,010	1,440	446	210	229
10	255	189	291	271	259	1,020	2,890	2,030	4,280	702	195	226
11	300	244	275	229	283	768	2,500	2,030	5,590	800	295	244
12	210	237	291	229	267	683	2,770	1,980	4,460	652	490	229
13	200	219	309	313	271	610	2,280	1,700	2,720	462	545	198
14	200	222	237	291	346	610	1,750	1,940	1,800	425	375	198
15	212	231	195	251	244	616	1,580	3,130	1,300	404	305	222
16	255	412	198	255	226	658	1,660	2,720	1,240	409	240	247
17	258	735	251	233	345	690	1,200	1,880	1,980	383	325	259
18	247	1,130	263	198	404	634	1,160	1,620	2,550	317	365	247
19	195	832	259	185	550	683	930	1,340	1,840	313	315	229
20	189	556	275	296	550	800	865	1,200	1,340	260	320	198
21	208	457	208	313	490	898	930	1,130	1,100	340	275	202
22	229	326	195	271	383	1,060	898	1,200	768	360	251	259
23	236	324	233	275	369	1,160	865	2,140	800	450	195	267
24	238	240	267	244	419	1,340	865	4,630	832	430	202	259
25	229	340	240	195	425	1,660	768	3,820	768	375	251	229
26	195	345	195	192	452	2,180	670	2,440	722	360	240	233
27	189	308	247	244	479	2,380	1,160	1,880	676	360	279	195
28	226	233	255	279	462	2,440	1,240	1,540	572	330	326	192
29	252	240	219	271	------	3,120	962	1,050	403	320	404	215
30	255	208	275	271	------	4,330	898	865	530	290	344	244
31	275	------	240	240	------	3,510	------	1,060	------	270	247	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	300	180	223	0.392	0.45
November	1,130	189	350	.615	.69
December	354	195	258	.453	.52
January	452	185	263	.462	.53
February	550	190	334	.587	.61
March	4,330	388	1,180	2.07	2.39
April	4,630	670	2,060	3.62	4.04
May	4,630	576	1,640	2.88	3.32
June	5,590	403	1,600	2.81	3.14
July	800	260	408	.717	.83
August	545	190	295	.518	.60
September	287	192	234	.411	.46
The year	5,590	180	736	1.29	17.58

HOCKANUM RIVER NEAR EAST HARTFORD, CONN.

LOCATION.—Water-stage recorder at Case & Marshall paper mi". 1½ miles below confluence with South Branch of Hockanum River and 2¾ miles east of East Hartford, Hartford County.

DRAINAGE AREA.—75.5 square miles.

RECORDS AVAILABLE.—September, 1919, to September, 1921; July, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 405 second-feet June 10 (gage height, 3.55 feet); minimum, 3.4 second-feet Oct. 6 (gage height, 0.67 foot).

1919–1921, 1928–1931: Maximum discharge, 1,450 second-feet Mar. 13, 1920 (gage height, 8.1 feet); practically no flow at times when water was held back by dams.

REMARKS.—Records excellent. Distribution of flow affected by storage in Shenipsit Lake and other smaller reservoirs above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	34	48	28	17	34	162	82	135	102	38	46
2	16	17	72	24	57	100	158	62	135	69	24	50
3	24	30	75	25	56	103	120	35	103	67	86	65
4	17	40	27	14	55	100	101	120	75	23	103	62
5	6.8	59	16	76	29	59	94	127	55	26	63	32
6	17	43	12	84	23	92	213	114	55	122	34	8.4
7	8.9	26	6.4	63	9.6	59	162	68	49	129	37	8.4
8	43	27	44	27	10	57	156	50	133	103	40	76
9	54	20	56	20	40	255	110	93	170	103	15	103
10	33	12	57	25	65	261	123	59	305	84	45	48
11	18	12	23	15	54	206	111	198	291	62	71	29
12	18	53	17	43	22	160	66	153	250	11	174	30
13	15	52	9.3	51	14	129	158	133	169	77	175	19
14	16	34	8.4	49	16	105	147	140	154	100	167	81
15	35	16	35	33	27	47	141	137	225	98	123	79
16	25	14	42	27	116	129	61	98	165	56	40	68
17	16	18	42	40	101	134	81	60	266	27	97	42
18	24	33	18	15	134	114	101	122	218	57	102	28
19	16	68	12	95	187	78	59	122	180	35	98	19
20	38	65	15	101	137	60	118	90	114	120	63	17
21	36	55	8.0	94	93	81	123	66	70	107	48	87
22	32	34	35	38	34	46	107	86	169	103	29	101
23	25	19	46	25	96	115	81	193	142	49	14	71
24	16	74	32	19	98	122	40	252	120	41	32	28
25	20	92	8.0	19	92	146	67	262	62	50	91	25
26	13	89	16	51	67	92	46	169	87	26	104	26
27	27	29	14	46	38	119	114	144	52	96	105	10
28	34	14	11	47	52	97	148	97	27	103	102	45
29	47	11	30	20	------	99	130	120	103	98	40	49
30	58	9.8	38	23	------	281	96	67	103	34	11	40
31	36	------	41	16	------	188	------	39	------	20	75	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	58	6.8	25.8	0.342	0.39
November	92	9.8	36.7	.486	.54
December	75	6.4	29.5	.391	.45
January	101	14	40.4	.535	.62
February	187	9.6	62.1	.823	.86
March	281	34	118	1.56	1.80
April	213	40	113	1.50	1.67
May	262	35	115	1.52	1.75
June	303	27	139	1.84	2.05
July	129	11	70.9	.939	1.08
August	175	11	72.5	.960	1.11
September	103	8.4	46.4	.615	.69
The year	303	6.4	72.4	.959	13.01

SALMON RIVER NEAR EAST HAMPTON, CONN.

LOCATION.—Water-stage recorder at Comstock Bridge, on Hartford-Middlesex County line, 3½ miles southeast of East Hampton, Middlesex County.

DRAINAGE AREA.—105 square miles.

RECORDS AVAILABLE.—July, 1928, to September, 1931. April, 1905, to March, 1906, at Leesville, 3½ miles downstream.

EXTREMES.—Maximum discharge during year, 1,770 second-feet Mar. 29 (gage height, 3.5 feet); minimum, 1.1 second-feet Oct. 5 (gage height, —0.16 foot).

1905–6, 1928–1931: Maximum discharge, 3,700 second-feet Mar. 5, 1929 (gage height, 4.4 feet); minimum, about 1 second-foot Oct. 13, 1929.

REMARKS.—Records good except those for periods of ice effect, Dec. 15–17, Dec. 24 to Feb. 25, and those estimated, Aug. 14–21, which are fair. Low-water flow regulated by mills upstream.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.7	38	124	34	38	181	550	174	187	52	18	19
2	1.9	27	98	30	46	210	681	162	174	48	18	25
3	10	22	84	28	36	197	463	171	132	43	19	101
4	1.2	20	64	34	42	181	410	154	113	42	23	86
5	1.1	31	49	42	36	160	361	138	100	40	19	58
6	7.2	38	46	95	44	148	302	125	87	122	17	43
7	7.8	32	46	85	40	140	298	118	87	197	16	32
8	7.4	24	46	70	34	389	343	257	102	135	17	26
9	1.8	21	43	50	32	1,170	290	592	384	120	18	23
10	9.7	21	40	44	32	680	246	442	886	97	19	20
11	1.2	16	36	40	30	436	246	532	560	91	23	19
12	1.4	20	40	60	36	356	232	381	342	71	329	15
13	7.9	17	38	65	50	329	204	333	235	56	334	15
14	6.7	17	28	55	160	298	181	480	174	64	218	18
15	14	39	26	44	140	302	165	463	143	73	150	16
16	19	158	24	40	130	298	154	329	346	64	110	16
17	15	172	26	42	160	269	146	352	1,180	58	80	17
18	13	198	27	50	320	243	151	277	604	81	60	14
19	17	132	34	60	400	262	143	228	337	77	45	14
20	16	85	27	85	220	286	132	207	232	63	40	14
21	13	63	34	80	160	286	128	200	174	53	36	18
22	11	52	40	65	150	273	125	200	135	55	34	16
23	12	43	30	50	140	250	120	580	122	42	29	16
24	12	40	28	44	160	232	122	685	135	45	28	11
25	8.6	48	26	40	180	319	113	401	111	42	25	14
26	28	58	30	42	197	550	350	298	95	37	23	9.1
27	23	45	40	55	190	435	671	232	87	32	26	15
28	20	37	60	55	178	320	362	190	75	29	26	18
29	20	28	50	55	------	1,080	262	160	63	26	26	14
30	35	32	44	46	------	1,010	207	138	56	23	24	12
31	36	------	40	42	------	548	------	132	------	20	21	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	36	1.1	12.4	0.118	0.14
November	198	16	52.5	.500	.56
December	124	24	44.1	.420	.48
January	95	28	52.5	.500	.58
February	400	30	121	1.15	1.20
March	1,170	140	382	3.64	4.20
April	681	113	272	2.59	2.89
May	685	118	295	2.81	3.24
June	1,180	56	249	2.37	2.64
July	197	20	64.6	.615	.71
August	334	16	60.4	.575	.66
September	101	9.1	24.5	.233	.26
The year	1,180	1.1	136	1.30	17.56

HOUSATONIC RIVER BASIN

HOUSATONIC RIVER NEAR GREAT BARRINGTON, MASS

LOCATION.—Staff gage at highway bridge at Van Deusenville, just above mouth of Williams River and 2 miles north of Great Barrington, Berkshire County.
DRAINAGE AREA.—280 square miles.
RECORDS AVAILABLE.—May, 1913, to September, 1931.
EXTREMES.—Maximum discharge during year, 2,510 second-feet Apr. 13 (gage height, 6.01 feet); minimum, about 4.4 second-feet Oct. 6 (gage height, 0.83 foot).

1913–1931: Maximum discharge, about 5,690 second-feet Nov. 5, 1927 (gage height, about 10 feet); no flow at times.
REMARKS.—Records fair. Considerable diurnal regulation.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	164	247	247	84	76	185	1,910	305	731	208	285	146
2	99	141	124	120	115	218	1,910	506	580	173	218	161
3	89	124	73	124	103	167	1,780	506	506	141	179	151
4	40	107	50	60	95	167	2,040	435	506	161	167	122
5	35	91	27	76	143	167	1,910	390	458	133	167	126
6	29	93	63	52	84	218	1,840	305	458	173	198	122
7	46	115	39	58	87	179	1,590	368	530	226	212	120
8	41	159	107	148	115	191	1,530	481	630	247	191	154
9	35	143	173	73	97	143	1,590	555	891	285	164	124
10	87	173	229	95	109	212	1,780	630	1,780	305	247	109
11	80	247	161	41	129	201	2,240	837	2,170	368	170	141
12	56	204	164	74	129	133	2,370	784	1,840	305	247	161
13	84	143	204	68	212	111	2,300	731	1,530	305	247	247
14	41	154	179	32	229	154	1,590	680	1,290	265	156	167
15	63	212	141	95	35	129	1,350	784	1,110	285	122	229
16	76	229	173	87	138	159	1,170	891	945	265	170	89
17	50	265	138	129	86	185	1,110	837	891	265	156	97
18	129	226	229	93	164	285	1,170	784	784	285	86	93
19	159	305	185	46	154	247	1,110	1,170	784	265	131	113
20	133	229	124	68	191	191	945	1,290	731	247	141	146
21	126	218	45	52	76	326	784	1,350	731	346	107	93
22	173	247	37	143	33	390	630	1,530	580	305	141	113
23	148	247	51	73	156	346	481	1,720	605	346	143	131
24	201	212	80	161	120	326	390	1,840	530	305	133	122
25	179	285	159	93	115	605	412	1,910	390	305	218	148
26	133	229	133	95	247	945	481	2,040	285	265	346	156
27	93	229	76	86	161	1,060	390	1,720	229	326	346	141
28	129	204	29	66	185	1,110	346	1,470	247	326	265	126
29	161	247	129	56	-------	1,650	285	1,170	305	265	305	191
30	208	226	154	76	-------	1,780	412	1,000	285	346	143	198
31	191	-------	117	66	-------	1,780	-------	837	-------	247	179	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	208	29	106	0.379	0.44
November	305	91	198	.707	.79
December	247	27	124	.443	.51
January	161	32	83.5	.298	.34
February	247	33	128	.457	.48
March	1,780	111	450	1.61	1.86
April	2,370	285	1,260	4.50	5.02
May	2,040	305	963	3.44	3.97
June	2,170	229	778	2.78	3.10
July	368	133	267	.954	1.10
August	346	86	193	.689	.79
September	247	89	141	.504	.56
The year	2,370	27	391	1.40	18.96

HOUSATONIC RIVER AT FALLS VILLAGE, CONN.

LOCATION.—Water-stage recorder at Falls Village, Litchfield County, half a mile below power plant of Connecticut Power Co.

DRAINAGE AREA.—644 square miles.

RECORDS AVAILABLE.—July, 1912, to September, 1931.

EXTREMES.—Maximum discharge during year, 4,320 second-feet Mar. 30 (gage height, 8.4 feet); minimum, 19 second-feet Nov. 2 (gage height 0.44 foot). 1912-1931: Maximum discharge, about 11,700 second-feet Nov. 5, 1927 (gage height, 15.7 feet); practically no flow at times.

REMARKS.—Records excellent except those for periods of ice effect, Dec. 16, 17, 25, Dec. 30 to Mar. 8, and those estimated from operating records from plant of Connecticut Power Co., July 31 to Aug. 2, which are fair. Low-water flow completely regulated at Connecticut Power Co.'s plant.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	168	326	466	220	120	400	3,680	888	2,060	400	340	258
2	160	125	512	170	160	380	3,760	750	2,140	416	274	354
3	164	200	382	340	180	360	3,740	658	1,750	474	378	343
4	184	151	392	170	140	400	3,670	746	1,290	354	471	366
5	110	211	407	240	200	500	3,750	725	1,130	290	320	435
6	177	354	387	280	180	400	3,540	572	862	696	318	236
7	178	475	263	320	220	440	3,320	542	694	622	326	80
8	140	330	402	240	95	360	3,120	572	1,270	644	356	243
9	135	179	293	240	220	354	3,060	1,210	1,910	642	260	235
10	124	170	349	280	200	353	3,030	1,060	3,690	718	322	230
11	108	209	359	90	240	494	2,980	1,500	4,050	968	332	234
12	32	197	362	240	220	460	3,120	1,610	3,560	842	692	231
13	200	214	326	240	220	394	3,160	1,390	2,940	686	578	74
14	110	302	176	200	260	460	3,060	1,430	2,140	630	647	240
15	99	310	218	220	280	391	2,670	1,890	1,720	536	199	237
16	101	445	200	220	300	426	2,240	1,850	1,400	421	180	232
17	137	724	220	260	340	482	1,870	1,710	2,130	430	428	287
18	126	812	232	95	420	565	1,690	1,500	2,230	480	295	272
19	81	848	316	160	480	670	1,350	1,220	1,780	356	314	182
20	120	774	326	220	550	680	1,200	998	1,490	340	384	85
21	158	641	84	220	500	828	1,020	940	943	296	338	300
22	116	570	190	200	300	914	1,100	951	944	762	359	286
23	164	354	217	200	360	1,160	893	1,460	977	864	144	264
24	170	274	321	220	400	1,440	796	2,360	948	834	313	284
25	166	362	100	150	420	1,730	821	2,600	847	860	272	455
26	80	425	162	200	480	1,930	717	2,830	741	622	239	602
27	178	254	394	280	440	2,320	911	2,550	810	426	452	413
28	128	284	95	240	440	2,490	954	1,990	540	494	438	310
29	158	304	260	200	------	3,270	833	1,700	484	320	524	233
30	232	252	280	220	------	4,290	990	1,330	455	456	217	244
31	175	------	340	240	------	4,180	------	1,120	------	288	362	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	232	32	141	0.219	0.25
November	848	125	369	.573	.64
December	512	84	291	.452	.52
January	340	90	220	.342	.39
February	550	95	299	.464	.48
March	4,290	353	1,080	1.68	1.94
April	3,760	717	2,230	3.46	3.86
May	2,830	542	1,380	2.14	2.47
June	4,050	455	1,600	2.48	2.77
July	968	288	554	.860	.99
August	692	144	357	.554	.64
September	602	74	275	.427	.48
The year	4,290	32	732	1.14	15.43

HOUSATONIC RIVER AT STEVENSON, CONN.

LOCATION.—Water-stage recorder in New Haven County, a quarter of a mile below dam of Connecticut Light & Power Co. at Stevenson, Fairfield County.
DRAINAGE AREA.—1,550 square miles.
RECORDS AVAILABLE.—August, 1928, to September, 1931.
EXTREMES.—Maximum discharge during year, 12,700 second-feet June 17 (gage height, 10.9 feet); practically no flow at times, caused by regulation.
1928–1931: Maximum discharge, 12,700 second-feet (revised) Mar. 6, 1929, June 17, 1931 (gage height, 10.9 feet); practically no flow at times, caused by regulation.
REMARKS.—Records good. Discharge estimated Sept. 8–14 and for period of ice effect, Jan. 25 to Feb. 16, from operating records of power plant above gage. Low-water flow completely regulated at power plant. Further regulation provided at Rocky River development upstream, which comprises storage reservoir with useful capacity of 5,900,000,000 cubic feet.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	482	328	1,190	830	650	1,960	8,080	1,960	4,670	1,220	932	703
2	480	424	1,360	804	750	1,960	9,360	2,120	5,450	1,350	487	640
3	395	635	1,070	647	650	1,820	8,260	1,100	4,800	734	769	560
4	343	1,110	836	544	650	1,690	7,340	2,080	4,320	565	486	778
5	72	990	1,090	1,180	700	1,570	7,030	2,180	3,350	1,360	992	772
6	392	749	948	1,500	600	1,760	6,600	2,210	2,470	1,890	938	306
7	328	917	1,160	866	700	1,310	6,700	1,280	2,600	2,050	808	397
8	375	1,070	808	1,020	700	2,520	6,950	2,440	3,240	1,470	520	870
9	401	986	814	1,310	550	4,560	6,100	3,850	5,000	1,060	422	450
10	318	1,110	884	874	440	3,850	5,740	3,820	9,560	2,340	664	370
11	255	1,250	922	1,200	550	2,660	5,290	3,940	10,200	2,780	738	480
12	0	1,070	1,190	1,370	700	1,670	5,100	4,470	8,520	2,730	1,210	350
13	383	1,050	844	1,050	850	2,290	4,970	4,300	6,900	1,330	1,130	220
14	379	1,110	815	1,220	1,300	2,270	5,010	4,270	5,510	1,930	1,100	660
15	368	1,520	922	1,070	1,300	1,780	4,700	4,750	4,660	1,720	980	672
16	340	2,230	460	1,140	1,000	2,580	4,140	4,750	4,560	1,310	700	668
17	378	2,570	538	931	1,270	2,230	3,870	4,450	9,580	1,280	825	632
18	315	2,970	458	1,370	2,560	2,100	3,830	4,130	8,490	628	968	552
19	1	2,640	268	1,340	3,780	2,340	2,560	4,120	6,270	1,040	641	435
20	565	1,250	626	1,250	2,020	2,680	2,220	3,860	4,790	1,530	1,000	230
21	474	2,370	506	1,370	1,720	2,290	2,400	3,360	4,260	1,000	822	636
22	828	2,080	666	1,170	1,470	2,540	2,360	3,460	3,410	1,480	790	603
23	640	1,590	625	624	1,920	2,840	2,390	4,230	3,740	1,670	164	721
24	504	1,810	552	1,010	1,720	3,790	2,590	6,040	3,490	1,580	678	532
25	524	1,910	412	950	1,950	3,800	2,340	5,870	2,430	1,400	470	608
26	208	1,460	874	1,100	2,100	4,370	2,070	5,720	2,530	1,110	691	491
27	513	478	750	550	1,920	4,590	2,760	5,440	2,370	1,020	681	296
28	445	1,420	1,290	1,100	2,050	5,110	2,870	4,740	1,890	811	692	673
29	434	722	1,550	950	-------	8,070	2,470	4,310	1,840	1,160	897	718
30	435	592	606	600	-------	10,200	2,260	3,520	1,470	882	570	948
31	367	-------	654	750	-------	8,690	-------	2,000	-------	932	812	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	828	0	385	0.248	0.29
November	2,970	328	1,350	.871	.97
December	1,550	268	829	.535	.62
January	1,500	544	1,020	.658	.76
February	3,780	440	1,310	.845	.88
March	10,200	1,310	3,290	2.12	2.44
April	9,360	2,070	4,610	2.97	3.31
May	6,040	1,100	3,700	2.39	2.76
June	10,200	1,470	4,750	3.06	3.41
July	2,780	565	1,400	.903	1.04
August	1,210	164	760	.490	.56
September	948	220	566	.365	.41
The year	10,200	0	1,990	1.28	17.45

TENMILE RIVER NEAR GAYLORDSVILLE, CONN.

LOCATION.—Water-stage recorder 1 mile above Connecticut-New York State line, 1½ miles above confluence with Housatonic River, and 2½ miles northwest of Gaylordsville, Litchfield County.

DRAINAGE AREA.—204 square miles.

RECORDS AVAILABLE.—December, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,980 second-feet June 17 (gage height, 5.5 feet); minimum, 22 second-feet Oct. 15 (gage height, 0.70 foot). 1929–1931: Maximum discharge, that of June 17, 1931; minimum, 19 second-feet Aug. 13, 1930 (gage height, 0.67 foot).

REMARKS.—Records good except those for periods of ice effect, and those estimated, Nov. 10, Apr. 3 to May 19, which are fair.

Daily and monthly discharge in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	61	202	[a] 95	[a] 100	403	960	294	760	200	72	58
2	37	58	187	[a] 95	[a] 100	370	1,190	279	550	191	66	52
3	35	51	138	[a] 100	[a] 110	360	985	279	420	182	65	58
4	34	48	146	107	[a] 110	357	910	252	364	170	66	62
5	34	76	138	108	[a] 100	326	810	239	311	157	68	58
6	34	163	140	213	[a] 110	299	670	226	285	204	62	52
7	33	120	142	200	[a] 100	296	810	229	288	320	60	50
8	35	94	146	[a] 150	[a] 95	380	960	370	714	219	60	46
9	34	81	146	[a] 140	[a] 95	550	760	590	746	225	56	41
10	34	72	138	[a] 130	[a] 90	550	670	474	1,130	317	55	39
11	32	66	133	[a] 120	[a] 90	511	670	670	1,130	299	58	37
12	28	61	138	126	[a] 90	438	650	530	885	247	85	35
13	28	56	142	126	[a] 95	420	530	492	715	193	92	34
14	29	57	122	114	[a] 150	370	492	570	590	178	78	33
15	28	93	114	[a] 110	[a] 140	420	474	860	511	178	74	33
16	31	204	[a] 110	[a] 110	[b] 120	456	438	590	690	161	131	32
17	34	458	[a] 100	[a] 120	[a] 130	438	438	650	1,910	153	105	34
18	37	492	[a] 100	[a] 120	[a] 400	403	474	530	1,460	144	86	36
19	41	370	[a] 100	[a] 144	[a] 600	456	386	456	1,040	157	85	35
20	48	285	99	153	[a] 480	456	354	403	860	140	88	34
21	41	247	92	[a] 140	[a] 380	492	338	420	715	131	74	35
22	36	219	89	[a] 130	[a] 320	550	323	456	590	144	65	37
23	34	198	88	[a] 120	[a] 280	570	386	700	530	153	58	35
24	32	180	86	[a] 110	[a] 280	590	456	715	474	131	54	32
25	33	184	[a] 85	[a] 110	[a] 300	650	323	570	403	119	51	30
26	33	202	94	[a] 110	[a] 340	715	370	530	364	105	50	30
27	36	178	137	[a] 130	[a] 340	715	511	456	329	102	52	29
28	38	153	148	[a] 120	[a] 360	670	370	386	288	102	99	30
29	39	131	[a] 120	[a] 110	-------	1,210	323	344	252	89	94	29
30	46	133	[a] 110	[a] 110	-------	1,460	323	320	226	83	75	28
31	48	-------	[a] 100	[a] 100	-------	1,100	-------	459	-------	76	65	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	48	28	35.5	0.174	0.20
November	492	48	160	.784	.87
December	202	85	124	.608	.70
January	213	95	125	.613	.71
February	600	90	211	1.03	1.07
March	1,460	296	548	2.69	3.10
April	1,190	323	578	2.83	3.16
May	860	226	463	2.27	2.62
June	1,910	226	651	3.19	3.56
July	320	76	170	.833	.96
August	131	50	72.5	.355	.41
September	62	28	39.1	.192	.21
The year	1,910	28	264	1.29	17.57

[a] Stage-discharge relation affected by ice.

SHEPAUG RIVER NEAR ROXBURY, CONN.

LOCATION.—Water-stage recorder at highway bridge seven-tenths of a mile below Roxbury Station and 1¼ miles southwest of Roxbury, Litchfield County.
DRAINAGE AREA.—133 square miles.
RECORDS AVAILABLE.—October, 1930, to September, 1931.
EXTREMES.—Maximum discharge during period, 3,410 second-feet June 16 (gage height, 6.8 feet); minimum, 8.5 second-feet Oct. 12 (gage height, 1.57 feet).
REMARKS.—Records good except those for periods of ice effect, Nov. 29, Dec. 2, 3, 15–18, Dec. 22 to Mar. 3, Mar. 13, 14, which are fair, and those for period when inlet pipe was partly plugged, June 17 to Sept. 30, which are poor.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-------	46	138	60	60	160	825	177	722	140	35	30
2	-------	45	120	55	60	150	1,160	169	500	135	35	30
3	-------	30	90	60	60	150	880	180	410	130	40	45
4	-------	26	100	75	70	145	778	163	356	125	45	37
5	-------	42	88	80	65	132	683	150	310	115	40	33
6	-------	69	86	140	65	130	560	137	268	150	35	28
7	-------	51	82	130	60	137	560	147	254	180	35	27
8	10	37	84	100	60	255	535	285	360	130	40	25
9	11	34	80	80	60	306	477	459	873	240	35	25
10	16	30	77	75	60	226	441	318	1,350	440	30	20
11	11	28	73	75	60	195	423	326	950	400	35	18
12	10	26	84	75	55	177	400	287	705	250	65	17
13	15	28	92	85	65	170	356	310	570	180	85	17
14	11	28	71	80	100	150	318	397	477	150	75	17
15	11	81	65	75	90	204	287	441	414	150	55	16
16	13	208	60	70	70	207	268	335	1,360	130	75	16
17	16	316	55	75	80	180	247	331	1,660	120	70	16
18	28	298	80	75	190	181	247	298	900	110	55	17
19	24	178	79	85	380	213	223	257	620	140	45	16
20	17	132	66	90	260	230	201	240	530	120	80	17
21	16	116	61	80	170	254	186	353	480	100	50	20
22	17	104	55	80	150	318	174	374	430	150	45	19
23	16	100	50	75	130	347	186	885	380	160	40	16
24	16	92	48	70	130	418	183	660	340	110	35	14
25	16	102	48	70	140	550	163	468	280	90	30	12
26	23	118	60	75	150	639	239	446	240	80	28	12
27	23	102	80	80	140	744	400	364	210	75	28	11
28	24	80	95	75	140	754	257	318	180	65	50	11
29	25	70	80	65	-------	1,490	213	287	160	60	40	11
30	30	88	70	65	-------	1,130	198	261	150	50	35	10
31	31	-------	65	60	-------	808	-------	456	-------	45	32	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October 8–31	31	10	17.9	0.135	0.12
November	316	26	90.2	.678	.76
December	138	48	76.8	.577	.67
January	140	55	78.5	.590	.68
February	380	55	111	.835	.87
March	1,490	130	360	2.71	3.12
April	1,160	163	402	3.02	3.37
May	885	137	332	2.50	2.88
June	1,660	150	548	4.12	4.60
July	440	45	146	1.10	1.27
August	85	28	45.9	.345	.40
September	45	10	20.1	.151	.17

NAUGATUCK RIVER NEAR THOMASTON, CONN.

LOCATION.—Water-stage recorder at highway bridge half a mile above confluence with Leadmine Brook and 2 miles north of Thomaston, Litchfield County.
DRAINAGE AREA.—73.0 square miles.
RECORDS AVAILABLE.—October, 1930, to September, 1931.
EXTREMES.—Maximum discharge during period, 1,970 second-feet Mar. 29 (gage height, 4.9 feet); minimum, 11 second-feet Oct. 21 (gage height, 0.98 foot).
REMARKS.—Records good except those for periods of ice effect, Dec. 17 to Jan. 3, Jan. 16 to Feb. 18, Feb. 23, which are poor.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-------	30	109	24	26	73	624	81	636	38	23	24
2	-------	18	72	22	26	76	950	74	298	40	22	26
3	-------	17	38	22	24	74	557	95	175	38	29	37
4	-------	18	36	28	24	74	552	81	170	35	27	28
5	-------	29	34	30	24	66	450	69	141	34	27	23
6	-------	38	34	82	24	58	326	63	66	52	28	19
7	-------	24	36	63	22	56	344	66	68	51	26	18
8	16	18	40	47	22	79	362	347	167	43	22	21
9	16	17	38	39	22	117	283	476	557	234	20	22
10	16	16	36	36	22	95	233	289	1,150	219	22	19
11	16	17	34	34	22	76	229	308	566	139	31	21
12	13	16	44	35	24	71	194	204	322	74	76	19
13	14	18	50	42	26	76	162	218	224	48	38	18
14	16	16	35	34	38	79	142	428	168	42	29	21
15	17	66	31	29	34	101	124	425	142	38	32	23
16	21	100	24	26	30	105	110	244	137	42	38	24
17	22	200	20	26	34	91	103	229	727	36	31	22
18	26	105	22	26	75	92	117	172	328	33	28	22
19	20	55	26	28	106	129	95	142	176	40	28	20
20	13	50	24	36	78	142	87	124	129	36	30	25
21	14	46	22	34	60	186	80	209	117	42	26	27
22	14	40	20	30	56	244	74	211	87	49	23	24
23	15	36	19	28	50	276	76	915	80	44	24	22
24	15	34	19	26	56	362	151	533	89	38	26	20
25	17	41	18	26	60	490	63	307	69	35	26	18
26	16	47	20	26	64	587	122	244	62	30	24	18
27	16	38	50	28	69	612	171	181	58	30	25	18
28	19	28	48	34	65	515	129	171	51	29	77	17
29	18	24	40	30	-------	1,410	110	123	45	28	29	18
30	20	23	30	28	-------	786	97	92	40	27	26	18
31	27	-------	26	26	-------	460	-------	261	-------	26	24	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October 8–31	27	13	17.4	0.238	0.21
November	200	16	40.8	.559	.62
December	109	18	35.3	.484	.56
January	82	22	33.1	.453	.52
February	106	22	42.2	.578	.60
March	1,410	56	247	3.38	3.90
April	950	63	237	3.25	3.63
May	915	63	238	3.26	3.76
June	1,150	40	235	3.22	3.59
July	234	26	54.5	.747	.86
August	77	20	30.2	.414	.48
September	37	17	21.7	.297	.33

NAUGATUCK RIVER NEAR NAUGATUCK, CONN.

LOCATION.—Water-stage recorder one-fifth of a mile above Beacon Hill Brook, 1.3 miles below Naugatuck, New Haven County, and 12 miles above mouth.

DRAINAGE AREA.—247 square miles.

RECORDS AVAILABLE.—June, 1918, to September, 1921; September, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 3,470 second-feet Mar. 29 (gage height, 5.2 feet); minimum not determined.

1918–1921, 1928–1931: Maximum stage, 8.0 feet Mar. 13, 1920 (discharge uncertain; previously published figure probably too low); minimum discharge, about 34 second-feet Aug. 31, 1921.

REMARKS.—Records good except those estimated for periods of low flow and those for high flows, which are fair. Slight regulation caused by operation of small reservoirs upstream.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a 50	85	222	114	102	348	1,370	330	919	148	a 70	a 77
2	a 45	a 70	243	100	123	360	2,350	308	644	150	a 65	86
3	a 50	a 65	151	94	112	337	1,280	319	439	143	89	112
4	a 45	a 65	136	100	114	337	1,140	330	363	123	86	105
5	a 40	95	126	150	109	308	968	278	367	123	77	a 74
6	a 50	114	116	314	109	271	810	267	244	165	79	a 60
7	a 50	100	116	260	96	271	840	253	304	204	81	a 60
8	a 50	a 65	130	194	92	1,110	902	588	436	179	a 65	a 65
9	a 50	a 55	128	154	131	1,050	734	1,260	998	230	a 60	a 65
10	a 50	a 63	114	136	136	674	635	750	2,400	418	a 77	a 60
11	a 50	a 60	118	120	118	513	625	936	1,480	233	103	a 65
12	a 40	a 60	128	153	110	467	560	662	832	207	281	a 60
13	a 50	a 60	136	167	141	467	500	635	605	162	174	a 55
14	a 50	a 65	116	138	236	467	471	1,050	471	168	123	a 65
15	a 65	165	108	115	207	513	428	1,110	416	148	101	a 65
16	a 60	363	84	112	219	508	397	712	532	140	105	a 70
17	a 65	596	90	111	223	455	374	673	1,760	138	105	a 75
18	94	507	88	105	463	428	363	536	944	120	97	a 70
19	a 60	300	a 90	158	436	513	334	467	578	126	96	a 65
20	a 70	216	90	173	319	550	334	432	439	122	92	a 75
21	a 50	179	81	156	260	602	311	498	367	123	84	a 80
22	a 50	154	92	134	246	734	289	648	315	136	a 70	a 75
23	a 50	128	103	114	267	706	311	1,810	271	128	a 70	a 70
24	a 50	136	103	109	274	840	360	1,420	293	118	a 77	a 65
25	a 55	160	83	100	293	1,140	330	826	256	96	80	a 60
26	a 45	185	110	133	326	1,300	425	673	226	90	80	a 55
27	a 60	143	200	136	348	1,300	797	536	200	96	83	a 55
28	a 65	120	176	143	326	1,100	491	455	173	94	110	a 60
29	75	94	159	143	-------	2,880	412	426	167	96	97	a 55
30	a 60	102	140	123	-------	1,940	378	322	156	90	a 70	a 55
31	77	-------	126	114	-------	1,130	-------	471	-------	83	a 77	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	94	40	55.5	0.225	0.26
November	596	55	152	.615	.69
December	243	81	126	.510	.59
January	314	94	141	.571	.66
February	463	92	212	.858	.89
March	2,880	271	762	3.09	3.56
April	2,350	289	651	2.64	2.94
May	1,810	253	645	2.61	3.01
June	2,400	156	586	2.37	2.64
July	418	83	150	.607	.70
August	281	60	94.3	.382	.44
September	112	55	68.6	.278	.31
The year	2,880	40	304	1.23	16.69

a Estimated.

LEADMINE BROOK NEAR THOMASTON, CONN.

LOCATION.—Chain gage on highway bridge half a mile above mouth and 2¼ miles northeast of Thomaston, Litchfield County.

DRAINAGE AREA.—24.1 square miles.

RECORDS AVAILABLE.—September, 1930, to September, 1931.

EXTREMES.—Maximum discharge during period, 750 second-feet Mar. 29 (gage height, 6.2 feet); minimum, 0.5 second-foot Sept. 12–15, 1931 (gage height, 1.60 feet).

REMARKS.—Records good except those for periods of ice effect, Nov. 29 to Dec. 5, Dec. 14 to Mar. 11, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	------	0,8	12	34	8.0	8.0	26	245	29	114	5.4	1.0	1.4
2	------	.8	5.1	15	7.0	7.5	30	288	31	67	8.6	1.0	1.1
3	------	.8	4.2	12	7.5	7.0	30	164	34	48	6.4	1.0	1.6
4	------	.9	4.1	12	8.0	7.0	28	156	28	34	5.4	1.1	1.3
5	------	.8	12	12	8.5	7.0	26	114	26	26	4.9	1.0	1.4
6	1.2	.8	18	12	24	7.0	24	96	24	22	7.4	.9	1.4
7	1.2	.9	9.5	12	20	7.0	22	108	25	22	12	.8	1.3
8	2.9	.9	6.0	13	16	7.0	30	114	126	55	9.0	.7	1.0
9	2.9	.9	5.8	12	14	7.0	55	90	135	114	13	.8	.9
10	1.6	.8	5.4	10	13	7.0	46	74	100	235	13	.8	.9
11	1.2	.9	3.9	9.5	12	7,0	40	73	131	156	10	1.9	.7
12	1.0	.9	4.1	14	11	7.0	37	62	68	85	7.0	21	.6
13	1.0	.8	4.8	16	12	7.5	41	53	78	60	5.1	11	.5
14	1.6	.9	5.1	10	10	14	44	48	126	42	5.4	4.4	.6
15	1.8	1.2	31	7.0	9.5	12	46	41	138	36	5.4	3.9	.5
16	1.5	2.1	49	6.0	9.5	10	52	38	80	34	5.1	6.2	.7
17	9.9	2.1	102	5.5	9.0	12	43	35	70	175	4.6	3.5	.7
18	5.3	5.8	63	6.0	9.5	24	47	39	52	74	5.6	2.5	.7
19	3.1	3.8	33	6.0	11	48	56	35	46	43	6.2	2.3	.7
20	2.3	2.5	20	5.5	14	40	65	31	30	31	4.9	2.1	.8
21	1.7	2.1	16	6.0	13	28	85	29	83	25	5.1	2.0	.9
22	1.6	2.0	14	6.0	11	26	102	30	80	17	5.8	1.5	.9
23	1.4	1.9	10	6.5	10	24	141	35	396	16	5.1	1.3	.9
24	1.0	2.0	10	5.5	9.0	22	197	39	166	20	4.4	1.5	.9
25	.9	2.4	16	5.5	9.0	24	266	28	82	15	3.4	1.3	.8
26	1.0	2.9	19	6.5	9.0	26	300	46	79	13	2.7	1.2	1.0
27	1.1	2.5	14	13	9.5	28	266	96	55	12	2.2	.9	.9
28	1.1	2.2	9.8	14	11	24	197	55	41	8.8	2.1	4.2	.8
29	.8	3.2	8.5	12	10	------	564	41	33	6.6	1.8	3.1	.7
30	.8	3.8	8.0	10	8.5	------	255	36	29	6.0	1.5	2.1	.8
31	------	7.2	------	9.0	8.5	------	156	------	71	------	1.3	1.5	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
1930					
September 6–30	9.9	0.8	2.00	0.083	0.08
1930–31					
October	7.2	.8	1.99	.083	.10
November	102	3.9	17.4	.722	.81
December	34	5.5	10.4	.433	.50
January	24	7.0	11.0	.456	.53
February	48	7.0	16.2	.672	.70
March	564	22	107	4.44	5.12
April	288	28	78.0	3.24	3.62
May	396	24	80.4	3.34	3.85
June	235	6.0	53.7	2.23	2.49
July	13	1.3	5.80	.241	.28
August	21	.7	2.85	.118	.14
September	1.6	.5	.91	.038	.04
The year	564	.5	32.2	1.34	18.18

HUDSON RIVER BASIN

HUDSON RIVER NEAR NEWCOMB, N. Y.

LOCATION.—Water-stage recorder at highway bridge half a mile below outlet of Harris Lake and 2 miles east of Newcomb, Essex County. Prior to Aug. 6, 1931, staff gage at same location.

DRAINAGE AREA.—192 square miles.

RECORDS AVAILABLE.—September, 1925, to September, 1931.

EXTREMES.—Maximum discharge during year, 2,470 second-feet Apr. 12 (gage height, 5.3 feet); minimum, 43 second-feet Sept. 1, 2 (gage height, 1.49 feet). 1925–1931: Maximum discharge, 6,250 second-feet Apr. 9, 1928 (gage height, 8.0 feet); minimum, 38 second-feet (revised) Sept. 13, 1930 (gage height, 1.43 feet).

REMARKS.—Records good except those for periods of ice effect, Dec. 11–19, Jan. 7–17, 21–26, Jan. 31 to Feb. 16, and for periods of backwater from logs, May 8–10, 18–22, which are fair. Slight regulation by small storage reservoirs and ponds above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	72	96	112	70	60	57	217	514	466	52	296	44
2	70	94	125	70	60	54	245	514	357	49	234	49
3	63	90	133	68	60	53	274	540	318	47	191	88
4	60	88	133	68	55	46	338	650	270	46	155	127
5	57	90	122	68	60	47	378	622	217	49	133	120
6	54	94	105	67	60	49	420	540	200	52	115	105
7	52	98	94	65	55	54	466	622	200	49	100	92
8	52	103	90	65	55	57	489	600	303	46	90	83
9	49	98	98	65	55	59	540	650	489	46	83	72
10	47	94	108	65	55	59	822	650	514	52	100	65
11	47	90	110	65	55	60	1,640	650	442	127	110	59
12	46	85	100	65	55	60	2,400	650	357	357	103	54
13	45	83	100	65	55	60	2,250	540	288	314	92	49
14	45	83	95	65	55	62	2,150	442	259	267	83	45
15	45	81	90	65	55	62	2,150	420	224	238	85	45
16	53	90	85	60	55	62	1,850	442	204	204	133	45
17	67	197	80	65	59	62	1,390	442	204	172	127	65
18	81	420	75	68	60	62	1,220	380	191	141	112	149
19	98	378	75	68	60	63	1,220	340	166	127	108	178
20	103	336	83	70	62	63	1,220	500	144	127	100	172
21	98	277	81	70	63	63	1,220	650	127	357	90	281
22	88	231	77	65	65	63	1,300	750	108	650	77	338
23	77	184	74	65	65	67	1,390	622	98	710	68	318
24	75	181	74	65	65	75	1,300	680	94	595	62	307
25	81	178	72	60	63	85	1,140	910	94	466	54	296
26	85	178	74	65	63	103	910	980	90	357	49	285
27	94	158	74	70	62	122	840	808	81	285	45	357
28	96	122	74	68	60	138	840	540	74	224	47	378
29	94	103	74	68	-------	161	742	680	67	217	50	318
30	96	98	72	67	-------	184	680	808	57	357	52	267
31	98	-------	72	65	-------	204	-------	595	-------	357	49	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	103	45	70.6	0.368	0.42
November	420	81	150	.781	.87
December	133	72	91.3	.476	.55
January	70	60	66.3	.345	.40
February	65	55	59.0	.307	.32
March	204	46	77.9	.406	.47
April	2,400	217	1,070	5.57	6.21
May	980	340	604	3.15	3.63
June	514	57	223	1.16	1.29
July	710	46	230	1.20	1.38
August	296	45	103	.536	.62
September	378	44	162	.844	.94
The year	2,400	44	242	1.26	17.10

HUDSON RIVER AT GOOLEY, NEAR INDIAN LAKE, N. Y.

LOCATION.—Water-stage recorder half a mile above Gooley, Essex County, 1 mile above mouth of Indian River, and 5 miles northeast of Indian Lake village, Hamilton County.

DRAINAGE AREA.—420 square miles.

RECORDS AVAILABLE.—August, 1916, to September, 1931.

EXTREMES.—Maximum discharge during year, 5,720 second-feet Apr. 14 (gage height, 6.48 feet); minimum, 91 second-feet Oct. 15 (gage height, 1.55 feet). 1916–1931: Maximum discharge, 13,900 second-feet Apr. 12, 1922 (gage height, 10.0 feet); minimum, 44 second-feet Aug. 22, 23, 1923.

REMARKS.—Records good except those for period of ice effect, Nov. 28 to Apr. 5, which are fair. Seasonal flow only slightly regulated by storage.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	132	151	240	150	130	130	420	1,010	785	112	537	112
2	129	151	280	150	120	120	480	937	614	108	430	122
3	125	143	300	150	120	120	550	1,020	506	168	373	252
4	119	132	280	150	120	110	650	1,090	1,060	291	390	319
5	112	139	280	150	120	120	750	1,060	1,140	230	324	263
6	108	155	260	140	120	120	929	962	987	178	273	221
7	108	155	260	140	120	120	1,030	937	1,140	158	235	191
8	105	155	240	140	120	130	1,060	1,270	1,270	143	217	174
9	105	155	240	140	120	130	1,260	1,170	1,200	139	204	155
10	102	151	240	140	120	140	1,870	1,070	1,030	292	226	139
11	99	143	240	140	120	140	4,430	1,180	833	828	235	125
12	97	143	220	140	120	150	4,850	1,440	672	905	226	122
13	97	132	220	140	120	150	4,680	1,260	544	778	212	119
14	94	132	220	140	120	150	5,390	857	443	658	191	112
15	97	132	200	140	120	150	4,850	770	379	572	182	136
16	105	136	200	140	120	150	3,940	725	368	462	230	276
17	119	201	200	140	130	150	3,110	718	390	379	254	273
18	151	449	190	150	130	150	2,830	642	384	319	244	476
19	182	502	190	150	130	150	2,760	635	330	278	226	424
20	170	436	180	150	140	150	2,560	888	249	294	200	390
21	162	373	180	150	140	150	2,500	1,330	200	1,010	182	646
22	147	319	170	150	140	150	2,970	1,440	178	1,430	166	801
23	136	283	170	150	140	160	2,970	1,270	178	1,330	151	793
24	136	249	170	150	140	160	2,760	1,910	217	1,080	139	755
25	151	235	160	140	140	170	2,240	2,170	195	857	132	710
26	155	235	160	140	140	190	1,490	1,850	178	688	108	702
27	158	217	160	130	130	220	1,540	1,440	170	558	105	873
28	155	200	160	130	130	240	1,700	1,500	147	443	129	889
29	155	200	160	130	-------	280	1,700	1,020	132	407	147	801
30	151	220	160	130	-------	340	1,490	1,090	119	702	136	695
31	151	-------	150	130	-------	380	-------	996	-------	695	119	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	182	94	129	0.307	0.35
November	502	132	214	.510	.57
December	300	150	209	.498	.57
January	150	130	142	.338	.39
February	140	120	127	.302	.31
March	380	110	167	.398	.46
April	5,390	420	2,330	5.55	6.19
May	2,170	635	1,150	2.74	3.16
June	1,270	119	535	1.27	1.42
July	1,430	108	532	1.27	1.46
August	537	105	223	.531	.61
September	889	112	402	.957	1.07
The year	5,390	94	512	1.22	16.56

HUDSON RIVER AT NORTH CREEK, N. Y.

LOCATION.—Water-stage recorder at highway bridge in North Creek, Warren County, 100 feet above mouth of North Creek. Prior to Oct. 15, 1930, staff gage at same location.

DRAINAGE AREA.—792 square miles.

RECORDS AVAILABLE.—September, 1907, to September, 1931.

EXTREMES.—Maximum discharge during year, 10,000 second-feet Apr. 11 (gage height, 7.50 feet); minimum, 157 second-feet Aug. 27 (gage height, 2.12 feet). 1907–1931: Maximum discharge, 30,000 second-feet Mar. 27, 1913 (gage height, 12.0 feet); minimum, 128 second-feet Sept. 2, 1923 (gage height, 1.92 feet).

REMARKS.—Records good except those for period of ice effect, Nov. 29 to Apr. 2, which are fair. Discharge estimated Jan. 4. Flow partly regulated by storage in Indian Lake Reservoir and by numerous lakes and ponds in basin.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	556	416	340	220	240	220	950	1,630	1,520	182	799	1,100
2	556	422	440	200	400	220	1,100	1,430	1,530	178	654	1,130
3	556	410	420	200	500	200	1,220	1,510	877	178	565	1,240
4	517	385	400	200	480	170	1,280	1,620	1,050	292	536	765
5	517	398	380	220	480	160	1,450	1,540	1,360	366	488	435
6	478	416	360	220	480	170	1,580	1,420	1,070	257	404	345
7	478	422	360	200	460	220	1,790	1,330	1,280	243	345	957
8	478	398	360	190	460	240	1,790	1,560	1,660	230	302	1,120
9	443	379	360	190	460	240	2,140	1,610	2,070	209	281	1,110
10	443	368	360	180	440	240	3,370	1,530	1,600	322	302	1,040
11	443	350	340	200	420	260	8,820	1,720	1,210	1,380	328	473
12	443	333	340	200	400	260	9,080	2,070	967	1,380	317	217
13	408	328	320	200	380	260	7,790	1,860	783	1,100	296	719
14	408	312	320	190	360	260	9,020	1,460	639	921	276	985
15	435	328	300	180	340	260	8,090	1,270	544	877	271	1,160
16	454	339	280	170	320	260	6,520	1,140	515	709	302	1,320
17	474	404	280	170	300	260	5,090	1,070	565	565	350	1,520
18	551	634	260	180	300	280	4,730	912	544	461	356	1,310
19	579	799	360	190	280	280	4,610	851	474	385	322	816
20	554	750	260	200	280	300	4,380	1,330	391	362	296	1,280
21	522	670	260	200	280	320	4,150	1,860	333	1,250	262	1,790
22	501	616	260	190	260	360	4,500	1,860	291	2,220	234	2,000
23	474	559	240	180	260	420	4,380	1,850	286	2,140	213	1,930
24	454	508	240	180	260	500	3,930	3,010	333	1,790	201	1,860
25	454	481	240	170	260	600	3,190	3,500	345	1,470	189	1,350
26	444	429	220	180	260	700	2,400	3,090	291	1,100	171	1,010
27	448	368	220	190	240	850	2,460	2,140	266	868	160	1,300
28	448	320	220	180	240	1,000	2,460	2,000	239	686	174	1,310
29	435	280	220	170	-------	1,100	2,460	1,540	213	579	209	1,150
30	422	300	220	160	-------	1,100	2,220	1,480	193	903	615	976
31	422	-------	220	160	-------	1,000	-------	1,390	-------	994	994	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	579	408	477	0.602	0.69
November	799	280	437	.552	.62
December	440	220	299	.378	.44
January	220	160	189	.239	.28
February	500	240	351	.443	.46
March	1,100	160	410	.518	.60
April	9,080	950	3,900	4.92	5.49
May	3,500	851	1,700	2.15	2.48
June	2,070	193	781	.986	1.10
July	2,220	178	793	1.00	1.15
August	994	160	362	.457	.53
September	2,000	217	1,120	1.41	1.57
The year	9,080	160	899	1.14	15.41

HUDSON RIVER AT HADLEY, N. Y.

LOCATION.—Water-stage recorder at Hadley, Saratoga County, a quarter of a mile above mouth of Sacandaga River and 400 feet below mouth of Lake Luzerne outlet.

DRAINAGE AREA.—1,660 square miles.

RECORDS AVAILABLE.—July, 1921, to September, 1931.

EXTREMES.—Maximum discharge during year, 14,700 second-feet Apr. 12 (gage height, 11.10 feet); minimum, 258 second-feet Nov. 29 (gage height, 1.04 feet).

1921-1931: Maximum discharge, 33,100 second-feet Apr. 12, 1922 (gage height, 19.71 feet); minimum, that of Nov. 29, 1930.

REMARKS.—Records excellent except those for periods of ice effect, Dec. 1, 4–6, Jan. 8–11, 15, 16, 23–27, Feb. 3–12, 23–27, which are good. Flow partly regulated by storage in Indian Lake and other reservoirs. Some diurnal fluctuation, owing to power operations on Schroon River.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	792	590	950	393	389	487	2,580	3,840	2,900	548	1,600	1,410
2	754	601	773	362	384	533	3,040	3,400	2,970	502	1,360	1,460
3	748	564	651	376	500	528	3,400	3,320	2,330	482	1,230	1,810
4	735	553	750	411	750	512	3,920	3,320	2,030	434	1,280	1,700
5	729	607	800	407	700	482	4,240	3,250	2,390	559	1,150	1,050
6	681	629	800	407	700	448	4,240	3,040	2,270	623	998	766
7	657	607	786	398	700	468	4,560	2,840	2,090	538	880	780
8	651	607	741	380	700	507	4,880	2,900	2,900	638	792	1,420
9	657	569	686	360	700	512	5,680	3,250	3,320	640	735	1,460
10	669	635	675	360	650	538	7,010	3,250	3,470	858	741	1,410
11	681	559	553	380	650	538	12,600	4,400	2,770	3,740	748	1,180
12	640	528	601	416	650	543	13,700	4,320	2,330	3,110	779	666
13	607	512	548	430	663	574	12,400	4,000	1,980	2,330	792	458
14	623	502	434	420	675	553	13,400	3,770	1,650	2,150	741	1,100
15	657	507	439	380	681	543	12,800	3,320	1,550	1,920	692	1,360
16	845	517	333	360	623	569	11,300	2,970	1,500	1,650	754	1,760
17	773	845	333	398	607	596	9,730	2,700	2,090	1,360	773	1,920
18	773	1,030	380	407	623	596	8,710	2,450	1,920	1,150	819	2,210
19	832	1,190	482	380	635	692	8,540	2,210	1,600	1,030	819	1,600
20	792	1,150	497	393	590	698	8,030	2,150	1,360	1,030	792	1,480
21	760	1,050	492	402	574	716	7,520	2,900	1,150	2,590	686	2,210
22	710	952	482	407	548	819	7,350	3,040	1,050	4,400	623	2,700
23	675	852	458	400	550	938	7,350	3,470	990	4,240	564	2,840
24	646	838	453	380	550	1,180	6,670	5,200	1,110	3,320	533	2,700
25	657	754	398	380	550	1,520	5,840	5,840	1,050	2,840	497	2,480
26	596	786	417	400	500	1,650	5,200	5,360	960	2,390	472	1,920
27	623	623	439	400	500	1,980	5,200	4,560	880	1,980	492	2,030
28	657	478	439	434	517	2,210	4,720	3,920	729	1,600	640	2,270
29	710	376	434	439	-------	2,330	4,720	3,540	635	1,360	607	2,090
30	612	418	439	425	-------	2,640	4,400	3,040	543	1,410	569	1,860
31	590	-------	416	416	-------	2,510	-------	2,970	-------	1,760	1,060	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	845	590	695	0.419	0.48
November	1,190	376	681	.410	.46
December	950	333	551	.332	.38
January	439	360	397	.239	.28
February	750	384	602	.363	.38
March	2,640	448	949	.572	.66
April	13,700	2,580	7,120	4.29	4.79
May	5,840	2,150	3,500	2.11	2.43
June	3,470	543	1,820	1.10	1.23
July	4,400	434	1,720	1.04	1.20
August	1,600	472	813	.490	.56
September	2,840	458	1,670	1.01	1.13
The year	13,700	333	1,710	1.03	13.98

HUDSON RIVER AT MECHANICVILLE, N. Y.

LOCATION.—Water-stage recorder at dam of West Virginia Pulp & Paper Co. in Mechanicville, Saratoga County.

DRAINAGE AREA.—4,500 square miles.

RECORDS AVAILABLE.—October, 1887, to September, 1931.

EXTREMES.—Maximum daily discharge during year, 24,300 second-feet July 22; minimum daily discharge, 614 second-feet Feb. 1.

1887–1931: Maximum discharge, 120,000 second-feet Mar. 28, 1913; practically no flow at times when plant is shut down.

REMARKS.—Discharge computed from flow over spillway, through wheels, and through lock of Champlain Canal. Comparisons with records above Mechanicville indicate that computed mean discharge for year may be 13 per cent too small, for May, June, and July substantially correct, and other months from 10 per cent to over 20 per cent too small. Flow partly regulated by storage, principally in Sacandaga and Indian Lake Reservoirs. No correction is made for diversion through Glens Falls feeder into Champlain Canal. Records of discharge over spillway and through wheels furnished by West Virginia Pulp & Paper Co.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,980	2,380	2,300	1,810	614	808	6,420	5,810	6,090	3 170	2,770	3,330
2	2,750	1,540	4,060	2,120	874	1,360	6,760	5,030	5,370	2.880	2,110	3,740
3	2,920	1,390	3,320	2,140	1,610	1,930	5,760	3,670	4,780	2.830	2,590	5,510
4	2,570	2,870	3,140	1,280	1,590	2,080	6,250	4,180	4,910	1.950	5,370	4,920
5	2,160	2,910	3,950	2,740	1,500	2,170	5,320	6,180	4,520	1.260	4,800	3,700
6	2,030	2,920	2,920	3,870	1,290	2,100	7,600	6,500	3,380	1.610	4,470	2,160
7	2,420	3,640	2,580	3,380	810	1,710	7,800	5,840	3,650	3 270	4,380	1,220
8	2,320	2,880	2,400	2,900	784	718	9,410	5,150	5,150	3 910	3,500	1,600
9	1,760	1,380	3,740	2,340	1,420	1,170	9,350	3,300	8,140	4 130	2,190	3,650
10	1,860	1,580	3,780	1,940	2,200	1,770	9,660	4,360	12,100	8 980	2,510	3,730
11	1,920	3,020	3,530	937	1,790	2,680	16,000	8,320	9,220	10 400	4,280	3,920
12	1,330	2,780	3,630	1,930	1,680	2,590	21,900	9,130	7,350	8 470	4,120	3,080
13	1,450	2,380	2,510	3,370	1,660	2,690	17,900	8,010	5,280	5 860	4,110	2,120
14	2,960	2,440	1,980	2,260	1,430	2,160	18,600	8,480	4,370	6 580	3,850	1,700
15	2,860	1,900	2,580	2,090	847	1,120	18,200	10,100	4,590	6 400	3,300	4,280
16	2,580	1,070	3,300	1,930	1,150	2,140	15,200	7,060	5,120	5 730	1,700	4,010
17	2,910	1,860	3,040	1,470	1,920	3,270	13,900	5,190	8,390	5 520	2,120	4,030
18	2,460	3,550	2,570	752	2,040	3,930	11,500	5,190	7,200	4 830	4,260	4,050
19	1,440	3,920	2,500	1,920	2,400	4,150	11,300	5,960	5,080	2.710	4,570	3,040
20	1,840	3,570	2,260	2,500	2,280	4,360	11,900	5,140	4,600	1.910	4,620	1,720
21	3,290	3,190	1,570	2,190	1,690	2,750	11,500	5,060	3,940	7,760	4,520	4,120
22	3,250	2,510	1,530	2,010	1,360	2,760	9,660	4,950	3,060	24 300	3,640	5,690
23	3,170	1,910	2,710	1,990	1,300	4,250	10,300	10.100	5,080	15 700	1,820	5,700
24	3,470	1,800	2,390	1,440	2,280	5,460	9,320	15,300	4,900	11.700	1,580	5,220
25	2,650	3,040	1,460	663	2,380	6,040	7,090	14,400	4,360	8 150	3,650	4,640
26	1,660	3,040	2,010	1,760	2,340	6,240	5,470	13,100	3,800	5 270	3,700	4,660
27	2,610	2,990	2,210	2,600	2,190	5,960	8,030	10,900	3,040	5 350	3,900	2,750
28	3,340	3,290	1,700	2,220	1,690	5,590	7,700	8,220	1,860	5 500	4,110	3,300
29	3,110	2,470	2,230	2,050	-------	7,230	6,290	7,280	1,700	5 050	3,150	4,760
30	2,360	1,950	2,900	1,960	-------	8,920	6,490	5,380	3,510	4 820	1,800	4,430
31	2,530	-------	2,780	1,380	-------	6,540	-------	4,830	-------	3 940	1,600	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	3,470	1,330	2,480	0.551	0.64
November	3,920	1,070	2,540	.564	.63
December	4,060	1,460	2,700	.600	.69
January	3,870	663	2,060	.458	.53
February	2,400	614	1,610	.358	.37
March	8,920	718	3,440	.764	.88
April	21,900	5,320	10,400	2.31	2.58
May	15,300	3,300	7,170	1.59	1.83
June	12,100	1,700	5,150	1.14	1.27
July	24,300	1,260	6,130	1.36	1.57
August	5,370	1,580	3,390	.753	.87
September	5,700	1,220	3,690	.820	.91
The year	24,300	614	4,240	.942	12.77

CEDAR RIVER BELOW CHAIN LAKES, NEAR INDIAN LAKE, N. Y.

LOCATION.—Water-stage recorder 1½ miles below mouth of Rock River, 2 miles east of Chain Lake outlet, near south corner of town of Newcomb, Essex County, and 5½ miles northeast of Indian Lake village.

DRAINAGE AREA.—160 square miles.

RECORDS AVAILABLE.—October, 1930, to September, 1931.

EXTREMES.—Maximum discharge during year, 2,510 second-feet Apr. 14 (gage height, 7.80 feet); minimum discharge recorded, 40 second-feet Aug. 27 (gage height, 1.30 feet).

REMARKS.—Records good except those for periods of ice effect, Dec. 1–10, Dec. 18 to Apr. 2, and those estimated, Oct. 1–16, which are fair. Flow slightly regulated by storage for log-driving operations.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		59	110	70	50	48	170	385	231	50	225	53
2		57	120	70	50	50	200	360	168	49	203	58
3		56	130	70	50	50	235	454	215	137	189	154
4		52	130	70	50	50	274	411	768	251	234	166
5		59	120	70	55	50	289	372	830	155	183	110
6		65	120	70	50	48	311	348	493	111	150	84
7		54	120	70	50	48	348	334	174	100	127	69
8		64	120	65	48	48	336	600	195	90	116	60
9	42	62	110	65	48	50	434	449	192	82	111	54
10		60	110	65	50	55	715	342	174	282	124	51
11		53	104	65	48	60	1,820	462	153	622	121	50
12		60	107	60	44	60	1,580	702	129	453	110	55
13		56	105	60	46	60	1,560	611	107	372	102	56
14		55	94	60	48	60	2,300	313	91	336	97	53
15		55	93	55	48	60	1,860	283	85	285	100	101
16		58	88	55	50	60	1,370	256	88	227	113	220
17	54	86	86	55	48	60	1,090	242	100	187	102	218
18	68	131	85	55	48	60	1,030	223	101	155	104	307
19	71	118	85	55	48	60	1,030	210	77	136	97	222
20	57	104	80	55	48	60	910	394	66	140	84	203
21	53	93	80	55	50	60	925	650	63	498	76	379
22	51	85	80	55	50	60	1,310	486	58	612	71	398
23	49	79	80	55	50	60	1,210	386	63	500	69	398
24	59	71	80	55	48	65	1,010	841	114	398	67	385
25	68	70	75	55	46	70	837	1,030	91	324	60	360
26	61	74	75	55	46	75	456	690	77	264	45	372
27	57	60	75	50	46	80	600	467	76	222	44	453
28	57	60	75	50	46	90	850	609	65	193	76	398
29	58	55	75	50	-------	100	830	368	58	182	77	348
30	58	69	75	50	-------	120	674	272	53	306	65	311
31	57	-------	75	50	-------	150	-------	250	-------	263	58	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	71	----------	50.0	0.312	0.36
November	131	52	69.3	.433	.48
December	130	75	95.5	.597	.69
January	70	50	59.4	.371	.43
February	55	44	48.5	.303	.32
March	150	48	65.4	.409	.47
April	2,300	170	885	5.53	6.17
May	1,030	210	445	2.78	3.20
June	830	53	172	1.08	1.20
July	628	49	258	1.61	1.86
August	234	44	110	.688	.79
September	453	50	205	1.28	1.43
The year	2,300	----------	205	1.28	17.40

INDIAN LAKE RESERVOIR NEAR INDIAN LAKE, N. Y.

LOCATION.—Chain gage at Indian Lake Dam, 2 miles south of Indian Lake village, Hamilton County.
DRAINAGE AREA.—131 square miles.
RECORDS AVAILABLE.—July, 1900, to September, 1931.
EXTREMES.—Maximum stage during year, 31.5 feet Aug. 28; minimum, 0.0 foot or lower Feb. 26 to Mar. 1, Mar. 9–25.
1900–1931: Maximum stage, 38.8 feet Mar. 28, 1913; minimum, that of Feb. 26 to Mar. 1, Mar. 9–25, 1931.
REMARKS.—Flow out of reservoir normally completely regulated by operation of sluice gates. Storage capacity, about 4,700,000,000 cubic feet.

Daily gage height, in feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.8	4.0	3.5	5.6	6.4	0	4.5	20.2	27.4	29.0	31.0	29.4
2	9.6	3.8	3.8	5.7	6.0	1.8	4.7	20.4	27.5	29.0	31.1	29.2
3	9.3	3.6	3.9	5.7	5.8	2.0	4.9	20.6	27.5	29.0	31.1	29.4
4	9.0	3.4	4.0	5.7	5.6	2.3	5.3	20.9	27.6	29.0	31.1	29.5
5	8.8	3.2	4.1	5.8	5.4	1.5	5.7	21.1	27.6	29.1	31.1	29.7
6	8.6	3.0	4.3	5.8	5.2	.7	6.0	21.3	27.7	29.1	31.1	29.6
7	8.4	2.8	4.5	5.9	4.9	.3	6.3	21.5	27.8	29.1	31.1	29.2
8	8.2	2.8	4.6	5.9	4.7	.2	6.5	21.7	27.9	29.1	31.1	28.8
9	8.0	2.7	4.6	5.9	4.4	0	6.9	21.9	27.8	29.2	31.1	28.4
10	7.8	2.6	4.7	6.0	4.0	0	7.4	22.1	27.9	29.2	31.1	28.0
11	7.6	2.5	4.7	6.0	3.6	0	8.9	22.5	28.0	29.5	31.2	28.0
12	7.4	2.3	4.8	6.0	3.2	0	10.2	22.7	28.1	29.6	31.2	27.8
13	7.2	2.2	4.8	6.1	2.8	0	11.1	23.0	28.2	29.6	31.2	27.6
14	7.1	2.1	4.8	6.1	2.5	0	12.1	23.2	28.2	29.7	31.2	27.2
15	6.9	1.9	4.8	6.1	2.3	0	13.0	23.4	28.3	29.8	31.3	26.9
16	6.7	1.7	4.9	6.2	1.9	0	13.7	23.6	28.3	29.9	31.3	26.6
17	6.6	1.7	4.9	6.2	1.7	0	14.2	23.7	28.5	29.9	31.3	26.4
18	6.6	2.2	4.9	6.2	1.5	0	15.1	23.9	28.5	29.9	31.4	26.6
19	6.4	2.3	5.0	6.3	1.3	0	15.4	24.0	28.6	30.0	31.4	26.5
20	6.2	2.3	5.1	6.3	1.2	0	16.1	24.7	28.6	30.0	31.4	26.3
21	6.0	2.2	5.1	6.3	1.0	0	16.8	25.0	28.7	30.2	31.4	26.0
22	5.8	2.2	5.2	6.4	.8	0	17.3	25.3	28.7	30.4	31.4	25.7
23	5.6	2.1	5.2	6.4	.6	0	17.8	25.7	28.7	30.6	31.4	25.5
24	5.4	1.4	5.3	6.4	.4	0	18.1	26.0	28.8	30.7	31.4	25.2
25	5.4	2.6	5.3	6.5	.2	0	18.5	26.4	28.8	30.8	31.4	25.3
26	5.1	3.0	5.4	6.6	0	.6	18.7	26.6	28.9	30.8	31.4	25.5
27	4.9	3.1	5.3	6.6	0	1.0	19.1	26.8	28.9	30.8	31.4	25.7
28	4.8	3.2	5.4	6.7	0	3.0	19.4	27.0	28.9	30.8	31.5	26.0
29	4.6	3.2	5.5	6.7	------	3.5	19.7	27.2	28.9	30.9	31.3	26.2
30	4.4	3.3	5.5	6.8	------	3.9	20.0	27.3	29.0	31.0	31.0	26.2
31	4.2	------	5.6	6.8	------	4.2	------	27.4	------	31.0	29.7	------

INDIAN RIVER NEAR INDIAN LAKE, N. Y.

LOCATION.—Water-stage recorder three-quarters of a mile below Indian Lake Dam and 2 miles south of Indian Lake village, Hamilton County.

DRAINAGE AREA.—132 square miles.

RECORDS AVAILABLE.—July, 1912, to June, 1914; June, 1915, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,050 second-feet Aug. 29 (gage height, 3.90 feet); practically no flow at times when gates were closed.

1912–1914, 1915–1931: Maximum discharge, about 3,460 second-feet Mar. 28, 1913 (gage height, 7.8 feet); practically no flow at times.

REMARKS.—Records good except those for extremely low flows and those estimated, which are fair. Flow completely regulated by storage in Indian Lake Reservoir; no discharge over spillway during year.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	402	199		0.8	a 313	a 61	3.9	1.6	1.4	1.2	4.2	996
2	395	194		.8	a 310	a 29	5.5	1.4	1.0	1.4	4.2	996
3	392	185		.8	a 307	a .8	6.2	1.6	1.0	1.2	4.9	387
4	386	176		.8	a 304	.7	a 6.6	1.4	1.0	1.6	5.2	4.9
5	363	168		.8	a 301	32	a 6.6	1.2	.8	1.8	3.9	4.2
6	347	162		1.0	a 298	80	a 6.6	1.0	1.2	42	3.6	510
7	344	156		1.0	292	74	a 6.6	.8	1.8	4.8	2.9	996
8	341	152		.8	281	72	a 6.6	1.6	253	2.7	2.9	996
9	334	144		.8	270	70	a 9.6	a 1.6	277	3.2	3.9	996
10	331	133	a 0.8	.7	260	67	14	a 2.1	4.9	5.2	3.9	350
11	328	129		.7	236	64	18	a 2.1	3.2	5.5	3.9	4.6
12	319	122		.6	216	61	7.1	2.1	2.5	2.5	3.9	545
13	313	115		.6	196	60	5.5	2.8	2.3	2.3	4.2	944
14	307	112		.6	172	59	5.2	1.6	2.3	2.9	4.6	944
15	298	108		.7	154	59	3.9	1.4	2.1	2.3	7.5	944
16	292	105		.7	139	57	3.2	1.2	1.8	2.3	6.6	944
17	292	110		.7	126	57	3.2	1.0	2.1	1.8	3.9	572
18	290	119	.6	.6	113	56	2.9	1.0	2.3	1.8	4.2	6.6
19	284	124	.6	.7	108	56	2.7	1.0	1.8	2.1	3.6	516
20	276	128	.6	.8	100	a 56	2.3	7.5	2.3	2.9	3.2	944
21	267	137	.6	.7	92	a 56	2.1	3.9	2.1	4.9	2.9	918
22	260	139	.6	.7	85	a 56	1.8	2.5	1.4	5.9	3.2	892
23	254	129	.6	.7	80	a 56	1.4	6.6	1.6	3.6	2.9	892
24	252	128	.6	.6	76	a 56	.7	9.2	2.1	3.2	3.2	660
25	241	66	.7	.6	73	a 56	.6	5.5	1.8	3.6	3.2	6.2
26	239	2.3	.6	.6	70	a 56	.8	4.2	1.8	3.6	3.9	7.1
27	236	1.2	.7	.6	a 67	a 35	3.2	2.9	1.6	3.9	4.2	6.6
28	228	a .8	.7	.6	a 64	6.2	2.1	2.7	1.6	3.9	4.9	4.9
29	206	a .8	.7	.6	-------	4.6	2.3	1.8	1.4	4.6	366	4.2
30	211	a .8	.8	.6	-------	4.2	2.1	1.6	1.2	4.9	846	3.9
31	206	-------	.8	a143	-------	3.2	-------	1.4	-------	3.6	1.020	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	402	206	298	----------	----------
November	199	.8	115	----------	----------
December	.8	.6	.74	----------	----------
January	143	.6	5.30	----------	----------
February	313	64	182	----------	----------
March	80	.7	47.1	----------	----------
April	18	.6	4.78	----------	----------
May	9.2	.8	2.49	----------	----------
June	277	.8	19.4	----------	----------
July	42	1.2	4.43	----------	----------
August	1,020	2.9	75.7	----------	----------
September	996	3.9	533	----------	----------
The year	1,020	.6	106	0.803	10.92

a Estimated.

NOTE.—Elevation of water surface in Indian Lake Reservoir at end of year was 16.3 feet higher than at beginning of year; approximate gain in storage, 2,422,000,000 cubic feet, equivalent to yearly mean discharge of 76.8 second-feet, 0.582 second-foot per square mile, or run-off of 7.90 inches.

NORTH CREEK AT NORTH CREEK, N. Y.

LOCATION.—Staff gage below abandoned dam in North Creek, Warren County, and 1,000 feet above mouth.

DRAINAGE AREA.—21.8 square miles.

RECORDS AVAILABLE.—July, 1924, to September, 1931.

EXTREMES.—Maximum discharge during year, about 445 second-feet Apr. 11; minimum, 3.3 second-feet Oct. 3–10 (gage height, 1.20 feet).

1924–1931: Maximum discharge, about 1,690 second-feet Apr. 7, 1930; minimum, 0.3 second-foot Sept. 1, 1926, Sept. 26, 1927.

REMARKS.—Records good except those for periods of ice effect, Nov. 30 to Dec. 4, Dec. 15 to Mar. 12, those for period of backwater from Hudson River, Apr. 11–16, and those for extremely low flows, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.7	7.9	20	5.5	5.5	8.5	47	46	22	4.8	8.0	5.5
2	3.7	16	12	5.5	5.5	8.5	58	40	20	4.3	7.7	7.1
3	3.3	13	10	5.5	5.5	8.5	54	41	16	4.8	7.1	10
4	3.3	11	9	6	5.5	8.5	85	46	15	4.8	10	11
5	3.3	10	8.5	6.5	5.5	8.5	84	46	14	4.8	8.7	9.4
6	3.3	11	7.9	6.5	5.5	9	91	43	14	4.5	7.4	9.0
7	3.3	9.6	7.3	6.5	5.5	9	90	39	16	4.8	6.4	9.8
8	3.3	8.8	8.5	6	5.5	9.5	98	37	33	5.2	5.5	7.7
9	3.3	8.5	9.2	6	5.5	10	122	36	42	8.7	6.8	5.5
10	3.5	7.9	8.8	6	5.5	10	261	64	44	29	8.7	5.0
11	3.9	7.9	8.8	6.5	5	10	420	130	32	166	7.7	4.8
12	4.1	7.3	9.9	6.5	5	10	160	85	25	49	7.7	4.3
13	4.4	6.6	11	6	5	9.9	75	73	20	26	11	3.9
14	4.6	6.3	7.0	6	5.5	9.6	70	66	18	22	9.8	3.4
15	5.7	6.3	6	5.5	5.5	9.9	120	58	18	23	9.0	13
16	17	13	5.5	5.5	5.5	9.9	140	48	20	16	8.3	18
17	16	32	5.5	5.5	6	9.9	149	42	30	12	10	18
18	21	28	6	6	6	11	149	38	23	11	11	18
19	18	22	6.5	6.5	6.5	12	149	33	15	11	9.4	14
20	18	20	6.5	6	6.5	14	155	29	11	11	8.3	14
21	17	16	6.5	6	6.5	16	178	24	8.7	101	7.4	20
22	17	14	6	5.5	6.5	16	151	23	7.7	170	6.4	22
23	17	12	6	5.5	6.5	20	107	36	8.0	73	5.5	20
24	16	11	6	5.5	7	36	77	177	11	33	5.0	17
25	14	7.9	6	5.5	7.5	40	53	96	11	23	4.5	11
26	13	7.9	6	5.5	7.5	41	48	71	10	18	4.1	12
27	11	7.3	6	6	8	46	100	46	8.3	14	6.1	22
28	8.8	6.3	6	6.5	8	50	72	38	9.0	11	7.4	20
29	6.0	5.4	6	6	-------	50	63	30	8.7	10	6.8	16
30	4.6	7.5	5.5	6	-------	52	50	26	7.4	13	6.1	11
31	3.9	-------	5.5	5.5	-------	48	-------	26	-------	9.8	5.5	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	21	3.3	8.87	0.407	0.47
November	32	5.4	11.6	.532	.59
December	20	5.5	7.72	.354	.41
January	6.5	5.5	5.92	.272	.31
February	8	5	6.04	.277	.29
March	52	8.5	19.7	.904	1.04
April	420	47	116	5.32	5.94
May	177	23	52.7	2.42	2.79
June	44	7.4	17.9	.821	.92
July	170	4.3	29.0	1.33	1.53
August	11	4.1	7.53	.345	.40
September	22	3.4	12.1	.555	.62
The year	420	3.3	24.6	1.13	15.31

SCHROON RIVER AT RIVERBANK, N. Y.

LOCATION.—Water-stage recorder at highway bridge at Riverbank, Warren County, 9 miles below Schroon Lake reservoir.
DRAINAGE AREA.—528 square miles.
RECORDS AVAILABLE.—September, 1907, to September, 1931.
EXTREMES.—Maximum discharge during year, 3,570 second-feet Apr. 15 (gage height, 6.21 feet); minimum, 91 second-feet Nov. 4 (gage height, 1.10 feet).
1907–1931: Maximum discharge, about 13,500 second-feet Mar. 28, 1913 (gage height, 10.7 feet); minimum, 28 second-feet Oct. 17, 1909 (gage height, 0.85 foot).
REMARKS.—Records good except those for periods when ice or logs affected control, Nov. 29, Dec. 2–5, 13–16, Jan. 1 to Mar. 12, Apr. 2–10, which are fair. Flow partly regulated by storage in Schroon and Brant Lakes.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	110	99	144	110	100	130	605	1,260	910	202	385	154
2	110	97	150	110	100	130	650	1,180	820	188	353	154
3	108	93	140	110	100	130	750	1,150	765	146	334	169
4	108	93	140	120	100	130	800	1,120	710	144	330	164
5	106	104	140	120	95	130	900	1,040	655	137	307	161
6	104	110	137	130	95	130	1,000	1,010	630	128	282	159
7	102	108	134	140	95	130	1,100	1,040	605	132	269	161
8	100	104	137	130	95	130	1,300	940	630	144	246	156
9	97	102	139	120	95	140	1,500	910	682	149	237	149
10	95	100	139	120	95	150	1,700	910	765	172	231	146
11	95	99	137	120	95	150	2,240	975	738	365	222	142
12	95	99	139	120	95	150	2,980	975	710	377	216	134
13	95	97	140	120	95	146	3,360	940	682	357	213	128
14	93	97	130	120	100	146	3,460	940	605	373	204	132
15	97	99	130	110	100	149	3,560	910	605	361	202	154
16	106	104	130	110	100	146	3,460	850	605	349	222	199
17	106	128	128	120	110	144	3,160	820	630	326	216	207
18	110	142	130	120	110	146	2,960	765	580	304	228	246
19	110	142	125	120	120	146	2,760	710	542	279	222	246
20	108	142	125	120	130	151	2,560	710	519	269	222	250
21	104	137	128	110	130	151	2,380	682	453	334	216	315
22	100	132	125	110	130	161	2,290	682	425	453	204	474
23	97	132	123	110	130	172	2,160	738	425	506	190	501
24	95	132	123	110	130	185	1,980	910	413	580	177	474
25	102	137	121	100	130	213	1,800	1,080	389	580	172	445
26	102	139	119	100	130	269	1,520	1,180	369	528	166	449
27	102	139	121	100	130	315	1,440	1,220	286	441	166	478
28	102	132	121	110	130	357	1,440	1,180	210	413	182	528
29	102	130	119	110	------	425	1,400	1,120	228	385	179	514
30	100	130	121	100	------	496	1,360	1,040	228	385	169	496
31	99	------	114	100	------	546	------	975	------	369	159	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	110	93	102	0.193	0.22
November	142	93	117	.222	.25
December	150	114	131	.248	.29
January	140	100	115	.218	.25
February	130	95	109	.206	.21
March	546	130	197	.373	.43
April	3,560	605	1,950	3.69	4.12
May	1,260	682	967	1.83	2.11
June	910	210	560	1.06	1.18
July	580	128	319	.604	.70
August	385	159	230	.436	.50
September	528	128	270	.511	.57
The year	3,560	93	422	.799	10.83

SACANDAGA RIVER NEAR HOPE, N. Y.

LOCATION.—Water-stage recorder 1½ miles below junction of East and West Branches of Sacandaga River and 4½ miles above Hope, Hamilton County.
DRAINAGE AREA.—491 square miles (revised).
RECORDS AVAILABLE.—September, 1911, to September, 1931.
EXTREMES.—Maximum discharge during year, 8,640 second-feet Apr. 11 (gage height, 6.35 feet); minimum, 42 second-feet Oct. 10 (gage height, 1.23 feet).
1911–1931: Maximum gage height, 11.7 feet during flood of Mar. 25–30, 1913 (discharge not determined); minimum discharge, about 16 second-feet Sept. 30, 1913 (gage height, 1.17 feet).
REMARKS.—Records good except those for periods of ice effect, Nov. 29 to Dec. 1, Dec. 15 to Mar. 13, and those estimated, which are fair. Occasional diurnal fluctuation, owing to operation of small dams.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	100	119	1,300	220	a 140	240	1,110	1,810	757	234	356	177
2	97	119	870	220	a 130	a 240	1,430	1,630	623	207	321	173
3	95	150	730	220	130	220	1,660	1,800	539	203	327	292
4	92	150	688	220	130	a 220	2,040	1,740	489	203	386	279
5	89	162	623	220	130	a 240	2,280	1,590	449	190	327	258
6	86	173	518	220	130	a 240	2,280	1,440	423	177	289	230
7	81	169	462	220	120	a 240	2,360	1,260	478	177	258	203
8	76	165	417	200	120	a 240	2,200	1,220	1,170	207	244	182
9	76	162	373	200	120	a 220	2,900	2,040	1,070	234	239	169
10	69	158	350	a 200	120	220	4,280	1,960	931	621	249	158
11	76	132	316	a 200	120	220	8,080	3,000	766	1,650	249	147
12	76	110	327	200	110	220	6,270	2,720	654	924	239	139
13	76	106	310	200	a 130	220	5,320	2,280	546	623	230	136
14	76	106	279	200	140	220	6,420	2,120	469	1,440	216	132
15	81	218	260	190	150	230	5,320	1,710	429	1,070	203	147
16	97	268	260	190	200	230	4,570	1,660	512	705	194	250
17	100	676	240	190	260	225	4,230	1,450	1,450	615	186	464
18	163	910	240	190	340	249	4,450	1,220	1,070	510	207	615
19	194	757	240	190	320	274	4,450	1,050	785	442	230	404
20	162	630	260	190	300	294	4,230	1,040	638	437	244	395
21	143	539	260	180	280	300	4,120	1,020	525	3,000	203	646
22	136	a 462	260	170	a 280	350	3,900	942	423	4,130	182	584
23	132	a 404	240	170	260	442	3,390	975	386	2,810	177	607
24	132	367	240	160	260	576	2,810	2,200	503	2,040	165	568
25	132	356	240	160	260	748	2,360	2,120	436	1,530	154	510
26	a 126	361	240	160	240	730	2,120	1,960	398	1,130	143	641
27	a 113	316	240	160	240	942	2,630	1,630	a 392	841	147	1,070
28	129	284	240	150	240	1,200	2,280	1,350	a 344	671	333	812
29	129	260	240	150	-------	1,260	2,200	1,090	a 305	554	258	671
30	129	320	240	140	-------	1,460	2,120	900	263	496	220	561
31	122	-------	220	a 140	-------	1,260	-------	831	-------	429	194	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	194	69	109	0.222	0.26
November	910	106	304	.619	.69
December	1,300	220	378	.770	.89
January	220	140	188	.383	.44
February	340	110	193	.393	.41
March	1,460	220	451	.919	1.06
April	8,080	1,110	3,460	7.05	7.87
May	3,000	831	1,610	3.28	3.78
June	1,450	263	607	1.24	1.38
July	4,130	177	919	1.87	2.16
August	386	143	238	.485	.56
September	1,070	132	387	.788	.88
The year	8,080	69	736	1.50	20.38

a Estimated.

SACANDAGA RESERVOIR AT CONKLINGVILLE, N. Y.

LOCATION.—Water-stage recorder 800 feet above right end of Conklingville Dam, at Conklingville, Saratoga County.

DRAINAGE AREA.—1,044 square miles (revised).

RECORDS AVAILABLE.—January, 1930, to September, 1931.

EXTREMES.—Maximum elevation during year, 767.69 feet July 27 (contents, 33,910,000,000 cubic feet); minimum, 730.78 feet Mar. 21 (contents, 2,530,000,000 cubic feet).

1930–31: Maximum elevation, that of July 27, 1931; minimum elevation, since the first filling, that of Mar. 21, 1931.

REMARKS.—Flow of Sacandaga River at Conklingville completely regulated by this reservoir. Capacity of reservoir at elevation of spillway crest (771 feet), 37,800,000,000 cubic feet; available capacity (above 740 feet), 30,000,000,000 cubic feet. Area of water surface of full reservoir, 41.7 square miles. Records furnished by Board of Hudson River Regulating District.

Daily gage height, in feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52.43	47.45	44.95	41.23	36.17	32.91	35.63	56.24	63.47	64.05	67.32	63.24
2	52.22	47.36	44.98	41.08	36.09	32.85	36.36	56.47	63.58	63.90	67.28	63.12
3	52.00	47.26	44.83	40.88	35.95	32.69	37.03	56.75	63.65	63.75	67.32	63.06
4	51.78	47.08	44.68	40.83	35.79	32.53	37.66	56.93	63.71	63.68	67.25	62.99
5	51.69	46.99	44.60	40.70	35.60	32.39	38.44	57.11	63.73	63.70	67.14	62.88
6	51.62	46.96	44.49	40.58	35.45	32.24	39.11	57.29	63.67	63.69	67 01	62.8
7	51.50	46.74	44.49	40.42	35.28	32.07	39.78	57.43	63.72	63.43	66.80	62.8
8	51.40	46.58	44.45	40.19	35.25	32.06	40.67	57.59	63.89	63.35	66.62	62.7
9	51.29	46.53	44.39	39.96	35.17	32.05	41.42	57.90	63.94	63.24	66.59	62.62
10	51.17	46.31	44.17	39.77	35.01	31.91	42.40	58.15	64.01	63.25	66.49	62.47
11	51.06	46.18	43.99	39.72	34.84	31.75	44.01	58.64	64.08	63.67	66.32	62.32
12	51.03	46.02	43.90	39.62	34.67	31.58	45.53	59.14	64.06	63.95	66.13	62.14
13	50.92	45.88	43.73	39.44	34.49	31.41	46.65	59.49	64.06	64.05	66.01	62.07
14	50.69	45.71	43.67	39.25	34.41	31.22	47.61	59.88	64.09	64.24	65.85	62.02
15	50.47	45.53	43.60	39.04	34.39	31.20	48.64	60.22	64.11	64.43	65.68	61.87
16	50.33	45.53	43.37	38.83	34.29	31.19	49.47	60.51	64.09	64.45	65.66	61.69
17	50.16	45.64	43.17	38.66	34.12	31.05	50.19	60.64	64.40	64.42	65.55	61.63
18	50.02	45.68	42.98	38.59	33.99	30.94	50.84	60.83	64.63	64.37	65.37	61.54
19	49.95	45.68	42.80	38.51	33.89	30.88	51.48	60.96	64.73	64.30	65.18	61.42
20	49.81	45.65	41.67	38.35	33.79	30.84	52.07	61.10	64.74	64.44	65.01	61.43
21	49.55	45.58	42.62	38.15	33.70	30.84	52,65	61.28	64.76	65.00	64.81	61.48
22	49.31	45.60	42.54	37.92	33.71	31.05	53.17	61.40	64.72	66.22	64.62	61.48
23	49.07	45.53	42.35	37.70	33.63	31.26	53.66	61.58	64.61	66.9'	64.55	61.42
24	48.87	45.45	42.19	37.48	33.48	31.47	54.01	62.02	64.59	67.22	64.43	61.37
25	48.61	45.46	42.14	37.44	33.36	31.87	54.30	62.29	64.52	67.44	64.24	61.25
26	48.58	45.39	42.05	37.33	33.20	32.27	54.64	62.62	64.48	67.57	64.01	61.17
27	48.44	45.15	41.87	37.09	33.06	32.76	55.19	62.87	64.39	67.65	63.81	61.29
28	48.26	45.11	41.84	36.84	32.93	33.31	55.41	63.05	64.35	67.63	63.71	61.36
29	48.06	44.84	41.74	36.63	-------	33.99	55.71	63.21	64.33	67.62	63.55	61.30
30	47.85	44.83	41.55	36.44	-------	34.83	55.98	63.30	64.21	67.55	63.48	61.22
31	47.62	-------	41.36	36.25	-------	35.33	-------	63.42	-------	67.45	63.43	------

Monthly elevation and contents of Sacandaga Reservoir at Conklingville, N. Y., 1930–31

Date	Elevation in feet	Contents in billion cubic feet	Increase or decrease in storage during month	
			Billion cubic feet	Equivalent in second-feet
September 30	52.54	18.27		
October 31	47.53	13.77	−4.50	1,680
November 30	44.89	11.55	−2.22	856
December 31	41.27	8.72	−2.83	1,057
January 31	36.15	5.27	−3.45	1,288
February 28	32.88	3.47	−1.80	744
March 31	35.47	4.87	+1.40	523
April 30	56.13	21.71	+16.84	6,497
May 31	63.45	29.26	+7.55	2,819
June 30	64.12	29.98	+.72	278
July 31	67.43	33.63	+3.65	1,363
August 31	63.32	29.12	−4.51	1,684
September 30	61.12	26.78	−2.34	903
The year			+8.51	270

NOTE.—Elevation given is that at midnight at end of month. Add 700.00 feet to obtain elevation above mean sea level.

SACANDAGA RIVER AT HADLEY, N. Y.

LOCATION.—Water-stage recorder half a mile west of Hadley, Saratoga County, and 1 mile above mouth.

DRAINAGE AREA.—1,060 square miles.

RECORDS AVAILABLE.—January, 1911, to September, 1931.

EXTREMES.—Maximum discharge during year, 5,080 second-feet June 30 (gage height, 6.22 feet); minimum, 21 second-feet June 5 (gage height, 1.35 feet). 1911–1931: Maximum discharge, about 35,500 second-feet Mar. 28, 1913 (gage height, 12.36 feet); minimum, 21 second-feet June 30, 1930, June 5, 1931.

REMARKS.—Records good except those during periods of ice effect, Nov. 30, Dec. 14, 25, Jan. 25, Feb. 1, 8, 15, 22, Mar. 1, 8, 15, 22, and those estimated, which are fair. Flow completely regulated by storage in Sacandaga Reservoir; monthly mean discharge corrected for change in storage.

Daily and monthly discharge, in second-feet, 1930-31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,340	1,820	1,890	1.110	112	91	62	40	26	2,130	2,070	2,060
2	2,270	263	[a]1,800	2,050	1,400	1,230	112	45	23	2,160	57	2,050
3	2,420	1,740	[a]1,970	1,970	1,530	1,220	72	32	23	1,840	2,090	2,130
4	2,180	1,760	2,050	102	1,240	1,200	76	28	23	158	2,300	2,120
5	167	1,760	2,030	2,000	1,440	1,210	65	26	1,000	364	2,180	2,130
6	1,290	1,800	1,910	2,050	1,230	1,240	61	24	1,080	2,170	2,490	51
7	1,280	1,790	174	2,040	[a]1,320	1,150	120	24	52	2,170	2,630	40
8	1,280	1,770	1,990	2,020	84	88	81	29	1,070	2,200	2,270	2,150
9	1,290	255	2,010	1,870	1,390	1,300	91	47	1,050	2,160	368	2,070
10	1,310	1,780	2,080	[a]1,750	1,390	1,270	106	56	1,070	2,250	2,600	2,070
11	1,320	1,760	2,010	99	1,490	1,270	167	70	1,060	1,800	2,600	2,100
12	81	1,760	2,000	1,930	1,420	1,260	79	50	1,070	59	2,640	2,070
13	2,310	1,790	1,890	1,930	1,370	1,270	383	52	1,040	1,190	2,660	356
14	2,280	1,760	108	1,890	[a]1,270	1,150	66	55	43	1,730	2,680	2,140
15	2,370	1,700	2,020	1,930	99	84	55	48	1,060	1,660	2,240	2,170
16	2,290	92	2,540	1,870	1,360	1,230	50	38	1,060	1,680	376	2,150
17	2,380	1,700	1,990	1,760	1,380	1,180	47	35	1,130	1,660	2,610	2,120
18	2,140	1,760	1,920	96	1,360	1,130	44	30	1,090	1,640	2,670	2,160
19	160	1,490	1,920	1,990	1,130	1,160	40	27	1,080	52	2,680	[a]2,190
20	2,480	1,600	1,830	1,910	1,300	1,180	37	26	1,030	1,690	2,690	[a] 45
21	2,430	1,510	95	1,950	1,140	[a]1,140	36	35	42	2,120	2,720	2,190
22	2,340	1,530	1,920	1,900	93	84	34	30	1,680	1,500	2,370	2,200
23	2,260	48	2,000	1,860	1,220	1,230	32	80	1,680	1,280	358	2,210
24	2,300	1,650	1,960	1,790	1,320	1,160	30	72	1,660	1,250	2,810	2,280
25	[a]2,120	1,790	74	105	1,250	990	29	55	1,780	1,260	2,740	2,220
26	[a] 150	1,790	1,950	1,950	1,270	994	41	48	1,680	58	2,770	2,110
27	[a]2,260	998	1,940	1,930	1,270	1,020	51	38	1,660	1,190	2,830	83
28	2,300	1,760	88	1,940	[a]1,150	992	38	34	44	1,650	2,850	2,020
29	2,260	1,750	1,980	1,860	-------	76	37	28	1,830	1,570	2,470	2,140
30	2,390	143	1,990	1,640	-------	885	34	25	2,050	1,650	55	2,180
31	2,330	-------	2,000	[a]1,800	-------	882	-------	29	-------	1,580	2,300	-------

Month	Observed			Corrected for storage		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	2,480	81	1,830	150	0.142	0.16
November	1,820	48	1,440	584	.551	.61
December	2,540	74	1,680	623	.588	.68
January	2,050	96	1,650	362	.342	.39
February	1,530	84	1,140	396	.374	.39
March	1,300	76	980	1,500	1.42	1.64
April	383	29	72.5	6,570	6.20	6.92
May	80	24	40.5	2,860	2.70	3.11
June	2,050	23	973	1,250	1.18	1 32
July	2,250	52	1,480	2,840	2.68	3.09
August	2,850	55	2,170	486	.458	.53
September	2,280	40	1,800	897	.846	.94
The year	2,850	23	1,270	1,540	1.45	19.78

[a] Estimated.

NOTE.—Elevation of water surface in Sacandaga Reservoir was 752.54 feet Oct. 1 and 761.12 feet Sept. 30.

GLENS FALLS FEEDER AT GLENS FALLS, N. Y.

LOCATION.—Slope station at upper end of feeder canal at Glens Falls, Warren County. Three water-stage recorders determine slope from point of diversion from Hudson River at feeder dam to point near first lock (No. 13) below.

RECORDS AVAILABLE.—May, 1927, to September, 1931.

REMARKS.—Records fair. Daily discharge determined by use of Chezy formula, variations in coefficient "C" throughout season being computed from current-meter measurements. Flow regulated by demands for Champlain Canal and for floating logs. Operation of feeder discontinued Dec. 8 and resumed Apr. 2; no flow during closed season.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Apr.	May	June	July	Aug.	Sept.
1	192	197	-------	151	153	195	202	203
2	189	188	-------	153	159	195	203	203
3	190	188	-------	150	155	196	201	202
4	189	189	-------	168	155	196	202	202
5	197	183	-------	161	161	196	203	202
6	177	180	-------	152	167	197	202	202
7	188	191	-------	148	164	198	203	201
8	192	184	-------	132	165	197	204	203
9	190	175	-------	145	162	198	201	203
10	190	182	-------	143	169	197	203	a 202
11	195	180	a 139	148	169	197	203	a 201
12	195	175	149	135	168	197	204	202
13	185	167	142	128	174	a 80	203	200
14	190	177	148	141	182	198	203	202
15	180	182	149	139	189	199	203	204
16	191	179	146	127	186	200	202	202
17	186	177	141	126	185	200	203	201
18	189	174	148	149	186	200	203	202
19	186	172	140	142	187	199	204	a 40
20	190	170	147	142	184	200	204	a 5
21	184	174	152	141	189	200	204	a 5
22	186	174	148	148	191	200	205	a 5
23	185	168	152	143	192	202	202	a 100
24	188	169	150	141	192	277	204	196
25	189	169	150	148	194	198	203	196
26	191	176	139	154	193	201	205	196
27	174	173	137	157	194	201	204	195
28	182	171	148	153	193	200	204	a 10
29	187	-------	152	146	193	201	203	a 100
30	182	-------	154	144	195	201	203	193
31	186	-------	-------	150	-------	201	203	-------

Month	Maximum	Minimum	Mean	Month	Maximum	Minimum	Mean
October	197	174	188	June	195	153	178
November 1–28	197	167	178	July	207	80	195
April 11–30	154	137	147	August	205	201	203
May	168	126	145	September	204	5	163

a Estimated.

BATTEN KILL AT ARLINGTON, VT.

LOCATION.—Chain gage on bridge at Arlington, Bennington County, nine-tenths of a mile below mouth of Warm Brook. Zero of gage is 597.68 feet above mean sea level.

DRAINAGE AREA.—151 square miles.

RECORDS AVAILABLE.—October, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 3,120 second-feet July 22 (gage height, 7.38 feet); minimum, 52 second-feet Oct. 13, 14 (gage height, 1.86 feet).

1928–1931: Maximum discharge, that of July 22, 1931; minimum, 50 second-feet Sept. 24, 1930 (gage height, 1.84 feet).

REMARKS.—Records good. Stage-discharge relation affected by ice Dec. 15–17, Jan. 1–3, 8–12, 15–17, 19, 20, 22–27, Jan. 29 to Feb. 16.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66	120	370	90	83	82	474	494	387	127	252	92
2	64	99	336	90	83	82	434	454	296	157	226	89
3	62	88	288	90	85	77	474	787	252	127	239	396
4	62	85	232	90	87	83	556	687	226	127	328	189
5	58	130	206	95	87	83	556	687	226	121	266	147
6	58	578	181	98	88	83	515	687	266	112	213	119
7	57	274	159	90	90	82	556	642	252	108	201	103
8	57	170	159	90	91	71	599	599	252	137	189	89
9	56	149	149	90	91	83	642	735	687	189	178	89
10	56	139	149	90	93	95	787	642	1,310	387	189	83
11	55	120	149	88	93	83	1,520	950	1,130	556	189	82
12	55	110	149	88	96	83	1,750	687	599	387	226	78
13	52	120	130	88	98	82	1,310	515	396	239	226	76
14	53	120	101	87	99	82	1,520	599	296	328	189	90
15	59	110	101	87	99	82	1,520	895	266	296	157	157
16	83	159	110	85	101	89	1,130	687	312	213	157	226
17	77	442	110	85	105	88	1,010	515	735	189	157	157
18	120	498	110	85	108	90	1,070	434	396	157	178	178
19	95	304	110	83	102	102	1,190	387	312	147	167	121
20	79	219	110	83	98	98	1,380	328	266	137	157	201
21	69	181	101	85	92	125	1,520	415	252	361	127	454
22	67	170	101	82	90	213	1,750	415	213	2,850	127	239
23	64	149	99	82	89	201	1,590	950	201	1,670	116	415
24	69	130	99	82	84	239	1,070	1,310	252	1,010	106	239
25	91	139	93	80	82	281	735	840	201	787	105	167
26	101	130	98	79	83	296	735	642	178	599	92	167
27	91	120	99	77	83	387	1,130	515	178	454	97	239
28	91	110	96	79	77	396	840	415	167	344	119	239
29	149	110	96	80	------	599	642	387	137	312	100	189
30	219	120	93	82	------	599	556	312	137	344	97	167
31	139	------	90	83	------	454	------	434	------	266	90	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	219	52	79.8	0.528	0.61
November	578	85	180	1.19	1.33
December	370	90	144	.954	1.10
January	98	77	85.9	.569	.66
February	108	77	91.3	.605	.63
March	599	71	177	1.17	1.35
April	1,750	434	985	6.52	7.27
May	1,310	312	614	4.07	4.69
June	1,310	137	359	2.38	2.66
July	2,850	108	427	2.83	3.26
August	328	90	170	1.13	1.30
September	454	76	176	1.17	1.30
The year	2,850	52	291	1.93	26.16

BATTEN KILL AT BATTENVILLE, N. Y.

LOCATION.—Water-stage recorder 1 mile southwest of Battenville, Washington County.

DRAINAGE AREA.—397 square miles.

RECORDS AVAILABLE.—October, 1922, to September, 1931.

EXTREMES.—Maximum discharge during year, 9,800 second-feet July 22 (gage height, 11.13 feet); minimum, 40 second-feet Oct. 13 (gage height, 1.76 feet). 1922–1931: Maximum discharge, 21,300 second-feet Nov. 4, 1927 (gage height, 17.7 feet); minimum, 36 second-feet Aug. 24, 1927.

REMARKS.—Records good except those for periods of ice effect, Dec. 17–19, Dec. 23 to Jan. 4, Jan. 8 to Mar. 7, which are fair. Diurnal fluctuation during low stages caused by operation of mills.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	99	169	620	160	130	260	1,620	810	925	286	824	207
2	93	152	800	150	130	260	1,620	740	761	282	727	194
3	94	130	526	150	130	240	1,580	962	662	282	744	483
4	94	120	419	160	130	240	1,620	1,070	604	260	1,160	545
5	93	135	363	165	120	240	1,620	948	550	263	824	383
6	84	472	328	165	120	240	1,480	970	550	242	668	319
7	87	432	314	155	120	240	1,480	910	538	217	574	291
8	86	264	314	150	120	236	1,710	852	729	280	520	264
9	86	198	295	140	120	224	2,060	1,020	1,100	424	479	251
10	86	180	291	140	130	260	2,260	925	1,860	970	479	234
11	87	169	268	140	130	264	3,130	1,350	1,620	1,530	452	218
12	82	158	277	150	130	260	3,500	1,150	1,140	1,170	446	202
13	81	158	282	150	130	264	3,000	902	824	859	490	195
14	77	158	242	140	150	269	2,730	894	675	980	435	191
15	80	155	222	140	160	298	2,730	1,500	598	1,130	383	260
16	92	162	198	130	170	312	2,360	1,310	604	918	373	319
17	108	324	180	140	180	328	2,010	1,080	998	754	406	300
18	122	622	180	150	300	383	1,910	895	1,150	649	496	310
19	132	373	190	160	440	462	1,960	782	852	598	409	286
20	129	310	210	160	400	532	2,010	688	688	544	378	264
21	114	295	210	150	380	636	2,110	720	636	913	333	595
22	103	251	207	150	360	789	2,260	838	556	7,410	300	496
23	94	230	190	150	340	962	2,310	1,170	508	7,020	282	615
24	96	218	180	140	320	1,110	1,860	2,260	580	4,630	260	484
25	109	210	180	140	300	1,270	1,350	1,960	496	3,210	234	419
26	127	226	180	140	280	1,310	1,160	1,710	452	2,570	242	378
27	143	218	170	150	300	1,440	1,590	1,350	435	1,860	230	568
28	128	184	170	140	280	1,480	1,400	1,110	378	1,480	242	538
29	135	172	170	140	-------	2,000	1,060	955	343	1,190	234	430
30	207	169	160	140	-------	2,410	970	838	314	1,160	213	378
31	198	-------	160	130	-------	1,910	-------	852	-------	970	242	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	207	77	108	0.272	0.31
November	622	120	234	.589	.66
December	800	160	274	.690	.80
January	165	130	147	.370	.43
February	440	120	214	.539	.56
March	2,410	224	682	1.72	1.98
April	3,500	970	1,950	4.91	5.48
May	2,260	688	1,080	2.72	3.14
June	1,860	314	738	1.86	2.08
July	7,410	217	1,450	3.65	4.21
August	1,160	213	454	1.14	1.31
September	615	191	354	.892	1.00
The year	7,410	77	642	1.62	21.96

KAYADEROSSERAS CREEK NEAR WEST MILTON, N. Y.

LOCATION.—Water-stage recorder 500 feet below mouth of Glowegee Creek and 1 mile east of West Milton, Saratoga County.

DRAINAGE AREA.—89 square miles.

RECORDS AVAILABLE.—July, 1927, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,720 second-feet July 10 (gage height, 6.25 feet); minimum, 14 second-feet Oct. 13 (gage height, 1.08 feet).

1927–1931: Maximum discharge, about 2,350 second-feet Mar. 16, 1929 (gage height, 7.5 feet); minimum, 6.1 second-feet Aug. 23, 1927 (gage height, 0.86 foot).

REMARKS.—Records good except those for periods of ice effect, Dec. 14–18, 23–26, Dec. 31 to Mar. 3, and those estimated, which are fair. Large diurnal fluctuation caused by operation of mills at West Milton and Rock City Falls.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	30	a 140	32	28	50	302	103	70	38	a 64	43
2	21	28	a 120	32	28	50	465	97	64	33	60	43
3	22	28	a 90	32	a 28	50	400	113	56	31	110	194
4	21	28	a 75	32	a 26	a 50	343	106	55	33	158	133
5	24	54	a 60	34	a 26	a 50	296	91	51	31	90	83
6	21	70	a 53	34	a 28	a 53	252	82	47	29	68	65
7	22	45	48	34	a 28	54	298	77	68	30	57	54
8	21	40	48	32	28	60	684	87	171	102	56	44
9	24	36	49	32	28	59	555	228	152	92	55	40
10	27	35	47	32	28	59	394	200	176	304	68	37
11	28	a 35	43	34	a 28	56	467	271	117	1,070	68	35
12	25	a 35	47	36	a 28	57	382	246	90	346	75	34
13	19	a 35	41	34	a 30	54	268	192	69	154	84	39
14	22	a 35	40	34	a 30	59	249	268	54	199	70	49
15	27	a 37	38	34	30	69	212	221	73	190	62	78
16	42	52	36	32	32	75	178	160	121	122	65	62
17	36	192	34	34	38	80	162	128	474	91	59	110
18	30	152	36	36	a 60	108	154	105	235	81	54	105
19	28	101	37	38	a 90	128	143	90	123	80	51	66
20	27	73	39	36	a 85	145	130	84	87	81	60	99
21	24	59	40	34	a 75	170	117	106	98	492	47	180
22	25	53	40	34	65	208	108	106	70	914	44	119
23	25	45	40	32	60	254	98	297	68	466	41	158
24	27	43	38	32	55	282	91	331	91	392	40	128
25	28	50	36	30	a 55	307	85	238	71	238	40	102
26	28	54	36	32	a 50	334	95	240	64	162	37	118
27	28	a 50	37	32	a 50	392	169	156	56	123	40	193
28	33	a 47	37	a 30	a 50	352	137	117	49	105	119	133
29	36	a 44	36	a 30	------	538	137	97	43	92	80	96
30	31	a 49	35	a 28	------	534	126	81	39	a 103	59	80
31	31	------	34	a 28	------	349	------	74	------	a 88	50	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	42	19	26.7	0.30	0.35
November	192	28	54.5	.61	.68
December	140	34	49.4	.55	.64
January	38	28	32.8	.36	.43
February	90	26	42.4	.47	.50
March	538	50	164	1.84	2.12
April	684	85	250	2.81	3.14
May	331	74	155	1.74	2.01
June	474	39	100	1.12	1.25
July	1,070	29	204	2.29	2.64
August	158	37	65.5	.73	.85
September	194	34	90.7	1.02	1.14
The year	1,070	19	103	1.16	15.75

a Estimated.

HOOSIC RIVER NEAR EAGLE BRIDGE, N. Y.

LOCATION.—Water-stage recorder half a mile below mouth of Walloomsac River and 1½ miles southeast of Eagle Bridge, Rensselaer County.

DRAINAGE AREA.—512 square miles.

RECORDS AVAILABLE.—August, 1910, to March, 1922; July, 1923, to September, 1931.

EXTREMES.—Maximum discharge during year, 6,920 second-feet May 23 (gage height, 9.17 feet); minimum, 63 second-feet Oct. 12 (gage height, 3.21 feet). 1910–1922, 1923–1931: Maximum discharge, 29,800 second-feet Nov. 4, 1927 (gage height, 18.8 feet); practically no flow Sept. 14, 1913 (gage height, 6.1 feet, old datum).

REMARKS.—Records excellent except those for period of ice effect, Dec. 15 to Mar. 8, which are fair. Diurnal fluctuation at medium and low stages caused by operation of power plants.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	116	157	590	130	120	280	1,840	1,020	1,090	308	279	166
2	128	126	539	130	140	260	2,580	994	876	288	238	173
3	128	170	381	140	140	260	2,380	1,110	736	274	290	304
4	110	166	333	140	140	240	2,640	994	675	260	703	387
5	83	173	308	150	140	240	2,510	868	610	242	432	265
6	129	585	288	150	140	240	2,250	800	589	234	328	201
7	130	392	270	140	140	240	2,440	728	510	226	279	173
8	127	270	318	140	120	240	2,720	705	979	298	251	170
9	120	213	274	130	140	260	2,990	1,260	2,330	562	230	154
10	95	247	274	130	140	328	3,200	1,250	4,340	1,510	230	157
11	102	205	256	120	140	323	5,590	2,640	2,340	1,360	247	160
12	78	194	251	140	120	318	4,880	1,780	1,670	798	308	151
13	133	184	213	130	140	318	3,270	1,470	1,300	556	381	130
14	111	149	198	130	150	303	3,640	1,540	1,020	480	308	148
15	107	174	180	130	150	376	3,200	1,950	948	449	265	169
16	116	225	180	120	170	449	2,510	1,520	1,140	365	251	222
17	122	723	180	120	190	432	2,320	1,470	1,980	318	251	230
18	116	1,120	180	120	280	486	2,190	1,220	1,440	288	379	238
19	157	596	180	140	500	562	2,250	1,030	1,050	279	318	205
20	163	409	180	140	480	624	2,130	912	885	279	303	198
21	166	381	160	130	440	728	2,130	966	860	318	256	526
22	136	328	180	130	420	994	2,010	1,170	705	2,220	217	365
23	121	293	170	130	380	1,240	1,720	3,250	617	963	190	502
24	116	283	160	130	360	1,470	1,370	4,760	720	603	190	381
25	131	283	150	110	340	1,720	1,120	2,970	582	536	173	298
26	134	293	170	160	320	1,670	1,020	2,380	504	516	194	270
27	180	251	160	150	300	2,010	1,860	1,840	473	415	198	338
28	184	234	150	150	280	2,130	1,320	1,470	409	365	230	298
29	164	230	160	150	------	3,330	1,220	1,280	370	328	213	274
30	181	226	160	140	------	3,300	1,280	1,070	328	343	198	247
31	173	------	150	140	------	2,190	------	1,210	------	308	187	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	184	78	131	0.256	0.30
November	1,120	126	309	.604	.67
December	590	150	237	.463	.53
January	160	110	135	.264	.30
February	500	120	233	.455	.47
March	3,330	240	889	1.74	2.01
April	5,590	1,020	2,420	4.73	5.28
May	4,760	705	1,540	3.01	3.47
June	4,340	328	1,070	2.09	2.33
July	2,220	226	525	1.03	1.19
August	703	173	275	.537	.62
September	526	130	250	.488	.54
The year	5,590	78	667	1.30	17.71

NORTH BRANCH OF HOOSIC RIVER AT NORTH ADAMS, MASS.

LOCATION.—Water-stage recorder at North Adams, Berkshire County, a fifth of a mile below Hudson Brook and 1½ miles above mouth.
DRAINAGE AREA.—38.9 square miles.
RECORDS AVAILABLE.—June to September, 1931.
EXTREMES.—Maximum discharge during period, 493 second-feet July 10 (gage height, 3.33 feet); minimum, 6.1 second-feet Sept. 1 (gage height, 1.25 feet).
REMARKS.—Records good. Some diurnal regulation from power plants above station.

Daily and monthly discharge, in second-feet, 1931

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1		13	12	10	16		18	15	22
2		14	10	11	17		16	20	22
3		12	23	71	18		14	36	27
4		11	40	33	19		13	26	23
5		11	19	21	20		16	20	64
6		12	14	14	21		16	16	89
7		12	12	12	22	32	75	12	53
8		36	11	14	23	32	34	9.6	103
9		37	10	11	24	37	22	10	48
10		190	12	10	25	28	25	10	35
11		105	15	11	26	26	20	9.6	36
12		51	18	13	27	20	18	10	39
13		33	21	11	28	16	14	14	33
14		29	15	13	29	19	13	16	29
15		24	13	19	30	14	16	13	24
					31		13	13	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
June 22-30	37	14	24.9	0.640	0.21
July	190	11	30.1	.774	.89
August	40	9.6	16.0	.411	.47
September	103	10	30.7	.789	.88

WALLOOMSAC RIVER NEAR NORTH BENNINGTON, VT.

LOCATION.—Water-stage recorder three-fifths of a mile below Paran Creek and 1.4 miles south of North Bennington, Bennington County.
DRAINAGE AREA.—111 square miles.
RECORDS AVAILABLE.—June to September, 1931.
EXTREMES.—Maximum discharge during period, 1,220 second-feet July 22 (gage height, 4.66 feet); minimum, 15 second-feet July 18 (gage height, 1.87 feet).
REMARKS.—Records good except those below 90 second-feet, which are fair. Diurnal regulation from power plants above station.

Daily and monthly discharge, in second-feet, 1931

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1		74	69	44	16		90	66	90
2		71	60	44	17		75	77	70
3		64	83	98	18		70	165	73
4		65	140	84	19		67	104	58
5		64	84	66	20		71	92	113
6		64	68	52	21		83	74	108
7		57	66	48	22		703	59	109
8		112	55	49	23		224	52	159
9		153	56	42	24		151	58	114
10		378	68	47	25		142	48	96
11		184	67	42	26		131	66	90
12		169	87	35	27	103	112	54	125
13		126	89	28	28	91	97	70	98
14		126	65	49	29	89	84	58	88
15		118	64	75	30	75	94	51	77
					31		79	54	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
July	703	57	132	1.19	1.37
August	165	48	73.2	.659	.76
September	159	28	75.7	.682	.76

MOHAWK RIVER BELOW DELTA DAM, NEAR ROME, N. Y.

LOCATION.—Staff gage at Spring Brook fish hatchery 1 mile below Delta Dam and 4 miles north of Rome, Oneida County.

DRAINAGE AREA.—151 square miles.

RECORDS AVAILABLE.—October, 1927, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,540 second-feet Apr. 11 (gage height, 4.9 feet); minimum, about 45 second-feet Jan. 17, 18.

1927–1931: Maximum discharge, 2,930 second-feet Apr. 8, 1928 (gage height, 6.9 feet); minimum, that of Jan. 17, 18, 1931.

Reports of State engineer and surveyor record maximum discharge of 4,210 second-feet Mar. 9, 1921.

REMARKS.—Records good. During navigation season water is diverted into Delta Reservoir above station from Black River through Forestport feeder and Black River Canal flowing south. Flow almost completely regulated by Delta Dam.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	191	191	160	181	202	52	254	333	224	287	274	260
2	191	191	a 134	181	202	49	383	333	212	287	274	260
3	191	191	126	181	202	49	448	a 349	202	287	274	260
4	191	191	126	181	176	58	495	349	191	287	287	260
5	191	191	126	181	152	58	495	333	191	287	287	260
6	191	191	126	181	152	58	543	333	191	287	274	260
7	191	191	126	181	152	75	757	317	a 202	287	274	260
8	191	191	126	181	152	a 88	1,020	278	212	287	274	260
9	191	191	126	181	152	88	1,070	212	212	287	274	260
10	191	191	126	181	152	88	1,240	266	202	258	287	260
11	191	191	126	181	a 141	88	1,520	421	202	171	287	260
12	191	191	126	181	115	88	1,080	555	191	a 248	287	260
13	191	191	126	187	126	88	779	535	191	216	287	260
14	191	191	126	202	126	88	620	350	191	181	287	260
15	191	191	126	202	a 126	88	515	248	191	171	287	260
16	191	191	144	a 150	126	88	476	248	191	171	287	260
17	191	191	181	a 45	126	88	476	274	191	171	287	274
18	191	191	181	a 124	126	101	457	235	191	171	287	274
19	191	191	181	202	134	101	457	202	191	171	257	a 344
20	191	191	181	202	134	101	457	191	191	171	246	a 465
21	191	191	181	202	134	101	457	171	191	171	274	216
22	191	191	181	202	134	a 109	457	192	191	149	274	361
23	191	191	181	202	134	117	457	260	191	134	274	515
24	191	191	181	202	134	126	457	350	212	143	274	425
25	191	191	181	202	134	126	382	483	191	134	274	438
26	191	191	181	202	134	126	333	421	202	134	274	259
27	191	191	181	202	91	117	333	302	202	134	274	73
28	191	191	181	202	58	117	317	235	202	330	274	345
29	191	191	181	202	-------	134	349	202	202	375	274	521
30	191	a 191	181	202	-------	117	349	242	250	274	274	535
31	191	-------	181	202	-------	109	-------	a 235	-------	274	274	-------

Month	Observed			Corrected for storage and diversion		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	191	191	191	61.5	0.407	0.47
November	191	191	191	102	.675	.75
December	181	126	155	175	1.16	1.34
January	202	45	184	106	.702	.81
February	202	58	140	172	1.14	1.19
March	134	49	92.9	570	3.77	4.35
April	1,520	254	581	699	4.63	5.17
May	555	171	305	317	2.10	2.42
June	250	191	200	93.5	.619	.69
July	375	134	224	253	1.68	1.94
August	287	246	277	83.0	.550	.63
September	535	73	307	260	1.72	1.92
The year	1,520	45	237	241	1.60	21.68

a Estimated.

NOTE.—Elevation of water surface in Delta Reservoir was 535.50 feet Oct. 1 and 546.95 feet Sept. 30.

MOHAWK RIVER NEAR LITTLE FALLS, N. Y.

LOCATION.—Water-stage recorder 1,800 feet above Rocky Rift Dam, 2 miles above mouth of East Canada Creek, and 4½ miles southeast of Little Falls, Herkimer County. Elevation of zero of gage is 310.0 feet, Barge Canal datum.

DRAINAGE AREA.—1,390 square miles.

RECORDS AVAILABLE.—October, 1927, to September, 1931.

EXTREMES.—Maximum discharge during year, 10,600 second-feet July 22 (gage height, 11.41 feet); minimum not determined (gage height frequently below recorder well during October and November).

1927–1931: Maximum discharge, 27,600 second-feet Mar. 15, 1929 (gage height, 16.4 feet); minimum, during summer and fall of 1930, not determined (gage height below recorder well).

REMARKS.—Records good except those for periods of ice effect, Dec. 15–21, Jan. 8–19, Jan. 24 to Mar. 13, and those estimated, which are fair. Water diverted during navigation season from Black River into Delta Reservoir and from West Canada Creek to summit level of Barge Canal. Some water may be received from Oswego River Basin through summit level and some may be similarly lost from Mohawk River Basin. Water diverted at Rocky Rift Dam into Barge Canal for lockage and power use at Lock 16 is included in discharge tables. Flow regulated by storage in Delta and Hinckley Reservoirs and by lockage and power use above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			1,210	904	750	550	2,620	3,320	1,740	1,010		1,090
2			1,040	838	700	600	3,840	2,510	1,430	987		1,100
3			892	808	700	600	4,500	3,300	1,240	1,100		1,550
4			894	876	700	650	5,430	4,420	1,120	1,220		1,360
5			884	892	650	650	4,820	4,660	1,160	1,160		1,180
6			1,140	933	650	650	3,790	2,800	1,100	1,080	[a]1,250	1,100
7			955	896	650	700	4,100	2,500	1,290	1,100		1,030
8			1,390	850	600	700	6,360	2,680	2,010	1,090		955
9			1,550	800	600	750	7,880	3,900	2,140	1,110		920
10			1,320	800	600	750	7,440	3,810	1,860	1,800		948
11			1,470	900	600	800	8,660	5,340	1,710	2,580		936
12			1,380	850	[a]600	1,000	5,950	6,710	1,420	1,750	1,330	883
13			1,240	850	[a]650	1,100	4,150	5,950	1,300	1,810	1,320	819
14			982	850	650	1,210	3,300	4,640	1,120	3,490	1,320	950
15			1,000	800	700	1,220	2,550	3,500	1,190	3,680	1,340	1,010
16	[a]795	[a]750	950	750	700	1,380	2,340	2,890	1,220	2,690	1,310	1,050
17			950	750	700	1,730	3,240	3,140	1,490	1,680	1,320	1,460
18			950	750	750	2,270	4,470	2,830	1,390	1,380	1,320	1,510
19			1,000	800	900	3,020	4,440	2,040	1,300	1,180	1,230	1,190
20			1,200	795	850	2,980	4,930	1,870	1,170	1,220	1,220	1,160
21			1,100	856	800	3,040	4,690	1,970	1,230	5,050	1,140	2,210
22			1,030	800	750	3,500	4,810	2,040	1,190	8,440	1,050	1,610
23			976	784	700	4,160	5,130	2,100	1,160	5,590	1,050	1,130
24			953	750	650	4,880	5,100	2,720	1,170	3,620	1,080	1,130
25			914	750	650	4,110	3,960	3,620	1,150	2,780	1,080	1,140
26			936	850	600	4,010	2,960	3,860	1,170	2,060	1,070	1,470
27			934	850	600	6,130	3,270	3,070	1,080	1,560	1,170	2,030
28			914	800	550	4,760	3,960	2,490	955		1,420	1,400
29			923	800	-------	5,020	4,570	1,890	1,020	[a]1,400	1,290	1,120
30			928	750	-------	4,880	4,630	1,570	948		1,080	1,020
31		-------	888	750	-------	3,380	-------	1,590	-------		905	-------

Month	Maximum	Minimum	Mean
October			[a]795
November			[a]750
December	1,550	884	1,060
January	933	750	820
February	900	550	679
March	6,130	550	2,300
April	8,660	2,340	4,600
May	6,710	1,570	3,220
June	2,140	948	1,320
July	8,440	987	2,190
August	1,420	905	1,220
September	2,210	819	1,220
The year	8,660	550	1,680

[a] Estimated.

MOHAWK RIVER AT COHOES, N. Y.

LOCATION.—Water-stage recorder at School Street plant of New York Power & Light Corporation in Cohoes, Albany County.

DRAINAGE AREA.—3,500 square miles.

RECORDS AVAILABLE.—October, 1925, to September, 1931, at present location. December, 1917, to July, 1925, at Crescent Dam, 2 miles upstream. July to October, 1925, discharge determined from gage heights above New York Power & Light Corporation dam in conjunction with operating records at School Street plant. All records comparable.

EXTREMES.—Maximum discharge during year, 33,000 second-feet Apr. 11 (gage height, 14.70 feet); minimum, 62 second-feet Feb. 15 (gage height, 4.13 feet).

1925–1931: Maximum discharge, 72,000 second-feet Mar. 16, 1929 (gage height, 18.3 feet); minimum, 22 second-feet Oct. 2, 1927 (gage height, 3.83 feet).

REMARKS.—Records good except those below 400 second-feet and those estimated, which are fair. Water diverted at Crescent Dam through Lock No. 6 for use in Barge Canal during navigation season; record of daily diversion follows table of monthly discharge of river. A small diversion just above gage for Cohoes water supply included in tables of discharge. New York City diverts water from Schoharie Creek above station. Part of diversion from West Canada Creek through Ninemile feeder and Ninemile Creek to summit level of Barge Canal enters Oswego River Basin. During navigation season water is diverted into Delta Reservoir from Black River Basin through Black River Canal (flowing south) and Lansing Kill, and from Oswego River Basin through summit level of Barge Canal. Flow partly regulated by storage reservoirs. Diurnal fluctuation caused by operation of School Street power plant.

Daily discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,140	626	883	642	319	1,090	8,430	7,380	3,010	1,680	1,760	1,670
2	1,180	376	1,690	1,170	1,010	1,640	9,780	5,020	2,350	1,770	1,000	1,630
3	1,080	954	2,100	1,020	1,340	1,790	14,100	3,270	2,130	1,260	2,000	2,270
4	994	927	2,270	784	1,210	1,830	14,300	6,070	2,260	758	2,240	2,360
5	438	1,030	3,920	1,060	1,070	1,860	16,000	7,000	2,270	836	2,390	1,390
6	1,230	1,110	3,100	1,580	1,060	1,790	10,800	4,730	1,420	1,370	2,440	1,520
7	1,310	1,050	3,200	1,330	346	1,690	10,600	4,690	642	1,380	2,090	1,480
8	1,260	478	3,260	1,150	495	1,130	17,200	3,830	2,870	2,450	1,340	1,520
9	1,120	339	3,190	885	1,010	1,910	23,900	6,550	3,170	2,900	864	1,440
10	1,100	874	3,410	718	1,050	2,100	19,800	6,820	4,560	3,410	1,820	1,550
11	[a] 690	1,050	3,270	726	1,180	2,070	25,300	9,450	3,930	21,200	1,970	1,500
12	[a] 450	1,020	2,530	1,330	1,040	2,060	23,600	14,800	3,660	8,800	1,970	870
13	[a] 920	897	1,670	1,220	1,100	2,100	14,100	12,000	2,200	5,060	1,810	715
14	[a]1,050	838	1,120	1,530	552	1,920	12,600	9,720	2,060	5,680	1,700	1,450
15	[a]1,200	568	1,460	2,550	264	1,210	12,600	9,390	2,040	7,740	966	1,390
16	[a]1,140	395	[a] 845	1,400	1,190	2,690	9,380	7,460	2,170	5,650	1,610	1,300
17	[a]1,060	1,220	[a]1,150	126	1,320	2,770	8,410	7,470	14,200	4,440	1,930	1,900
18	686	1,240	[a]1,390	195	1,780	3,110	8,460	6,820	7,360	4,290	1,880	2,710
19	701	1,350	[a]1,500	1,090	1,940	3,660	9,340	5,530	4,560	1,280	1,750	1,780
20	811	1,350	[a]1,020	1,070	1,680	5,170	9,340	3,840	3,370	2,180	1,920	1,490
21	849	1,070	[a]1,100	1,120	1,520	6,660	9,540	3,860	3,280	6,670	1,980	2,730
22	691	687	[a]1,740	[a]1,100	1,420	6,710	8,210	4,370	2,250	23,600	1,110	3,840
23	905	394	1,680	[a]1,020	2,130	7,710	8,380	4,980	2,630	16,100	638	3,210
24	957	881	1,240	[a] 500	2,110	9,490	11,100	7,400	2,390	10,000	1,480	3,180
25	731	869	773	[a] 520	2,030	9,420	11,100	8,720	2,320	6,300	1,560	2,350
26	360	842	1,370	[a]1,070	2,210	14,200	4,860	9,360	2,400	4,990	1,600	2,240
27	1,050	676	1,160	[a] 910	2,380	14,200	5,010	7,470	2,130	3,560	1,580	2,150
28	952	964	1,150	[a]1,020	2,040	16,500	6,540	5,420	1,400	2,880	1,710	3,240
29	1,090	704	1,150	[a]1,160	-------	16,500	7,140	4,980	2,010	2,580	1,220	2,760
30	1,050	479	1,420	1,010	-------	18,200	8,270	3,440	2,060	2,410	1,340	2,390
31	930	-------	1,300	528	-------	12,100	-------	2,500	-------	2,220	1,720	-------

Monthly discharge, in second-feet, of Mohawk River at Cohoes, N. Y., 1930–31

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1,310	360	940	0.269	0.31
November	1,350	339	842	.241	.27
December	3,920	773	1,840	.526	.61
January	2,550	126	1,020	.291	.34
February	2,380	264	1,310	.374	.39
March	18,200	1,090	5,650	1.61	1.86
April	25,300	4,860	11,900	3.40	3.79
May	14,800	2,500	6,590	1.88	2.17
June	14,200	642	3,100	.886	.99
July	23,600	758	5,340	1.53	1.76
August	2,440	638	1,660	.474	.55
September	3,840	715	2,000	.571	.64
The year	25,300	126	3,530	1.01	13.68

Daily diversion, in second-feet, from Mohawk River through Barge Canal at Lock No. 6 at Crescent Dam, N. Y., 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	104	188	76				18	145	128	104	106	117
2	93	142	70				6	110	133	151	94	94
3	116	136	41				6	192	168	157	118	88
4	128	130	23				18	180	122	104	118	135
5	203	194	12				6	128	133	128	142	152
6	103	118	21				215	116	133	116	112	89
7	132	147	14				151	186	157	104	106	101
8	132	165	10				100	104	133	116	141	164
9	103	107	6				105	158	145	128	100	77
10	212	118	a 5				82	139	139	157	123	117
11	209	153				a 4	146	134	139	112	100	94
12	115	101					53	117	122	146	106	117
13	157	107					169	76	157	177	117	141
14	128	142					163	140	151	130	100	147
15	139	153			a 4		133	134	139	118	112	123
16	133	118		a 4			145	193	157	159	117	147
17	115	153					110	216	111	113	147	100
18	132	153					116	187	123	101	129	106
19	162	147					99	158	122	117	100	106
20	132	165					139	117	128	158	112	152
21	133	130	a 4				122	133	133	84	106	135
22	110	182				a 6	151	133	145	61	88	101
23	92	229				38	122	116	122	50	117	124
24	144	188				41	133	129	99	113	117	95
25	138	118				41	128	175	116	159	88	186
26	144	124				6	104	158	116	148	106	106
27	150	95				18	133	169	157	124	176	78
28	162	47				6	151	157	151	153	112	165
29	127	76			-------	6	116	110	133	88	152	142
30	182	53			-------	12	122	133	122	88	94	84
31	188	-------			-------	18	-------	133	-------	112	147	-------

a Estimated.

WEST CANADA CREEK AT HINCKLEY, N. Y.

LOCATION.—Water-stage recorder 1 mile below Hinckley Dam, at Hinckley, Oneida County, and 1¾ miles east of Prospect.
DRAINAGE AREA.—373 square miles.
RECORDS AVAILABLE.—June, 1919, to September, 1931.
EXTREMES.—Maximum discharge during year, 3,930 second-feet Apr. 22 (gage height, 6.34 feet); minimum, 192 second-feet Sept. 22 (gage height, 3.31 feet).
1919–1931: Maximum discharge, 10,800 second-feet Apr. 12, 1922 (gage height, 8.93 feet); practically no flow Aug. 31, 1924 (gage height, 2.50 feet).
REMARKS.—Records excellent except those for periods of ice effect, Feb. 2–11, 14, 15, Feb. 24 to Mar. 2, and those estimated, Mar. 3, 4, 15–19, which are good. Flow regulated by storage in Hinckley Reservoir; monthly mean discharge corrected for storage. Small diversion from Hinckley reservoir for Utica water supply.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	513	493	418	443	266	220	710	1,430	694	576	653	637
2	513	520	418	412	260	220	833	1,340	598	576	661	603
3	513	520	418	390	240	224	910	2,380	555	583	685	555
4	513	513	436	384	220	224	950	2,850	562	583	702	540
5	513	513	493	379	220	224	272	2,170	576	583	702	540
6	513	443	513	374	220	224	1,030	1,710	583	576	702	540
7	507	395	493	374	220	224	730	1,470	583	576	702	533
8	507	395	493	374	220	224	323	1,300	583	576	702	533
9	507	395	493	368	220	224	309	2,000	661	576	432	533
10	507	395	500	368	220	224	318	2,340	744	583	694	526
11	500	395	520	368	220	254	342	2,340	719	576	702	526
12	500	395	533	363	210	333	352	2,420	637	670	702	526
13	493	395	533	347	214	342	520	2,170	591	1,170	694	526
14	493	395	540	333	220	338	540	1,710	583	1,650	694	526
15	487	395	526	328	220	338	555	1,310	583	2,190	677	533
16	480	401	520	328	217	333	1,050	1,070	576	1,340	685	540
17	480	401	520	328	217	333	2,580	1,000	569	870	685	533
18	480	406	513	323	217	333	3,060	890	583	710	685	533
19	474	406	507	318	217	328	3,550	753	605	691	685	222
20	474	406	507	314	220	394	3,650	779	583	704	677	206
21	474	406	474	300	220	449	3,850	971	583	1,940	677	196
22	467	412	467	291	220	449	3,850	930	583	3,060	677	196
23	467	418	461	291	224	436	3,750	960	576	2,520	677	200
24	461	418	461	287	220	430	3,350	1,470	576	1,840	669	203
25	461	418	455	287	220	461	2,420	1,780	576	1,350	677	200
26	461	418	449	287	220	500	1,860	1,780	583	957	669	206
27	455	418	449	287	220	555	2,010	1,430	583	762	677	206
28	455	418	449	283	220	598	2,010	1,070	576	736	677	206
29	449	418	449	279	------	384	1,940	824	576	677	669	210
30	449	418	449	279	------	642	1,780	728	576	669	398	241
31	449	------	449	275	------	694	------	762	------	637	613	------

Month	Observed			Corrected for storage		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	513	449	484	211	0.566	0.65
November	520	395	425	386	1.03	1.15
December	540	418	481	376	1.01	1.16
January	443	275	334	216	.579	.67
February	266	210	223	246	.660	.69
March	694	220	360	468	1.25	1.44
April	3,850	272	1,650	2,810	7.53	8.40
May	2,850	728	1,490	1,450	3.89	4.48
June	744	555	599	502	1.35	1.51
July	3,060	576	1,020	1,090	2.92	3.37
August	702	398	665	228	.611	.70
September	637	196	409	598	1.60	1.78
The year	3,850	196	680	715	1.92	26.00

NOTE.—Elevation of water surface in Hinckley Reservoir was 1,206.45 feet at midnight Sept. 30, 1930, and 1,219.00 feet at midnight Sept. 30, 1931.

WEST CANADA CREEK AT KAST BRIDGE, N. Y.

LOCATION.—Water-stage recorder 600 feet below highway bridge at Kast Bridge, Herkimer County, and 4 miles above mouth, at Herkimer.

DRAINAGE AREA.—575 square miles.

RECORDS AVAILABLE.—May, 1905, to December, 1909; January, 1912, to December, 1913; October, 1920, to September, 1931.

EXTREMES.—Maximum discharge during year, 5,380 second-feet July 20 (gage height, 4.48 feet); minimum, 135 second-feet Aug. 31 (gage height, 1.25 feet).

1920–1931: Maximum discharge, about 16,500 second-feet June 21, 1922 (gage height, 7.3 feet); minimum, about 20 second-feet Sept. 3, 1929 (gage height, 0.90 foot).

REMARKS.—Records good except those for periods of ice effect, Nov. 28 to Dec. 4, Dec. 16 to Mar. 14, and those estimated, Dec. 8, May 24–30, which are fair. Flow partly regulated by storage in Hinckley Reservoir. Diurnal fluctuations at low and medium stages caused by power operations. During navigation season Ninemile feeder diverts water from West Canada Creek at Trenton Falls.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	466	427	700	600	360	300	1,360	1,940	946	622	660	526
2	462	465	500	500	360	300	2,090	1,700	767	626	690	588
3	470	476	500	500	340	300	1,820	2,540	750	755	772	618
4	454	473	600	550	320	300	2,370	3,290	690	739	830	550
5	486	469	646	480	320	300	1,400	2,680	660	599	715	477
6	459	459	664	500	320	320	1,340	2,120	662	591	667	480
7	464	386	600	420	300	320	1,880	1,790	926	548	606	474
8	456	364	650	440	300	340	1,940	1,260	1,150	591	618	416
9	454	359	658	440	300	340	1,550	2,360	892	572	586	440
10	450	340	620	550	300	340	1,280	2,700	924	1,050	446	430
11	488	355	648	550	280	360	1,760	3,140	882	1,320	638	428
12	400	378	688	440	280	460	981	3,290	790	800	620	447
13	444	362	720	500	300	480	912	2,760	654	1,200	584	467
14	432	382	748	480	340	500	938	2,200	564	2,430	590	454
15	431	360	697	360	360	524	898	1,780	611	2,380	624	471
16	414	422	650	440	380	562	904	1,240	724	1,710	644	484
17	430	396	650	500	360	619	2,380	1,300	820	924	648	690
18	442	476	650	500	360	692	3,180	1,150	664	784	594	658
19	400	459	600	400	380	770	3,510	891	593	646	610	494
20	421	388	600	460	320	808	3,740	859	494	1,000	600	498
21	421	384	600	460	300	1,010	3,860	1,080	670	2,680	590	591
22	418	382	600	360	280	1,210	3,980	1,210	587	3,880	652	364
23	445	374	600	400	280	1,410	3,980	1,100	627	2,910	556	298
24	446	399	600	380	280	1,640	3,740	1,050	602	2,260	576	280
25	450	378	600	400	280	2,060	2,860	1,400	563	1,630	554	322
26	434	419	600	480	280	1,860	2,200	2,100	616	1,160	572	556
27	416	414	600	400	280	2,010	2,380	1,850	622	892	562	743
28	465	420	550	400	280	1,840	2,480	1,400	646	786	558	426
29	435	420	550	400	-------	2,210	2,960	1,050	606	748	686	336
30	429	420	600	380	-------	1,690	2,480	975	608	840	444	309
31	428	-------	550	380	-------	1,390	-------	916	-------	676	428	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	488	400	442	0.769	0.89
November	476	340	407	.708	.79
December	748	500	621	1.08	1.24
January	600	360	453	.788	.91
February	380	280	316	.550	.57
March	2,210	300	880	1.53	1.76
April	3,980	898	2,240	3.90	4.35
May	3,290	859	1,780	3.10	3.57
June	1,150	494	710	1.23	1.37
July	3,880	548	1,240	2.16	2.49
August	830	428	610	1.06	1.22
September	743	280	477	.830	.93
The year	3,980	280	851	1.48	20.09

NINEMILE FEEDER NEAR HOLLAND PATENT, N. Y.

LOCATION.—Water-stage recorder at mouth of feeder, half a mile below highway bridge 3 miles east of Holland Patent, Oneida County, and 6 miles below intake.

RECORDS AVAILABLE.—June, 1919, to September, 1931, during navigation seasons.

REMARKS.—Records good. Discharge estimated Nov. 2–5, 17, 18, 26–29. Canal diverts at Trenton Falls on West Canada Creek; water reaches Barge Canal through Ninemile Creek. No diversion through feeder Dec. 2 to July 1.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	July	Aug.	Sept.	Day	Oct.	Nov.	Dec.	July	Aug.	Sept.
1	100	86	59	-------	6.5	115	16	101	84	-------	73	114	114
2	100	86	-------	16	8.4	115	17	100	85	-------	70	114	116
3	100	86	-------	72	16	114	18	101	85	-------	68	114	114
4	100	86	-------	73	10	114	19	101	85	-------	68	115	109
5	99	86	-------	73	37	114	20	101	85	-------	74	114	109
6	100	85	-------	73	70	113	21	100	85	-------	55	115	76
7	101	83	-------	73	88	113	22	95	84	-------	17	115	6.2
8	101	83	-------	73	116	113	23	88	84	-------	5.5	115	4.0
9	101	82	-------	72	106	115	24	88	84	-------	4.0	116	3.6
10	101	83	-------	75	74	115	25	87	84	-------	2.8	116	3.0
11	101	83	-------	75	113	115	26	86	84	-------	2.2	116	6.3
12	101	83	-------	40	113	115	27	86	85	-------	2.0	116	4.9
13	101	84	-------	4.4	114	115	28	87	88	-------	28	116	3.3
14	101	83	-------	19	113	116	29	86	90	-------	38	115	2.8
15	101	84	-------	37	114	116	30	86	90	-------	11	111	2.6
							31	85	-------	-------	6.0	114	------

Month	Maximum	Minimum	Mean
October	101	85	96.3
November	90	82	84.8
July 2–31	75	2.0	43.3
August	116	6.5	94.7
September	116	2.0	79.8

EAST CANADA CREEK AT DOLGEVILLE, N. Y.

LOCATION.—Water-stage recorder at Dolgeville, Herkimer County, 100 feet below lower highway bridge and 1 mile below Spruce Creek.

DRAINAGE AREA.—261 square miles.

RECORDS AVAILABLE.—October, 1927, to September, 1931. Comparable records from station at High Falls, 1 mile downstream, September, 1898, to December, 1909; January to November, 1912.

EXTREMES.—Maximum discharge during year, 6,030 second-feet Apr. 11 (gage height, 10.15 feet); minimum, 4 second-feet Oct. 21 (gage height, 5.50 feet).

1927–1931: Maximum discharge, 8,500 second-feet Apr. 8, 1928 (gage height, 11.2 feet); minimum, 4 second-feet frequently July to September and Oct. 21, 1930 (gage height, 5.50 feet).

REMARKS.—Records fair except those for periods of ice effect, Nov. 29 to Dec. 1, Dec. 11 to Mar. 15, and those above 2,000 second-feet, which are poor. City of Little Falls diverts about 5 second-feet above station. Flow partly regulated by storage in Canada Lakes, capacity 441 million cubic feet. Diurnal fluctuation caused by power-plant operation.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	130	98	340	90	80	90	810	974	328	166	134	124
2	117	95	307	85	80	85	1,130	830	234	a 130	116	167
3	97	88	216	80	80	90	1,190	1,360	222	a 140	155	326
4	105	76	179	90	75	95	1,700	1,320	206	a 148	219	202
5	96	81	156	90	75	90	1,690	1,090	184	137	164	160
6	117	82	152	100	80	85	1,640	711	128	116	158	127
7	99	80	148	90	85	90	1,660	560	257	124	150	154
8	83	92	148	85	80	95	1,960	670	800	138	175	219
9	90	98	144	85	75	100	1,730	1,670	647	a 187	187	226
10	83	94	148	80	75	100	2,500	1,380	412	a 332	151	226
11	83	85	140	80	75	100	5,480	2,110	298	994	147	221
12	80	91	170	85	70	100	4,640	1,810	257	702	140	221
13	67	102	140	90	80	95	3,140	974	179	416	141	166
14	66	110	120	90	90	100	3,870	932	134	1,300	140	159
15	72	113	100	85	110	110	3,000	702	150	1,250	126	207
16	70	124	90	85	120	134	2,170	575	205	836	117	316
17	75	380	90	90	120	183	2,100	474	586	450	99	455
18	124	420	100	85	140	261	2,170	427	564	247	99	374
19	110	298	110	85	160	284	2,170	384	a 298	262	129	226
20	92	226	130	85	140	325	1,900	412	a 236	280	127	400
21	86	187	140	85	120	312	1,840	565	210	3,140	104	741
22	80	a 164	130	80	110	316	1,590	466	194	3,820	94	487
23	84	152	120	80	100	419	1,980	499	204	2,160	141	382
24	88	141	120	75	95	601	1,540	1,330	304	1,140	139	312
25	89	148	120	75	90	702	874	1,280	211	468	101	275
26	86	148	110	80	85	772	806	1,220	a 236	273	108	464
27	84	138	110	90	85	1,000	1,240	780	a 298	197	142	673
28	113	96	110	85	80	1,060	1,050	501	215	171	312	424
29	130	85	100	85	------	1,180	1,280	390	176	238	197	369
30	121	120	100	85	------	1,110	1,280	281	140	296	141	a 360
31	108	------	100	85	------	890	------	279	------	198	135	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	130	66	94.4	0.362	0.42
November	420	76	140	.536	.60
December	340	90	142	.544	.63
January	100	75	85.2	.326	.38
February	160	70	94.8	.363	.38
March	1,180	85	354	1.36	1.57
April	5,480	806	2,000	7.66	8.55
May	2,110	279	870	3.33	3.84
June	800	128	284	1.09	1.22
July	3,820	116	660	2.53	2.92
August	312	94	145	.556	.64
September	741	124	305	1.17	1.30
The year	5,480	66	432	1.66	22.45

a Estimated.

SCHOHARIE CREEK AT MIDDLEBURG, N. Y.

LOCATION.—Staff gage at highway bridge in Middleburg, Schoharie County.
DRAINAGE AREA.—532 square miles.
RECORDS AVAILABLE.—July, 1927, to September, 1931.
EXTREMES.—Maximum discharge during year, about 5,290 second-feet Apr. 10 (gage height, about 6.2 feet); minimum, 5.1 second-feet Oct. 13–15 (gage height, 0.35 foot).

1927–1931: Maximum discharge, 17,000 second-feet Nov. 4, 1927 (gage height, 10.5 feet); minimum, 2.1 second-feet Aug. 16, 1930 (gage height, 0.22 foot).

REMARKS.—Records good except those for periods of ice effect, Nov. 30 to Dec. 3, Dec. 16–18, Dec. 22 to Feb. 15, Feb. 24–28, Mar. 3–5, and those for rapidly changing stages, which are fair. Discharge estimated June 21. Entire flow at Gilboa, 20 miles upstream, except for periods of spilling, Apr. 12–30, May 9–18, diverted by city of New York from Schoharie Reservoir through Shandaken Tunnel and Esopus Creek into Ashokan Reservoir and thence through Catskill Aqueduct to New York. Monthly mean discharge corrected for storage and diversion from data furnished by New York City Board of Water Supply.

Daily discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.7	13	13	13	15	88	870	426	183	86	125	18
2	6.8	13	13	13	14	84	1,260	330	163	68	117	10
3	6.1	12	20	12	14	85	1,210	330	128	54	122	38
4	5.4	13	27	14	14	80	1,670	308	93	52	100	37
5	6.1	17	28	15	14	80	1,570	286	77	32	70	27
6	6.1	18	24	14	14	77	1,390	232	77	32	79	20
7	6.1	18	24	12	14	77	1,390	198	86	34	66	21
8	5.8	18	26	12	13	75	1,340	213	343	286	42	18
9	5.8	15	26	11	13	75	1,920	377	166	240	39	13
10	5.4	14	24	12	13	84	3,260	1,080	505	1,510	39	11
11	5.4	15	24	13	13	77	4,120	2,640	286	3,200	35	11
12	5.4	13	24	13	13	77	3,190	1,760	194	1,300	66	8.6
13	5.4	11	24	13	15	75	2,070	1,110	150	770	120	7.0
14	5.1	11	23	13	17	77	2,990	1,620	120	560	96	5.8
15	5.1	11	20	13	28	82	2,530	2,060	114	308	378	6.4
16	9.0	11	18	12	46	105	1,740	1,180	261	402	217	7.0
17	11	11	17	12	67	108	1,300	1,390	1,870	265	103	11
18	15	14	15	12	93	118	1,130	802	658	224	57	11
19	13	17	16	12	100	159	1,100	560	426	286	38	12
20	12	16	16	11	102	165	1,010	402	330	169	22	14
21	10	16	16	10	100	190	989	600	308	198	18	13
22	10	15	16	10	91	280	989	505	236	2,030	13	18
23	10	13	15	10	88	393	1,700	588	201	770	11	17
24	11	13	14	10	90	624	2,570	478	265	675	8.6	12
25	10	18	14	11	90	815	995	478	173	616	14	16
26	13	22	14	13	95	945	677	560	435	377	11	18
27	12	15	15	15	90	1,260	1,110	402	256	308	9.8	12
28	12	12	14	17	90	1,220	640	308	187	265	30	17
29	12	12	13	17	-------	1,750	723	265	100	201	37	11
30	12	11	13	16	-------	1,370	742	221	120	221	29	14
31	13	-------	13	15	-------	967	-------	209	-------	159	17	------

Monthly discharge, in second-feet, of Schoharie Creek at Middleburg, N.Y., 1930-31

Month	Observed			Corrected for storage and diversion		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	15	5.1	8.86	30.4	0.057	0.07
November	22	11	14.3	84.8	.159	.18
December	28	13	18.7	104	.195	.22
January	17	10	12.8	70.8	.133	.15
February	102	13	48.8	151	.284	.30
March	1,750	75	376	876	1.65	1.90
April	4,120	640	1,610	3,370	6.33	7.06
May	2,640	198	707	1,640	3.08	3.55
June	1,870	77	284	1,030	1.94	2.16
July	3,200	32	506	1,110	2.07	2.39
August	378	8.6	68.7	118	.222	.26
September	38	5.8	15.2	82.5	.155	.17
The year	4,120	5.1	306	724	1.36	18.41

FOX CREEK AT WEST BERNE, N. Y.

LOCATION.—Staff gage 500 feet above highway bridge in West Berne, Albany County, and 1¼ miles below mouth of Switz Kill.

DRAINAGE AREA.—66 square miles.

RECORDS AVAILABLE.—August, 1924, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,560 second-feet July 22 (gage height, 5.1 feet); minimum, 1.7 second-feet Jan. 15–17.

1924–1931: Maximum discharge, 4,190 second-feet Apr. 21, 1929 (gage height, 7.8 feet); minimum, 0.9 second-foot several times Aug. 31 to Sept. 4, 1926 (gage height, 1.40 feet).

REMARKS.—Records good except those for periods of ice effect or backwater from débris on control, Oct. 1 to Nov. 18, Dec. 14–18, Dec. 31 to Jan. 3, Jan. 8 to Feb. 22, Sept. 11–30, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.1	3.8	7.7	2.2	3.2	15	488	60	56	31	36	7.2
2	4.1	3.3	6.3	2.0	3.0	15	1,070	54	50	27	32	8.7
3	4.7	3.3	5.1	2.4	3.0	15	1,030	50	43	25	27	15
4	4.4	3.0	4.4	2.5	3.0	15	835	46	37	22	22	13
5	4.1	4.7	4.1	3.0	3.0	15	550	41	33	21	21	10
6	3.8	4.4	4.1	3.5	3.0	15	460	41	27	20	20	8.2
7	3.3	3.8	3.5	3.0	2.8	17	505	43	27	19	18	7.2
8	3.0	3.0	3.8	2.8	2.8	17	663	101	126	90	17	5.9
9	2.8	2.8	5.1	2.6	2.8	18	1,050	153	244	134	16	4.7
10	2.5	2.3	4.7	2.4	2.8	17	1,090	311	577	662	16	4.7
11	2.5	3.3	4.1	2.2	2.8	16	1,360	909	258	1,030	17	3.8
12	2.3	3.3	4.1	2.0	3.0	15	1,320	614	166	665	20	3.5
13	2.3	3.3	3.8	1.9	3.2	17	1,240	374	103	207	29	3.0
14	2.3	3.3	3.6	1.9	3.6	18	699	416	82	114	41	2.8
15	5.5	3.3	3.4	1.7	3.8	21	294	416	67	98	54	2.8
16	6.7	3.5	3.2	1.7	4.4	21	180	354	115	82	41	3.3
17	4.4	3.8	3.6	1.7	5.0	22	166	314	832	71	33	3.8
18	6.7	9.7	3.8	1.9	6.5	27	140	294	315	56	23	4.4
19	6.7	10	4.7	2.2	6.5	31	126	258	153	50	17	4.4
20	5.9	8.2	5.1	2.4	6.5	39	114	225	121	46	15	3.8
21	5.1	8.2	5.5	2.8	8.0	57	103	210	103	67	15	3.8
22	4.7	7.2	4.7	2.8	9.0	82	94	254	78	1,100	13	3.8
23	5.1	7.2	3.5	2.6	10	119	82	527	72	312	11	4.4
24	6.3	7.2	2.8	2.4	13	204	76	320	69	194	9.2	4.4
25	6.3	8.2	3.0	2.6	13	314	67	225	66	166	9.2	3.8
26	6.3	8.2	2.5	3.0	17	382	66	194	142	130	8.2	3.5
27	4.4	7.7	2.5	3.6	15	654	60	166	84	90	7.7	3.5
28	4.1	6.3	2.5	3.4	21	965	60	94	60	72	11	3.8
29	4.7	4.4	2.3	3.4	------	1,060	62	78	43	60	10	3.5
30	4.1	5.5	2.5	3.4	------	754	66	72	38	51	9.2	3.5
31	4.1	------	2.4	3.2	------	505	------	66	------	42	8.2	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	6.7	2.3	4.43	0.067	0.08
November	10	2.3	5.21	.079	.09
December	7.7	2.3	3.95	.060	.07
January	3.6	1.7	2.55	.039	.04
February	21	2.8	6.45	.098	.10
March	1,060	15	177	2.68	3.09
April	1,360	60	471	7.14	7.97
May	909	41	235	3.56	4.10
June	832	27	140	2.12	2.36
July	1,100	19	186	2.82	3.25
August	54	7.7	20.2	.306	.35
September	15	2.8	5.27	.080	.09
The year	1,360	1.7	105	1.59	21.59

POESTEN KILL NEAR TROY, N. Y.

LOCATION.—Water-stage recorder 500 feet below bridge, on Troy-Eagle Mills road, 3 miles east of Troy, Rensselaer County, and 4½ miles above mouth.

DRAINAGE AREA.—88 square miles.

RECORDS AVAILABLE.—July, 1923, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,670 second-feet July 10 (gage height, 4.98 feet); minimum, 1.7 second-feet Oct. 15 (gage height, 0.78 foot).

1923–1931: Maximum discharge, about 7,030 second-feet Nov. 4, 1927 (gage height, 8.4 feet); minimum, that of Oct. 15, 1930.

REMARKS.—Records good except those for periods of ice effect, Nov. 28 to Dec. 4, Dec. 15–19, Jan. 7–9, Jan. 21 to Feb. 10, and those estimated, which are fair. Practically entire low-water flow of Quaken Kill (about 5 second-feet) diverted for municipal use.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.4	7.3	50	9.1	6	a30	408	72	122	36	45	19
2	3.8	6.3	40	8.4	6	a30	660	63	90	30	29	22
3	3.6	6.6	30	8.8	5.5	a32	595	60	68	19	66	31
4	3.4	5.5	26	9.3	5	a32	581	58	57	17	219	32
5	3.0	10	23	10	5	a30	507	49	46	15	128	25
6	2.8	69	22	14	5	a30	430	44	40	20	78	16
7	2.7	46	21	11	5	a32	456	50	32	33	55	9.7
8	2.7	24	22	9.5	5	a32	559	48	55	56	37	8.2
9	2.5	17	19	8	4.8	a32	650	98	187	87	31	10
10	2.3	14	19	8.0	a4.6	a42	620	194	409	1,080	37	16
11	2.1	9.7	17	9.7	a4.6	a44	795	932	243	816	46	18
12	1.9	9.7	18	9.3	a5	a44	595	658	152	390	60	12
13	1.9	9.4	18	9.3	a6	a42	392	417	103	204	64	7.9
14	1.9	8.6	16	8.4	a6.5	a42	294	a400	74	145	49	10
15	2.5	9.8	12	7.6	a6.5	a46	233	a450	84	101	42	19
16	3.0	15	9.5	7.4	a7.5	a55	182	a352	185	78	35	21
17	3.2	58	8	6.6	a10	a70	152	334	520	60	32	24
18	4.6	80	8.5	7.6	a60	a90	142	240	289	50	30	27
19	6.3	49	9.5	6.9	a120	a120	124	180	169	45	29	17
20	6.3	35	11	8.0	a95	a140	106	140	122	41	30	12
21	4.9	27	11	7.5	a80	a168	88	179	146	52	27	32
22	3.8	22	11	7	a70	199	76	228	96	536	23	41
23	3.4	20	10	6.5	a60	252	64	634	76	320	17	63
24	3.4	17	10	6.5	a50	316	58	985	96	182	12	46
25	4.1	18	8.7	6.5	a44	328	52	632	66	150	10	34
26	14	21	10	6.5	a38	383	54	488	52	109	9.3	23
27	20	16	10	a7.5	a36	445	108	314	40	74	9.3	25
28	13	10	10	8.5	a32	408	96	220	a34	57	11	29
29	11	6.5	11	7.5	------	666	84	161	a45	59	9.3	24
30	8.6	8.5	10	6.5	------	604	88	122	42	76	9.3	22
31	7.6	------	9.4	6.5	------	404	------	138	------	61	15	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	20	1.9	5.12	0.058	0.07
November	80	5.5	21.9	.249	.28
December	50	8	16.5	.188	.22
January	14	6.5	8.19	.093	.11
February	a120	a4.6	28.0	.318	.33
March	666	a30	167	1.90	2.19
April	795	52	308	3.50	3.90
May	985	44	288	3.27	3.77
June	520	32	125	1.42	1.58
July	1,080	15	161	1.83	2.11
August	219	9.3	41.7	.474	.55
September	63	7.9	23.2	.264	.29
The year	1,080	1.9	99.9	1.14	15.40

a Estimated

KINDERHOOK CREEK AT ROSSMAN, N. Y.

LOCATION.—Water-stage recorder at highway bridge in Rossman, Columbia County, 1 mile above confluence with Claverack Creek.

DRAINAGE AREA.—330 square miles.

RECORDS AVAILABLE.—March, 1906, to December, 1909; January, 1911, to May, 1914; July, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 3,350 second-feet Mar. 29 (gage height, 4.92 feet); minimum, 17 second-feet Oct 5, 6 (gage height, 0.38 foot).

1906–1909, 1911–1914, 1928–1931: Maximum discharge, about 10,500 second-feet Feb. 20, 1909; minimum, 16 second-feet Sept. 6, 7, 1929 (gage height, 0.35 foot).

Maximum discharge known, 11,000 second-feet Jan. 22, 1910.

REMARKS.—Records good except those for periods of ice effect, Dec. 15–24, Jan. 1–23, Feb. 8–18, and those estimated, Jan. 24 to Feb. 7, which are fair. Diurnal fluctuation at low and medium stages caused by power operations.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	61	152	50	46	238	1,420	295	586	162	126	132
2	31	36	179	46	46	234	1,960	299	465	135	142	60
3	24	86	166	32	44	209	1,650	276	327	157	223	72
4	24	53	117	44	44	227	1,560	259	304	102	274	154
5	20	72	149	55	44	205	1,420	255	289	107	276	115
6	39	101	135	65	46	189	1,240	232	259	114	214	37
7	26	238	135	70	46	192	1,280	234	190	134	172	48
8	27	144	116	60	46	216	1,510	254	320	109	112	101
9	39	136	128	46	60	261	1,600	401	546	127	66	70
10	26	125	112	42	46	293	1,420	477	1,460	763	140	76
11	20	102	108	44	42	285	1,600	424	1,010	1,130	110	60
12	24	105	118	46	40	285	1,510	502	802	725	150	45
13	27	112	109	46	42	277	1,150	489	612	540	183	35
14	51	91	97	42	46	253	965	508	514	413	163	59
15	33	77	80	38	46	301	823	651	428	297	109	70
16	24	100	65	38	50	409	690	573	448	236	131	112
17	37	184	55	38	90	378	606	612	1,150	226	145	44
18	35	367	46	40	140	440	566	521	1,030	190	137	74
19	30	289	50	46	313	577	514	465	684	152	92	76
20	63	216	55	46	364	650	471	379	528	169	97	40
21	41	205	75	44	328	805	413	337	489	150	104	67
22	43	170	100	42	332	1,130	343	477	465	259	68	126
23	41	158	90	42	306	1,240	337	764	369	364	68	136
24	34	148	80	40	269	1,380	313	2,120	379	240	115	91
25	27	131	68	40	265	1,560	285	1,420	304	230	74	88
26	30	143	63	44	261	1,520	272	1,220	298	123	91	56
27	61	143	75	50	257	1,710	412	935	251	202	91	43
28	56	121	97	55	196	1,610	385	739	184	170	89	112
29	66	75	97	50	------	2,310	313	612	211	154	103	74
30	42	94	99	48	------	2,650	353	508	170	122	47	75
31	43	------	57	46	------	1,700	------	534	------	142	125	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	66	20	36.1	0.109	0.13
November	367	36	136	.412	.46
December	179	46	99.1	.303	.35
January	70	32	46.3	.140	.16
February	364	40	138	.418	.44
March	2,650	189	766	2.32	2.68
April	1,960	272	913	2.77	3.09
May	2,120	232	573	1.74	2.01
June	1,460	170	502	1.52	1.70
July	1,130	102	263	.797	.92
August	276	47	130	.394	.45
September	154	35	78.3	.237	.26
The year	2,650	20	307	.930	12.65

CATSKILL CREEK AT OAK HILL, N. Y.

LOCATION.—Water-stage recorder just below highway bridge in southernmost part of Oak Hill, Greene County, and 1 mile above mouth of Tenmile Creek.

DRAINAGE AREA.—97 square miles.

RECORDS AVAILABLE.—March, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year, 3,110 second-feet May 10 (gage height, 8.63 feet); minimum, 0.5 second-foot Oct. 14 (gage height, 2.77 feet).

1929–1931: Maximum discharge, about 4,910 second-feet Apr. 20, 1929 (gage height, 10.1 feet); minimum, about 0.05 second-foot Sept. 6, 7, 1929 (gage height, 2.65 feet).

REMARKS.—Records good except those for periods of ice effect, Dec. 3–6, 14–17, Dec. 30 to Feb. 13, Feb. 17, and for periods of extremely low discharge, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	1.7	11	5	5	33	716	126	90	26	28	6.0
2	.9	1.7	8.8	4	4	37	974	108	75	22	23	5.0
3	.9	1.7	8	4	4	42	746	104	60	20	22	6.7
4	.9	1.8	8	6	5	33	854	93	51	20	20	8.6
5	1.0	2.6	7	5	5	32	732	81	41	18	18	7.6
6	1.0	2.4	8	5	5	31	652	72	36	15	14	6.7
7	1.0	2.1	8.1	5	5	31	650	64	36	12	12	5.7
8	1.0	2.4	8.4	5	5	38	804	129	150	[a] 26	10	4.2
9	1.0	2.4	8.4	4	5	59	1,010	215	127	[a] 160	9.6	3.6
10	1.0	2.6	8.1	4	5	34	1,430	781	729	[a] 500	9.6	3.4
11	.9	2.7	8.1	5	5	32	1,660	1,230	230	[a] 700	10	3.0
12	.8	2.6	8.4	5	5	31	841	621	164	294	16	2.7
13	.7	2.7	6.5	5	6	31	625	477	124	174	20	2.7
14	.6	2.7	5	5	10	32	570	753	97	122	15	2.7
15	1.0	3.0	5	5	14	39	441	510	93	90	15	3.0
16	1.2	3.4	4	4	14	45	354	407	126	76	24	3.0
17	1.0	8.0	5	4	19	46	301	388	521	59	17	3.8
18	1.1	18	5.6	4	25	60	276	273	245	48	12	2.9
19	1.2	15	5.6	5	28	81	246	215	171	48	10	2.7
20	1.1	12	5.4	5	25	90	215	179	128	41	8.6	3.0
21	.9	10	4.8	5	25	131	193	243	110	[a] 60	7.3	[a] 2.9
22	1.1	8.4	4.6	4	25	198	171	204	81	[a] 1,200	6.7	[a] 3.2
23	1.2	8.4	4.6	4	27	282	276	404	78	[a] 400	6.0	[a] 3.6
24	1.4	7.8	5.1	4	36	449	233	327	86	[a] 250	5.4	3.0
25	1.6	8.4	5.1	4	34	463	184	287	62	[a] 170	[a] 5.0	2.9
26	1.6	9.8	5.4	4	36	671	182	290	[a] 57	116	[a] 5.0	3.2
27	1.4	9.2	5.4	5	34	826	182	207	[a] 76	86	[a] 5.0	3.6
28	1.6	8.1	5.4	5	48	659	154	164	59	67	[a] 11	3.2
29	1.6	8.1	5.4	5	-------	996	182	124	42	53	[a] 11	3.0
30	1.6	9.5	5	5	-------	685	156	106	33	48	9.0	2.9
31	2.1	-------	5	5	-------	491	-------	108	-------	38	7.0	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	2.1	0.6	1.14	0.012	0.01
November	18	1.7	5.97	.062	.07
December	11	4	6.39	.066	.08
January	6	4	4.65	.048	.06
February	48	4	16.6	.171	.18
March	996	31	216	2.23	2.57
April	1,660	154	534	5.51	6.15
May	1,230	64	300	3.09	3.56
June	729	33	133	1.37	1.53
July	[a] 1,200	12	160	1.65	1.90
August	28	[a] 5.0	12.7	.131	.15
September	8.6	2.7	3.95	.041	.05
The year	1,660	.6	116	1.20	16.31

[a] Estimated.

RONDOUT CREEK AT ROSENDALE, N. Y.

LOCATION.—Water-stage recorder 150 feet above highway bridge in Rosendale, Ulster County, and 3 miles above junction with Wallkill River.

DRAINAGE AREA.—386 square miles.

RECORDS AVAILABLE.—July, 1901, to November, 1903; January, 1906, to December, 1913; August, 1926, to September, 1931.

EXTREMES.—Maximum discharge during year, 7,760 second-feet Mar. 29 (gage height, 9.47 feet); minimum, 7 second-feet Oct. 14 (gage height, 1.49 feet). 1926–1931: Maximum discharge, 27,300 second-feet Aug. 27, 1928 (gage height, 21.9 feet); minimum, about 7 second-feet Aug. 9, 1929, Oct. 14, 1930.

REMARKS.—Records good except those for periods of ice effect, Dec. 15–18, Dec. 30 to Jan. 11, Jan. 16 to Mar. 6, which are fair. Large diurnal fluctuation during low and medium stages caused by power plant operation.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	64	66	281	120	130	380	2,330	928	658	211	127	102
2	62	77	360	110	130	380	3,530	808	574	183	119	119
3	73	85	356	120	140	360	2,700	830	442	173	120	210
4	64	57	237	120	150	360	2,680	718	436	163	136	262
5	69	97	233	110	140	400	2,650	650	367	15[illegible]	154	230
6	62	169	220	160	140	440	1,940	565	350	140	138	203
7	60	138	220	300	140	520	2,090	529	371	18[illegible]	146	135
8	66	106	179	240	140	660	2,140	1,200	1,800	17[illegible]	130	108
9	64	85	199	200	150	905	1,780	2,970	1,160	220	96	131
10	47	84	195	190	150	817	1,730	2,330	1,970	985	97	122
11	60	83	184	190	140	681	1,840	4,320	1,470	1,640	116	126
12	61	75	195	216	140	618	1,670	3,500	1,060	796	165	97
13	69	84	228	290	140	604	1,320	2,800	838	442	181	86
14	36	73	191	224	160	562	1,190	2,640	672	332	172	82
15	72	107	160	200	160	618	1,060	2,410	572	300	152	48
16	66	556	150	170	190	639	935	1,700	557	275	196	70
17	60	1,290	140	160	240	639	822	1,500	1,090	273	174	86
18	70	895	165	160	420	732	770	1,250	748	254	123	146
19	51	511	148	170	700	890	710	1,060	537	249	129	170
20	92	365	173	220	650	778	643	912	442	210	122	113
21	34	296	114	200	550	882	600	922	404	242	145	107
22	58	244	109	170	500	1,070	551	1,100	333	993	120	120
23	64	214	137	140	460	1,150	2,390	1,360	338	504	114	137
24	65	158	145	130	420	1,440	2,780	1,160	362	294	68	90
25	54	215	165	120	400	2,020	1,540	988	347	239	76	97
26	74	212	129	120	380	2,470	1,570	1,060	298	203	83	93
27	54	216	168	170	360	2,870	2,310	868	311	147	109	93
28	68	158	229	180	360	2,630	1,440	718	268	169	318	78
29	55	198	188	160	------	6,200	1,290	607	194	150	258	85
30	66	172	150	150	------	4,660	1,140	516	220	137	198	87
31	92	------	130	140	------	2,770	------	757	------	144	105	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	92	34	63.0	0.163	0.19
November	1,290	57	236	.611	.68
December	360	109	190	.492	.57
January	300	110	173	.448	.52
February	700	130	278	.720	.75
March	6,200	360	1,300	3.37	3.88
April	3,530	551	1,670	4.33	4.83
May	4,320	516	1,410	3.65	4.21
June	1,970	194	640	1.63	1.85
July	1,640	137	341	.883	1.02
August	318	68	142	.368	.42
September	262	48	121	.313	.35
The year	6,200	34	547	1.42	19.27

WALLKILL RIVER AT PELLETS ISLAND MOUNTAIN, N. Y.

LOCATION.—Chain gage at highway bridge in Pellets Island Mountain, Orange County, 4½ miles south of Middletown.

DRAINAGE AREA.—385 square miles.

RECORDS AVAILABLE.—December, 1919, to September, 1931.

EXTREMES.—Maximum discharge during year, about 2,130 second-feet June 17 (gage height, about 7.1 feet); minimum, 36 second-feet Oct. 6-7 (gage height, 2.38 feet).

1919–1931: Maximum discharge, 8,350 second-feet Mar. 16, 1920 (gage height, 20.7 feet, old datum); minimum, 17 second-feet Aug. 11, 12, 1926 (gage height, 2.30 feet).

REMARKS.—Records good except those for periods of ice effect, Dec. 3–4, 17–19, 23–27, Dec. 30 to Jan. 4, Jan. 12–18, 23–26, Feb. 3, 15, which are fair. Discharge estimated Feb. 4, 5, 8–12.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	90	190	220	177	1,460	1,880	690	294	177	133	152
2	52	99	232	180	164	1,400	2,000	562	420	177	110	128
3	46	82	220	156	150	1,180	1,940	521	440	147	116	247
4	41	77	170	160	150	1,030	1,820	480	364	133	133	401
5	39	178	142	218	150	980	1,580	440	278	152	147	328
6	38	327	126	483	150	880	1,460	440	218	177	116	204
7	38	296	150	735	150	780	1,290	346	177	294	110	133
8	39	218	152	735	150	1,020	1,290	419	644	364	101	94
9	39	164	177	647	140	1,580	1,240	847	1,030	294	92	80
10	41	135	164	480	140	1,820	1,130	930	1,310	678	84	68
11	42	126	152	420	150	1,820	1,030	980	1,460	1,420	103	63
12	42	94	164	360	150	1,640	880	930	1,400	1,460	140	41
13	44	86	164	320	164	1,460	780	980	1,350	1,290	177	54
14	39	90	152	300	232	1,290	647	980	1,240	1,180	177	50
15	44	90	86	260	320	1,180	562	1,030	1,080	1,030	147	54
16	42	273	56	220	440	1,080	480	980	1,530	880	138	68
17	56	615	50	200	606	980	440	830	2,020	735	123	70
18	71	880	50	200	930	930	401	735	1,990	647	110	57
19	90	880	60	218	1,480	880	364	562	1,660	480	88	57
20	90	780	68	262	1,640	830	346	480	1,350	420	88	57
21	64	690	82	294	1,580	880	311	440	1,130	364	92	57
22	52	562	77	278	1,400	880	278	647	930	364	82	60
23	52	364	70	220	1,290	830	473	735	830	401	80	57
24	50	328	65	180	1,240	830	1,060	830	735	346	73	58
25	46	278	65	160	1,350	780	1,080	780	604	328	73	51
26	47	278	70	160	1,400	930	1,080	690	440	294	73	57
27	56	247	95	190	1,350	930	1,130	647	364	262	76	52
28	62	177	247	262	1,290	896	1,130	521	278	204	221	52
29	54	119	364	311	-------	1,490	1,030	401	232	177	294	57
30	54	152	340	278	-------	1,940	830	311	204	152	232	52
31	68	-------	280	218	-------	1,880	-------	278	-------	152	190	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	90	38	51.3	0.133	0.15
November	880	77	292	.758	.85
December	364	50	145	.377	.43
January	735	150	301	.782	.90
February	1,640	140	662	1.72	1.79
March	1,940	780	1,180	3.06	3.53
April	2,000	278	999	2.59	2.89
May	1,030	278	659	1.71	1.97
June	2,020	177	867	2.25	2.51
July	1,460	133	490	1.27	1.46
August	294	73	126	.327	.38
September	401	41	98.6	.256	.29
The year	2,020	38	487	1.26	17.15

WALLKILL RIVER AT GARDINER, N. Y.

LOCATION.—Water-stage recorder at highway bridge 500 feet below mouth of Shawangunk Kill and three-quarters of a mile northwest of Gardiner, Ulster County.

DRAINAGE AREA.—716 square miles.

RECORDS AVAILABLE.—September, 1924, to September, 1931.

EXTREMES.—Maximum discharge during year, 6,990 second-feet June 17 (gage height, 8.76 feet); minimum, 40 second-feet Oct. 10, 13 (gage height, 2.30 feet).

1924–1931: Maximum discharge, 12,900 second-feet Sept. 2, 1927 (gage height, 12.6 feet); minimum, 26 second-feet July 26, 1926, Aug. 11, 1930.

REMARKS.—Records good except those for periods of ice effect, Nov. 29, Dec. 16–31, Jan. 1–5, 10–19, 22–27, Feb. 1 to Mar. 4, which are fair. Discharge estimated Nov. 8. Large diurnal fluctuations during low and medium stages caused by power operations.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	125	135	369	320	380	2,800	2,850	1,160	688	343	267	301
2	117	154	340	260	320	2,600	3,680	970	728	285	239	267
3	117	182	430	240	280	2,400	2,980	877	672	239	235	412
4	96	171	390	240	260	2,200	2,860	814	600	210	244	664
5	106	185	327	280	240	2,010	2,500	720	516	244	248	586
6	102	512	267	1,680	240	1,900	2,120	672	402	387	248	428
7	119	555	276	2,080	240	1,740	2,120	632	366	573	214	311
8	89	486	313	1,840	240	2,320	2,340	1,100	1,310	616	187	244
9	89	348	327	1,600	220	3,940	2,010	2,010	1,740	600	162	214
10	84	285	318	1,200	220	3,550	1,840	1,740	2,500	3,460	198	176
11	85	226	308	750	220	3,040	1,620	1,740	2,340	3,290	188	153
12	70	219	323	600	240	2,800	1,430	1,620	2,010	2,450	247	140
13	85	211	353	500	280	2,560	1,240	1,570	1,790	1,960	285	123
14	105	188	327	440	400	2,280	1,070	1,840	1,620	1,620	316	138
15	92	244	277	380	550	2,230	904	2,060	1,430	1,400	327	135
16	83	956	220	340	800	2,120	769	1,680	1,590	1,240	454	117
17	94	2,420	170	340	1,100	1,900	720	1,460	6,190	1,040	321	138
18	112	2,260	160	340	1,600	1,790	664	1,210	4,040	850	276	185
19	157	1,780	150	360	2,800	1,680	656	970	2,720	760	218	157
20	139	1,380	160	554	3,200	1,620	600	823	2,120	689	198	128
21	159	1,190	170	628	3,000	1,620	523	823	1,740	583	187	158
22	139	990	190	650	2,600	1,620	530	1,140	1,420	1,240	168	147
23	116	758	200	600	2,600	1,520	1,380	1,710	1,190	1,010	143	123
24	110	620	190	380	2,600	1,430	2,230	1,620	1,070	736	174	143
25	76	533	180	280	2,600	1,520	1,790	1,370	931	552	149	119
26	106	506	190	280	2,600	1,960	2,080	1,220	778	502	140	98
27	92	474	240	280	2,600	1,790	2,470	1,060	624	421	145	95
28	114	369	600	390	2,400	1,620	1,840	850	530	372	755	147
29	101	320	650	635	-------	4,530	1,620	680	447	337	804	142
30	104	308	600	650	-------	3,870	1,380	565	378	351	565	114
31	124	-------	500	540	-------	2,980	-------	579	-------	307	428	----

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	159	70	107	0.149	0.17
November	2,420	135	632	.883	.99
December	650	150	307	.429	.49
January	2,080	240	634	.885	1.02
February	3,200	220	1,240	1.73	1.80
March	4,530	1,430	2,320	3.24	3.74
April	3,680	523	1,690	2.36	2.63
May	2,060	565	1,200	1.68	1.94
June	6,190	366	1,480	2.07	2.31
July	3,460	210	925	1.29	1.49
August	804	140	282	.394	.45
September	664	95	210	.293	.33
The year	6,190	70	916	1.28	17.36

SHAWANGUNK KILL AT PINE BUSH, N. Y.

LOCATION.—Staff gage at Hardenburg Bridge, half a mile northeast of Pine Bush, Orange County, and 5½ miles below Platte Kill.

DRAINAGE AREA.—103 square miles.

RECORDS AVAILABLE.—September, 1924, to September, 1931.

EXTREMES.—Maximum discharge during year, about 1,860 second-feet Mar. 29 (gage height, about 5.6 feet); minimum, 14 second-feet Oct. 4, 5, 14, 15, Sept. 30 (gage height, 0.66 foot).

1924-1931: Maximum discharge, about 4,310 second-feet Sept. 1, 1927 (gage height, 10.5 feet); minimum, 2.8 second-feet Aug. 5, 1930 (gage height, 0.37 foot).

REMARKS.—Records good except those for periods of ice effect, Nov. 29, 30, Dec. 3, 4, Dec. 14 to Mar. 6, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	21	65	44	55	440	351	113	101	25	27	28
2	16	17	91	40	46	420	610	95	103	22	23	30
3	15	15	75	36	44	340	378	95	72	21	27	122
4	14	21	46	40	34	300	378	86	52	21	29	79
5	14	78	43	46	34	280	296	73	41	21	28	43
6	15	98	39	280	32	260	209	69	34	86	24	29
7	15	51	43	340	32	222	250	80	32	128	22	23
8	15	30	45	300	30	430	296	329	408	115	20	20
9	15	28	45	260	30	580	209	488	396	93	18	18
10	15	25	41	200	30	378	170	312	631	842	20	17
11	15	23	38	120	28	312	146	236	410	574	24	18
12	15	22	41	95	30	296	122	250	170	217	38	16
13	15	22	45	75	44	250	105	236	97	97	40	15
14	14	25	42	60	60	222	89	265	79	64	39	15
15	16	39	34	50	85	265	79	344	69	52	51	15
16	19	389	32	50	140	250	72	209	67	46	115	15
17	19	520	32	55	180	209	70	183	784	39	46	18
18	22	250	32	60	280	236	73	133	363	37	31	31
19	23	183	32	85	440	209	65	107	150	44	29	18
20	22	126	38	160	480	209	58	89	97	52	28	18
21	18	88	46	140	460	222	53	180	73	427	22	23
22	18	73	44	80	420	209	53	286	59	158	22	25
23	16	64	42	60	380	196	266	361	55	101	20	22
24	15	58	38	50	360	209	440	236	62	84	18	18
25	16	56	40	50	400	312	209	196	53	62	16	15
26	16	61	46	55	420	430	554	146	48	44	18	15
27	15	61	80	75	400	344	462	109	43	34	76	18
28	16	44	150	160	380	433	236	82	34	30	198	18
29	16	42	110	140	-------	1,570	196	70	29	28	77	15
30	18	42	60	100	-------	613	158	61	26	27	43	14
31	22	-------	50	75	-------	344	-------	79	-------	28	31	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	23	14	16.6	0.161	0.19
November	520	15	85.7	.832	.93
December	150	32	51.8	.503	.58
January	340	36	109	1.06	1.22
February	480	28	191	1.85	1.93
March	1,570	196	355	3.45	3.98
April	610	53	222	2.16	2.41
May	488	61	181	1.76	2.03
June	784	26	155	1.50	1.67
July	842	21	117	1.14	1.31
August	198	16	39.4	.383	.44
September	122	14	25.7	.250	.28
The year	1,570	14	129	1.25	16.97

WAPPINGER CREEK NEAR WAPPINGER FALLS, N. Y.

LOCATION.—Water-stage recorder 2½ miles above Wappinger Falls, Dutchess County.

DRAINAGE AREA.—186 square miles.

RECORDS AVAILABLE.—August, 1928, to September, 1931 (discontinued). May, 1903, to June, 1905, at station half a mile below (gage heights only).

EXTREMES.—Maximum discharge during year, 1,220 second-feet Mar. 29 (gage height, 3.99 feet); minimum not determined, owing to backwater conditions. 1928–1931: Maximum discharge, 2,630 second-feet Mar. 6, 1929 (gage height, 7.0 feet); minimum, 9.3 second-feet Aug. 6, 1930.

REMARKS.—Records good except those for periods of ice effect, Dec. 15–18, 22–26, Dec. 31 to Jan. 5, Jan. 9 to Feb. 24, for periods of backwater from logs on control, July 22 to Sept. 24, and those estimated, Sept. 25–30, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	61	166	60	65	560	725	200	398	97	30	50
2	39	61	180	48	80	515	1,040	188	331	88	32	44
3	38	52	126	60	60	497	868	180	249	84	50	48
4	36	46	117	60	80	484	772	177	216	82	40	70
5	34	65	113	70	75	434	678	160	194	68	34	65
6	34	150	113	182	75	394	582	148	177	134	30	60
7	33	107	117	249	75	384	724	156	166	232	30	44
8	29	82	120	203	75	456	935	229	280	156	32	40
9	30	68	115	150	75	772	795	416	294	129	36	36
10	30	59	113	120	75	725	655	335	366	166	42	40
11	30	58	107	110	60	655	582	540	434	203	50	34
12	18	50	111	110	70	582	538	538	348	180	55	30
13	15	52	115	100	80	560	470	484	275	133	70	24
14	20	52	103	90	95	492	416	502	229	107	70	22
15	23	58	85	60	140	538	371	750	200	117	55	28
16	32	120	70	100	150	582	331	582	194	103	95	26
17	26	389	65	110	160	538	306	515	609	101	100	30
18	29	515	65	110	420	497	319	443	515	81	85	28
19	29	384	66	110	850	506	286	371	366	68	65	30
20	35	290	65	120	700	502	260	323	283	77	75	30
21	33	239	64	110	650	492	236	310	242	74	75	26
22	33	216	65	80	550	479	216	362	213	90	60	28
23	35	191	60	80	500	461	294	499	188	95	42	24
24	34	171	60	80	480	434	416	582	194	70	40	26
25	35	166	50	70	492	438	306	452	174	46	38	27
26	23	185	60	75	510	479	279	416	166	42	34	27
27	28	169	79	90	538	434	314	353	166	44	42	27
28	45	140	104	95	538	394	267	290	138	42	70	21
29	42	111	101	95	-------	803	236	256	120	38	100	22
30	45	111	91	85	-------	1,080	219	236	107	36	75	21
31	48	-------	75	75	-------	820	-------	279	-------	36	60	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	48	15	32.2	0.173	0.20
November	515	46	147	.790	.88
December	180	50	94.9	.510	.59
January	249	48	102	.548	.63
February	850	60	276	1.48	1.54
March	1,080	384	548	2.95	3.40
April	1,040	216	481	2.59	2.89
May	750	148	364	1.96	2.26
June	609	107	261	1.40	1.56
July	232	36	97.4	.524	.60
August	100	30	55.2	.297	.34
September	70	21	34.3	.184	.21
The year	1,080	15	207	1.11	15.10

HACKENSACK RIVER BASIN

HACKENSACK RIVER AT NEW MILFORD, N. J.

LOCATION.—Water-stage recorder at pumping plant of Hackensack Water Co., New Milford, Bergen County, 3½ miles below mouth of Dwars Kill.

DRAINAGE AREA.—113 square miles.

RECORDS AVAILABLE.—October, 1921, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,220 second-feet June 17 (gage height, 3.25 feet).

1921–1931: Maximum discharge, about 2,500 second-feet (revised) Sept. 2, 1927, July 6, 1928; maximum gage height, 4.58 feet Sept. 2, 1927.

REMARKS.—Records excellent except those estimated Jan. 17, 18 Apr. 4–11, and those below 40 second-feet, which are good. Flow regulated by storage in Oradell Reservoir, 1 mile above gage. Water diverted at New Milford. Record of diversions and part of equipment furnished by Hackensack Water Co.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2	2	93	101	29	90	388	176	254	5	0	0
2	2.6	2	81	75	27	87	447	185	109	0	0	0
3	2	2	10	72	21	87	391	158	52	0	0	2
4	2	2	2	37	25	87	320	120	58	0	0	0
5	2	2	2	16	14	77	280	112	58	0	0	0
6	2.8	2	2	89	16	97	260	109	52	1	0	0
7	2	2	2	253	12	101	280	112	56	2	0	0
8	2	2	2	137	16	316	360	326	423	30	0	0
9	2	2	2	128	24	568	320	364	323	24	0	0
10	2	2	39	124	120	319	280	281	306	26	0	0
11	2	2	54	81	116	243	220	450	359	80	0	0
12	2	2	32	75	90	228	176	294	253	48	0	0
13	2	2	27	118	90	141	141	310	209	32	0	0
14	2	2	18	116	315	101	128	411	81	24	0	0
15	2	2	10	71	202	120	116	243	101	18	0	0
16	2	2	11	27	32	116	105	238	133	11	0	0
17	2	2	7.5	23	60	116	97	218	704	0	0	0
18	2	2	4.7	19	726	90	97	185	369	0	0	0
19	2	2	3.8	16	495	90	81	95	186	0	1	46
20	2	2	2	147	376	124	75	87	150	0	0	91
21	2	4.8	2	122	266	163	72	242	125	0	0	124
22	2	192	2	21	150	154	63	238	31	8	0	154
23	2	176	13	30	128	141	533	400	48	4	0	92
24	2	167	3.6	38	124	116	562	364	53	2	0	66
25	2	30	2	29	120	124	118	156	40	0	0	23
26	2	33	8.2	27	112	145	510	167	28	0	0	5
27	2	35	299	30	90	116	614	167	26	0	0	0
28	2	2	403	38	75	120	392	128	18	0	0	0
29	2	2	243	45	------	467	137	105	9	0	0	0
30	2	5.4	183	45	------	380	94	90	1	0	0	0
31	2	------	150	40	------	310	------	68	------	0	0	------

Month	Observed			Corrected for storage and diversion		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	2.8	2	2.05	33.5	0.296	0.34
November	192	2	22.9	140	1.24	1.38
December	403	2	55.3	107	.947	1.09
January	253	16	70.6	128	1.13	1.30
February	726	12	138	191	1.69	1.76
March	568	77	175	227	2.01	2.32
April	614	63	255	309	2.73	3.05
May	450	68	213	265	2.35	2.71
June	704	1	154	207	1.83	2.04
July	80	0	10.2	65.0	.575	.66
August	1	0	.03	49.4	.437	.50
September	154	0	20.1	48.9	.433	.48
The year	726	0	92.5	147	1.30	17.63

PASSAIC RIVER BASIN

PASSAIC RIVER NEAR MILLINGTON, N. J.

LOCATION.—Water-stage recorder at Davis Bridge, 1 mile upstream from Millington, Somerset County, and 1½ miles below mouth of Black Brook.

DRAINAGE AREA.—55 square miles.

RECORDS AVAILABLE.—November, 1921, to September, 1931. At Millington, November, 1903, to July, 1906.

EXTREMES.—Maximum discharge during year, 460 second-feet Mar. 30 (gage height, 6.22 feet); minimum, 3.6 second-feet Oct. 23 (gage height, 3.68 feet). 1903–1906, 1921–1931: Maximum discharge, 2,000 second-feet Mar. 8, 1904 (gage height, 7.50 feet); minimum, 2.5 second-feet Oct. 18, 1923.

REMARKS.—Records excellent except those estimated, Nov. 7–15, 28, 29, Dec. 13–20, 25–27, 31, Jan. 1–3, and those for periods of ice effect, Jan. 13–15, Feb. 3–7, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.2	16	48	44	18	58	290	55	59	14	30	24
2	7.8	15	42	30	14	61	309	50	54	14	26	18
3	9.6	7.8	24	26	11	56	263	50	42	16	23	56
4	5.2	7.8	20	26	10	54	208	46	35	12	29	83
5	5.2	17	18	44	9	54	154	38	27	16	25	71
6	6.9	26	21	196	9	52	120	36	25	25	20	61
7	7.8	16	25	172	9	48	110	36	36	37	21	46
8	7.8	10	26	123	9.1	160	123	59	144	32	18	27
9	7.8	9	23	81	19	394	114	91	156	24	12	20
10	8.6	9	22	59	51	358	96	87	154	62	16	15
11	10	9	20	44	55	273	85	103	187	185	19	16
12	10	9	20	36	55	178	75	98	172	205	46	14
13	6.0	9	19	32	66	123	63	96	136	113	44	12
14	6.0	10	17	26	191	102	55	100	108	64	36	12
15	7.4	50	16	18	173	87	47	100	71	84	29	18
16	8.6	84	14	16	103	80	44	81	73	94	32	17
17	6.9	123	13	15	92	71	40	64	154	87	24	15
18	7.4	194	12	16	286	61	37	50	160	80	18	16
19	8.2	201	11	28	316	58	34	42	134	64	16	11
20	7.8	152	11	51	232	67	32	37	120	48	14	11
21	6.4	123	11	51	142	81	31	67	91	51	15	12
22	5.6	98	10	37	98	73	28	106	50	90	14	14
23	4.8	75	10	25	83	61	61	128	40	90	12	11
24	5.6	56	11	20	73	54	69	134	37	84	12	10
25	6.0	50	11	18	67	69	54	100	34	83	15	8.6
26	7.8	44	15	18	63	87	72	77	27	69	10	10
27	7.4	37	110	25	61	77	154	59	25	49	11	12
28	6.0	32	201	34	55	69	120	46	22	37	37	10
29	7.4	18	192	32	------	350	100	38	17	35	39	11
30	9.1	20	146	27	------	430	75	35	17	36	43	6.0
31	15	------	100	23	------	348	------	31	------	32	36	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	15	4.8	7.56	0.137	0.16
November	201	7.8	50.9	.925	1.03
December	201	10	40.0	.727	.84
January	196	15	44.9	.816	.94
February	316	9	84.6	1.54	1.60
March	430	48	132	2.40	2.77
April	309	28	102	1.85	2.06
May	134	31	69.0	1.25	1.44
June	187	17	80.2	1.46	1.63
July	205	12	62.3	1.13	1.30
August	46	10	23.9	.435	.50
September	83	6.0	22.3	.405	.45
The year	430	4.8	59.8	1.09	14.72

PASSAIC RIVER AT PATERSON, N. J.

LOCATION.—At hydroelectric power plant of the Society for Establishing Useful Manufactures in Paterson, Passaic County.

DRAINAGE AREA.—785 square miles.

RECORDS AVAILABLE.—January, 1898, to September, 1931.

REMARKS.—Flow regulated by storage in Wanaque, Newark, and Jersey City reservoirs and Greenwood Lake. Diversions for municipal uses above station. Base data furnished by John H. Cook, deputy governor, The Society for Establishing Useful Manufactures, by North Jersey District Water Supply Commission, Passaic Consolidated Water Co., Newark waterworks, Jersey City waterworks, Commonwealth Water Co., and East Orange waterworks. Daily discharge represents total flow just above Great Falls.

Daily and monthly discharge, in second-feet, 1929–1931

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1929–30												
1	31	233	251	1,331	427	1,704	619	733	343	376	45	67
2	692	299	245	1,316	481	1,733	702	757	297	564	90	170
3	1,286	523	258	1,334	423	1,632	689	854	252	822	98	117
4	925	726	220	1,349	572	1,468	573	757	162	726	48	79
5	681	754	210	1,158	1,265	1,329	531	717	238	419	51	31
6	622	757	193	875	1,195	1,174	717	499	129	459	47	134
7	553	764	210	849	1,027	1,151	1,985	287	179	525	49	94
8	343	669	252	809	998	2,698	2,426	279	147	420	32	36
9	277	620	316	845	841	3,614	2,088	356	197	270	28	99
10	240	545	374	855	704	3,266	1,799	398	1,136	245	52	31
11	101	338	326	845	523	3,099	1,690	220	1,661	252	34	31
12	192	209	291	686	443	3,140	1,563	225	1,449	216	33	31
13	133	295	302	1,021	685	2,964	1,443	242	1,322	244	30	30
14	87	256	544	1,410	1,099	2,677	1,389	219	1,249	240	30	28
15	113	312	769	2,149	1,174	2,378	1,335	361	1,108	229	28	187
16	68	398	885	2,006	935	2,117	1,361	656	1,030	139	27	290
17	115	344	756	1,657	763	1,891	1,502	392	785	142	85	459
18	103	807	1,455	1,861	901	1,692	1,691	406	797	125	54	244
19	63	1,275	2,757	1,604	753	1,561	1,629	465	721	139	79	242
20	100	966	2,913	1,552	861	1,399	1,590	423	604	68	151	201
21	53	988	2,441	1,519	1,178	1,335	1,359	410	409	78	66	103
22	325	869	2,116	1,418	1,367	1,203	1,351	363	319	61	107	206
23	1,372	843	1,798	1,334	1,426	1,020	1,303	368	215	43	398	42
24	1,407	589	1,659	1,081	1,500	730	1,100	347	280	142	485	90
25	1,061	555	1,589	937	1,584	1,017	1,000	495	130	215	449	172
26	712	539	1,478	717	1,790	1,263	774	501	291	290	179	54
27	491	385	1,348	628	1,784	1,330	708	456	350	282	201	112
28	427	531	1,317	641	1,746	1,122	716	339	763	193	68	167
29	355	320	1,400	536	-------	1,006	664	438	397	91	183	86
30	309	298	1,440	538	-------	803	700	480	419	156	68	80
31	321	-------	1,392	371	-------	931	-------	423	-------	48	128	------

Daily and monthly discharge, in second-feet, of Passaic River at Paterson, N. J., 1929–1931—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	32	105	320	813	197	646	2,532	1,763	1,510	345	213	289
2	56	40	294	716	230	722	3,003	1,579	1,783	119	69	370
3	32	74	301	721	190	574	2,965	1,481	1,485	269	211	379
4	153	143	301	547	173	681	2,789	1,317	1,271	249	224	382
5	28	163	228	698	89	621	2,647	1,092	955	127	215	436
6	31	201	231	1,317	149	620	2,410	937	772	279	184	407
7	32	229	236	1,391	177	629	2,357	826	734	372	133	339
8	31	244	226	1,039	153	1,782	2,519	1,772	1,730	398	102	283
9	32	182	178	1,105	342	2,707	2,311	3,026	2,393	380	89	279
10	31	87	214	1,002	460	2,457	2,024	2,850	2,588	724	88	259
11	30	147	187	839	480	1,987	1,890	2,652	2,812	1,498	172	97
12	28	28	167	757	481	1,796	1,707	2,425	2,585	1,554	228	133
13	30	142	222	546	592	1,666	1,462	2,368	2,265	1,435	231	34
14	31	53	253	442	983	1,656	1,312	2,310	1,974	1,412	234	55
15	30	497	107	307	785	1,454	1,041	2,243	1,723	1,393	306	51
16	31	743	104	258	824	1,323	856	2,013	2,051	1,231	239	100
17	31	1,365	51	318	1,049	1,131	751	1,763	3,897	1,178	175	118
18	29	1,660	130	233	2,156	917	732	1,544	3,953	999	229	103
19	28	1,572	130	402	1,947	793	609	1,350	3,062	994	235	180
20	31	1,305	118	526	1,670	902	507	1,239	2,604	966	104	88
21	32	1,104	127	530	1,566	899	513	1,261	2,254	878	138	28
22	32	1,065	56	463	1,427	965	507	1,756	1,870	742	158	60
23	32	930	68	304	1,358	758	1,164	2,118	1,607	664	146	93
24	87	685	192	317	1,315	706	2,409	2,083	1,463	674	130	88
25	57	703	222	239	1,154	748	1,963	1,868	1,293	629	166	60
26	42	518	181	220	947	886	2,262	1,737	928	596	111	104
27	32	396	879	234	845	984	2,820	1,586	759	431	91	78
28	31	347	1,264	243	735	1,016	2,638	1,209	652	411	636	95
29	46	219	1,079	300	-------	2,081	2,361	1,255	511	356	550	61
30	100	221	909	301	-------	2,376	2,021	1,024	427	235	403	66
31	130	-------	783	306	-------	2,313	-------	853	-------	190	388	------

Month	Observed			Corrected for storage and diversion		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
1929–30						
October	1,407	31	437	822	1.06	1.21
November	1,275	209	567	974	1.24	1.38
December	2,913	193	1,020	1,450	1.85	2.13
January	2,149	371	1,140	1,540	1.96	2.26
February	1,790	423	1,020	1,360	1.73	1.80
March	3,614	730	1,760	2,080	2.65	3.06
April	2,426	531	1,230	1,590	2.03	2.26
May	854	219	447	686	.874	1.01
June	1,661	129	579	885	1.13	1.26
July	822	43	265	401	.511	.59
August	485	27	110	199	.254	.29
September	459	28	124	154	1.96	.22
The year	3,614	27	723	1,010	1.29	17.47
1930–31						
October	153	28	44.5	120	.153	.18
November	1,660	28	506	798	1.02	1.14
December	1,264	51	315	555	.707	.82
January	1,391	220	562	945	1.20	1.38
February	2,156	89	803	1,240	1.58	1.64
March	2,707	574	1,250	2,050	2.61	3.01
April	3,003	507	1,840	2,210	2.82	3.15
May	3,026	826	1,720	1,980	2.52	2.90
June	3,953	427	1,800	2,070	2.64	2.94
July	1,554	119	701	958	1.22	1.41
August	636	69	213	388	.494	.57
September	436	28	170	297	.378	.42
The year	3,953	28	824	1,130	1.44	19.56

ROCKAWAY RIVER AT BOONTON, N. J.

LOCATION.—Water-stage recorder below dam of Jersey City waterworks at Boonton, Morris County.
DRAINAGE AREA.—119 square miles.
RECORDS AVAILABLE.—January, 1906, to September, 1931.
REMARKS.—Records good except those estimated, which are fair. Daily-discharge table indicates flow over dam, through waste gates, and effluent from sewage-disposal plant. Water for Jersey City water supply diverted from Boonton Reservoir, a quarter of a mile above gage. Flow regulated by storage in reservoir.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			a 2.7	3.2	3.0	2.9	56	144	184	13	4.3	3.1
2			a 2.9	a 2.8	2.7	2.8	349	122	217	6.0	4.1	4.4
3			a 2.9	2.9	2.7	3.0	357	132	143	3.3	5.3	4.6
4			a 2.8	2.7	3.5	3.1	294	136	99	3.3	3.8	4.1
5			a 2.8	5.6	a 3.5	3.3	255	116	65	3.0	3.4	4.1
6			2.8	7.8	a 3.4	3.3	214	89	42	3.4	3.3	4.1
7			2.6	5.0	a 3.8	3.3	208	80	32	21	3.2	3.7
8			2.6	4.2	3.8	a 2.9	242	202	193	40	3.2	3.7
9			2.7	4.3	5.4	a 3.5	269	416	302	37	3.4	3.5
10			2.7	4.1	4.7	a 3.6	244	a 383	286	279	3.9	4.2
11			3.1	4.0	7.4	a 3.4	96	a 342	308	828	4.8	a 4.0
12			3.4	3.9	6.3	a 3.3	92	a 303	297	887	4.8	3.6
13			3.1	4.1	5.3	a 3.2	128	264	229	647	4.2	3.5
14			2.9	3.3	4.8	3.4	104	272	180	432	3.9	4.2
15			2.8	3.3	a 3.0	3.5	89	255	140	403	3.2	3.9
16	a 2.5	a 2.7	a 2.7	3.3	a 2.8	3.7	76	214	201	388	3.3	3.5
17			a 2.7	3.3	a 3.0	3.8	68	157	584	305	3.2	3.3
18			a 2.7	3.2	a 3.2	4.0	54	140	599	229	3.3	3.3
19			a 2.7	4.9	a 3.4	4.0	55	114	403	215	3.2	3.1
20			2.6	4.8	a 3.2	4.3	58	108	297	191	3.2	3.2
21			2.7	4.4	2.7	4.6	54	144	235	167	3.1	3.1
22			2.6	4.0	a 3.1	4.2	43	283	178	143	3.0	3.3
23			2.7	4.0	a 3.0	4.0	118	346	143	119	3.0	3.7
24			2.8	3.7	a 3.1	3.8	234	368	125	111	3.0	3.7
25			2.7	3.4	a 3.1	4.5	177	291	97	83	3.1	a 3.2
26			3.8	3.6	a 3.0	4.4	212	225	79	66	3.1	a 3.1
27			11	3.9	a 3.0	4.2	301	182	63	54	5.5	a 3.2
28			5.6	3.5	2.8	4.9	281	139	47	43	3.6	a 3.0
29			4.4	3.0	-------	13	204	107	28	32	3.2	a 3.2
30			4.0	2.8	-------	5.5	170	84	26	11	3.1	a 3.1
31		-------	3.7	3.0	-------	5.0	-------	75	-------	5.9	3.0	-------

Month	Observed			Corrected for storage and diversion		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	----------	----------	a 2.50	24.5	0.206	0.24
November	----------	----------	a 2.70	81.5	.685	.76
December	11	2.6	3.30	67.9	.571	.66
January	7.8	2.7	3.87	109	.916	1.06
February	7.4	2.7	3.67	132	1.11	1.16
March	13	2.8	4.08	239	2.01	2.32
April	357	43	170	274	2.30	2.57
May	416	75	201	283	2.38	2.74
June	599	26	194	281	2.36	2.63
July	887	3.0	186	277	2.33	2.69
August	5.5	3.0	3.60	82.0	.689	.79
September	4.6	3.0	3.59	58.2	.489	.55
The year	887	----------	65.1	159	1.34	18.17

a Discharge past dam estimated.

BEAVER BROOK AT OUTLET OF SPLITROCK POND, N. J.

LOCATION.—Water-stage recorder 50 feet below Splitrock Pond, 2 miles northeast of Hibernia, Morris County, and 3½ miles above mouth of Hibernia Brook.

DRAINAGE AREA.—5.5 square miles.

RECORDS AVAILABLE.—October, 1925, to September, 1931.

REMARKS.—Records good. Entire flow is regulated by operation of sluice gate in Splitrock Pond Dam. Gage-height record furnished by Jersey City Water Department.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.23	5.0	3.5	5.1	2.7	11.1	28	5.2	15.2	0.05	2.2	1.32
2	.18	3.3	4.6	4.5	2.2	11.1	29	5.6	15.6	.05	1.81	1.18
3	.18	1.08	5.0	3.4	1.89	10.9	28	5.7	15.2	.05	1.56	1.56
4	.15	.89	4.4	2.8	1.81	10.4	26	7.0	14.0	.05	1.56	1.40
5	.11	4.6	3.6	3.4	1.72	12.0	24	7.8	13.0	.05	1.40	1.25
6	.11	6.6	3.1	8.4	1.72	12.3	13.0	7.7	11.1	.08	1.25	1.10
7	.11	3.0	3.1	11.1	1.56	9.1	.41	7.8	10.4	.05	1.03	.89
8	.11	1.95	3.4	11.4	1.25	10.7	.36	14.5	14.4	.08	.83	.76
9	.11	1.48	3.5	10.4	1.64	19.9	.32	24	40	.09	.70	.64
10	.11	1.18	3.4	9.1	2.3	23	.32	26	51	5.5	.70	.58
11	.11	.89	3.1	8.0	2.6	23	.22	25	47	12.7	.89	.52
12	.11	.83	3.0	5.1	2.3	21	.15	25	43	14.4	1.48	.52
13	.11	.96	2.8	.20	2.9	19.4	.15	20	40	14.0	1.48	.41
14	.11	.54	2.2	.03	5.9	18.1	.15	19.0	36	13.3	1.40	.41
15	.08	3.7	1.48	.03	5.7	17.2	.11	19.9	30	14.4	1.40	43
16	.08	4.9	.70	.01	4.2	16.4	.05	19.0	27	14.4	1.32	60
17	.11	6.2	.36	0	4.7	16.0	.05	18.6	11.8	13.3	1.18	53
18	.08	8.8	.41	.01	14.3	13.0	.03	17.6	4.3	11.7	1.03	45
19	.08	10.6	.52	.03	19.4	13.0	.03	16.8	24	11.1	.89	35
20	.08	10.6	.58	.01	18.1	12.7	.03	16.0	40	10.4	.83	27
21	.08	9.4	.70	.01	15.6	13.3	.03	16.0	34	10.0	.70	21
22	3.9	8.4	.76	0	14.4	13.7	.03	16.4	28	9.3	.64	15.2
23	20	7.5	.83	12.2	12.7	13.3	.05	18.1	8.5	8.2	.52	11.4
24	25	6.8	.76	16.4	11.7	13.0	.05	19.0	.08	7.4	.41	8.8
25	19.4	6.0	.89	11.1	11.1	13.3	.05	18.6	.05	6.5	.32	6.9
26	14.4	5.7	.98	8.2	11.1	14.0	.11	18.1	.03	5.5	.27	5.4
27	10.2	5.2	3.2	6.8	11.1	14.0	.34	17.6	.03	4.9	.57	5.5
28	13.2	4.0	4.3	6.4	11.1	13.3	1.48	16.4	.03	4.3	1.56	5.1
29	18.1	2.1	4.8	6.0	-------	19.9	3.3	16.0	.05	3.9	1.72	4.2
30	16.0	1.39	5.1	5.3	-------	27	4.5	14.8	.05	3.3	1.64	2.9
31	10.0	-------	5.2	4.3	-------	27	-------	13.7	-------	2.6	1.48	-------

Month	Maximum	Minimum	Mean	Month	Maximum	Minimum	Mean
October	25	0.08	4.92	May	26	5.2	15.9
November	10.6	.54	4.45	June	51	.03	19.1
December	5.2	.36	2.59	July	14.4	.05	6.50
January	16.4	0	5.15	August	2.2	.27	1.12
February	19.4	1.25	7.06	September	60	.41	12.1
March	27	9.1	15.6				
April	29	.03	5.34	The year	60	0	8.31

WHIPPANY RIVER AT MORRISTOWN, N. J.

LOCATION.—Water-stage recorder at Morristown sewage disposal plant, three-quarters of a mile below Morristown, Morris County, and 8 miles above mouth of river.

DRAINAGE AREA.—29 square miles.

RECORDS AVAILABLE.—August, 1921, to September, 1931.

EXTREMES.—Maximum discharge during year, about 456 second-feet July 11 (gage height, 4.14 feet); minimum, 6.8 second-feet Oct. 6–8, 12, 23 (gage height, 0.83 foot).

1921–1931: Maximum discharge, about 1,100 second-feet Aug. 26, 1928 (gage height, 7.30 feet); minimum, 6.3 second-feet Oct. 5, 7, 1921 (gage height, 0.80 foot).

REMARKS.—Records excellent except those for periods of ice effect, Nov. 28, 29, Dec. 15–18, Jan. 2, 3, 15–17, 23, 25, 31, Feb. 1, which are good. Gage-height record furnished by commissioner of department of public works of Morristown.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.3	11.4	40	17.2	14	24	100	41	78	18.8	23	18.8
2	7.3	9.0	22	17	15.2	26	126	41	44	18.0	22	47
3	7.3	8.4	17.2	15	13.3	23	71	43	35	18.8	27	116
4	7.3	10.7	13.3	14.6	12.0	23	64	38	30	20	31	40
5	7.3	34	14.0	36	11.4	25	57	37	30	19.5	23	28
6	6.8	23	14.0	145	11.4	23	54	36	28	50	23	22
7	6.8	11.4	14.6	44	12.6	20	69	37	32	41	19.5	18.8
8	6.8	10.7	14.6	28	18.8	135	74	90	117	30	17.2	17.2
9	7.3	10.7	14.0	24	30	158	56	62	47	30	19.5	17.2
10	7.3	10.2	13.3	19.5	55	59	50	63	64	209	23	16.6
11	7.3	10.2	13.3	18.0	28	42	51	85	82	306	34	15.2
12	6.8	10.2	14.0	18.8	22	38	46	55	44	102	59	14.0
13	7.3	10.7	14.0	20	35	35	43	62	35	62	34	14.6
14	7.3	12.6	12.0	17.2	190	34	41	59	31	113	25	17.2
15	9.6	55	11	13.3	38	32	39	53	30	224	26	18.8
16	9.0	45	10	12.6	26	33	38	44	72	89	28	17.2
17	9.6	63	10	12.6	31	32	37	40	160	62	21	18.8
18	10.2	181	10	14.6	205	28	37	38	52	56	18	19.5
19	10.2	49	10.7	33	57	30	35	36	38	58	21	15.2
20	9.6	28	12.6	37	39	37	34	35	32	53	18.8	14.6
21	9.0	22	11.4	26	32	40	34	61	28	75	17.2	16.6
22	7.3	19.5	12.0	18.0	30	33	34	55	27	63	16.6	15.9
23	6.8	17.2	12.0	15	29	30	94	113	32	44	18.8	14.6
24	7.3	15.9	12.6	14.6	27	29	51	58	33	47	19.5	13.3
25	9.6	17.2	12.0	14	25	49	40	47	27	39	32	12.0
26	7.8	15.9	17.2	16.6	24	43	94	43	26	33	26	18.8
27	9.6	14.0	117	25	23	34	96	37	24	30	65	17.2
28	11.4	13	71	27	22	33	53	35	21	29	84	14.0
29	12.6	13	31	20	-------	241	47	32	19.5	30	33	13.3
30	12.6	14.0	24	18	-------	102	43	31	20	29	27	12.6
31	18.0	-------	23	15	-------	63	-------	33	-------	26	22	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	18	6.8	8.72	0.301	0.35
November	181	8.4	25.5	.879	.98
December	117	10	20.6	.710	.82
January	145	12.6	24.7	.852	.98
February	205	11.4	38.5	1.33	1.38
March	241	20	50.1	1.73	1.99
April	126	34	56.9	1.96	2.19
May	113	31	49.7	1.71	1.97
June	160	19.5	44.6	1.54	1.72
July	306	18.0	65.3	2.25	2.59
August	84	16.6	28.2	.972	1.12
September	116	12.0	21.8	.752	.84
The year	306	6.8	36.2	1.25	16.93

RAMAPO RIVER NEAR MAHWAH N. J.

LOCATION.—Water-stage recorder at highway bridge three-quarters of a mile below mouth of Mahwah River and 1 mile west of Mahwah, Berger County.
DRAINAGE AREA.—118 square miles.
RECORDS AVAILABLE.—February, 1903, to December, 1906; September, 1922, to September, 1931.
EXTREMES.—Maximum discharge during year, 1,040 second-feet Mar. 9 (gage height, 5.65 feet); minimum, 7 second-feet Dec. 16 (gage height, 1.63 feet). 1903–1906, 1922–1931: Maximum discharge, about 5,380 second-feet Oct. 9, 1903 (gage height, 9.8 feet); minimum, that of Dec. 16, 1930.
REMARKS.—Records excellent.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	26	103	91	75	246	565	370	739	74	37	81
2	21	38	103	77	86	246	712	329	597	76	37	73
3	21	35	81	77	75	231	614	316	384	72	32	65
4	20	24	75	79	57	222	518	273	302	55	36	89
5	18	53	78	92	69	221	442	244	245	63	59	69
6	19	77	70	372	64	211	384	221	200	82	46	60
7	15	74	62	364	59	192	428	207	185	96	36	52
8	16	44	78	260	67	572	565	521	581	90	35	65
9	19	42	69	211	90	985	488	812	518	82	36	43
10	17	37	77	177	100	744	413	630	630	339	32	31
11	17	32	67	156	84	550	356	646	728	503	36	32
12	17	39	70	155	77	442	316	597	565	312	49	27
13	19	28	73	153	91	370	285	534	428	165	62	30
14	17	30	59	134	142	317	253	534	342	113	52	26
15	19	132	67	112	138	309	228	503	278	100	44	52
16	13	218	47	100	118	300	205	413	325	86	49	22
17	17	326	46	101	128	274	193	356	760	76	65	40
18	15	556	61	100	597	256	185	301	581	74	61	29
19	19	481	44	120	518	258	170	268	384	76	56	27
20	22	297	41	150	356	280	153	246	293	74	60	19
21	17	209	52	129	280	298	146	303	236	66	49	37
22	14	166	45	108	249	282	137	370	194	63	44	32
23	18	132	46	96	249	271	541	472	178	59	40	28
24	21	127	51	94	244	268	760	442	179	80	51	32
25	11	117	49	84	240	316	518	342	153	70	40	23
26	16	116	56	98	246	398	581	302	130	62	27	37
27	17	99	171	87	253	398	812	257	118	65	153	33
28	17	90	187	93	233	342	630	219	102	59	437	30
29	15	76	131	109	-------	744	518	194	92	59	192	52
30	12	69	113	99	-------	850	428	174	80	39	124	29
31	17	-------	97	88	-------	630	-------	198	-------	37	95	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	30	11	17.6	0.149	0.17
November	556	24	126	1.07	1.19
December	187	41	76.4	.647	.75
January	372	77	134	1.14	1.31
February	597	57	178	1.51	1.57
March	985	192	388	3.29	3.79
April	760	137	418	3.54	3.95
May	812	174	374	3.17	3.66
June	760	80	351	2.97	3.31
July	503	37	105	.890	1.03
August	437	27	70.1	.594	.68
September	89	19	42.2	.358	.40
The year	985	11	190	1.61	21.81

RAMAPO RIVER AT POMPTON LAKES, N. J.

LOCATION.—Water-stage recorders at hydroelectric plant in Pompton Lakes Passaic County, 1½ miles above mouth.
DRAINAGE AREA.—160 square miles.
RECORDS AVAILABLE.—October, 1921, to September, 1931.
EXTREMES.—Maximum discharge during year, 1,190 second-feet (flow through turbines not included) May 9 (gage height, 0.97 foot).
1921–1931: Maximum discharge, about 7,220 second-feet (flow through turbines not included) Sept. 2, 1927 (gage height 2.68 feet).
REMARKS.—Records good. Tables of daily and monthly discharge include flow over spillway and through turbines. Slight regulation of flow by storage in lake. Gage-height and power-house records furnished by Jersey Central Power & Light Co.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51	4.0	a 68	144	a 145	286	704	454	683	70	36	74
2	51	44	a169	129	a 140	291	924	398	742	73	67	b 83
3	41	44	a115	124	a 140	282	764	390	473	164	16.5	b 94
4	41	37	a111	127	a 135	277	620	351	364	77	70	b 91
5	4.0	47	a 76	127	a 130	273	518	313	312	b 23	57	b 80
6	28	110	122	369	a 130	261	444	289	273	b164	a 70	67
7	28	98	97	443	a 130	250	465	273	245	b164	a 50	70
8	28	71	61	303	a 125	421	634	678	610	b164	ba50	50
9	28	44	170	278	a 125	1,290	581	a1,200	686	b 77	ba50	84
10	4.0	51	71	258	a 130	1,100	474	a 984	706	b149	ba50	36
11	47	51	91	240	a 135	676	407	a 934	964	516	ba55	40
12	4.0	51	94	234	a 140	415	359	a 834	752	401	ba55	23
13	33	51	110	167	a 150	434	321	a 754	538	239	ba55	42
14	33	51	99	a 152	a 160	374	308	a 654	416	177	ba55	50
15	28	115	66	a 150	a 170	366	282	a 554	341	164	55	46
16	33	273	a 90	a 150	a 190	351	264	495	372	164	54	46
17	4.0	368	a 76	a 150	a 220	332	250	416	1,090	131	54	46
18	20	502	a 76	a 150	a 670	308	a 241	362	871	3.0	80	50
19	4.0	512	a 79	a 150	a 720	297	a 234	332	543	143	54	50
20	16.5	357	101	a 165	a 450	328	a 234	a 309	389	70	90	40
21	16.5	286	4.0	a 210	354	351	234	a 304	302	99	57	16
22	37	174	71	a 210	310	332	139	a 404	251	134	57	57
23	37	194	71	a 190	a 250	319	582	586	238	29	43	40
24	4.0	179	71	a 165	a 180	313	1,160	583	238	140	50	32
25	47	179	71	a 145	a 225	344	707	434	214	36	67	36
26	4.0	170	71	138	308	407	752	381	186	110	40	23
27	4.0	41	157	144	308	407	1,200	332	176	93	62	43
28	44	a 98	305	149	286	374	876	291	164	67	434	29
29	41	a 90	238	161	------	846	662	264	164	70	267	56
30	4.0	a 97	211	154	------	1,250	542	246	164	97	185	50
31	41	------	149	a 150	------	854	------	240	------	29	134	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	51	4.0	26.0	0.162	0.19
November	512	4.0	146	.912	1.02
December	305	4.0	108	.675	.78
January	443	124	188	1.18	1.36
February	720	125	234	1.46	1.52
March	1,290	250	465	2.91	3.36
April	1,200	139	529	3.31	3.69
May	1,200	240	485	3.03	3.49
June	1,090	164	449	2.81	3.14
July	516	3.0	130	.812	.94
August	434	16.5	81.3	.508	.59
September	94	16	51.5	.322	.36
The year	1,290	3.0	241	1.51	20.44

[a] Discharge over spillway estimated.
[b] Discharge through turbines estimated.

GREENWOOD LAKE AT THE GLENS, N. J.

LOCATION.—Staff gage on Erie Railroad bridge 100 feet above dam at The Glens, Passaic County.

DRAINAGE AREA.—27 square miles.

RECORDS AVAILABLE.—June, 1898, to November, 1903; June, 1907, to September, 1931.

EXTREMES.—Maximum stage during year, 100.25 feet Apr. 8–11, 18–23; minimum, 99.6 feet Oct. 9–15.

1898–1903, 1907–1931: Maximum gage height, about 104.0 feet Oct. 9–14, 1903; minimum, 93.25 feet several days in November, 1900.

REMARKS.—Greenwood Lake Dam was constructed to provide storage for Morris Canal. Navigation in canal was abandoned by act of State legislature Mar. 13, 1924; very little regulation of lake subsequent to that date. Records furnished by Morris Canal & Banking Co.

Daily gage height in feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	99.65	99.75	100.0	99.9	99.95	100.1	100.2	100.15	100.05	100.1	99.9	99.9
2	99.65	99.8	100.0	99.9	99.95	100.1	100.2	100.15	100.05	100.1	99.9	99.9
3	99.65	99.8	100.0	99.9	99.95	100.1	100.2	100.1	100.05	100.05	99.9	99.9
4	99.65	99.8	99.95	99.85	99.95	100.1	100.2	100.1	100.05	100.05	99.9	99.9
5	99.65	99.8	99.95	99.85	99.95	100.1	100.2	100.05	100.05	100.05	99.9	99.9
6	99.65	99.8	99.95	99.85	100.0	100.1	100.2	100.05	100.05	100.05	99.9	99.9
7	99.65	99.8	99.95	99.85	100.0	100.1	100.2	100.05	100.1	100.1	99.9	99.85
8	99.65	99.85	99.95	99.9	100.0	100.15	100.25	100.1	100.1	100.1	99.95	99.85
9	99.6	99.85	99.9	99.9	100.0	100.15	100.25	100.1	100.1	100.1	99.95	99.85
10	99.6	99.85	99.9	99.9	100.0	100.15	100.25	100.1	100.1	100.1	99.95	99.85
11	99.6	99.85	99.9	99.9	100.0	100.15	100.25	100.15	100.1	100.05	99.9	99.8
12	99.6	99.85	99.9	99.9	100.05	100.2	100.2	100.15	100.1	100.05	99.9	99.8
13	99.6	99.9	99.9	99.9	100.05	100.2	100.2	100.15	100.15	100.05	99.9	99.8
14	99.6	99.9	99.9	99.9	100.05	100.2	100.2	100.15	100.15	100.05	99.9	99.8
15	99.6	99.9	99.9	99.9	100.05	100.2	100.2	100.2	100.15	100.0	99.85	99.8
16	99.65	99.9	99.85	99.9	100.1	100.2	100.2	100.2	100.1	100.0	99.85	99.8
17	99.65	99.9	99.85	99.85	100.1	100.2	100.2	100.2	100.1	100.0	99.85	99.7
18	99.65	99.95	99.85	99.85	100.1	100.15	100.25	100.15	100.1	100.0	99.85	99.7
19	99.7	99.95	99.85	99.85	100.1	100.15	100.25	100.1	100.1	100.0	99.85	99.7
20	99.7	99.95	99.85	99.85	100.1	100.15	100.25	100.1	100.05	100.0	99.9	99.7
21	99.7	99.9	99.85	99.9	100.05	100.15	100.25	100.1	100.05	99.95	99.9	99.7
22	99.7	99.95	99.9	99.9	100.05	100.2	100.25	100.1	100.05	99.95	99.9	99.7
23	99.7	99.95	99.9	99.9	100.05	100.2	100.25	100.05	100.05	99.95	99.9	99.7
24	99.75	100.0	99.9	99.9	100.05	100.2	100.2	100.05	100.05	99.95	99.9	99.7
25	99.75	100.0	99.9	99.9	100.1	100.15	100.2	100.05	100.1	99.95	99.9	99.7
26	99.75	100.0	99.9	99.9	100.1	100.15	100.2	100.05	100.1	99.9	99.85	99.7
27	99.75	100.0	99.9	99.9	100.1	100.15	100.2	100.05	100.1	99.9	99.85	99.7
28	99.7	100.0	99.85	99.9	100.1	100.15	100.2	100.1	100.1	99.9	99.85	99.7
29	99.7	100.0	99.85	99.95	-------	100.2	100.2	100.1	100.1	99.9	99.85	99.65
30	99.75	100.0	99.85	99.95	-------	100.2	100.2	100.1	100.1	99.9	99.85	99.7
31	99.75	-------	99.85	99.95	-------	100.2	-------	100.1	-------	99.9	99.85	-------

WANAQUE RIVER AT GREENWOOD LAKE, N. J.

LOCATION.—Water-stage recorder 600 feet downstream from dam at outlet of Greenwood Lake at The Glens, Passaic County.

DRAINAGE AREA.—27 square miles.

RECORDS AVAILABLE.—May, 1919, to September, 1931.

EXTREMES.—Maximum discharge during year, 242 second-feet June 17 (gage height, 2.52 feet); no flow during several periods.

1919–1931: Maximum discharge, about 600 second-feet Apr. 7, 1924 (gage height, 3.72 feet); minimum stage occurs at times gates at Greenwood Lake are closed and no water is passing over spillway.

REMARKS.—Records excellent. Flow regulated by storage in lake. (See record of Greenwood Lake at The Glens.) Gage-height record furnished by North Jersey District Water Supply Commission.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.2	0	30	35	24	60	168	93	62	16	3.3	33
2	.4	0	28	30	21	60	181	80	55	12	1.9	29
3	.4	0	23	27	19	59	170	75	47	9.8	2.1	39
4	.9	.1	22	25	17	56	146	64	38	9.3	2.4	34
5	.1	2.2	19	28	16	60	122	55	34	8.2	.9	27
6	0	.9	18	61	15	55	108	48	27	16	.6	22
7	0	.1	18	80	17	52	107	45	30	22	.6	18
8	0	0	18	75	24	84	113	82	98	21	.8	13
9	0	0	15	68	30	167	108	139	117	22	.2	7.9
10	0	0	16	62	36	173	98	143	132	75	.8	7.0
11	0	0	15	56	33	154	97	142	139	99	1.8	6.4
12	0	0	20	56	29	133	80	128	125	86	6.1	4.5
13	0	0	19	55	26	115	65	121	106	65	3.1	2.6
14	0	0	18	50	32	98	61	111	88	53	3.3	3.2
15	2.7	11	14	46	32	88	53	106	73	46	4.2	4.2
16	0	32	1.9	40	31	80	46	97	89	39	4.7	3.7
17	.6	57	6.6	35	30	74	39	89	220	31	2.4	2.6
18	0	122	9.5	33	68	68	37	71	224	29	1.4	3.3
19	0	136	16	39	95	64	31	62	178	29	5.5	1.7
20	0	116	22	44	99	69	28	55	143	24	10	.6
21	0	93	21	42	93	66	26	64	113	22	7.4	1.0
22	0	79	19	38	87	62	24	70	82	26	4.6	1.0
23	0	65	20	34	78	60	88	80	68	24	2.8	1.4
24	0	54	21	32	72	56	125	80	64	24	4.8	2.3
25	1.4	49	18	28	68	61	108	70	52	22	.4	.4
26	0	42	19	26	64	73	122	67	44	16	4.0	.1
27	0	37	47	24	64	68	158	58	36	14	24	1.0
28	0	30	50	24	60	65	144	50	30	12	69	1.9
29	0	22	47	26	-------	137	132	44	26	10	66	.2
30	0	18	44	26	-------	186	112	39	20	11	56	0
31	0	-------	38	26	-------	175	-------	40	-------	7.4	44	-------

Month	Maximum	Minimum	Mean	Month	Maximum	Minimum	Mean
October	2.7	0	0.25	May	143	39	79.6
November	136	0	32.2	June	224	20	85.3
December	50	1.9	22.4	July	99	7.4	29.1
January	80	24	41.0	August	69	.2	10.9
February	99	15	45.7	September	39	0	9.07
March	186	52	89.6				
April	181	24	96.6	The year	224	0	45.0

WANAQUE RIVER AT WANAQUE, N. J.

LOCATION.—Water-stage recorder above weir 50 feet above highway bridge in Wanaque, Passaic County. Prior to Mar. 14, 1931, recorder was 400 feet below highway bridge.

DRAINAGE AREA.—94 square miles (increased from 91 square miles by diverting Post Brook into Wanaque Reservoir).

RECORDS AVAILABLE.—December, 1903, to December, 1905; May, 1912, to May, 1915; May, 1919, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,210 second-feet June 17 (gage height, 4.69 feet); minimum, 1.6 second-feet Mar. 19.

1903–1905, 1912–1915, 1919–1931: Maximum stage, 8.35 feet July 22 or 23, 1919 (discharge not determined); minimum discharge, 1 second-foot Apr. 5, 1928 (gage height, 0.16 foot).

REMARKS.—Records good. Water diverted from Wanaque Reservoir. Flow regulated by storage in Wanaque Reservoir, just above station, and in Greenwood Lake, 11 miles upstream. Gage-height record furnished by North Jersey District Water Supply Commission.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50	46	18	17	17	17	417	275	346	21	20	18.9
2	50	46	18	17	17	17	502	239	313	18.9	20	20
3	39	48	17	16	17	17	475	243	223	20	20	20
4	51	48	16	16	17	17	424	172	157	20	20	18.9
5	51	46	16	17	17	17	371	153	129	18.9	18.9	18.9
6	51	46	16	17	17	16	327	139	91	18.9	20	18.9
7	51	46	16	17	17	17	330	129	85	18.9	20	18.9
8	38	46	16	17	17	17	374	307	355	21	18.9	18.9
9	46	48	16	17	17	17	330	545	411	20	18.9	18.9
10	48	48	16	17	17	17	287	488	411	140	18.9	20
11	50	48	16	17	17	16	255	450	437	231	18.9	20
12	51	48	16	17	17	16	202	383	383	183	18.9	20
13	48	48	16	18	17	16	168	377	305	119	18.9	20
14	48	50	16	17	17	17.7	164	346	239	97	20	20
15	48	50	16	17	17	17.7	122	346	187	61	20	18.9
16	37	51	16	17	17	18.3	112	287	270	49	20	18.9
17	43	45	16	17	17	28	103	255	1,080	33	20	18.9
18	44	50	16	18	18	50	109	202	766	27	20	18.9
19	46	48	16	18	17	6.4	77	168	504	25	18.9	20
20	46	48	16	17	17	18.3	64	143	383	24	20	20
21	46	48	16	17	17	18.3	51	179	305	22	20	18.9
22	46	27	16	16	17	18.9	43	227	198	27	18.9	18.9
23	46	16	16	16	18	20	328	279	168	22	18.9	18.9
24	46	16	16	16	18	20	488	271	168	22	18.9	20
25	46	16	17	16	17	20	377	210	129	22	18.9	20
26	46	16	17	15	16	22	419	187	100	22	18.9	18.9
27	46	16	17	15	17	20	594	157	88	21	21	18.9
28	46	17	17	16	17	24	475	129	66	21	18.9	20
29	46	17	16	17	-------	26	409	103	47	20	18.9	20
30	46	17	16	17	-------	178	333	88	24	18.9	18.9	20
31	46	-------	17	17	-------	369	-------	110	-------	22	18.9	-------

Month	Observed			Corrected for storage and diversion		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	51	37	46.5	−1.57	−0.017	−0.02
November	51	16	38.7	93.3	.993	1.11
December	18	16	16.3	53.5	.569	.66
January	18	15	16.7	126	1.34	1.54
February	18	16	17.1	140	1.49	1.55
March	369	6.4	35.8	297	3.16	3.64
April	594	43	291	327	3.48	3.88
May	545	88	245	265	2.82	3.25
June	1,080	24	279	302	3.21	3.58
July	231	18.9	45.4	71.8	.764	.88
August	21	18.9	19.4	33.2	.353	.41
September	20	18.9	19.4	−.43	−.0046	−.005
The year	1,080	6.4	89.0	142	1.51	20.48

PEQUANNOCK RIVER AT MACOPIN INTAKE DAM, N. J.

LOCATION.—Water-stage recorder at Macopin intake dam of Newark waterworks, 3 miles above Butler, Morris County.
DRAINAGE AREA.—63.7 square miles.
RECORDS AVAILABLE.—January, 1892, to September, 1931.
REMARKS.—Table of daily discharge indicates flow over intake dam only. Water diverted at intake dam. Flow regulated by several reservoirs. Station operated and base data furnished by Newark Bureau of Water.

Daily and monthly discharge, in second-feet, 1930–31

Day	Feb.	Mar.	Apr.	May	June	July
1	0	0	49	128	77	0
2	0	0	81	114	61	0
3	0	0	42	99	20	0
4	0	0	19	86	1.5	0
5	0	0	9.0	61	0	0
6	0	0	4.8	38	0	0
7	0	0	30	42	25	0
8	0	43	56	250	222	0
9	0	69	49	455	290	0
10	0	38	49	355	270	177
11	0	12	46	250	243	270
12	0	5.3	28	189	182	171
13	0	3.7	14	171	144	65
14	0	1.1	9.0	160	138	32
15	0	1.9	2.2	155	104	19
16	0	2.2	0	119	270	9.0
17	0	0	0	95	834	0
18	73	0	0	65	632	0
19	22	0	0	49	362	0
20	1.1	0	0	42	218	0
21	0	0	0	95	144	0
22	0	0	0	171	95	0
23	0	0	65	212	88	0
24	0	0	104	189	82	0
25	0	0	100	133	49	0
26	0	0	189	99	32	0
27	0	0	263	73	19	0
28	0	0	194	53	3.9	0
29	------	119	149	43	0	0
30	------	69	144	30	0	0
31	------	22	------	42	------	0

Month	Observed			Corrected for storage and diversion		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	0	0	0	−0.894	−0.014	−0.02
November	0	0	0	63.5	.997	1.11
December	0	0	0	43.0	.675	.78
January	0	0	0	67.9	1.07	1.23
February	73	0	3.43	87.1	1.37	1.43
March	119	0	12.5	217	3.41	3.93
April	263	0	56.5	202	3.17	3.54
May	455	30	131	207	3.25	3.75
June	834	0	154	229	3.59	4.00
July	270	0	24.0	88.0	1.38	1.59
August	0	0	0	24.0	.377	.43
September	0	0	0	8.80	.138	.15
The year	834	0	31.8	103	1.62	21.92

NOTE.—No flow over spillway on days for which no daily discharge is shown.

SADDLE RIVER AT LODI, N. J.

LOCATION.—Water-stage recorder at highway bridge 1 mile above Lodi, Bergen County, and 2¾ miles above mouth of river.
DRAINAGE AREA.—55 square miles.
RECORDS AVAILABLE.—September, 1923, to September, 1931.
EXTREMES.—Maximum discharge during year, 549 second-feet Apr. 24 (gage height, 4.08 feet); minimum stage, 1.44 feet Sept. 14 (discharge not determined).
1923–1931: Maximum discharge, about 1,630 second-feet Sept. 2, 1927 (gage height, 6.82 feet); minimum stage, that of Sept. 14, 1931.
REMARKS.—Records good except those for periods of ice effect, Dec. 16, Jan. 8, 9, 16, 22, 23, Feb. 1, 3, 4, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	32	50	52	34	59	121	93	123	45	24	32
2	16	23	47	50	37	61	202	88	131	45	22	35
3	18	24	39	46	34	57	206	97	77	38	23	83
4	20	22	40	42	32	57	129	93	66	44	31	65
5	17	40	38	43	31	66	106	86	61	41	29	46
6	15	65	39	143	32	65	97	77	58	58	20	40
7	17	54	39	209	28	58	112	75	61	68	25	25
8	16	38	40	85	32	93	173	127	164	59	25	29
9	20	36	38	60	46	240	145	349	268	54	18	28
10	22	32	38	50	102	192	104	257	187	61	21	22
11	18	33	33	47	72	106	86	178	227	83	29	21
12	14	32	37	48	69	88	82	153	182	62	72	18
13	15	29	39	51	65	77	75	160	102	45	56	25
14	16	27	38	47	137	77	72	166	83	44	39	23
15	22	83	34	52	90	78	65	162	71	44	32	17
16	18	182	32	38	64	72	62	133	78	38	29	22
17	16	232	27	35	58	68	59	106	214	47	25	25
18	15	302	28	41	224	64	58	95	316	39	23	30
19	18	265	29	57	386	61	58	88	141	43	33	22
20	17	125	32	92	137	75	57	82	85	46	59	18
21	21	75	30	72	95	99	54	110	68	48	37	25
22	24	62	32	55	86	83	52	184	65	40	33	25
23	20	56	31	44	82	75	134	209	61	38	28	24
24	17	50	33	42	74	72	444	274	71	38	30	17
25	21	48	33	39	68	69	235	153	64	36	28	17
26	19	48	36	39	65	92	151	106	57	35	22	11
27	20	46	122	42	61	80	271	92	54	33	20	17
28	20	41	257	44	59	69	222	75	48	32	64	21
29	21	44	182	47	------	166	127	68	46	29	58	22
30	19	38	82	43	------	302	104	61	45	32	42	17
31	30	------	61	41	------	171	------	61	------	28	36	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	30	14	18.7	0.340	0.39
November	302	22	72.8	1.32	1.47
December	257	27	52.8	.960	1.11
January	209	35	57.9	1.05	1.21
February	386	28	82.1	1.49	1.55
March	302	57	96.5	1.75	2.02
April	444	52	129	2.35	2.62
May	349	61	131	2.38	2.74
June	316	45	109	1.98	2.21
July	83	28	44.9	.816	.94
August	72	18	33.3	.605	.70
September	83	11	27.4	.498	.56
The year	444	11	71.0	1.29	17.52

ELIZABETH RIVER BASIN

ELIZABETH RIVER AT ELIZABETH, N. J.

LOCATION.—Water-stage recorder at dam just above Westfield Avenue Bridge, in Elizabeth, Union County, and 2½ miles above mouth.
DRAINAGE AREA.—20 square miles.
RECORDS AVAILABLE.—October, 1921, to September, 1931.
EXTREMES.—Maximum discharge during year, 635 second-feet Mar. 8 (gage height, 7.19 feet).
1921–1931: Maximum discharge, about 2,640 second-feet Sept. 1, 1927 (gage height, 9.71 feet).
REMARKS.—Records good. Discharge estimated June 14–22, Aug. 3–15. Diversions aggregating about 6 second-feet made above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.8	3.8	28	7.9	1.6	15	86	8.5	33	3.8	6.4	4.3
2	3.8	3.2	3.8	3.4	1.6	7.9	44	12	7.2	3.8	6.4	4.9
3	3.2	3.2	3.2	.4	1.6	7.1	22	9.3	7.0	3.8	8	16
4	2.1	24	3.2	.4	2.1	8.8	21	7.0	7.0	3.8	20	6.4
5	3.2	56	3.2	31	1.2	11	16	7.7	7.6	3.2	9	6.8
6	1.6	7.4	3.8	142	1.2	7.9	14	7.7	6.0	40	7	9.8
7	1.6	4.4	4.4	15	.4	7.1	45	17	47	25	6	9.0
8	2.1	4.4	4.4	9.5	.1	237	27	128	128	15	6	9.0
9	2.6	3.8	4.4	7.9	79	46	15	29	44	8.2	6	7.5
10	3.2	4.4	4.4	6.4	42	3.2	12	33	88	25	15	6.8
11	3.2	4.4	4.4	5.7	12	11	14	32	29	26	70	7.5
12	3.2	3.8	6.4	34	15	14	8.7	25	17	7.0	60	8.2
13	2.6	3.8	5.0	15	24	12	9.5	40	12	6.1	10	9.0
14	3.2	6.0	4.4	8.7	34	10	9.5	32	11	11	8	8.2
15	18	116	3.8	6.4	10	10	10	16	20	9.5	7	9.8
16	3.2	52	1.6	5.7	7.9	10	10	12	110	6.5	3.8	29
17	4.3	89	2.6	5.7	28	9.5	7.9	10	65	7.0	3.6	10
18	6.4	184	2.6	5.0	121	8.7	7.9	9.3	20	8.9	5.2	15
19	2.1	18	2.6	99	22	12	6.4	8.5	13	7.5	22	6.1
20	2.1	12	3.8	22	15	24	6.4	7.7	10	7.0	10	6.1
21	3.8	8.7	2.6	4.4	12	9.5	6.4	44	9	60	4.6	6.9
22	3.8	7.1	2.1	3.2	10	7.9	7.1	10	8	23	3.7	5.5
23	4.4	7.1	5.4	2.6	9.5	7.9	66	57	11	17	5.9	6.1
24	5.0	6.4	7.1	2.1	8.7	7.1	10	10	4.4	19	4.8	8.2
25	3.2	9.9	3.2	2.1	7.9	28	9.3	10	5.0	11	5.7	9.0
26	.7	5.0	27	2.1	7.9	9.5	53	9.3	5.6	9.3	6.2	17
27	3.2	5.0	184	2.1	9.5	8.7	15	7.7	3.8	8.1	9.1	9.3
28	5.0	3.8	24	2.6	8.7	14	9.3	7.0	3.2	57	9.4	6.1
29	12	3.8	13	2.6	------	231	9.3	6.3	2.7	26	49	5.0
30	3.8	5.0	10	2.6	------	36	7.7	5.6	3.2	25	4.9	3.2
31	34	------	46	2.6	------	20	------	62	------	7.3	4.9	------

Month	Observed			Corrected for diversions		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	34	0.7	4.98	9.54	0.477	0.55
November	184	3.2	22.2	26.3	1.32	1.47
December	184	1.6	13.7	18.0	.900	1.04
January	142	.4	14.8	22.9	1.14	1.31
February	121	.1	17.6	29.6	1.48	1.54
March	237	3.2	27.5	39.0	1.95	2.25
April	86	6.4	19.5	30.6	1.53	1.71
May	128	5.6	22.0	32.9	1.64	1.89
June	128	2.7	24.6	36.3	1.82	2.03
July	60	3.2	15.8	27.3	1.36	1.57
August	70	3.6	12.8	22.1	1.10	1.27
September	29	3.2	8.86	17.3	.865	.96
The year	237	.1	1.70	25.9	1.30	17.59

RAHWAY RIVER BASIN

RAHWAY RIVER AT RAHWAY, N. J.

LOCATION.—Staff gage at Church Street Bridge, in Rahway, Union County, half a mile above mouth of Robinsons Branch of Rahway River.

DRAINAGE AREA.—41 square miles.

RECORDS AVAILABLE.—July, 1908, to April, 1915; October, 1921, to September, 1931.

EXTREMES.—Maximum discharge during year, 433 second-feet Mar. 29 (gage height, 2. 70 feet); minimum, 1. 8 second-feet Nov. 7 (gage height, 0.40 foot). 1908–1915, 1921–1931: Maximum discharge, about 1,740 second-feet Aug. 2, 1927 (gage height, 6.0 feet); minimum stage, 0.00 foot Dec. 1, 1912 (discharge not determined).

REMARKS.—Records good. Discharge estimated Apr. 28. Diversions aggregating about 17 second-feet made above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7	9	24	13	12	31	117	13	183	11	12	10
2	7	6	15	11	13	32	194	22	50	11	13	9
3	6	5	13	11	11	24	88	29	25	12	11	70
4	5	12	7	9	12	28	67	26	19	14	39	22
5	7	68	6	12	12	34	44	22	19	15	16	11
6	5	19	9	172	12	28	37	24	17	37	13	10
7	5	4	6	47	10	24	73	21	20	28	10	10
8	4	7	11	19	12	183	86	70	194	22	11	11
9	5	5	11	16	28	355	50	122	97	142	11	8
10	3	5	11	15	97	122	42	68	124	60	13	8
11	3	5	8	13	38	53	40	96	133	86	42	7
12	3	3	9	16	23	42	32	44	57	29	105	6
13	5	6	10	32	33	33	28	101	37	20	25	6
14	3	8	7	19	105	29	24	74	31	28	19	6
15	6	152	7	19	42	26	25	60	26	31	18	19
16	10	91	7	9	28	25	22	39	35	22	16	8
17	6	206	6	11	24	22	23	30	194	22	18	9
18	7	218	6	12	242	22	21	28	83	25	12	11
19	7	61	6	50	83	22	23	22	35	37	10	7
20	5	24	6	58	48	25	23	22	30	22	18	8
21	4	12	7	25	37	26	22	43	25	20	14	7
22	5	17	7	20	35	25	19	50	21	44	11	7
23	4	15	7	12	31	22	77	133	23	16	9	7
24	4	12	7	15	29	22	43	53	22	20	15	7
25	5	13	7	13	23	37	28	34	18	17	14	6
26	4	12	8	14	24	34	57	17	16	12	13	6
27	4	12	172	14	24	28	74	13	18	15	14	9
28	6	12	107	15	23	26	50	11	16	13	43	9
29	8	12	32	15	------	355	30	16	17	12	16	7
30	10	11	22	15	------	268	24	16	13	26	15	6
31	29	------	15	15	------	82	------	19	------	13	11	------

Month	Observed			Corrected for diversions		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	29	3	6.19	24.4	0.595	0.69
November	218	3	34.7	52.0	1.27	1.42
December	172	6	18.6	36.6	.893	1.03
January	172	9	28.8	41.2	1.00	1.15
February	242	10	39.7	56.7	1.38	1.44
March	355	22	67.3	84.1	2.05	2.36
April	194	19	49.4	68.2	1.66	1.85
May	133	11	43.2	61.6	1.50	1.73
June	194	13	53.3	72.9	1.78	1.99
July	142	11	28.5	47.5	1.16	1.34
August	105	9	19.6	37.6	.917	1.06
September	70	6	10.9	28.8	.702	.78
The year	355	3	32.8	50.9	1.24	16.84

RARITAN RIVER BASIN

SOUTH BRANCH OF RARITAN RIVER NEAR HIGH BRIDGE, N. J.

LOCATION.—Water-stage recorder 1 mile above High Bridge, Hunterdon County, and 4 miles above mouth of Spruce Run.

DRAINAGE AREA.—65 square miles.

RECORDS AVAILABLE.—February, 1919, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,580 second-feet July 11 (gage height, 9.36 feet); minimum, 6.6 second-feet Oct. 11.

1919–1931: Maximum discharge, about 3,600 second-feet Feb. 2, 1922 (gage height, 10.97 feet); minimum, that of Oct. 11, 1930.

REMARKS.—Records excellent except those for periods of ice effect, Nov. 28–30, Dec. 15, Jan. 2–4, 16–18, 23, 24, and those estimated, Oct. 12–14, Jan. 28–30, July 28 to Aug. 2, which are fair. Equipment furnished and operated by Taylor-Wharton Iron & Steel Co.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	37	86	46	37	58	181	93	217	61	70	45
2	28	29	63	44	49	68	214	90	133	58	70	49
3	27	31	45	42	41	61	148	95	102	58	69	68
4	25	33	43	44	44	58	138	89	91	57	82	58
5	22	39	41	64	41	57	124	87	80	60	65	49
6	26	71	40	236	43	54	116	80	78	83	56	43
7	27	37	37	113	39	55	134	99	82	80	55	46
8	26	35	44	65	41	148	158	271	254	69	55	41
9	28	27	41	59	77	246	125	167	126	96	51	42
10	27	28	39	60	79	120	112	130	110	987	69	39
11	22	29	38	51	56	89	118	160	172	887	70	37
12	22	31	39	57	57	75	111	128	115	243	83	38
13	22	32	41	53	79	72	100	137	97	173	73	36
14	24	32	33	47	240	68	93	134	86	145	62	41
15	27	39	30	42	82	68	86	129	82	224	62	43
16	29	61	29	40	69	73	82	107	228	165	56	43
17	30	104	41	38	88	70	84	95	566	135	57	41
18	30	423	42	40	430	67	78	86	178	123	49	38
19	27	98	41	98	138	66	76	82	136	122	51	35
20	29	66	40	98	91	70	76	81	121	113	53	35
21	29	53	34	62	75	79	74	192	118	107	49	37
22	29	48	40	48	66	78	73	159	101	102	45	38
23	26	39	37	42	75	76	145	278	104	102	40	38
24	28	43	35	40	65	67	115	149	110	93	49	36
25	28	47	29	44	66	92	88	125	96	82	44	35
26	25	45	43	56	65	96	190	117	88	77	43	38
27	26	36	175	62	61	76	224	104	87	74	52	36
28	30	32	130	65	56	77	122	94	77	70	77	37
29	29	30	78	65	-------	570	108	92	72	70	54	35
30	29	32	61	60	-------	220	99	81	64	70	54	34
31	38	-------	50	50	-------	158	-------	122	-------	70	51	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	38	22	27.3	0.420	0.48
November	423	27	56.2	.865	.97
December	175	29	50.5	.772	.89
January	236	38	62.3	.958	1.10
February	430	37	83.9	1.28	1.33
March	570	54	104	1.60	1.84
April	224	73	120	1.85	2.06
May	278	80	124	1.91	2.20
June	563	64	132	2.03	2.26
July	987	57	157	2.42	2.79
August	83	40	58.6	.902	1.04
September	68	34	41.0	.631	.70
The year	987	22	84.7	1.30	17.66

SOUTH BRANCH OF RARITAN RIVER AT STANTON, N. J.

LOCATION.—Water-stage recorder at highway bridge near railroad station in Stanton, Hunterdon County, half a mile above mouth of Prescott Brook.

DRAINAGE AREA.—147 square miles.

RECORDS AVAILABLE.—July, 1903, to December, 1906; July, 1919, to September, 1931.

EXTREMES.—Maximum discharge during year, 2,630 second-feet July 10 (gage height, 6.76 feet); minimum, 19 second-feet Oct. 14 (gage height, 1.78 feet).

1903–1906, 1919-1931: Maximum stage, 10.5 feet Oct. 9, 1903 (discharge not determined); minimum discharge, 17 second-feet Sept. 11, 1930 (gage height 1.74 feet).

REMARKS.—Records good except those for periods of ice effect, Nov. 2[illegible]-30, Dec. 1-5, 14-27, 31, Jan. 1-3, 9-17, 21, 22, 31, Feb. 1-8, and those estimated, Jan. 23-25, which are fair. Slight diurnal fluctuation, owing to small water-power developments upstream.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	91	51	130	110	95	124	427	147	430	102	87	77
2	66	42	100	100	90	142	506	145	254	91	85	72
3	32	43	65	95	90	124	339	154	181	101	102	164
4	29	41	55	93	85	120	302	169	155	102	135	100
5	29	82	60	137	85	115	271	144	142	101	95	79
6	34	148	73	645	85	106	251	104	129	159	90	71
7	71	93	78	270	85	104	271	141	135	140	73	63
8	43	51	76	170	110	379	308	458	485	119	74	68
9	40	50	75	130	167	516	248	308	226	111	79	62
10	43	48	70	110	230	266	220	224	212	1,290	111	59
11	43	54	68	100	185	204	207	305	341	1,510	144	67
12	37	68	68	95	188	182	205	248	213	392	128	58
13	36	46	71	90	263	161	188	263	173	265	112	49
14	39	51	55	90	548	153	176	244	151	224	109	55
15	65	87	50	90	191	148	159	229	166	298	79	70
16	68	102	50	110	164	150	160	192	457	233	95	69
17	49	191	110	130	161	145	142	171	1,060	191	81	62
18	56	1,080	110	129	930	137	143	155	352	175	81	49
19	51	246	80	306	284	134	136	142	258	173	80	51
20	45	148	65	223	233	144	135	140	220	174	69	51
21	51	108	55	130	139	159	138	359	195	166	76	58
22	48	97	55	110	104	146	131	332	186	143	69	46
23	46	89	55	100	139	143	220	435	172	134	67	43
24	46	93	65	95	134	126	210	301	187	130	69	54
25	46	97	70	100	134	154	144	234	170	120	77	43
26	44	89	110	110	134	178	290	212	152	108	69	40
27	46	62	600	145	129	143	324	182	134	115	68	55
28	49	46	350	132	117	137	217	156	128	95	140	49
29	51	44	194	117	------	1,030	174	148	130	97	96	58
30	38	50	145	102	------	498	168	135	106	106	85	45
31	56	------	120	95	------	348	------	256	------	95	79	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	91	29	48.0	0.327	0.38
November	1,080	41	117	.796	.89
December	600	50	107	.728	.84
January	615	90	143	.973	1.12
February	930	85	189	1.29	1.34
March	1,030	104	213	1.45	1.67
April	506	131	227	1.54	1.72
May	458	104	220	1.50	1.73
June	1,060	106	243	1.65	1.84
July	1,510	91	234	1.59	1.83
August	144	67	90.5	.616	.71
September	164	40	62.9	.428	.48
The year	1,510	29	158	1.07	14.55

RARITAN RIVER AT MANVILLE, N. J.

LOCATION.—Water-stage recorder at highway bridge between Manville and Finderne, Somerset County, 1¼ miles above mouth of Millstone River.

DRAINAGE AREA.—490 square miles.

RECORDS AVAILABLE.—June, 1903, to March, 1907; August, 1921, to September, 1931. Gage heights only, August, 1908, to April, 1915.

EXTREMES.—Maximum discharge during year, about 9,690 second-feet July 11 (gage height 11.30 feet); minimum, about 28 second-feet Nov. 3.

1903–1907, 1921–1931: Maximum discharge, about 25,000 second-feet Oct. 10, 1903 (gage height, 15.9 feet); minimum, about 25 second-feet Aug. 8, 1930.

REMARKS.—Records good except those for periods of ice effect, Nov. 29, Dec. 2–4, 16, 17, 24–26, Jan. 1–3, 13–17, 21–25, 31, Feb. 1–6, which are fair. About 2 second-feet diverted above station and not included in records.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	82	210	280	160	380	1,420	366	1,660	241	196	161
2	89	71	200	260	150	489	2,190	333	800	221	189	158
3	101	50	160	240	160	416	1,240	340	551	217	189	714
4	82	68	150	241	150	387	1,020	333	448	221	294	333
5	68	68	158	245	160	394	860	340	402	229	237	221
6	50	122	153	2,620	150	346	746	289	352	254	199	192
7	53	161	153	960	155	327	789	284	346	394	185	173
8	62	137	153	456	155	1,900	960	800	1,990	315	179	155
9	73	95	147	472	233	2,460	767	1,020	910	250	170	142
10	78	68	137	416	1,480	1,180	630	620	910	1,790	192	132
11	66	71	134	340	1,130	860	600	910	1,860	6,070	506	122
12	76	73	134	279	498	714	551	714	1,020	1,360	600	132
13	68	109	137	240	910	590	498	681	714	778	359	137
14	73	73	137	220	1,990	515	440	703	580	640	279	124
15	59	170	127	220	736	472	402	660	481	910	250	144
16	99	233	110	220	580	440	373	551	3,200	580	284	134
17	82	542	110	220	481	424	340	472	4,720	440	245	150
18	89	2,630	119	241	3,650	380	340	402	1,540	394	206	155
19	56	960	129	1,060	1,240	359	321	359	960	394	192	147
20	58	498	134	960	910	416	315	346	756	373	237	122
21	62	373	127	260	725	456	299	736	620	481	192	132
22	59	264	117	200	489	402	304	1,130	498	681	182	137
23	53	217	134	180	506	366	432	1,990	448	359	185	127
24	52	192	130	180	481	333	515	1,240	472	409	182	122
25	52	189	120	180	432	340	387	860	409	340	176	109
26	53	185	130	192	416	432	448	714	346	269	170	114
27	47	176	2,410	221	394	366	1,180	590	333	237	164	132
28	56	101	1,880	237	359	333	590	481	294	229	229	122
29	54	110	800	221	------	4,290	456	424	264	203	250	129
30	59	137	542	196	------	2,190	402	387	254	221	206	109
31	66	------	359	180	------	1,240	------	380	------	217	182	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	101	47	66.7	0.136	0.16
November	2,630	50	274	.559	.62
December	2,410	110	311	.635	.73
January	2,620	180	401	.818	.94
February	3,650	150	674	1.38	1.44
March	4,290	327	781	1.59	1.83
April	2,190	299	660	1.35	1.51
May	1,990	284	628	1.28	1.48
June	4,720	254	938	1.91	2.13
July	6,070	203	636	1.30	1.50
August	600	164	236	.482	.56
September	333	109	166	.339	.38
The year	6,070	47	479	.978	13.28

NESHANIC RIVER AT REAVILLE, N. J.

LOCATION.—Water-stage recorder at highway bridge half a mile southwest of Reaville, Hunterdon County.
DRAINAGE AREA.—26 square miles.
RECORDS AVAILABLE.—June, 1930, to September, 1931.
EXTREMES.—Maximum discharge during year not determined; minimum, 0.2 second-foot Feb. 2 (gage height, 1.21 feet).
1930–31: Maximum discharge not determined; minimum, that of Feb. 2, 1931.
REMARKS.—Records good. Discharge estimated for periods when stage was affected by ice.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	2.5	7.8	17.4	a 4	27	138	7.8	35	5.3	2.0	1.4
2	.4	1.5	10.5	a 14	4.0	28	94	7.3	17.4	5.1	1.8	2.3
3	.4	1.2	a 3	a 11	a 4	22	58	7.8	11.9	5.1	2.0	13.0
4	.5	1.2	a 3	10.0	a 4	22	47	6.6	9.6	4.8	2.1	3.6
5	.5	2.3	2.8	66	a 3	20	36	6.0	8.5	4.8	1.8	8.9
6	.5	4.6	2.8	236	a 3	17.4	31	5.3	6.6	7.8	1.2	4.3
7	.5	2.3	2.9	39	a 3	15.8	47	6.6	24	7.8	.9	2.8
8	.7	1.7	3.1	a 30	8.5	154	49	25	115	6.6	.9	2.0
9	.8	1.4	2.9	a 20	69	87	33	18.0	30	5.1	1.0	1.8
10	.9	1.2	2.8	15.8	78	56	29	12.6	65	144	18.5	1.7
11	1.1	1.2	2.5	14.4	27	40	26	19.0	76	61	19.5	1.4
12	1.1	1.2	2.5	13.5	56	33	22	14.4	42	20	16.3	1.1
13	1.1	1.2	2.5	a 13	72	27	19.0	21	31	13.9	6.3	1.1
14	1.1	1.7	2.1	a 13	93	24	15.8	22	24	12.6	4.6	2.0
15	11.8	11.1	a 2	a 13	46	22	14.4	17.4	19.5	23	4.6	3.1
16	5.3	10.0	a 2	a 12	23	20	13.0	13.5	456	11.4	4.3	2.3
17	1.8	25	a 2	10.9	126	21	12.3	10.9	143	8.5	2.9	1.8
18	.8	66	1.8	8.9	187	17.4	11.4	9.6	66	8.2	2.5	2.1
19	.8	23	2.0	153	52	16.3	10.0	8.2	44	8.2	2.8	1.8
20	.8	15.3	2.0	33	39	19.0	8.9	7.3	33	8.2	3.6	1.1
21	.8	12.6	a 2	19.0	33	18.5	8.2	56	24	14.4	2.9	.9
22	.8	10.0	a 1.8	a 14	30	15.8	8.2	32	19.0	8.5	2.8	1.2
23	.8	7.8	a 1.8	a 12	29	14.9	10.8	68	26	6.0	2.3	1.4
24	.9	6.3	a 2	a 10	24	13.0	8.9	36	22	13.5	3.1	.8
25	.9	6.3	2.9	a 9	23	13.9	8.2	28	14.9	7.0	2.9	.3
26	.9	5.3	2.7	8.5	22	13.9	16.3	23	12.3	5.1	2.3	1.1
27	.9	4.6	244	a 8	21	11.4	17.1	16.9	11.4	3.8	2.3	2.1
28	.9	4.6	72	7.8	18.0	11.4	10.9	13.5	8.9	3.3	2.1	1.8
29	1.1	3.3	38	6.6	-------	347	9.6	10.9	7.3	2.9	2.1	1.4
30	1.4	3.1	29	a 7	-------	79	8.5	8.9	6.0	3.3	2.1	1.1
31	2.3	-------	23	a 5	-------	54	-------	9.7	-------	2.8	1.7	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	11.8	0.4	1.39	0.054	0.06
November	66	1.2	7.98	.311	.35
December	244	1.8	15.6	.607	.70
January	236	5	27.4	1.07	1.23
February	187	3	39.3	1.53	1.59
March	347	11.4	41.3	1.61	1.86
April	138	8.2	27.4	1.07	1.19
May	68	5.3	17.7	.689	.79
June	456	6.0	47.0	1.83	2.04
July	144	2.8	14.3	.556	.64
August	19.5	.9	4.07	.158	.18
September	13.0	.3	2.39	.093	.10
The year	456	.3	20.3	.790	10.73

a Estimated.

NORTH BRANCH OF RARITAN RIVER NEAR FAR HILLS, N. J.

LOCATION.—Water-stage recorder 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.

RECORDS AVAILABLE.—February, 1922, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,320 second-feet July 10 (gage height, 4.10 feet); no flow during several days in November, when pond was filling.

1922–1931: Maximum stage (estimated), 5.1 feet Mar. 7, 1922 (discharge not determined); minimum discharge, that of November, 1930.

REMARKS.—Records excellent except those estimated for period when pond was drawn down, Nov. 7–27, which are fair. Diversion of 2 second-feet by small turbine at dam included in discharge tables.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.4	13	40	16	10	24	81	34	89	22	22	16
2	5.4	10	22	12	15	27	102	34	47	22	22	25
3	4.9	8.9	14	14	12	25	62	34	40	22	24	62
4	5.4	10	14	15	14	24	59	30	36	22	34	29
5	5.4	19	14	23	12	25	49	29	32	22	24	22
6	4.9	23	14	116	13	24	47	28	29	34	22	21
7	4.9		13	36	12	23	59	29	29	34	21	18
8	4.9		12	20	14	151	65	45	89	28	19	17
9	5.8		12	21	41	97	49	45	41	24	20	16
10	6.7		12	21	52	52	43	43	55	357	22	16
11	7.1		12	18	23	43	45	65	75	233	27	15
12	7.1		19	18	24	40	40	43	45	102	45	12
13	7.1		16	18	48	34	38	43	40	71	28	12
14	7.1		15	14	115	32	36	41	36	134	23	13
15	7.6		11	12	31	30	34	41	36	129	22	15
16	6.7		8.9	12	28	30	34	34	77	65	26	14
17	6.7	25	9.5	12	60	29	34	29	97	49	21	14
18	6.7		11	14	178	28	32	28	49	47	18	14
19	6.7		12	25	47	28	32	28	43	49	16	13
20	6.7		14	30	38	30	32	28	40	47	16	12
21	6.7		12	22	30	36	32	72	36	59	16	12
22	6.7		12	14	28	29	32	49	30	55	15	13
23	7.6		14	15	28	28	69	110	36	41	14	12
24	8.5		14	14	27	28	40	52	38	41	15	11
25	7.6		10	15	26	40	34	45	32	36	15	9.5
26	5.8		14	16	25	34	80	41	29	29	14	12
27	6.3		108	22	24	28	66	38	28	28	27	13
28	7.1	2.1	51	28	23	28	43	34	26	26	38	11
29	8.5	7.3	28	21	-------	216	40	30	24	28	23	10
30	8.9	14	23	17	-------	75	36	29	23	29	21	9.5
31	13	-------	17	17	-------	59	-------	68	-------	26	18	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	13	4.9	6.77	0.260	0.30
November	-------	-------	21.1	.812	.91
December	108	8.9	19.3	.742	.86
January	116	12	21.5	.827	.95
February	178	10	35.6	1.37	1.43
March	216	23	45.1	1.73	1.99
April	102	32	48.2	1.85	2.06
May	110	28	41.9	1.61	1.86
June	97	23	44.2	1.70	1.90
July	357	22	61.6	2.37	2.73
August	45	14	22.2	.854	.98
September	62	9.5	16.3	.627	.70
The year	357	-------	32.0	1.23	16.67

NORTH BRANCH OF RARITAN RIVER AT MILLTOWN, N. J.

LOCATION.—Staff gage at Milltown, Somerset County, 1½ miles above junction of North and South Branches of Raritan River.

DRAINAGE AREA.—190 square miles.

RECORDS AVAILABLE.—June, 1923, to September, 1931.

EXTREMES.—Maximum discharge during year, about 7,140 second-feet Mar. 29 (gage height, 7.15 feet); minimum, about 3 second-feet Nov. 28 (gage height, 1.72 feet).

1923–1931: Maximum stage, 10.0 feet (estimated) Nov. 3, 1927 (discharge not determined); minimum discharge, that of Nov. 28, 1930.

REMARKS.—Records good except those for periods of ice effect, which are fair. Slight diurnal fluctuation caused by operation of small power plants.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	50	95	238	31	159	525	148	595	104	101	65
2	17	39	78	[a]220	81	184	630	110	311	93	93	71
3	18	37	60	180	56	167	490	156	228	93	88	490
4	16	34	[a]48	167	95	163	395	128	200	98	115	219
5	16	56	41	156	67	171	323	118	167	93	107	107
6	18	110	39	1,090	45	145	323	112	175	95	93	110
7	24	88	69	167	46	142	334	121	184	184	78	88
8	18	88	32	268	52	560	300	455	800	163	78	69
9	18	43	65	196	219	670	289	242	595	112	78	60
10	21	41	60	214	[a]750	490	247	196	340	710	90	58
11	21	34	52	167	[a]380	340	233	490	525	1,870	142	56
12	19	37	[a]44	247	[a]220	328	209	252	323	420	263	52
13	21	56	[a]34	167	[a]380	284	200	284	268	328	171	45
14	22	34	[a]26	[a]130	890	224	180	274	200	289	121	58
15	29	142	[a]22	[a]110	67	200	167	238	200	351	110	69
16	29	196	[a]18	[a]100	[a]75	196	167	192	1.090	247	152	60
17	28	490	[a]22	118	167	196	159	180	1,400	209	88	52
18	26	1,510	41	145	990	188	145	128	340	209	93	76
19	37	595	43	346	395	196	124	134	284	209	88	54
20	29	209	52	[a]240	306	224	131	115	228	200	148	52
21	26	188	45	152	279	219	128	407	209	219	83	54
22	26	233	41	[a]120	219	188	131	490	175	242	76	58
23	29	104	63	[a]120	205	184	258	800	167	159	71	52
24	29	71	56	[a]110	196	156	184	376	175	192	78	48
25	29	83	39	[a]110	180	196	167	289	148	145	69	45
26	29	16	48	[a]120	171	214	247	274	134	121	67	60
27	32	39	[a]1,300	124	167	205	334	152	138	112	69	60
28	29	[a]9	560	148	152	180	238	175	128	110	247	54
29	37	[a]8	238	152	------	3,580	200	152	124	104	118	52
30	45	45	258	152	------	990	180	138	93	145	93	48
31	58	------	279	78	------	455	------	134	------	107	98	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	58	16	26.6	0.140	0.16
November	1,510	8	156	.821	.92
December	1,300	18	125	.658	.76
January	1,090	78	195	1.03	1.19
February	990	31	246	1.29	1.34
March	3,580	142	380	2.00	2.31
April	630	124	255	1.34	1.50
May	800	110	241	1.27	1.46
June	1,400	93	331	1.74	1.94
July	1,870	93	249	1.31	1.51
August	263	67	109	.574	.66
September	490	45	81.4	.428	.48
The year	3,580	8	199	1.05	14.23

[a] Stage-discharge relation affected by ice.

BLACK RIVER NEAR POTTERSVILLE, N. J.

LOCATION.—Water-stage recorder 1 mile above highway bridge at Pottersville, Somerset County, and 8 miles above mouth of Rockaway Creek.

DRAINAGE AREA.—33 square miles.

RECORDS AVAILABLE.—June, 1922, to September, 1931. November, 1921, to June, 1922, at Pottersville, 1 mile downstream.

EXTREMES.—Maximum discharge during year, 615 second-feet July 10 (gage height, 3.35 feet); minimum, 1.3 second-feet Oct. 4 (gage height, 0.66 foot). 1921–1931: Maximum discharge, about 1,600 second-feet Nov. 17, 1927 (gage height, 4.75 feet); minimum, that of Oct. 4, 1930.

REMARKS.—Records good except those below 5 second-feet, those for periods of ice effect, Nov. 28, 29, Dec. 2–4, 16, 17, 31, Jan. 1–3, 8–10, 22, 23, and those estimated, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.7	13	35	22	e 16	24	104	37	116	19	30	24
2	1.9	11	30	20	e 16	25	99	31	86	18	29	34
3	1.6	9.2	22	18	e 14	22	80	30	75	18	33	41
4	1.5	9.2	16	18	e 13	21	70	e 28	67	19	38	30
5	1.8	18	16	38	e 13	20	62	e 24	51	25	32	27
6	3.0	30	15	82	e 12	19	52	e 22	35	50	30	25
7	3.8	25	15	55	e 12	19	54	e 22	44	52	27	24
8	3.8	16	16	44	13	62	57	e 24	106	50	24	23
9	3.8	13	15	38	26	88	56	e 40	73	61	25	21
10	4.3	12	14	30	41	78	52	e 65	78	276	28	19
11	4.3	11	14	e 28	26	72	48	64	93	233	34	17
12	4.8	10	15	e 28	22	55	43	62	78	158	40	16
13	4.8	10	15	e 26	99	36	38	52	67	146	37	16
14	4.8	11	13	e 22	119	30	34	50	57	135	36	16
15	5.5	26	11	e 19	69	29	31	48	45	118	38	18
16	5.7	42	10	e 14	45	29	29	43	90	104	40	16
17	6.5	66	10	e 14	47	28	28	e 36	120	100	35	18
18	8.3	156	11	16	119	27	27	e 30	84	100	30	18
19	8.0	83	11	33	86	e 26	25	25	70	99	30	17
20	7.4	66	11	36	76	27	24	25	64	86	29	17
21	6.8	59	8.9	25	52	35	23	58	55	75	25	18
22	6.8	e 30	8.9	16	34	33	23	64	41	64	23	16
23	6.8	22	8.9	16	30	30	50	134	35	57	23	16
24	7.1	18	9.6	16	28	27	49	93	36	52	22	15
25	7.1	19	14	15	26	36	48	78	34	49	21	14
26	7.1	18	13	e 16	25	41	65	69	31	45	20	16
27	6.8	16	79	e 22	24	38	72	51	29	42	30	16
28	7.4	13	54	e 26	23	45	64	38	24	39	32	15
29	8.3	10	46	e 26	------	180	62	32	22	36	30	15
30	8.9	13	36	e 22	------	114	50	28	20	35	27	14
31	14	------	24	e 18	------	99	------	94	------	32	25	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	14	1.5	5.69	0.172	0.20
November	156	9.2	28.5	.864	.96
December	79	8.9	19.9	.603	.70
January	82	14	26.4	.800	.92
February	119	12	40.2	1.22	1.27
March	180	19	45.6	1.38	1.59
April	104	23	50.6	1.53	1.71
May	134	22	48.3	1.46	1.68
June	120	20	60.9	1.85	2.06
July	276	18	77.2	2.34	2.70
August	40	20	29.8	.903	1.04
September	41	14	19.7	.597	.67
The year	276	1.5	37.7	1.14	15.50

e Estimated.

MILLSTONE RIVER AT BLACKWELLS MILLS, N. J.

LOCATION.—Water-stage recorder at highway bridge in Blackwells Mills, Somerset County, a quarter of a mile below mouth of Middlebrush Brook.

DRAINAGE AREA.—258 square miles.

RECORDS AVAILABLE.—August, 1921, to September, 1931. June, 1903, to December, 1904 (gage height only), 1¾ miles downstream.

EXTREMES.—Maximum discharge during year, 2,810 second-feet June 17 (gage height, 6.94 feet); minimum, 28 second-feet Oct. 26 (gage height, 0.30 foot).

1921–1931: Maximum discharge, about 7,000 second-feet Oct. 18, 1927; maximum gage height, about 11.0 feet Apr. 7, 1924, Sept. 7, 1926; minimum discharge, about 5 second-feet Sept. 16, 1923.

REMARKS.—Records good. Delaware & Raritan Canal parallels river for some distance; some seepage and waste water from canal enters river above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	95	119	223	86	220	965	159	273	90	73	90
2	35	88	100	160	83	278	1,340	151	229	78	65	78
3	35	86	106	252	75	252	845	148	181	73	70	78
4	36	84	102	117	75	249	675	148	139	76	76	80
5	34	100	100	129	67	252	480	141	125	70	72	73
6	41	100	104	912	67	238	374	132	112	81	65	65
7	43	100	100	565	58	220	470	130	104	110	55	57
8	41	90	102	300	58	990	885	393	928	148	57	56
9	40	61	100	240	316	1,450	550	440	461	148	43	54
10	41	66	97	190	887	865	458	330	487	340	108	50
11	40	66	97	153	408	675	350	330	1,020	2,120	772	50
12	40	69	100	153	290	480	310	310	509	594	1,260	52
13	57	66	95	199	513	366	278	338	358	270	638	44
14	62	69	69	184	825	306	232	382	274	208	378	47
15	69	132	72	150	480	274	217	362	226	310	322	48
16	93	139	83	119	314	252	202	302	1,560	208	252	41
17	84	214	66	108	287	256	193	226	2,590	148	190	44
18	81	298	64	95	1,540	260	175	193	1,660	134	159	61
19	93	226	62	586	866	235	167	170	915	136	130	54
20	117	187	58	580	650	252	162	167	525	134	112	52
21	44	159	45	338	480	302	156	196	346	417	102	53
22	41	130	50	240	358	274	148	274	242	1,390	95	50
23	56	102	72	200	298	246	175	698	211	539	91	54
24	67	104	70	151	242	226	184	419	211	342	119	55
25	52	112	61	114	220	217	175	278	190	278	114	44
26	34	99	65	110	220	208	205	235	170	196	104	53
27	54	84	700	114	220	199	338	202	146	148	104	64
28	64	90	885	123	205	193	246	175	127	121	88	60
29	76	104	466	121	------	1,720	202	153	114	108	90	61
30	78	104	462	108	------	1,550	175	132	104	99	88	61
31	97	------	330	99	------	905	------	123	------	91	90	------

Month	Maximum	Minimum	Mean	Month	Maximum	Minimum	Mean
October	117	34	57.6	May	698	123	253
November	298	61	114	June	2,590	104	485
December	885	45	161	July	2,120	70	297
January	912	95	230	August	1,260	43	193
February	1,540	58	364	September	90	41	57.6
March	1,720	193	465				
April	1,340	148	378	The year	2,590	34	254

GREEN BROOK AT BOUNDBROOK, N. J.

LOCATION.—Staff gage near State highway bridge at Boundbrook, Middlesex County, half a mile above mouth.

DRAINAGE AREA.—49 square miles.

RECORDS AVAILABLE.—June, 1923, to February, 1931 (discontinued).

REMARKS.—Monthly records poor; daily discharge not sufficiently accurate for publication. Flow regulated by water-power plants upstream. Diversions by pumping from well fields above station. Plainfield sewage empties into brook 3 miles above station. No corrections applied for diversions or sewage inflow.

Monthly discharge, in second-feet, 1930–31

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	21	9	13.0	0.265	0.31
November	332	12	50.2	1.02	1.14
December	226	12	37.7	.769	.89
January	252	22	49.7	1.01	1.16
February 1-21	345	18	78.6	1.60	1.25

LAWRENCE BROOK AT FARRINGTON DAM, N. J.

LOCATION.—Water-stage recorder at Farrington Dam, half a mile southwest of Milltown, Middlesex County, and 4¾ miles above mouth.

DRAINAGE AREA.—34 square miles.

RECORDS AVAILABLE.—May, 1927, to September, 1931. June, 1922, to December, 1926, at Patricks Corner, 2¾ miles upstream.

EXTREMES.—Maximum discharge during year, 429 second-feet Mar. 29 (gage height, 24.98 feet).

1927–1931: Maximum discharge, about 1,900 second-feet July 6, 1928 (gage height, 25.84 feet); practically no flow when gates in dam are closed and there is no flow over spillway.

REMARKS.—Records good except those estimated, Oct. 1–3, 11–28, Feb. 1, 2, 22, 23, Mar. 22, July 19–26, which are fair. Daily-discharge table shows flow over dam and through blow-off gates. Part of table of monthly discharge corrected for effect of storage in Farrington Reservoir. Recorder operated by city engineer of New Brunswick.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	12.8	0	0	4	18.9	93	12.3	9.6	6.2	7.0	7.2
2	14	12.7	0	0	5	29	114	10.8	10.8	5.7	6.7	6.7
3	14	12.7	0	0	5.7	25	56	12.3	9.6	5.7	6.7	6.4
4	14.3	12.6	0	0	5.9	22	41	10.8	8.0	5.4	6.7	6.7
5	14.3	12.7	0	0	6.2	29	32	10.8	7.2	5.2	6.4	7.0
6	14.3	12.8	7.7	0	5.9	22	22	9.6	6.7	5.2	6.4	6.7
7	14.2	12.7	13.3	0	5.9	18.9	46	10.8	6.7	6.2	6.2	6.4
8	14.2	12.7	13.2	0	6.4	144	102	18.9	62	7.2	5.7	5.9
9	14.2	12.7	13.2	0	23	188	51	46	41	9.6	5.7	5.4
10	14.2	12.6	13.2	0	74	68	32	46	41	14.1	10.5	5.4
11	14	12.6	13.1	0	51	46	25	46	87	36	36	5.4
12	14	12.5	13.1	0	41	32	22	36	46	16.3	102	4.7
13	14	12.5	13.1	0	45	25	18.9	46	29	10.8	56	4.7
14	14	12 5	13.0	0	87	22	16.3	56	18.9	10.8	36	5.0
15	14	12.5	13.0	0	46	16.3	16.3	36	14.1	12.3	56	5.0
16	14	12.5	12.9	0	29	14.1	14.1	25	215	8.7	46	4.7
17	14	12.6	12.9	0	31	16.3	12.3	16.3	261	7.5	22	4.7
18	14	12.8	12.8	0	167	16.3	10.8	14.1	80	7.2	14.1	5.0
19	13	12.8	12.8	0	80	14.1	10.8	12.3	46	7	12.3	4.7
20	13	12.8	12.7	0	56	22	10.8	10.8	32	7	10.8	4.7
21	13	12.8	12.7	0	41	32	10.8	12.3	18.9	48	10.8	4.5
22	13	12.8	12.6	0	36	24	9.6	18.9	12.3	50	8.7	10.6
23	13	12.8	12.6	0	32	16.3	16.3	25	12.3	42	8.0	18.3
24	13	5.1	12.6	0	29	16.3	18.9	22	12.3	34	8.0	16.3
25	13	0	12.5	0	25	18.9	16.3	16.3	10.8	26	8.7	15.5
26	13	0	12.5	0	22	18.9	22	16.3	8.7	18	8.7	15.5
27	13	0	12.9	.2	18.9	18.9	29	14.1	8.0	10.8	8.7	15.5
28	13	0	13.5	1.2	16.3	18.9	18.9	10.8	7.2	10.8	8.7	15.4
29	12.8	0	13.7	2.5	-------	292	14.1	9.6	6.7	9.6	8.7	15.4
30	12.8	0	13.8	3.9	-------	109	14.1	8.0	6.4	8.7	8.0	15.3
31	12.8	-------	5.8	5.2	-------	56	-------	7.2	-------	7.5	7.5	-------

Month	Observed			Corrected for storage		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	14.3	12.8	13.6	4.24	0.125	0.14
November	12.8	0	9.89	11.1	.326	.36
December	13.8	0	10.5	15.0	.441	.51
January	5.2	0	.42	14.0	.412	.48
February	167	4	35.5	36.1	1.06	1.10
March	292	14.1	45.5	45.7	1.34	1.54
April	114	9.6	30.5	30.2	.888	.99
May	56	7.2	20.9	20.8	.612	.71
June	261	6.4	37.8	37.6	1.11	1.24
July	50	5.2	14.8	14.9	.438	.50
August	102	5.7	17.9	17.9	.526	.61
September	18.3	4.5	8.49	5.17	.152	.17
The year	292	0	20.4	20.9	.615	8.35

NAVESINK RIVER BASIN

SWIMMING RIVER NEAR RED BANK, N. J.

LOCATION.—Water-stage recorder above dam of Monmouth Consolidated Water Co., 3 miles above mouth of river at Red Bank, Monmouth County.
DRAINAGE AREA.—48 square miles.
RECORDS AVAILABLE.—July, 1922, to September, 1931.
EXTREMES.—Maximum discharge over spillway during year, 475 second-feet Mar. 8 (gage height, 3.40 feet).
1922–1931: Maximum discharge over spillway, about 2,590 second-feet Feb. 25, 1926 (gage height, 3.42 feet).
REMARKS.—Records good. Discharge over spillway estimated Nov. 15–18, Feb. 7–13. Tables of discharge include diversion above station for municipal uses. Recorder operated and record of diversion furnished by Monmouth Consolidated Water Co.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	36	54	38	28	44	115	44	70	33	27	36
2	16	32	51	32	36	57	171	46	56	31	24	34
3	18	29	31	36	33	48	95	48	41	33	27	28
4	19	36	33	41	33	48	79	45	38	32	27	33
5	17	102	34	45	31	59	69	44	36	24	25	33
6	18	66	36	116	31	51	62	42	33	36	24	29
7	19	42	36	67	31	43	91	46	33	45	25	28
8	16	32	34	39	28	187	140	51	78	47	22	27
9	18	32	32	38	34	260	91	63	58	41	21	29
10	19	30	32	41	89	98	73	49	64	38	27	28
11	20	30	32	36	94	76	66	66	109	39	115	27
12	18	30	34	46	78	62	63	57	65	35	143	26
13	18	32	31	98	88	56	60	72	48	31	67	26
14	20	32	30	48	107	57	57	73	44	35	44	24
15	37	68	30	33	51	53	57	66	41	47	47	22
16	47	147	22	31	51	50	54	50	278	35	88	21
17	28	138	24	37	52	50	51	45	190	35	42	23
18	24	148	26	36	162	50	50	46	83	34	35	27
19	21	69	30	137	93	48	50	42	57	36	33	26
20	22	53	34	201	69	53	49	43	48	32	30	23
21	24	48	32	63	56	62	48	42	42	33	44	23
22	25	43	30	39	50	53	47	45	40	70	36	26
23	24	40	34	37	49	50	73	57	45	45	32	24
24	26	41	34	43	48	48	60	49	63	33	38	21
25	26	38	27	38	48	48	48	44	44	33	38	20
26	26	36	35	42	48	48	61	46	42	29	31	25
27	24	36	166	42	46	48	91	43	40	29	32	32
28	28	31	162	41	42	48	60	37	37	28	55	32
29	30	28	70	38	-------	261	53	37	36	24	76	29
30	37	34	54	36	-------	151	46	33	34	28	69	25
31	41	-------	42	36	-------	83	-------	33	-------	29	42	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	47	16	24.0	0.500	0.58
November	148	28	52.0	1.08	1.20
December	166	22	43.6	.908	1.05
January	201	31	53.3	1.11	1.28
February	162	28	57.4	1.20	1.25
March	261	43	75.8	1.58	1.82
April	171	46	71.0	1.48	1.65
May	73	33	48.5	1.01	1.16
June	278	33	63.1	1.31	1.46
July	70	24	35.5	.740	.85
August	143	21	44.7	.931	1.07
September	36	20	26.9	.560	.62
The year	278	16	49.5	1.03	14.01

TOMS RIVER BASIN

TOMS RIVER NEAR TOMS RIVER, N. J.

LOCATION.—Water-stage recorder 1 mile below mouth of Union Branch and 2½ miles northwest of village of Toms River, Ocean County.
DRAINAGE AREA.—124 square miles.
RECORDS AVAILABLE.—December, 1928, to September, 1931.
EXTREMES.—Maximum discharge during year, 362 second-feet Apr. 1, 2 (gage height, 5.72 feet); minimum, 71 second-feet Oct. 11, 12 (gage height, 3.13 feet).
1928–1931: Maximum discharge, 851 second-feet Apr. 18, 1929 (gage height, 8.95 feet); minimum, 70 second-feet Aug. 13, Sept. 29, 30, 1930.
REMARKS.—Records excellent. Discharge estimated Jan. 12–15.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	73	116	133	179	127	136	349	190	155	107	104	117
2	73	112	140	157	124	152	362	179	174	103	93	112
3	73	105	133	139	122	155	349	174	174	12[illegible]	94	102
4	75	110	124	132	120	150	349	162	162	120	92	106
5	74	144	121	132	119	149	292	156	147	110	102	103
6	73	155	119	162	117	146	249	155	137	12[illegible]	95	99
7	73	157	118	168	116	140	231	154	127	120	89	94
8	73	147	117	179	116	178	225	168	156	12[illegible]	85	90
9	74	131	114	168	124	237	237	184	190	127	83	87
10	74	124	111	157	155	273	231	202	213	13[illegible]	87	85
11	73	115	109	145	168	311	213	219	225	15[illegible]	133	83
12	72	110	108	140	174	292	196	255	237	20[illegible]	225	83
13	72	106	108	140	168	237	184	324	243	240	237	83
14	74	105	106	160	174	202	174	336	213	213	255	83
15	119	135	104	160	168	184	168	311	184	16[illegible]	255	78
16	126	156	100	148	162	174	162	311	208	174	213	77
17	127	179	94	147	157	174	156	311	249	18[illegible]	202	90
18	118	208	98	137	179	168	153	273	279	16[illegible]	202	85
19	104	225	97	150	190	162	154	231	318	16[illegible]	162	83
20	98	219	100	179	202	168	147	208	279	15[illegible]	133	81
21	93	196	102	196	202	168	144	208	202	14[illegible]	128	81
22	90	174	101	196	179	174	143	190	162	18[illegible]	124	77
23	90	152	98	168	168	168	155	196	157	20[illegible]	116	77
24	90	138	97	157	156	157	168	196	174	22[illegible]	157	75
25	89	132	95	147	148	157	168	179	174	18[illegible]	184	75
26	87	125	99	142	144	162	184	184	157	14[illegible]	184	100
27	86	120	148	139	139	157	225	179	143	130	162	127
28	86	116	174	137	135	154	225	174	131	118	150	120
29	102	108	202	135	-------	225	225	168	120	12[illegible]	150	105
30	107	111	231	133	-------	249	208	146	113	122	149	97
31	114	-------	213	130	-------	304	-------	142	-------	118	138	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	127	72	88.8	0.716	0.83
November	225	105	141	1.14	1.27
December	231	94	123	.992	1.14
January	196	130	154	1.24	1.43
February	202	116	152	1.23	1.28
March	311	136	189	1.52	1.75
April	362	143	214	1.72	1.93
May	336	142	209	1.69	1.95
June	318	113	187	1.51	1.68
July	249	107	153	1.23	1.42
August	255	83	148	1.19	1.37
September	127	75	91.8	.740	.83
The year	362	72	154	1.24	16.88

MULLICA RIVER BASIN

BATSTO RIVER AT BATSTO, N. J.

LOCATION.—Water-stage recorder 30 feet downstream from highway bridge in Batsto, Burlington County, and 1 mile above confluence with Mullica River.
DRAINAGE AREA.—70 square miles.
RECORDS AVAILABLE.—October, 1927, to September, 1931.
REMARKS.—Records good. Records of discharge include water diverted around station by old gristmill. Flow regulated slightly by operation of sluice gates in dam 300 feet upstream and occasionally by operation of sawmill at dam.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47	63	70	62	66	80	213	97	88	63	47	83
2	50	58	70	65	60	81	202	88	111	62	49	80
3	50	60	64	65	62	81	195	88	119	56	53	74
4	50	61	60	64	64	83	191	95	105	59	49	68
5	50	58	56	66	62	79	154	88	93	58	45	67
6	50	60	61	77	62	77	142	80	80	62	45	67
7	50	58	60	78	64	74	143	79	79	64	45	64
8	50	52	60	65	65	96	127	89	85	63	47	62
9	51	57	57	69	68	102	127	93	97	61	45	58
10	50	52	55	69	78	112	117	98	108	61	54	59
11	49	55	55	65	82	119	103	112	107	63	69	63
12	47	56	55	87	79	114	99	169	117	70	110	58
13	47	54	54	84	77	102	97	198	124	72	111	62
14	47	60	54	77	86	93	94	191	114	64	111	60
15	75	61	53	82	77	94	88	165	107	55	119	59
16	67	69	52	77	76	91	87	172	101	55	99	58
17	63	69	49	69	79	96	84	172	106	57	95	59
18	57	69	52	65	88	94	80	134	202	61	92	59
19	51	68	52	84	89	99	77	108	303	59	76	58
20	52	64	53	77	101	96	75	111	226	58	69	56
21	50	62	52	84	97	94	73	125	171	68	72	56
22	49	64	53	86	87	98	79	110	119	70	69	54
23	49	60	54	79	83	96	82	119	103	64	93	49
24	50	61	52	77	79	92	75	126	87	55	139	53
25	61	58	47	77	77	90	74	113	79	53	163	52
26	63	57	48	71	74	86	82	104	79	48	201	65
27	55	61	76	70	74	83	96	101	78	49	181	70
28	55	58	77	72	70	85	103	88	66	52	126	82
29	56	54	60	71	------	111	111	88	65	52	114	73
30	61	58	63	64	------	133	108	80	63	50	98	63
31	62	------	61	68	------	173	------	78	------	46	89	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	75	47	53.7	0.767	0.88
November	69	52	59.9	.856	.96
December	77	47	57.6	.823	.95
January	87	62	73.1	1.04	1.20
February	101	60	75.9	1.08	1.12
March	173	74	96.9	1.38	1.59
April	213	73	113	1.61	1.80
May	198	78	115	1.64	1.89
June	303	63	113	1.61	1.80
July	72	46	59.0	.843	.97
August	201	45	89.5	1.28	1.48
September	83	49	63.0	.900	1.00
The year	303	45	80.7	1.15	15.64

GREAT EGG RIVER BASIN

GREAT EGG RIVER AT FOLSOM, N. J.

LOCATION.—Water-stage recorder at highway bridge 1 mile south of Folsom, Atlantic County, and 2 miles above mouth of Pennypot Stream.
DRAINAGE AREA.—56 square miles.
RECORDS AVAILABLE.—September, 1925, to September, 1931.
EXTREMES.—Maximum discharge during year, 127 second-feet Apr. 3 (gage height, 4.19 feet); minimum, 19 second-feet Aug. 5 (gage height, 2.28 feet).
1925–1931: Maximum discharge, 229 second-feet Apr. 19, 20, 1929 (gage height, 5.28 feet); minimum, that of Aug. 5, 1931.
REMARKS.—Records good. Discharge estimated Apr. 12–20, May 7–10, June 21, Sept. 18–20.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	36	41	48	42	50	110	50	48	28	22	41
2	32	33	44	45	41	56	120	49	47	28	23	38
3	26	32	41	43	40	56	127	50	42	28	24	36
4	24	32	39	40	40	53	124	51	41	28	22	35
5	24	32	38	41	40	50	117	46	38	28	22	34
6	24	34	36	49	40	48	104	44	38	28	22	32
7	23	34	35	52	40	47	83	48	35	30	22	31
8	23	32	35	50	40	58	82	50	44	47	22	30
9	24	31	34	48	42	78	82	65	48	63	22	28
10	24	32	34	46	52	83	78	55	46	51	25	28
11	24	32	34	42	55	79	67	49	62	52	36	27
12	24	32	34	44	54	69	65	50	59	46	57	26
13	24	32	34	53	51	57	65	50	52	38	51	25
14	24	32	32	53	52	54	60	50	47	35	40	25
15	40	43	32	50	56	51	55	51	44	32	52	25
16	40	48	32	48	54	51	50	50	42	30	78	24
17	32	48	32	45	53	61	50	48	49	30	63	25
18	31	48	32	42	64	69	46	46	47	30	46	24
19	30	44	32	54	71	69	44	45	43	32	41	24
20	28	42	31	60	70	71	44	44	39	30	37	24
21	28	41	30	60	64	71	44	57	36	29	38	24
22	28	48	30	56	59	66	44	72	34	28	38	23
23	28	66	30	52	55	60	46	64	34	27	47	22
24	28	44	31	48	52	55	50	58	36	26	95	22
25	29	40	31	47	50	50	48	49	35	26	104	21
26	28	38	32	46	48	46	48	46	34	26	98	27
27	27	37	50	45	48	44	66	61	32	25	76	36
28	27	36	67	44	46	43	70	50	31	24	69	34
29	28	35	68	44	------	72	56	46	30	24	59	33
30	31	34	61	44	------	92	50	42	28	24	52	28
31	34	------	52	42	------	98	------	40	------	23	46	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	40	23	27.8	0.49	0.57
November	66	31	38.3	.68	.76
December	68	30	38.2	.68	.79
January	60	40	47.8	.85	.98
February	71	40	50.7	.90	.94
March	98	43	61.5	1.10	1.27
April	127	44	69.8	1.25	1.40
May	72	40	50.8	.90	1.05
June	62	28	41.4	.739	.82
July	63	23	32.1	.573	.66
August	104	22	46.7	.83	.96
September	41	21	28.4	.50	.57
The year	127	21	44.4	.79	10.77

MAURICE RIVER BASIN

MANANTICO CREEK NEAR MILLVILLE, N. J.

LOCATION.—Water-stage recorder at Millville-Milmay highway bridge 4 miles northeast of Millville, Cumberland County, and 6 miles above mouth.
DRAINAGE AREA.—22.3 square miles.
RECORDS AVAILABLE.—June to September, 1931.
EXTREMES.—Maximum discharge during period, 60 second-feet Aug. 25 (gage height, 2.14 feet); minimum, 7.1 second-feet July 29 to Aug. 9 (gage height, 1.28 feet).
REMARKS.—Records excellent.

Daily and monthly discharge, in second-feet, 1931

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1	-------	10.9	7.1	21	16	-------	10.0	16.8	11.8
2	-------	12.3	7.1	19.0	17	-------	9.6	14.7	11.8
3	-------	11.4	7.1	17.3	18	-------	10.0	13.3	11.8
4	-------	10.9	7.1	17.3	19	-------	11.4	11.8	11.4
5	-------	10.9	7.5	16.8	20	-------	10.0	11.4	11.4
6	-------	10.5	7.1	16.3	21	-------	9.6	15.0	11.4
7	-------	10.9	7.1	16.3	22	11.4	10.5	20	11.8
8	-------	11.4	7.1	15.7	23	11.4	9.6	37	11.8
9	-------	10.9	7.5	14.7	24	12.8	9.2	59	11.4
10	-------	14.4	10.5	12.3	25	12.3	8.7	56	10.9
11	-------	20	13.6	12.3	26	11.8	8.3	36	18.8
12	-------	14.7	29	12.3	27	11.8	7.9	29	25
13	-------	12.3	21	12.3	28	11.8	7.5	47	22
14	-------	11.8	15.2	12.3	29	11.4	7.5	42	19.0
15	-------	10.9	14.7	11.8	30	10.5	7.1	33	16.3
					31	-------	7.1	25	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
June 22-30	12.8	10.5	11.7	0.525	0.18
July	20	7.1	10.6	.475	.55
August	59	7.1	20.5	.919	1.06
September	25	10.9	14.8	.664	.74

DELAWARE RIVER BASIN

EAST BRANCH OF DELAWARE RIVER AT FISHS EDDY, N. Y.

LOCATION.—Water-stage recorder at railroad bridge in Fishs Eddy, Delaware County, 4½ miles below mouth of Beaver Kill. Zero of gage is 950.84 feet above mean sea level.

DRAINAGE AREA.—785 square miles.

RECORDS AVAILABLE.—November, 1912, to September, 1931.

EXTREMES.—Maximum discharge during year, 19,000 second-feet July 11 (gage height, 12.56 feet); minimum, 105 second-feet Oct. 14 (gage height, 1.81 feet).

1912–1931: Maximum discharge, about 45,000 second-feet Sept. 30, 1924 (gage height, 19.0 feet); minimum, 95 second-feet Aug. 10, 11, 14, 1930 (gage height, 1.76 feet).

REMARKS.—Records good except those for periods of ice effect, Nov. 28 to Dec. 1, Dec. 16 to Mar. 6, which are fair. Staff gage readings used Oct. 5–15, 23–27.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	149	180	1,800	320	260	600	4,110	3,050	1,710	535	890	322
2	149	175	1,550	320	260	600	6,290	2,720	1,460	525	825	302
3	149	165	1,020	300	260	600	5,640	2,600	1,230	550	825	432
4	146	157	1,060	300	260	600	6,320	2,310	1,090	495	955	490
5	139	165	890	300	260	550	6,330	2,040	988	461	753	384
6	134	167	795	320	260	550	5,320	1,840	890	408	628	329
7	129	172	735	300	260	555	5,130	1,710	869	466	545	292
8	134	167	705	280	260	618	4,580	2,450	2,470	1,620	500	262
9	129	157	678	280	280	858	4,940	4,570	1,590	1,640	495	240
10	134	157	628	260	280	753	6,780	3,260	1,740	6,240	530	228
11	129	154	590	260	280	661	11,500	3,620	1,800	15,200	505	216
12	118	154	639	260	300	617	9,530	4,000	1,460	6,600	520	205
13	107	165	747	260	300	590	6,280	3,470	1,260	3,840	560	197
14	107	165	585	240	300	585	5,320	3,620	1,120	2,790	490	186
15	107	170	471	240	320	639	4,760	3,620	1,020	2,110	443	202
16	144	194	400	240	340	666	3,920	2,980	1,090	2,180	585	240
17	157	394	360	240	400	661	3,330	3,400	2,100	1,760	476	310
18	199	617	380	260	600	765	2,980	2,790	1,620	1,460	392	452
19	202	530	440	240	900	890	2,720	2,360	1,300	1,540	351	333
20	175	434	420	240	800	890	2,420	2,090	1,120	1,300	329	282
21	159	388	400	240	700	858	2,310	2,520	1,340	1,400	312	269
22	149	358	380	240	650	1,120	2,140	2,480	1,160	7,360	288	265
23	144	333	360	240	650	1,260	3,400	2,580	1,020	4,340	269	256
24	139	315	360	240	600	1,840	4,070	2,600	988	3,620	253	240
25	139	354	340	240	600	2,980	3,050	2,760	858	2,660	237	225
26	134	476	380	260	600	3,890	3,060	4,320	836	2,090	234	240
27	129	434	380	260	600	4,780	4,240	3,330	1,070	1,660	265	272
28	149	380	360	260	600	5,560	3,400	2,790	795	1,460	1,120	262
29	167	360	340	260	------	9,510	3,840	2,260	666	1,260	662	234
30	172	360	340	280	------	8,090	3,770	1,940	580	1,300	452	219
31	175	------	320	260	------	4,940	------	2,090	------	1,090	365	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	202	107	145	0.185	0.21
November	617	154	280	.357	.40
December	1,800	320	608	.775	.89
January	320	240	266	.339	.39
February	900	260	435	.554	.58
March	9,510	550	1,870	2.38	2.74
April	11,500	2,140	4,720	6.01	6.70
May	4,570	1,710	2,840	3.62	4.17
June	2,470	580	1,240	1.58	1.76
July	15,200	408	2,580	3.29	3.79
August	1,120	234	518	.660	.76
September	490	186	280	.357	.40
The year	15,200	107	1,320	1.68	22.79

DELAWARE RIVER AT PORT JERVIS, N. Y.

LOCATION.—Water-stage recorder near highway bridge at Port Jervis, Orange County, 1½ miles above mouth of Neversink River. Zero of gage is 415.60 feet above mean sea level.

DRAINAGE AREA.—3,070 square miles.

RECORDS AVAILABLE.—October, 1904, to September, 1931.

EXTREMES.—Maximum discharge during year, 35,100 second-feet Mar. 30 (gage height, 8.82 feet); minimum, 441 second-feet Oct.17 (gage height, 1.13 feet).

1904–1931: Maximum discharge, 92,700 second-feet Mar. 28, 1914 (gage height, 16.0 feet); minimum, 175 second-feet Sept. 22, 23, 1908 (gage height, 0.60 foot).

Maximum discharge known, about 155,000 second-feet Oct. 10, 11, 1903 (gage height, 23.3 feet).

REMARKS.—Records good except those for period of ice effect, Dec. 17 to Feb. 28, which are fair. Large diurnal fluctuation at medium and low stages, owing to operation of power plants on tributary streams. Flow regulated by storage in Wallenpaupack, Toronto, and Swinging Bridge Reservoirs; combined total capacity, 12.2 billion cubic feet. Records of storage in Wallenpaupack Reservoir furnished by Pennsylvania Power & Light Co.; those for Toronto and Swinging Bridge Reservoirs furnished by Chas. H. Tenney & Co.

Daily discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,110	1,090	1,150	1,200	1,200	2,680	16,200	8,760	6,490	2,150	3,290	1,680
2	1,220	714	2,410	1,100	1,100	2,600	18,700	7,690	5,390	1,910	2,720	1,190
3	1,170	832	2,560	1,100	1,100	2,720	19,800	6,680	4,560	1,810	2,750	1,540
4	1,210	809	2,440	1,100	1,100	2,630	18,000	6,680	3,960	1,740	2,790	1,550
5	939	1,070	2,630	1,100	1,100	2,520	18,600	5,920	3,550	1,350	2,740	1,490
6	841	974	2,290	1,300	1,100	2,440	16,200	5,220	3,180	1,590	2,520	1,490
7	982	961	2,040	1,600	1,000	2,300	15,200	4,880	3,110	2,000	2,190	1,200
8	834	936	1,770	1,600	1,000	2,380	15,700	5,050	6,840	3,110	1,990	1,210
9	1,050	765	1,790	1,500	1,000	2,820	14,700	10,000	7,640	6,360	1,890	1,490
10	824	676	1,770	1,300	1,000	3,250	14,700	11,700	6,300	7,710	1,670	1,330
11	767	924	1,690	1,200	1,000	3,480	17,700	9,950	5,920	23,200	2,340	1,300
12	816	1,040	1,710	1,200	1,000	3,160	22,200	14,100	5,560	23,900	2,130	1,060
13	572	794	1,690	1,200	1,000	2,680	16,900	13,900	4,720	13,900	2,150	1,120
14	881	798	1,490	1,100	1,100	2,480	13,200	13,800	4,110	9,560	2,070	837
15	701	937	1,330	1,100	1,200	2,600	11,200	13,700	3,550	7,280	2,080	1,140
16	720	970	1,230	1,100	1,200	3,100	9,950	11,200	3,950	5,920	1,740	1,120
17	646	862	1,200	1,000	1,200	3,180	8,320	10,400	5,760	5,400	1,510	1,260
18	700	1,340	1,200	1,100	1,600	3,480	7,280	11,200	6,760	4,710	2,050	1,460
19	752	1,620	1,300	1,200	2,400	4,450	6,490	8,540	5,600	4,410	1,820	1,480
20	663	1,590	1,300	1,300	3,400	4,340	6,110	7,690	4,340	4,560	1,560	1,460
21	821	1,420	1,300	1,300	3,600	3,960	5,560	7,340	3,820	4,140	1,590	1,110
22	823	1,330	1,300	1,200	3,400	4,570	5,050	9,950	4,240	8,340	1,530	1,180
23	828	1,280	1,300	1,200	3,200	5,800	6,460	9,410	4,440	18,500	1,400	1,100
24	797	970	1,200	1,100	3,000	8,060	10,200	9,220	3,470	11,900	976	1,060
25	956	1,050	1,200	1,100	3,000	13,300	8,940	9,700	3,460	8,760	1,500	922
26	880	1,230	1,300	1,100	2,800	16,800	7,480	12,700	3,190	6,680	1,080	1,090
27	602	1,170	1,500	1,200	2,800	20,800	8,990	13,700	2,830	5,740	1,350	968
28	829	1,020	1,500	1,200	2,800	21,600	9,220	10,300	2,850	4,890	1,340	854
29	755	1,230	1,400	1,300	-------	29,500	8,320	8,320	2,740	4,290	1,660	1,120
30	792	1,160	1,300	1,200	-------	32,100	10,100	6,690	2,550	4,190	2,070	957
31	1,040	-------	1,300	1,200	-------	21,600	-------	6,880	-------	3,880	1,560	-------

Monthly discharge, in second-feet, of Delaware River at Port Jervis, N. Y., 1930–31

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches	Correction for storage in second-feet
October	1,220	572	856			−344
November	1,620	676	1,050			−170
December	2,630	1,150	1,600			−160
January	1,600	1,000	1,210			−48.8
February	3,600	1,000	1,800			+111
March	32,100	2,300	7,660			+883
April	22,200	5,050	12,200			+944
May	14,100	4,880	9,400			+352
June	7,640	2,550	4,500			−115
July	23,900	1,350	6,900			−99.4
August	3,290	976	1,940			−306
September	1,680	837	1,230			−248
The year	32,100	572	4,210	1.37	18.61	+65.7

NOTE.—The corrections for storage are not included in the records of daily and monthly discharge.

DELAWARE RIVER AT BELVIDERE, N. J.

LOCATION.—Water-stage recorder at Belvidere, Warren County, just below mouth of Pequest River.

DRAINAGE AREA.—4,540 square miles.

RECORDS AVAILABLE.—October, 1922, to September, 1931.

EXTREMES.—Maximum discharge during year, 46,800 second-feet Mar. 30 (gage height, 12.4 feet); minimum, 909 second-feet Oct. 14 (gage height, 2.47 feet).

1922–1931: Maximum discharge, about 118,000 second-feet Oct. 1, 1924 (gage height, about 19.3 feet); minimum, 895 second-feet in July and August, 1923 (gage height, 2.45 feet).

REMARKS.—Records excellent. Discharge estimated Jan. 15–17, when stage was affected by ice, and Dec. 10–13, 15, 16. Part of table of monthly discharge corrected for effect of storage in reservoirs on Wallenpaupack Creek and Mongaup River.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,450	1,330	1,930	1,840	1,800	4,560	23,300	11,900	8,680	3,470	4,820	2,180
2	1,330	1,420	2,090	1,700	1,740	4,690	22,700	10,200	7,780	3,040	4,180	2,230
3	1,450	1,190	2,940	1,480	1,520	4,430	26,200	9,430	6,780	2,830	3,700	2,440
4	1,400	1,100	3,250	1,590	1,660	4,560	23,300	8,680	6,030	2,630	3,940	2,730
5	1,450	1,310	3,140	1,550	1,480	4,430	23,300	8,320	5,340	2,630	3,820	2,440
6	1,220	1,580	3,140	2,630	1,640	4,180	21,000	7,610	4,820	2,440	3,700	2,210
7	1,060	1,620	2,940	3,250	1,460	4,060	18,900	6,940	4,430	2,830	3,250	2,090
8	1,320	1,480	2,730	3,140	1,420	4,430	19,400	7,270	7,640	4,060	3,040	1,820
9	1,080	1,370	2,440	3,360	1,590	6,030	18,400	10,400	11,400	4,950	2,730	1,700
10	1,310	1,270	2,400	3,580	1,510	6,030	17,400	15,900	10,200	10,400	2,730	1,950
11	1,190	1,110	2,400	3,140	1,620	6,030	18,400	14,100	10,000	19,600	2,730	1,740
12	1,100	1,260	2,200	2,940	1,680	6,030	24,400	15,000	9,050	32,800	3,250	1,740
13	1,200	1,400	2,200	2,730	1,820	5,480	22,100	17,900	7,780	19,900	3,040	1,450
14	1,000	1,240	2,250	2,440	2,140	4,950	16,900	16,400	6,470	14,100	3,040	1,550
15	1,240	1,260	1,800	1,700	2,340	4,690	14,600	17,400	5,620	10,600	2,940	1,370
16	1,200	1,450	1,400	1,700	2,180	5,080	12,800	15,500	5,620	8,680	2,940	1,480
17	1,200	1,800	1,360	1,900	2,340	5,480	11,400	12,800	7,610	7,270	2,540	1,530
18	1,140	2,250	1,380	2,200	4,560	5,480	10,000	13,700	9,620	6,940	2,340	1,620
19	1,170	2,830	1,740	2,250	5,340	6,030	9,050	11,900	9,050	6,320	2,630	1,880
20	1,190	2,830	1,840	2,250	5,080	6,940	8,320	10,000	7,440	5,890	2,540	1,880
21	1,090	2,540	1,980	2,250	5,210	6,780	7,780	9,810	6,030	6,030	2,250	1,930
22	1,100	2,230	1,870	1,930	5,210	6,470	7,270	11,900	5,340	6,180	2,160	1,620
23	1,210	2,110	1,740	1,740	4,950	7,610	7,780	12,300	6,030	15,300	2,110	1,590
24	1,200	2,000	2,120	2,040	4,690	9,050	12,800	12,800	5,750	15,900	1,930	1,480
25	1,180	1,700	1,580	1,920	4,430	12,800	13,200	11,900	4,950	11,900	1,560	1,380
26	1,260	1,760	1,660	1,840	4,560	18,900	11,000	12,300	4,820	9,050	1,970	1,380
27	1,250	1,900	1,870	1,740	4,690	22,700	11,900	15,900	4,300	7,270	1,680	1,480
28	1,040	1,820	2,730	2,340	4,430	25,000	13,200	13,200	4,060	6,620	2,250	1,400
29	1,150	1,510	2,440	2,250	-------	32,200	11,400	10,800	3,940	5,750	2,250	1,270
30	1,150	1,450	2,250	1,950	-------	45,200	11,400	9,240	3,820	5,620	2,440	1,450
31	1,180	-------	1,930	1,930	-------	33,500	-------	8,320	-------	5,210	2,630	-------

Month	Observed			Corrected for storage		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	1,450	1,040	1,210	862	0.190	0.22
November	2,830	1,100	1,670	1,500	.330	.37
December	3,250	1,360	2,190	2,030	.447	.52
January	3,580	1,480	2,240	2,190	.482	.56
February	5,340	1,420	2,970	3,080	.678	.71
March	45,200	4,060	10,400	11,300	2.49	2.87
April	26,200	7,270	15,700	16,600	3.66	4.08
May	17,900	6,940	11,900	12,300	2.71	3.12
June	11,400	3,820	6,680	6,560	1.44	1.61
July	32,800	2,440	8,590	8,490	1.87	2.16
August	4,820	1,560	2,810	2,500	.551	.64
September	2,730	1,270	1,770	1,520	.335	.37
The year	45,200	1,040	5,690	5,760	1.27	17.23

DELAWARE RIVER AT RIEGELSVILLE, N. J.

LOCATION.—Water-stage recorder at suspension bridge at Riegelsville, Warren County, 600 feet above mouth of Musconetcong River.

DRAINAGE AREA.—6,190 square miles.

RECORDS AVAILABLE.—July, 1906, to September, 1931.

EXTREMES.—Maximum discharge during year, 57,000 second-feet Mar. 30 (gage height, 14.4 feet) minimum, 1,190 second-feet Dec. 16, when there was no flow in canal (gage height, 1.79 feet).

1906–1931: Maximum discharge, about 144,000 second-feet Mar. 28, 1913 (gage height, 25 feet); minimum, not including flow in canal, 870 second-feet Sept. 20, 1908 (gage height, 1.55 feet).

Maximum discharge known, about 275,000 second-feet Oct. 10, 11, 1903 (gage height, about 35.9 feet).

REMARKS.—Records good. Pennsylvania Canal diverted about 230 second-feet above station Oct. 1 to Nov. 15, Apr. 22 to Sept. 30. Part of table of monthly discharge corrected for diversion and for effect of storage in reservoirs on Wallenpaupack Creek and Mongaup River.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,660	1,680	2,090	2,440	2,200	6,080	32,600	14,600	11,200	4,420	5,520	2,870
2	1,640	1,820	2,440	2,110	2,250	6,230	31,000	12,700	10,200	3,880	4,920	2,910
3	1,690	1,760	2,940	1,920	2,060	6,230	34,100	12,000	8,820	3,510	4,500	3,480
4	1,660	1,480	3,630	2,160	2,080	6,080	31,500	10,900	7,820	3,280	4,500	3,840
5	1,710	1,680	3,510	2,140	2,040	6,080	30,000	10,500	7,170	3,390	4,640	3,480
6	1,630	1,870	3,510	5,160	2,020	6,000	28,500	9,500	6,540	3,160	4,230	3,000
7	1,420	2,160	3,510	5,310	2,020	6,000	25,500	8,820	6,080	3,760	3,970	2,870
8	1,470	2,020	3,280	4,010	1,890	7,000	25,000	9,840	9,730	5,460	3,480	2,560
9	1,470	1,820	2,940	4,140	2,230	8,500	24,000	15,000	15,000	6,150	3,250	2,270
10	1,480	1,800	2,940	4,420	2,530	8,500	22,600	21,100	13,100	15,000	3,720	2,480
11	1,550	1,520	2,940	3,880	2,340	8,500	23,000	18,800	12,400	26,400	3,840	2,310
12	1,360	1,500	2,840	3,630	2,340	8,000	28,000	18,800	11,600	39,200	4,100	2,210
13	1,440	1,680	2,730	3,390	2,840	7,500	27,500	23,500	10,200	25,900	3,970	2,020
14	1,360	1,720	2,730	3,160	5,160	6,850	21,600	22,600	8,480	17,700	3,720	2,060
15	1,410	1,690	2,630	2,630	3,570	6,540	18,400	23,500	7,490	13,400	3,720	1,980
16	1,660	1,790	1,840	2,270	3,510	6,850	15,800	21,100	7,840	11,200	3,600	1,890
17	1,480	2,280	1,800	2,440	3,630	7,330	14,200	17,500	10,900	9,180	3,250	2,150
18	1,480	3,950	1,770	2,730	12,600	7,490	12,700	17,100	12,400	8,520	3,000	2,250
19	1,410	3,280	1,990	3,390	9,160	7,820	11,600	15,800	11,600	7,870	2,980	2,500
20	1,470	3,280	2,180	3,510	7,490	9,160	10,500	13,500	9,840	7,550	3,070	2,270
21	1,400	3,050	2,340	3,280	7,170	9,160	10,200	12,700	7,820	7,550	2,730	2,580
22	1,420	2,730	2,340	2,530	7,040	8,820	9,500	15,000	7,010	7,550	2,580	2,270
23	1,600	2,530	2,250	2,440	6,850	9,500	9,500	16,300	7,170	14,700	2,560	2,110
24	1,530	2,440	2,530	2,530	6,540	10,900	14,200	16,300	7,170	19,000	2,410	2,080
25	1,550	2,200	2,110	2,530	6,230	14,600	16,300	15,400	6,380	14,100	2,150	1,860
26	1,580	2,110	2,080	2,440	6,230	23,000	13,900	15,400	6,080	10,800	2,210	1,890
27	1,660	2,200	2,530	2,440	6,230	27,500	15,000	18,800	5,610	8,850	2,190	1,840
28	1,560	2,140	4,010	3,050	6,080	30,500	16,300	17,100	5,310	7,870	3,450	1,930
29	1,380	1,970	3,510	3,160	------	39,500	14,200	13,900	5,160	6,910	3,480	1,760
30	1,630	1,690	3,160	2,730	------	55,000	13,500	12,000	4,560	6,290	3,000	1,800
31	1,690	------	2,530	2,530	------	44,500	------	10,500	------	6,140	3,600	------

Month	Observed			Corrected for storage and diversion		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	1,710	1,360	1,530	1,410	0.228	0.26
November	3,950	1,480	2,130	2,070	.334	.37
December	4,010	1,770	2,700	2,540	.410	.47
January	5,310	1,920	3,050	3,000	.485	.56
February	12,600	1,890	4,510	4,620	.746	.78
March	55,000	6,000	13,400	14,300	2.31	2.66
April	34,100	9,500	20,000	21,000	3.39	3.78
May	23,500	8,820	15,500	16,100	2.60	3.00
June	15,000	4,560	8,690	8,800	1.42	1.58
July	39,200	3,160	10,600	10,700	1.73	1.99
August	5,520	2,150	3,490	3,420	.553	.64
September	3,840	1,760	2,380	2,360	.381	.43
The year	55,000	1,360	7,350	7,540	1.22	16.52

DELAWARE RIVER AT TRENTON, N. J.

LOCATION.—Water-stage recorder 200 feet above Calhoun Street Bridge, Trenton, Mercer County, and half a mile above mouth of Assunpink Creek.

DRAINAGE AREA.—6,800 square miles.

RECORDS AVAILABLE.—February, 1913, to September, 1931.

EXTREMES.—Maximum discharge during year, 53,200 second-feet Mar. 30 (gage height, 6.60 feet); minimum, 1,480 second-feet Oct. 30 (gage height, −0.25 foot). (Flow in canals not included.)

1913–1931: Maximum discharge, about 160,000 second-feet Mar. 28, 29, 1913 (gage height, 13.3 feet); minimum, not including flow in canals, 1,240 second-feet several times in October and November, 1914 (gage height, −0.40 foot).

REMARKS.—Records good. Discharge estimated Jan. 15–26, when stage was affected by ice, and Mar. 22. Part of monthly-discharge table corrected for effect of storage on Wallenpaupack Creek and Mongaup River and for following diversions: Pennsylvania Canal, 30 second-feet Oct. 1 to Nov. 15, Apr. 22 to Sept. 30; Power Race, 60 second-feet Oct. 1 to Feb. 28, 110 second-feet Mar. 1 to Sept. 30; Delaware & Raritan Canal feeder, 110 second-feet Oct. 1 to Dec. 31, Mar. 1 to Sept. 30.

Daily discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,670	1,800	2,040	3,070	2,940	5,840	35,500	14,500	11,600	4,890	6,240	3,770
2	1,820	1,800	2,360	2,970	2,580	6,240	32,500	13,800	10,900	4,360	5,840	3,220
3	1,870	1,970	2,850	2,580	2,670	6,240	33,500	12,500	9,410	3,940	5,080	3,740
4	1,940	1,870	3,640	2,330	2,410	6,030	33,500	11,600	8,310	3,710	4,890	4,530
5	1,970	1,690	4,110	2,580	2,500	6,030	30,500	10,900	7,320	3,580	5,080	4,360
6	2,040	1,730	3,980	5,410	2,360	5,840	29,500	10,000	6,870	3,710	4,890	3,810
7	1,920	1,970	3,980	7,320	2,360	5,640	26,600	9,130	6,240	3,710	4,710	3,350
8	1,690	2,300	3,740	5,260	2,330	6,930	25,700	9,410	9,730	5,080	4,180	3,220
9	1,690	2,170	3,450	5,080	2,520	9,930	25,700	13,400	14,400	6,240	3,940	2,820
10	1,780	1,990	3,190	5,080	3,640	10,300	23,000	20,300	14,500	14,500	4,200	2,610
11	1,690	1,940	3,190	4,890	3,410	8,850	23,000	20,800	13,800	28,500	5,260	2,790
12	1,800	1,690	3,100	4,530	3,040	8,310	25,700	19,100	12,800	38,700	4,890	2,640
13	1,710	1,600	2,970	4,180	3,130	7,800	29,500	23,000	11,200	32,500	4,890	2,500
14	1,690	1,870	2,940	3,840	6,080	7,100	23,900	23,900	9,410	21,200	4,530	2,250
15	1,870	2,120	3,040	3,200	5,560	6,660	19,500	23,900	8,060	16,900	4,360	2,360
16	1,800	1,940	3,220	3,000	4,080	6,440	16,900	22,100	9,770	13,100	4,180	2,220
17	1,970	2,140	2,200	3,000	4,180	6,870	14,900	19,100	13,400	10,900	4,080	2,200
18	1,800	3,910	2,410	3,200	12,300	6,870	13,400	17,400	13,100	9,410	3,680	2,440
19	1,710	4,110	1,990	3,600	11,900	7,320	12,200	17,400	12,500	8,580	3,350	2,520
20	1,690	3,870	2,200	4,200	8,850	8,310	11,200	14,200	10,900	8,310	3,510	2,730
21	1,690	3,710	2,360	4,200	7,800	8,310	10,300	13,800	8,850	8,310	3,450	2,580
22	1,650	3,450	2,520	3,600	7,560	11,000	9,700	14,900	7,560	8,060	3,190	2,880
23	1,600	3,100	2,550	3,200	7,100	8,850	9,410	17,800	6,870	10,400	3,100	2,470
24	1,710	2,910	2,470	3,000	6,870	10,000	11,700	16,900	7,560	22,100	3,100	2,300
25	1,690	2,730	2,940	3,000	6,440	12,500	16,900	16,100	6,870	16,500	2,880	2,220
26	1,650	2,410	2,410	2,800	6,030	18,700	14,900	15,700	6,240	13,100	2,550	2,120
27	1,690	2,360	3,580	2,880	6,030	25,700	14,900	18,200	6,030	10,300	2,730	2,140
28	1,760	2,470	5,260	3,000	6,030	30,500	16,100	18,700	5,640	8,850	2,670	2,090
29	1,710	2,440	4,890	3,680	-------	38,700	15,700	14,900	5,260	8,060	4,420	2,120
30	1,540	2,170	4,180	3,480	-------	50,800	14,200	12,500	4,890	6,870	3,740	1,970
31	1,760	-------	3,770	3,040	-------	47,400	-------	10,900	-------	6,660	3,680	-------

Monthly discharge, in second-feet, of Delaware River at Trenton, N. J., 1930–31

Month	Observed			Corrected for storage and diversions		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	2,040	1,540	1,760	1,610	0.237	0.27
November	4,110	1,600	2,410	2,420	.356	.40
December	5,260	1,990	3,150	3,160	.465	.54
January	7,320	2,330	3,720	3,730	.549	.63
February	12,300	2,330	5,100	5,270	.775	.81
March	50,800	5,640	13,100	14,200	2.09	2.41
April	35,500	9,410	20,700	21,800	3.21	3.58
May	23,900	9,130	16,000	16,600	2.44	2.81
June	14,500	4,890	9,330	9,460	1.39	1.55
July	38,700	3,580	11,600	11,800	1.74	2.01
August	6,240	2,550	4,110	4,050	.596	.69
September	4,530	1,970	2,770	2,770	.407	.45
The year	50,800	1,540	7,830	8,090	1.19	16.15

BEAVER KILL AT COOKS FALLS, N. Y.

LOCATION.—Staff gage at highway bridge in Cooks Falls, Delaware County, 5½ miles below mouth of Willowemoc Creek.

DRAINAGE AREA.—241 square miles.

RECORDS AVAILABLE.—July, 1913, to September, 1931.

EXTREMES.—Maximum discharge during year, about 5,060 second-feet July 11 (gage height, about 9.0 feet); minimum, 41 second-feet Oct. 15 (gage height, 0.92 foot).

1913–1931: Maximum discharge, about 14,600 second-feet Nov. 16, 1926 (gage height, about 16.0 feet); minimum, about 23 second-feet Sept. 14–16, 1913 (gage height, 0.60 foot).

REMARKS.—Records good except those for period of ice effect, Dec. 17 to Mar. 9, and those estimated, Nov. 3–8, May 3, 12, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Ju'y	Aug.	Sept.
1	81	80	1,210	110	100	150	1,360	945	650	152	314	100
2	72	73	700	100	95	150	2,330	790	530	152	285	98
3	65	70	472	100	95	140	2,260	790	460	142	344	196
4	60	70	389	110	90	140	1,980	790	408	133	391	152
5	60	70	358	110	95	130	2,260	650	375	133	271	124
6	60	70	329	110	95	120	2,260	650	344	133	232	112
7	60	70	275	110	95	120	1,700	570	445	124	208	87
8	59	70	275	100	95	130	1,630	734	1,470	327	196	77
9	60	67	288	100	100	140	1,860	1,640	790	314	196	75
10	60	65	275	100	100	130	2,720	1,350	890	2,170	196	75
11	58	62	262	100	100	105	3,720	1,560	740	3,730	184	73
12	52	60	250	100	100	85	2,820	1,560	570	1,560	184	72
13	48	77	238	100	110	73	2,260	1,560	478	1,270	184	71
14	43	75	227	100	120	70	1,980	1,420	425	650	173	68
15	56	77	194	95	130	70	1,770	1,360	391	650	184	116
16	93	107	130	100	150	62	1,490	1,240	419	650	196	101
17	78	246	130	100	190	60	1,300	1,420	670	530	196	112
18	126	358	150	100	300	64	1,060	1,000	442	460	152	202
19	102	275	160	100	260	89	1,000	890	375	425	152	152
20	77	205	160	100	240	194	945	790	344	425	142	112
21	62	184	150	100	220	288	890	1,180	391	492	133	110
22	60	174	140	95	200	358	840	890	328	3,410	113	104
23	58	156	140	95	190	374	1,850	1,120	328	1,840	101	98
24	56	156	130	95	180	610	1,460	1,000	299	1,130	98	88
25	54	248	130	100	170	1,180	740	955	258	790	95	80
26	53	250	140	100	160	1,300	1,120	1,460	232	650	90	98
27	50	238	140	100	160	1,540	1,770	1,000	173	570	94	116
28	51	227	130	100	160	1,880	1,360	840	162	495	307	100
29	67	205	120	100	------	3,660	1,300	695	162	425	220	90
30	75	246	110	100	------	2,420	1,180	650	152	478	184	77
31	80	------	110	100	------	1,630	------	1,040	------	375	133	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	126	43	65.7	0.273	0.31
November	358	60	144	.598	.67
December	1,210	110	255	1.06	1.22
January	110	95	101	.419	.48
February	300	90	146	.606	.63
March	3,660	60	563	2.34	2.70
April	3,720	740	1,710	7.10	7.92
May	1,640	570	1,050	4.36	5.03
June	1,470	152	457	1.90	2.12
July	3,730	124	800	3.32	3.83
August	391	90	192	.797	.92
September	202	68	105	.436	.49
The year	3,730	43	467	1.94	26.32

LITTLE BEAVER KILL NEAR LIVINGSTON MANOR, N. Y.

LOCATION.—Staff gage 2½ miles southeast of Livingston Manor, Sullivan County, and 3 miles above mouth of Cattail Brook.

DRAINAGE AREA.—19.8 square miles.

RECORDS AVAILABLE.—July, 1924, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,130 second-feet July 10 (gage height, 4.9 feet); minimum, 2.4 second-feet Oct. 15 (gage height, 0.75 foot).
1924–1931: Maximum discharge, 3,420 second-feet Aug. 26, 1928 (gage height, 8.7 feet); minimum, 2.2 second-feet Aug. 9, 10, 12, 1930 (gage height, 0.73 foot).

REMARKS.—Records fair. Stage-discharge relation affected by ice Dec. 13–22, 25, 31, Jan. 2–3, Jan. 6 to Feb. 16, Feb. 25 to Mar. 4, Mar. 14, 15. Small diversion from Lily Pond for Liberty water supply.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.2	7.7	87	9.4	8	15	138	52	57	6.7	9.7	6.9
2	4.4	6.4	37	9	8	15	306	44	42	6.7	13	8.4
3	4.2	6.0	24	10	8	15	210	46	33	6.7	19	19
4	4.0	6.2	29	9.7	8	15	358	37	29	6.7	13	11
5	4.2	7.2	24	10	7	15	251	32	24	5.9	10	7.5
6	4.2	7.4	18	11	7	15	184	27	19	6.4	7.5	6.9
7	4.2	5.7	19	12	7	16	184	32	20	6.7	7.5	5.9
8	4.0	5.4	18	11	7	15	172	104	115	13	6.4	5.5
9	4.4	5.2	19	11	7	15	237	208	62	60	7.5	5.2
10	4.0	5.7	15	10	7	15	325	118	81	602	8.8	5.0
11	4.0	5.2	15	10	8	15	355	160	60	250	8.4	5.0
12	3.6	6.2	23	10	9	14	184	184	42	67	15	4.5
13	3.6	7.0	18	10	10	13	138	118	34	52	15	4.0
14	3.6	6.4	15	9	10	14	118	118	29	41	9.7	4.5
15	8.6	10	15	9	11	15	73	92	26	29	15	5.0
16	9.4	33	14	9	13	18	67	70	32	29	12	4.7
17	5.7	101	14	8	19	19	60	118	46	21	8.4	26
18	12	56	13	8	29	26	56	64	29	26	6.9	17
19	7.4	33	13	8	24	20	41	57	20	24	6.7	8.1
20	6.2	26	12	9	18	21	38	44	16	24	5.9	7.5
21	5.2	20	11	9	15	27	31	100	24	21	6.4	8.8
22	5.0	18	11	8	16	31	27	73	15	90	5.5	6.9
23	4.0	15	11	8	19	43	224	128	17	42	5.0	5.9
24	5.7	13	11	8	19	69	100	73	20	29	4.5	5.5
25	5.4	34	11	8	18	81	70	73	17	21	4.2	5.0
26	5.7	29	11	8	17	180	134	100	14	18	4.5	7.5
27	4.8	19	14	9	16	238	118	64	14	15	66	8.8
28	8.0	16	11	9	16	184	70	46	8.1	13	45	6.4
29	7.2	13	11	9	------	547	87	36	7.5	13	20	6.9
30	6.4	26	9.4	8	------	233	67	167	7.5	17	11	5.2
31	9.4	------	9	8	------	128	------	104	------	12	7.5	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	12	3.6	5.60	0.283	0.33
November	101	5.2	18.3	.924	1.03
December	87	9	18.1	.915	1.05
January	12	8	9.20	.465	.54
February	29	7	12.9	.652	.68
March	547	13	67.3	3.40	3.92
April	358	27	147	7.42	8.28
May	208	27	86.7	4.38	5.05
June	115	7.5	32.0	1.62	1.81
July	602	5.9	50.8	2.57	2.96
August	66	4.2	12.4	.626	.72
September	26	4.0	7.82	.395	.44
The year	602	3.6	39.1	1.97	26.81

WEST BRANCH OF DELAWARE RIVER AT HALE EDDY, N. Y.

LOCATION.—Water-stage recorder at highway bridge in Hale Eddy, Delaware County, 9 miles above confluence with East Branch of Delaware River.

DRAINAGE AREA.—603 square miles.

RECORDS AVAILABLE.—November, 1912, to September, 1931.

EXTREMES.—Maximum discharge during year, 8,340 second-feet July 22 (gage height, 9.27 feet); minimum, 47 second-feet Oct. 16 (gage height, 1.19 feet).

1912–1931: Maximum discharge, about 26,500 second-feet Sept. 30, 1924 (gage height, about 15.8 feet); minimum, 34 second-feet Sept. 21, 1913 (gage height, 1.0 foot).

Maximum discharge known, about 46,000 second-feet Oct. 10, 1903 (gage height, 20.3 feet).

REMARKS.—Records good except those for periods of ice effect, Nov. 28–30 Dec. 2–3, Dec. 13 to Mar. 15, and those estimated, Aug. 15, 16, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	88	72	220	140	110	600	3,130	1,790	1,120	308	613	215
2	80	69	280	130	120	550	4,140	1,570	930	283	553	215
3	72	63	260	130	110	550	3,870	1,530	772	286	548	322
4	68	60	233	130	110	550	4,140	1,370	671	269	660	333
5	64	62	315	150	100	500	4,000	1,150	587	269	510	273
6	60	59	269	180	100	500	3,480	1,020	524	240	416	221
7	60	63	243	220	100	500	3,240	900	496	350	356	189
8	60	60	231	160	100	550	3,120	1,120	783	1,200	322	170
9	59	68	218	140	100	600	3,240	2,410	771	1,660	369	156
10	57	60	215	140	100	550	3,480	1,790	634	1,920	631	148
11	57	62	200	130	110	550	5,700	1,800	737	6,550	442	138
12	54	63	206	130	110	550	4,950	2,160	603	4,060	391	136
13	50	64	200	120	120	550	3,430	1,940	510	2,400	421	136
14	50	64	200	120	150	500	2,560	2,060	447	1,740	383	134
15	49	64	170	110	190	550	2,160	1,880	400	1,290	330	146
16	48	71	150	100	240	524	1,840	1,530	429	1,260	300	170
17	50	71	140	110	380	529	1,530	1,900	1,280	1,050	276	307
18	55	78	160	120	500	592	1,370	1,490	1,130	870	263	454
19	56	80	190	120	750	639	1,150	1,220	812	823	263	273
20	57	78	180	130	700	634	1,020	1,050	693	726	250	221
21	58	78	170	140	700	682	900	1,950	912	1,460	209	209
22	57	75	170	120	650	960	840	1,750	754	7,110	183	224
23	56	71	150	120	600	1,290	1,110	1,530	598	5,010	164	212
24	56	69	150	120	600	1,980	1,520	2,150	572	2,860	156	195
25	56	74	150	130	600	3,230	1,150	2,910	529	2,160	148	186
26	56	80	160	140	600	4,320	1,080	4,240	455	1,700	141	203
27	57	80	160	140	600	4,790	1,290	2,810	690	1,290	189	212
28	69	75	160	140	550	4,900	1,290	2,160	478	1,050	492	198
29	80	70	150	130	-------	6,300	2,030	1,660	387	900	429	186
30	74	75	150	130	-------	5,830	2,190	1,370	341	930	297	167
31	75	-------	140	120	-------	3,710	-------	1,330	-------	766	243	-----

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	88	48	60.9	0.101	0.12
November	80	59	69.3	.115	.13
December	315	140	193	.320	.37
January	220	100	134	.222	.26
February	750	100	329	.546	.57
March	6,300	500	1,580	2.62	3.02
April	5,700	840	2,500	4.15	4.63
May	4,240	900	1,790	2.97	3.42
June	1,280	341	668	1.11	1.24
July	7,110	240	1,700	2.82	3.25
August	660	141	353	.585	.67
September	454	134	212	.352	.39
The year	7,110	48	803	1.33	18.07

WALLENPAUPACK CREEK AT WILSONVILLE, PA.

LOCATION.—At hydroelectric plant of Pennsylvania Power & Light Co. with dam at Wilsonville, 1½ miles south of Hawley, Wayne County.

DRAINAGE AREA.—227 square miles.

RECORDS AVAILABLE.—October, 1918, to September, 1921; June, 1926, to September, 1931.

REMARKS.—Records good. Flow computed from output of generators. No discharge over spillway. Daily discharge not corrected for storage. Discharge measurements, records of power-plant operation, and water-surface elevations in reservoir and in tailrace furnished by Pennsylvania Power & Light Co.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	388	16	262	137	20	0	117	172	76	197	225	116
2	332	89	139	6	27	0	255	229	75	109	0	132
3	398	157	156	36	36	25	80	31	181	282	139	275
4	233	248	196	52	46	0	224	37	103	0	26	61
5	62	126	283	190	32	0	0	52	20	0	97	53
6	329	164	193	210	10	46	194	72	100	195	118	4
7	220	227	43	103	38	0	140	95	11	302	154	138
8	362	131	80	243	14	0	261	24	357	472	406	524
9	239	34	113	176	152	57	264	22	371	580	62	388
10	210	217	141	28	60	207	251	203	302	471	315	387
11	341	314	203	18	92	346	163	29	245	361	82	184
12	106	172	182	178	29	193	8	217	108	47	230	302
13	384	153	70	70	0	0	136	228	122	628	324	0
14	76	287	0	205	138	0	111	108	0	282	304	355
15	122	269	75	135	24	0	87	246	251	310	108	311
16	106	65	176	41	152	88	129	224	447	300	20	300
17	173	93	348	45	218	0	41	80	487	200	266	485
18	178	128	227	37	66	130	0	337	444	287	418	253
19	18	132	285	117	47	218	23	92	541	12	300	153
20	158	93	179	175	53	199	209	291	267	440	372	20
21	200	170	75	95	49	60	164	102	29	141	466	212
22	235	231	483	167	97	0	227	101	674	98	383	228
23	185	20	198	186	0	213	242	371	477	2	47	170
24	313	114	127	3	31	99	124	125	333	146	525	90
25	287	245	0	26	59	137	12	289	477	44	220	237
26	64	115	171	189	91	20	0	406	329	0	341	107
27	294	0	219	142	75	84	392	348	494	387	211	24
28	165	157	97	134	71	38	201	270	52	276	166	232
29	106	309	124	32	-------	0	329	290	494	460	218	119
30	261	82	72	69	-------	400	344	74	252	484	30	14
31	315	-------	17	10	-------	215	-------	57	-------	329	469	-------

Month	Observed			Corrected for storage		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	398	18	221	−29.2	−0.129	−0.15
November	314	0	152	20.2	.089	.10
December	483	0	159	22.5	.099	.11
January	243	3	105	64.0	.282	.33
February	218	0	61.7	137	.604	.63
March	400	0	89.5	540	2.38	2.74
April	392	0	158	870	3.83	4.27
May	406	22	168	485	2.14	2.47
June	674	0	271	209	.921	1.03
July	628	0	253	248	1.09	1.26
August	525	0	227	275	1.21	1.14
September	524	0	196	−20.8	−.092	−.10
The year	674	0	172	215	.947	12.83

NEVERSINK RIVER AT OAKLAND VALLEY, N. Y.

LOCATION.—Water-stage recorder 250 feet below highway bridge known as Paradise Bridge, Orange County, and three-quarters of a mile south of Oakland Valley, Sullivan County.

DRAINAGE AREA.—221 square miles.

RECORDS AVAILABLE.—July, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 3,760 second-feet Mar. 29 (gage height, 6.11 feet); minimum, 50 second-feet Oct. 10 (gage height, 1.53 feet).
1928–1931: Maximum discharge, 13,000 second-feet Aug. 26, 1928 (gage height, 10.1 feet); minimum, 42 second-feet Sept. 4, 1929 (gage height, 1.43 feet).

REMARKS.—Records excellent except those for periods of ice effect, Dec. 3–5, 15–19, Dec. 25 to Mar. 7, and those estimated, Sept. 5–12, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	81	604	100	95	180	1,220	658	523	158	135	90
2	64	81	478	100	90	180	1,880	604	423	156	126	90
3	69	75	240	100	100	170	1,580	582	352	158	143	138
4	59	70	220	110	110	170	1,680	550	327	156	150	138
5	58	73	200	110	95	180	1,650	501	290	153	153	117
6	58	75	190	120	100	170	1,280	485	323	158	126	110
7	55	70	118	150	95	170	1,330	474	356	203	121	100
8	52	69	175	120	100	187	1,280	1,100	1,650	205	113	90
9	51	67	166	110	90	209	1,200	1,920	842	232	108	85
10	52	65	158	100	90	196	1,400	1,310	1,440	990	113	80
11	58	61	152	100	95	187	2,080	1,840	1,060	2,070	117	75
12	58	59	166	100	90	187	1,720	1,700	724	804	135	71
13	61	62	193	120	95	172	1,160	1,330	572	469	158	69
14	65	67	155	110	110	172	1,250	1,160	490	352	138	66
15	82	77	130	95	100	206	1,100	1,160	433	298	131	66
16	96	111	120	95	110	229	930	860	443	271	178	71
17	104	291	120	95	150	219	840	965	676	271	143	89
18	92	402	140	110	220	251	782	788	474	242	117	121
19	88	251	140	100	400	301	817	664	375	267	102	113
20	86	187	150	110	340	281	743	594	323	242	135	94
21	94	158	137	100	280	289	760	664	318	228	104	90
22	88	137	134	100	240	383	746	712	294	338	98	96
23	88	122	127	90	220	438	2,010	856	271	323	89	94
24	83	117	129	90	220	614	1,780	743	279	253	83	83
25	88	125	130	95	190	895	1,000	646	239	212	81	78
26	65	163	130	100	190	1,150	1,050	736	232	187	83	78
27	62	155	150	100	180	1,510	1,660	604	264	172	85	79
28	84	130	130	110	170	1,520	1,000	506	209	161	153	87
29	75	137	120	100	------	3,270	860	438	181	153	178	81
30	73	152	120	100	------	2,400	782	433	169	156	126	76
31	79	------	110	100	------	1,380	------	736	------	150	104	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	104	51	72.4	0.328	0.38
November	402	59	123	.557	.62
December	604	110	177	.801	.92
January	150	90	105	.475	.55
February	400	90	156	.706	.74
March	3,270	170	576	2.61	3.01
April	2,080	743	1,250	5.66	6.32
May	1,920	433	849	3.84	4.43
June	1,650	169	485	2.19	2.44
July	2,070	150	329	1.49	1.72
August	178	81	123	.557	.64
September	138	66	90.5	.410	.46
The year	3,270	51	362	1.64	22.23

FLAT BROOK NEAR FLATBROOKVILLE, N. J.

LOCATION.—Water-stage recorder 1 mile above Flatbrookville, Sussex County, and 1½ miles above mouth.

DRAINAGE AREA.—65 square miles.

RECORDS AVAILABLE.—July, 1923, to September, 1931.

EXTREMES.—Maximum discharge during year, 605 second-feet Mar. 29 (gage height, 3.68 feet); minimum, about 6.1 second-feet Oct. 14, 26 (gage height, 1.67 feet).

1923–1931: Maximum discharge, about 2,350 second-feet Apr. 7, 1924, Feb. 11, 1925 (gage height, 7.1 feet); minimum, 4 second-feet Sept. 6, 7, 1923 (gage height, 1.35 feet).

REMARKS.—Records excellent except those for periods when stage was affected by ice, Dec. 16–18, 23–26, Jan. 1–4, 9–27, Feb. 2–6, 8–18, which are fair. Slight regulation by operation of power plant upstream.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15.3	19.0	33	32	37	117	244	115	90	46	35	25
2	14.7	17.7	32	30	36	117	302	107	90	44	34	24
3	14.7	18.3	25	28	34	110	237	105	78	45	42	83
4	14.2	12.0	24	26	34	107	206	95	72	45	60	56
5	14.2	28	24	42	34	98	179	90	65	44	58	36
6	14.2	63	24	128	34	88	160	84	60	54	40	31
7	14.2	36	24	145	33	82	163	80	68	63	31	26
8	14.2	27	23	100	34	129	189	150	412	54	32	23
9	13.6	23	23	80	34	274	160	259	220	50	31	23
10	13.6	21	23	65	34	195	139	195	206	254	34	22
11	14.7	19.6	22	55	34	154	131	166	220	456	35	21
12	12.0	19.0	23	48	34	134	123	145	169	192	40	20
13	14.7	18.3	25	42	38	120	112	145	131	117	45	19.6
14	11.0	18.3	22	40	44	115	102	174	107	90	36	23
15	15.9	19.6	20	40	50	131	93	237	93	80	35	22
16	19.0	30	16	38	60	142	88	172	107	68	38	21
17	18.3	66	14	38	70	134	84	145	448	61	32	20
18	17.7	76	16	40	150	145	84	126	263	61	28	21
19	19.6	54	19.0	44	237	163	78	112	172	76	27	20
20	19.6	42	19.0	65	172	154	74	102	128	63	34	18.3
21	16.5	34	19.0	55	131	151	72	176	107	60	31	23
22	15.8	32	17.7	46	100	160	68	252	90	107	26	23
23	14.7	28	16	42	90	157	190	274	90	84	25	21
24	16.1	26	14	40	88	172	270	248	98	110	24	19.6
25	16.6	26	13	38	93	226	169	189	80	88	23	17.7
26	11.5	27	15	38	102	267	166	176	70	65	23	19.0
27	15.3	25	46	40	110	220	237	145	68	56	23	23
28	14.2	22	74	58	107	189	172	120	60	50	74	22
29	14.7	19.6	58	54	------	456	145	107	54	48	48	20
30	15.3	21	51	46	------	403	128	95	50	51	32	18.3
31	17.1	------	40	45	------	274	------	88	------	51	27	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	19.6	11.0	15.3	0.235	0.27
November	76	12.0	29.6	.455	.51
December	74	13	26.3	.405	.47
January	145	26	52.5	.808	.93
February	237	33	73.4	1.13	1.18
March	456	82	174	2.68	3.09
April	302	68	152	2.34	2.61
May	274	80	151	2.32	2.68
June	448	50	132	2.03	2.26
July	456	44	88.2	1.36	1.57
August	74	23	35.6	.548	.63
September	83	17.7	25.4	.391	.44
The year	456	11.0	79.6	1.22	16.64

PAULINS KILL AT BLAIRSTOWN, N. J.

LOCATION.—Water-stage recorder 1,200 feet above highway bridge in Blairstown, Warren County, 1,400 feet above mouth of Blairs Creek, and 9 miles above mouth. Prior to Aug. 1, 1931, recorder at highway bridge.

DRAINAGE AREA.—128 square miles to June 24, 1931; 126 square miles thereafter.

RECORDS AVAILABLE.—October, 1921, to September, 1931.

EXTREMES.—Maximum discharge during year not determined; minimum, 3 second-feet Nov. 5, Dec. 17 (gage height, 1.45 feet).

1921–1931: Maximum discharge, about 1,800 second-feet Mar. 8, 1922, Feb. 12, 1925 (gage height, 7.05 feet); minimum, about 2.8 second-feet Nov. 1, 1922 (gage height, 1.34 feet).

REMARKS.—Records good except those for periods of ice effect and those estimated, Mar. 1–5, Apr. 29, 30, Aug. 1–7, which are fair. No record May 1–19, June 25 to July 31. Flow regulated by storage in Swartswood Lake and by operation of power plants above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Aug.	Sept.
1	28	41	61	a 60	61	220	332	-------	197	90	48
2	36	33	66	a 58	a 60	200	431	-------	197	85	49
3	34	42	46	a 55	a 60	190	374	-------	154	80	196
4	29	25	a 36	56	a 55	170	319	-------	129	75	153
5	34	42	a 34	62	a 55	160	280	-------	114	70	101
6	33	76	33	149	a 55	144	256	-------	105	65	76
7	30	70	39	178	a 55	133	256	-------	133	60	68
8	33	52	47	137	a 55	191	280	-------	560	60	58
9	29	38	40	a 100	a 55	460	256	-------	460	60	53
10	35	45	41	a 65	a 55	360	220	-------	360	62	48
11	30	48	42	a 55	a 55	256	208	-------	346	68	54
12	34	50	39	a 50	58	220	197	-------	293	78	41
13	28	47	39	a 48	61	197	175	-------	232	77	41
14	27	49	39	a 44	96	186	164	-------	197	74	44
15	32	54	a 20	a 42	150	186	154	-------	164	66	55
16	41	68	a 15	a 41	125	186	144	-------	203	68	57
17	35	131	17	41	106	175	118	-------	524	63	49
18	47	193	21	59	388	164	133	-------	431	58	51
19	45	160	29	70	460	154	124	-------	306	53	47
20	38	116	29	77	268	164	114	144	244	71	44
21	39	90	38	65	197	175	109	164	208	65	46
22	25	74	36	a 50	186	175	107	208	175	56	44
23	32	56	31	a 46	197	164	154	256	186	50	42
24	32	50	a 26	a 42	208	154	232	256	186	50	40
25	33	53	a 26	a 40	220	175	175	208	-------	45	40
26	30	47	37	a 38	244	208	186	197	-------	47	38
27	21	48	68	a 38	244	186	280	175	-------	50	38
28	29	48	123	75	220	164	220	154	-------	84	45
29	31	35	104	98	-------	414	190	133	-------	82	44
30	31	27	95	82	-------	503	160	124	-------	67	40
31	35	-------	74	a 65	-------	374	-------	124	-------	56	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	47	21	32.8	0.256	0.30
November	193	25	63.6	.497	.55
December	123	15	44.9	.351	.40
January	178	38	67.3	.526	.61
February	460	55	145	1.13	1.18
March	503	133	220	1.72	1.98
April	431	107	212	1.66	1.85
May 20–31	256	124	179	1.40	.62
June 1–24	560	105	254	1.98	1.77
August	90	45	65.6	.521	.60
September	196	38	58.3	.463	.52

a Stage-discharge relation affected by ice.

PEQUEST RIVER AT PEQUEST, N. J.

LOCATION.—Water-stage recorder at Pequest, Warren County, 100 feet above Lehigh & Hudson River Railway bridge and 300 feet below mouth of Furnace Brook.

DRAINAGE AREA.—108 square miles.

RECORDS AVAILABLE.—November, 1921, to September, 1931.

EXTREMES.—Maximum discharge during year, 830 second-feet July 10 (gage height, 3.59 feet); minimum, 21 second-feet Oct. 9–11 (gage height, 1.11 feet).

1921–1931: Maximum discharge, that of July 10, 1931; minimum, 16 second-feet Sept. 20, 21, 1924, Aug. 7, 1926 (gage height, 0.31 foot).

REMARKS.—Records excellent except those estimated, Dec. 17–20, Jan. 3–6, 16–18, 23–28, Feb. 1–17, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	28	68	64		114	236	102	104	93	95	64
2	22	27	68	51		114	266	95	114	86	91	60
3	22	28	52	48		110	233	95	100	83	90	66
4	22	26	66	46		104	208	91	88	83	88	67
5	22	42	61	46		99	185	88	80	80	83	67
6	22	52	64	85	50	99	170	83	73	84	80	61
7	22	50	64	110		95	179	83	102	93	75	55
8	22	40	66	83		122	202	132	349	95	72	52
9	22	35	66	83		221	185	157	290	100	73	51
10	21	32	62	76		208	165	147	250	525	78	50
11	22	31	50	72		176	160	142	263	705	83	48
12	23	31	50	66		147	155	138	221	630	84	47
13	22	31	48	66		131	140	152	188	582	84	47
14	22	29	46	54		124	131	150	157	536	83	46
15	27	31	35	48	75	122	120	147	133	471	81	47
16	27	38	31	44		122	116	131	215	387	76	48
17	26	60	30	40		118	112	114	458	283	73	50
18	28	100	32	38	297	114	108	100	406	227	73	48
19	27	97	34	45	310	112	102	95	328	202	72	47
20	27	73	38	56	205	116	99	91	250	185	70	46
21	26	62	37	52	150	133	95	106	199	173	72	46
22	24	55	34	40	136	140	91	133	165	160	72	45
23	25	51	35	38	133	129	114	155	155	145	72	43
24	24	47	35	36	129	120	133	160	155	142	67	42
25	23	46	34	38	126	126	126	142	142	140	62	41
26	22	46	40	38	122	140	129	124	136	138	60	43
27	24	42	77	42	120	133	152	110	129	129	64	45
28	23	32	106	80	114	126	136	99	116	120	76	45
29	24	36	91	76	-------	322	120	90	104	112	78	42
30	25	37	83	61	-------	318	110	81	97	110	76	42
31	29	-------	64	62	-------	253	-------	80	-------	104	70	----

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	29	21	23.8	0.220	0.25
November	100	26	44.5	.412	.46
December	106	30	53.8	.498	.57
January	110	36	57.5	.532	.61
February	310	----------	102	.944	.98
March	322	95	145	1.34	1.54
April	266	91	149	1.38	1.54
May	160	80	117	1.08	1.24
June	458	73	186	1.72	1.92
July	705	80	226	2.09	2.41
August	95	60	76.5	.708	.82
September	67	41	50.0	.463	.52
The year	705	21	103	.954	12.86

BEAVER BROOK NEAR BELVIDERE, N. J.

LOCATION.—Water-stage recorder 500 feet above mouth of brook and 2 miles east of Belvidere, Warren County.

DRAINAGE AREA.—36 square miles.

RECORDS AVAILABLE.—May, 1922, to September, 1931.

EXTREMES.—Maximum discharge during year, 740 second-feet July 11 (gage height, 3.80 feet); minimum, 2.0 second-feet Oct. 11–14 (gage height, 1.19 feet).

1922–1931: Maximum discharge, about 826 second-feet July 15, 1928 (gage height, 3.92 feet); minimum, that of Oct. 11–14, 1931.

REMARKS.—Records good except those for periods of ice effect and those estimated, May 14, 15, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.6	6.5	a 18	a 20	a 26	52	102	28	29	26	26	14
2	2.9	4.5	a 14	a 19	a 24	50	117	26	25	24	25	15
3	2.9	3.5	a 12	a 17	a 24	46	108	28	21	23	25	22
4	2.9	3.3	a 11	16	a 22	45	97	27	19	23	26	19
5	2.7	7.3	11	21	a 22	42	84	25	18	21	24	17
6	2.6	12	10	59	a 22	40	78	23	17	26	22	16
7	3.4	7.9	11	57	22	37	80	23	23	27	20	15
8	2.7	6.3	12	35	a 22	39	82	32	82	25	19	14
9	2.6	5.3	11	a 38	a 22	66	72	40	66	25	20	12
10	2.4	4.2	11	a 36	a 20	57	65	33	54	166	24	13
11	2.2	4.5	10	a 32	a 22	50	64	34	59	636	30	12
12	2.0	4.0	11	35	a 26	47	59	34	50	452	29	11
13	2.0	4.0	12	33	29	44	54	40	44	298	27	11
14	2.0	4.0	10	a 30	a 32	43	49	40	37	214	23	10
15	3.5	5.3	a 9	a 24	a 40	41	46	36	33	168	22	11
16	4.0	5.3	a 8	a 22	a 42	42	45	33	53	137	24	8.7
17	3.5	19	a 8	a 20	a 61	40	42	29	181	115	21	9.5
18	5.6	40	8.0	21	a 167	38	40	26	180	95	17	10
19	5.8	32	7.7	31	141	38	36	24	134	65	16	9.1
20	3.7	22	6.3	38	93	42	36	23	102	70	15	10
21	3.5	19	a 8	33	75	44	33	30	80	66	14	8.0
22	4.5	17	a 8	a 30	68	45	32	38	66	60	12	10
23	3.5	13	7.7	a 24	66	44	40	39	60	54	12	7.7
24	3.7	13	a 8	a 24	64	39	39	37	59	52	12	7.8
25	3.5	12	a 7	a 24	61	44	35	33	49	50	13	6.3
26	2.9	12	a 8	23	59	49	37	29	44	49	11	7.3
27	2.6	10	21	28	56	44	46	26	43	44	15	9.2
28	2.6	a 9	36	33	52	42	37	24	37	40	20	7.0
29	3.6	a 9	36	34	-------	98	35	22	33	36	21	8.6
30	4.2	a 7	29	33	-------	117	31	19	29	34	17	8.7
31	6.0	-------	38	27	-------	104	-------	18	-------	32	16	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	6.0	2.0	3.31	0.092	0.11
November	40	3.3	10.7	.297	.33
December	38	6.3	13.5	.375	.43
January	59	16	29.6	.822	.95
February	167	20	49.3	1.37	1.43
March	117	37	50.6	1.41	1.63
April	117	31	57.4	1.59	1.77
May	40	18	29.6	.822	.95
June	181	17	57.6	1.60	1.78
July	636	21	102	2.83	3.26
August	30	11	19.9	.553	.64
September	22	6.3	11.3	.314	.35
The year	636	2.0	36.1	1.00	13.63

a Stage-discharge relation affected by ice.

LEHIGH RIVER AT TANNERY, PA.

LOCATION.—Water-stage recorder 600 feet above highway bridge in Tannery, Carbon County.

DRAINAGE AREA.—322 square miles.

RECORDS AVAILABLE.—October, 1919, to September, 1921; October, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, about 6,300 second-feet Mar. 29 (gage height, 7.5 feet); minimum, 44 second-feet Nov. 28 (gage height, 1.53 feet).

1919–1921, 1928–1931: Maximum discharge, 6,930 second-feet Mar. 12, 1920 (gage height, 8.10 feet, chain-gage datum); minimum, 37 second-feet Sept. 28, 1930 (gage height, 1.46 feet).

REMARKS.—Records good except those estimated, which are fair. Slight diurnal fluctuation caused by operation of power plants.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	130	81	144	e 75	e 100	e 260	1,550	532	564	177	218	177
2	115	75	217	e 70	e 100	e 240	1,860	489	495	167	203	167
3	91	73	144	e 85	e 110	e 220	1,800	465	429	167	210	170
4	87	71	124	174	e 120	e 220	1,800	441	388	167	282	214
5	87	89	130	e 210	e 140	e 220	1,600	400	356	177	226	214
6	81	127	121	e 180	181	e 220	1,400	305	320	181	207	207
7	79	85	91	e 120	e 120	e 220	1,300	330	337	181	203	199
8	79	87	118	e 95	e 140	e 240	1,260	892	786	634	196	192
9	79	87	113	e 90	e 150	447	1,300	1,350	625	471	214	192
10	77	81	105	e 90	e 140	e 320	1,210	1,030	604	1,180	305	188
11	77	73	103	e 120	e 100	e 300	1,210	1,210	597	2,020	310	184
12	75	79	103	e 160	e 130	e 280	1,080	1,300	501	1,160	310	181
13	75	75	103	e 140	e 180	e 280	942	1,390	423	744	361	167
14	71	77	82	e 100	e 180	286	842	1,700	361	519	345	151
15	71	73	e 70	e 80	e 120	305	779	1,400	315	420	300	147
16	71	79	e 65	e 100	e 140	320	695	1,120	443	356	296	151
17	77	87	e 70	e 120	e 214	315	625	1,010	674	310	264	151
18	81	103	e 85	e 160	296	350	584	870	507	286	230	144
19	81	105	127	e 220	400	441	532	765	388	278	210	130
20	77	93	96	e 240	361	429	489	702	325	260	207	115
21	75	79	103	e 160	e 200	400	453	1,090	296	278	207	164
22	73	81	135	e 110	e 190	489	429	1,120	260	452	181	160
23	75	81	e 120	e 100	e 180	544	667	1,030	264	447	167	151
24	75	73	e 95	e 120	e 190	786	730	1,080	268	835	174	144
25	77	81	e 80	e 100	e 200	1,270	653	1,030	239	604	181	124
26	79	93	e 100	226	e 200	1,650	702	1,030	327	420	160	115
27	73	81	e 140	196	e 200	1,750	758	870	330	340	154	103
28	79	61	154	160	e 220	1,750	660	744	251	282	157	124
29	87	54	e 120	147	------	3,550	625	625	218	260	160	107
30	77	75	e 100	e 130	------	2,960	590	570	192	282	170	105
31	85	------	e 85	e 120	------	1,910	------	674	------	247	167	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	130	71	81.2	0.252	0.29
November	127	54	82.0	.255	.28
December	217	65	111	.345	.40
January	240	70	135	.419	.48
February	400	100	179	.556	.58
March	3,550	220	741	2.30	2.65
April	1,860	429	971	3.02	3.37
May	1,700	305	889	2.76	3.18
June	786	192	403	1.25	1.40
July	2,020	167	462	1.43	1.65
August	361	154	225	.699	.81
September	214	103	158	.491	.55
The year	3,550	54	371	1.15	15.64

e Estimated.

LEHIGH RIVER AT BETHLEHEM, PA.

LOCATION.—Water-stage recorder 1,500 feet above Minsi Trail Bridge, Bethlehem, Northampton County, and 2,000 feet below Monocacy Creek.

DRAINAGE AREA.—1,280 square miles.

RECORDS AVAILABLE.—October, 1928, to September, 1931. September, 1902, to February, 1905; April, 1909, to December, 1913; and October, 1918, to September, 1921, at New Street Bridge, half a mile upstream.

EXTREMES.—Maximum discharge during year, 9,520 second-feet Feb. 18 (gage height, 5.73 feet); minimum, not including flow in canal, 245 second-feet Nov. 29 (gage height, 1.50 feet).

1902–1905, 1909–1913, 1918–1921, 1928–1931: maximum discharge, 32,200 second-feet Jan. 22, 1910 (gage height, 13.78 feet); minimum, 160 second-feet Oct. 15, 1910 (gage height, 1.33 feet). (Flow in canal not included.)

Maximum discharge known, 86,600 second-feet (determined by Pennsylvania Department of Forests & Waters) Feb. 28, 1902 (gage height, 25.9 feet).

REMARKS.—Records good. Tables of daily and monthly discharge include flow in Lehigh Canal. Discharge of Canal estimated Dec. 3–11 and June 8–11.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	431	378	454	484	468	949	4,450	1,740	1,840	794	815	768
2	424	363	558	436	508	1,010	5,700	1,690	1,640	689	771	737
3	466	392	474	392	452	1,030	5,270	1,690	1,510	665	808	1,480
4	441	383	480	420	468	988	4,850	1,600	1,380	683	860	1,210
5	400	384	494	526	460	949	4,320	1,490	1,300	693	845	1,010
6	430	388	477	2,330	460	874	3,880	1,410	1,260	799	761	923
7	443	420	469	1,360	452	814	3,740	1,350	1,490	1,130	699	790
8	426	406	501	790	385	1,390	3,590	2,900	2,670	1,250	639	767
9	403	387	453	757	542	3,020	3,270	4,980	2,210	1,520	712	732
10	403	431	477	768	542	2,110	3,100	4,210	1,810	2,870	1,110	644
11	403	380	461	702	508	1,720	2,970	3,660	1,770	5,300	1,210	624
12	396	391	413	680	476	1,520	2,790	3,730	1,570	3,490	1,070	600
13	468	384	420	604	576	1,400	2,560	3,830	1,360	2,440	1,030	576
14	413	391	413	534	1,640	1,340	2,350	4,890	1,260	1,910	955	634
15	403	414	392	460	984	1,320	2,190	4,360	1,210	1,590	865	568
16	405	410	320	476	910	1,380	2,080	3,800	1,650	1,360	798	657
17	399	610	326	436	1,210	1,400	1,970	3,320	2,220	1,260	804	675
18	365	649	276	500	6,330	1,400	1,750	2,970	1,810	1,150	713	746
19	409	517	332	768	2,660	1,440	1,600	2,690	1,450	1,210	667	645
20	423	500	436	936	1,630	1,530	1,640	2,460	1,260	1,210	660	566
21	421	489	399	790	1,310	1,520	1,540	2,700	1,110	1,130	648	626
22	368	489	413	517	1,140	1,500	1,470	3,200	1,040	1,530	646	627
23	384	370	385	517	1,150	1,630	1,830	2,890	996	1,580	613	600
24	379	424	371	517	1,110	1,770	2,060	2,760	1,010	1,560	645	567
25	334	415	320	500	1,030	2,290	1,820	2,670	959	1,750	609	537
26	356	431	406	517	1,000	3,140	1,900	2,600	886	1,440	599	564
27	392	385	840	702	1,000	3,190	2,560	2,370	999	1,210	619	558
28	373	397	1,030	910	898	3,250	2,100	2,140	992	1,060	1,720	577
29	392	333	680	768	------	6,420	1,940	1,940	859	944	1,180	514
30	395	322	594	614	------	7,560	1,850	1,770	974	962	960	506
31	390	------	500	585	------	5,270	------	1,830	------	933	857	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	468	334	404	0.316	0.36
November	649	322	421	.329	.37
December	1,030	276	470	.367	.42
January	2,330	392	687	.537	.62
February	6,330	385	1,080	.844	.88
March	7,560	814	2,100	1.64	1.89
April	5,700	1,470	2,770	2.16	2.41
May	4,980	1,350	2,760	2.16	2.49
June	2,670	774	1,410	1.10	1.23
July	5,300	665	1,490	1.16	1.34
August	1,720	599	835	.652	.75
September	1,480	506	701	.548	.61
The year	7,560	276	1,260	.984	13.37

MUSCONETCONG RIVER AT OUTLET OF LAKE HOPATCONG, N. J.

LOCATION.—Water-stage recorder at highway bridge 300 feet downstream from Lake Hopatcong Dam, in Landing, Morris County.
DRAINAGE AREA.—25.4 square miles.
RECORDS AVAILABLE.—July, 1928, to September, 1931.
EXTREMES.—Maximum discharge during year, 330 second-feet July 11 (gage height, 2.53 feet); minimum, 5.0 second-feet Apr. 3 (gage height, 0.43 foot).
1928–1931: Maximum discharge, 344 second-feet Aug. 27, 1928 (gage height, 2.61 feet); minimum, that of Apr. 3, 1931.
REMARKS.—Records excellent. Flow regulated by storage in Lake Hopatcong. Gage-height record furnished by Morris Canal & Banking Co.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	26	24	10.0	25	25	12.0	70	52	24	13.7	11.2
2	35	26	24	10.0	15.3	25	11.2	67	46	21	12.9	11.2
3	31	26	24	10.0	10.4	25	11.6	64	40	17.8	13.3	11.6
4	31	27	24	10.0	10.4	15.5	11.6	58	34	16.9	15.5	11.6
5	31	27	24	14.7	10.4	10.8	11.2	54	32	17.3	14.6	11.6
6	31	25	24	24	10.4	10.8	14.5	51	27	18.8	13.7	11.6
7	29	25	24	24	10.0	10.4	13.8	51	28	20	13.3	11.6
8	29	27	28	24	10.0	10.4	12.5	64	57	20	13.3	27
9	29	44	31	24	10.0	10.8	15.5	77	55	30	12.0	33
10	29	45	31	24	19.3	10.4	16.9	80	55	136	13.3	33
11	29	32	28	26	24	10.4	23	86	55	299	15.5	33
12	28	17.8	23	26	24	10.4	25	83	50	302	16.0	32
13	28	17.8	23	26	24	10.4	24	83	43	255	13.7	32
14	27	17.8	23	26	25	10.8	27	77	39	257	13.3	31
15	27	22	23	26	25	10.8	27	74	36	268	14.6	33
16	27	25	23	26	25	10.8	25	64	54	242	18.3	32
17	27	24	23	26	25	10.8	24	64	108	203	16.4	31
18	27	24	23	25	25	10.8	25	56	112	175	14.6	31
19	27	24	23	25	25	10.8	24	51	102	153	14.2	31
20	27	24	23	25	25	10.8	23	46	92	129	14.6	31
21	27	24	23	25	25	10.8	22	60	84	116	14.6	31
22	27	24	23	25	25	10.8	24	66	67	106	15.1	31
23	27	24	23	25	25	10.8	46	80	63	87	14.6	31
24	26	24	23	25	25	10.8	49	76	58	62	12.0	31
25	26	24	14.1	25	25	10.8	45	70	50	33	11.2	31
26	26	24	10.4	25	25	10.8	58	67	44	22	11.2	31
27	26	24	10.4	25	25	10.8	76	62	42	20	11.2	31
28	26	24	10.4	25	25	10.8	76	55	37	18.8	11.2	31
29	26	24	10.4	25	-------	10.8	78	50	32	16.9	11.2	31
30	26	24	10.4	25	-------	10.8	76	47	27	17.?	11.2	31
31	26	-------	10.0	25	-------	10.8	-------	45	-------	15.5	11.2	-------

Month	Maximum	Minimum	Mean	Month	Maximum	Minimum	Mean
October	38	26	28.3	May	86	45	64.5
November	45	17.8	25.5	June	112	27	54.0
December	31	10.0	21.3	July	302	15.5	101
January	26	10.0	22.8	August	18.3	11.2	13.6
February	25	10.0	20.6	September	33	11.2	26.7
March	25	10.4	12.2				
April	78	11.2	30.9	The year	302	10.0	35.2

MUSCONETCONG RIVER NEAR HACKETTSTOWN, N. J.

LOCATION.—Water-stage recorder 500 feet above Delaware, Lackawanna & Western Railroad bridge and 3 miles above Hackettstown, Warren County.

DRAINAGE AREA.—70 square miles.

RECORDS AVAILABLE.—September, 1921, to September, 1931.

EXTREMES.—Maximum discharge during year, 728 second-feet July 11; minimum, 24 second-feet Dec. 16–18, Sept. 1.

1921–1931: Maximum discharge, about 1,080 second-feet Feb. 12, 1925 (gage height, 5.12 feet); minimum, about 2 second-feet July 8, 1927 (gage height, 1.02 feet).

REMARKS.—Record good except those for Oct. 1–9, June 18 to Aug. 13, and those for periods of ice effect, which are fair. Part of table of monthly discharge corrected for effect of storage in Lake Hopatcong.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	50	59	a 44	48	76	180	151	118	66	49	35
2	30	36	56	a 42	47	80	184	141	123	59	46	29
3	30	27	53	a 40	a 34	72	168	139	108	50	47	32
4	34	26	50	36	32	70	151	132	93	48	53	38
5	35	41	46	39	29	64	136	122	71	48	54	36
6	37	55	47	99	28	55	120	105	71	66	53	32
7	80	43	46	113	26	52	122	102	74	76	49	29
8	80	44	45	90	28	79	134	125	225	59	42	26
9	53	39	34	a 80	34	190	127	172	250	66	44	29
10	44	28	32	69	a 48	160	110	172	230	271	48	42
11	38	25	32	67	a 48	120	108	170	232	675	48	46
12	38	41	32	67	a 48	99	108	162	214	625	59	47
13	39	58	32	71	49	90	98	160	172	490	65	46
14	37	99	32	a 65	86	83	90	156	156	401	56	47
15	39	64	29	a 60	76	83	86	154	141	610	50	54
16	39	62	24	a 60	69	78	85	143	171	490	53	53
17	39	75	24	55	66	72	78	129	295	373	56	52
18	45	118	24	52	172	67	76	116	308	308	51	51
19	41	100	25	65	149	69	72	104	283	283	49	51
20	39	87	30	78	113	74	65	98	243	250	47	47
21	39	70	33	a 70	96	76	61	106	203	223	46	47
22	37	44	35	a 60	89	80	60	141	174	203	42	49
23	35	36	39	a 60	85	76	100	170	166	176	39	47
24	35	34	41	53	82	74	129	184	151	152	39	47
25	36	33	a 40	a 50	79	82	120	172	130	125	36	44
26	38	35	35	50	79	96	125	160	118	99	33	48
27	38	47	82	51	78	89	199	145	111	79	37	53
28	40	43	100	56	78	79	186	125	99	62	54	51
29	41	40	76	56	------	196	170	113	87	56	49	46
30	41	44	a 60	56	------	225	162	104	74	56	39	45
31	50	------	a 48	53	------	190	------	102	------	54	46	------

Month	Observed			Corrected for storage		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	80	30	41.2	8.7	0.124	0.14
November	118	26	51.5	47.4	.677	.76
December	100	24	43.3	44.4	.634	.73
January	113	36	61.5	61.5	.879	1.01
February	172	26	67.7	81.0	1.16	1.21
March	225	52	96.6	149	2.13	2.46
April	199	60	120	157	2.24	2.50
May	184	98	138	135	1.93	2.22
June	308	71	163	158	2.26	2.52
July	675	48	213	208	2.97	3.42
August	65	33	47.7	43.8	.626	.72
September	54	26	43.3	17.6	.251	.28
The year	675	24	90.7	92.7	1.32	17.97

a Stage-discharge relation affected by ice.

MUSCONETCONG RIVER NEAR BLOOMSBURY, N. J.

LOCATION.—Water-stage recorder at highway bridge 1½ miles above Bloomsbury, Hunterdon County, and 9 miles above mouth.

DRAINAGE AREA.—143 square miles.

RECORDS AVAILABLE.—July, 1903, to March, 1907; July 1921, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,800 second-feet Nov. 18 (gage height, 5.45 feet); minimum, 21 second-feet Oct. 24 (gage height, 0.78 foot). 1903–1907, 1921–1931: Maximum stage, 8.0 feet (old datum) October 10 or 11, 1903 (discharge not determined); minimum discharge, 20 second-feet Aug. 29, 1930.

REMARKS.—Records good except those for period of obstruction on control, Oct. 1–17. Flow regulated by several small water-power plants above station and by storage in Lake Hopatcong.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	56	77	116	86	84	127	319	227	212	142	116	93
2	56	76	97	85	96	135	334	212	199	130	114	89
3	62	74	87	84	80	125	285	212	183	113	116	102
4	56	66	92	82	80	117	258	205	158	102	129	84
5	58	74	89	122	67	115	228	191	145	113	120	88
6	62	95	78	273	66	105	216	181	124	148	114	82
7	68	90	79	196	60	95	223	175	142	154	104	75
8	103	70	86	155	60	163	236	289	375	142	95	74
9	94	74	80	140	100	278	220	263	368	145	97	74
10	78	68	72	131	135	245	204	282	344	710	122	69
11	66	76	67	116	91	199	192	282	358	1,050	117	85
12	64	58	69	120	98	165	187	269	312	875	131	83
13	64	64	61	116	243	146	181	281	260	715	121	83
14	64	98	63	101	373	139	167	271	218	595	125	98
15	73	130	65	97	138	136	159	270	202	675	114	99
16	73	98	63	111	147	139	155	246	367	635	114	97
17	76	205	89	99	205	136	146	222	578	512	120	95
18	77	480	61	101	507	126	139	209	470	442	105	98
19	70	186	60	228	265	124	138	186	420	410	106	86
20	70	151	63	163	205	135	134	173	372	372	106	87
21	70	133	56	133	165	136	129	222	319	333	103	91
22	66	101	68	118	154	138	127	246	280	302	97	89
23	66	83	70	113	148	136	168	294	256	284	97	87
24	66	80	72	101	144	124	210	316	246	258	95	81
25	59	77	60	91	137	134	199	280	225	227	101	79
26	61	74	79	104	134	151	251	252	209	196	84	87
27	74	61	189	107	132	145	297	225	186	179	134	88
28	68	89	180	116	124	137	288	209	176	146	153	88
29	72	104	139	109	------	414	256	180	170	132	116	86
30	68	80	122	97	------	390	240	170	154	131	99	80
31	83	------	90	100	------	328	------	170	------	127	94	------

Month	Observed			Corrected for storage		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	103	56	69.1	36.6	0.253	0.30
November	480	58	106	102	.713	.80
December	189	56	85.9	87.0	.607	.70
January	273	82	122	122	.853	.98
February	507	60	151	165	1.15	1.20
March	414	95	167	219	1.53	1.76
April	334	127	210	246	1.72	1.92
May	316	170	233	230	1.61	1.86
June	578	124	268	263	1.84	2.05
July	1,050	102	339	334	2.34	2.70
August	153	84	112	108	.755	.87
September	102	69	86.6	60.9	.427	.48
The year	1,050	56	162	164	1.15	15.62

ASSUNPINK CREEK AT TRENTON, N. J.

LOCATION.—Water-stage recorder at Chambers Street Bridge, in Trenton, Mercer County, 1½ miles above mouth.
DRAINAGE AREA.—89 square miles.
RECORDS AVAILABLE.—July, 1923, to September, 1931.
EXTREMES.—Maximum discharge during year, 660 second-feet July 11 (gage height, 4.56 feet); minimum, 6 second-feet several days in October.
1923–1931: Maximum discharge, 2,400 second-feet Apr. 7, 1924 (gage height, 7.85 feet); minimum, 2 second-feet June 30, 1927, July 21, 22, 1929.
REMARKS.—Records good. Discharge estimated Nov. 20–24, July 31, Aug. 23–25.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8	26	48	96	40	58	255	52	55	25	20	39
2	8	8	36	70	52	72	285	38	47	29	8	33
3	39	45	34	50	40	68	190	47	35	37	29	39
4	9	41	40	45	35	68	175	52	42	19	32	31
5	6	26	40	64	38	66	140	40	43	27	30	12
6	7	9	23	156	35	58	114	46	23	45	28	23
7	39	39	16	113	13	54	112	52	35	68	27	28
8	9	30	42	86	29	159	148	125	130	78	15	40
9	7	13	44	78	75	184	118	152	87	59	25	28
10	8	25	41	66	88	177	107	132	101	115	83	33
11	43	26	34	60	132	180	84	165	160	492	173	28
12	10	42	23	64	110	150	77	125	114	134	270	13
13	9	31	8	72	131	100	68	112	95	84	206	13
14	7	40	7	66	137	78	64	132	72	72	139	32
15	54	20	37	63	113	59	58	123	63	147	151	33
16	10	46	33	59	101	69	52	99	250	68	130	26
17	24	60	35	41	107	71	52	84	366	62	86	24
18	9	61	35	43	255	67	47	73	472	52	69	22
19	6	57	31	132	188	64	47	55	345	53	58	23
20	43	50	11	140	172	74	52	51	225	56	50	12
21	40	46	9	125	145	88	40	70	114	54	41	28
22	9	30	35	101	118	88	47	80	80	51	34	27
23	8	10	43	79	95	86	54	172	75	58	36	18
24	40	40	37	63	80	79	67	116	68	59	46	11
25	9	39	14	50	71	69	63	91	62	44	46	33
26	8	43	35	56	67	62	41	72	56	38	48	28
27	42	24	140	44	64	62	87	66	44	50	46	16
28	10	50	162	49	51	59	75	52	42	34	46	34
29	16	23	134	48	-------	352	67	47	52	38	33	34
30	9	24	146	51	-------	293	58	25	38	32	42	25
31	47	-------	127	36	-------	254	-------	34	-------	32	53	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	54	6	19.1	0.215	0.25
November	61	8	34.1	.383	.43
December	162	7	48.4	.544	.63
January	156	36	73.1	.821	.95
February	255	13	92.2	1.04	1.08
March	352	54	109	1.22	1.41
April	285	40	94.8	1.07	1.19
May	172	25	83.2	.935	1.08
June	472	23	113	1.27	1.42
July	492	19	11.4	.802	.92
August	270	8	67.7	.761	.88
September	40	11	26.2	.294	.33
The year	492	6	69.2	.778	10.57

NORTH BRANCH OF RANCOCAS CREEK AT PEMBERTON, N. J.

LOCATION.—Water-stage recorder 600 feet below highway bridge at Pemberton, Burlington County, and 11 miles above confluence with South Branch of Rancocas Creek.
DRAINAGE AREA.—111 square miles.
RECORDS AVAILABLE.—September, 1921, to September, 1931.
REMARKS.—Records fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	70	58	98	80	88	438	112	189	61	43	84
2	52	61	67	98	70	105	425	120	170	46	39	77
3	46	58	67	77	70	105	336	135	161	61	46	74
4	49	64	74	77	67	102	312	161	105	61	52	67
5	55	74	61	88	70	94	241	127	94	64	49	61
6	58	77	49	112	67	91	241	98	88	70	37	49
7	49	80	58	127	67	77	241	91	77	70	40	58
8	43	64	61	112	64	179	230	120	161	91	38	61
9	43	58	58	91	88	230	135	127	241	88	26	52
10	46	64	61	91	112	189	94	161	209	91	55	46
11	46	61	55	80	120	179	161	264	230	102	105	55
12	43	58	55	102	98	161	179	361	189	105	219	43
13	40	52	49	120	94	143	161	373	189	88	189	35
14	38	55	46	120	105	112	143	241	179	70	189	58
15	74	67	64	127	112	112	94	241	179	80	161	49
16	120	127	52	91	80	112	88	230	373	77	161	38
17	112	135	43	80	98	120	91	209	324	67	120	49
18	84	199	46	88	120	127	98	189	324	67	94	49
19	64	276	52	135	135	120	91	152	324	74	77	49
20	61	98	52	152	120	127	84	152	219	88	77	46
21	58	49	46	135	112	127	102	152	189	70	74	52
22	46	46	61	102	112	127	143	152	189	67	77	52
23	43	37	49	120	84	112	120	179	152	61	102	38
24	52	49	61	98	91	112	120	179	179	70	199	40
25	55	49	55	98	94	98	127	161	91	55	161	40
26	34	46	70	84	88	105	120	143	70	61	161	49
27	55	40	135	91	84	112	143	170	88	46	112	88
28	52	58	189	94	80	112	264	135	84	49	105	91
29	52	43	170	94	------	288	120	105	80	49	105	64
30	61	39	143	91	------	373	98	105	70	46	105	74
31	67	------	112	84	------	399	------	91	------	49	91	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	120	34	56.1	0.505	0.58
November	276	37	75.1	.677	.76
December	189	43	71.6	.645	.74
January	152	80	102	.919	1.06
February	135	64	92.2	.831	.87
March	399	77	146	1.32	1.52
April	438	84	175	1.58	1.76
May	373	91	169	1.52	1.75
June	373	70	174	1.57	1.75
July	105	46	69.2	.623	.72
August	219	26	100	.901	1.04
September	91	35	56.3	.507	.57
The year	438	26	107	.934	13.12

OLDMANS CREEK NEAR WOODSTOWN, N. J.

LOCATION.—Water-stage recorder at Woodstown-Swedesboro highway bridge 2 miles north of Woodstown, Salem County, and 14 miles above mouth.
DRAINAGE AREA.—19.3 square miles.
RECORDS AVAILABLE.—June to September, 1931.
EXTREMES.—Maximum discharge during period, 154 second-feet July 8 (gage height, 5.64 feet); minimum, 4.5 second-feet Aug. 7–9 (gage height, 1.26 feet).
REMARKS.—Records excellent.

Daily and monthly discharge, in second-feet, 1931

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1	------	5.4	5.4	11.5	16	------	9.3	15.6	6
2	------	5.1	5.8	10.6	17	------	8.9	10.2	6
3	------	5.1	5.8	10.2	18	------	8.4	8.4	6
4	------	6.9	5.4	10.2	19	------	12.0	7.6	6
5	------	6.9	5.4	9.7	20	5.8	10.2	6.9	7
6	------	8.4	5.4	8.9	21	5.8	9.3	9.7	6.9
7	------	47	5.1	8.4	22	5.8	9.3	10.2	6.9
8	------	95	4.5	8.0	23	6.5	8.9	56	6.5
9	------	25	4.8	7.6	24	10.6	8.4	75	6.5
10	------	35	11.1	7	25	8.4	8.0	30	6.5
11	------	54	21	7	26	7.2	6.9	18.8	18.1
12	------	19.6	28	6	27	6.5	6.5	16.1	14.0
13	------	14.0	14.5	6	28	6.2	6.5	22	9.7
14	------	11.1	9.7	6	29	5.4	6.2	21	8.4
15	------	10.2	29	6	30	5.4	6.2	17.2	8.0
					31	------	5.8	13.0	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
June 20-30	10.6	5.4	6.69	0.347	0.14
July	95	5.1	15.5	.803	.93
August	75	4.5	16.1	.834	.96
September	18.1	6	8.19	.424	.47

WICOMICO RIVER BASIN

EAST BRANCH OF WICOMICO RIVER NEAR SALISBURY, MD.

LOCATION.—Water-stage recorder at Schumaker Dam, 2 miles southeast of Salisbury, Wicomico County. Zero of gage is 17.95 feet above mean sea level.

DRAINAGE AREA.—18.5 square miles.

RECORDS AVAILABLE.—October, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year, 36 second-feet May 7 (gage height, 1.48 feet); minimum, 1.3 second-feet Oct. 17, Mar. 13 (gage height, 1.05 feet). 1929–1931: Maximum discharge, 76 second-feet Mar. 19, 1930 (gage height, 1.76 feet); minimum, that of Oct. 17, Mar. 13, 1931.

REMARKS.—Records good. Flow regulated by operation of gristmill at head of Schumaker Pond.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.8	3.8	3.8	3.3	3.3	4.3	9.1	9.1	8.4	5.4	3.8	6.6
2	3.8	2.8	3.3	3.3	3.8	3.8	15.3	10.5	12.8	5.4	3.8	7.2
3	4.3	4.8	2.8	2.8	4.3	4.3	13.6	11.2	7.8	4.8	3.3	7.8
4	4.8	7.2	3.8	3.3	3.8	3.3	16.2	9.8	10.5	4.8	3.3	10.5
5	3.8	4.3	4.3	3.3	3.3	2.4	17.1	8.4	7.2	4.8	6.0	11.2
6	2.8	3.8	3.8	6.0	2.8	2.4	16.2	7.8	6.0	6.6	5.4	6.6
7	2.8	3.3	3.3	4.3	3.8	3.3	18.0	17.1	9.8	8.4	5.4	7.2
8	3.3	5.4	2.8	3.8	3.3	5.4	20.0	27.1	14.4	5.4	6.0	6.6
9	4.3	4.3	3.3	3.3	3.8	3.8	20.0	22.0	8.4	4.8	4.8	6.0
10	3.3	3.3	2.8	4.3	3.8	2.8	18.0	26.0	7.8	6.6	5.4	6.6
11	2.8	3.8	2.8	3.8	2.8	3.8	13.6	17.1	10.5	7.2	6.0	5.4
12	2.8	3.8	3.3	5.4	5.4	2.8	9.8	17.1	8.4	5.4	8.4	6.0
13	2.8	3.3	4.3	6.6	3.8	2.4	10.5	13.6	6.6	4.8	11.2	6.0
14	4.3	4.8	4.3	4.3	6.6	2.8	8.4	17.1	6.6	4.3	8.4	4.3
15	2.0	6.6	3.3	2.8	4.3	2.8	7.8	9.1	7.8	4.8	6.0	6.0
16	4.3	4.3	2.8	3.8	4.8	4.3	8.4	14.4	10.5	6.6	4.8	7.2
17	2.8	3.8	2.8	3.8	6.0	6.6	7.8	9.1	12.8	4.8	6.6	4.8
18	4.3	3.8	6.5	3.3	4.8	4.8	9.1	10.5	7.2	4.3	4.8	4.8
19	3.8	4.3	6.0	7.2	3.8	7.2	7.2	8.4	6.6	3.8	4.3	7.2
20	2.4	6.0	4.8	6.0	3.3	6.0	7.2	7.8	6.0	3.8	5.4	5.4
21	2.0	3.8	3.3	6.0	4.3	6.0	7.2	10.5	5.4	3.8	13.6	6.0
22	2.8	3.8	4.8	6.0	3.3	4.8	7.8	12.8	5.4	4.3	10.5	10.5
23	3.8	3.3	4.3	4.3	3.3	7.2	9.1	18.0	6.0	4.3	19.0	10.5
24	4.3	3.8	3.8	4.3	4.3	6.6	7.2	18.0	10.5	6.6	22.0	7.8
25	2.4	3.8	2.8	3.3	3.8	5.4	7.8	16.2	9.8	6.0	14.4	6.6
26	2.4	2.8	3.3	3.3	3.8	4.3	12.0	16.2	6.6	4.8	17.1	15.3
27	2.4	2.4	5.4	3.8	3.3	4.3	13.6	12.0	9.1	3.8	15.3	24.0
28	3.3	3.3	4.3	3.8	3.3	4.3	11.2	8.4	6.0	3.8	9.8	11.2
29	6.6	3.3	3.8	3.3	------	7.2	8.4	9.8	6.0	3.3	9.1	11.2
30	4.8	2.8	3.3	3.3	------	6.6	7.2	9.1	6.0	4.3	7.8	11.2
31	6.0	------	3.3	3.3	------	6.6	------	6.6	------	4.8	9.1	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	6.6	2.0	3.52	0.190	0.22
November	7.2	2.4	4.02	.217	.24
December	6.5	2.8	3.78	.204	.24
January	7.2	2.8	4.17	.225	.26
February	6.6	2.8	3.96	.214	.22
March	7.2	2.4	4.60	.249	.29
April	20.0	7.2	11.5	.622	.69
May	27.1	6.6	13.3	.719	.83
June	14.4	5.4	8.23	.445	.50
July	8.4	3.3	5.05	.273	.31
August	22.0	3.3	8.41	.455	.52
September	24.0	4.3	8.26	.446	.50
The year	27.1	2.0	6.57	.355	4.82

SUSQUEHANNA RIVER BASIN

SUSQUEHANNA RIVER AT COLLIERSVILLE, N. Y.

LOCATION.—Water-stage recorder a quarter of a mile below power plant of Associated Gas & Electric System and half a mile north of Colliersville, Otsego County.

DRAINAGE AREA.—353 square miles.

RECORDS AVAILABLE.—July, 1924, to September, 1931.

EXTREMES.—Maximum discharge during year, 3,330 second-feet Apr. 12 (gage height, 5.76 feet); minimum, 16 second-feet Nov. 3 (gage height, 1.30 feet).

1924–1931: Maximum discharge, 5,190 second-feet Mar. 16, 1929 (gage height, 7.1 feet); minimum, about 8 second-feet Aug. 21, 1926 (gage height, 1.09 feet).

REMARKS.—Records good except those estimated, which are fair. Ordinary daily flow completely regulated by operation of power plant.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	17	40	36	60	189	1,340	a 850	a 500	122	114	142
2	18	17	110	41	53	237	1,380	a 650	a 500	151	186	167
3	18	19	112	59	45	102	1,520	478	a 300	47	198	166
4	18	25	102	37	41	254	a 1,520	676	a 85	219	431	146
5	18	23	71	53	39	196	1,750	695	a 160	83	278	164
6	23	28	96	47	39	102	1,800	288	a 260	64	149	161
7	44	29	129	85	52	165	1,750	370	222	149	180	133
8	29	20	107	47	45	317	1,800	461	610	124	226	116
9	37	20	92	40	54	124	2,000	1,020	130	123	82	122
10	22	24	144	49	62	222	2,150	1,010	257	350	226	147
11	43	27	95	91	43	190	2,760	488	266	944	200	140
12	21	31	139	57	57	158	3,140	731	254	379	174	99
13	36	29	109	42	47	86	2,580	866	235	216	171	76
14	37	27	84	40	52	283	2,200	880	204	180	93	207
15	38	25	102	40	48	109	a 1,950	873	102	318	231	190
16	28	23	64	a 41	92	212	a 1,750	778	235	175	76	102
17	25	29	121	a 39	270	200	a 1,560	984	448	267	174	114
18	40	34	61	41	103	a 100	a 1,430	989	292	185	200	82
19	19	28	60	51	132	a 380	a 1,300	854	177	280	95	95
20	28	27	99	118	258	a 150	a 1,100	685	270	203	97	98
21	44	31	34	54	263	a 400	a 950	815	243	440	164	198
22	22	27	82	55	144	517	a 800	1,110	119	1,170	172	148
23	30	25	91	48	282	796	a 775	909	252	975	47	195
24	63	40	94	43	114	957	a 900	859	117	340	114	131
25	26	43	34	41	250	1,260	a 900	873	236	470	120	101
26	18	29	49	62	135	1,520	a 850	873	216	336	104	210
27	34	25	42	55	252	1,850	a 800	780	186	286	132	126
28	62	28	32	43	189	1,950	a 750	450	226	219	312	158
29	58	25	47	41	-------	2,040	a 750	299	71	282	168	124
30	23	24	49	97	-------	2,080	a 800	a 299	161	223	198	127
31	23	-------	82	109	-------	1,610	--------	a 500	-------	358	118	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	63	18	31.1	0.088	0.10
November	43	17	26.6	.075	.08
December	144	32	83.0	.235	.27
January	118	36	54.9	.156	.18
February	282	39	115	.326	.34
March	2,080	86	605	1.71	1.97
April	3,140	750	1,500	4.25	4.74
May	1,110	288	722	2.05	2.36
June	610	71	244	.691	.77
July	1,170	47	312	.884	1.02
August	431	47	169	.479	.55
September	210	76	140	.397	.44
The year	3,140	17	334	.946	12.82

a Estimated.

SUSQUEHANNA RIVER AT CONKLIN, N. Y.

LOCATION.—Water-stage recorder at highway bridge just below Conklin, Broome County, and 3½ miles below Pennsylvania State line.

DRAINAGE AREA.—2,240 square miles.

RECORDS AVAILABLE.—November, 1912, to September, 1931.

EXTREMES.—Maximum discharge during year, 22,800 second-feet Mar. 30 (gage height, 12.16 feet); minimum (estimated), 190 second-feet Oct. 25.

1912–1931: Maximum discharge, 52,000 second-feet Mar. 28, 1913 (gage height, 18.3 feet); minimum, 106 second-feet Sept. 16, 1913 (gage height, 1.32 feet).

REMARKS.—Records good except those for periods of backwater from ice or weeds, Dec. 14 to Jan. 17, Feb. 11 to Mar. 20, Aug. 3 to Sept. 25, and those estimated, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a 280	330	510	460		1,500	12,300	5,440	2,980	726	1,400	750
2	a 280	309	563	440		1,400	13,400	4,560	2,680	667	1,310	650
3	a 260	301	820	440	a 430	1,300	13,100	4,180	2,320	693	1,100	650
4	a 267	a 242	834	460		1,300	12,800	3,640	1,050	642	1,100	700
5	256	a 235	803	500		1,300	12,500	3,300	1,800	630	1,000	750
6	231	225	782	550		1,300	11,300	3,140	1,400	582	1,200	800
7	231	222	796	550		1,400	10,600	2,600	1,430	673	1,000	700
8	225		803	500	a 400	1,500	11,200	2,470	1,860	691	850	650
9	a 220		803	500		1,700	12,500	4,270	2,400	842	850	600
10	a 220	a 200	796	480		1,600	13,400	5,440	2,340	2,020	1,000	550
11	215		810	480	a 380	1,500	15,900	4,650	1,800	3,780	1,100	500
12	215		834	480	380	1,400	19,400	4,830	1,800	6,490	1,000	500
13	215		842	480	380	1,300	16,300	4,780	1,570	4,120	900	450
14		a 222	850	480	440	1,300	11,700	6,560	1,350	2,600	850	400
15		a 215	750	460	550	1,400	8,880	5,640	1,200	2,050	800	450
16		a 215	550	460	650	1,400	7,410	4,840	1,120	1,680	800	450
17		a 257	550	a 470	850	1,500	6,270	5,800	1,150	1,800	750	450
18	a 200	356	480		1,600	1,700	5,440	6,270	1,820	1,570	750	750
19		321	550		2,200	1,900	4,940	5,070	1,980	1,460	650	650
20		281	600		2,400	2,000	4,270	4,000	1,460	1,340	700	600
21		307	550		2,400	2,640	3,730	6,570	1,400	2,530	600	550
22	a 215	303	550		2,200	3,510	3,220	7,150	1,400	6,580	550	500
23	235	316	550		2,000	4,990	3,220		a 1,250	8,800	500	700
24	a 193	301	500		1,900	7,670	4,380		a 1,460	5,870	460	800
25	a 190	316	500	a 470	1,900	12,000	4,420		a 1,400	3,720	460	750
26	231	301	500		1,800	17,300	3,820	a 6,000	a 1,060	3,060	460	654
27	225	292	500		1,700	20,800	3,730		a 1,030	2,460	480	605
28	238	268	500		1,600	20,800	4,180		1,250	1,920	700	588
29	242	a 264	480		-------	21,800	4,910		1,020	1,680	950	661
30	249	297	460		-------	22,100	6,490		924	1,570	1,300	680
31	267	-------	460		-------	16,500	--------	3,390	-------	1,800	900	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	280	190	226	0.101	0.12
November	356	----------	253	.117	.13
December	850	460	641	.286	.33
January	550	440	476	.212	.24
February	2,400	380	1,050	.469	.49
March	22,100	1,300	5,800	2.59	2.99
April	19,400	3,220	8,860	3.96	4.42
May	7,150	2,470	5,050	2.25	2.59
June	2,980	924	1,620	.723	.81
July	8,800	582	2,420	1.08	1.24
August	1,400	460	854	3.81	.44
September	800	400	616	.275	.31
The year	22,100	190	2,330	1.04	14.11

a Estimated.

SUSQUEHANNA RIVER AT HARRISBURG, PA.

LOCATION.—Water-stage recorders at Nagle Street, 500 feet above sanitary dam, and at Market Street Bridge, 3,700 feet above sanitary dam in Harrisburg, Dauphin County, used since Oct. 1, 1928. Prior to Oct. 1, 1928, a chain gage at Walnut Street Bridge, 500 feet above Market Street Bridge, was used. Zero of all gages is 289.40 feet above mean sea level.

DRAINAGE AREA.—24,100 square miles.

RECORDS AVAILABLE.—January, 1891, to September, 1931. All records prior to Oct. 1, 1923, have been revised in connection with the power project at Conowingo, Md. A complete set of the revised records is on file at the United States Geological Survey at Harrisburg, Pa., and at Washington, D. C., and also at the State Department of Forests and Waters, Harrisburg, Pa.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1929, 235,000 second-feet Mar. 17 (gage height, 12.55 feet); minimum, 2,640 second-feet Aug. 27 (gage height, 2.93 feet).

Maximum discharge during year ending Sept. 30, 1930, 177,000 second-feet Feb. 28 (gage height, 10.15 feet); minimum, 2,060 second-feet Sept. 1 (gage height, 2.91 feet).

Maximum discharge during year ending Sept. 30, 1931, 153,000 second-feet Mar. 31 (gage height, 9.18 feet); minimum, about 1,600 second-feet Nov. 29 (gage height, 2.48 feet). (Above stages from gage at Nagle Street.)

1891–1931: Maximum discharge, about 613,000 second-feet May 22, 1894 (gage height, 25.7 feet); minimum, that of Nov. 29, 1930.

REMARKS.—Records good; those for year ending Sept. 30, 1929, are revised records superseding those published in Water-Supply Paper 681. Discharge estimated because of ice Dec. 22, 23, 1928; Jan. 3–16, 19–21, 24, 25, Jan. 28 to Feb. 6, 10–25, Dec. 1–13, 1929; Jan. 23 to Feb. 14, Nov. 27, 28, Dec. 1, 2, 16, 1930; Jan. 15, 16, 21–23, 30, 31, Feb. 1–5, 1931.

Daily discharge, in second-feet, 1928–1931

Day	Oct.	Nov.	Dec.	Jan	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1928–29												
1	6,690	7,200	10,600	9,410	8,500	129,000	45,800	81,300	45,800	15,400	5,610	3,880
2	6,820	7,200	11,000	9,120	8,500	104,000	42,300	75,800	37,900	14,600	5,370	3,680
3	6,690	7,080	19,100	9,100	8,500	78,600	39,300	122,000	31,800	13,300	5,370	3,380
4	6,690	7,200	42,300	7,800	8,500	67,300	36,900	172,000	27,800	12,600	5,610	3,280
5	6,320	7,200	37,400	8,400	8,700	64,400	36,600	153,000	24,500	12,100	5,260	3,190
6	6,560	7,080	30,800	10,500	9,500	97,000	45,800	122,000	22,200	11,400	4,820	3,100
7	6,560	7,080	25,900	16,500	15,600	107,000	83,200	102,000	20,600	11,000	4,820	3,100
8	6,320	7,080	22,600	9,000	20,800	97,000	114,000	97,000	19,500	10,200	4,610	3,980
9	6,080	6,950	19,900	11,800	24,500	81,300	94,500	89,300	18,000	9,720	4,280	4,820
10	5,730	7,080	18,000	15,000	23,700	59,900	78,600	78,600	16,800	9,260	4,280	4,500
11	5,490	7,330	16,200	21,000	20,800	48,900	71,600	65,800	15,400	9,260	4,500	4,280
12	5,370	7,080	14,400	21,000	18,800	42,300	81,300	56,800	14,100	9,720	4,390	4,610
13	5,260	6,820	13,300	21,000	15,200	41,500	104,000	50,500	13,300	10,300	4,500	4,280
14	5,150	6,560	12,000	16,000	14,300	58,400	112,000	47,400	12,600	11,300	4,180	5,370
15	4,930	6,560	11,800	10,300	14,300	143,000	104,000	42,900	12,300	11,000	4,390	7,460
16	4,820	6,690	11,600	9,200	13,500	224,000	105,000	44,400	11,600	10,200	5,490	7,330
17	4,820	6,560	12,100	9,570	13,700	233,000	170,000	55,300	11,000	9,260	5,150	6,690
18	4,820	6,560	12,100	10,600	14,200	215,000	196,000	59,900	10,500	8,560	4,720	6,200
19	4,930	6,950	12,000	12,400	14,200	175,000	163,000	56,800	10,000	8,980	4,390	5,960
20	4,720	7,200	12,000	18,100	13,300	125,000	131,000	53,700	10,500	7,850	4,080	5,490
21	4,610	7,460	12,100	36,300	11,200	89,300	129,000	55,300	11,000	7,720	3,780	5,150
22	4,720	8,270	11,500	52,100	10,600	70,200	174,000	61,400	12,300	7,080	3,880	4,930
23	6,200	10,300	11,500	42,100	10,200	62,900	222,000	68,800	11,600	6,690	3,880	4,820
24	6,200	13,700	10,600	30,600	9,800	61,400	208,000	71,600	13,300	6,440	3,780	4,610
25	7,080	15,000	9,570	25,400	10,200	68,800	155,000	61,400	16,600	6,200	3,580	4,390
26	7,590	13,900	9,120	20,600	16,800	71,600	124,000	53,700	18,600	6,560	3,480	4,180
27	7,330	12,400	9,410	16,800	93,400	65,800	121,000	47,400	18,000	7,200	3,580	4,080
28	7,080	11,600	10,200	15,800	124,000	70,200	114,000	44,400	15,400	6,080	3,380	3,880
29	6,560	11,000	10,000	13,300	-------	71,600	97,000	42,300	13,700	5,850	3,280	3,780
30	6,690	10,800	10,000	10,000	-------	59,900	89,300	47,400	14,100	5,490	3,280	4,500
31	6,950	-------	8,840	8,500	-------	50,500	-------	55,300	-------	5,490	3,480	-------

Daily discharge, in second-feet, of Susquehanna River at Harrisburg, Pa., 1928–1931—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1929–30												
1	3,980	17,000	13,600	32,300	16,000	122,000	36,100	25,600	27,600	16,200	4,180	2,690
2	8,550	16,000	13,000	31,600	18,500	87,900	34,000	24,500	24,700	14,200	3,980	2,880
3	44,000	16,000	11,000	31,000	19,000	73,000	33,000	23,800	21,700	13,700	3,780	2,880
4	70,200	17,800	11,000	35,100	19,000	68,800	32,000	23,100	18,600	14,800	3,580	2,980
5	59,900	21,200	14,000	58,400	24,500	61,400	33,600	21,700	16,200	13,900	3,480	2,880
6	55,300	21,900	13,000	62,900	24,100	52,100	34,300	19,700	14,800	13,000	3,190	2,690
7	38,800	21,200	16,500	50,500	22,100	47,400	39,600	19,700	13,300	12,600	3,190	2,600
8	28,600	20,100	18,000	44,400	20,000	64,400	61,400	19,300	12,600	11,800	2,920	2,410
9	22,400	19,500	19,000	40,900	19,000	104,000	86,700	18,400	12,800	10,500	2,820	2,410
10	18,000	18,200	20,000	45,800	18,500	141,000	84,000	16,800	13,000	10,300	2,730	2,600
11	15,000	16,800	21,000	58,400	18,000	119,000	70,200	16,200	15,400	9,870	2,640	2,880
12	13,300	15,800	21,000	65,800	17,500	97,000	59,900	15,400	20,100	12,100	2,640	2,880
13	12,000	15,000	19,600	58,400	21,100	89,300	52,100	14,200	23,300	11,100	2,550	3,070
14	11,000	14,200	25,900	56,800	24,100	84,000	48,900	13,900	24,500	10,300	2,550	2,880
15	10,200	13,900	38,600	91,000	24,900	73,000	47,400	15,600	21,200	9,870	2,550	2,790
16	9,410	14,600	52,300	109,000	21,900	67,300	45,800	19,500	17,800	9,260	2,500	2,880
17	8,840	19,500	56,800	99,500	17,400	59,900	48,900	24,200	15,800	9,260	2,600	3,170
18	8,410	39,700	48,900	78,600	17,400	52,100	62,900	24,700	18,000	9,120	2,600	3,070
19	8,130	85,200	50,500	59,900	19,300	48,900	78,600	24,900	24,500	8,410	2,690	6,760
20	7,720	112,000	81,300	44,400	22,800	61,400	70,200	23,100	34,000	7,850	2,600	6,900
21	7,330	102,000	107,000	37,900	31,000	75,800	61,400	22,600	45,800	7,290	2,600	5,450
22	8,560	78,600	94,500	32,300	27,300	65,800	55,300	25,400	36,900	6,560	2,600	4,880
23	50,300	59,900	75,800	25,200	33,300	55,300	50,500	31,600	29,600	6,220	2,600	4,360
24	79,200	48,800	58,400	22,000	50,500	47,400	45,800	28,600	24,700	6,080	2,600	3,840
25	53,700	40,400	48,900	19,000	61,400	40,900	41,800	26,400	20,600	5,960	2,600	3,550
26	41,800	35,300	42,900	20,000	90,900	40,100	38,200	26,600	17,800	5,610	2,600	3,460
27	33,800	31,600	36,600	19,000	140,000	45,800	35,300	32,000	16,400	5,260	3,070	3,170
28	27,100	29,100	33,600	18,500	166,000	53,700	32,300	30,800	15,000	4,930	2,880	2,980
29	22,400	26,600	34,300	18,500	-------	52,100	29,600	27,300	16,600	4,720	2,690	2,880
30	19,700	22,400	34,600	18,500	-------	45,800	27,600	24,700	18,200	4,390	2,600	3,070
31	18,000	-------	33,300	17,500	-------	39,800	-------	24,700	-------	4,280	2,600	-------
1930–31												
1	3,460	2,230	2,300	3,650	5,500	12,900	116,000	39,300	44,000	8,090	9,370	5,560
2	3,550	2,410	2,600	3,070	4,600	12,600	113,000	36,500	41,000	7,270	8,360	5,450
3	3,460	2,410	2,060	3,170	4,200	12,600	129,000	36,000	35,700	7,020	7,810	5,560
4	3,170	2,410	2,980	3,260	5,000	12,600	124,000	33,300	30,000	8,090	7,410	6,140
5	2,980	2,410	3,460	3,460	5,100	12,600	124,000	30,000	25,800	9,890	7,270	6,140
6	2,790	2,230	3,740	4,260	5,110	12,600	129,000	27,800	23,000	11,200	7,020	6,020
7	2,600	2,320	3,460	4,360	4,990	12,600	112,000	26,100	20,700	11,600	6,770	5,910
8	2,500	2,320	3,550	4,050	2,600	12,200	97,000	25,600	21,800	12,800	6,770	5,680
9	2,410	2,410	4,260	3,840	4,150	12,400	89,300	37,100	29,800	12,600	6,640	5,560
10	2,320	2,500	4,990	4,570	3,940	18,400	89,300	55,300	39,300	13,800	7,540	5,450
11	2,320	2,410	5,560	4,360	7,020	17,600	99,500	55,300	39,600	24,200	11,100	4,990
12	2,230	2,410	6,020	4,260	4,880	17,400	99,500	50,400	32,300	34,900	12,200	4,670
13	2,140	2,410	5,790	4,260	4,990	15,800	99,500	50,400	27,500	29,200	10,300	4,360
14	2,140	2,320	5,790	4,260	5,340	14,000	86,700	59,900	23,400	22,000	10,400	3,940
15	2,060	2,230	5,450	3,900	7,410	12,900	71,600	94,500	20,200	18,900	10,400	3,740
16	2,060	2,230	4,000	2,900	6,640	12,200	86,700	107,000	18,200	17,800	9,370	3,550
17	2,060	2,320	2,320	3,460	6,020	12,600	47,200	86,700	17,800	15,000	8,220	3,550
18	1,960	2,320	2,790	3,460	7,140	13,500	40,800	70,200	17,600	12,400	7,020	3,550
19	2,000	2,410	4,260	3,840	12,200	15,000	35,400	64,400	16,800	11,900	6,400	3,840
20	1,960	2,410	4,050	3,840	18,400	16,200	30,800	56,800	15,000	12,600	5,910	3,840
21	2,000	2,410	3,740	3,800	15,800	18,700	27,500	58,400	13,100	12,400	5,560	4,150
22	2,140	2,500	2,980	3,400	16,400	19,800	25,100	73,000	11,900	12,800	5,340	4,150
23	2,140	2,410	3,170	3,500	19,300	20,400	23,400	89,300	11,600	12,200	5,340	4,460
24	2,000	2,410	2,980	3,550	18,900	25,800	32,000	126,000	11,200	20,700	4,990	4,570
25	1,930	2,230	3,070	3,360	16,800	34,400	35,700	134,000	10,800	25,800	4,670	4,670
26	2,000	2,320	3,260	3,360	15,300	50,400	34,400	134,000	10,100	23,400	4,570	4,670
27	2,000	2,300	3,940	3,360	14,400	75,800	33,100	124,000	10,100	19,500	4,670	4,990
28	2,060	1,800	4,050	3,840	13,300	86,700	36,800	107,000	10,900	16,000	4,990	4,780
29	2,140	1,700	4,050	4,570	-------	99,300	41,000	78,600	9,960	12,800	5,680	4,990
30	2,230	1,880	4,150	5,500	-------	143,000	41,000	61,400	9,070	11,600	5,910	4,880
31	2,230	-------	4,050	5,700	-------	145,000	-------	50,400	-------	10,300	5,680	-------

Monthly discharge, in second-feet, of Susquehanna River at Harrisburg, Pa., 1928–31

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
1928–29					
October	7,590	4,610	5,990	0.249	0.29
November	15,000	6,560	8,460	.351	.39
December	42,300	8,840	15,400	.639	.74
January	52,100	7,800	17,000	.705	.81
February	124,000	8,500	20,500	.851	.89
March	233,000	41,500	94,600	3.93	4.53
April	222,000	36,600	110,000	4.56	5.09
May	172,000	42,300	72,100	2.99	3.45
June	45,800	10,000	17,700	.734	.82
July	15,400	5,490	9,250	.384	.44
August	5,610	3,280	4,360	.181	.21
September	7,460	3,100	4,630	.192	.21
The year	233,000	3,100	31,700	1.32	17.87
1929–30					
October	79,200	3,980	26,300	1.09	1.26
November	112,000	13,900	33,700	1.40	1.56
December	107,000	11,000	37,600	1.56	1.80
January	109,000	17,500	45,300	1.88	2.17
February	166,000	16,000	35,900	1.49	1.55
March	141,000	39,800	68,900	2.86	3.30
April	86,700	27,600	49,200	2.04	2.28
May	32,000	13,900	22,700	.942	1.09
June	45,800	12,600	21,000	.871	.97
July	16,200	4,280	9,340	.388	.45
August	4,180	2,500	2,880	.120	.14
September	6,900	2,410	3,400	.141	.16
The year	166,000	2,410	29,700	1.23	16.73
1930–31					
October	3,550	1,930	2,360	0.098	0.11
November	2,500	1,700	2,300	.095	.11
December	6,020	2,060	3,830	.159	.18
January	5,700	2,900	3,880	.161	.19
February	19,300	2,600	9,120	.378	.39
March	145,000	12,200	32,200	1.34	1.54
April	129,000	23,400	71,700	2.98	3.32
May	134,000	26,100	67,100	2.78	3.20
June	44,000	9,070	21,600	.896	1.00
July	34,900	7,020	15,400	.639	.74
August	12,200	4,570	7,220	.300	.35
September	6,140	3,550	4,790	.199	.22
The year	145,000	1,700	20,200	.838	11.35

NOTE.—Tables of discharge for year ending Sept. 30, 1929, are revised records and supersede those published in Water-Supply Paper 681.

OAKS CREEK AT INDEX, N. Y.

LOCATION.—Staff gage at highway bridge at Index, Otsego County, half a mile above mouth and 3 miles southwest of Cooperstown.

DRAINAGE AREA.—102 square miles.

RECORDS AVAILABLE.—November, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year, 920 second-feet Apr. 11 (gage height, 4.6 feet); minimum, about 9 second-feet Nov. 4, 29.

1929-1931: Maximum discharge, that of Apr. 11, 1931; minimum, 5.6 second-feet frequently July 27 to Aug. 31, 1930 (gage height, 0.90 foot).

REMARKS.—Records good except those for period of ice effect, Dec. 16 to Mar. 19, and for periods of backwater, Oct. 3 to Nov. 30, May 10 to June 12, which are fair. Discharge estimated July 3, Sept. 22, 24, 25.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	10	43	18	18	46	510	263	140	20	54	54
2	17	9.5	29	17	18	46	510	240	130	18	50	51
3	15	9.5	25	17	19	44	510	229	120	18	67	78
4	14	9	22	18	19	44	570	218	110	24	118	70
5	13	9.5	22	19	19	44	570	208	100	24	69	57
6	13	10	22	22	18	42	570	187	95	21	55	53
7	12	10	22	20	18	42	570	177	110	20	50	52
8	12	9.5	30	18	19	42	605	189	140	21	49	50
9	11	9.5	32	17	20	44	675	279	110	22	51	49
10	11	9.5	30	16	22	42	710	200	100	59	54	49
11	11	9.5	29	16	19	40	879	200	85	125	52	49
12	11	9.5	41	19	17	38	815	220	75	72	53	46
13	11	10	39	22	18	38	745	260	64	48	52	42
14	11	10	31	17	26	40	710	260	58	50	51	40
15	10	10	22	15	26	42	640	220	54	52	51	39
16	10	11	20	14	28	46	570	220	57	39	49	39
17	10	15	18	14	36	55	510	300	77	38	45	43
18	18	22	18	15	50	60	480	260	69	37	43	49
19	18	18	20	18	70	70	450	220	50	72	39	47
20	17	15	22	20	70	76	393	190	42	70	38	44
21	16	14	20	19	65	86	352	190	43	78	36	47
22	14	13	19	18	60	117	325	180	39	236	34	55
23	11	12	18	17	55	153	352	200	36	161	32	50
24	10	12	18	16	55	218	325	220	38	125	31	48
25	10	12	18	16	55	320	300	190	36	104	29	46
26	10	11	20	18	50	426	287	180	47	91	29	51
27	10	10	22	22	50	498	287	170	50	75	43	58
28	10	10	20	20	48	510	287	160	29	68	146	55
29	10	9.0	20	20	------	583	312	150	25	59	89	53
30	10	15	19	19	------	540	287	140	24	59	63	53
31	10	------	18	19	------	510	------	150	------	57	57	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	18	10	12.4	0.122	0.14
November	22	9	11.5	.113	.13
December	43	18	24.2	.237	.27
January	22	14	17.9	.175	.20
February	70	17	35.3	.346	.36
March	583	38	158	1.55	1.79
April	879	287	504	4.94	5.51
May	300	140	209	2.05	2.36
June	140	24	71.8	.70	.79
July	236	18	63.3	.62	.72
August	146	29	54.2	.53	.61
September	78	39	50.6	.496	.55
The year	879	9	101	.990	13.43

CHERRY VALLEY CREEK AT WESTVILLE, N. Y.

LOCATION.—Wire gage at highway bridge a quarter of a mile northwest of Westville, Otsego County, and 4 miles above mouth.

DRAINAGE AREA.—82 square miles.

RECORDS AVAILABLE.—January, 1930, to June, 1931 (discontinued).

EXTREMES.—Maximum discharge during period, about 1,780 second-feet Apr. 11 (gage height, 6.3 feet); minimum, about 2.0 second-feet Oct. 10.

1930–31: Maximum discharge, that of Apr. 11, 1931; minimum, that of Oct. 10, 1930.

REMARKS.—Records fair except those for periods of ice effect, Dec. 13–25, Dec. 29 to Mar. 7, Mar. 11–21, those for period of backwater from débris on control, Oct. 8 to Nov. 30, and those estimated, which are poor.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
1	4.9	4.6	41	13	15	42	400	141	137
2	7.0	4.2	62	12	15	42	500	134	122
3	8.1	4.0	41	12	14	42	500	[a] 181	114
4	6.5	4.0	18	12	14	42	581	[a] 154	[a] 100
5	4.6	3.6	12	13	14	40	565	116	[a] 90
6	3.7	3.4	11	18	14	40	542	[a] 85	[a] 80
7	2.4	3.4	12	17	13	38	480	[a] 92	[a] 95
8	2.8	4.0	15	15	13	38	480	[a] 130	106
9	2.4	4.0	20	13	13	37	610	245	87
10	2.0	3.8	23	12	13	40	896	150	78
11	2.8	4.4	16	12	12	36	1,590	145	[a] 65
12	2.4	4.0	20	16	12	34	1,130	186	[a] 50
13	2.8	4.6	18	18	14	32	601	152	41
14	3.4	4.0	16	15	17	36	542	162	[a] 32
15	3.4	4.0	14	12	18	40	461	171	[a] 28
16	2.4	4.6	12	10	22	46	292	162	[a] 46
17	3.0	4.6	11	11	28	50	276	362	[a] 70
18	4.0	6.0	11	13	42	60	216	245	[a] 50
19	4.6	8.0	12	13	50	70	202	154	[a] 40
20	5.5	7.0	14	13	65	80	169	184	[a] 36
21	4.8	6.5	12	12	65	110	145	292	[a] 34
22	4.0	5.5	11	11	60	154	126	260	[a] 32
23	4.6	5.0	11	11	55	202	118	245	[a] 30
24	4.6	4.6	11	11	50	292	139	230	[a] 30
25	4.6	4.2	11	11	48	440	152	186	[a] 40
26	4.6	3.4	12	13	46	565	148	179	54
27	4.0	3.2	14	17	44	705	169	174	58
28	4.2	3.0	13	17	44	855	169	169	[a] 40
29	4.0	2.6	13	16	------	855	171	166	[a] 30
30	4.2	4.2	13	16	------	708	148	145	[a] 26
31	4.2	------	13	15	------	565	------	134	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	8.1	2.0	4.08	0.050	0.06
November	8.0	2.6	4.41	.054	.06
December	62	11	17.2	.210	.24
January	18	10	13.5	.165	.19
February	65	12	29.6	.361	.38
March	855	32	204	2.49	2.87
April	1,590	118	417	5.09	5.68
May	362	85	178	2.17	2.50
June	137	26	61.4	.749	.84

[a] Estimated.

UNADILLA RIVER NEAR NEW BERLIN, N. Y.

LOCATION.—Staff gage at highway bridge a quarter of a mile below mouth of Shawler Brook and 1½ miles north of New Berlin, Chenango County.

DRAINAGE AREA.—192 square miles.

RECORDS AVAILABLE.—July, 1924, to September, 1931.

EXTREMES.—Maximum discharge during year, 2,770 second-feet Apr. 11 (gage height, 6.8 feet); minimum, 11 second-feet Oct. 11, 13, 16.

1924–1931: Maximum discharge, 5,590 second-feet Mar. 15, 1929 (gage height, 8.8 feet); minimum, 10 second-feet Sept. 5, 1929 (gage height, 1.06 feet).

REMARKS.—Records good except those for periods of ice effect, Nov. 28 to Dec. 6, Dec. 13 to Jan. 4, Jan. 7 to Feb. 16, Feb. 27, 28, and for period of backwater effect from aquatic growth, June 26 to Sept. 30, which are fair. Discharge estimated Dec. 7.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	14	70	40	34	104	905	399	269	36	85	50
2	22	27	38	36	30	107	1,150	338	195	40	60	36
3	20	16	70	16	36	107	1,050	353	172	32	75	70
4	15	16	70	26	30	107	1,100	324	144	55	110	200
5	18	23	65	54	36	100	1,050	282	128	46	110	120
6	17	17	65	44	36	98	950	244	111	44	70	80
7	18	13	70	42	32	96	950	219	145	42	65	60
8	18	33	76	28	30	94	1,070	318	310	28	55	48
9	18	16	82	38	55	98	1,670	570	244	24	55	50
10	15	33	90	46	38	98	1,950	421	207	95	90	32
11	17	20	78	24	36	96	2,620	432	160	340	80	26
12	17	28	124	26	40	99	1,980	535	133	200	70	24
13	16	20	100	34	44	86	1,260	758	102	110	65	17
14	18	38	85	38	70	100	950	617	90	120	55	36
15	18	41	60	36	70	98	770	500	82	220	48	34
16	11	26	42	34	80	98	650	466	128	200	48	28
17	17	34	30	24	94	115	570	878	183	130	48	40
18	20	31	20	30	135	144	500	599	172	100	55	26
19	16	48	46	28	155	172	416	465	115	90	34	60
20	17	56	36	26	155	195	368	399	84	85	42	65
21	12	36	28	28	144	256	324	432	82	140	50	55
22	13	18	40	38	133	341	282	416	78	500	19	130
23	24	20	20	36	133	538	416	432	72	400	38	80
24	18	19	24	26	133	782	432	500	102	240	22	55
25	22	20	48	30	130	1,340	353	465	82	180	20	40
26	14	58	26	28	126	1,900	338	432	70	150	28	46
27	18	29	44	36	120	2,080	384	338	60	120	24	110
28	18	19	28	30	110	1,860	416	282	60	95	170	100
29	17	13	40	32	------	1,960	570	256	50	80	95	100
30	16	16	18	36	------	1,580	500	231	46	130	75	65
31	22	------	34	36	------	1,110	------	231	------	110	60	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	24	11	17.5	0.091	0.10
November	58	13	26.6	.139	.16
December	124	18	53.8	.280	.32
January	54	16	33.1	.172	.20
February	155	30	80.9	.421	.44
March	2,080	86	515	2.68	3.09
April	2,620	282	865	4.51	5.03
May	878	219	424	2.21	2.55
June	310	46	129	.672	.75
July	500	24	135	.703	.81
August	170	19	62.0	.323	.37
September	200	17	62.8	.327	.36
The year	2,620	11	201	1.05	14.18

UNADILLA RIVER AT ROCKDALE, N. Y.

LOCATION.—Wire gage at highway bridge in Rockdale, Chenango County, 5.5 miles from mouth.

DRAINAGE AREA.—515 square miles.

RECORDS AVAILABLE.—November, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year, 6,500 second-feet Mar. 27 (gage height, 8.3 feet); minimum, 50 second-feet Nov. 5.

1929–1931: Maximum discharge, that of Mar. 27, 1931. Maximum discharge previously published for Dec. 20, 1929, would be reduced to 5,750 second-feet by the application of the 1931 revised rating. Minimum discharge, 45 second-feet Aug. 9–14, 1930.

REMARKS.—Records good except those for periods when stage was affected by backwater from temporary dam and ice, Oct. 1 to Mar. 4, and from weeds, July 21 to Sept. 30, which are fair. Discharge estimated Sept. 7.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	69	59	115	100	110	340	2,660	1,180	608	134	220	140
2	66	66	206	100	110	340	3,170	1,010	524	123	180	120
3	64	64	182	110	110	320	3,060	910	438	123	170	130
4	64	69	154	110	110	320	2,900	860	401	119	200	160
5	64	53	146	120	110	317	2,760	762	358	123	240	260
6	57	55	138	130	120	317	2,480	625	317	123	200	220
7	64	64	146	130	120	324	2,340	582	331	123	170	160
8	55	55	150	120	120	317	2,670	654	608	119	150	120
9	64	53	206	110	120	317	3,490	1,360	608	115	140	120
10	59	59	192	110	120	311	4,320	1,120	476	135	240	110
11	64	59	201	120	120	305	5,620	910	393	420	200	100
12	61	73	223	120	120	305	5,160	1,180	331	508	170	85
13	59	78	267	120	120	331	3,370	1,340	280	331	150	100
14	57	73	206	110	130	305	2,340	1,460	244	244	140	85
15	59	83	170	110	150	317	1,820	1,180	223	244	130	90
16	59	81	150	120	190	331	1,580	1,000	223	331	130	120
17	59	83	140	120	220	331	1,340	1,970	280	305	120	110
18	64	78	130	120	300	408	1,230	1,510	298	250	110	130
19	64	89	130	120	400	508	1,010	1,060	267	212	110	120
20	69	105	120	120	460	540	860	910	223	192	100	140
21	57	102	120	110	440	670	762	1,120	206	220	85	240
22	64	83	110	110	420	1,060	670	1,120	201	800	95	220
23	55	69	110	110	380	1,540	995	960	201	1,000	85	240
24	59	64	110	110	380	2,340	1,280	1,180	196	600	80	180
25	69	78	110	110	360	3,820	1,010	1,320	201	420	80	150
26	55	78	110	120	360	5,430	860	1,370	192	320	75	130
27	59	78	110	120	340	6,500	1,120	1,010	173	280	95	150
28	71	83	110	110	340	5,880	1,180	810	163	260	240	190
29	71	69	110	110	-------	6,170	1,560	715	146	220	420	190
30	64	76	110	110	-------	5,330	1,480	608	142	220	240	180
31	59	-------	110	110	-------	3,540	-------	625	-------	240	170	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	71	55	62.1	0.121	0.14
November	105	53	72.6	.141	.16
December	267	110	148	.287	.33
January	130	100	115	.223	.26
February	460	110	228	.443	.46
March	6,500	305	1,590	3.09	3.56
April	5,620	670	2,170	4.21	4.70
May	1,970	582	1,050	2.04	2.35
June	608	142	308	.598	.67
July	1,000	115	286	.555	.64
August	420	75	159	.309	.36
September	260	85	150	.291	.32
The year	6,500	53	528	1.03	13.95

CHENANGO RIVER NEAR CHENANGO FORKS, N. Y.

LOCATION.—Water-stage recorder 1½ miles below Chenango Forks, Broome County, and confluence with Tioughnioga River.

DRAINAGE AREA.—1,490 square miles.

RECORDS AVAILABLE.—November, 1912, to September, 1931.

EXTREMES.—Maximum discharge during year, 18,500 second-feet Mar. 27 (gage height, 9.79 feet); minimum, 135 second-feet Oct. 19, 20.

1912–1931: Maximum discharge, 35,500 second-feet Mar. 27, 1913 (gage height, 13.7 feet); minimum, 92 second-feet several times in August and September, 1913 (gage height 2.20 feet).

REMARKS.—Records good except those for periods when stage was affected by ice or weeds, Dec. 2–3, Dec. 17 to Mar. 14, July 27 to Sept. 3, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	259	230	360	420	440	1,200	8,180	2,980	1,940	340	460	280
2	230	235	500	420	420	1,200	10,700	2,530	1,560	334	400	280
3	224	235	550	420	420	1,200	9,440	2,620	1,330	502	380	300
4	218	213	546	460	440	1,200	9,440	2,440	1,180	462	360	423
5	208	213	519	500	440	1,200	9,120	2,100	1,050	416	360	430
6	191	202	478	550	440	1,200	7,880	1,830	946	374	340	354
7	186	186	546	550	420	1,300	7,580	1,610	1,120	367	320	314
8	191	196	726	500	420	1,400	8,180	1,840	2,440	340	300	295
9	186	191	822	500	440	1,500	11,400	2,980	1,860	334	300	277
10	186	191	758	500	420	1,400	13,800	2,440	1,420	420	460	271
11	186	191	706	500	420	1,300	17,000	2,710	1,250	1,230	700	253
12	180	213	726	500	420	1,200	14,800	3,180	1,080	910	600	230
13	165	213	970	500	440	1,200	9,760	3,270	946	648	480	230
14	160	230	811	500	460	1,100	7,140	3,270	833	537	440	230
15	175	230	619	480	480	1,100	5,680	2,800	748	494	400	235
16	155	230	423	460	550	1,150	4,640	2,360	844	470	380	271
17	150	247	460	460	700	1,290	3,880	3,770	779	454	360	347
18	155	259	500	460	1,100	1,450	3,470	3,570	716	462	340	494
19	150	259	500	460	1,600	1,670	2,980	2,620	648	519	340	416
20	140	247	480	480	1,900	1,780	2,620	2,280	591	502	300	360
21	165	241	460	480	1,700	2,280	2,280	2,240	582	610	280	354
22	165	218	440	480	1,600	3,370	2,020	2,530	573	1,710	260	409
23	180	213	440	480	1,500	4,650	1,940	2,190	537	1,420	260	446
24	170	208	420	460	1,400	7,000	2,280	2,850	510	946	240	409
25	170	235	420	480	1,400	11,500	1,940	5,680	502	758	240	367
26	165	253	420	500	1,300	15,200	1,760	6,110	470	648	240	347
27	170	259	440	500	1,300	17,400	2,100	3,880	430	550	240	360
28	208	230	440	500	1,300	15,900	2,360	2,980	409	500	280	381
29	247	202	420	480	------	15,900	3,660	2,540	381	480	420	381
30	247	241	420	460	------	14,800	3,980	2,100	367	650	360	354
31	235	------	420	460	------	10,400	------	2,100	------	550	320	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	259	140	188	0.126	0.15
November	259	186	224	.150	.17
December	970	360	540	.362	.42
January	550	420	481	.323	.37
February	1,900	420	852	.572	.60
March	17,400	1,100	4,660	3.13	3.61
April	17,000	1,760	6,400	4.30	4.80
May	6,110	1,610	2,860	1.92	2.21
June	2,440	367	935	.628	.70
July	1,710	334	611	.410	.47
August	700	240	360	.242	.28
September	494	230	337	.226	.25
The year	17,400	140	1,540	1.03	14.03

TIOUGHNIOGA RIVER AT ITASKA, N. Y.

LOCATION.—Water-stage recorder at Itaska, Broome County, 3¾ miles below Whitney Point and mouth of Otselic River and 6 miles above confluence with Chenango River.

DRAINAGE AREA.—738 square miles.

RECORDS AVAILABLE.—October, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year, 11,000 second-feet Mar. 27 (gage height, 7.84 feet); minimum, 73 second-feet Oct. 20 (gage height, 0.90 foot).

1929–1931: Maximum discharge, that of Mar. 27, 1931; minimum, that of Oct. 20, 1930.

REMARKS.—Records excellent except those for period of ice effect, Jan. 14 to Mar. 12, periods of backwater from grass, Oct. 1–19, July 16 to Sept. 30, and those estimated, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	150	149			a 240	650	4,260	1,380	1,060	a 200	a 260	120
2	130	167			a 240	650	5,960	1,200	853	a 200	a 240	120
3	130	160			a 220	650	4,740	1,330	729	a 300	a 220	190
4	120	129			a 220	650	5,240	1,210	644	a 270	a 200	280
5	110	123			a 220	650	4,840	1,050	579	262	a 200	190
6	100	120			a 220	650	4,260	915	530	217	a 180	160
7	120	114		a 285	a 220	650	4,170	819	698	209	a 160	130
8	110	108	a 400		a 220	700	4,550	960	1,340	201	160	130
9	110	123			a 220	800	6,680	1,360	987	193	170	130
10	100	105			a 220	700	8,000	1,180	761	351	380	130
11	95	116			a 220	650	10,300	1,480	682	996	400	120
12	100	129			240	600	7,910	1,750	586	528	300	110
13	90	132			240	582	4,640	1,710	523	361	260	a 110
14	100	139		a 300	260	575	3,560	1,540	463	307	220	a 110
15	90	153		280	280	582	2,920	1,300	425	282	200	a 120
16	90	139		280	340	638	2,350	1,110	537	260	190	a 150
17	85			280	440	720	1,960	2,130	a 431	240	180	a 200
18	100			260	600	827	1,770	1,620	a 410	260	190	a 320
19	85			260	1,000	960	1,540	1,210	a 370	320	170	a 260
20	81			260	1,100	1,000	1,340	1,050	a 340	280	150	a 220
21	91			260	1,000	1,250	1,180	1,080	a 340	440	150	a 200
22	89			240	900	1,830	1,070	1,100	a 330	1,100	140	a 220
23	86			240	850	2,520	1,050	942	a 310	700	130	a 240
24	91	a 150	a 280	a 240	800	3,940	1,110	1,500	a 300	480	120	a 220
25	102			a 240	750	6,710	960	3,360	a 290	400	130	a 200
26	105			a 260	700	9,090	888	3,140	a 270	340	120	a 170
27	99			a 280	650	10,000	1,020	1,960	a 250	300	130	200
28	128			a 280	650	8,940	1,150	1,480	a 240	260	160	a 200
29	180			a 260	-------	9,250	1,790	1,230	a 220	240	170	a 200
30	170			a 240	-------	8,240	1,830	1,060	a 220	a 320	140	a 190
31	149	-------		a 240	-------	5,240	-------	1,050	-------	a 300	130	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	180	81	109	0.148	0.17
November	167	105	140	.190	.21
December	-------	-------	338	.458	.53
January	-------	240	271	.367	.42
February	1,100	220	474	.642	.67
March	10,000	575	2,610	3.54	4.08
April	10,300	888	1,430	4.65	5.19
May	3,360	819	1,430	1.94	2.24
June	1,340	220	524	.710	.79
July	1,100	193	359	.486	.56
August	400	120	192	.260	.30
September	320	110	178	.241	.27
The year	10,300	81	838	1.14	15.43

a Estimated.

OWEGO CREEK NEAR OWEGO, N. Y.

LOCATION.—Water-stage recorder at highway bridge half a mile above confluence with Catatonk Creek and 1½ miles north of Owego, Tioga County.
DRAINAGE AREA.—185 square miles.
RECORDS AVAILABLE.—January, 1930, to September, 1931.
EXTREMES.—Maximum discharge during year, 3,060 second-feet May 26 (gage height, 5.17 feet); minimum, 11 second-feet Nov. 28 (gage height, 0.54 foot).
1930–31: Maximum discharge, 4,060 second-feet (revised) Mar. 8, 1930 (gage height, 5.8 feet); minimum, that of Nov. 28, 1930.
REMARKS.—Records good except those for periods of ice effect, Dec. 12–17, 22–25, Jan. 7–16, Jan. 22 to Feb. 15, and those estimated, Oct. 1–4, 7, 26, Aug. 7, 8, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	14	16	23	24	153	986	184	192	31	29	14
2	14	14	16	21	24	141	1,900	161	153	31	28	15
3	13	14	19	22	24	140	1,210	188	129	31	27	16
4	13	14	21	22	24	144	1,460	164	112	29	28	15
5	13	13	22	23	24	138	1,180	142	100	28	25	14
6	13	13	24	27	24	127	1,000	126	90	26	24	14
7	13	13	47	26	24	120	1,130	116	180	25	22	13
8	13	13	84	24	24	158	1,380	197	361	24	21	12
9	13	13	88	24	26	239	1,890	252	184	22	26	12
10	13	13	69	26	24	198	1,930	224	146	27	29	12
11	13	14	63	26	24	166	2,360	252	129	52	29	12
12	13	14	55	28	22	159	1,250	204	111	51	26	12
13	12	14	50	28	26	144	831	210	97	37	24	12
14	12	14	44	26	28	148	688	232	87	32	23	12
15	12	14	40	26	36	171	554	207	78	29	22	12
16	12	14	38	26	50	210	436	166	83	27	22	13
17	12	13	34	26	72	271	365	234	76	26	21	13
18	13	13	33	26	136	361	314	184	66	26	19	13
19	13	13	33	26	293	427	274	144	61	44	19	19
20	12	13	32	26	252	386	232	127	54	37	17	19
21	12	13	29	25	204	568	201	146	54	40	16	17
22	12	14	26	24	178	792	176	133	53	97	15	16
23	12	14	26	24	166	1,100	184	136	49	82	15	16
24	13	14	24	24	157	1,290	184	555	47	54	15	15
25	13	15	24	24	153	1,520	150	1,580	43	48	16	16
26	13	14	24	24	155	1,350	144	1,580	41	42	19	17
27	12	14	24	26	153	1,610	155	682	39	39	16	16
28	14	13	24	26	128	1,870	148	432	37	35	16	16
29	12	14	24	26	------	2,520	250	317	34	33	15	16
30	13	15	24	24	------	1,500	249	249	33	31	16	16
31	14	------	24	24	------	955	------	219	------	29	15	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	14	12	12.8	0.069	0.08
November	15	13	13.7	.074	.08
December	88	16	35.5	.192	.22
January	28	21	24.9	.135	.16
February	293	22	88.4	.478	.50
March	2,520	120	615	3.32	3.83
April	2,360	144	774	4.18	4.66
May	1,580	116	314	1.70	1.96
June	361	33	97.3	.526	.59
July	97	22	37.6	.203	.23
August	29	15	21.1	.114	.13
September	19	12	14.5	.078	.09
The year	2,520	12	171	.924	12.53

CAYUTA CREEK NEAR ALPINE, N. Y.

LOCATION.—Staff gage on highway bridge at outlet of Cayuta Lake, 2½ miles north of Alpine, Schuyler County.

DRAINAGE AREA.—17.6 square miles.

RECORDS AVAILABLE.—November, 1929, to September, 1931 (discontinued).

EXTREMES.—Maximum discharge during year, 116 second-feet Mar. 30 (gage height, 3.25 feet); no flow Oct. 20–24.

1929–1931: Maximum discharge, 185 second-feet June 19, 1930; minimum, that of Oct. 20–24, 1930.

REMARKS.—Records good except those for periods of ice effect, Dec. 13–18, 24–26, Jan. 29 to Feb. 15, and those for extremely low flows, which are fair. Cayuta Lake furnishes considerable natural storage.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.1	0.1	0.9	1.0	7.2	94	20	47	5.0	1.2	0.3
2	.1	.1	.1	.9	.9	7.4	98	19	42	4.6	1.1	.3
3	.1	.05	.1	.8	.9	7.6	98	18	37	4.2	1.0	.5
4	.1	.05	.1	.9	.9	8.1	98	17	33	3.7	1.0	.5
5	.05	.05	.1	1.0	.9	8.8	98	17	30	3.3	.9	.5
6	.05	.05	.2	1.2	.9	8.8	91	16	28	2.8	.9	.5
7	.05	.05	.4	1.2	.9	9.0	88	15	31	2.8	.8	.4
8	.05	.05	.4	1.2	.9	10	84	16	34	2.8	.7	.3
9	.05	.05	[a].5	1.2	1.0	13	88	19	34	2.8	1.0	.3
10	.05	.05	.6	1.2	1.0	15	91	27	32	3.0	1.3	.3
11	.05	.05	.6	1.2	.9	16	98	37	30	4.0	1.2	.2
12	.05	.05	.6	1.2	[a]1.0	17	98	40	[a]27	3.7	1.2	.2
13	.05	.05	.5	1.2	1.2	17	91	40	25	3.4	1.2	.2
14	.05	.05	.4	1.2	1.4	17	77	40	23	3.4	1.0	.1
15	.05	.05	.4	1.2	1.8	17	68	37	21	[a]3.3	.9	.2
16	.05	.05	.4	1.2	2.3	18	59	34	20	3.0	.9	.4
17	.05	.1	.4	1.2	2.6	18	53	33	19	2.6	.9	.5
18	.05	.1	.5	1.2	2.9	18	47	31	17	2.6	.8	.5
19	.05	.1	.7	1.3	3.4	18	42	28	15	2.6	.7	.5
20	.00	.1	.9	1.3	4.1	19	37	27	14	2.4	.7	.4
21	.00	.1	.9	1.2	4.5	20	33	26	13	2.5	.6	.5
22	.00	.1	.9	1.2	4.7	22	30	25	11	2.7	.6	.5
23	.00	.1	.9	1.2	5.1	25	29	28	10	2.6	.5	.5
24	.00	.1	.8	1.2	5.5	33	27	42	9.7	2.4	.4	.5
25	.05	.1	.6	1.2	6.1	53	25	69	8.8	2.1	.4	.3
26	.05	.1	.7	1.2	6.3	77	23	91	7.9	1.9	.4	.3
27	.05	.1	.9	[a]1.3	6.7	84	22	88	7.2	1.7	[a].4	.3
28	.05	.05	1.0	1.4	7.0	98	21	77	6.6	1.7	.4	.3
29	.05	.05	1.0	1.3	-------	112	21	68	5.8	[a]1.6	.4	.2
30	.05	.05	.9	1.2	-------	112	21	59	5.5	1.5	.4	.1
31	.05	-------	.9	1.1	-------	105	-------	53	-------	1.4	.3	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	0.2	0.00	0.052	0.0030	0.003
November	.1	.05	.072	.0041	.005
December	1.0	.1	.565	.032	.04
January	1.4	.8	1.17	.066	.08
February	7.0	.9	2.74	.156	.16
March	112	7.2	32.6	1.85	2.13
April	98	21	61.7	3.51	3.92
May	91	15	37.3	2.12	2.44
June	47	5.5	21.5	1.22	1.36
July	5.0	1.4	2.84	.161	.19
August	1.3	.3	.781	.044	.05
September	.5	.1	.353	.020	.02
The year	112	.00	13.5	.767	10.40

[a] Estimated.

TIOGA RIVER AT LINDLEY, N. Y.

LOCATION.—Wire gage on highway bridge at Lindley, Steuben County, 6 miles above mouth of Canisteo River.

DRAINAGE AREA.—770 square miles.

RECORDS AVAILABLE.—January, 1930, to September, 1931.

EXTREMES.—Maximum discharge during year, about 7,440 second-feet May 25 (gage height, about 9.5 feet); minimum, 20 second-feet Nov. 28.

1930–31: Maximum discharge, 8,910 second-feet Mar. 8, 1930 (gage height, 10.3 feet); minimum, about 19 second-feet Sept. 11, 12, 1930.

REMARKS.—Records good except those for period of ice effect, Nov. 27 to Mar. 7, and those for periods of backwater from weeds, Oct. 1 to Nov. 26, June 26 to Sept. 30, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	40	24	30	95	700	1,910	640	1,120	85	150	48
2	34	38	28	30	75	650	3,930	562	710	120	110	60
3	42	40	38	32	60	600	3,290	710	575	460	600	900
4	38	38	50	34	42	440	4,100	575	486	1,000	280	500
5	32	40	55	36	38	340	3,270	474	406	420	160	260
6	34	38	70	36	36	280	2,630	439	311	240	110	150
7	34	36	120	36	34	240	2,350	395	3,450	170	85	130
8	30	36	150	34	28	286	2,130	614	4,380	190	75	90
9	30	36	110	34	28	462	3,040	1,010	1,950	700	150	70
10	32	34	90	34	26	296	3,770	882	1,340	280	1,100	70
11	30	36	75	34	24	234	5,110	970	1,090	650	420	65
12	32	32	75	34	32	217	3,130	930	780	320	280	60
13	28	38	60	32	42	155	2,130	1,620	608	200	200	55
14	32	36	55	30	42	145	1,620	3,950	562	190	180	70
15	30	36	48	28	50	208	1,250	3,080	439	180	110	55
16	32	36	44	30	110	191	1,010	1,960	675	130	110	60
17	32	38	38	28	280	212	818	3,220	480	110	90	75
18	38	38	40	28	650	306	675	1,900	353	95	75	130
19	36	40	38	32	750	363	575	1,340	272	85	70	85
20	34	38	38	30	650	332	498	1,130	239	95	65	75
21	34	38	36	30	550	564	412	1,730	203	1,900	65	65
22	32	36	36	26	440	1,100	374	1,280	183	3,000	55	65
23	34	38	36	26	340	1,320	665	4,020	167	1,000	50	60
24	38	38	34	22	300	1,940	745	4,130	243	550	46	60
25	42	36	32	26	260	3,200	575	4,750	171	400	46	55
26	38	34	34	42	260	2,940	536	5,210	150	320	48	55
27	38	30	34	160	360	2,180	856	2,620	120	220	40	60
28	42	20	32	320	500	3,000	675	1,770	110	200	110	60
29	40	22	32	240	------	5,200	791	1,260	90	170	85	55
30	40	24	30	180	------	2,920	855	1,050	85	150	65	55
31	42	------	30	130	------	1,840	------	1,410	------	150	60	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	42	28	35.2	0.046	0.05
November	40	20	35.3	.046	.05
December	150	24	52.0	.068	.08
January	320	22	59.5	.077	.09
February	750	24	218	.283	.29
March	5,200	145	1,060	1.38	1.59
April	5,110	374	1,790	2.32	2.59
May	5,210	395	1,790	2.32	2.68
June	4,380	85	725	.942	1.05
July	3,000	85	445	.578	.67
August	1,100	40	164	.213	.25
September	900	48	120	.156	.17
The year	5,210	20	543	.705	9.56

TIOGA RIVER NEAR ERWINS, N. Y.

LOCATION.—Water-stage recorder at highway bridge half a mile below Erwins, Steuben County, and 3 miles above confluence with Cohocton River. Prior to June 22, 1931, chain gage with same datum at same location.

DRAINAGE AREA.—1,370 square miles.

RECORDS AVAILABLE.—July, 1918, to September, 1931.

EXTREMES.—Maximum discharge during year, about 13,600 second-feet May 24 (gage height, about 9.0 feet); minimum, 48 second-feet Oct. 17 (gage height, 0.72 foot).

1918–1931: Maximum discharge, about 46,700 second-feet May 22, 1919 (gage height, 16.4 feet); minimum, 28 second-feet Sept. 4, 1929 (gage height, 0.60 foot).

REMARKS.—Records good except those for periods of ice effect, Nov. 7, 27–29, Dec. 2–5, 14–18, 23, 27–31, Jan. 1–3, 7–29, Feb. 1–20, 27, and those estimated, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	81	83	72	60	220	970	3,020	1,240	1,560	144	217	109
2	70	a 72	65	60	190	930	5,500	1,060	1,070	272	198	128
3	70	62	80	60	160	810	5,200	1,150	815	1,250	745	1,030
4	66	62	85	66	130	660	6,920	1,150	704	1,770	429	656
5	a 60	70	95	72	110	461	6,250	930	602	823	307	412
6	62	62	102	66	100	373	4,970	730	479	451	241	307
7	70	60	135	60	90	345	4,130	660	3,280	331	210	229
8	62	62	226	55	a 85	345	3,480	881	6,780	303	176	180
9	62	a 60	198	55	75	558	4,890	1,860	3,180	801	425	153
10	62	53	161	60	70	461	6,200	1,540	2,050	451	2,210	137
11	58	62	142	65	65	345	7,670	1,760	1,580	831	868	120
12	58	62	135	70	70	320	4,640	1,570	1,170	576	570	109
13	58	66	121	70	80	294	3,040	3,920	895	370	440	101
14	55	79	110	60	85	294	2,350	6,210	740	341	350	94
15	53	79	85	55	110	320	1,870	4,610	669	321	284	91
16	53	66	70	55	240	320	1,540	2,810	895	250	250	135
17	51	62	70	60	460	345	1,240	4,440	636	217	214	233
18	58	79	70	a 60	1,100	461	a 1,060	2,800	509	198	187	280
19	a 57	79	79	60	1,200	590	930	1,990	423	202	166	233
20	53	81	83	60	1,100	558	810	1,760	370	249	150	187
21	a 53	70	83	a 60	930	1,020	660	2,800	326	2,170	137	180
22	53	66	79	a 60	a 770	1,940	590	2,070	289	4,050	123	194
23	53	66	70	55	558	2,610	842	6,280	258	1,570	117	150
24	62	66	75	55	401	3,720	1,150	12,400	289	847	109	128
25	a 66	66	72	a 60	401	5,200	970	8,850	271	622	101	114
26	a 62	64	72	120	461	5,070	890	8,390	241	503	99	117
27	62	60	70	320	a 550	3,630	1,430	4,020	214	381	117	120
28	72	55	70	600	a 660	5,570	1,340	2,600	190	331	174	147
29	75	50	65	460	-------	10,300	1,320	a 1,930	170	298	190	131
30	72	58	60	345	-------	5,330	1,760	1,520	156	275	144	114
31	83	------	60	270	-------	3,020	-------	1,900	-------	246	125	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	83	51	62.3	0.045	0.05
November	83	50	66.1	.048	.05
December	226	60	95.5	.070	.08
January	600	55	117	.085	.10
February	1,200	65	374	.273	.28
March	10,300	294	1,840	1.34	1.54
April	7,670	590	2,890	2.11	2.35
May	12,400	660	3,090	2.26	2.61
June	6,780	156	1,030	.752	.84
July	4,050	144	692	.505	.58
August	2,210	99	325	.237	.27
September	1,030	91	211	.154	.17
The year	12,400	50	902	.658	8.92

a Estimated.

CHEMUNG RIVER AT CHEMUNG, N. Y.

LOCATION.—Water-stage recorder just below highway bridge three-quarters of a mile southwest of Chemung, Chemung County.

DRAINAGE AREA.—2,530 square miles.

RECORDS AVAILABLE.—September, 1903, to September, 1931.

EXTREMES.—Maximum discharge during year, 21,600 second-feet Mar. 29 (gage height, 10.69 feet); minimum, about 95 second-feet Nov. 29.

1903–1931: Maximum discharge, about 67,000 second-feet Mar. 15, 1918 (gage height, 17.96 feet); minimum, 49 second-feet Aug. 14, 1911 (gage height, 1.47 feet).

REMARKS.—Records good except those for periods of ice effect, Nov. 30 to Dec. 3, Dec. 13 to Jan. 27, Feb. 1–16, and for periods of backwater from weeds, Oct. 1 to Nov. 29, June 21 to Sept. 30, which are fair. Discharge estimated Aug. 22.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	170	130	130	120	460	1,180	6,200	2,140	3,240	360	480	320
2	160	130	140	120	380	1,410	9,280	1,740	2,430	340	420	300
3	140	120	170	120	320	1,270	10,500	1,680	1,870	700	550	480
4	140	120	190	130	280	1,130	11,500	1,870	1,570	2,200	800	1,400
5	130	130	207	140	240	980	12,100	1,610	1,320	1,700	650	900
6	130	120	207	150	220	831	9,080	1,400	1,140	1,000	500	650
7	120	110	244	150	190	761	7,970	1,250	2,710	700	440	480
8	110	110	260	140	170	840	7,700	1,720	9,030	600	400	380
9	130	110	359	140	160	1,130	9,080	2,830	6,380	650	550	340
10	130	110	325	130	150	1,180	9,960	2,980	3,860	950	2,200	300
11	120	120	297	130	150	914	12,200	3,410	2,980	850	1,900	260
12	120	120	260	140	160	795	9,140	3,410	2,360	1,200	1,200	240
13	120	120	240	150	170	710	5,970	5,310	1,870	850	950	240
14	120	120	200	150	170	686	4,420	9,660	1,570	700	800	220
15	120	120	180	130	190	736	3,500	8,360	1,370	650	650	220
16	110	120	170	150	400	813	2,820	5,550	1,420	550	550	240
17	120	110	160	160	727	942	2,360	6,780	1,370	500	480	380
18	120	110	160	150	1,120	1,290	2,000	5,750	1,110	460	440	460
19	120	120	160	160	2,210	1,520	1,800	3,770	932	440	400	480
20	120	110	160	150	1,870	1,540	1,550	2,980	786	460	380	400
21	110	120	160	160	1,210	1,940	1,350	3,590	800	2,200	360	340
22	110	110	150	150	904	3,480	1,200	4,440	700	5,500	340	360
23	110	110	150	140	736	4,910	1,240	4,910	650	3,400	320	360
24	120	110	140	140	646	7,560	1,790	16,600	600	1,700	300	300
25	130	110	140	140	600	10,500	1,620	15,500	600	1,200	300	280
26	120	110	130	150	654	11,800	1,460	15,200	550	1,000	280	240
27	110	100	130	240	786	8,800	1,620	8,620	500	800	280	240
28	120	100	120	482	952	10,200	2,000	5,540	460	650	360	240
29	120	95	120	770	-------	18,600	1,870	4,040	420	600	400	240
30	120	110	120	694	-------	13,800	2,430	3,070	400	550	380	240
31	130	-------	120	555	-------	7,640	-------	3,410	-------	500	340	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	170	110	124	0.049	0.06
November	130	95	114	.045	.05
December	359	120	184	.073	.08
January	770	120	207	.082	.09
February	2,210	150	579	.229	.24
March	18,600	686	3,870	1.53	1.76
April	12,200	1,200	5,190	2.05	2.29
May	16,600	1,250	5,130	2.03	2.34
June	9,030	400	1,830	.723	.81
July	5,500	340	1,100	.435	.50
August	2,200	280	594	.235	.27
September	1,400	220	384	.152	.17
The year	18,600	95	1,610	.636	8.66

CANISTEO RIVER AT WEST CAMERON, N. Y.

LOCATION.—Wire gage on highway bridge at West Cameron, Steuben County, 2 miles above Cameron.

DRAINAGE AREA.—341 square miles.

RECORDS AVAILABLE.—January, 1930, to September, 1931 (discontinued).

EXTREMES.—Maximum discharge during the year, 4,000 second-feet May 24 (gage height, 9.6 feet); minimum, 16 second-feet Sept. 11–13.

1930–31: Maximum known discharge, that of May 24, 1931; minimum, that of Sept. 11–13, 1931.

REMARKS.—Records fair except those for March to May, which are good. Stage-discharge relation affected by weeds Oct. 8 to Nov. 26, June 16 to Sept. 30, and by ice Nov. 27–30, Dec. 1–4, 13–22, 30, 31, Jan. 1–10, 12–27, 31, Feb. 1–27, Mar. 5, 12, 13.

Daily and monthly discharge, in second-feet 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a 32	28	42	22	65	231	765	381	231	34	50	20
2	a 32	26	38	20	60	175	865	294	175	42	55	22
3	a 32	24	34	22	55	138	1,160	418	150	750	80	28
4	a 28	24	36	24	50	89	2,000	311	123	360	75	46
5	a 30	26	38	24	46	85	1,710	246	114	150	70	32
6	a 28	26	40	24	44	79	1,380	188	101	95	70	26
7	a 26	24	41	20	42	71	815	175	468	75	42	22
8	24	22	38	24	40	95	1,120	431	1,420	70	44	24
9	24	26	35	22	36	103	1,680	515	556	70	600	20
10	24	24	37	22	34	77	2,020	445	328	65	500	17
11	22	24	38	a 24	34	66	1,870	400	262	140	220	16
12	22	24	40	26	34	60	865	345	202	110	150	16
13	24	24	36	24	36	60	599	1,970	162	80	110	16
14	20	22	32	22	42	64	476	1,100	138	75	85	19
15	22	19	30	22	46	83	328	765	114	65	70	42
16	22	24	26	20	85	75	262	476	90	65	70	120
17	20	24	24	19	160	97	231	644	95	60	55	120
18	20	46	24	18	260	85	188	418	80	60	60	100
19	20	32	26	19	320	136	150	345	60	50	50	70
20	18	28	28	20	260	127	162	345	70	50	38	55
21	18	24	26	19	220	286	120	988	65	320	36	110
22	20	24	26	18	170	476	97	495	65	380	34	65
23	19	22	a 24	18	120	590	246	2,060	60	200	28	46
24	22	22	a 24	19	95	792	262	3,220	55	140	24	44
25	22	22	a 24	20	85	990	216	1,860	50	130	24	44
26	22	22	a 26	60	90	1,300	216	1,320	46	100	24	50
27	22	20	a 24	150	120	824	535	715	50	80	28	60
28	26	19	a 24	188	175	1,700	476	456	46	70	24	70
29	26	20	a 24	150	-------	2,640	651	311	36	60	28	55
30	26	32	22	103	-------	1,240	630	262	32	60	26	55
31	26	-------	22	75	-------	667	-------	262	-------	55	22	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	32	18	23.8	0.070	0.08
November	46	19	24.8	.073	.08
December	42	22	30.6	.090	.10
January	188	18	40.6	.119	.14
February	320	34	101	.296	.31
March	2,640	60	436	1.28	1.48
April	2,020	97	736	2.16	2.41
May	3,220	175	715	2.10	2.42
June	1,420	32	181	.531	59
July	750	34	131	.384	44
August	600	22	90.1	.264	.30
September	120	16	47.7	.140	.16
The year	3,220	16	214	.628	8.51

a Estimated.

COHOCTON RIVER NEAR CAMPBELL, N. Y.

LOCATION.—Chain gage at highway bridge 2 miles above Campbell, Steuben County.

DRAINAGE AREA.—478 square miles.

RECORDS AVAILABLE.—July, 1918, to September, 1931.

EXTREMES.—Maximum discharge during year, 4,200 second-feet Mar. 29 (gage height, 5.0 feet); minimum, 28 second-feet Jan. 1, 2.

1918–1931: Maximum discharge, 12,900 second-feet Dec. 1, 1927 (gage height, 8.9 feet); minimum, 13 second-feet Oct. 7, 1921 (gage height, 0.68 foot).

REMARKS.—Records fair except those for Mar. 6 to June 1, which are good. Stage-discharge relation affected by weeds Oct. 1 to Nov. 25, June 2 to Sept. 30, and by ice Nov. 26 to Mar. 5. Diversion from Mud Creek for power development on Keuka Lake (Oswego River Basin) takes practically all ordinary flow from 45 square miles above Lamoka Lake outlet.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	36	55	28	75	320	1,650	370	455	80	85	65
2	46	36	50	28	55	300	1,450	360	400	80	85	60
3	46	36	46	36	50	280	1,260	385	320	480	85	80
4	42	32	46	38	44	260	1,900	341	300	280	120	75
5	46	32	55	40	40	240	1,650	299	260	260	100	70
6	42	32	70	38	36	234	1,550	268	240	180	80	60
7	40	30	80	36	34	238	1,450	255	440	160	75	55
8	38	32	85	34	32	263	1,170	331	1,200	120	70	55
9	38	32	75	34	32	293	1,170	380	700	140	480	50
10	36	32	60	34	30	271	1,450	385	550	130	460	50
11	34	32	55	40	30	267	1,760	510	460	300	240	46
12	32	32	48	40	32	238	1,260	602	380	200	180	40
13	30	34	44	38	36	207	960	2,510	320	160	150	42
14	32	36	44	36	32	186	808	1,550	300	150	130	48
15	34	32	40	36	42	153	635	1,080	260	140	120	100
16	36	32	36	36	75	143	540	1,040	260	110	110	180
17	32	32	36	38	130	146	455	882	220	100	100	150
18	32	40	34	40	220	189	390	668	190	100	95	120
19	32	42	38	40	340	275	350	540	180	100	90	100
20	32	36	38	42	360	280	312	510	170	110	85	110
21	32	36	40	44	240	395	290	1,170	160	130	80	110
22	36	32	40	42	160	590	322	735	150	260	75	100
23	32	32	38	40	130	988	336	1,220	150	260	70	80
24	32	32	36	40	120	1,300	317	2,220	130	240	65	70
25	32	32	34	40	120	1,710	277	2,380	120	190	60	75
26	36	32	34	55	130	1,820	285	1,760	110	140	75	65
27	36	32	34	70	160	1,820	360	1,350	110	120	100	100
28	36	30	34	95	220	1,980	331	960	100	110	75	85
29	36	30	32	130	-------	3,670	336	735	95	95	80	65
30	36	46	32	120	-------	2,610	370	602	85	95	85	65
31	36	-------	30	100	-------	1,980	-------	510	-------	90	65	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	46	30	36.3	0.076	0.09
November	46	30	33.7	.071	.08
December	85	30	45.8	.096	.11
January	130	28	48.6	.102	.12
February	360	30	107	.224	.23
March	3,670	143	763	1.60	1.84
April	1,900	277	846	1.77	1.98
May	2,510	255	868	1.82	2.10
June	1,200	85	294	.615	.69
July	480	80	165	.345	.40
August	480	60	122	.255	.29
September	180	40	79.0	.165	.18
The year	3,670	28	285	.596	8.11

CONEWAGO CREEK NEAR MANCHESTER, PA.

LOCATION.—Water-stage recorder 500 feet above Manchester-Yorkhaven highway bridge and 1½ miles north of Manchester, York County.
DRAINAGE AREA.—511 square miles.
RECORDS AVAILABLE.—October, 1928, to September, 1931.
EXTREMES.—Maximum discharge during year, 6,850 second-feet Apr. 2 (gage height, 9.14 feet); minimum, 2 second-feet Oct. 20 (gage height, 1.17 feet).
1928–1931: Maximum discharge, about 20,300 second-feet Apr. 17, 1929 (gage height, 15.31 feet); minimum, 2 second-feet Aug. 7, 8, Oct. 20, 1930.
REMARKS.—Records good except those for period of backwater caused by rocks piled on control, July 17 to Sept. 30, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	10	28	73	53	70	780	109	76	91	38	89
2	26	10	23	56	52	66	4,270	106	189	87	29	74
3	26	16	16	56	33	203	1,140	106	276	74	29	153
4	20	17	25	49	49	141	745	104	138	74	21	484
5	12	14	26	49	40	104	614	116	98	102	16	181
6	10	11	30	899	43	89	456	111	78	98	20	120
7	17	15	32	688	35	80	556	109	72	109	22	85
8	15	16	33	194	40	98	1,400	210	153	367	18	52
9	10	13	29	111	58	781	776	418	224	194	16	50
10	11	7	26	126	90	369	535	296	147	292	28	49
11	10	16	28	85	256	197	438	308	102	472	85	42
12	9	14	33	76	184	133	358	362	87	240	345	37
13	11	12	33	54	159	106	283	267	76	171	144	25
14	16	20	30	52	138	91	244	279	68	133	102	25
15	13	18	37	47	174	87	211	304	60	104	70	22
16	11	18	23	43	110	78	187	316	833	95	47	17
17	7	25	22	42	104	116	168	222	683	87	50	21
18	8	23	23	38	113	290	156	174	345	70	33	20
19	8	23	20	247	168	376	147	159	204	45	26	21
20	5	22	22	530	271	337	130	147	156	40	26	23
21	11	22	15	292	232	337	126	159	126	33	30	66
22	14	22	25	101	184	222	118	118	98	43	28	52
23	11	23	21	118	147	178	130	171	80	62	23	40
24	12	20	20	91	126	162	153	249	1,370	68	33	32
25	11	25	16	68	104	147	159	207	528	62	26	29
26	11	23	29	60	93	250	133	153	218	54	49	30
27	5	28	165	52	72	156	136	130	159	40	52	33
28	17	25	644	66	76	149	168	113	136	30	38	42
29	16	28	253	64	-------	3,430	141	100	111	23	33	25
30	11	13	138	50	-------	1,330	116	85	87	37	128	26
31	10	-------	82	66	-------	614	-------	74	-------	32	133	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	26	5	12.9	0.025	0.03
November	28	7	18.3	.036	.04
December	644	15	62.8	.123	.14
January	899	38	147	.288	.33
February	271	33	114	.223	.23
March	3,430	66	345	.675	.78
April	4,270	116	499	.976	1.09
May	418	74	187	.366	.42
June	1,370	60	233	.456	.51
July	472	23	111	.217	.25
August	345	16	56.1	.110	.13
September	484	17	65.5	.128	.14
The year	4,270	5	154	.301	4.09

CONESTOGA CREEK AT LANCASTER, PA.

LOCATION.—Water-stage recorder above diversion dam of city waterworks, three-quarters of a mile west of Lancaster, Lancaster County.
DRAINAGE AREA.—322 square miles.
RECORDS AVAILABLE.—September, 1928, to September, 1931.
EXTREMES.—Maximum discharge during year, 4,220 second-feet July 11 (gage height, 5.20 feet); minimum not determined.
1928–1931: Maximum discharge, about 9,400 second-feet Feb. 28, 1929 (gage height, 6.57 feet); no flow over dam Aug. 11, 1930.
REMARKS.—Records fair. Part of table of monthly discharge corrected for diversion for Lancaster water supply.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	38	33	102	76	90	237	122	98	69	83	105
2	31	33	31	90	72	113	695	139	113	76	e 75	167
3	28	33	36	94	90	135	652	e 120	36	69	66	1,130
4	31	47	36	60	79	113	695	105	83	e 70	87	192
5	53	53	33	102	72	102	e 400	122	90	e 65	63	167
6	20	53	31	930	63	94	243	113	63	69	56	e 130
7	26	53	22	342	66	94	219	122	e 750	368	63	90
8	28	47	36	177	69	105	494	458	1,030	530	38	109
9	26	47	38	152	90	310	266	451	243	167	e 36	66
10	26	41	47	135	388	237	208	e 340	152	1,030	83	63
11	26	38	38	98	197	162	197	197	126	2,400	1,400	87
12	26	38	31	109	143	139	e 190	197	122	e 600	266	105
13	18	41	36	113	152	122	172	231	105	316	197	e 90
14	20	47	22	102	219	118	177	197	e 100	260	148	72
15	26	44	33	90	152	109	167	202	83	219	122	76
16	33	44	10	87	152	113	139	208	118	231	e 100	76
17	33	41	33	87	177	139	139	e 170	368	197	90	63
18	31	44	26	72	785	167	148	135	177	182	94	69
19	33	83	22	1,030	316	208	e 130	130	113	e 180	79	69
20	41	60	26	652	219	231	105	130	109	177	63	e 70
21	41	47	18	248	187	208	130	139	e 100	202	56	66
22	38	38	26	167	139	177	122	135	83	162	56	69
23	41	28	31	135	143	167	126	139	76	157	e 100	72
24	38	33	28	113	135	157	167	126	348	130	225	53
25	38	28	20	83	122	143	172	130	162	139	135	50
26	38	33	31	94	113	167	182	130	98	e 140	94	50
27	36	22	695	102	113	192	157	126	87	90	76	e 55
28	36	33	375	102	113	219	122	126	e 85	98	38	60
29	41	28	126	98	------	e 1,110	126	126	76	63	402	72
30	47	18	113	94	------	530	135	130	72	83	e 320	53
31	47	------	118	87	------	254	------	e 113	------	90	135	------

Month	Observed			Corrected for diversion		Run-off in inches
	Maximum	Minimum	Mean	Mean	Per square mile	
October	53	18	33.2	46.5	0.144	0.17
November	83	18	41.1	54.1	.168	.19
December	695	10	71.0	82.7	.257	.30
January	1,030	60	192	204	.634	.73
February	785	63	166	178	.553	.58
March	1,100	90	200	212	.658	.76
April	695	105	237	249	.773	.86
May	458	105	171	143	.568	.65
June	1,030	36	176	188	.584	.65
July	2,400	63	278	291	.904	1.04
August	1,400	36	156	169	.525	.61
September	1,130	50	120	133	.413	.46
The year	2,400	10	153	166	.516	7.00

e Estimated.

MUDDY CREEK AT CASTLE FIN, PA.

LOCATION.—Water-stage recorder 1 mile downstream from Castle Fin, York County, and 2¾ miles above mouth.
DRAINAGE AREA.—134 square miles.
RECORDS AVAILABLE.—October, 1928, to September, 1931.
EXTREMES.—Maximum stage during year, 6.81 feet Jan. 19 (discharge not determined); minimum, 0.90 foot Nov. 29 (discharge not determined).
1928–1931: Maximum stage, 8.81 feet Feb. 26, 1929 (discharge not determined); minimum, that of Nov. 29, 1930.
REMARKS.—Records good below and fair above 2,000 second-feet. Slight diurnal fluctuation caused by operation of hydroelectric plant.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	42	72	55	40	72	264	52	88	35	21	34
2	35	38	45	34	48	85	273	61	76	54	28	34
3	35	42	39	51	55	61	167	64	60	39	29	201
4	35	48	44	68	44	52	140	62	51	35	124	52
5	37	45	42	249	44	55	118	48	51	40	28	44
6	32	45	48	899	48	47	107	62	52	44	28	37
7	37	38	46	134	40	48	157	70	45	50	26	40
8	38	40	49	88	48	244	164	194	79	46	21	27
9	34	43	42	88	343	149	129	118	58	33	22	38
10	37	42	41	74	182	97	116	111	51	101	94	27
11	41	44	42	61	78	74	107	124	51	52	120	34
12	30	43	41	64	79	68	94	120	50	37	79	26
13	32	42	40	68	77	54	86	124	48	38	48	34
14	37	50	34	54	71	66	81	105	39	32	39	34
15	34	47	38	54	48	55	81	99	45	30	31	48
16	37	43	32	40	59	63	72	88	85	39	40	34
17	39	63	33	53	83	78	74	76	103	33	26	30
18	38	208	38	50	136	106	69	76	51	27	27	30
19	36	54	42	1,110	85	110	67	72	46	31	27	22
20	35	47	51	163	71	106	64	67	40	67	27	23
21	36	41	41	89	66	97	60	92	40	64	35	36
22	37	38	46	51	61	91	62	76	42	33	32	37
23	39	40	39	61	63	80	118	109	37	42	341	23
24	41	42	44	69	55	76	74	70	89	52	135	26
25	40	49	62	52	52	89	67	72	48	27	56	36
26	41	44	67	58	50	82	74	69	37	26	46	48
27	37	40	1,200	60	50	66	84	66	50	25	46	38
28	44	28	152	54	43	78	66	55	35	26	56	34
29	48	30	84	51	-------	357	62	56	37	20	120	39
30	45	41	74	47	-------	182	64	52	37	44	48	27
31	44	-------	78	48	-------	136	-------	61	-------	27	42	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	48	30	37.5	0.280	0.32
November	208	28	48.6	.363	.40
December	1,200	32	88.6	.661	.76
January	1,110	34	132	.985	1.14
February	343	40	75.7	.565	.59
March	357	47	97.5	.728	.84
April	273	60	105	.784	.87
May	194	48	82.9	.619	.71
June	103	35	53.6	.400	.45
July	101	20	40.3	.301	.35
August	341	21	59.4	.443	.51
September	201	22	39.8	.297	.33
The year	1,200	20	71.6	.537	7.27

DEER CREEK AT ROCKS, MD.

LOCATION.—Water-stage recorder a quarter of a mile below Maryland & Pennsylvania Railroad bridge and 1 mile below Rocks, Harford County.
DRAINAGE AREA.—94.8 square miles.
RECORDS AVAILABLE.—October, 1926, to September, 1931.
EXTREMES.—Maximum discharge during year, 2,960 second-feet Aug. 10 (gage height, 7.50 feet); minimum discharge, 8 second-feet Dec. 16; minimum gage height, 1.25 feet Aug. 8.
1926–1931: Maximum stage, 15.53 feet Nov. 16, 1926 (discharge not determined); minimum discharge, that of Dec. 16, 1930.
REMARKS.—Records good except those estimated, which are poor.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	35			44	65	193	50	73	31	21	50
2	29	29		a 45		73	172	51	64	36	13	46
3	29	38				55	106	54	52	33	45	148
4	26	40				51	90	50	48	32	172	57
5	23	38		320	a 40	47	80	47	45	39	33	46
6	31	37		320		45	77	47	43	55	29	39
7	28	35			39	44	122	70	43	48	24	44
8	28	32	a 36		a 39	175	124	184	55	42	18	39
9	29	30			a 380	99	92	90	45	35	23	36
10	27	38			a 380	68	83	90	45	51	477	34
11	30	37			76	59	77	99	45	45	153	32
12	21	33			74	56	70	96	42	35	89	30
13	32	37		a 50	50	52	69	92	39	32	60	25
14	27	41			52	50	65	80	36	30	43	34
15	31				45	50	63	73	42	32	38	44
16	28		49		47	55	59	66	54	39	33	32
17	33		98		56	66	59	63	64	34	36	31
18	31		55		81	72	57	61	40	26	30	34
19	28		40	a 690	65	84	54	59	38	25	29	29
20	36		42	a 690	59	80	54	56	34	46	29	29
21	30		46		54	72	51	76	32	51	33	40
22	33	a 36	72		50	64	55	66	35	32	37	30
23	30		35		50	64	84	84	195	25	294	29
24	35		57		47	57	60	64	260	30	104	29
25	32		46	a 45	45	64	55	60	54	28	57	30
26	24		448		44	59	60	60	44	21	50	56
27	38				42	54	63	54	51	27	48	48
28	31				38	57	54	50	40	24	102	39
29	40		a 80	47	-------	223	51	50	38	24	341	33
30	38			43	-------	101	50	46	34	38	76	30
31	36	-------		42	-------	81	-------	47	-------	26	57	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	40	21	30.4	0.321	0.37
November	----------	----------	35.9	.379	.42
December	448	----------	62.2	.656	.76
January	----------	----------	106	1.12	1.29
February	----------	----------	73.5	.775	.81
March	223	44	72.3	.763	.88
April	193	50	78.3	.826	.92
May	184	46	68.9	.727	.84
June	260	32	57.7	.609	.68
July	55	21	34.6	.365	.42
August	477	13	83.7	.883	1.02
September	148	25	40.8	.430	.48
The year	----------	13	62.0	.654	8.89

a Estimated.

GUNPOWDER RIVER BASIN

LITTLE GUNPOWDER FALLS AT LAUREL BROOK, MD.

LOCATION.—Water-stage recorder 700 feet above mouth of Laurel Brook, half a mile southwest of the town of Laurel Brook, Harford County, and 1 mile below Maryland & Pennsylvania Railroad bridge.

DRAINAGE AREA.—35.7 square miles.

RECORDS AVAILABLE.—December, 1926, to September, 1931.

EXTREMES.—Maximum discharge during year, about 625 second-feet July 20 (gage height, 4.22 feet); minimum discharge, about 3.1 second-feet Feb. 15 (gage height, 0.66 foot).

1926–1931: Maximum stage, 9.64 feet June 14, 1928 (discharge not determined); minimum discharge, that of Feb. 15, 1931.

REMARKS.—Records good.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.1	13			16	38	95	17	31	8.6	5.8	12
2	9.1	13	a 17	a 17	15	32	64	19	24	9.0	5.8	12
3	9.5	13			14	23	37	21	18	9.0	6.0	13
4	9.1	14	15	16	18	21	31	18	16	9.3	22	13
5	9.1	15	15	45	15	20	27	17	15	10	9.3	12
6	9.1	14	15	58	16	18	26	16	14	12	6.8	11
7	9.1	13	16	22	16	18	56	35	14	14	6.0	10
8	9.5	13	16	a 20	15	80	43	92	14	10	5.8	9.6
9	9.5	13	14	a 20	84	38	31	34	14	10	5.8	9.3
10	9.1	13	15	18	38	26	27	34	14	75	49	8.6
11	8.8	13	15	18	22	22	26	50	14	18	75	8.2
12	9.1	13	15	18	23	20	24	49	14	11	33	7.9
13	8.0	15	15		19	20	22	41	12	9.3	18	
14	8.8	15	15		21	19	22	31	12	9.0	13	
15	9.9	16	14	a 15	16	19	21	26	14	9.3	14	
16	10	15	a 12		19	22	20	23	27	11	12	a 80
17	11	19	a 12	15	24	28	20	21	16	9.0	9.6	
18	11	17	14	17	29	33	20	20	12	7.9	8.6	
19	11	15	15	191	25	36	18	19	12	7.6	10	
20	12	15	15	32	23	32	18	18	10	165	9.0	
21	12	14	15	20	22	26	18	31	9.3	44	15	8.2
22	12	14	14	19	20	24	20	24	9.3	14	15	7.6
23	13	14		20	19	24	35	35	16	10	107	6.8
24	13	14	a 12	18	18	21	22	23	18	9.6	38	7.6
25	12	16		16	16	24	21	20	12	9.0	20	6.5
26	12	15	18	16	17	22	23	19	11	7.6	18	12
27	13		150	17	16	20	23	18	12	6.8	17	11
28	14	a 13	33	17	16	23	20	16	9.3	6.5	14	8.6
29	14		22	16	------	92	19	16	8.6	6.0	49	7.9
30	14		a 17	16	------	34	18	15	9.0	7.2	20	7.9
31	13	------	a 17	15	------	27	------	16	------	6.8	14	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	14	8.0	10.8	0.303	0.35
November	19	----------	14.2	.398	.44
December	150	----------	20.0	.560	.65
January	191	----------	25.5	.714	.82
February	84	14	21.9	.613	.64
March	92	18	29.1	.815	.94
April	95	18	28.9	.810	.90
May	92	15	26.9	.754	.87
June	31	8.6	14.4	.403	.45
July	165	6.0	17.8	.499	.58
August	107	5.8	21.0	.588	.68
September	13	6.5	9.16	.257	.29
The year	191	5.8	20.0	.560	7.61

a Estimated.

PATAPSCO RIVER BASIN

NORTH BRANCH OF PATAPSCO RIVER NEAR REISTERSTOWN, MD.

LOCATION.—Water-stage recorder at highway bridge on Louisville-Delight road 600 feet above mouth of Cook Branch and 3½ miles southwest of Reisterstown, Baltimore County.

DRAINAGE AREA.—91.0 square miles.

RECORDS AVAILABLE.—June, 1927, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,340 second-feet Aug. 10 (gage height, 5.25 feet); minimum, 11 second-feet Aug. 9 (gage height, 1.10 feet).
1927–1931: Maximum discharge, about 2,500 second-feet Oct. 2, 1929 (gage height, about 7.5 feet); minimum, that of Aug. 9, 1931.

REMARKS.—Records good except those estimated, June 26 to July 8, and those during periods of possible ice effect, which are fair. Power plant at Finksburg, 7 miles upstream, affects low-water flow.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	28	45	33	30	90	192	36	93		14	30
2	19	27	28	29	30	84	183	36	66		13	26
3	20	27	30	34	27	58	104	38	43		14	66
4	20	29	30	39	33	48	86	35	33		17	38
5	19	34	30	189	30	43	74	33	31	29	16	27
6	21	29	30	264	31	42	69	33	29		13	27
7	21	25	44	69	27	40	98	35	34		13	23
8	21	25	35	62	31	90	118	96	61		12	21
9	22	24	31	42	191	78	84	56	33	20	11	19
10	21	26	30	42	91	58	74	45	30	32	166	16
11	21	26	27	35	50	45	69	76	29	27	242	16
12	19	24	28	39	50	40	61	53	27	21	64	15
13	22	26	27	36	39	36	56	67	24	19	40	14
14	22	26	27	32	45	36	51	53	23	19	25	14
15	23	29	26	30	36	36	48	53	24	18	20	14
16	25	28	19	32	35	38	45	45	174	18	19	14
17	27	34	23	35	44	48	45	40	71	18	18	17
18	27	51	28	35	71	66	44	39	38	19	15	18
19	25	33	31	479	56	79	42	38	30	18	14	16
20	27	28	30	93	51	71	40	35	27	24	14	15
21	25	29	26	54	48	59	39	50	23	40	19	18
22	25	29	26	44	45	50	43	43	23	23	28	14
23	26	29	29	40	42	48	72	76	23	18	231	13
24	26	29	25	36	40	45	47	45	94	34	71	17
25	25	30	21	35	35	44	43	39	32	20	59	13
26	23	27	124	34	35	44	45	38		16	61	27
27	25	25	455	34	34	42	53	33		16	34	30
28	28	23	84	38	33	43	43	30	29	15	28	18
29	28	24	51	36	------	288	40	29		14	329	15
30	29	29	47	33	------	104	38	27		16	61	13
31	27	------	50	33	------	76	------	85	------	16	40	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	29	19	23.5	0.258	0.30
November	51	23	28.4	.312	.35
December	455	19	49.6	.545	.63
January	479	29	66.6	.732	.84
February	191	27	46.8	.514	.54
March	288	36	63.5	.698	.80
April	192	38	68.2	.749	.84
May	96	27	46.4	.510	.59
June	174	23	42.0	.462	.52
July	40	14	23.0	.253	.29
August	329	11	55.5	.610	.70
September	66	13	20.8	.229	.26
The year	479	11	44.6	.490	6.66

NORTH BRANCH OF PATAPSCO RIVER NEAR MARRIOTTSVILLE, MD.

LOCATION.—Water-stage recorder at highway bridge 1.2 miles northeast of Marriottsville, Howard County, and 3 miles above junction with South Branch of Patapsco River.

DRAINAGE AREA.—165 square miles.

RECORDS AVAILABLE.—October, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,590 second-feet Aug. 10 (gage height, 6.50 feet); minimum, about 11 second-feet Dec. 24 (gage height, 2.52 feet).

1929–1931: Maximum discharge, revised, about 2,380 second-feet Apr. 6, 7, 1930 (gage height, 7.65 feet); minimum, that of Dec. 24, 1931.

REMARKS.—Records good. Considerable fluctuation at low and medium stages caused by operation of power plants upstream.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	62	67	70	59	154	311	65	196	35	32	48
2	28	45	58	52	59	162	335	65	124	44	24	45
3	30	31	56	52	40	102	186	65	82	37	21	87
4	37	45	51	59	55	87	153	67	70	222	24	62
5	28	54	51	96	51	78	132	64	59	69	28	44
6	26	47	55	342	64	73	120	62	52	50	24	48
7	29	56	73	132	72	68	167	59	54	62	21	37
8	28	38	65	68	61	143	213	167	91	49	20	37
9	29	51	52	94	253	145	145	100	70	42	17	32
10	36	36	51	85	211	96	122	87	62	116	243	31
11	29	44	54	76	91	78	117	122	51	64	364	30
12	34	44	45	68	75	75	106	100	51	43	109	32
13	25	47	51	73	80	72	98	127	42	36	73	32
14	28	51	51	73	82	65	94	104	39	34	46	24
15	30	56	38	49	73	68	87	98	49	33	39	30
16	32	52	36	44	73	72	83	89	223	30	38	26
17	35	46	35	58	75	92	82	76	117	33	29	28
18	38	70	45	55	122	122	80	72	67	36	31	32
19	37	56	61	545	102	140	76	70	51	34	26	38
20	33	47	51	186	92	130	75	65	40	58	24	26
21	34	59	45	96	85	104	70	76	42	112	35	31
22	35	42	37	64	76	91	73	87	45	43	65	30
23	37	52	49	80	73	91	120	148	39	34	480	25
24	47	40	37	65	72	82	85	91	102	53	162	32
25	37	47	40	67	65	82	73	75	48	42	87	34
26	38	46	75	59	72	80	78	70	44	31	134	32
27	39	49	636	61	52	75	96	65	54	26	68	62
28	41	32	167	64	58	83	76	55	44	26	56	32
29	45	44	94	68	------	494	75	54	39	25	329	30
30	46	48	75	67	------	202	72	47	28	35	98	30
31	44	------	56	52	------	142	------	224	------	33	65	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	47	25	34.4	0.208	0.24
November	70	31	47.9	.290	.32
December	636	35	76.0	.461	.53
January	545	44	97.4	.590	.68
February	253	40	83.7	.507	.53
March	494	65	114	.691	.80
April	335	70	120	.727	.81
May	224	47	87.6	.531	.61
June	223	28	69.2	.419	.47
July	222	25	51.2	.310	.36
August	480	17	90.7	.550	.63
September	87	24	36.9	.224	.25
The year	636	17	75.8	.459	6.23

PATUXENT RIVER BASIN

PATUXENT RIVER NEAR BURTONSVILLE, MD.

LOCATION.—Water-stage recorder 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, 1911, to June, 1912; July, 1913, to September, 1931.
EXTREMES.—Maximum discharge, about 3,180 second-feet July 21 (gage height, 12.23 feet); minimum, 5.5 second-feet Oct. 1 (gage height, 2.17 feet).
1911–1931: Maximum discharge, about 4,500 second-feet Sept. 5, 1926, June 19, 1928 (gage height, 15.3 feet); minimum, 5.1 second-feet Aug. 6, 1930 (gage height, 2.16 feet).
REMARKS.—Records good except those included in braces, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.5	15			29	61	108	40		37		30
2	5.5	16	17		28	96	230	41		138		29
3	5.8	17		20		62	106	46		35	20	26
4	6.7	18				52	82	40		29		29
5	7.0	20	22		25	45	71	38		30		26
6	7.2	19	23	280		41	63	37	60	105	27	23
7	7.0	17	30			39	81	40		128	15	23
8	7.7	16	37		28	60	196	88		34	12	22
9	7.9	18	27		36	81	108	66		26	32	19
10	8.2	19	24		92	56	84	48		39	290	18
11	8.4	18	23			45	77	47		35	554	18
12	8.4	19	23	29		42	68	45	30	26	124	18
13	7.9	20	23			39	61	104	27	21	67	17
14	7.9	23	23		35	37	57	74	26	19	43	17
15	8.4	23	23			38	53	93	26	20	36	30
16	8.8	20				41	50	64	142	23	32	22
17	10	24		27	38	57	48	52	157		26	17
18	10	26		28	55	74	47	46	41		22	17
19	11	24	18	336	53	67	44	42	31	435	22	17
20	11	22		130	47	63	42	40	27		22	14
21	12	20			43	54	41	64	24		38	18
22	14	21			40	48	43	69	21		78	18
23	15	20		35	37	52	92	291	129		236	16
24	16	20			37	46	58	84	225		75	18
25	17	20		34	35	47	50	58	45		68	16
26	16	20		32	34	44	50	50	65	20	336	17
27	16	20	85	32	33	40	55	43	58		68	27
28	17			34	31	45	47	39	39		53	20
29	21	16		34	------	319	44	35	30		45	16
30	20			32	------	130	41	34	24		41	14
31	17	------		30	------	81	------	84	------		34	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	21	5.5	11.0	0.087	0.10
November	26	15	19.4	.153	.17
December	----------	----------	37.7	.297	.34
January	336	----------	50.3	.398	.46
February	92	----------	36.8	.290	.30
March	319	37	64.6	.508	.59
April	230	41	73.2	.578	.64
May	291	34	62.6	.493	.57
June	225	21	60.9	.480	.54
July	----------	----------	101	.795	.92
August	554	12	80.5	.634	.73
September	30	14	20.4	.161	.18
The year	----------	5.5	51.7	.407	5.54

POTOMAC RIVER BASIN

NORTH BRANCH OF POTOMAC RIVER AT BLOOMINGTON, MD.

LOCATION.—Water-stage recorder at Bloomington, Garrett County, 600 feet above mouth of Savage River and 2 miles above Piedmont, W. Va.

DRAINAGE AREA.—287 square miles.

RECORDS AVAILABLE.—October, 1924, to September, 1927; July, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year not determined; minimum, 11 second-feet Nov. 15, 16 (gage height, 2.06 feet).

1924–1927, 1929–1931: Maximum discharge (estimated), 6,000 second-feet Oct. 2, 1929 (gage height not determined); minimum, that of Nov. 15, 16, 1930.

Maximum stage known, 20.3 feet Mar. 29, 1924.

REMARKS.—Records good except those for Dec. 1 to June 18, which are poor. Low-water flow affected by operation of storage reservoir on Stony River; capacity, about 265,000,000 cubic feet; contents of reservoir, 60,000,000 cubic feet Sept. 30, 1930, and 195,000,000 cubic feet Sept. 30, 1931.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	21	17			697	1,020	670	741	60	42	128
2	34	21				991	991	542	613	52	52	95
3	34	19		a 55		659	954	641	475	50	43	88
4	33	19	a 40			532	2,770	664	375	75	50	180
5	31	25			a 155	400	2,050	537	400	75	56	124
6	24	29		110		360	1,520	475	516	62	54	103
7	24	32	205	273		334	1,250	435	501	80	46	81
8	24	24	309	208		327	1,130	1,620	827	90	41	66
9	24	19	211		1,500	292	1,730	340	569	60	40	56
10	24	19	133		1,470	242	1,620	957	417	335	52	48
11	24	21	104		682	225	1,570	796	323	753	66	42
12	23	16	111		506	214	1,290	717	239	263	57	37
13	23	13	185		440	200	957	a 3,000	206	156	50	33
14	22	12	137		770	257	796	a 4,300	273	111	48	29
15	22	12	84	a 60	564	455	676	a 2,000	495	87	44	39
16	22	12	42		465	511	569	1,290	417	72	38	55
17	22	13	27		435	422	495	957	302	82	34	78
18	21	13	24		811	391	480	765	228	103	32	105
19	19	12			924	404	431	717	170	101	35	198
20	18	17			729	435	379	a 2,000	144	80	52	111
21	17	19	a 20	211	613	435	341	a 2,700	117	62	313	445
22	17	20		142	495	532	391	a 1,800	101	62	580	195
23	19	21		146	431	580	1,130	a 2,200	106	92	391	137
24	18	20		111	387	575	796	a 1,700	131	72	236	242
25	19	20		104	348	753	1,130	1,420	115	61	139	222
26	20	19	19	924	323	891	1,380	1,380	92	46	104	1,300
27	23	19	33	1,570	273	859	1,570	1,020	84	38	139	891
28	24	19	142	1,380	257	996	1,250	759	122	31	170	537
29	24	19	178	753	-------	2,400	957	613	100	28	279	391
30	23	18	137	537	-------	1,570	796	559	72	32	289	273
31	23	-------	92	379	-------	1,130	-------	1,020	-------	28	163	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	35	17	23.5	0.082	0.09
November	32	12	18.8	.066	.07
December	309	17	81.6	.284	.33
January	1,570	----------	253	.882	1.02
February	1,500	----------	488	1.70	1.77
March	2,400	200	615	2.14	2.47
April	2,770	341	1,080	3.77	4.21
May	4,300	435	1,240	4.32	4.98
June	827	72	309	1.08	1.21
July	753	28	106	.369	.43
August	580	32	120	.418	.48
September	1,300	29	211	.735	.82
The year	4,300	12	378	1.32	17.88

a Estimated.

NORTH BRANCH OF POTOMAC RIVER NEAR CUMBERLAND, MD.

LOCATION.—Water-stage recorder at Wileys Ford, 2 miles south of Cumberland, Allegany County, and 2 miles below mouth of Wills Creek.

DRAINAGE AREA.—877 square miles.

RECORDS AVAILABLE.—May, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year, about 13,500 second-feet May 13 (gage height, about 13.0 feet); minimum, 23 second-feet Oct. 2?, 23 (gage height, 2.52 feet).

1929–1931: Maximum discharge, that of May 13, 1931; minimum, that of Oct. 22, 23, 1930.

Maximum stage known, 28.4 feet Mar. 29, 1924 (discharge not determined).

Extremes do not include flow of Chesapeake & Ohio Canal.

REMARKS.—Records good except those for Mar. 30 to May 19, which are fair. Record does not include flow diverted past station in Chesapeake & Ohio Canal, of which about 80 per cent is diverted from river at head gates 2 miles above station and remainder is sewage from city of Cumberland, which obtains its water supply from Evitts Creek, mouth of which is below station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	39	47	128	597	775	3,760	1,370	1,700	145	74	310
2	30	38	44	96	466	2,370	3,370	1,170	1,330	182	70	192
3	27	39	57	103	362	1,800	2,850	1,170	1,070	166	145	212
4	28	38	116	113	310	1,370	4,730	1,170	886	513	118	192
5	31	50	90	148	320	1,070	6,190	962	850	492	124	280
6	31	50	131	412	229	834	4,170	850	976	310	112	212
7	31	45	173	538	252	730	3,370	980	958	247	95	173
8	29	48	315	430	257	723	2,730	5,590	1,280	212	86	142
9	27	54	356	295	534	723	3,760	4,030	985	216	76	124
10	30	48	252	315	2,830	625	3,760	2,670	770	925	329	110
11	31	47	190	271	1,520	512	3,110	2,130	613	1,700	216	95
12	29	44	173	220	1,020	486	2,670	2,190	511	967	176	86
13	29	44	194	198	858	430	2,020	9,250	473	550	148	78
14	29	45	257	154	998	486	1,690	11,000	895	376	112	68
15	26	44	169	116	1,270	681	1,420	6,040	810	280	92	60
16	26	44	103	90	998	1,010	1,220	3,870	904	234	80	64
17	24	48	73	108	866	917	1,070	2,820	641	265	72	65
18	29	50	62	101	944	810	971	2,150	498	1,040	90	108
19	28	44	62	128	1,370	794	882	1,870	403	564	95	188
20	25	45	59	144	1,370	944	794	3,470	326	376	139	238
21	25	48	59	173	1,170	917	716	6,640	275	320	234	247
22	23	44	66	234	1,010	962	778	4,710	238	280	1,010	437
23	23	39	60	224	842	1,120	2,490	5,590	220	200	786	260
24	24	44	59	238	746	1,050	2,020	4,990	224	247	662	247
25	27	45	52	194	674	1,320	2,080	3,600	247	204	348	337
26	29	42	68	272	604	1,800	2,490	3,080	212	152	300	613
27	30	45	118	2,020	544	1,690	3,630	2,330	224	127	564	2,040
28	31	44	151	2,190	466	1,970	2,550	1,760	208	100	627	922
29	35	44	216	1,370	------	4,150	2,020	1,430	216	90	537	714
30	39	44	220	890	------	5,150	1,640	1,330	180	84	676	504
31	39	------	165	674	------	4,450	------	1,820	------	78	492	------

Month	Maximum	Minimum	Mean	Chesapeake & Ohio Canal, mean discharge
October	39	23	28.9	29.3
November	54	38	44.8	26.6
December	356	44	134	18.0
January	2,190	90	406	12.5
February	2,830	229	837	18.7
March	5,150	430	1,380	23.7
April	6,190	716	2,500	23.2
May	11,000	850	3,290	34.5
June	1,700	180	637	30.2
July	1,700	78	376	23.0
August	1,010	70	280	22.0
September	2,040	60	311	23.2
The year	11,000	23	852	23.8

POTOMAC RIVER AT SHEPHERDSTOWN, W. VA.

LOCATION.—Water-stage recorder at highway bridge at Shepherdstown, Jefferson County, 3.3 miles above mouth of Antietam Creek. Zero of gage is 281.00 feet above mean sea level.

DRAINAGE AREA.—5,970 square miles.

RECORDS AVAILABLE.—August, 1928, to September, 1931.

EXTREMES.—1929–30: maximum discharge during year, 82,400 second-feet Oct. 23 (gage height, 19.83 feet); minimum, 231 second-feet Aug. 17, 19 (gage height, 1.39 feet).

1930–31: maximum discharge during year, 32,200 second-feet May 24 (gage height, 10.90 feet); minimum, 307 second-feet Oct. 25–30 (gage height, 1.30 feet).

1928–1931: maximum discharge, 124,000 second-feet Apr. 17, 1929 (gage height, 25.53 feet); minimum, that of Aug. 17, 19, 1930.

Maximum stage known, 39.2 feet May 31 or June 1, 1889.

REMARKS.—Records excellent except those estimated Dec. 1–13, 1929, Jan. 20 to Feb. 2, 1930, and period of grass growth in river, June 15 to Oct. 8, 1930. Dams above station cause fluctuations during low water.

Daily and monthly discharge, in second-feet, 1929–1931

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1929–30												
1	855	4,000		9,640	2,300	6,040	3,750	3,280	1,080	1,130	554	428
2	1,790	3,870		8,400	2,300	5,470	3,630	3,170	1,000	1,050	384	489
3	31,400	4,380	3,500	7,650	2,500	5,060	3,400	3,170	1,000	918	320	428
4	34,700	7,350		7,200	3,520	4,650	3,400	3,280	1,000	780	450	450
5	16,000	12,500		6,760	8,260	4,250	3,630	3,060	931	780	825	417
6	9,640	11,300		6,180	13,800	4,000	3,750	2,780	931	825	855	406
7	6,910	8,550		5,470	12,000	3,870	5,430	2,600	1,040	825	636	395
8	5,060	6,910		5,190	9,320	11,000	8,550	2,440	821	825	541	395
9	4,000	5,900		5,060	7,650	16,400	9,320	2,480	917	580	463	384
10	3,280	4,920	3,700	4,780	6,480	13,800	9,010	2,460	931	855	406	373
11	2,710	4,380		4,380	5,750	11,600	8,100	2,240	945	489	373	351
12	2,440	4,000		4,120	5,190	10,600	7,200	2,070	1,320	489	362	340
13	2,110	3,870		3,870	4,920	9,960	6,480	1,970	3,750	384	362	340
14	1,990	3,630	4,120	3,870	4,920	9,010	5,750	1,880	2,870	463	351	340
15	1,840	3,520	6,200	4,120	5,060	8,100	5,190	1,840	2,160	594	330	340
16	1,730	3,400	7,950	4,250	5,190	7,800	4,780	1,860	1,760	692	300	340
17	1,630	3,400	7,200	4,120	4,520	7,200	4,520	1,820	1,730	594	310	351
18	1,470	8,440	6,330	3,750	4,120	6,620	4,380	1,860	1,730	489	310	330
19	1,360	38,000	6,040	3,170	4,000	6,480	4,380	1,800	1,690	439	310	340
20	1,340	34,500	6,180		4,120	6,620	4,380	1,760	1,630	351	330	351
21	1,470	19,000	6,180		4,120	7,950	4,120	1,690	1,540	528	384	351
22	4,570	12,700	5,610		4,120	6,910	4,120	1,760	1,120	594	384	362
23	63,400	9,960	5,060		4,120	6,040	4,780	1,750	1,210	608	362	450
24	43,200	8,100	4,650		4,120	5,330	5,470	1,650	1,090	594	406	401
25	19,800	7,060	4,250	2,300	4,000	4,920	5,190	1,510	1,100	706	439	371
26	11,600	6,330	4,380		4,650	4,920	4,650	1,440	1,360	300	450	371
27	8,400	5,610	4,380		6,040	5,190	4,380	1,340	1,530	340	439	352
28	6,620	5,190	4,250		6,330	5,060	4,000	1,180	973	502	428	352
29	5,330	4,920	6,790		-------	4,650	3,630	1,210	987	567	417	361
30	4,650	4,520	11,600		-------	4,120	3,400	1,090	1,310	515	406	371
31	4,120	-------	11,300		-------	4,000	-------	1,080	-------	528	417	------

Daily and monthly discharge, in second-feet, of Potomac River at Shepherdstown, W. Va., 1929–1931—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	371	325	401	821	2,180	1,730	12,700	6,040	6,330	1,620	1,530	2,090
2	371	334	381	945	1,820	1,940	23,700	5,190	6,620	1,210	1,240	2,030
3	371	334	371	973	1,620	4,300	22,400	4,650	6,040	1,280	1,000	2,010
4	381	343	371	756	1,460	5,330	14,800	4,120	5,190	1,530	1,210	2,160
5	371	343	371	875	1,410	4,380	13,400	3,870	4,380	2,780	1,490	1,630
6	381	361	391	959	987	3,630	18,300	3,630	3,750	1,940	1,240	1,620
7	381	381	431	973	1,080	3,060	14,500	3,280	3,520	3,170	1,490	1,530
8	391	381	834	1,460	987	2,730	14,100	4,520	3,520	3,400	1,490	1,040
9	381	381	391	1,690	1,160	3,630	13,400	14,800	3,630	2,710	1,820	1,080
10	371	381	656	2,300	1,260	4,120	12,000	13,800	3,630	2,820	1,690	1,000
11	371	381	692	2,010	1,530	3,750	13,400	10,300	3,280	7,350	1,840	987
12	371	391	889	1,710	4,490	3,280	14,500	8,250	2,890	9,320	1,960	987
13	371	401	903	1,600	3,750	2,760	9,320	7,200	2,530	5,750	1,580	987
14	371	421	808	1,410	2,940	2,370	7,500	18,800	2,200	4,250	1,510	821
15	371	421	584	1,120	2,330	2,160	6,180	29,500	2,010	3,170	1,180	668
16	352	451	743	1,200	2,260	2,010	5,330	18,700	3,280	2,600	1,020	1,000
17	352	821	494	1,000	2,500	2,070	4,650	13,000	7,350	2,640	1,000	717
18	343	644	472	973	2,280	2,570	4,120	9,960	7,950	6,040	987	931
19	343	431	717	795	2,160	2,870	3,750	8,100	5,330	7,650	973	656
20	334	411	717	973	2,370	2,780	3,400	7,060	3,870	6,180	973	668
21	343	381	483	957	3,520	2,660	3,060	8,700	2,920	5,060	987	808
22	361	343	692	1,090	3,750	2,760	3,060	15,200	2,500	5,610	987	608
23	334	325	644	668	3,400	2,760	6,040	21,200	2,050	5,330	987	717
24	316	343	527	945	2,940	2,800	12,000	30,400	2,090	4,120	3,400	1,040
25	307	334	431	959	2,550	3,060	12,300	21,200	2,010	3,520	6,760	1,020
26	316	361	483	959	2,260	3,060	9,320	14,800	1,920	2,820	4,920	1,200
27	307	352	959	1,100	1,990	3,400	9,010	11,600	3,060	2,330	3,750	1,460
28	307	352	931	1,160	1,760	4,000	9,320	9,640	2,390	1,970	3,060	1,420
29	307	361	808	1,540	-------	10,600	8,550	7,650	1,880	1,880	2,820	2,010
30	316	361	861	3,280	-------	22,000	7,060	6,330	1,670	1,670	2,660	2,050
31	325	-------	808	2,820	-------	17,100	-------	6,040	-------	1,600	2,370	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
1929–30					
October	68,400	855	10,000	1.68	1.94
November	38,000	3,400	8,670	1.45	1.62
December	11,600	-------	5,150	.86	.99
January	9,640	-------	4,180	.700	.81
February	13,800	2,300	5,480	.918	.96
March	16,400	3,870	7,020	1.18	1.36
April	9,320	3,400	5,090	.85	.95
May	3,280	1,080	2,050	.34	.40
June	3,750	821	1,380	.231	.26
July	1,130	300	624	.105	.12
August	855	300	429	.072	.08
September	489	330	378	.06	.07
The year	68,400	300	4,200	.704	9.56
1930–31					
October	391	307	351	.059	.07
November	821	325	395	.066	.07
December	959	371	621	.104	.12
January	3,280	756	1,290	.216	.25
February	4,490	987	2,240	.375	.39
March	22,000	1,730	4,410	.738	.85
April	23,700	3,060	10,400	1.74	1.94
May	30,400	3,280	11,200	1.88	2.17
June	7,950	1,670	3,660	.613	.68
July	9,320	1,210	3,660	.613	.71
August	6,760	973	1,930	.323	.37
September	2,160	656	1,230	.206	.23
The year	30,400	307	3,450	.578	7.85

POTOMAC RIVER AT POINT OF ROCKS, MD.

LOCATION.—Water-stage recorder at highway bridge at Point of Rocks, Frederick County, a third of a mile below Catoctin Creek and 6 miles above Monocacy River.

DRAINAGE AREA.— 9,650 square miles.

RECORDS AVAILABLE.—February, 1895, to September, 1931.

EXTREMES.—Maximum discharge during year, 36,800 second-feet May 24 (gage height, 8.16 feet); minimum, 550 second-feet Oct. 5 (gage height, 0.26 foot).

1895–1931: Maximum discharge, 258,000 second-feet May 13, 1924 (gage height, 32.2 feet); minimum, 540 second-feet Sept. 10, 1914 (gage height, 0.38 foot).

Maximum stage known, 40.2 feet June 2, 1889 (discharge, about 320,000 second-feet).

REMARKS.—Records excellent. Discharge estimated Dec. 2–4, 16–18, 20–22. Chesapeake & Ohio Canal parallels Potomac River on the Maryland side; discharge of Canal is not included in records for this station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	736	700	842	2,390	3,030	2,610	19,500	8,180	9,070	3,430	2,550	3,760
2	749	762	870	2,020	2,610	2,610	25,200	7,160	9,210	4,190	2,230	3,470
3	724	788	1,000	2,050	2,310	3,960	31,300	6,370	9,640	2,180	2,290	3,210
4	654	801	900	1,650	2,100	6,370	23,300	5,780	9,000	2,050	2,720	3,600
5	594	688	775	1,970	1,970	5,400	17,900	5,400	7,760	3,180	3,180	3,000
6	724	801	828	2,610	1,700	5,020	21,700	4,840	6,560	3,270	2,720	2,550
7	688	775	814	2,330	1,560	4,340	21,100	4,590	5,980	4,300	2,640	2,870
8	633	828	886	4,080	1,510	4,030	20,000	5,280	5,980	5,210	2,960	2,440
9	700	762	1,120	4,060	1,580	4,520	20,000	16,900	5,590	5,180	2,810	1,770
10	633	842	1,010	3,860	1,870	5,590	17,400	18,400	5,210	6,390	5,380	1,530
11	762	828	1,050	3,370	2,070	4,840	19,000	15,300	5,020	6,240	3,370	1,580
12	736	814	1,210	2,750	3,990	4,770	17,400	12,200	4,440	11,800	3,090	1,510
13	700	775	1,320	2,780	4,840	4,300	14,300	10,300	3,930	7,760	2,720	1,530
14	712	762	1,340	2,500	4,030	3,790	11,700	16,800	3,410	6,080	2,180	1,530
15	665	828	1,300	2,070	3,570	3,280	9,640	33,600	2,840	4,840	1,870	1,400
16	676	814	1,200	2,670	3,030	3,030	8,180	25,500	3,280	3,960	1,740	1,240
17	688	886	1,420	2,330	3,090	2,960	7,360	18,400	7,410	4,440	1,700	1,800
18	775	1,100	1,320	1,820	2,960	2,900	6,370	13,800	10,500	6,960	1,560	1,620
19	736	949	949	1,920	2,750	3,890	5,980	11,200	8,790	8,790	1,670	1,400
20	762	828	960	1,670	2,810	3,630	5,210	9,640	6,370	9,010	1,450	1,100
21	788	762	1,130	1,720	3,690	3,600	4,620	10,100	4,660	7,560	1,620	1,210
22	762	801	1,500	1,920	4,480	3,370	4,780	15,500	3,860	7,560	1,700	1,300
23	736	856	1,720	1,970	4,410	3,730	7,260	22,200	3,530	7,970	1,650	1,220
24	676	788	2,100	1,670	4,030	3,790	12,400	35,100	3,210	7,560	3,400	1,800
25	688	886	1,820	1,580	3,530	3,630	15,800	29,100	3,090	5,980	13,800	1,650
26	700	901	1,390	1,490	3,180	4,100	13,400	21,600	4,090	6,620	10,100	1,950
27	775	871	4,750	1,560	2,720	3,990	12,200	16,400	5,240	5,210	7,760	2,250
28	676	1,030	2,900	1,670	2,610	4,840	11,900	13,400	4,160	3,990	5,780	2,390
29	762	1,170	1,920	1,870	-------	8,310	11,500	10,800	3,150	3,530	5,780	2,390
30	623	801	1,720	3,310	-------	24,000	9,640	9,000	3,210	3,000	5,400	2,810
31	643	-------	1,970	3,860	-------	22,200	--------	8,180	-------	2,810	4,700	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	788	594	706	0.073	0.08
November	1,170	688	840	.087	.10
December	4,750	775	1,420	.147	.17
January	4,080	1,490	2,370	.246	.28
February	4,840	1,510	2,930	.304	.32
March	24,000	2,610	5,400	.560	.65
April	31,300	4,620	14,200	1.47	1.64
May	35,100	4,590	14,200	1.47	1.70
June	10,500	2,840	5,610	.581	.65
July	11,800	2,050	5,520	.572	.66
August	13,800	1,450	3,630	.376	.43
September	3,760	1,100	2,060	.213	.24
The year	35,100	594	4,920	.510	6.92

POTOMAC RIVER NEAR WASHINGTON, D. C.

LOCATION.—Water-stage recorder 1¼ miles southwest of Langley, Fairfax County, Va., 2 miles above District of Columbia boundary line, and 2½ miles above Chain Bridge. Zero of gage is 38.00 feet above mean sea level.

DRAINAGE AREA.—11,570 square miles.

RECORDS AVAILABLE.—March, 1930, to September, 1931.

EXTREMES.—Maximum discharge during year, 37,900 second-feet Apr. 3 (gage height, 6.90 feet); minimum mean daily discharge, 467 second-feet Nov. 29 (gage height, 0.51 foot). Extremes do not include flow in aqueducts, which divert water from river at Great Falls.

1930–31: Maximum discharge, that of Apr. 3, 1931; minimum mean daily discharge, 448 second-feet Aug. 25, 1930.

Maximum discharge known, about 390,000 second-feet June 2, 1889 (gage height, about 39 feet).

REMARKS.—Records good. Records, except last three columns of monthly table, do not include water diverted at Great Falls through aqueducts for Washington, D. C., water supply, daily discharge of which is published on page 262. Flow in Chesapeake & Ohio Canal passing station estimated as follows: October to April, no flow; May to September, 20 to 25 second-feet.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	632	523	1,040	2,110	4,340	3,200	23,500	9,680	9,350	3,650	3,260	5,230
2	632	481	829	2,800	3,620	3,470	30,700	8,300	10,500	6,430	2,910	4,340
3	602	530	632	2,610	3,200	3,710	36,100	7,560	11,100	5,040	2,640	4,020
4	621	610	698	2,210	2,800	5,360	28,900	6,640	10,200	3,260	2,830	3,800
5	594	709	1,140	2,240	2,530	7,090	21,000	6,620	9,080	2,750	3,260	4,510
6	523	720	1,120	3,770	2,320	6,020	20,200	5,620	7,800	4,340	3,770	3,650
7	488	594	1,020	5,820	2,240	5,420	23,500	5,230	6,640	5,620	3,260	3,230
8	554	594	988	4,180	1,800	5,230	22,600	5,230	6,860	5,620	3,140	3,380
9	530	676	848	4,340	1,900	6,090	22,600	8,550	6,860	6,020	3,350	2,830
10	516	698	1,100	4,510	2,160	7,560	20,200	19,000	6,020	6,220	3,860	2,110
11	546	610	1,280	5,040	2,690	7,090	19,400	17,800	5,820	6,430	6,640	1,850
12	516	698	1,180	4,340	2,940	6,020	19,800	13,800	5,420	9,350	6,430	1,780
13	586	698	1,490	3,620	4,770	5,820	17,000	11,400	4,860	10,800	4,510	1,740
14	538	665	1,830	3,170	5,820	5,230	14,200	11,100	4,340	7,800	3,620	1,670
15	530	610	2,020	2,970	4,680	4,680	11,400	28,000	3,830	6,220	2,910	1,690
16	530	676	1,830	3,170	4,340	4,020	9,680	28,900	5,230	5,230	2,500	1,710
17	495	784	986	2,750	3,800	3,860	8,550	21,000	4,860	4,510	2,290	1,620
18	562	768	665	2,470	3,830	4,020	7,560	16,600	9,080	6,020	2,090	2,190
19	546	1,010	1,540	2,560	3,770	4,020	6,860	12,800	10,800	8,800	2,160	1,850
20	698	1,360	1,450	3,380	3,680	5,040	6,220	10,800	7,800	9,680	2,090	1,650
21	643	880	1,080	3,590	3,830	5,040	5,620	9,680	6,020	9,680	2,060	1,180
22	687	709	1,340	2,390	4,680	4,860	5,230	11,700	4,510	8,300	2,420	1,160
23	709	768	1,020	1,760	5,420	4,680	7,220	21,000	4,340	8,300	2,890	1,470
24	698	709	979	2,110	5,230	4,860	9,280	29,800	5,620	9,350	2,640	2,110
25	736	736	860	2,110	4,860	4,860	15,000	31,600	4,180	7,800	7,620	2,560
26	643	610	1,340	1,940	4,340	4,680	15,000	23,500	4,180	6,430	13,800	2,090
27	488	988	3,680	1,850	3,830	5,040	13,400	18,600	6,020	7,090	10,200	2,370
28	516	546	8,300	1,850	3,380	5,040	12,800	15,000	6,020	5,420	7,800	2,690
29	562	467	5,420	1,970	-------	9,340	12,400	12,000	4,680	4,340	6,220	2,890
30	562	562	3,500	2,040	-------	23,700	11,400	9,900	3,710	4,020	8,300	2,860
31	594	-------	2,320	3,470	-------	26,600	-------	8,550	-------	3,530	6,430	-------

Month	Observed			Corrected for diversions		
	Maximum	Minimum	Mean	Mean	Per square mile	Run-off in inches
October	736	488	583	857	0.074	0.09
November	1,360	467	700	1,010	.087	.10
December	8,300	632	1,730	2,050	.177	.20
January	5,820	1,760	3,000	3,330	.288	.33
February	5,820	1,800	3,670	4,020	.347	.36
March	26,600	3,200	6,500	6,790	.587	.68
April	36,100	5,230	15,900	16,300	1.41	1.57
May	31,600	5,230	14,400	14,700	1.27	1.46
June	11,100	3,710	6,520	6,820	.589	.66
July	10,800	2,750	6,390	6,670	.576	.66
August	13,800	2,060	4,450	4,720	.408	.47
September	5,230	1,160	2,540	2,810	.243	.27
The year	36,100	467	5,540	5,840	.505	6.85

Daily discharge, in second-feet, of aqueducts at Great Falls, near Washington, D. C., 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	311	332	184	337	359	312	357	347	328	304	258	284
2	319	313	213	392	372	356	358	344	314	283	267	253
3	313	328	192	359	339	344	352	343	316	294	295	244
4	310	300	191	365	340	352	345	366	304	257	299	268
5	294	315	215	365	359	346	354	337	313	272	282	284
6	301	299	242	378	352	337	357	339	307	293	301	263
7	311	372	358	348	334	375	353	331	294	297	282	263
8	308	303	382	348	327	226	354	338	293	282	269	297
9	304	315	359	324	360	167	362	340	305	280	252	290
10	321	320	340	369	361	175	364	330	302	274	256	290
11	321	323	329	352	355	181	360	335	302	277	272	293
12	315	295	333	377	346	186	356	319	314	254	305	279
13	324	326	314	376	346	186	361	349	311	285	294	263
14	318	318	317	347	342	168	378	324	291	279	290	279
15	322	307	349	306	339	187	331	330	299	288	284	266
16	322	308	344	309	354	329	352	311	311	278	268	263
17	317	314	341	302	361	280	338	310	309	276	272	243
18	260	336	319	299	359	280	361	316	313	279	280	266
19	223	335	343	307	334	289	350	326	321	268	276	249
20	165	342	350	315	353	289	369	308	318	290	244	260
21	140	309	324	310	345	273	346	302	266	298	261	274
22	139	326	364	312	323	254	340	319	293	301	264	299
23	141	297	349	309	296	309	353	301	288	279	252	288
24	140	331	333	311	365	367	375	279	298	266	259	260
25	139	303	337	299	368	373	363	340	299	280	270	255
26	204	353	350	309	325	351	331	305	307	257	268	255
27	304	310	366	309	355	354	360	329	306	288	263	265
28	333	330	324	311	332	363	317	314	299	301	269	282
29	338	276	358	306	-------	321	357	328	303	287	263	276
30	323	171	375	311	-------	371	355	304	301	275	266	269
31	310	-------	339	348	-------	341	-------	298	-------	274	280	-------

SAVAGE RIVER AT BLOOMINGTON, MD.

LOCATION.—Water-stage recorder at Bloomington, Garrett County, three-quarters of a mile above mouth and 2 miles above Piedmont, W. Va.

DRAINAGE AREA.—114 square miles.

RECORDS AVAILABLE.—May, 1905, to July, 1906; October, 1924, to September, 1927; August, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1930, 2,050 second-feet (revised), Oct. 2 (gage height, 5.52 feet).

Maximum discharge during year, ending Sept. 30, 1931, 2,220 second-feet May 13 (gage height, 5.63 feet); minimum, 1.5 second-feet Oct. 9 (gage height, 0.93 foot).

1905–6, 1924–1927, 1929–1931: Maximum discharge, about 2,730 second-feet Nov. 13, 1925; minimum, 1.2 second-feet Aug. 7, 1930 (gage height, 0.89 foot).

REMARKS.—Records good except those for days when discharges exceed 250 second-feet, which are fair. Water diverted above station by cities of Piedmont and Westernport for water supply and by Baltimore & Ohio Railroad.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.9	2.9		a 12		296	420	164	146	11	6.6	21
2	1.9	2.9		10		495	400	140	124	11	5.5	16
3	1.8	2.9	a 3.5	12		390	385	145	103	29	5.5	18
4	1.9	3.0		11	a 40	282	1,050	116	89	247	15	16
5	1.9	3.9		13		184	850	102	92	83	12	16
6	1.9	4.3	16	84		122	620	94	77	55	20	16
7	1.6	4.1	35	70		104	495	99	69	43	14	11
8	1.6	3.6	31	37	37	99	465	585	71	31	8.0	8.8
9	1.6	3.4	20		299	84	696	482	65	23	8.0	7.4
10	1.7	3.6	16		490	68	620	360	54	65	7.2	6.6
11	1.6	3.8	16		301	64	495	282	45	84	9.6	6.0
12	1.7	3.8	26		188	57	365	251	40	48	7.4	5.2
13	1.6	3.8	24	a 15	133	64	273	1,030	36	35	6.9	4.8
14	1.7	3.9	17		306	75	203	1,160	37	29	5.8	4.5
15	1.7	4.1	10		287	131	152	670	37	22	4.7	4.1
16	1.9	3.9	4.1		235	147	126	464	37	22	3.9	4.1
17	2.0	4.1			150	138	120	344	34	33	3.3	6.0
18	2.1	4.5		13	162	118	104	258	29	22	3.1	9.6
19	2.0	5.0		18	194	138	92	215	25	19	4.1	15
20	2.1	4.7		36	200	136	80	204	21	15	12	12
21	2.4	3.9	a 3.5	41	170	142	72	620	19	14	54	18
22	2.5	3.8		a 25	120	188	122	565	18	18	64	10
23	2.4	3.4		a 24	97	184	282	706	19	14	37	11
24	2.9	3.3		28	86	184	734	615	29	12	25	11
25	3.1	3.3		34	76	306	360	477	22	11	18	11
26	3.8	3.4	62	284	71	390	450	344	18	8.4	16	145
27	3.0	2.9	16	395	60	395	490	239	22	6.9	31	111
28	3.1	2.6	24	350	56	540	410	168	21	5.8	33	74
29	3.1	2.0	20	191	------	1,050	325	132	16	5.8	39	51
30	3.3	2.0	a 15	114	------	680	235	117	13	11	35	37
31	3.6	------	a 13	97	------	485	------	166	------	8.4	29	------

Month	Maximum	Minimum	Mean
October	3.8	1.6	2.24
November	5.0	2.0	3.56
December	35	----------	11.6
January	395	10	65.6
February	490	37	143
March	1,050	57	250
April	1,050	72	383
May	1,160	94	365
June	146	13	47.6
July	247	5.8	33.6
August	64	3.1	17.5
September	145	4.1	22.9
The year	1,160	1.6	112

a Estimated.

GEORGES CREEK AT FRANKLIN, MD.

LOCATION.—Water-stage recorder at suspension bridge at Franklin, Allegany County, 1¼ miles above mouth at Westernport.

DRAINAGE AREA.—74.8 square miles.

RECORDS AVAILABLE.—October, 1929, to September, 1931. May, 1905, to July, 1906, at Westernport.

EXTREMES.—Maximum discharge during year, about 1,840 second-feet May 13 (gage height, 5.95 feet); minimum, 1.6 second-feet Oct. 2, 4–8 (gage height, 0.92 foot).

1905–6, 1929–1931: Maximum discharge, that of May 13, 1931; minimum, 1.6 second-feet Sept. 29, 30, Oct. 2, 4–8, 1930.

REMARKS.—Records good.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.6	2.3		5.8	16	147	215	75	86	10	4.6	10
2	1.6	2.3		5.4	14	131	222	72	71	11	5.1	7.6
3	1.6	2.3	a 2.8	5.8		88	212	74	59	14	7.6	7.6
4	1.6	2.5		6.1		70	494	62	52	32	10	6.3
5	1.6	3.6	4.4	23	a10	54	376	54	53	18	6.6	8.9
6	1.6	4.2	73	47		44	323	49	44	16	6.3	7.0
7	1.6	3.1	18	26	9.3	40	268	52	44	14	5.1	5.3
8	1.6	2.5	15	22	10	44	235	241	51	11	4.6	4.8
9	1.6	2.5	11	17	70	39	253	151	37	10	4.6	4.6
10	1.6	2.8	12	13	68	33	200	126	32	19	4.6	4.6
11	1.6	3.1	14	10	38	28	171	118	28	23	5.6	4.4
12	1.6	3.1	16	10	33	26	136	355	25	13	4.8	4.2
13	1.6	3.4	11	9.0		26	116	1,220	23	11	4.6	4.2
14	1.8	3.4	8.6	8.2		31	104	848	24	8.9	3.9	3.9
15	1.8	3.6	6.4	a 5.0	a32	50	84	480	29	8.9	3.7	
16	1.8	3.6	3.9	a 5.0		47	73	334	26	9.3	3.7	a 5.0
17	1.8	4.7		a 5.0	34	42	65	250	22	10	3.5	
18	1.8	4.7		6.1	42	40	59	195	19	11	3.2	
19	1.8	4.4		11	47	46	52	183	17	9.3	4.6	
20	1.8	4.2		14	42	46	47	202	15	7.9	18	7.9
21	1.8	4.2	a 2.5	11	39	45	43	460	14	8.3	33	6.0
22	1.8	4.2		a 9.0	32	45	122	312	14	9.6	26	5.1
23	1.9	4.2		a 9.0	30	49	171	376	14	7.0	16	4.8
24	2.0	4.2		8.6	28	57	118	274	16	6.3	11	4.6
25	2.0	4.2		9.7	24	83	114	228	14	7.0	7.9	4.2
26	2.0	4.2	5.4	33	21	77	135	188	13	5.3	10	37
27	2.0	3.1	19	44	19	70	128	149	14	4.8	26	16
28	2.0		13	39	17	241	112	122	13	4.6	22	10
29	2.3	a 2.5	10	28		465	102	102	12	4.6	17	7.6
30	2.0		a 8.4	23		265	86	93	11	7.3	12	6.0
31	2.0		a 6.9	20		188		106		5.3	10	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	2.3	1.6	1.78	0.024	0.03
November	4.7	2.3	3.40	.045	.05
December	73		9.35	.125	.14
January	47		15.8	.211	.24
February	70	9.3	28.6	.382	.40
March	465	26	85.7	1.15	1.33
April	494	43	161	2.15	2.40
May	1,220	49	244	3.26	3.76
June	86	11	29.7	.397	.44
July	32	4.6	10.9	.146	.17
August	33	3.2	9.86	.132	.15
September	37	3.9	7.25	.097	.11
The year	1,220	1.6	50.8	.679	9.22

a Estimated.

NEW CREEK NEAR KEYSER, W. VA.

LOCATION.—Staff gage on New Creek Drive, 2½ miles southwest of Ke yser, Mineral County, and 3¼ miles above mouth.
DRAINAGE AREA.—46.4 square miles.
RECORDS AVAILABLE.—April, 1930, to September, 1931 (discontinued).
EXTREMES.—Maximum discharge during year, about 500 second-feet May 20 (gage height, 3.96 feet); minimum, 0.6 second-foot Nov. 30.
1930–31: Maximum discharge, that of May 20, 1931; minimum, that of Nov. 30, 1930.
REMARKS.—Records poor.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	4.5			5.8	50	172	70	39	5 0	1.7	2.2
2	2.7	4.5			5.0	51	152	73	32	4 5	1.7	2.0
3	2.7	4.5	a 3.0	a 3.0	a 4.0	35	162	70	25	5 4	1.7	2.2
4	3.0	5.0			3.6	33	222	67	23	8 2	1.7	2.0
5	2.7	3.6		13	2.4	28	162	58	19	6 7	2.4	2.0
6	3.0	2.2	5.0	57	1.7	26	172	53	20	5 8	2.0	2.0
7	2.7	1.7	12	44	3.0	19	162	47	22	5 4	1.7	2.0
8	2.7	2.0	9.5	35	5.0	22	162	162	20	5 0	1.2	1.4
9	2.7	2.0	6.7	26	12	20	152	122	18	3 2	1.2	1.4
10	3.0	1.4	6.7	11	47	15	142	112	15	8 2	1.2	1.4
11	2.7	2.0	5.8	7.6	25	15	120	104	14	11	1.2	1.4
12	2.7	1.7	3.0	6.7	22	20	101	172	13	5 4	1.7	1.2
13	3.0	1.4	4.1	6.3	19	18	86	452	12	4 1	2.0	1.4
14	4.1	1.7	5.8	5.0	13	20	76	312	14	3 6	1.7	1.2
15	5.0	1.4	2.7	5.0	18	20	67	272	16	3 0	1.2	2.0
16	8.9	2.2		4.5	13	24	64	172	17	3 0	1.0	2.4
17	10	2.4		4.1	8.2	33	61	102	12	6 3	.7	2.7
18	10	2.2		4.1	17	38	53	93	12	4 5	.7	2.2
19	11	1.7			28	33	47	272	11	3 2	2.4	1.4
20	11	1.4			22	24	44	452	10	2.4	5.0	6.7
21	10	1.7	a 2.0	a 4.0	20	17	40	352	8.2	3 2	26	4.5
22	3.2	2.2			18	18	122	272	6.7	3 2	14	2.2
23	2.4	2.2			15	20	172	212	6.7	3 0	11	2.0
24	3.6	1.7			a 15	26	142	212	7.6	2.4	6.3	5.0
25	5.8	2.0		5.0	15	31	128	182	6.7	2.7	6.3	2.4
26	5.0	2.2	2.4	11	11	37	114	172	6.3	2.0	2.7	57
27	3.2	1.4	28	11	8.9	38	104	132	6.7	2.0	3.0	20
28	4.5	1.0	32	8.2	6.7	66	101	108	5.8	2.0	4.1	11
29	3.6	.7	10	8.2	-------	162	86	72	5.0	3 0	5.4	6.3
30	4.5	.6	3.6	7.2	-------	172	72	40	4.5	2.7	3.0	3.6
31	4.1	-------	a 3.0	7.6	-------	116	-------	44	-------	2.4	2.7	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	11	2.4	4.71	0.102	0.12
November	5.0	.6	2.17	.047	.05
December	32	----------	5.65	.122	.14
January	57	----------	10.4	.224	.26
February	47	1.7	13.7	.295	.31
March	172	15	40.2	.866	1.00
April	222	40	115	2.48	2.77
May	452	40	162	3.49	4.02
June	39	4.5	14.2	.306	.34
July	11	2.0	4.27	.092	.11
August	26	.7	3.83	.083	.10
September	57	1.2	5.17	.111	.12
The year	452	.6	32.0	.690	9.34

a Estimated.

WILLS CREEK NEAR CUMBERLAND, MD.

LOCATION.—Water-stage recorder at Pennsylvania Railroad bridge 2 miles above mouth at Cumberland, Allegany County.

DRAINAGE AREA.—252 square miles.

RECORDS AVAILABLE.—May, 1905, to July, 1906; October, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year ending Sept. 30, 1930, 4,170 second-feet (revised), Oct. 22 (gage height, 7.02 feet).

Maximum discharge during year ending Sept. 30, 1931, 4,820 second-feet May 13 (gage height 7.25 feet); minimum, 9 second-feet Oct. 14 (gage height, 1.30 feet).

1905–6, 1929–1931: Maximum discharge, that of May 13, 1931; minimum, that of Oct. 14, 1930.

REMARKS.—Records good.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	14			86	254	957	344	442	58	48	110
2	11	14		[a] 35	82	410	1,020	305	355	66	42	93
3	11	14	[a] 17		53	327	973	320	290	87	109	93
4	11	15			62	275	2,130	266	248	330	68	
5	11	18		53	47	220	1,680	238	235	157	54	
6	11	17	32	183	44	176	1,190	222	230	116	44	
7	11	17	44	136	51	155	924	257	198	99	39	
8	10	16	51	88	50	167	720	2,460	192	78	35	
9	10	16	44	86	136	157	690	1,500	163	69	32	
10	10	16	38	69	220	130	645	952	143	731	294	[a] 50
11	11	15	40	62	132	114	570	678	129	635	161	
12	11	15	54	56	138	120	466	923	118	314	107	
13	11	15	48	45	134	100	390	3,040	107	202	87	
14	10	15	35	33	232	138	344	2,860	506	145	68	
15	11	15	27		202	218	302	1,680	242	113	55	
16	11	16		[a] 28	188	235	269	1,100	232	109	46	27
17	12	16			178	228	245	774	174	143	39	29
18	13	16			188	215	228	585	138	763	43	48
19	12	17		35	220	242	205	470	118	336	57	49
20	12	18		50	230	248	185	516	102	215	93	33
21	12	16	[a] 25	[a] 30	222	242	172	1,460	92	159	145	30
22	12	16		[a] 30	192	250	289	1,150	87	151	250	29
23	13	15		64	167	263	595	1,460	86	118	185	29
24	13	14		36	149	258	454	1,170	88	149	134	68
25	13	14		34	125	369	458	861	79	110	103	45
26	13	14		94	118	438	580	655	70	86	120	197
27	14		63	192	97	422	635	488	107	73	330	138
28	15	[a] 15	43	205	91	624	595	398	91	66	299	106
29	15		35	159	------	1,600	515	330	73	58	252	79
30	14		35	124	-------	1,120	414	386	63	53	178	62
31	.15	-------	[a] 30	112	-------	738	-------	600	-------	51	139	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	15	10	11.9	0.047	0.05
November	18	----------	15.5	.062	.07
December	63	----------	31.6	.125	.14
January	205	----------	71.9	.285	.33
February	232	44	137	.544	.57
March	1,600	100	337	1.34	1.54
April	2,130	172	628	2.49	2.78
May	3,040	222	918	3.64	4.20
June	506	63	173	.687	.77
July	763	51	188	.746	.86
August	330	32	118	.468	.54
September	197	27	62.2	.247	.28
The year	3,040	10	225	.893	12.13

[a] Estimated.

EVITTS CREEK NEAR CUMBERLAND, MD.

LOCATION.—Water-stage recorder at Cumberland Country Club, 2½ miles northeast of Cumberland, Allegany County, and 3 miles above mouth.
DRAINAGE AREA.—96.0 square miles.
RECORDS AVAILABLE.—August, 1929, to September, 1931.
EXTREMES.—Maximum discharge during year, 782 second-feet May 13 (gage height, 4.94 feet); minimum, 0.8 second-foot Sept. 23 (gage height, 1.14 feet).
1929–1931: Maximum discharge, 1,290 second-feet Oct. 22, 1929 (gage height, 6.26 feet); minimum, that of Sept. 23, 1931.
REMARKS.—Records good. Some regulation probably caused by gate changes at Lake Gordon, 8 miles upstream, where water supply for city of Cumberland is diverted from creek.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	3.7		a 5.0	4.7	28	171	54	87	7.4	17	16
2	2.1	3.4	a 2.0	4.7	3.9	38	140	50	70	12	14	20
3	1.6	3.7		10		22	160	46	59	11	14	18
4	1.6	3.9		9.4		17	186	42	49	11	20	12
5	1.5	5.4	3.4	21	a 3.5	13	175	37	49	9.8	17	16
6	1.5	4.7	9.4	39		12	157	34	47	21	12	12
7	1.5	3.9	10	19	3.4	9.9	151	33	45	18	12	10
8	1.8	3.9	7.7	12	3.4	15	128	238	50	9.6	14	11
9	1.8	3.9	5.4	9.4	23	18	107	158	39	68	12	9.4
10	1.6	3.9	5.0	8.2	26	17	90	120	32	256	14	11
11	1.6	4.3	4.3	6.6		15	76	102	29	214	16	11
12	1.6	4.3	4.7	a 5.4		12	66	128	26	82	15	9.1
13	1.6	4.3	3.7	a 5.0		11	63	608	21	53	12	9.1
14	1.8	4.3	3.4	4.7	a 7.0	11	52	510	18	41	13	11
15	1.8	4.3		3.4		11	48	302	21	28	12	11
16	1.8	3.9		a 3.0		10	45	208	20	27	9.0	9.2
17	2.1	3.7		a 5.0	5.8	11	41	158	22	70	8.7	12
18	2.1	3.9		5.8	7.3	11	39	126	14	a 470	36	18
19	2.5	3.9		10	8.2	9.9	32	169	11	178	21	9.2
20	3.0	3.4	a 2.0	11	8.8	11	31	188	14	117	15	a 11
21	3.4	3.4		6.6	8.2	9.3	28	555	11	150	22	a 7.0
22	3.7	3.2		5.0	7.3	9.3	40	338	9.4	132	18	11
23	3.7	3.2		a 4.0	6.6	12	135	540	8.6	78	15	18
24	3.9	3.0		a 4.0	6.6	12	84	310	8.9	84	12	19
25	4.3	3.0		4.7	6.6	16	65	222	6.8	57	19	11
26	3.9	3.0		5.4	5.0	19	76	175	9.6	42	20	69
27	4.3	3.0	39	5.8	4.7	15	94	126	9.9	34	25	23
28	4.3	2.3	19	6.2	4.7	65	73	105	7.8	28	19	18
29	4.3	2.3	12	5.4	------	154	66	90	6.5	27	25	15
30	4.3	a 2.0	8.8	5.8	------	66	56	76	5.8	20	25	12
31	3.9	------	6.6	4.7	------	46	------	116	------	23	23	------

Month	Maximum	Minimum	Mean	Month	Maximum	Minimum	Mean
October	4.3	1.4	2.59	May	608	33	192
November	5.4	2.0	3.64	June	87	5.8	26.9
December	39	-------	5.63	July	470	7.4	76.7
January	39	-------	8.23	August	36	8.7	17.0
February	26	-------	7.15	September	69	7.0	15.0
March	154	9.3	23.4				
April	186	28	89.2	The year	608	1.4	39.3

a Estimated.

PATTERSON CREEK AT ALASKA, W. VA.

LOCATION.—Chain gage on highway bridge a quarter of a mile north of Alaska, Mineral County, 12 miles south of Cumberland, Md., and 15 miles north of Romney, W. Va.

DRAINAGE AREA.—249 square miles.

RECORDS AVAILABLE.—June, 1930, to September, 1931 (discontinued).

EXTREMES.—Maximum discharge during year, about 3,850 second-feet May 13 (gage height, 8.20 feet); minimum, 2.3 second-feet Dec. 3, 4 (gage height, 0.64 foot).

1930–31: Maximum, that of May 13, 1931; minimum, 0.4 second-foot Aug. 2–5, 1930 (gage height, 0.42 foot).

REMARKS.—Records poor.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.3	5.5	5.5		25	214	1,090	97	133	13	15	18
2	3.3	6.1	3.1			615	1,690	86	97	16	13	15
3	3.3	7.5	2.3	a 17		340	1,030	81	90	28	17	17
4	3.9	8.2	2.6			207	740	78	79	25	14	17
5	3.3	8.2	4.5		a 14	142	565	64	70	27	22	18
6	3.9	7.5	9.3	340		94	515	56	68	24	20	15
7	4.2	8.2	12	270	15	79	1,030	95	67	25	18	15
8	4.5	8.6	15		23	99	740	590	68	29	17	17
9	4.8	7.8	18		71	153	515	565	58	335	14	11
10	4.8	7.5	18		490	150	440	540	48	166	11	11
11	4.5	6.8	17		197	133	335	515	40	84	11	11
12	4.8	7.5	15		139	85	278	850	36	45	11	11
13	4.8	8.6	14		88	65	167	2,930	32	29	11	11
14	3.9	9.3	14		78	70	139	2,230	29	24	11	14
15	4.5	8.6	15		92	71	117	1,450	158	20	12	11
16	4.2	9.3			78	67	92	640	440	17	9.6	11
17	3.6	9.6		a 33	58	64	79	440	117	24	8.0	11
18	3.3	8.9			48	56	71	295	68	82	8.0	11
19	3.9	8.6			101	56	61	238	51	34	8.0	13
20	4.5	8.2			130	48	50	194	42	24	9.6	14
21	3.6	8.2	a 8		115	44	46	1,270	38	22	19	20
22	4.2	8.2			86	44	181	1,090	30	30	63	36
23	4.8	8.2			75	51	910	2,230	27	22	73	45
24	4.8	7.8			64	56	515	740	29	22	67	43
25	5.2	6.8			52	64	390	590	25	17	59	50
26	5.5	5.8			45	73	325	465	25	14	31	52
27	6.1	5.2	40	29	40	79	278	365	22	15	57	38
28	7.5	4.8	40	40	38	95	230	310	21	13	31	29
29	8.6	4.8	38	40	------	1,810	178	210	18	17	36	26
30	7.5	6.1	33	39	------	850	130	117	15	17	29	28
31	6.4	------	a 24	30	------	515	------	120	------	16	26	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	8.6	3.3	4.69	0.019	0.02
November	9.6	4.8	7.55	.030	.03
December	40	2.3	13.8	.055	.06
January	340	------	48.4	.194	.22
February	490	------	79.2	.318	.33
March	1,810	44	209	.839	.97
April	1,690	46	431	1.73	1.93
May	2,930	56	630	2.53	2.92
June	440	15	68.0	.273	.30
July	335	13	41.2	.165	.19
August	73	8.0	24.2	.097	.11
September	52	11	21.3	.086	.10
The year	2,930	2.3	132	.530	7.18

a Estimated.

SOUTH BRANCH OF POTOMAC RIVER NEAR PETERSBURG, W. VA.

LOCATION.—Water-stage recorder 1.2 miles below mouth of North Fork of South Branch of Potomac River and 2½ miles west of Petersburg, Grant County. Zero of gage is 962.00 feet above mean sea level.

DRAINAGE AREA.—642 square miles.

RECORDS AVAILABLE.—June, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 5,400 second-feet June 16 (gage height, 7.48 feet); minimum, 43 second-feet Oct. 2 (gage height, 1.51 feet). 1928–1931: Maximum discharge, about 14,400 second-feet Oct. 22, 1929 (gage height, 12.21 feet); minimum, that of Oct. 2, 1930.

REMARKS.—Records good except those for periods of ice effect, Nov. 30, Dec. 1–4, 18–25, which are fair. Regulation caused by operation of power plant 800 feet above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	54		112	363	301	1,160	720	630	230	265	278
2	46	54		107	306	592	1,080	644	650	262	363	246
3	46	54	60	109	268	592	1,000	592	503	234	473	226
4	46	56		107	238	520	3,500	520	435	298	357	213
5	46	63	90	140	225	455	3,270	455	415	275	406	186
6	46	68	94	823	199	391	2,180	415	410	244	344	162
7	46	71	116	592	189	363	1,700	415	430	288	244	148
8	44	68	192	363	196	372	1,430	1,370	531	250	188	138
9	46	64	169	280	545	406	2,080	1,390	531	206	174	123
10	46	64	132	235	1,040	368	2,080	1,120	445	220	148	120
11	46	64	118	211	727	318	2,030	930	391	773	154	118
12	46	64	112	183	549	310	1,560	804	340	470	160	113
13	46	63	118	183	450	280	1,230	930	336	350	164	130
14	47	64	116	169	430	318	1,080	1,040	1,470	276	154	117
15	48	64	114	120	396	514	930	1,160	2,670	237	143	103
16	53	64	96	86	363	832	797	1,040	4,030	207	125	101
17	54	64	72	130	391	776	685	930	2,010	190	103	106
18	57	66		127	685	650	604	818	1,270	230	98	114
19	54	66		134	818	630	537	720	895	187	97	113
20	52	68		169	720	650	476	624	685	161	126	118
21	50	68		221	598	579	435	895	567	161	960	121
22	50	66	60	147	492	567	567	1,000	508	217	1,790	130
23	50	64		142	420	555	1,470	2,310	585	169	2,050	120
24	50	64		158	372	573	1,230	1,980	618	173	1,180	110
25	52	63		152	336	664	1,230	1,700	525	248	788	116
26	52	64	68	327	310	825	1,350	1,520	435	176	566	129
27	52	64	112	804	280	790	1,520	1,230	382	160	494	272
28	53	64	214	930	257	825	1,270	1,000	340	138	440	234
29	53	52	177	657	------	1,780	1,040	818	297	124	444	232
30	54	50	163	481	------	1,650	860	699	264	117	422	186
31	54	------	123	401	------	1,230	------	650	------	204	331	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	57	44	49.3	0.077	0.09
November	71	50	62.7	.098	.11
December	214	------	101	.157	.18
January	930	86	284	.442	.51
February	1,040	189	434	.676	.70
March	1,780	280	635	.989	1.14
April	3,500	435	1,350	2.10	2.34
May	2,310	415	982	1.53	1.76
June	4,030	264	787	1.23	1.37
July	773	117	241	.375	.43
August	2,050	97	444	.692	.80
September	278	101	154	.240	.27
The year	4,030	44	459	.715	9.70

SOUTH BRANCH OF POTOMAC RIVER NEAR SPRINGFIELD, W. VA.

LOCATION.—Water-stage recorder at highway bridge 2 miles east of Springfield, Hampshire County, and 13 miles above confluence with North Branch of Potomac River. Zero of gage is 562.00 feet above mean sea level.

DRAINAGE AREA.—1,470 square miles.

RECORDS AVAILABLE.—August, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 7,560 second-feet Apr. 5 (gage height, 8.28 feet); minimum, 62 second-feet Oct. 1, 2 (gage height, 0.89 foot).

1928–1931: Maximum discharge, about 21,100 second-feet Apr. 17, 1929 (gage height, 19.13 feet); minimum, 50 second-feet Aug. 5, 1930 (gage-height, 0.85 foot).

REMARKS.—Records excellent except those estimated, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	96	117	e 209	526	488	2,780	1,350	1,080	346	215	616
2	62	100	e 83	e 168	450	658	3,980	1,160	1,110	375	428	518
3	65	96	e 83	e 158	428	926	2,780	1,040	1,160	375	550	465
4	65	96	117	198	375	926	2,980	955	955	382	675	405
5	65	113	153	221	333	832	6,970	841	841	346	729	375
6	65	113	168	319	312	738	4,970	747	784	412	1,010	340
7	69	117	174	e1,330	286	650	4,640	693	756	502	747	279
8	69	117	174	1,250	266	624	3,870	812	784	465	526	260
9	76	127	203	870	306	693	3,870	2,730	822	495	405	240
10	76	127	246	729	818	784	4,640	2,360	812	738	333	215
11	76	127	234	510	1,350	738	3,980	1,850	702	558	299	192
12	76	127	186	534	1,000	650	3,210	1,550	616	984	266	186
13	76	127	174	420	812	582	2,410	3,420	534	720	253	174
14	76	127	168	375	675	534	1,950	4,090	526	574	240	158
15	80	127	158	e 360	598	526	1,650	2,880	2,370	458	234	174
16	80	127	e 137	e 330	566	684	1,400	2,360	4,290	382	215	168
17	84	132	e 117	e 290	534	1,030	1,220	1,900	4,200	340	192	158
18	96	127	e 104	e 260	566	1,000	1,080	1,600	2,310	550	174	158
19	78	122	e 104	253	888	888	955	1,500	1,550	542	163	158
20	78	122	e 108	246	1,100	879	841	1,450	1,130	368	168	168
21	83	122	e 108	e 272	1,010	870	765	1,750	879	420	292	186
22	83	122	e 108	e 266	879	803	812	2,100	738	566	2,210	186
23	87	113	e 108	e 279	747	794	3,600	5,080	675	566	4,220	180
24	87	113	e 117	e 279	650	784	3,760	4,750	738	420	3,480	266
25	91	108	e 83	e 292	590	812	2,880	3,430	747	412	2,100	192
26	91	113	e 91	240	526	964	2,570	2,990	675	590	1,400	260
27	87	108	203	279	480	1,250	2,520	2,410	574	435	1,080	266
28	91	e 83	227	898	442	1,250	2,310	1,900	510	346	1,060	266
29	96	e 74	246	1,080	-------	2,460	1,900	1,550	442	299	936	368
30	96	96	e 346	812	-------	3,980	1,600	1,250	398	253	822	333
31	96	-------	e 227	632	-------	2,880	-------	1,120	-------	227	765	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	96	62	79.4	0.054	0.06
November	132	74	114	.078	.09
December	346	83	157	.107	.12
January	1,330	158	463	.315	.36
February	1,350	266	625	.425	.44
March	3,980	488	1,020	.694	.80
April	6,970	765	2,760	1.88	2.10
May	5,080	693	2,050	1.39	1.60
June	4,290	398	1,120	.762	.85
July	984	227	466	.317	.37
August	4,220	163	845	.575	.66
September	616	158	264	.180	.20
The year	6,970	62	830	.565	7.65

e Estimated.

SOUTH FORK OF SOUTH BRANCH OF POTOMAC RIVER NEAR MOOREFIELD, W. VA.

LOCATION.—Chain gage on highway bridge 5 miles south of Moorefield, Hardy County, and 2 miles above Stoney Creek.
DRAINAGE AREA.—271 square miles.
RECORDS AVAILABLE.—June, 1928, to September, 1931.
EXTREMES.—Maximum discharge during year, 1,630 second-feet Apr. 4, 5 (gage height, 4.66 feet); minimum, 10 second-feet Oct. 1–3, 5–8.
1928–1931: Maximum discharge, about 7,620 second-feet Oct. 22, 1929 (gage height, 8.75 feet); minimum, 8.0 second-feet Aug. 12, 13, 1930 (gage height, 1.93 feet).
REMARKS.—Records good.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	18	19	39	38	82	456	197	186	38	70	116
2	10	18	19	a 35	38	84	581	178	293	43	88	103
3	10	16	19	63	38	118	544	164	251	46	118	88
4	11	18	20	35	38	138	1,160	148	208	38	108	78
5	10	22	21	46	35	135	1,390	132	193	86	581	68
6	10	22	22	175	35	124	825	121	164	66	265	63
7	10	22	28	251	35	116	739	113	154	116	175	54
8	10	22	28	a 171	35	121	618	325	148	121	130	48
9	13	22	33	a 138	41	154	1,110	618	132	100	103	45
10	13	22	33	93	48	193	962	456	116	105	88	39
11	12	22	31	100	105	182	658	330	105	127	76	36
12	11	21	28	76	96	158	456	274	93	145	70	34
13	13	22	28	74	86	145	352	279	86	132	64	32
14	13	21	28	68	82	132	289	411	105	100	52	30
15	14	21	26	70	74	118	242	443	132	84	46	27
16	15	21	21	a 66	68	118	208	382	309	74	41	28
17	15	22	22	54	70	138	186	309	186	66	38	27
18	15	22	23	49	78	145	168	260	138	86	34	32
19	16	22	24	48	105	141	154	225	121	78	34	28
20	15	21	24	48	138	135	141	193	96	63	48	28
21	15	19	a 22	49	132	124	124	186	82	697	130	27
22	15	19	22	48	121	116	138	186	74	225	314	25
23	15	19	24	a 42	116	116	1,110	411	72	138	825	27
24	16	18	23	42	100	116	916	510	66	256	469	26
25	16	19	a 22	38	91	158	658	399	74	265	303	27
26	16	19	24	41	86	284	510	341	63	168	212	32
27	17	19	35	41	80	298	387	256	56	124	387	34
28	18	17	a 49	41	74	265	309	217	51	103	274	36
29	18	16	a 49	41	-------	618	260	186	46	84	212	34
30	18	20	43	41	-------	825	225	164	42	72	168	31
31	18	-------	a 35	42	-------	510	-------	151	-------	80	138	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	18	10	13.8	0.051	0.06
November	22	16	20.1	.074	.08
December	49	19	27.3	.101	.12
January	251	35	69.8	.258	.30
February	138	35	74.4	.275	.29
March	825	82	197	.727	.84
April	1,390	124	529	1.95	2.18
May	618	113	276	1.02	1.18
June	309	42	128	.472	.53
July	697	38	127	.469	.54
August	825	34	183	.675	.78
September	116	25	43.4	.160	.18
The year	1,390	10	141	.520	7.08

a Estimated.

TOWN CREEK NEAR OLDTOWN, MD.

LOCATION.—Chain gage on highway bridge 2 miles above Sawpit Run and 3 miles northeast of Oldtown, Allegany County.
DRAINAGE AREA.—136 square miles.
RECORDS AVAILABLE.—July, 1928, to September, 1931.
EXTREMES.—Maximum discharge during year, about 3,270 second-feet July 18 (gage height, 10.14 feet); minimum, 2.0 second-feet Oct. 4-7 (gage height, 1.54 feet).

1928–1931: Maximum discharge, about 5,530 second-feet Oct. 23, 1929 (gage height, 13.40 feet); minimum, 0.9 second-foot Aug. 2, 3, 7–14, 1930 (gage height 1.41 feet).

REMARKS.—Records fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.3	4.3	6.6	14	19	78	451	113	110	9.4	52	41
2	2.3	4.5	3.3	14	9.4	311	850	103	92	11	48	36
3	2.2	4.3	3.3	13	6.3	160	615	94	77	11	44	39
4	2.0	4.3	3.3	14	6.3	104	421	84	66	16	43	44
5	2.0	4.3	5.3	22	6.3	81	337	74	58	18	44	38
6	2.0	4.3	7.6	82	6.9	64	311	68	54	20	42	30
7	2.0	3.8	13	160	14	58	311	67	50	71	33	24
8	2.6	3.3	20	68	12	140	285	890	67	55	29	18
9	2.8	3.3	17		58	180	202	451	64	37	24	16
10	2.8	3.3	12		191	93	180	324	52	1,460	27	18
11	2.8	3.3	11		29	98	80	150	248	41	1,420	43	17
12	2.8	3.3	12			67	68	122	213	36	393	34	16
13	2.8	4.0	9.4			59	60	111	545	25	213	30	13
14	2.8	4.0	8.8			39	55	101	690	23	150	25	12
15	3.0	4.3	6.0	14	32	50	90	513	29	122	20	16
16	3.1	4.3	4.2	14	57	53	82	365	31	106	14	16
17	2.8	4.8	4.0	14	60	50	74	272	28	324	14	16
18	3.1	6.3	3.3		46	52	68	213	24	2,410	14	20
19	3.1	5.0			60	55	60	180	20	513	37	18
20	3.0	5.0			82	60	44	324	17	237	60	14
21	2.8	5.0		19	84	60	44	890	13	272	52	16
22	2.8	5.0	4.0		70	68	62	545	18	311	57	13
23	2.8	5.0			59	74	615	1,660	21	202	50	13
24	2.8	5.0		14	52	80	285	690	20	202	42	81
25	2.9	5.0		14	44	98	213	451	14	224	34	37
26	4.3	5.3	6.6	14	43	101	191	337	13	170	38	81
27	3.8	5.0	24	29	32	88	260	236	16	108	74	101
28	4.3	4.5	81	31	32	337	202	180	12	90	88	63
29	4.3	3.5	50	25	------	1,510	170	140	11	77	71	40
30	4.5	4.8	27	23	------	513	140	131	8.8	66	58	33
31	4.5	------	14	19	------	337	------	113	------	55	48	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	4.5	2.0	2.97	0.022	0.03
November	6.3	3.3	4.40	.032	.04
December	81	3.3	12.3	.090	.10
January	160	13	28.6	.210	.24
February	191	6.3	48.0	.353	.37
March	1,510	50	165	1.21	1.40
April	850	44	235	1.73	1.93
May	1,660	67	361	2.65	3.06
June	110	8.8	37.0	.272	.30
July	2,410	9.4	306	2.25	2.59
August	88	14	41.6	.306	.35
September	101	12	31.3	.230	.26
The year	2,410	2.0	107	.787	10.67

CACAPON RIVER NEAR GREAT CACAPON, W. VA.

LOCATION.—Staff gage at Rock Ford, 6½ miles above Great Cacapon, Morgan County, and mouth of river.
DRAINAGE AREA.—670 square miles.
RECORDS AVAILABLE.—December, 1922, to September, 1931.
EXTREMES.—Maximum discharge during year, 3,620 second-feet May 24 (gage height, 6.10 feet); minimum, 40 second-feet Oct. 7, 8, 22–24 (gage height, 0.38 foot).
1922–1931: Maximum discharge, about 34,000 second-feet May 12, 1924 (gage height, 19.32 feet); minimum, 37 second-feet Aug. 2, 3, 6, 7, 12–14, 1930 (gage height, 0.36 foot).
REMARKS.—Records good. Discharge estimated because of ice Nov. 28–30, Dec. 2–4, 15–25, Jan. 2–4, 15–26.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	43	51	60	116	101	121	594	342	417	84	77	162
2	45	47			98	172	2,820	276	618	88	95	134
3	50	52	55	110	95	194	1,890	291	780	152	324	143
4	42	55			85	260	1,200	276	479	232	219	121
5	45	60	63	82	74	219	1,010	232	397	308	183	112
6	42	63	77	121	74	183	950	206	378	107	291	107
7	41	71	77	194	72	162	950	276	378	232	359	89
8	40	77	100	291	76	162	1,730	1,340	291	308	219	78
9	42	77	116	246	91	183	1,890	1,810	324	324	152	72
10	45	63	100	183	113	194	2,520	1,410	246	206	126	65
11	47	60	94	152	134	342	1,650	725	194	276	104	68
12	42	58	80	126	143	260	1,070	594	183	501	94	67
13	47	60	72	123	162	206	780	546	172	359	88	60
14	45	59	69	123	143	183	594	1,650	134	194	80	58
15	42	56			124	172	458	1,890	134	172	77	55
16	43	56			115	143	397	1,570	618	206	74	56
17	46	59			106	143	342	1,130	1,070	232	68	56
18	48	60			102	143	291	523	479	417	68	72
19	47	60			108	162	276	546	342	546	84	84
20	42	59	65	85	124	162	232	725	194	479	74	85
21	42	58			143	126	206	780	172	725	89	74
22	41	60			143	124	246	890	162	618	120	59
23	40	62			134	126	670	2,060	152	523	1,270	52
24	41	58			126	134	1,890	3,040	143	324	1,570	76
25	43	59			118	162	1,200	1,810	121	232	890	91
26	47	62	88		107	219	950	1,270	102	152	618	115
27	52	62	120	84	102	246	835	1,010	115	121	437	143
28	51		152	88	98	342	670	780	124	112	276	118
29	47	55	134	94	------	594	523	569	108	95	276	92
30	45		134	98	------	1,410	417	458	96	85	206	78
31	55	------	118	101	------	1,130	------	458	------	81	183	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	55	40	44.8	0.067	0.08
November	77	47	59.6	.089	.10
December	152	------	81.7	.122	.14
January	291	82	115	.172	.20
February	162	72	111	.166	.17
March	1,410	121	270	.403	.46
April	2,820	206	975	1.46	1.63
May	3,040	206	951	1.42	1.64
June	1,070	96	304	.454	.51
July	725	81	274	.409	.47
August	1,570	68	284	.424	.49
September	162	52	88.1	.131	.15
The year	3,040	40	297	.443	6.04

LICKING CREEK NEAR SYLVAN, PA.

LOCATION.—Chain gage on highway bridge a tenth of a mile north of Pennsylvania-Maryland State line, 3 miles south of Sylvan, Franklin County, and 15 miles above mouth.

DRAINAGE AREA.—87.4 square miles.

RECORDS AVAILABLE.—June, 1930, to September, 1931.

EXTREMES.—Maximum discharge during year, about 1,650 second-feet July 18 (gage height, 7.88 feet); minimum, 2.7 second-feet Nov. 2.

1930–31: Maximum discharge, that of July 18, 1931; minimum, 1.0 second-foot Aug. 8, 1930 (gage height, 0.64 foot).

REMARKS.—Records fair. Stage-discharge relation affected by ice and discharge estimated Dec. 17–25, 30, 31, Jan. 1, 2, 9–18, 21–25, Feb. 2, 3, 15, 16.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.9	4.3	7.8	11	19	400	450	131	204	27	58	24
2	4.6	3.0	7.3	11	10	131	1,180	118	168	46	54	26
3	4.9	4.0	7.3	11	10	112	587	131	126	75	50	37
4	4.3	3.7	6.3	12	8.3	60	559	118	104	80	48	37
5	4.9	7.8	6.3	13	7.8	65	304	99	98	104	42	30
6	4.9	5.9	11	52	7.8	56	236	87	92	134	39	27
7	3.4	5.4	16	70	9.7	48	215	87	98	194	33	22
8	4.9	4.6	18	65	15	65	195	727	168	104	32	21
9	5.9	4.0	32		24	177	160	671	104	304	36	18
10	4.9	5.4	27		43	145	138	400	80	475	92	17
11	5.9	5.4	18		41	105	118	304	70	895	142	15
12	4.9	5.4	16		53	81	105	247	62	281	70	16
13	5.9	7.3	13		41	49	93	351	56	176	53	14
14	3.7	8.3	11	17	36	56	87	475	51	126	42	13
15	5.9	5.4	9.7		45	56	81	425	351	126	37	13
16	5.9	5.9	6.8		60	58	76	450	118	126	29	14
17	6.8	8.3			48	59	70	327	92	258	29	12
18	6.3	6.8			46	60	70	270	64	1,150	25	15
19	5.4	8.7		23	65	70	65	215	54	351	26	27
20	5.4	7.8		23	99	70	60	304	42	204	26	24
21	4.6	6.8	6.0		112	76	57	643	39	425	29	18
22	4.6	7.8			87	70	81	503	34	615	30	15
23	4.6	7.8		14	65	70	475	1,290	37	351	42	12
24	4.9	8.7			57	70	258	783	58	236	35	14
25	5.4	7.8			48	65	270	475	55	176	42	19
26	7.3	6.8	8.7	18	43	65	236	375	40	134	30	33
27	7.3	5.9	35	22	37	60	281	292	58	104	42	47
28	7.3	5.9	42	30	41	76	205	225	64	86	80	45
29	8.7	5.9	27	37	------	1,290	186	176	54	80	46	24
30	8.3	5.9	20	36	------	587	160	150	33	86	35	18
31	6.3	------	15	32	------	351	------	425	------	64	32	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	8.7	3.4	5.61	0.064	0.07
November	8.7	3.0	6.22	.071	.08
December	42	----------	13.4	.153	.18
January	70	11	22.8	.261	.30
February	112	7.8	42.1	.482	.50
March	1,290	48	152	1.74	2.01
April	1,180	57	235	2.69	3.00
May	1,290	87	364	4.16	4.80
June	351	33	89.1	1.02	1.14
July	1,150	27	245	2.80	3.23
August	142	25	45.4	.519	.60
September	47	12	22.2	.254	.28
The year	1,290	3.0	104	1.19	16.19

BACK CREEK NEAR HEDGESVILLE, W. VA.

LOCATION.—Chain gage at bridge on Martinsburg-Berkeley Springs highway 1.3 miles west of Hedgesville, Berkeley County, and 4 miles above mouth of Tilhance Creek.

DRAINAGE AREA.—252 square miles.

RECORDS AVAILABLE—July, 1928, to September, 1931 (discontinued).

EXTREMES.—Maximum discharge during year, 4,060 second-feet May 8 (gage height, 8.20 feet); minimum, 1.9 second-feet Oct. 3–5 (gage height, 1.03 feet). 1928–1931: Maximum discharge, about 13,000 second-feet Oct. 23, 1929 (gage height, 16.9 feet); minimum, 0.9 second-foot Aug. 6, 1930 (gage height, 0.99 foot).

REMARKS.—Records fair. Discharge estimated Dec. 24, 25. Little or no ice effect.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.5	11	7.8	25	21	50	655	75	406	16	16	6.8
2	2.3	12	7.8	18	15	137	2,030	68	800	15	14	6.0
3	2.1	13	7.8	15	11	197	630	60	133	15	13	5.5
4	1.9	13	9.0	13	11	123	438	56	187	16	9.0	5.0
5	2.1	19	11	16	11	88	305	50	116	16	9.9	6.8
6	2.8	18	14	42	8.4	62	285	47	87	168	13	6.4
7	2.9	23	18	193	10	58	580	44	69	136	13	5.5
8	3.2	21	22	73	11	93	810	2,590	56	69	11	3.7
9	3.8	13	29	36	19	325	555	755	48	32	12	2.8
10	4.4	10	19	34	47	205	370	438	34	30	13	6.0
11	4.8	9.0	15	34	62	137	277	305	27	63	14	4.6
12	5.1	8.4	12	41	58	103	217	233	20	52	13	4.6
13	5.1	9.0	9.6	34	52	78	166	221	15	32	13	11
14	5.4	9.0	7.8	21	41	62	116	1,030	12	15	11	2.8
15	5.7	8.4	8.4	18	33	60	91	655	9.9	8.2	9.0	2.8
16	5.1	6.6	6.6	16	31	58	80	482	202	18	9.0	3.2
17	5.1	7.2	6.6	20	31	54	62	325	480	28	7.3	5.0
18	4.8	7.8	6.6	20	34	52	64	249	143	242	8.2	5.5
19	4.8	9.0	5.7	23	40	47	64	197	47	133	13	4.6
20	5.7	9.0	5.7	25	48	44	54	148	27	90	17	3.7
21	5.4	9.0	5.7	22	58	42	47	148	18	480	27	3.7
22	9.0	9.0	5.7	22	58	42	62	182	13	406	12	2.8
23	8.4	9.0	5.7	20	54	46	482	1,700	11	179	16	5.5
24	6.6	9.0	6.0	20	50	60	415	608	11	90	18	18
25	8.4	8.4	6.0	20	38	80	261	359	11	63	18	32
26	9.6	7.8	7.2	20	30	88	201	246	164	78	22	22
27	11	7.2	52	22	31	78	182	133	43	42	13	13
28	11	6.6	93	22	36	103	137	94	47	30	11	9.9
29	11	6.6	96	24	------	1,200	88	74	27	24	14	7.3
30	11	7.8	54	24	------	705	83	63	20	24	13	6.4
31	11	------	29	24	------	370	------	635	------	20	9.9	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	11	1.9	5.87	0.023	0.03
November	23	6.6	10.6	.042	.05
December	96	5.7	19.0	.075	.09
January	193	13	30.9	.123	.14
February	62	8.4	33.9	.135	.14
March	1,200	42	156	.619	.71
April	2,030	47	327	1.30	1.45
May	2,590	44	396	1.57	1.81
June	800	9.9	109	.433	.48
July	480	8.2	84.8	.337	.39
August	27	7.3	13.3	.053	.06
September	32	2.8	7.43	.029	.03
The year	2,590	1.9	99.9	.396	5.38

CONOCOCHEAGUE CREEK AT FAIRVIEW, MD.

LOCATION.—Chain gage on highway bridge half a mile southeast of Fairview, Washington County, and 6½ miles northwest of Hagerstown. Zero of gage is 388.92 feet above mean sea level.

DRAINAGE AREA.—502 square miles.

RECORDS AVAILABLE.—June, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 4,320 second-feet Apr. 2 (gage height, 7.65 feet); minimum, 22 second-feet Dec. 16 (gage height, 1.61 feet). 1928–1931: Maximum discharge, 7,580 second-feet June 26, 1928 (gage height, 11.10 feet); minimum, that of Nov. 28, 1930.

REMARKS.—Records fair. Low-water flow probably affected by operation of small power plants at Mercersburg, Pa.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	43	51	77	a 70	109	2,140	450	540	120	254	124
2	40	40		a 55	65	338	3,870	420	540	134	214	141
3	42	42		51		326	1,900	420	480	190	198	900
4	42	52	a 45	47		231	1,300	354	392	2,280	222	310
5	42	43		55		150	1,040	360	392	590	190	238
6	38	43	42	128	a 60	124	812	332	354	310	190	148
7	47	43	51	212		106	720	343	343	970	198	155
8	40	57	51	146		360	690	780	540	450	169	108
9	45	47	74		51	690	660	910	392	332	148	108
10	45	43	51	a 85	176	450	570	720	326	1,580	355	99
11	42	52	42		203	290	540	660	290	2,540	590	80
12	36	52	51	61	167	290	450	600	241	1,110	355	80
13	42	43	38	68	141	241	392	780	241	590	202	85
14	43	50	47		117	167	365	910	250	450	202	70
15	40	47	42		a 110	120	300	1,100	310	450	162	78
16	43	51	26	a 55	163	194	275	910	270	590	144	81
17	40	44			150	226	326	720	222	1,500	162	81
18	43	51			167	241	326	660	241	2,880	124	95
19	43	55			255	222	310	600	176	865	127	78
20	36	47		150	332	250	285	600	158	655	169	95
21	38	44	a 38	198	354	250	295	1,040	117	1,420	148	64
22	47	47		a 100	300	241	420	910	124	1,040	176	86
23	36	53		a 100	280	285	1,600	2,700	231	655	127	78
24	47	38		98	231	275	1,040	1,900	338	590	148	81
25	40	47		172	222	260	750	1,300	332	378	162	75
26	42	42	51	77	158	217	660	1,100	420	355	124	108
27	42	a 40	120	94	81	203	720	910	630	310	134	122
28	52	25	203	68	74	222	600	720	241	290	206	81
29	52	42	212	a 70	-------	2,620	630	630	158	270	206	99
30	42	40	137	a 70	-------	1,440	480	570	180	290	120	75
31	45	-------	87	71	-------	910	-------	540	-------	246	144	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	52	36	42.3	0.084	0.10
November	57	25	45.4	.090	.10
December	212	26	61.2	.122	.14
January	212	47	88.8	.177	.20
February	354	51	151	.301	.31
March	2,620	106	389	.775	.89
April	3,870	275	816	1.63	1.82
May	2,700	332	805	1.60	1.84
June	630	117	316	.629	.70
July	2,880	120	786	1.57	1.81
August	590	120	196	.390	.45
September	900	64	134	.267	.30
The year	3,870	25	320	.637	8.66

a Estimated.

ANTIETAM CREEK NEAR SHARPSBURG, MD.

LOCATION.—Staff gage at Burnside Bridge, 1 mile southeast of Sharpsburg, Washington County, and 4¼ miles above Sharmans Branch. Zero of gage is 311.00 feet above mean sea level.

DRAINAGE AREA.—280 square miles.

RECORDS AVAILABLE.—August, 1928, to September, 1931. June, 1897, to August, 1905, at Middle Bridge, 1 mile above present site.

EXTREMES.—Maximum discharge during year, about 3,020 second-feet July 9 (gage height, 8.16 feet); minimum, 35 second-feet Jan. 15 (gage height, 1.00 foot).

1928-1931: Maximum discharge, about 3,490 second-feet May 3, 1929 (gage height, 8.80 feet); minimum, that of Jan. 15, 1931.

Maximum stage known, 11.9 feet in July, 1928.

REMARKS.—Records poor. Owing to operation of power plant upstream, discharges below 120 second-feet are probably about 25 per cent large, as two daily gage readings do not give a true indication of mean daily flow. Discharge estimated because of ice Nov. 28-30, Dec. 1-4, 16-26, Jan. 2, 3, 16.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	93	99		74	50	86	278	100	220	96	130	90
2	104	98		70	58	104	775	102	233	261	121	88
3	93	72	85	63	99	247	96	207	149	117	291	
4	70	103		73	66	96	233	100	138	353	104	160
5	82	106	81	93	59	92	183	94	134	261	111	113
6	96	99	86	126	63	93	160	94	117	138	106	96
7	66	107	84	109	69	81	172	77	117	160	96	93
8	90	112	93	87	61	92	193	111	132	130	98	86
9	73	103	90	81	63	118	172	160	130	1,240	111	83
10	60	92	82	78	101	103	149	121	128	699	553	83
11	73	112	86	61	88	106	134	132	113	233	417	86
12	52	109	80	81	73	93	121	138	111	172	160	85
13	77	99	75	82	73	65	117	138	113	149	130	83
14	63	106	73	64	74	75	117	149	98	138	121	94
15	65	112	68	60	78	93	109	149	117	130	109	100
16	72	73		60	63	81	100	136	82	233	100	276
17	68	90		63	66	82	91	123	115	544	106	109
18	65	109		53	70	72	88	119	100	321	93	86
19	93	96		126	84	68	86	119	104	183	93	83
20	69	99		134	77	86	70	119	100	220	90	72
21	93	106	75	104	84	70	72	134	90	385	91	76
22	106	87		69	72	75	233	128	93	306	96	72
23	104	95		63	81	68	220	369	121	220	98	306
24	107	88		70	78	84	160	233	183	220	98	106
25	104	101		63	84	78	130	193	149	193	91	72
26	96	93		69	75	84	130	183	233	160	96	128
27	107	99	406	70	74	73	132	160	699	149	93	96
28	112		166	70	82	87	121	134	183	149	98	93
29	119	85	88	74	------	319	121	121	134	138	149	83
30	112		73	70	------	238	104	113	121	160	117	70
31	98	------	73	64	------	166	------	149	------	149	90	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	119	52	86.5	0.309	0.36
November	112	72	97.3	.347	.39
December	406	68	92.5	.330	.38
January	134	53	78.4	.280	.32
February	101	50	72.5	.259	.27
March	319	65	101	.361	.42
April	775	70	167	.596	.66
May	369	77	139	.496	.57
June	699	82	154	.550	.61
July	1,240	96	259	.925	1.07
August	553	90	132	.471	.54
September	306	70	112	.400	.45
The year	1,240	50	125	.446	6.04

CHESAPEAKE & OHIO CANAL AT POINT OF ROCKS, MD.

LOCATION.—Staff gage at canal locks 1 mile northwest of Point of Rocks, Frederick County.

RECORDS AVAILABLE.—July to September, 1931.

EXTREMES.—Maximum discharge during period, 80 second-feet July 23 (gage height, 1.96 feet); minimum, 30 second-feet Aug. 1 (gage height, 1.54 feet).

REMARKS.—Records fair. Canal diverts from left bank of Potomac River at Harpers Ferry and returns below gaging station on Potomac River at Point of Rocks, Md.

Daily and monthly discharge, in second-feet, 1931

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1	------	30	40	11	------	42	40	21	49	40	34
2	------	38	42	12	------	48	40	22	47	39	36
3	------	40	45	13	------	45	36	23	64	39	36
4	------	38	44	14	43	45	37	24	63	39	39
5	------	40	42	15	43	45	38	25	59	49	38
6	------	33	44	16	45	43	39	26	44	55	43
7	------	36	40	17	48	40	40	27	39	55	45
8	------	33	44	18	49	39	45	28	40	47	52
9	------	36	44	19	48	36	38	29	43	49	52
10	------	37	43	20	43	38	34	30	40	47	49
								31	45	47	------

Month	Maximum	Minimum	Mean	Month	Maximum	Minimum	Mean
July 14–31	64	39	47.3	September	52	34	41.3
August	55	30	41.5				

NORTH RIVER NEAR BURKETOWN, VA.

LOCATION.—Staff gage 2 miles northwest of Burketown, Augusta County, and 7 miles above confluence with Middle River.

DRAINAGE AREA.—381 square miles.

RECORDS AVAILABLE.—June, 1926, to September, 1931.

EXTREMES.—Maximum discharge during year, 5,090 second-feet July 23 (gage height, 7.58 feet); minimum, 21 second-feet Jan. 2 (gage height, 1.18 feet). 1926–1931: Maximum discharge, 7,370 second-feet Nov. 16, 1926 (gage height, 10.17 feet); minimum, 20 second-feet Sept. 24, 1930 (gage height, 1.16 feet).

REMARKS.—Records fair. Discharge estimated Nov. 29, Dec. 2, 3, 22–25, Jan. 16, 17. Low-water flow regulated by operation of mills above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	38	35	30	35	81	718	310	569	145	292	202
2	25	28	30	28	38	76	718	274	680	120	207	196
3	44	32	30	33	41	62	569	251	606	150	304	286
4	35	38	28	38	44	76	756	240	532	170	251	196
5	33	38	50	990	35	93	1,230	196	406	165	274	186
6	44	38	68	229	38	89	990	186	334	262	218	145
7	47	38	44	93	41	93	834	207	310	322	218	145
8	28	35	44	62	35	120	680	951	286	229	176	120
9	47	25	44	62	50	140	834	1,150	240	196	176	110
10	44	41	33	50	56	145	951	834	218	262	196	93
11	44	38	36	50	56	125	834	643	196	341	176	110
12	32	44	28	56	44	135	643	532	196	274	155	93
13	35	38	38	44	50	93	569	680	165	606	160	68
14	36	50	36	44	44	110	446	873	170	207	165	120
15	35	38	33	38	36	115	386	756	756	170	135	102
16	50	38	41	35	41	130	347	643	873	202	125	110
17	44	32	35	35	56	155	298	496	496	145	130	85
18	41	32	38	38	56	165	262	453	347	366	135	93
19	33	38	44	56	44	186	240	386	280	165	140	76
20	44	38	50	59	56	176	240	322	223	207	155	65
21	38	25	27	50	44	145	207	433	186	643	165	110
22	35	41	25	47	56	155	212	532	262	196	386	81
23	38	38	25	44	62	165	912	1,230	240	1,070	990	191
24	28	41	25	50	50	140	951	1,150	229	1,390	834	155
25	41	47	25	44	50	165	795	873	181	509	569	102
26	35	44	35	44	62	218	680	718	186	412	496	120
27	33	28	160	50	50	274	569	569	756	334	453	76
28	44	30	76	38	72	298	453	460	176	268	386	102
29	35	30	68	44	------	873	399	386	196	240	328	85
30	36	33	50	50	------	1,070	347	322	160	218	274	85
31	32	------	41	38	------	756	------	286	------	1,150	251	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	50	25	38.1	0.100	0.12
November	50	25	36.5	.096	.11
December	160	25	43.3	.114	.13
January	990	28	82.9	.218	.25
February	72	35	47.9	.126	.13
March	1,070	62	214	.562	.65
April	1,230	207	602	1.58	1.76
May	1,230	186	559	1.47	1.70
June	873	160	348	.913	1.02
July	1,390	120	361	.948	1.09
August	990	125	288	.756	.87
September	286	65	124	.325	.36
The year	1,390	25	230	.604	8.19

SOUTH FORK OF SHENANDOAH RIVER NEAR LYNNWOOD, VA.

LOCATION.—Water-stage recorder 1½ miles northeast of Lynnwood, Rockingham County, and 3 miles below confluence of North and South Rivers.
DRAINAGE AREA.—1,080 square miles.
RECORDS AVAILABLE.—September, 1930, to September, 1931.
EXTREMES.—Maximum discharge during period, 5,220 second-feet Aug. 23 (gage height, 7.80 feet); minimum, 52 second-feet Dec. 6 (gage height, 1.71 feet).
REMARKS.—Records excellent. Discharge estimated Oct. 1–5, June 22–23. Low-water flow regulated by mill above.

Daily and monthly discharge, in second-feet, 1930–31

Day	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	------	110	148	144	223	166	228	2,100	589	855	317	1,070	490
2	------	110	136	153	280	153	344	2,760	528	1,270	322	496	452
3	------	110	121	162	184	148	379	1,790	496	1,110	390	608	724
4	------	120	175	148	166	153	339	1,670	464	908	652	575	702
5	------	120	223	129	778	148	317	2,370	439	760	542	902	477
6	------	106	203	133	1,500	140	306	2,100	414	645	488	452	402
7	------	125	166	188	502	140	285	2,370	421	582	1,090	408	396
8	------	125	166	213	344	133	312	1,830	1,410	652	502	373	379
9	------	106	129	193	290	157	470	1,830	1,790	610	427	344	356
10	------	110	140	170	259	254	458	2,010	1,390	515	541	356	333
11	------	103	140	153	223	259	408	1,750	1,070	439	638	361	317
12	------	103	144	157	223	238	367	1,390	908	408	645	361	322
13	------	100	129	133	213	218	333	1,150	1,230	367	485	361	290
14	------	110	125	136	213	198	312	960	1,550	528	744	333	280
15	140	110	153	140	193	179	301	848	1,630	1,140	582	317	322
16	148	121	125	144	175	188	306	752	1,310	1,850	702	290	280
17	140	136	129	133	208	193	322	680	1,070	998	439	295	280
18	136	136	153	144	179	203	328	624	908	745	738	301	295
19	114	106	162	136	193	228	328	576	781	589	464	317	290
20	114	110	170	157	218	264	322	542	695	490	573	317	259
21	93	129	153	136	218	259	317	502	952	439	1,810	322	280
22	106	133	148	129	198	238	317	509	1,230	500	548	1,380	339
23	114	125	157	148	179	243	344	1,110	2,730	1,200	958	4,700	301
24	125	133	153	203	179	248	385	1,510	2,370	542	2,640	2,590	344
25	100	121	162	208	175	243	452	1,310	1,750	452	1,070	1,590	344
26	103	136	166	148	170	243	562	1,070	1,350	390	709	1,190	344
27	100	125	162	274	193	233	631	938	1,270	1,170	569	960	356
28	103	144	114	333	188	218	645	796	938	477	483	870	312
29	93	148	125	254	184	------	1,350	702	767	402	464	724	269
30	106	144	136	203	179	------	2,160	645	666	361	427	610	243
31	------	153	------	228	184	------	1,470	------	617	------	613	542	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
1930					
September 15–30	148	93	115	0.106	0.06
1930–31					
October	153	100	122	.113	.13
November	223	114	150	.139	.16
December	333	129	172	.159	.18
January	1,500	166	278	.257	.30
February	264	133	203	.188	.20
March	2,160	228	497	.460	.53
April	2,760	502	1,310	1.21	1.35
May	2,730	414	1,090	1.01	1.16
June	1,850	361	713	.660	.74
July	2,640	317	696	.644	.74
August	4,700	290	784	.726	.84
September	724	243	359	.332	.37
The year	4,700	100	532	.493	6.70

SOUTH FORK OF SHENANDOAH RIVER AT FRONT ROYAL, VA.

LOCATION.—Water-stage recorder at highway bridge 1 mile west of Front Royal, Warren County, and 3½ miles above confluence with North Fork of Shenandoah River.

DRAINAGE AREA.—1,640 square miles.

RECORDS AVAILABLE.—September, 1930, to September, 1931. June, 1899, to July, 1906, at site 1 mile upstream.

EXTREMES.—Maximum discharge during period Sept. 22, 1930, to Sept. 30, 1931, 5,550 second-feet Aug. 24 (gage height, 5.12 feet); minimum, 65 second-feet Nov. 29, Dec. 24 (gage height, 0.57 foot).

1899–1906, 1930–31: Maximum discharge, 76,800 second-feet Mar. 1, 1902 (gage height, 23.5 feet); minimum, that of Nov. 29, Dec. 24, 1930.

REMARKS.—Records excellent. Discharge estimated Oct. 27 to Nov. 2, Mar. 19–31. Flow at low and medium stages is regulated by power plants above.

Daily and monthly discharge, in second-feet, 1930–31

Day	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	------	178	250	260	240	330	524	2,240	1,040	1,020	608	668	874
2	------	191		294	262	294	364	3,020	768	1,370	512	1,310	880
3	------	178	228	214	306	217	332	3,710	952	1,690	458	818	805
4	------	149	182	190	344	297	540	2,620	502	1,660	374	778	602
5	------	170	318	204	292	332	608	2,230	880	1,350	661	849	934
6	------	181	326	262	528	296	516	2,910	642	1,210	762	1,010	1,130
7	------	147	258	240	2,170	266	534	3,080	844	1,230	862	888	481
8	------	298	284	240	1,140	238	614	3,290	1,410	928	930	628	626
9	------	232	323	304	655	264	343	2,880	1,730	1,140	1,030	628	513
10	------	246	216	299	408	330	726	3,000	2,400	923	714	517	510
11	------	214	280	306	414	378	669	3,090	1,940	941	628	636	475
12	------	196	306	318	436	338	691	2,590	1,630	794	864	446	530
13	------	208	309	313	402	463	702	2,110	1,990	633	731	442	464
14	------	214	302	262	360	486	538	1,790	1,950	590	886	534	322
15	------	266	210	228	554	268	568	1,550	2,200	432	736	456	644
16	------	246	192	268	266	336	268	1,340	2,300	1,240	877	562	512
17	------	248	191	190	438	348	578	1,240	1,920	1,830	956	344	340
18	------	327	107	182	343	380	427	1,170	1,590	1,580	716	525	378
19	------	288	218	162	262	359		1,070	1,380	1,050	900	476	426
20	------	272	263	182	370	298		752	1,220	864	660	328	450
21	------	118	192	286	384	406		968	1,120	874	750	492	334
22	242	233	246	208	400	541	570	874	1,150	338	1,480	555	402
23	116	258	444	247	352	310		764	2,080	808	1,160	1,340	366
24	358	215	260	224	350	404		891	3,250	666	846	5,100	575
25	243	232	172	190	263	336		1,760	3,040	1,240	3,170	3,270	495
26	292	214	226	264	250	389		1,660	2,400	794	1,640	2,420	604
27	272		228	391	257	462	900	1,520	1,940	651	1,080	1,740	648
28	258		168	305	356	368	950	1,270	1,750	1,240	917	1,550	372
29	236	250	110	318	334	------	1,000	1,210	1,420	892	796	1,250	238
30	103		216	528	328	------	2,800	1,080	1,190	651	722	1,210	652
31	------		------	458	344	------	3,000	------	1,130	------	570	812	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
1930					
September 22–30	358	103	236	0.144	0.05
1930–31					
October	327	118	225	.137	.16
November	444	107	242	.148	.17
December	528	162	269	.164	.19
January	2,170	240	445	.271	.31
February	541	217	348	.212	.22
March	------	268	734	.448	.52
April	3,710	752	1,920	1.17	1.30
May	3,250	502	1,610	.982	1.13
June	1,830	338	1,020	.622	.69
July	3,170	374	903	.551	.64
August	5,100	328	1,050	.640	.74
September	1,130	238	553	.337	.38
The year	5,100	107	778	.474	6.45

SHENANDOAH RIVER AT MILLVILLE, W. VA.

LOCATION.—Water-stage recorder half a mile below Cattail Run, three-quarters of a mile above Millville, Jefferson County, and 5 miles above mouth at Harpers Ferry. Zero of gage is 293.00 feet above mean sea level.

DRAINAGE AREA.—3,040 square miles.

RECORDS AVAILABLE.—August, 1928, to September, 1931. April, 1895, to March, 1909, three-quarters of a mile below present site.

EXTREMES.—Maximum discharge during year, 7,710 second-feet Aug. 24 (gage height, 6.05 feet); minimum, about 59 second-feet Oct. 4 (gage height, 0.39 foot).

1895–1909, 1928–1931: Maximum discharge, about 140,000 second-feet Oct. 1, 1896; minimum, that of Oct. 4, 1930.

REMARKS.—Records excellent. Discharge estimated Apr. 30, May 1. A hydroelectric plant of Potomac Edison Co. half a mile above gage and other plants upstream cause fluctuations in stage at gage.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	374	451	300	952	518	739	3,650	1,640	2,340	882	760	1,470
2	346	481	385	626	493	577	3,890	1,540	2,630	1,000	954	1,440
3	248	481	427	598	475	885	4,890	1,280	3,160	694	1,800	1,240
4	200	341	374	544	409	544	4,530	1,290	3,160	743	1,440	1,240
5	336	433	403	747	463	588	3,450	1,070	2,680	514	1,510	1,100
6	276	403	415	1,120	380	804	3,310	1,060	2,190	884	1,420	1,160
7	240	531	415	1,140	499	747	4,420	993	1,950	1,340	1,330	1,500
8	358	397	439	2,900	550	840	4,780	2,780	2,070	1,510	1,400	924
9	271	469	475	2,000	457	1,060	4,740	3,280	1,610	1,230	919	744
10	415	439	469	1,280	487	858	4,190	3,080	1,730	1,600	884	658
11	397	421	512	885	531	846	4,530	3,230	1,490	1,210	982	708
12	341	415	451	747	564	1,060	4,040	2,720	1,410	940	1,090	632
13	421	397	505	923	557	1,060	3,330	2,720	1,140	1,250	875	732
14	336	481	518	662	655	1,010	2,770	3,950	1,080	1,110	593	643
15	368	505	512	655	685	914	2,410	3,250	959	1,250	704	520
16	305	463	368	612	570	867	2,110	3,220	930	848	704	542
17	403	409	415	605	531	797	1,880	2,990	1,620	1,170	705	769
18	380	397	374	662	451	698	1,760	2,570	2,500	1,490	700	715
19	374	346	397	626	570	787	1,880	2,270	2,090	1,190	610	448
20	427	320	451	564	584	768	1,470	2,020	1,670	1,290	616	462
21	409	368	427	564	708	670	1,140	1,850	1,180	1,490	766	519
22	397	463	358	433	469	700	1,480	1,770	1,240	1,370	816	637
23	315	358	320	619	715	816	1,530	2,900	894	2,110	973	436
24	315	380	336	518	700	797	1,360	3,510	832	1,940	4,370	736
25	368	524	403	584	564	656	2,070	4,600	956	1,730	6,160	789
26	415	481	564	512	564	910	2,800	3,840	1,590	3,560	4,050	822
27	305	266	648	538	475	836	2,510	3,190	1,220	2,130	3,090	919
28	409	346	755	433	564	1,210	2,200	2,640	938	1,600	2,470	874
29	285	300	739	439	------	1,380	1,950	2,440	1,260	1,380	2,710	796
30	262	374	787	518	------	1,850	1,820	2,060	1,340	1,120	2,280	480
31	325	------	904	493	------	2,540	------	2,020	------	1,070	2,000	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	427	200	343	0.113	0.13
November	531	266	415	.137	.15
December	904	300	479	.158	.18
January	2,900	433	790	.260	.30
February	715	380	542	.178	.19
March	2,540	544	929	.306	.35
April	4,890	1,140	2,900	.954	1.06
May	4,600	993	2,510	.826	.95
June	3,160	832	1,660	.546	.61
July	3,560	514	1,340	.441	.51
August	6,160	593	1,600	.526	.61
September	1,500	436	822	.270	.30
The year	6,160	200	1,200	.395	5.34

MIDDLE RIVER NEAR GROTTOES, VA.

LOCATION.—Chain gage at highway bridge at Mount Meridian, Augusta County, 1½ miles above confluence with North River and 3 miles west of Grottoes, Rockingham County.

DRAINAGE AREA.—360 square miles.

RECORDS AVAILABLE.—February, 1925, to September, 1931.

EXTREMES.—Maximum discharge during year, 2,020 second-feet Aug. 23 (gage height, 8.00 feet); minimum, 22 second-feet Oct. 3, 12 (gage height, 1.90 feet).

1925–1931: Maximum discharge, 4,080 second-feet Aug. 17, 1928 (gage height, 12.20 feet); minimum, 22 second-feet Sept. 21, Oct. 3, 12, 1930 (gage height, 1.90 feet).

REMARKS.—Records good.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	54	57	a 70	42	104	920	132	321	97	321	132
2	34	44	50	a 65	57	148	720	124	270	104	204	132
3	44	60	a 45	a 60	66	156	524	117	236	148	295	422
4	72	68	a 45	71	68	139	488	104	174	488	308	214
5	66	110	51	165	72	132	640	97	165	165	362	139
6	73	97	70	600	66	124	680	104	148	194	148	124
7	72	90	90	214	68	110	960	110	139	348	117	110
8	84	52	82	139	64	132	640	600	204	139	104	110
9	90	43	64	104	72	174	524	282	174	117	97	110
10	80	31	72	97	110	156	524	236	132	174	97	97
11	90	56	70	84	124	148	422	194	124	174	104	90
12	36	58	51	a 80	110	132	308	174	110	148	110	97
13	53	71	72	a 75	104	117	258	321	104	132	104	78
14	84	54	68	a 70	97	110	225	321	174	214	97	84
15	62	67	60	a 65	79	110	214	362	295	308	80	90
16	68	64	a 55	a 60	78	104	184	282	920	488	72	97
17	97	52	a 55	a 55	90	104	174	214	270	156	71	90
18	65	76	52	a 55	117	97	156	204	194	165	78	90
19	54	74	72	60	132	97	139	165	148	194	74	90
20	66	64	72	54	139	110	139	165	132	334	78	76
21	62	66	64	a 55	97	97	132	392	124	562	104	84
22	62	61	a 60	a 60	110	97	139	562	117	214	524	110
23	59	38	a 60	62	110	104	258	1,210	600	139	1,620	90
24	59	47	a 60	78	97	139	308	640	204	422	562	90
25	51	56	a 65	66	104	165	236	422	148	247	348	73
26	60	65	66	60	97	156	204	334	117	156	282	84
27	66	48	110	72	90	156	184	377	148	139	225	148
28	90	28	225	74	97	165	156	225	124	124	214	124
29	60	a 30	139	66	------	454	139	194	110	165	184	79
30	77	44	97	72	------	600	132	165	104	110	165	74
31	70	------	a 80	68	------	377	------	156	------	295	156	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	97	34	66.4	0.184	0.21
November	110	28	58.9	.164	.18
December	225	45	73.5	.204	.24
January	600	54	96.0	.267	.31
February	139	42	91.3	.254	.26
March	600	97	162	.450	.52
April	960	132	358	.994	1.11
May	1,210	97	290	.808	.93
June	920	104	208	.578	.64
July	562	97	221	.614	.71
August	1,620	71	236	.658	.76
September	422	73	114	.317	.35
The year	1,620	28	165	.458	6.22

a Estimated.

SOUTH RIVER AT WAYNESBORO, VA.

LOCATION.—Water-stage recorder above Baker Spring in Waynesbor o, Augusta County.

DRAINAGE AREA.—144 square miles.

RECORDS AVAILABLE.—July, 1928, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,350 second-feet Aug. 22 (gage height, 5.32 feet); minimum, caused by filling dam above, 9 second-feet Dec. 3 (gage height, 0.88 foot).

1928–1931: Maximum discharge, 4,660 second-feet Sept. 19, 1928 (gage height, 11.02 feet); minimum, 9 second-feet May 17, Dec. 3, 1930.

REMARKS.—Records good. Discharge estimated Aug. 15–17. Du Pont Rayon Co. diverts about 3 second-feet, which is not included in record.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	32	39	32	32	73	511	82	207	46	66	72
2	30	34	54	33	32	91	530	82	278	51	58	70
3	30	34	23	33	33	79	402	77	211	58	45	124
4	30	46	22	33	33	70	328	71	172	68	40	132
5	30	46	29	73	32	59	286	66	144	52	51	74
6	30	39	36	101	33	54	275	66	122	55	42	62
7	31	37	42	62	34	51	280	81	116	88	37	58
8	31	37	35	51	31	108	289	196	146	58	35	55
9	32	38	30	43	36	124	339	194	164	49	34	52
10	30	37	30	42	49	99	303	159	102	55	33	50
11	32	38	30	39	45	82	261	136	88	72	33	47
12	33	39	29	39	42	71	216	146	65	58	54	47
13	33	37	29	38	39	65	183	192	76	50	46	46
14	33	38	30	36	39	60	163	286	82	46	49	45
15	34	38	29	33	37	64	142	250	152	59	50	44
16	35	39	27	32	38	62	128	196	174	51	40	43
17	35	38	30	34	39	58	118	170	114	46	40	43
18	33	38	30	34	43	54	108	146	95	49	33	42
19	33	37	30	35	45	52	100	126	79	46	36	44
20	31	36	30	36	44	51	91	114	71	74	31	44
21	32	36	29	35	43	50	86	179	64	86	52	51
22	32	36	29	34	42	56	106	175	80	49	585	47
23	34	35	29	32	42	59	161	269	138	62	1,090	49
24	34	33	29	34	43	79	140	264	88	124	576	62
25	33	36	28	35	42	112	124	206	66	102	320	72
26	35	37	29	34	38	181	118	176	62	58	216	123
27	33	35	33	33	37	163	112	170	60	50	165	176
28	33	34	42	33	37	150	99	138	58	46	132	79
29	34	34	38	32	-------	394	91	118	52	43	108	49
30	33	37	35	31	-------	281	86	110	47	39	95	45
31	34	-------	31	33	-------	201	-------	106	-------	37	81	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	35	30	32.4	0.225	0.26
November	46	32	37.0	.257	.29
December	54	22	31.8	.221	.25
January	101	31	39.5	.274	.32
February	49	31	38.6	.268	.28
March	394	50	102	.708	.82
April	530	86	206	1.43	1.60
May	286	66	153	1.06	1.22
June	278	47	112	.778	.87
July	124	37	58.9	.409	.47
August	1,090	31	138	.958	1.10
September	176	42	64.9	.451	.50
The year	1,090	22	84.7	.588	7.98

SOUTH RIVER AT HARRISTON, VA.

LOCATION.—Chain gage at highway bridge at Harriston, Augusta County, 7 miles above confluence with Middle River.

DRAINAGE AREA.—222 square miles.

RECORDS AVAILABLE.—February, 1925, to September, 1931.

EXTREMES.—Maximum discharge during year, 2,220 second-feet Aug. 23 (gage height, 7.00 feet); minimum, 25 second-feet Nov. 21, Dec. 4 (gage height, 2.77 feet).

1925–1931: Maximum discharge, 5,990 second-feet Sept. 20, 1928 (gage height, 11.90 feet); minimum, 23 second-feet Aug. 12, 1930 (gage height, 2.74 feet).

REMARKS.—Records good. Discharge estimated Nov. 28, 29, Dec. 2, 3, 22–24, Dec. 31 to Jan. 2. Low-water flow regulated by operation of mill above station.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	56	53	50	32	87	790	143	256	86	83	116
2	40	38	45	45	50	130	970	140	348	79	120	107
3	45	65	40	50	47	136	645	132	290	95	92	189
4	43	77	40	62	53	120	533	125	256	95	97	211
5	33	83	54	242	40	102	410	115	211	83	84	125
6	50	65	65	176	46	85	433	112	186	115	79	109
7	40	58	69	109	40	77	456	128	198	125	77	98
8	36	53	79	83	53	141	433	256	202	125	70	83
9	47	53	53	69	65	195	506	309	218	90	68	79
10	44	53	54	65	56	176	456	240	162	106	67	81
11	40	50	72	64	62	146	389	224	143	115	67	79
12	36	59	53	62	62	130	328	224	135	110	84	69
13	45	59	53	56	58	107	290	328	110	92	84	70
14	48	47	56	52	53	105	256	410	118	84	81	70
15	46	59	56	52	56	96	224	389	174	92	95	59
16	45	47	53	44	62	94	211	328	256	90	72	65
17	43	65	52	45	69	96	198	273	186	74	81	62
18	45	59	65	52	69	81	180	256	151	84	75	62
19	38	56	59	56	72	79	165	214	125	79	70	67
20	62	59	65	52	59	77	154	198	115	74	79	65
21	53	38	53	50	69	72	151	256	115	174	88	76
22	50	48	50	53	64	76	162	273	101	84	850	76
23	59	62	45	53	62	87	273	410	192	84	2,000	69
24	64	65	45	50	59	130	240	389	143	180	970	69
25	40	47	44	43	58	170	256	328	110	174	533	62
26	32	45	58	53	64	280	214	290	99	97	384	76
27	70	44	62	50	56	261	205	256	103	84	280	118
28	42	40	81	45	60	232	177	224	90	81	218	83
29	62	35	72	46	------	645	162	186	83	74	179	67
30	53	36	62	54	------	454	154	177	81	74	161	69
31	50	------	55	43	------	341	------	174	------	84	138	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	70	32	46.5	0.20[illegible]	0.24
November	83	------	54.0	.243	.27
December	81	40	56.9	.256	.30
January	242	43	65.4	.29[illegible]	.34
February	72	32	57.0	.257	.27
March	645	72	162	.73[illegible]	.84
April	970	151	334	1.50	1.67
May	410	112	242	1.09	1.26
June	348	81	165	.743	.83
July	180	74	99.5	.448	.52
August	2,000	67	240	1.08	1.24
September	211	59	87.7	.39[illegible]	.44
The year	2,000	32	134	.60[illegible]	8.22

NORTH FORK OF SHENANDOAH RIVER AT COOTES STORE, VA.

LOCATION.—Chain gage at highway bridge at Cootes Store, Rockingham County, 1 mile below Brocks Gap and 3½ miles above mouth of Linville Creek.

DRAINAGE AREA.—215 square miles.

RECORDS AVAILABLE.—February, 1925, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,910 second-feet Aug. 23 (gage height, 6.73 feet); minimum, 0.7 second-foot Oct. 1–27 (gage height, 2.00 feet).

1925–1931: Maximum discharge, 9,280 second-feet Apr. 16, 1929 (gage height, 14.98 feet); minimum, 0.3 second-foot Oct. 1, 1929, Aug. 27 to Sept. 3, 1930 (gage height, 1.94 feet).

REMARKS.—Records fair. Discharge estimated Mar. 29, Apr. 1, 3–5, 7–9, 28, May 25-30.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7	1.2	3.2	7.0	12	35	500	108	610	16	39	112
2	.7	1.2	3.2	7.5	12	35	700	101	610	20	35	99
3	.7	1.2	3.2	12	12	33	600	90	440	42	61	72
4	.7	2.8	3.0	13	11	33	400	76	341	38	56	61
5	.7	3.0	3.0	37	10	32	350	61	286	38	190	52
6	.7	3.0	3.4	176	9.0	40	700	56	220	35	117	43
7	.7	3.2	7.0	112	8.0	58	500	54	190	179	65	39
8	.7	3.4	6.4	65	7.0	190	600	157	173	97	45	33
9	.7	3.8	6.0	51	7.0	184	500	360	146	88	39	30
10	.7	3.8	6.0	40	8.5	157	750	322	117	83	34	21
11	.7	3.8	5.7	39	9.5	141	520	304	86	77	28	18
12	.7	3.8	5.4	33	11	117	400	269	66	68	22	18
13	.7	3.8	5.4	28	11	94	286	220	53	48	18	15
14	.7	3.8	5.4	23	12	69	252	190	43	37	16	19
15	.7	3.8	5.1	18	12	61	190	165	72	37	15	18
16	.7	3.8	5.1	18	13	57	157	146	101	32	15	15
17	.7	3.8	4.8	18	15	53	117	131	252	43	15	14
18	.7	3.8	4.8	18	16	47	94	108	108	152	14	14
19	.7	3.8	4.4	17	16	46	76	81	58	61	12	14
20	.7	3.8	4.4	17	17	44	61	72	51	54	22	14
21	.7	3.8	3.8	17	17	44	56	565	43	542	112	14
22	.7	3.8	3.8	17	18	42	322	750	44	260	1,080	14
23	.7	3.8	4.4	16	18	42	750	565	48	205	1,330	14
24	.7	3.8	5.1	15	20	40	500	440	30	184	1,200	13
25	.7	3.8	5.1	15	21	101	400	300	26	101	341	14
26	.7	3.6	4.4	14	23	88	269	200	24	69	162	28
27	.7	3.4	4.8	14	25	86	184	150	21	58	1,200	24
28	1.2	3.4	6.7	13	30	83	150	120	20	58	610	17
29	1.2	3.2	7.0	13	------	200	131	90	16	46	400	14
30	1.2	3.2	8.0	12	------	655	117	70	14	45	269	14
31	1.2	------	10	12	------	420	------	220	------	40	170	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	1.2	0.7	0.76	0.0035	0.004
November	3.8	1.2	3.35	.016	.02
December	10	3.0	5.10	.024	.03
January	176	7.0	29.3	.136	.16
February	30	7.0	14.3	.067	.07
March	655	32	107	.498	.57
April	750	56	354	1.65	1.84
May	750	54	211	.981	1.13
June	610	14	144	.670	.75
July	542	16	92.3	.429	.49
August	1,830	12	266	1.24	1.43
September	112	13	29.6	.138	.15
The year	1,830	.7	105	.488	6.64

NORTH FORK OF SHENANDOAH RIVER NEAR STRASBURG, VA.

LOCATION.—Water-stage recorder at highway bridge 2 miles east of Strasburg, Shenandoah County, and 9 miles above confluence with South Fork of Shenandoah River.

DRAINAGE AREA.—772 square miles.

RECORDS AVAILABLE.—March, 1925, to September, 1931.

EXTREMES.—Maximum discharge during year, 2,780 second-feet Aug. 23 (gage height, 5.50 feet); minimum, 35 second-feet Feb. 8 (gage height, 1.72 feet).

1925–1931: Maximum discharge, 13,900 second-feet Apr. 17, 1929 (gage height, 15.86 feet); minimum, 33 second-feet Sept. 26, 1930 (gage height, 1.70 feet).

REMARKS.—Records good. Discharge estimated Oct. 18–24, Dec. 2–5, June 14, 15.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	69	67	119	75	89	585	294	284	100	184	342
2	54	78	60	95	65	100	678	245	1,120	89	592	288
3	58	76	50	108	94	103	1,100	221	1,200	69	305	240
4	49	84	55	103	75	94	776	218	744	102	215	265
5	53	89	55	71	70	119	744	197	502	164	329	245
6	53	106	61	259	60	110	936	176	380	146	266	190
7	43	80	69	746	83	110	872	185	329	404	240	172
8	46	61	69	322	60	119	1,160	304	266	215	189	129
9	51	80	80	240	65	122	1,000	608	250	294	158	138
10	51	71	87	230	106	173	1,290	532	250	173	126	120
11	54	76	84	193	91	255	1,080	480	198	210	186	113
12	54	65	78	143	97	215	800	401	169	213	116	129
13	58	71	74	146	116	197	592	408	158	194	113	106
14	46	65	71	139	110	146	465	418	157	156	113	97
15	61	76	71	161	92	150	394	517	250	143	106	119
16	61	78	103	146	122	136	342	422	254	136	113	72
17	63	82	92	132	92	126	310	348	562	106	88	106
18	65	82	82	94	66	136	288	305	353	131	70	129
19	65	87	76	78	97	146	235	277	260	394	106	122
20	65	84	67	106	119	110	225	234	197	341	97	106
21	60	80	74	106	110	119	215	235	164	207	144	97
22	65	80	76	124	112	142	206	239	139	744	245	89
23	60	82	84	151	166	110	203	305	136	484	1,710	110
24	55	76	89	110	80	152	934	877	139	342	1,880	156
25	63	82	84	65	89	116	856	720	134	827	1,040	362
26	65	63	92	70	116	150	648	570	132	361	640	223
27	69	71	103	92	106	180	539	465	132	235	554	168
28	74	71	106	80	97	216	443	367	116	197	1,040	140
29	76	48	259	94	-------	316	367	310	110	172	872	146
30	76	60	192	80	-------	640	329	277	124	157	616	143
31	71	-------	182	83	-------	778	-------	240	-------	153	443	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	76	41	58.9	0.076	0.09
November	106	48	75.8	.098	.11
December	259	50	90.1	.117	.13
January	746	65	151	.196	.23
February	166	60	94.0	.122	.13
March	778	89	183	.237	.27
April	1,290	203	620	.803	.90
May	877	176	368	.477	.55
June	1,200	110	307	.398	.44
July	827	69	247	.320	.37
August	1,880	70	416	.539	.62
September	362	72	162	.210	.23
The year	1,880	41	232	.301	4.07

CATOCTIN CREEK NEAR JEFFERSON, MD.

LOCATION.—Chain and staff gages at bridge on Frederick-Harpers Ferry road 2 miles west of Jefferson, Frederick County.

DRAINAGE AREA.—111 square miles.

RECORDS AVAILABLE.—June, 1928, to September, 1931 (discontinued).

EXTREMES.—Maximum discharge during year, about 4,580 second-feet July 1 or 2 (gage height, 9.0 feet); minimum, 0.8 second-foot Oct. 1.

1928–1931: Maximum stage, 11.30 feet June 19, 1928 (discharge not determined); minimum discharge, 0.7 second-foot Aug. 10–14, Sept. 29, 30, 1930.

REMARKS.—Records good below and fair above 200 second-feet.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	5.2	14	26	22	31	360	40	87	588	16	11
2	.9	4.3	31	23	22	53	340	40	93	474	14	9.6
3	1.2	4.1	8.6	21		37	206	44	49	75	13	11
4	1.3	4.6	7.8	21		30	157	41	41	68	12	13
5	1.2	5.9	8.6	40	e20	26	123	36	41	58	24	11
6	1.4	5.9	10	136		24	110	34	43	39	13	9.2
7	1.2	5.2	14	45		24	157	45	74	36	9.6	7.8
8	1.3	5.2	12	e38	19	63	180	87	82	31	8.9	6.6
9	1.4	6.2	10	e32	25	80	146	67	45	88	136	6.0
10	1.7	6.2	9.1	28	52	38	125	100	36	170	790	5.7
11	1.7	6.2	7.8	e26	e40	28	102	51	35	40	62	5.4
12	1.4	6.5	7.2	25	e35	36	89	55	32	29	29	4.8
13	1.4	7.2	7.2	26	28	28	79	55	30	26	22	4.3
14	1.3	7.2	6.8		26	28	72	62	29	24	17	30
15	1.4	7.2	6.5		e26	26	63	63	28	23	15	5.7
16	1.5	8.2	e6.0	e21	26	29	59	47	27	206	13	7.2
17	1.7	9.9	5.2		26	30	54	43	36	690	11	17
18	2.7	9.1	4.6	22	28	30	52	40	27	70	10	11
19	3.2	7.8		180	31	31	46	38	24	32	9.2	8.6
20	2.7	7.5		58	32	34	43	36	23	62	9.6	12
21	2.4	7.2	e4.0	48	31	32	40	47	21	198	13	13
22	2.7	7.2		e40	29	32	82	47	20	59	17	8.2
23	3.0	6.5		32	26	37	206	168	168	33	21	5.7
24	3.5	5.9		26	24	35	64	73	60	36	16	111
25	4.1	6.5	5.2	24	22	36	54	59	30	29	25	10
26	3.8	6.5	7.5	25	21	39	61	55	790	26	17	55
27	3.8	4.9	470	26	21	34	64	46	86	20	16	21
28	4.6	3.8	47	28	19	39	50	41	39	17	13	15
29	6.2	3.0	36	27	------	400	46	38	29	15	41	10
30	6.2	5.9	31	24	------	136	43	36	24	34	21	8.6
31	5.9	------	e28	23	------	99	------	36	------	19	15	------

North	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	6.2	0.8	2.50	0.023	0.03
November	9.9	3.0	6.23	.056	.06
December	470	----------	26.6	.240	.28
January	180	21	37.2	.335	.39
February	52	19	26.1	.235	.24
March	400	24	52.4	.472	.54
April	360	40	109	.982	1.10
May	168	34	53.9	.486	.56
June	790	20	71.6	.645	.72
July	690	15	107	.964	1.11
August	790	8.9	46.8	.422	.49
September	111	4.3	15.1	.136	.15
The year	790	.8	46.3	.417	5.67

e Estimated.

MONOCACY RIVER AT JUG BRIDGE, NEAR FREDERICK, MD.

LOCATION.—At Jug Bridge, 2½ miles east of Frederick, Frederick County, and half a mile below mouth of Linganore Creek.
DRAINAGE AREA.—817 square miles.
RECORDS AVAILABLE.—November, 1929, to September, 1931, at Jug Bridge.
EXTREMES.—1929–30: Maximum discharge during period, about 12,500 second-feet Mar. 8 (gage height, 12.47 feet); minimum, 38 second-feet Sept. 30 (gage height, 1.03 feet).
1930–31: Maximum discharge during year, about 10,800 second-feet Apr. 2 (gage height, 11.37 feet); minimum, 35 second-feet Oct. 1 (gage height, 1.03 feet).
Maximum stage, about 29 feet in June, 1889.
REMARKS.—Records fair.

Daily and monthly discharge, in second-feet, 1929–1931

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1929-30											
1	-------		1,990		1,020	545	445	160	134	67	63
2	-------		1,540	[a] 450	960	519	431	157	604	68	63
3	-------	[a] 300	1,480		896	498	404	152	568	68	65
4	-------		1,300	969	740	504	382	146	210	67	68
5	-------		928	3,520	691	478	348	139	155	62	67
6	-------	478	789	4,430	685	748	344	144	134	63	62
7	-------	545	758	1,950	697	5,090	336	242	126	65	60
8	-------	691	783	1,510	8,050	2,100	320	223	126	63	63
9	-------	715	770	1,300	5,260	1,340	293	262	115	62	60
10	-------	600	733	1,230	2,110	1,120	274	330	108	62	65
11	-------	519	639	1,230	1,760	992	260	385	99	62	63
12	-------	478	578	1,060	1,990	928	246	250	93	58	56
13	-------	504	656	1,490	1,580	864	242	195	91	57	62
14	-------	814	1,060	3,020	1,340	808	250	171	89	60	95
15	-------	864	2,170	1,830	1,160	770	530	163	89	67	142
16	-------	758	1,440	1,300	1,020	721	514	146	91	65	97
17	-------	622	1,060	1,090	960	783	344	198	83	76	106
18	-------	611	802	1,090	928	833	293	533	83	79	110
19	-------	992	500	1,230	1,420	783	278	1,230	81	68	95
20	-------	1,060		1,340	1,300	703	308	572	77	70	77
21	1,230	680		1,200	960	633	297	282	76	65	70
22	1,060			992	864	611	260	204	70	62	67
23	928			896	764	594	233	177	72	62	65
24	864	[a] 400		896	746	556	217	166	76	63	65
25	833		[a] 300	928	740	514	217	399	76	65	62
26	758			992	864	493	213	376	74	63	57
27	703	524		1,900	864	464	189	213	72	74	52
28	674	664		1,310	703	450	186	189	70	72	47
29	605	1,530		-------	628	440	189	163	70	77	43
30	[a] 350	1,620		-------	600	445	186	142	72	76	39
31	-------	1,540		-------	572	-------	177	-------	68	67	------

[a] Estimated.

Daily and monthly discharge, in second-feet, of Monocacy River at Jug Bridge, near Frederick, Md., 1929–1931—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930-31												
1	39	62	72		99	161	3,630		865	241	106	169
2	39	58	81	a 90	90	629	7,540		1,340	835	104	131
3	39	49	a 60		83	501	2,140		692	430	84	206
4	40	53	a 60	90		301	1,510		442	272	80	560
5	41	62	60	236		225	1,200		345	682	86	227
6	39	68	62	2,040	a 75	181	992		299	341	84	150
7	39	62	92	833		158			316	535	80	114
8	40	62	97		75	936			704	462	78	95
9	44	62	94		126	1,740		a 400	484	256	151	84
10	44	60	77		460	684			320	295	496	82
11	43	58	68		383	391			266	650	2,230	79
12	48	62	64	a 105	228	279			235	306	635	73
13	48	64	64		181	238			209	209	276	69
14	43	70	62			199			198	166	198	67
15	46	75	62		a 150	187			187	145	153	69
16	49	75				196			443	132	128	69
17	53	79			147	276		390	600	187	113	71
18	53	81		77	187	450		345	414	166	106	77
19	46	83		724	251	566	a 440	323	244	138	99	75
20	48	90		1,180	320	582		309	192	391	97	73
21	44	75	a 55	423	328	540		299	166	670	101	69
22	49	68			268	396		320	143	520	115	67
23	49	66			209	353		585	166	341	192	258
24	49	64			178	316		645	572	260	390	208
25	53	62		a 120	158	290		414	650	192	379	77
26	49	64	222		139	294		345	289	187	450	104
27	53	60	3,250	101	126	279		306	250	135	200	124
28	48	55	1,310	114	118	322		266	226	115	148	111
29	57	48	391	124	------	5,920		238	179	110	2,330	88
30	58	55	a 200	121	------	2,380		220	150	130	775	77
31	62	------	a 100	111	------	1,230	------	644	------	143	267	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
1929-30					
November 21-30	1,230	350	800	0.979	0.36
December	1,620	----------	655	.802	.92
January	2,170	----------	761	.931	1.07
February	4,430	----------	1,430	1.75	1.82
March	8,050	572	1,380	1.69	1.95
April	5,090	440	878	1.07	1.19
May	530	177	297	.364	.42
June	1,230	139	270	.330	.37
July	604	68	127	.155	.18
August	79	57	66.3	.081	.09
September	142	39	70.2	.086	.10
1930-31					
October	62	39	46.8	.057	.07
November	90	48	65.1	.080	.09
December	3,250	----------	229	.280	.32
January	2,040	77	261	.319	.37
February	460	----------	175	.214	.22
March	5,920	158	684	.837	.96
April	7,540	----------	919	1.12	1.25
May	----------	----------	389	.476	.55
June	1,340	143	386	.472	.53
July	835	110	311	.381	.44
August	2,330	78	346	.424	.49
September	560	67	124	.152	.17
The year	7,540	39	329	.403	5.46

a Estimated.

NOTE.—Above records for year ending Sept. 30, 1930, are revised records superseding those published in Water-Supply Paper 696.

GOOSE CREEK NEAR LEESBURG, VA.

LOCATION.—Chain gage at highway bridge at Evergreen Mills, 7 miles south of Leesburg, Loudon County, three-quarters of a mile below Little River, and 10 miles above mouth.

DRAINAGE AREA.—338 square miles.

RECORDS AVAILABLE.—July, 1909, to December, 1912; January, 1930, to September, 1931.

EXTREMES.—Maximum stage during period Jan. 21, 1930, to Sept. 30, 1931, 11.82 feet Mar. 8, 1930 (discharge, 4,800 second-feet); minimum discharge, 1.4 second-feet Aug. 19, 20, 1930, Aug. 3, 4, 1931 (gage height, 2.08 feet).

1909–1912, 1930–31: Maximum stage, about 18 feet (old datum) Sept. 24 or 25, 1912 (discharge not determined); minimum, that of Aug. 19, 20, 1930, Aug. 3, 4, 1931.

Maximum stage known, about 29 feet in May or June, 1889.

REMARKS.—Records good. Discharge estimated Jan. 21, 22, June 9, 1930.

Daily and monthly discharge, in second-feet, 1930–31

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930									
1		206	256	210	167	54	15	2.0	3.8
2		210	243	206	156	50	90	2.1	4.2
3		239	214	214	156	48	35	2.0	2.6
4		546	218	226	142	42	139	1.8	2.1
5		1,690	214	206	136	38	15	1.8	1.8
6		930	218	264	132	37	15	1.8	1.8
7		612	206	1,590	136	35	38	1.8	1.8
8		524	3,300	546	132	68	21	2.0	1.8
9		458	1,160	436	120	80	13	1.8	1.8
10		458	746	370	107	70	8.4	1.8	1.8
11		414	656	370	102	70	7.7	1.8	1.8
12		370	656	326	99	54	5.8	1.8	1.8
13		414	524	326	99	48	5.8	1.5	2.0
14		458	436	304	99	44	5.4	2.0	2.7
15		392	392	264	149	40	5.4	2.1	2.4
16		295	370	252	126	37	4.6	2.1	2.1
17		392	370	348	107	38	5.0	2.0	2.1
18		348	370	326	90	126	4.6	1.8	2.0
19		348	348	291	104	77	4.6	1.5	1.8
20		295	304	256	123	75	4.6	1.5	1.8
21	190	295	278	256	300	40	3.8	2.0	1.8
22	200	278	269	235	90	31	3.8	2.2	1.8
23	214	269	260	235	85	30	3.0	2.0	1.8
24	178	278	260	218	75	35	2.7	2.0	2.1
25	202	269	264	210	80	58	2.6	1.8	2.0
26	198	260	273	202	75	38	2.7	1.8	2.1
27	202	264	260	202	65	30	2.7	1.6	2.0
28	206	252	226	194	63	22	2.4	1.8	1.5
29	210		235	194	63	17	2.4	1.8	1.5
30	194		218	186	58	16	2.2	1.8	1.6
31	186		214		56		2.1	1.8	

Daily and monthly discharge, in second-feet, of Goose Creek near Leesburg, Va., 1930–31—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1930–31												
1	1.8	2.4	4.6	17	15	24	502	60	110	9.1	2.2	15
2	1.8	2.4	4.6	10	16	52	480	58	273	222	2.1	11
3	1.8	2.6	4.6	8.4	14	56	304	72	156	65	1.8	10
4	2.0	2.8	5.0	7.0	11	46	214	65	116	38	1.8	10
5	1.6	3.4	5.4	24	11	38	190	50	90	13	54	9.8
6	1.6	2.7	7.0	700	10	28	164	46	75	23	23	7.7
7	1.5	2.7	17	123	12	25	247	68	48	304	7.0	4.6
8	2.1	2.4	18	96	13	194	243	239	210	88	3.4	5.0
9	2.1	2.4	9.1	44	13	226	190	186	120	35	2.4	3.4
10	2.1	2.4	9.1	50	56	110	178	139	75	19	142	3.0
11	2.1	2.8	9.1	23	40	72	146	116	54	16	348	3.0
12	2.1	3.4	5.8	35	37	52	126	90	52	15	77	2.8
13	1.8	3.8	5.8	27	37	48	104	156	44	11	48	2.8
14	2.0	3.8	7.0	20	27	40	93	231	37	5.4	27	2.1
15	2.2	3.4	6.2	12	19	42	80	171	34	5.8	9.1	2.4
16	2.0	5.0	6.6	13	20	50	75	149	60	32	9.8	2.0
17	2.1	5.4	6.2	15	23	60	68	120	35	22	8.4	38
18	2.4	5.8	6.2	7.0	28	58	60	96	21	370	7.0	52
19	2.2	5.4	6.2	30	32	54	56	88	16	75	42	31
20	2.1	6.2	6.2	38	34	52	50	72	12	34	9.8	10
21	2.1	5.4	5.4	32	48	46	46	85	9.8	19	23	6.6
22	2.4	5.4	6.2	21	46	48	132	88	8.4	32	68	5.8
23	2.4	4.6	6.2	22	40	72	370	392	9.8	22	256	14
24	2.1	4.2	6.2	19	37	88	194	190	107	11	99	269
25	2.4	4.6	5.8	18	30	72	132	132	35	9.1	46	50
26	2.4	4.2	5.8	23	22	63	129	102	13	7.0	40	44
27	2.4	3.8	436	22	23	56	113	90	22	5.8	40	42
28	2.7	4.2	194	23	22	56	88	75	30	3.4	37	28
29	2.7	3.0	77	23	-------	348	72	60	15	2.8	38	15
30	2.4	4.2	32	21	-------	256	68	56	6.6	2.6	30	11
31	2.4	-------	21	20	-------	160	-------	50	-------	2.6	24	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
1930					
January 21–31	214	178	198	0.586	0.24
February	1,690	206	420	1.24	1.29
March	3,300	206	450	1.33	1.53
April	1,590	186	315	.932	1.04
May	300	56	113	.334	.39
June	126	16	48.3	.143	.16
July	139	2.1	15.3	.045	.05
August	2.2	1.5	1.86	.0055	.006
September	4.2	1.5	2.07	.0061	.007
1930–31					
October	2.7	1.5	2.12	.0063	.007
November	6.2	2.4	3.83	.011	.01
December	436	4.6	30.5	.090	.10
January	700	7.0	49.8	.147	.17
February	56	10	26.3	.078	.08
March	348	24	83.6	.247	.28
April	502	46	164	.485	.54
May	392	46	116	.343	.40
June	273	6.6	63.2	.187	.21
July	370	2.6	49.0	.145	.17
August	348	1.8	49.3	.146	.17
September	269	2.0	23.7	.070	.08
The year	700	1.5	55.2	.163	2.22

NOTE.—Feb. 5, Mar. 8, Apr. 7, 1930, stage was above point to which rating curve is defined.

GREAT SENECA CREEK NEAR GAITHERSBURG, MD.

LOCATION.—Chain gage on highway bridge on Frederick pike 2 miles northwest of Gaithersburg, Montgomery County, and just below Whetstone Run. Zero of gage is 305.37 feet above mean sea level.

DRAINAGE AREA.—41.0 square miles.

RECORDS AVAILABLE.—March, 1925, to January, 1931 (discontinued).

EXTREMES.—Maximum discharge during period, about 130 second-feet Dec. 27 (gage height, 3.12 feet); minimum, 1.4 second-feet Oct. 1, 2 (gage height, 0.96 foot).

1925-1931: Maximum discharge, about 800 second-feet Nov. 16, 1926 (gage height, 8.80 feet); minimum, 1.3 second-feet Sept. 28, 1930 (gage height, 0.94 foot).

REMARKS.—Records fair. Discharge estimated because of ice Nov. 28-30, Dec. 1-5, 16-26.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Day	Oct.	Nov.	Dec.	Jan.
1	1.4	4.8		8.5	16	2.2	7.4		
2	1.4	4.8		7.4	17	2.3	11		
3	1.6	5.0	5.0	7.7	18	2.3	9.3		
4	1.6	5.4		7.4	19	2.3	6.7		
5	1.6	6.4		12	20	2.5	5.8		
6	1.6	6.2	8.7	35	21	2.9	6.2	4.0	
7	1.7	6.0	15	11	22	3.2	6.4		
8	1.9	6.2	8.5	14	23	3.2	6.4		
9	2.2	6.4	6.7	13	24	3.8	6.4		
10	2.2	6.4	6.4	9.9	25	3.8	6.4		
11	1.9	6.4	6.7	12	26	3.8	6.4		
12	1.9	6.7	6.4	12	27	4.1	6.0	130	
13	1.9	6.9	6.0	10	28	4.2		19	
14	2.2	6.7	6.0		29	5.0	5.0	9.6	
15	2.3	6.4	6.0		30	5.4		8.7	
					31	5.2		7.7	

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	5.4	1.4	2.70	0.066	0.08
November	11	4.8	6.34	.155	.17
December	130		10.3	.251	.29
January 1–13	35	7.4	12.3	.300	.15

SENECA CREEK AT DAWSONVILLE, MD.

LOCATION.—Water-stage recorder at highway bridge half a mile east of Dawsonville, Montgomery County, and 100 feet below Little Seneca Creek.
DRAINAGE AREA.—98.4 square miles.
RECORDS AVAILABLE.—October, 1930, to September, 1931.
EXTREMES.—Maximum discharge during year, about 1,730 second-feet July 1 (gage height, 6.08 feet); minimum, 1.9 second-feet Oct. 1 (gage height, 0.57 foot).
REMARKS.—Records good except those estimated because of ice, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.9	12	a 15	a 15	23	49	224	25	57	251	10	10
2	2.4	11	a 16	a 15	23	55	178	26	40	483	9.9	9.6
3	2.4	12	17	24		37	81	27	27	47	12	9.0
4	3.1	14	16	24		33	64	26	24	35	11	9.0
5	3.5	17	16	79	a 20	31	51	24	23	32	82	9.0
6	3.8	17	20	174		28	46	24	22	114	21	9.0
7	4.2	16	43		24	27	87	27	22	49	14	7.2
8	5.3	16	27		23	40	150	38	33	31	12	6.0
9	5.6	16	19		33	46	77	31	22	26	12	5.6
10	5.6	16	18		54	34	59	27	18	26	117	5.6
11	5.3	15	17	a 20	a 32	29	51	25	17	26	219	5.6
12	5.3	15	17		a 30	27	44	24	15	23	49	4.2
13	5.3	15	16		28	26	39	30	14	20	27	3.5
14	5.6	16	15		27	25	37	30	14	18	18	3.5
15	6.6	15	15		a 20	26	35	30	14	20	16	3.1
16	6.6	16		26	a 22	29	33	25	219	36	14	84
17	7.2	21		25	28	39	32	24	28	36	11	11
18	8.4	21		24	38	40	31	24	19	51	9.0	7.8
19	8.4	18		148	34	37	29	24	15	24	11	6.6
20	9.6	17		52	31	35	28	23	14	79	8.4	6.6
21	9.0	16	a 10		30	31	27	31	12	130	47	11
22	9.0	17			27	31	33	33	11	26	70	7.8
23	11	16		a 27	25	33	71	124	118	21	98	6.0
24	11	16			24	31	37	38	268	25	35	6.6
25	11	16			24	30	33	30	30	21	22	6.0
26	9.0	16	55	25	23	29	34	27	62	16	55	14
27	8.4	16	350	26	22	27	33	25	52	14	22	15
28	9.6		81	27	22	37	29	23	76	13	19	8.4
29	12	a 14	36	26	------	292	27	22	25	11	18	6.6
30	12		a 20	25	------	85	26	20	20	20	13	5.6
31	12	------	a 15	24	------	55	------	32	------	14	13	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	12	1.9	7.10	0.072	0.08
November	21	11	15.7	.160	.18
December	347	----------	30.5	.310	.36
January	174	15	34.6	.352	.41
February	54	20	26.7	.271	.28
March	292	25	44.3	.450	.52
April	224	26	57.5	.584	.65
May	124	20	30.3	.308	.36
June	268	11	44.4	.451	.50
July	483	11	56.1	.570	.66
August	219	8.4	35.3	.359	.41
September	84	3.1	10.1	.103	.11
The year	483	1.9	32.8	.333	4.52

a Estimated.

ROCK CREEK AT SHERRILL DRIVE, WASHINGTON, D. C.

LOCATION.—Water-stage recorder at Sherrill Drive highway bridge in Rock Creek Park, in Washington, 7½ miles above mouth.

DRAINAGE AREA.—62.2 square miles.

RECORDS AVAILABLE.—October, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year, 590 second-feet July 21 (gage height, 3.47 feet); minimum, 0.5 second-foot Oct. 1–7 (gage height, 1.04 feet). 1929–1931: Maximum discharge, 1,170 second-feet Apr. 7, 1930 (gage height, 5.10 feet); minimum, that of Oct. 1–7, 1930.

REMARKS.—Records excellent except those for periods of possible ice effect, which are good.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	3.1	6.9	8.5	10	14	58	18	89	24	6.3	8.5
2	.5	3.1	6.3	6.3	9.4	25	104	18	49	34	5.7	7.7
3	.5	2.7	5.1	6.3	8.5	20	43	18	27	14	5.1	6.9
4	.5	3.1	5.1	6.3	7.7	16	32	18	20	9.4	28	6.9
5	.5	3.6	5.1	12	8.5	14	27	17	17	8.5	10	7.7
6	.5	3.6	6.3	31	7.7	13	25	17	15	8.5	6.9	6.9
7	.5	3.6	11	17	9.4	13	36	19	14	9.4	5.7	5.7
8	.7	3.6	9.4	11	9.4	25	70	28	14	9.4	4.6	5.1
9	.7	4.1	6.9	10	13	31	48	27	15	6.9	6.3	4.6
10	.9	4.1	5.7	10	24	22	35	20	13	16	33	4.6
11	.9	4.1	5.7	7.7	17	17	30	20	12	15	73	4.1
12	.9	4.6	5.1	10	13	16	28	23	12	8.5	35	4.1
13	1.1	5.1	5.1	10	13	16	25	34	10	6.3	19	4.1
14	1.4	5.7	5.1	7.7	12	15	24	30	10	5.7	11	4.1
15	1.7	6.9	5.7	8.5	11	15	23	24	10	7.7	16	4.1
16	2.3	7.7	5.1	7.7	11	18	22	20	12	16	9.4	3.1
17	2.7	9.4	5.1	7.7	14	23	22	18	12	13	7.7	3.6
18	2.3	8.5	5.1	8.5	16	26	20	16	9.4	18	7.7	3.6
19	2.7	8.5	5.7	24	17	25	20	16	7.7	11	13	3.1
20	2.7	7.7	6.3	42	14	20	19	15	6.9	24	6.3	3.6
21	3.1	7.7	6.3	13	13	18	19	25	6.3	367	20	3.6
22	2.7	7.7	6.3	11	12	17	20	42	5.7	46	43	3.1
23	3.1	7.7	6.3	11	11	18	39	122	18	20	52	6.9
24	4.6	7.7	5.7	10	11	18	27	39	65	26	24	6.9
25	4.1	6.9	5.1	10	10	20	24	25	16	15	17	2.7
26	6.3	5.1	6.3	9.4	10	18	23	20	10	11	14	3.6
27	7.7	5.7	41	9.4	10	16	23	17	69	9.4	31	5.1
28	10	5.7	39	9.4	10	20	20	15	58	8.5	18	3.6
29	9.4	5.1	17	9.4	------	118	19	14	18	6.9	15	3.1
30	3.6	5.1	10	10	------	49	18	13	10	12	13	4.1
31	2.3	------	6.3	11	------	30	------	72	------	11	10	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	10	0.5	2.63	0.042	0.05
November	9.4	2.7	5.57	.090	.10
December	41	5.1	8.75	.141	.16
January	42	6.3	11.8	.190	.22
February	24	7.7	11.9	.191	.20
March	118	13	23.4	.376	.43
April	104	18	31.4	.505	.56
May	122	13	26.5	.426	.49
June	89	5.7	21.7	.349	.39
July	367	5.7	25.7	.413	.48
August	73	4.6	18.3	.294	.34
September	8.5	2.7	4.83	.078	.09
The year	367	.5	16.1	.259	3.51

NORTHWEST BRANCH OF ANACOSTIA RIVER NEAR COLESVILLE, MD.

LOCATION.—Staff gage at bridge 1½ miles southwest of Colesville, Montgomery County, and 3 miles above Burnt Mills. Zero of gage is 265.60 feet above mean sea level.

DRAINAGE AREA.—21.3 square miles.

RECORDS AVAILABLE.—February, 1924, to September, 1931.

EXTREMES.—Maximum discharge during year, about 1,340 second-feet July 20 (gage height, about 7.0 feet); minimum, 1.0 second-foot Oct. 1, Sept. 24, 25 (minimum gage height, 1.36 feet Oct. 1).

1924–1930: Maximum discharge, about 1,600 second-feet Apr. 6, 1924 (gage height, 7.87 feet); minimum, 0.4 second-foot Aug. 11, 12, 1930.

REMARKS.—Records fair. Discharge estimated because of ice Nov. 28–30, Dec. 1–5, 19–26, Jan. 1–4, 8–14, Feb. 12–16.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	2.5			3.8	8.9	43	6.0	69	8.1	3.8	2.8
2	1.2	2.5			3.8	8.5	25	6.8	24	14	3.5	2.5
3	1.2	2.5	2.0	3.0	3.8	6.0	14	6.8	13	4.1	43	2.5
4	1.2	4.5			3.8	5.2	12	6.0	9.5	4.1	11	2.5
5	1.5	5.2		10	3.8	4.5	10	6.0	7.7	4.1	3.8	2.5
6	1.4	4.1	3.8	14	3.5	4.5	9.5	6.0	7.3	3.5	2.8	2.5
7	1.4	3.2	6.0	11	3.8	4.1	34	6.8	7.3	3.8	1.8	2.2
8	1.5	1.5	3.2		4.1	18	27	14	7.3	2.2	1.5	2.2
9	1.8	1.5	2.5		7.3	8.5	14	7.3	7.3	1.2	13	1.8
10	1.8	1.5	2.5		8.1	6.0	12	6.4	6.4	11	100	2.5
11	1.8	1.8	1.8	3.0	5.6	6.4	11	6.8	6.0	4.8	31	1.8
12	1.8	1.8	1.8			3.8	9.5	9.5	5.2	2.8	13	1.8
13	2.2	4.1	1.8			4.5	9.5	13	4.8	1.8	6.4	1.5
14	3.2	3.2	1.8			4.5	8.5	8.5	4.8	1.4	5.2	1.2
15	2.5	3.8	1.5	2.8	4.5	4.8	7.7	8.5	4.8	1.2	5.2	1.1
16	1.8	3.8	1.4	2.8		6.0	7.7	6.8	5.6	7.3	4.1	1.1
17	2.2	4.5	1.4	3.8	5.2	11	7.7	6.0	4.8	4.1	3.2	1.1
18	2.2	3.8	1.4	8.9	6.0	9.5	7.7	5.2	4.1	1.4	2.8	1.1
19	1.8	3.8		42	5.2	7.3	6.8	5.2	4.1	1.2	2.8	2.2
20	1.5	3.5		8.1	4.8	6.4	6.8	5.2	3.5	363	2.8	1.8
21	1.4	3.5		5.6	4.5	5.6	6.8	13	3.2	130	20	1.4
22	2.2	3.5		4.8	4.1	6.4	7.7	8.9	2.8	13	23	1.1
23	2.5	3.5	1.0	4.1	4.1	6.8	11	30	6.0	8.1	14	1.1
24	1.8	3.8		4.1	3.8	5.6	7.7	9.5	10	6.0	8.5	1.0
25	1.5	3.8		4.1	3.8	7.3	7.3	7.3	4.1	5.2	12	1.0
26	1.4	3.5		4.1	3.8	6.0	7.7	6.4	109	4.8	9.5	2.5
27	1.2	3.2	32	4.1	3.8	5.6	7.7	5.2	9.5	4.5	10	2.5
28	1.5		20	4.1	3.5	7.7	6.8	4.5	4.1	3.8	7.7	2.2
29	2.8	2.0	8.9	4.5	-------	18	6.0	4.5	2.2	3.8	6.0	1.8
30	2.8		4.1	4.1	-------	14	6.8	4.1	1.4	3.8	4.8	1.8
31	2.8	-------	4.1	3.8	-------	10	-------	250	-------	3.8	3.5	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	3.2	1.0	1.84	0.086	0.10
November	5.2	1.5	3.13	.147	.16
December	32	-------	3.81	.179	.21
January	42	2.8	5.93	.278	.32
February	8.1	3.5	4.52	.212	.22
March	18	3.8	7.46	.350	.40
April	43	6.0	12.0	.563	.63
May	250	4.1	15.8	.742	.86
June	109	1.4	12.0	.563	.63
July	363	1.2	20.4	.958	1.10
August	100	1.5	12.2	.573	.66
September	2.8	1.0	1.84	.086	.10
The year	363	1.0	8.45	.397	5.39

RAPPAHANNOCK RIVER BASIN

RAPPAHANNOCK RIVER AT KELLYS FORD, VA.

LOCATION.—Chain gage at highway bridge at Kellys Ford, Culpeper County, 2 miles above mouth of Mountain Run and 5 miles south of Remington.
DRAINAGE AREA.—641 square miles.
RECORDS AVAILABLE.—February, 1925, to September, 1931.
EXTREMES.—Maximum discharge during year, 2,560 second-feet Aug. 10 (gage height, 6.41 feet); minimum, 1 second-foot Oct. 7, 10–25.
1925–1931: Maximum discharge, 18,600 second-feet Oct. 23, 1929 (gage height, 20.65 feet); minimum, that of Oct. 7, 10–25, 1930.
REMARKS.—Records good. Discharge estimated Nov. 28–30, Dec. 31 to Jan. 2, Jan. 21, 22.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4	15	48	30	43	70	535	123	818	8[illegible]	68	108
2	3	16	39	25	30	92	990	126	558	13[illegible]	70	88
3	3	15	20	21	21	139	874	126	466	16[illegible]	56	224
4	3	18	16	66	18	90	512	100	321	7[illegible]	16	491
5	2	24	22	134	20	83	401	90	249	54	535	224
6	2	28	28	1,300	16	77	340	81	216	5[illegible]	182	88
7	2	27	41	656	28	77	444	191	188	1,51[illegible]	100	136
8	2	28	44	249	35	173	512	1,370	200	38[illegible]	88	82
9	2	16	50	120	77	535	466	990	266	17[illegible]	86	61
10	1	15	52	88	137	340	422	340	173	9[illegible]	1,860	65
11	1	14	54	88	148	216	380	422	128	12[illegible]	305	69
12	1	15	50	98	150	170	340	380	112	14[illegible]	194	61
13	1	20	48	92	100	134	266	932	118	10[illegible]	147	69
14	1	26	48	50	77	126	249	1,370	197	83	158	55
15	1	22	22	58	64	112	232	818	340	105	185	43
16	1	27	10	54	72	131	197	582	266	126	142	34
17	1	32	10	64	70	115	185	512	179	105	65	43
18	1	39	20	58	83	95	185	444	134	1,230	61	41
19	1	35	26	66	92	88	173	340	95	466	73	29
20	1	37	22	54	105	98	128	302	88	216	82	38
21	1	34	18	40	112	98	128	340	79	145	78	38
22	1	30	16	25	112	115	188	466	58	176	356	41
23	1	27	20	26	118	321	321	874	56	110	818	40
24	1	28	14	34	105	194	284	656	72	153	491	305
25	1	28	13	39	66	164	216	444	66	134	374	191
26	6	32	26	43	66	134	216	360	75	137	874	170
27	12	30	108	62	72	115	216	340	98	10[illegible]	631	272
28	13	30	200	77	60	142	162	266	88	70	491	170
29	15	25	191	72	-------	422	156	216	88	6[illegible]	430	98
30	15	25	60	64	-------	558	139	185	81	5[illegible]	356	47
31	15	-------	40	44	-------	466	-------	167	-------	83	139	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	15	1	3.7	0.0058	0.01
November	39	14	25.3	.03[illegible]	.04
December	200	10	44.4	.069	.08
January	1,300	21	126	.197	.23
February	150	16	74.9	.117	.12
March	558	70	184	.287	.33
April	990	128	329	.51[illegible]	.57
May	1,370	81	450	.70[illegible]	.81
June	818	56	196	.306	.34
July	1,510	52	214	.334	.39
August	1,860	16	307	.47[illegible]	.55
September	491	29	114	.17[illegible]	.20
The year	1,860	1	173	.270	3.67

RAPPAHANNOCK RIVER NEAR FREDERICKSBURG, VA.

LOCATION.—Water-stage recorder 1½ miles above dam of Virginia Electric & Power Co. and 3½ miles above Fredericksburg, Spottsylvania County.
DRAINAGE AREA.—1,590 square miles.
RECORDS AVAILABLE.—September, 1907, to September, 1931.
EXTREMES.—Maximum discharge during year, 4,190 second-feet May 23 (gage height, 3.77 feet); minimum, 5 second-feet Oct. 11, 12 (gage height, −0.23 foot.)
1907–1931: Maximum discharge, about 66,000 second-feet May 13, 1924 (gage height, 16.5 feet); minimum, that of Oct. 11, 12, 1930.
REMARKS.—Records good except those estimated, Nov. 27 to Dec. 7, Mar. 31 to Apr. 10, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	48	130	215	150	206	1,700	361	2,820	219	195	316
2	20	45	130	163	143	284	2,700	338	2,120	459	163	255
3	16	52	85	147	140	403	2,100	333	1,310	779	140	260
4	11	60	80	150	134	355	1,400	333	846	318	117	1,010
5	10	55	70	163	140	306	1,200	328	669	210	203	1,030
6	10	51	110	815	131	265	1,100	300	571	196	609	441
7	11	62	130	1,590	140	241	1,400	290	502	2,010	290	300
8	11	63	147	933	126	260	1,400	1,160	441	1,310	195	246
9	11	65	196	536	156	1,190	1,300	2,420	525	556	131	202
10	8	87	191	386	212	920	1,100	1,250	510	350	648	180
11	5	75	156	363	367	603	942	899	415	265	619	166
12	5	59	123	275	361	441	836	730	355	300	290	150
13	10	67	109	260	275	367	720	1,100	322	344	265	137
14	10	85	112	277	250	316	635	3,440	333	285	206	137
15	9	77	104	206	210	306	587	2,020	836	265	191	123
16	11	77	90	169	199	300	540	1,390	619	932	250	107
17	10	83	81	163	184	328	495	1,030	540	670	188	104
18	10	85	92	153	202	322	467	826	467	1,140	137	97
19	10	85	87	184	246	295	467	712	373	1,030	137	95
20	11	109	73	202	311	285	428	635	311	454	123	99
21	18	102	102	240	344	280	385	811	270	333	316	97
22	16	102	109	232	361	285	403	1,390	237	391	391	85
23	15	92	96	188	328	610	940	3,050	224	344	2,470	138
24	15	95	85	166	275	806	857	2,210	248	1,280	1,700	240
25	12	73	90	163	246	571	619	1,190	413	1,070	786	410
26	15	77	120	163	224	467	510	1,040	333	448	1,100	314
27	18	85	120	169	215	403	480	1,060	312	275	2,700	250
28	28	100	326	173	199	350	467	982	510	206	1,510	425
29	33	70	540	159	------	1,350	428	644	350	169	915	285
30	39	75	367	169	------	2,000	385	532	255	153	532	169
31	45	------	296	166	------	1,200	------	830	------	173	409	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	45	5	15.3	0.0096	0.01
November	109	45	75.4	.047	.05
December	540	70	147	.092	.11
January	1,590	147	301	.189	.22
February	367	126	224	.141	.15
March	2,000	206	526	.331	.38
April	2,700	385	900	.566	.63
May	3,440	290	1,080	.679	.78
June	2,820	224	601	.378	.42
July	2,010	153	546	.343	.40
August	2,700	117	578	.364	.42
September	1,030	85	261	.164	.18
The year	3,440	5	440	.277	3.75

RAPIDAN RIVER AT RAPIDAN, VA.

LOCATION.—Staff gage 1,000 feet below highway bridge in Rapidar, Culpeper County, and 2 miles below Robinson Branch.

DRAINAGE AREA.—446 square miles.

RECORDS AVAILABLE.—February, 1925, to February, 1931 (discontinued).

EXTREMES.—Maximum discharge during period, 1,040 second-feet Jan. 6 (gage height, 3.36 feet); minimum, 4 second-feet Oct. 2 (gage height, −0.12 foot). 1925–1931: Maximum discharge, 12,400 second-feet Nov. 16, 1926 (gage height, 16.66 feet); minimum, that of Oct. 2, 1930.

REMARKS.—Records good except those for low flows, which are fair. Low-water flow regulated by small mill above gage.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Day	Oct.	Nov.	Dec.	Jan.	Feb.
1	9	10	40	69	69	16	8	28	20	50	56
2	6	8	109	57	68	17	11	38	15	49	69
3	5	17	21	45	50	18	7	36	23	76	85
4	6	17	18	64	51	19	7	40	45	72	132
5	6	51	23	113	47	20	11	31	38	95	137
6	5	12	30	685	39	21	11	24	36	73	------
7	6	11	111	223	50	22	6	13	48	29	------
8	7	14	76	145	51	23	12	28	38	35	------
9	7	9	48	95	58	24	12	31	36	43	------
10	6	32	41	82	155	25	7	15	37	72	------
11	6	36	42	61	124	26	8	17	52	53	------
12	7	10	45	98	80	27	10	31	209	50	------
13	6	16	30	84	64	28	13	20	143	68	------
14	8	16	28	68	68	29	8	15	118	88	------
15	8	10	32	58	73	30	10	27	57	25	------
						31	10	------	70	60	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	13	5	8.0	0.018	0.02
November	51	8	22.1	.050	.06
December	209	15	54.2	.122	.14
January	685	25	93.1	.209	.24
February 1–20	155	39	76.3	.171	.13

RAPIDAN RIVER NEAR CULPEPER, VA.

LOCATION.—Water-stage recorder at highway bridge 8½ miles south of Culpeper, Culpeper County, and half a mile above Cedar Run.
DRAINAGE AREA.—465 square miles.
RECORDS AVAILABLE.—November, 1930, to September, 1931.
EXTREMES.—Maximum discharge during period, 1,900 second-feet May 23 (gage height, 4.25 feet); minimum, 10 second-feet Nov. 22 (gage height, 0.43 foot).
REMARKS.—Records excellent. Discharge estimated Dec. 16, 17. Low-water flow regulated by mill at Rapidan.

Daily and monthly discharge, in second-feet, 1930–31

Day	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	------	53	47	64	99	664	159	569	80	95	102
2	------	62	55	60	162	913	153	471	99	54	101
3	------	44	62	66	142	585	161	341	83	80	338
4	------	45	59	62	126	471	154	276	65	59	794
5	------	31	102	68	112	424	140	242	71	221	232
6	------	57	535	45	105	411	125	222	90	111	141
7	------	69	280	74	93	552	159	195	191	67	112
8	------	96	161	44	287	490	714	212	222	63	92
9	------	77	115	79	353	425	495	237	116	45	84
10	------	50	92	137	239	433	373	182	107	39	72
11	------	46	85	137	173	412	318	157	118	69	67
12	------	60	97	109	146	371	295	140	105	60	62
13	------	56	86	105	133	332	892	134	116	70	55
14	------	33	76	95	123	300	907	364	100	69	55
15	------	27	63	81	115	281	543	356	96	115	53
16	------	40	64	84	114	254	425	325	188	47	49
17	48	50	76	81	110	228	349	258	80	73	48
18	52	72	67	95	101	228	306	204	148	51	52
19	48	54	78	136	96	207	278	172	142	45	52
20	43	61	107	141	99	189	256	150	172	213	41
21	54	36	85	121	102	178	454	121	124	107	47
22	25	44	63	111	94	197	447	136	149	396	51
23	36	64	66	106	248	263	1,190	132	92	980	47
24	62	42	63	98	202	237	537	336	679	349	102
25	49	20	66	95	170	206	420	207	271	213	75
26	27	52	70	94	158	190	370	126	126	439	74
27	37	208	68	90	143	208	482	272	96	742	223
28	49	141	66	78	149	193	315	133	83	304	96
29	30	118	69	------	600	176	261	115	70	182	64
30	32	87	64	------	547	170	231	105	77	148	54
31	------	72	59	------	382	------	283	------	79	124	------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
November 17–30	62	25	42.3	0.091	0.05
December	208	20	63.5	.137	.16
January	535	47	98.3	.211	.24
February	141	44	91.3	.196	.20
March	600	93	185	.398	.46
April	913	170	340	.731	.82
May	1,190	125	393	.845	.97
June	569	105	230	.495	.55
July	679	65	137	.295	.34
August	980	39	182	.391	.45
September	794	41	114	.245	.27

YORK RIVER BASIN

NORTH ANNA RIVER NEAR DOSWELL, VA.

LOCATION.—Water-stage recorder at old Ox Ford, half a mile above highway bridge on United States route No. 1 and 2 miles north of Doswell, Caroline County. Staff gage used prior to Nov. 7, 1930.

DRAINAGE AREA.—439 square miles.

RECORDS AVAILABLE.—March, 1929, to September, 1931.

EXTREMES.—Maximum discharge during year, 1,730 second-feet June 2 (gage height, 6.16 feet); minimum, 4 second-feet Oct. 18–23, 26–28.

1929–1931: Maximum discharge, 6,270 second-feet Oct. 24, 1929 (gage height, 17.72 feet); minimum, 4 second-feet Aug. 29, Sept. 13, Oct. 18–23, 26–28, 1930.

REMARKS.—Records good except those estimated, which are fair.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6	14	23	e 60	56	86	309	113	842	54		76
2	6	15	e 20	e 55	55	191	766	108	1,370	47	e 40	64
3	6	10	e 25	e 50	54	233	654	113	535	199		58
4	6	33	e 25	48	51	157	368	116	248	86	e 100	90
5	6	16	e 30	58	52	126	318	104	185	62	e 170	134
6	5	28	36	270	48	104	426	99	152	56	e 120	97
7	6	24	56	395	51	93	702	108	131	71	e 97	73
8	6	24	60	182	49	93	872	267	116	130	e 80	55
9	6	e 25	75	118	56	206	518	500	111	80	e 70	52
10	5	e 25	62	118	86	270	325	293	104	174	e 60	46
11	6	e 25	48	108	212	160	258	224	90	245	e 200	37
12	5	26	42	73	152	126	218	218	84	168	e 320	39
13	6	18	38	78	104	106	188	637	78	126	e 160	32
14	6	13	37	71	93	95	171	1,400	69	71	e 99	34
15	5	22	35	e 65	82	97	160	670	109	58	e 80	36
16	5	24	36	e 65	75	113	150	361	215	60		25
17	5	26	47	60	75	131	142	242	126	574	e 60	30
18	4	34	44	56	82	134	137	200	99	e 410		35
19	4	27	35	64	111	118	139	168	80	e 250		39
20	4	35	e 35	76	124	118	137	147	67	e 170	e 120	24
21	4	32	e 30	101	121	134	124	552	58	e 110	439	32
22	4	31	e 35	90	121	139	126	1,020	56	e 70	872	42
23	4	30	e 35	97	113	331	194	1,310	109	e 60	1,050	29
24	6	25	e 35	71	97	569	233	1,080	338	e 218	471	24
25	5	32	e 30	60	88	309	174	405	174	e 100	174	39
26	4	30	46	62	82	218	147	258	108	e 150	121	82
27	4	26	61	58	78	182	152	236	80	e 270	782	468
28	4	e 25	191	62	73	152	152	194	80	e 120	312	206
29	6	e 25	166	61	-------	351	139	157	82	e 70	177	99
30	7	25	121	60	-------	872	126	134	64	e 60	124	56
31	13	-------	e 90	58	-------	419	-------	118	-------	e 49	97	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October	13	4	5.5	0.013	0.01
November	35	10	24.8	.056	.06
December	191	20	53.2	.121	.14
January	395	48	91.9	.209	.24
February	212	48	87.2	.199	.21
March	872	86	208	.474	.55
April	872	124	284	.647	.72
May	1,400	99	373	.850	.98
June	1,370	56	199	.453	.51
July	574	47	141	.321	.37
August	1,050	-------	215	.490	.56
September	468	24	71.8	.164	.18
The year	1,400	4	147	.337	4.53

e Estimated.

SOUTH ANNA RIVER NEAR ASHLAND, VA.

LOCATION.—Water-stage recorder at highway bridge 5 miles northeast of Ashland, Hanover County, and 5 miles above Newfound River.
DRAINAGE AREA.—393 square miles.
RECORDS AVAILABLE.—October, 1930, to September, 1931.
EXTREMES.—Maximum discharge during period, 2,200 second-feet May 23 (gage height, 8.79 feet); minimum, 8 second-feet Oct. 27 (gage height, 1.29 feet).
REMARKS.—Records excellent except those estimated, Oct. 26, Nov. 4, 5, May 4–12, Sept. 13–15, which are good. Low-water flow regulated by gristmills above.

Daily and monthly discharge, in second-feet, 1930–31

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-------	19	31	83	52	157	341	106	939	67	50	85
2	-------	20	31	75	50	221	524	104	1,670	51	39	74
3	-------	12	37	76	56	268	722	108	1,590	42	36	66
4	-------	15	34	56	45	198	394	110	379	38	95	69
5	-------	20	32	56	49	145	341	100	234	52	144	56
6	-------	24	34	131	47	117	724	100	180	164	130	58
7	-------	27	57	271	48	101	906	100	152	161	323	59
8	-------	31	58	192	53	108	1,050	250	134	56	112	51
9	-------	15	36	111	49	129	643	500	124	67	76	49
10	-------	29	45	89	85	204	380	300	114	70	54	43
11	-------	30	46	108	124	180	283	240	104	111	218	47
12	-------	22	40	94	147	129	228	230	101	104	297	48
13	-------	21	40	78	120	105	194	268	89	110	99	40
14	-------	23	43	70	102	96	174	450	84	121	110	40
15	-------	24	44	79	88	104	159	472	81	76	99	30
16	-------	25	39	76	77	117	147	290	216	74	77	22
17	-------	38	47	78	84	145	139	200	397	77	66	24
18	-------	30	58	69	112	134	139	159	152	297	60	22
19	-------	30	53	66	139	120	145	139	98	89	67	22
20	-------	30	45	79	131	114	132	126	84	62	122	22
21	-------	27	53	84	114	114	122	467	73	55	202	20
22	-------	25	51	73	117	131	126	1,070	67	70	352	24
23	10	28	46	81	116	280	163	1,540	64	58	408	22
24	10	31	45	72	101	552	182	1,230	66	116	460	24
25	10	30	51	75	96	367	166	549	106	96	221	24
26	10	26	48	62	89	225	141	290	104	132	127	27
27	11	33	67	63	81	180	141	245	87	233	464	83
28	17	31	73	60	78	157	129	420	99	110	413	106
29	15	32	89	56	-------	326	127	245	102	76	228	84
30	22	24	93	57	-------	775	117	170	83	63	131	57
31	15	-------	90	54	-------	504	-------	247	-------	52	94	-------

Month	Maximum	Minimum	Mean	Per square mile	Run-off in inches
October 23–31	22	10	13.3	0.034	0.01
November	38	12	25.7	.065	.07
December	93	31	50.2	.128	.15
January	271	54	86.3	.220	.25
February	147	45	87.5	.223	.23
March	775	96	210	.534	.62
April	1,050	117	306	.779	.87
May	1,540	100	349	.888	1.02
June	1,670	64	259	.659	.74
July	297	38	95.2	.242	.28
August	464	36	173	.440	.51
September	106	20	46.6	.119	.13

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 Sept. 30, 1931

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
Oct. 30	Kennebec River	Atlantic Ocean	Augusta, Me	4.38	5,080
May 1	do	do	Waterville, Me		10,100
Jan. 29	Moose River	Kennebec River	Rockwood, Me	3.05	211
Feb. 8	do	do	do	2.90	176
Oct. 26	Glens Falls feeder	Hudson River	Gage No. 2, Glens Falls, N. Y.	280.48	175
May 9	do	do	do	277.09	148
July 2	do	do	do	280.15	178
Aug. 2	do	do	do	280.03	162
Sept. 10	do	do	do	280.00	169
Oct. 26	do	do	Gage No. 3, Glens Falls, N. Y.	280.08	168
Apr. 13	do	do	do	277.22	154
22	do	do	do	277.24	147
May 9	do	do	do	277.82	142
18[a]	do	do	do	277.10	155
June 16[a]	do	do	do	277.04	154
July 2	do	do	do	277.40	144
Aug. 2	do	do	do	277.91	145
7[a]	do	do	do	277.55	163
Sept. 10	do	do	do	277.06	160
May 9	do	do	Dunhams Basin, N. Y	147.71	102
May 14	Maurice River	Delaware Bay	Norma, N. J		132
Aug. 10	do	do	do		20.6
Sept. 1	do	do	do		96
23	do	do	do		35.4
Aug. 10	Crosswicks Creek	Delaware River	Ellisdale, N. J	−1.64	19.0
Sept. 1	do	do	do	−1.23	39.8
23	do	do	do	−1.52	27.2
Aug. 10	Haynes Creek	Rancocas River	Eayrestown, N. J		11.2
Sept. 1	do	do	do		46.2
23	do	do	do		13.4
Oct. 2	West Branch of Woodbury Creek.	Woodbury Creek	Woodbury, N. J		.7
May 4	Mantua Creek	Delaware River	Salina, N. J		10.9
Aug. 10	do	do	do		9.3
Sept. 1	do	do	do		9.7
23	do	do	do		7.4
May 4	Salem Creek	do	Woodstown, N. J		5.6
Dec. 16	Gunpowder Falls	Gunpowder River	Highway bridge on Falls road below Prettyboy dam site, near Weisburg, Md.		35.2
16	do	do	Above Little Falls at Bluemount, Md.		26.7
16	do	do	do		25.3
16	do	do	Glencoe, Md		14.9
17	do	do	do		37.7
15	do	do	Phoenix, Md		62.0
17	do	do	do		44.7
Jan. 28	do	do	do	.99	91.2
28	do	do	do	.99	90.1
Feb. 26	do	do	do	.975	82.3
Mar. 26	do	do	do	1.04	98.4
Apr. 29	do	do	do	1.02	90.2
May 28	do	do	do	1.00	84.2
Dec. 16	Little Falls	Gunpowder Falls	Mouth, at Bluemount, Md		20.2
15	Greens Branch	do	Mouth, near Phoenix, Md		1.3
Jan. 28	do	do	do		1.79
Feb. 26	do	do	do		1.53
Mar. 26	do	do	do		2.22
Apr. 29	do	do	do		2.09
May 28	do	do	do		2.1
28	Western Run	do	Western Run, Md		28.3

[a] Made by engineers of the New York State Department of Public Works.

Miscellaneous discharge measurements in North Atlantic slope drainage basins during the year ending Sept. 30, 1931—Continued

Date	Stream	Tributary to or diverting from—	Locality	Gage height	Discharge
				Feet	*Sec.-ft.*
Dec. 17	Western Run	Gunpowder Falls	Above Beaver Dam Run, near Ashland, Md.		27.8
Jan. 28	do	do	do	1.00	30.4
Feb. 26	do	do	do	.88	28.1
26	do	do	do	.96	38.2
Mar. 26	do	do	do	.89	31.6
Apr. 29	do	do	do	.86	31.4
May 28	do	do	Ashland, Md		36.3
Dec. 15	do	do	Below Beaver Dam Run, near Ashland, Md.		40.7
15	Beaver Dam Run	Western Run	Mouth, near Ashland, Md		10.1
17	do	do	do		8.7
Jan. 28	do	do	Cockeysville, Md		10.1
Feb. 26	do	do	do		9.54
Mar. 26	do	do	do		10.3
Apr. 29	do	do	do		9.1
May 28	do	do	do		9.17
Feb. 26	Fitzhugh Run	Gunpowder Falls	Near Bosley, Md		.34
Mar. 26	do	do	do		.64
Apr. 29	do	do	do		.71
May 28	do	do	do		.74
Jan. 28	Long Quarter Branch	Peterson Run	Near Towson, Md		.59
Feb. 26	do	do	do		.52
Mar. 26	do	do	do		.79
Apr. 29	do	do	do		.90
May 28	do	do	do		.80
Jan. 28	Dulaney Valley Branch.	Gunpowder Falls	Near Dulaney Valley, Md		1.00
Feb. 26	do	do	do		.89
Mar. 26	do	do	do		.91
Apr. 29	do	do	do		.91
May 28	do	do	do		1.21
Nov. 19	North Branch of Potomac River.	Potomac River	Cresaptown, Md		36.6
6	Potomac River	Chesapeake Bay	Above junction with Shenandoah River.		329
4	do	do	Brunswick, Md		576
6	do	do	do		833
June 18	Stoney River	North Branch of Potomac River.	Below Stoney River Dam, W. Va. (gate closed).		2.8
18	do	do	Below Stoney River Dam, W. Va. (4-inch gate opening).		19.0
18	do	do	Below Stoney River Dam, W. Va. (8-inch gate opening).		36.8
18	do	do	Below Stoney River Dam, W. Va. (10-inch gate opening).		46.8
18	do	do	Below Stoney River Dam, W. Va. (12-inch gate opening).		57.0
18	Unnamed creek	Stoney River	Mouth, just below Stoney River Dam.		2.2
Nov. 18	Chesapeake & Ohio Canal.	North Branch of Potomac River.	Head gates, Cumberland, Md.		18.0
Mar. 12	do	do	do		18.8
May 14	do	do	do		48.5
Sept. 19	do	do	do		32.0
19	Spillway of Chesapeake & Ohio Canal.	Chesapeake & Ohio Canal.	1 mile above gaging station near Cumberland, Md.		11.9
Nov. 8	Antietam Creek	Potomac River	Near Emmertsville, Md		42.7
8	do	do	Antietam, Md		63.5
6	Chesapeake & Ohio Canal.	do	Harpers Ferry, W. Va		50.0
6	do	do	Brunswick, Md		35.8
1	do	do	Point of Rocks, Md		50.5
6	Shenandoah River	do	Railroad bridge of Riverton Lime Co., Front Royal, Va.		252
6	do	do	Mouth, Harpers Ferry, W. Va.		332
5	Mossy Creek	North River	Above Todd Spring, near Mount Solon, Va.		2.1
5	do	do	Below Todd Spring, near Mount Solon, Va.		10.5
6	North Fork of Shenandoah River.	Shenandoah River	Highway bridge at Riverton station of Southern Railway, Va.		103

INDEX