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UNITED STATES DEPARTMENT OF THE INTERIOR

SURFACE WATER SUPPLY
of the **UNITED STATES**
1929

PART I
NORTH ATLANTIC SLOPE
DRAINAGE BASINS

Prepared in cooperation with the States of
MAINE, NEW HAMPSHIRE, MASSACHUSETTS, CONNECTICUT, VERMONT
NEW YORK, NEW JERSEY, MARYLAND, and VIRGINIA

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 681

UNITED STATES DEPARTMENT OF THE INTERIOR
RAY LYMAN WILBUR, Secretary
GEOLOGICAL SURVEY
GEORGE OTIS SMITH, Director

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SURFACE WATER SUPPLY *of the* UNITED STATES 1929

PART I NORTH ATLANTIC SLOPE DRAINAGE BASINS

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Prepared in cooperation with the States of
MAINE, NEW HAMPSHIRE, MASSACHUSETTS, CONNECTICUT
VERMONT, NEW YORK, NEW JERSEY, MARYLAND
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ILLUSTRATION

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

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SURFACE WATER SUPPLY OF NORTH ATLANTIC SLOPE DRAINAGE BASINS, 1929

AUTHORIZATION AND SCOPE OF WORK

This volume is one of a series of 14 reports presenting records of measurements of flow made on streams in the United States during the years ending September 30, 1929.

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, 1895-1930

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

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

Measurements of stream flow have been made at about 5,830 points in the United States and also at many points in Alaska and the Hawaiian Islands. In July, 1929, 2,240 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 1 foot per second. It is generally used as a fundamental unit from which others are computed.

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

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

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

The following terms not in common use are here defined:

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

“Control,” a term used to designate the section or 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, 1928, and ending September 30, 1929. 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

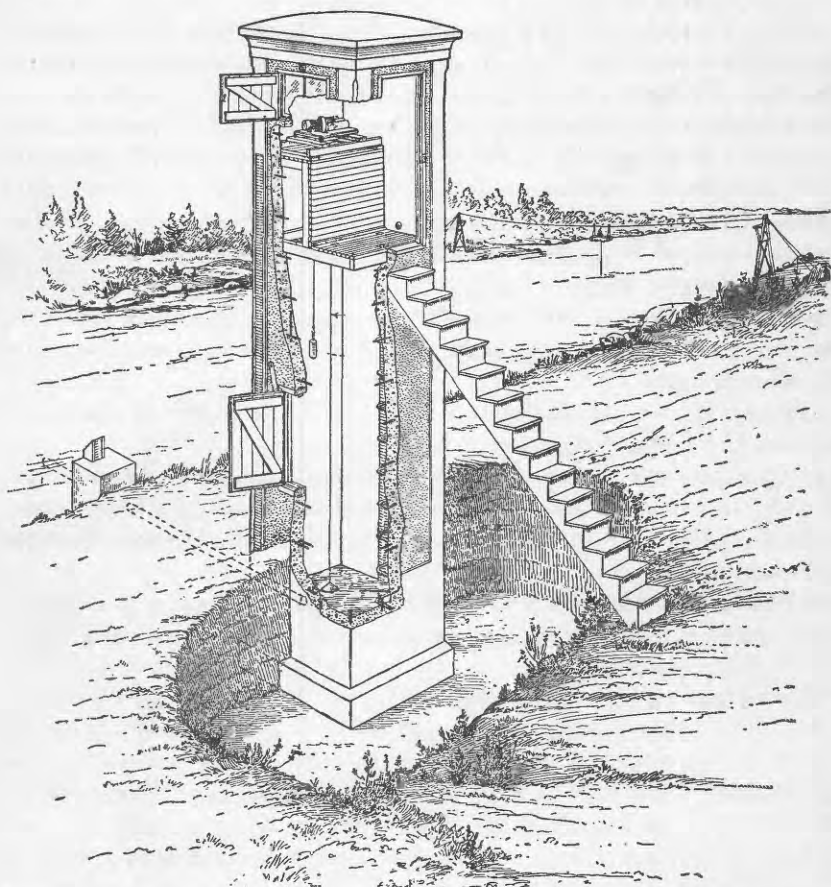


FIGURE 1.—Typical river measurement station showing concrete well and house for water-stage recorder and staff gages, cable, and car

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.

From the discharge measurements rating tables are prepared that give the discharge for any stage. 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 discharge, 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 unless 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 the 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," 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 result of stream flow measurements are now published annually in 12 parts, each part covering an area whose boundaries coincide with natural drainage features as indicated below:

PART I. North Atlantic slope basins (St. John River to York River).

II. South Atlantic slope and eastern Gulf of Mexico basins (James River to the Mississippi).

III. Ohio River Basin.

IV. St. Lawrence River Basin.

V. Hudson Bay and upper Mississippi River Basins.

VI. Missouri River Basin.

VII. Lower Mississippi River Basin.

VIII. Western Gulf of Mexico basins.

IX. Colorado River Basin.

X. The Great Basin.

XI. Pacific slope basins in California.

PART XII. North Pacific slope 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., 60 Washington Street.
 Albany, N. Y., 506 Broadway, Arcade Building.
 Trenton, N. J., 710 Trenton Trust Building.
 Charlottesville, Va., Brooks Museum, University of Virginia.
 South Charleston, W. Va., Naval Ordnance Plant.
 Asheville, N. C., 210 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.
 Lansing, Mich., M9 State Office Building.
 Chicago, Ill., 1503 Consumers 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.
 Tucson, Ariz., 210 Post Office Building.
 Denver, Colo., 403 Post Office Building.
 Salt Lake City, Utah, 313 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's publications may be obtained by applying to the Director, United States Geological Survey, Washington, D. C.

Stream-flow records have been obtained at about 5,830 points in the United States, and the data obtained have been published in the reports tabulated below.

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 and 1894. |
| 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..... | Description, measurements, ratings, and monthly discharge (also similar data for some earlier years)..... | 1895 and 1906. |
| W 15..... | Descriptions, measurements, and gage heights, eastern United States, eastern Mississippi River, and Missouri River above junction with Kansas..... | 1897. |
| W 16..... | Descriptions, measurements, and gage heights, western Mississippi River below junction of Missouri and Platte, and western United States..... | 1897. |
| 19th A, pt. 4..... | Description, 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. |

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 1929. The date for any particular station will, as a rule, be found in the reports covering the years during which the station was maintained. For example, data for 1910 to 1920 for any station in the area covered by Part III 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.

[For basins included see p. 5]

PUBLICATIONS

| Year | I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII-A | XII-B | XII-C |
|---------|---------------|-----|--------|--------|--------|----------|--------|--------|--------|----------|--------|--------|--------|--------|
| 1899 | 35 | 36 | 36 | 36 | 36 | 36, 37 | 37 | 37 | 37, 38 | 38, 39 | 38, 39 | 38 | 38 | 38 |
| 1900 | 47, 48 | 48 | 48, 49 | 49 | 49 | 49, 50 | 50 | 50 | 50 | 51 | 51 | 51 | 51 | 51 |
| 1901 | 65, 75 | 75 | 65, 75 | 65, 75 | 65, 75 | 65, 75 | 65, 75 | 65, 75 | 65, 75 | 66, 75 | 66, 75 | 66, 75 | 66, 75 | 66, 75 |
| 1902 | 83, 85 | 85 | 83, 85 | 83, 85 | 83, 85 | 83, 85 | 83, 85 | 83, 85 | 83, 85 | 85 | 85 | 85 | 85 | 85 |
| 1903 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 100 | 100 | 100 | 100 | 100 |
| 1904 | 124, 125, 126 | 126 | 126 | 126 | 126 | 126, 127 | 127 | 127 | 127 | 133 | 133 | 133 | 133 | 133 |
| 1905 | 165, 166, 167 | 167 | 167 | 167 | 167 | 167, 168 | 168 | 168 | 168 | 176, 177 | 177 | 177 | 177 | 177 |
| 1906 | 201, 202, 203 | 203 | 203 | 203 | 203 | 203, 204 | 204 | 204 | 204 | 212, 213 | 213 | 213 | 213 | 213 |
| 1907-8 | 241 | 242 | 243 | 244 | 245 | 245 | 247 | 248 | 249 | 250, 251 | 251 | 252 | 252 | 252 |
| 1909 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270, 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 | 332-B | 332-C |
| 1913 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 362-A | 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 |

* Loup and Platte Rivers near Columbus, Nebr., and all tributaries below junction with Platte.
 * Tributaries of Mississippi from east.
 * Lake Ontario and tributaries to St. Lawrence River proper.
 * Hudson Bay only.
 * New England rivers only.
 * Hudson River to Delaware River, inclusive.
 * Susquehanna River to Yackin River, inclusive.
 * Platte and Kansas Rivers.
 * Great Basin in California, except Truckee and Carson River Basins.
 * Below junction with Gila.
 * Rogue, Umpqua, and Siletz Rivers only.

* Rating tables and index to Water-Supply Papers 35-39 contained in Water-Supply Paper 39. Tables for monthly discharge for 1899 in Twenty-first Annual Report, Part IV.
 * James River only.
 * Gallatin River.
 * Green and Gunnison Rivers and Grand River above junction with Gunnison.
 * Mohave River only.
 * Kings and Kern Rivers and south Pacific slope basins.
 * Rating tables and index to Water-Supply Papers 47-52 and data on precipitation wells, and irrigation in California and Utah contained in Water-Supply Paper 52. Tables of monthly discharge for 1900 in Twenty-second Annual Report, Part IV.
 * Wissahickon and Schuylkill Rivers to James River.
 * Scioto River.

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DIVISION OF WORK

The data for stations in Maine and those on the Androscoggin and Saco Rivers in New Hampshire were collected and prepared for publication under the direction of M. R. Stackpole, district engineer, assisted by G. K. Wood, L. W. Furness, Alice L. Barentzen, and Frances F. Giddings.

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The manuscript was assembled and reviewed by Warren Withee.

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, 1929.

EXTREMES.—Maximum discharge during year, 78,200 second-feet May 6 (gage height, 19.0 feet); minimum, 1,330 second-feet Sept. 7-11 (gage height, 1.80 feet).

1926-1929: Maximum discharge, 90,000 second-feet May 8, 1928 (gage height, 20.7 feet); minimum, 990 second-feet Mar. 6 and 9, 1927.

REMARKS.—Records good except those for periods of ice effect (Dec. 13-17, 22-27, and Dec. 31 to Apr. 15), which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|--------|--------|-------|-------|-------|-------|--------|--------|--------|--------|-------|-------|
| 1----- | 2,600 | 8,450 | 6,120 | 4,230 | 3,800 | 1,740 | 4,790 | 65,200 | 14,700 | 10,100 | 2,600 | 1,890 |
| 2----- | 2,600 | 7,940 | 5,090 | 4,140 | 3,640 | 1,690 | 4,690 | 57,000 | 18,400 | 9,240 | 2,600 | 1,690 |
| 3----- | 2,870 | 6,990 | 5,700 | 4,140 | 3,100 | 1,690 | 4,790 | 48,400 | 16,100 | 7,450 | 2,350 | 1,590 |
| 4----- | 3,020 | 6,550 | 5,910 | 4,230 | 3,020 | 1,590 | 4,890 | 61,500 | 15,000 | 7,450 | 2,110 | 1,590 |
| 5----- | 2,870 | 6,990 | 5,290 | 4,410 | 2,800 | 1,590 | 4,990 | 77,500 | 15,000 | 7,220 | 2,230 | 1,410 |
| 6----- | 2,870 | 6,990 | 5,290 | 4,410 | 2,730 | 1,690 | 4,990 | 78,200 | 13,400 | 6,990 | 2,870 | 1,410 |
| 7----- | 2,840 | 6,990 | 5,290 | 4,410 | 2,730 | 1,690 | 5,090 | 78,200 | 15,700 | 6,770 | 3,170 | 1,330 |
| 8----- | 3,020 | 6,990 | 5,290 | 4,500 | 2,660 | 1,640 | 5,290 | 76,800 | 16,100 | 7,450 | 3,020 | 1,330 |
| 9----- | 3,020 | 6,770 | 4,890 | 4,500 | 2,660 | 1,640 | 5,700 | 69,900 | 13,700 | 9,780 | 3,480 | 1,330 |
| 10----- | 3,170 | 6,770 | 4,690 | 4,500 | 2,600 | 1,590 | 6,990 | 61,800 | 12,400 | 13,400 | 3,170 | 1,330 |
| 11----- | 3,480 | 5,290 | 4,890 | 4,500 | 2,540 | 1,640 | 10,100 | 55,000 | 11,200 | 11,800 | 2,470 | 1,330 |
| 12----- | 3,800 | 5,090 | 4,500 | 4,500 | 2,470 | 1,690 | 14,000 | 54,300 | 10,600 | 10,300 | 2,470 | 1,410 |
| 13----- | 4,500 | 4,320 | 4,690 | 4,890 | 2,410 | 1,590 | 15,000 | 61,100 | 11,800 | 8,970 | 3,480 | 1,590 |
| 14----- | 4,500 | 4,140 | 4,790 | 4,890 | 2,350 | 1,590 | 15,900 | 62,500 | 11,800 | 7,690 | 5,910 | 3,480 |
| 15----- | 4,500 | 4,140 | 4,690 | 4,690 | 2,350 | 1,590 | 17,200 | 54,300 | 10,600 | 7,220 | 5,490 | 3,480 |
| 16----- | 4,500 | 4,890 | 4,500 | 4,320 | 2,230 | 1,590 | 18,800 | 45,200 | 12,400 | 7,220 | 4,890 | 4,890 |
| 17----- | 4,320 | 4,890 | 4,140 | 4,140 | 2,230 | 1,590 | 19,600 | 42,700 | 13,100 | 6,770 | 6,120 | 5,490 |
| 18----- | 4,140 | 5,910 | 3,970 | 3,970 | 2,170 | 1,590 | 18,800 | 43,400 | 11,800 | 6,120 | 6,550 | 4,890 |
| 19----- | 5,290 | 8,450 | 3,970 | 3,970 | 2,110 | 1,640 | 19,200 | 38,500 | 10,100 | 5,700 | 5,490 | 4,140 |
| 20----- | 14,400 | 10,600 | 4,140 | 4,320 | 2,060 | 1,700 | 24,100 | 34,300 | 8,710 | 5,700 | 5,290 | 4,140 |
| 21----- | 18,400 | 15,400 | 4,690 | 4,410 | 2,000 | 1,950 | 23,100 | 31,500 | 7,450 | 5,700 | 3,480 | 3,970 |
| 22----- | 16,800 | 17,200 | 5,490 | 4,500 | 2,000 | 2,350 | 24,600 | 29,800 | 6,550 | 5,700 | 2,870 | 3,480 |
| 23----- | 13,700 | 15,700 | 5,700 | 5,290 | 1,890 | 2,800 | 26,600 | 25,600 | 6,120 | 4,890 | 2,350 | 2,870 |
| 24----- | 11,200 | 13,700 | 5,700 | 5,600 | 1,890 | 3,240 | 26,600 | 23,100 | 5,700 | 4,140 | 2,600 | 2,230 |
| 25----- | 13,100 | 11,200 | 5,290 | 5,490 | 1,890 | 4,060 | 27,100 | 21,300 | 5,290 | 3,480 | 2,600 | 1,790 |
| 26----- | 18,400 | 9,510 | 4,990 | 5,490 | 1,840 | 4,790 | 27,100 | 19,200 | 6,120 | 3,170 | 3,170 | 1,690 |
| 27----- | 17,600 | 6,550 | 4,790 | 5,290 | 1,790 | 5,290 | 32,600 | 18,000 | 10,300 | 2,730 | 4,500 | 1,690 |
| 28----- | 14,400 | 6,120 | 4,690 | 5,190 | 1,790 | 5,290 | 41,600 | 16,500 | 14,400 | 2,600 | 2,600 | 1,500 |
| 29----- | 11,800 | 5,910 | 4,690 | 4,890 | ----- | 5,190 | 49,700 | 15,000 | 14,400 | 2,870 | 3,020 | 1,500 |
| 30----- | 10,900 | 6,330 | 4,690 | 4,500 | ----- | 5,090 | 68,100 | 13,700 | 10,100 | 3,020 | 2,470 | 1,410 |
| 31----- | 9,780 | ----- | 4,410 | 3,800 | ----- | 4,890 | ----- | 14,400 | ----- | 2,870 | 2,110 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|--------|-----------------|-------------------|
| October----- | 18,400 | 2,600 | 7,690 | 1.35 | 1.56 |
| November----- | 17,200 | 4,140 | 7,890 | 1.39 | 1.55 |
| December----- | 6,120 | 3,970 | 4,930 | .866 | 1.00 |
| January----- | 5,600 | 3,800 | 4,580 | .805 | .93 |
| February----- | 3,800 | 1,790 | 2,420 | .425 | .44 |
| March----- | 5,290 | 1,590 | 2,510 | .441 | .51 |
| April----- | 63,100 | 4,690 | 18,900 | 3.32 | 3.70 |
| May----- | 78,200 | 13,700 | 45,000 | 7.91 | 9.12 |
| June----- | 18,400 | 5,290 | 11,600 | 2.04 | 2.28 |
| July----- | 13,400 | 2,600 | 6,600 | 1.16 | 1.34 |
| August----- | 6,550 | 2,110 | 3,470 | .610 | .70 |
| September----- | 5,490 | 1,330 | 2,400 | .422 | .47 |
| The year----- | 78,200 | 1,330 | 9,890 | 1.74 | 23.60 |

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, 1929.

EXTREMES.—Maximum discharge during period, 1,870 second-feet May 13 (gage height, 7.07 feet); minimum, 154 second-feet Sept. 28–30 (gage height, 3.47 feet).

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

Daily and monthly discharge, in second-feet, 1928–29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|------|-------|-------|------|-------|-------|-------|-------|-------|
| 1 | | 332 | 525 | 408 | 472 | 1,100 | 682 | 255 | 1,330 | 502 | 1,050 | 730 |
| 2 | | 336 | 805 | 416 | 670 | 1,070 | 682 | 257 | 1,330 | 507 | 1,050 | 705 |
| 3 | | 336 | 805 | 420 | 882 | 1,070 | 660 | 263 | 1,360 | 507 | 1,020 | 705 |
| 4 | | 336 | 805 | 424 | 882 | 1,050 | 660 | 281 | 1,300 | 502 | 1,020 | 705 |
| 5 | | 339 | 805 | 416 | 882 | 1,020 | 660 | 311 | 1,300 | 498 | 992 | 682 |
| 6 | | 342 | 805 | 412 | 882 | 992 | 660 | 455 | 1,300 | 498 | 992 | 682 |
| 7 | | 360 | 780 | 444 | 882 | 965 | 660 | 755 | 1,300 | 498 | 961 | 682 |
| 8 | | 360 | 780 | 448 | 882 | 965 | 638 | 1,020 | 1,300 | 498 | 938 | 682 |
| 9 | | 360 | 780 | 456 | 882 | 965 | 400 | 1,070 | 1,270 | 502 | 938 | 660 |
| 10 | | 360 | 780 | 460 | 882 | 938 | 180 | 1,280 | 1,270 | 502 | 910 | 660 |
| 11 | | 356 | 780 | 464 | 1,050 | 938 | 182 | 1,420 | 1,270 | 507 | 882 | 660 |
| 12 | | 356 | 780 | 472 | 1,420 | 910 | 182 | 1,540 | 1,240 | 470 | 882 | 660 |
| 13 | | 495 | 755 | 476 | 1,420 | 910 | 183 | 1,870 | 1,240 | 244 | 882 | 638 |
| 14 | | 830 | 755 | 480 | 1,420 | 882 | 185 | 1,800 | 1,240 | 665 | 882 | 638 |
| 15 | | 830 | 755 | 480 | 1,310 | 855 | 187 | 1,700 | 1,220 | 1,020 | 855 | 638 |
| 16 | | 830 | 755 | 480 | 1,220 | 855 | 188 | 1,630 | 1,220 | 1,020 | 855 | 638 |
| 17 | | 830 | 730 | 480 | 1,220 | 830 | 190 | 1,630 | 1,220 | 1,020 | 855 | 385 |
| 18 | | 830 | 730 | 480 | 1,220 | 830 | 196 | 1,540 | 1,190 | 1,020 | 830 | 167 |
| 19 | | 805 | 755 | 480 | 1,220 | 780 | 202 | 1,540 | 1,190 | 992 | 830 | 167 |
| 20 | | 830 | 755 | 480 | 1,220 | 780 | 208 | 1,540 | 1,190 | 1,070 | 830 | 166 |
| 21 | | 830 | 755 | 480 | 1,220 | 780 | 215 | 1,440 | 1,160 | 1,130 | 805 | 164 |
| 22 | | 328 | 830 | 755 | 480 | 1,220 | 755 | 222 | 1,360 | 1,160 | 830 | 162 |
| 23 | | 332 | 830 | 470 | 480 | 1,160 | 755 | 224 | 1,360 | 1,130 | 1,160 | 162 |
| 24 | | 336 | 805 | 385 | 476 | 1,160 | 730 | 224 | 1,330 | 1,130 | 1,190 | 161 |
| 25 | | 336 | 740 | 755 | 476 | 1,160 | 730 | 228 | 1,330 | 1,100 | 1,190 | 161 |
| 26 | | 339 | 472 | 755 | 476 | 1,130 | 730 | 233 | 1,330 | 1,100 | 1,160 | 160 |
| 27 | | 336 | 472 | 755 | 476 | 1,130 | 730 | 238 | 1,330 | 1,100 | 1,160 | 158 |
| 28 | | 336 | 472 | 625 | 472 | 1,100 | 705 | 244 | 1,330 | 1,070 | 1,130 | 154 |
| 29 | | 336 | 468 | 380 | 472 | ----- | 705 | 244 | 1,330 | 1,070 | 1,130 | 154 |
| 30 | | 336 | 472 | 384 | 472 | ----- | 705 | 252 | 1,330 | 720 | 1,100 | 730 |
| 31 | | 336 | ----- | 396 | 472 | ----- | 682 | ----- | 1,330 | ----- | 1,070 | 730 |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|---------------|---------|---------|-------|-----------------|-------------------|
| October 22–31 | 339 | 328 | 335 | 0.770 | 0.29 |
| November | 880 | 332 | 561 | 1.29 | 1.44 |
| December | 805 | 380 | 593 | 1.40 | 1.84 |
| January | 480 | 408 | 462 | 1.06 | 1.22 |
| February | 1,420 | 472 | 1,080 | 2.48 | 2.58 |
| March | 1,100 | 682 | 862 | 1.98 | 2.28 |
| April | 682 | 180 | 337 | .775 | .86 |
| May | 1,870 | 255 | 1,190 | 2.74 | 3.16 |
| June | 1,360 | 720 | 1,200 | 2.76 | 3.08 |
| July | 1,190 | 244 | 827 | 1.90 | 2.19 |
| August | 1,050 | 730 | 868 | 2.00 | 2.31 |
| September | 780 | 154 | 441 | 1.01 | 1.13 |

ST. CROIX RIVER NEAR BAILEYVILLE, ME.

LOCATION.—Water-stage recorder below power house of St Croix Paper Co. at Grand Falls, $3\frac{1}{2}$ miles east of Baileyville, Washington County.

DRAINAGE AREA.—1,320 square miles.

RECORDS AVAILABLE.—November, 1919, to September, 1929.

EXTREMES.—Maximum discharge during year, 9,510 second-feet May 4 (gage height, 6.90 feet); minimum, 155 second-feet June 23 (gage height, 1.05 feet).

1919-1929: Maximum discharge, about 23,300 second-feet May 1, 1923 (gage height, 13.90 feet); minimum (estimated), 100 second-feet Dec. 9, 1923 and July 20 and 27, 1924.

REMARKS.—Records good except those for Nov. 9, 24-26, Dec. 1-5, 31, Jan. 1, Feb. 14-18, 22-27, Mar. 12, and Sept. 1, which were estimated. About 30,000,000,000 cubic feet of storage is developed above station.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 1,940 | 1,460 | 1,390 | 2,650 | 1,450 | 2,150 | 2,180 | 6,900 | 2,860 | 1,550 | 1,560 | 845 |
| 2 | 1,720 | 1,530 | 1,250 | 2,680 | 1,450 | 2,300 | 2,600 | 6,900 | 2,860 | 1,340 | 1,570 | 798 |
| 3 | 1,350 | 1,690 | 1,380 | 2,750 | 1,020 | 1,560 | 2,600 | 5,320 | 3,560 | 1,340 | 1,580 | 1,310 |
| 4 | 1,440 | 1,600 | 1,390 | 2,600 | 1,360 | 2,100 | 2,380 | 8,180 | 3,480 | 1,270 | 1,230 | 1,490 |
| 5 | 1,460 | 1,530 | 1,380 | 2,220 | 1,420 | 2,600 | 2,450 | 7,990 | 3,400 | 1,640 | 1,360 | 1,510 |
| 6 | 1,330 | 1,590 | 1,330 | 2,260 | 1,360 | 2,620 | 2,520 | 7,620 | 3,240 | 1,990 | 1,160 | 1,530 |
| 7 | 1,350 | 1,510 | 1,370 | 2,490 | 1,360 | 2,630 | 1,410 | 7,080 | 3,160 | 1,430 | 1,310 | 1,580 |
| 8 | 1,410 | 1,480 | 1,420 | 2,680 | 1,350 | 2,600 | 2,170 | 6,900 | 3,320 | 1,600 | 1,350 | 1,640 |
| 9 | 1,400 | 1,440 | 1,440 | 2,380 | 1,470 | 2,750 | 2,520 | 6,720 | 2,860 | 1,850 | 1,400 | 1,350 |
| 10 | 1,420 | 1,400 | 1,560 | 2,220 | 1,090 | 1,590 | 2,680 | 6,000 | 3,320 | 1,850 | 1,420 | 1,380 |
| 11 | 1,330 | 1,420 | 1,490 | 2,220 | 1,410 | 2,350 | 2,750 | 5,820 | 3,090 | 1,780 | 1,440 | 1,520 |
| 12 | 1,380 | 1,440 | 1,490 | 1,940 | 1,440 | 2,630 | 2,820 | 5,280 | 2,640 | 1,780 | 1,340 | 1,310 |
| 13 | 1,410 | 1,460 | 1,480 | 1,470 | 2,010 | 2,630 | 2,750 | 5,640 | 2,340 | 1,780 | 1,230 | 1,260 |
| 14 | 1,360 | 1,690 | 1,280 | 1,370 | 2,040 | 2,630 | 1,970 | 4,920 | 2,200 | 1,270 | 1,360 | 1,140 |
| 15 | 1,480 | 1,560 | 1,410 | 1,410 | 2,030 | 2,630 | 2,520 | 5,100 | 2,270 | 1,780 | 1,360 | 1,160 |
| 16 | 1,370 | 1,620 | 1,260 | 1,440 | 2,000 | 2,600 | 2,750 | 5,280 | 1,850 | 1,780 | 1,270 | 1,130 |
| 17 | 1,330 | 1,560 | 1,350 | 1,510 | 1,350 | 1,340 | 3,050 | 5,280 | 1,780 | 1,600 | 1,320 | 1,120 |
| 18 | 1,450 | 1,450 | 1,440 | 1,420 | 1,940 | 2,050 | 4,560 | 4,740 | 1,720 | 1,850 | 1,350 | 1,100 |
| 19 | 1,360 | 1,650 | 1,490 | 1,720 | 1,870 | 2,520 | 6,360 | 3,800 | 1,620 | 1,780 | 1,580 | 1,090 |
| 20 | 1,940 | 1,700 | 1,440 | 1,560 | 1,830 | 2,600 | 6,540 | 4,740 | 1,460 | 1,580 | 1,560 | 1,120 |
| 21 | 2,080 | 1,620 | 1,490 | 1,490 | 1,860 | 2,380 | 6,360 | 4,920 | 1,300 | 1,430 | 1,650 | 1,180 |
| 22 | 2,220 | 1,700 | 1,590 | 1,600 | 1,850 | 2,520 | 5,740 | 4,570 | 1,270 | 1,530 | 1,480 | 846 |
| 23 | 2,220 | 1,620 | 1,380 | 1,530 | 1,850 | 2,750 | 5,120 | 4,230 | 1,310 | 1,780 | 1,430 | 1,090 |
| 24 | 2,150 | 1,650 | 1,770 | 1,520 | 1,240 | 1,410 | 4,780 | 4,230 | 1,420 | 1,650 | 1,420 | 1,200 |
| 25 | 2,220 | 1,400 | 1,580 | 1,530 | 1,900 | 2,300 | 4,460 | 4,400 | 1,170 | 1,570 | 858 | 1,170 |
| 26 | 2,520 | 1,670 | 1,510 | 1,480 | 1,900 | 2,600 | 5,530 | 4,230 | 1,120 | 1,580 | 1,530 | 1,160 |
| 27 | 2,600 | 1,620 | 1,520 | 1,200 | 2,080 | 2,600 | 7,260 | 4,400 | 1,290 | 1,720 | 1,400 | 1,160 |
| 28 | 1,720 | 1,600 | 1,730 | 1,560 | 2,150 | 2,300 | 7,080 | 3,720 | 1,230 | 1,490 | 1,610 | 1,230 |
| 29 | 1,600 | 1,360 | 2,600 | 1,590 | ----- | 2,220 | 7,440 | 3,160 | 1,250 | 1,580 | 1,550 | 922 |
| 30 | 1,440 | 1,460 | 2,630 | 1,580 | ----- | 2,220 | 7,800 | 2,860 | 1,530 | 1,570 | 1,400 | 1,090 |
| 31 | 1,510 | ----- | 2,700 | 1,450 | ----- | 1,210 | ----- | 2,940 | ----- | 1,780 | 1,510 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 2,600 | 1,330 | 1,660 | 1.26 | 1.45 |
| November | 1,700 | 1,360 | 1,550 | 1.17 | 1.30 |
| December | 2,700 | 1,250 | 1,570 | 1.19 | 1.37 |
| January | 2,750 | 1,200 | 1,860 | 1.41 | 1.63 |
| February | 2,150 | 1,020 | 1,640 | 1.24 | 1.29 |
| March | 2,750 | 1,210 | 2,310 | 1.75 | 2.02 |
| April | 7,800 | 1,410 | 4,040 | 3.06 | 3.41 |
| May | 8,180 | 2,860 | 5,290 | 4.01 | 4.62 |
| June | 3,560 | 1,120 | 2,200 | 1.67 | 1.86 |
| July | 1,990 | 1,270 | 1,630 | 1.23 | 1.42 |
| August | 1,650 | 858 | 1,410 | 1.07 | 1.23 |
| September | 1,640 | 798 | 1,210 | .917 | 1.02 |
| The year | 8,180 | 798 | 2,200 | 1.67 | 22.62 |

GRAND LAKE STREAM AT GRAND LAKE STREAM, ME.

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

DRAINAGE AREA.—249 square miles.

RECORDS AVAILABLE.—October, 1928, to September, 1929.

EXTREMES.—Maximum discharge during period, 1,650 second-feet Aug. 10 (gage height, 4.91 feet); minimum, 38 second-feet Dec. 7 (gage height, 1.21 feet).

REMARKS.—Records good except those for periods of ice effect (Dec. 15, Dec. 17 to Jan. 17, and Feb. 21 to Mar. 11), which are fair. Flow regulated by storage in Grand Lake.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-------|------|------|-------|-------|
| 1 | | 214 | 101 | 102 | 394 | 132 | 86 | 123 | 720 | 253 | 241 | 880 |
| 2 | | 212 | 101 | 102 | 394 | 132 | 86 | 134 | 765 | 375 | 241 | 860 |
| 3 | | 156 | 101 | 102 | 394 | 132 | 87 | 280 | 770 | 516 | 241 | 845 |
| 4 | | 138 | 101 | 102 | 394 | 132 | 87 | 715 | 760 | 511 | 244 | 830 |
| 5 | | 102 | 101 | 102 | 390 | 132 | 87 | 710 | 750 | 511 | 244 | 815 |
| 6 | | 110 | 101 | 102 | 390 | 116 | 87 | 1,270 | 735 | 506 | 244 | 795 |
| 7 | | 110 | 101 | 102 | 390 | 76 | 91 | 1,510 | 725 | 340 | 241 | 790 |
| 8 | | 169 | 101 | 102 | 394 | 76 | 91 | 1,500 | 725 | 235 | 241 | 780 |
| 9 | | 169 | 101 | 102 | 390 | 76 | 92 | 1,480 | 720 | 235 | 241 | 765 |
| 10 | | 169 | 101 | 102 | 390 | 76 | 89 | 1,290 | 425 | 235 | 295 | 755 |
| 11 | | 166 | 101 | 102 | 390 | 76 | 89 | 780 | 272 | 235 | 98 | 750 |
| 12 | | 166 | 101 | 102 | 245 | 76 | 91 | 415 | 275 | 232 | 98 | 730 |
| 13 | | 171 | 101 | 102 | 132 | 76 | 91 | 770 | 275 | 235 | 100 | 715 |
| 14 | | 169 | 101 | 102 | 132 | 76 | 92 | 750 | 275 | 238 | 365 | 700 |
| 15 | | 169 | 102 | 102 | 132 | 78 | 92 | 760 | 275 | 241 | 588 | 700 |
| 16 | | 169 | 101 | 102 | 132 | 78 | 130 | 760 | 259 | 241 | 588 | 686 |
| 17 | | 169 | 102 | 102 | 132 | 78 | 200 | 760 | 247 | 241 | 583 | 673 |
| 18 | | 169 | 102 | 265 | 132 | 78 | 103 | 745 | 244 | 241 | 578 | 345 |
| 19 | | 171 | 102 | 418 | 132 | 78 | 101 | 750 | 244 | 441 | 860 | 52 |
| 20 | 232 | 102 | 102 | 414 | 132 | 81 | 100 | 755 | 244 | 241 | 1,100 | 51 |
| 21 | 220 | 60 | 102 | 406 | 132 | 81 | 100 | 750 | 247 | 241 | 1,070 | 49 |
| 22 | 212 | 78 | 102 | 406 | 132 | 82 | 101 | 750 | 247 | 241 | 1,040 | 48 |
| 23 | 200 | 101 | 102 | 406 | 132 | 81 | 100 | 755 | 250 | 241 | 1,020 | 48 |
| 24 | 174 | 103 | 102 | 406 | 132 | 81 | 98 | 750 | 250 | 241 | 1,010 | 46 |
| 25 | 174 | 103 | 102 | 402 | 132 | 81 | 100 | 760 | 250 | 244 | 996 | 45 |
| 26 | 238 | 103 | 102 | 402 | 132 | 82 | 107 | 760 | 253 | 244 | 972 | 45 |
| 27 | 230 | 101 | 102 | 402 | 132 | 82 | 107 | 755 | 253 | 244 | 954 | 44 |
| 28 | 229 | 101 | 102 | 398 | 132 | 82 | 103 | 410 | 250 | 244 | 942 | 44 |
| 29 | 235 | 101 | 102 | 398 | | 84 | 117 | 253 | 256 | 244 | 924 | 44 |
| 30 | 226 | 100 | 102 | 398 | | 84 | 121 | 253 | 253 | 244 | 906 | 184 |
| 31 | 217 | | 102 | 394 | | 86 | | 530 | | 241 | 890 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|---------------|---------|---------|------|-----------------|-------------------|
| October 20-31 | 238 | 174 | 216 | 0.867 | 0.39 |
| November | 214 | 60 | 137 | .550 | .61 |
| December | 102 | 101 | 102 | .410 | .47 |
| January | 418 | 102 | 234 | .940 | 1.08 |
| February | 394 | 132 | 238 | .956 | 1.00 |
| March | 132 | 76 | 89.1 | .358 | .41 |
| April | 200 | 86 | 101 | .406 | .45 |
| May | 1,510 | 123 | 741 | 2.98 | 3.44 |
| June | 770 | 244 | 407 | 1.63 | 1.82 |
| July | 516 | 232 | 283 | 1.14 | 1.31 |
| August | 1,100 | 98 | 586 | 2.35 | 2.71 |
| September | 880 | 44 | 470 | 1.89 | 2.11 |

MACHIAS RIVER BASIN

EAST MACHIAS RIVER NEAR EAST MACHIAS, ME.

LOCATION.—Staff gage just below outlet of Hadley Lake and 3 miles above village of East Machias in town of East Machias, Washington County. Zero of gage is 36.00 feet above mean sea level.

DRAINAGE AREA.—234 square miles.

RECORDS AVAILABLE.—October, 1926, to September, 1929.

EXTREMES.—Maximum discharge during year, 2,140 second-feet May 23 and 24; minimum, 64 second-feet Aug. 6.

1926–1929: Maximum discharge, that of May 23 and 24, 1929; minimum, 58 second-feet Oct. 4 and 5, 1926 (gage height, 0.66 foot).

REMARKS.—Records good except those for estimated periods, which are fair. Possibly slight regulation at station.

Daily and monthly discharge, in second-feet, 1928–29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|------|-------|-------|------|-------|---------|---------|-------|-------|-------|
| 1..... | • 146 | 282 | 256 | 672 | 381 | 178 | 596 | 1,850 | • 1,913 | 318 | 170 | 131 |
| 2..... | • 152 | 269 | 256 | 712 | 366 | 167 | 754 | 1,850 | • 1,913 | 358 | 170 | 127 |
| 3..... | • 152 | 268 | 256 | 672 | 336 | 167 | 736 | 1,850 | • 1,823 | 372 | 160 | • 124 |
| 4..... | • 160 | 282 | 269 | 672 | 322 | 167 | 798 | 1,850 | • 1,623 | 387 | • 100 | 123 |
| 5..... | • 154 | 282 | 282 | 634 | 308 | 178 | 798 | 1,850 | 1,463 | 387 | • 68 | • 122 |
| 6..... | • 152 | 282 | 308 | 672 | 282 | 220 | 798 | 1,980 | 1,193 | 387 | • 64 | • 120 |
| 7..... | • 152 | 295 | 322 | 892 | 282 | 256 | 798 | 1,980 | 1,083 | 387 | • 65 | • 120 |
| 8..... | • 146 | 269 | 322 | 982 | 308 | 282 | 892 | 1,920 | 969 | 372 | • 67 | 120 |
| 9..... | • 142 | 269 | 322 | 942 | 322 | 295 | 992 | 1,850 | 843 | 372 | • 66 | 120 |
| 10..... | • 136 | 244 | 336 | 942 | 336 | 308 | 1,090 | 1,720 | 753 | 358 | • 67 | 123 |
| 11..... | • 132 | 244 | 322 | 942 | 351 | 295 | 1,090 | 1,650 | 665 | 331 | • 68 | 123 |
| 12..... | • 126 | 232 | 308 | 892 | 351 | 295 | 1,090 | 1,510 | 625 | 318 | • 72 | 120 |
| 13..... | • 126 | 220 | 295 | 798 | 351 | 295 | 1,090 | 1,440 | 583 | 306 | • 72 | 120 |
| 14..... | 130 | 208 | 282 | 754 | 336 | 295 | 1,040 | 1,320 | 513 | 294 | • 74 | 123 |
| 15..... | 125 | 197 | 269 | 672 | 308 | 308 | 992 | • 1,380 | 483 | 283 | • 74 | 127 |
| 16..... | 120 | 186 | 256 | 634 | 308 | 308 | 942 | • 1,570 | 483 | 272 | • 76 | 131 |
| 17..... | 120 | 186 | 244 | • 600 | 282 | 322 | 1,140 | • 1,720 | 453 | • 260 | • 77 | 131 |
| 18..... | 125 | 197 | 351 | 596 | 269 | 322 | 1,510 | • 1,820 | 413 | 250 | • 78 | 147 |
| 19..... | 136 | 197 | 458 | 634 | 256 | 322 | 1,510 | • 1,950 | 372 | 261 | • 78 | 160 |
| 20..... | 143 | • 220 | 491 | 712 | 244 | 336 | 1,720 | • 2,050 | 353 | 250 | • 81 | • 166 |
| 21..... | 167 | • 240 | 596 | 754 | 232 | 381 | 1,720 | • 2,080 | 331 | 230 | • 132 | 170 |
| 22..... | 167 | 256 | 634 | 754 | 232 | 426 | 1,720 | • 2,130 | 313 | 221 | • 132 | 170 |
| 23..... | 186 | 282 | 634 | 712 | 220 | 491 | 1,650 | • 2,140 | 294 | 213 | • 134 | 165 |
| 24..... | 244 | 282 | 596 | 634 | 208 | 560 | 1,580 | • 2,140 | 283 | 205 | • 140 | 165 |
| 25..... | 256 | 282 | 560 | 596 | 197 | 560 | 1,440 | • 2,090 | 272 | 199 | • 144 | 160 |
| 26..... | 282 | 282 | 525 | 560 | 186 | 596 | 1,530 | • 2,090 | 272 | 199 | 156 | 160 |
| 27..... | 282 | 269 | 491 | 525 | 186 | 560 | 1,850 | • 2,060 | 257 | 188 | 147 | 156 |
| 28..... | 282 | 256 | 491 | • 480 | 186 | 560 | 1,750 | • 2,020 | 250 | 183 | 147 | 152 |
| 29..... | 308 | 244 | 596 | 426 | ----- | 560 | 1,850 | • 1,960 | 243 | 183 | 139 | 147 |
| 30..... | 308 | 232 | 672 | 426 | ----- | 560 | 1,920 | • 1,940 | 283 | 178 | 135 | 143 |
| 31..... | 295 | ----- | 712 | 396 | ----- | 560 | ----- | • 1,920 | ----- | 174 | 135 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 308 | 120 | 179 | 0.765 | 0.88 |
| November..... | 295 | 186 | 248 | 1.06 | 1.18 |
| December..... | 712 | 244 | 410 | 1.75 | 2.02 |
| January..... | 992 | 396 | 687 | 2.94 | 3.39 |
| February..... | 381 | 186 | 284 | 1.21 | 1.26 |
| March..... | 596 | 167 | 359 | 1.53 | 1.76 |
| April..... | 1,920 | 596 | 1,250 | 5.34 | 5.96 |
| May..... | 2,140 | 1,320 | 1,860 | 7.95 | 9.16 |
| June..... | 1,910 | 240 | 710 | 3.08 | 3.38 |
| July..... | 387 | 174 | 281 | 1.20 | 1.38 |
| August..... | 170 | 64 | 106 | .453 | .62 |
| September..... | 170 | 120 | 139 | .594 | .66 |
| The year..... | 2,140 | 64 | 545 | 2.33 | 31.65 |

• 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 to September, 1929. July, 1909, to September, 1919, at site 1 mile below.

EXTREMES.—Maximum discharge during period July to September, 1929, 59 second-feet July 16 (gage height, 3.59 feet); minimum, 10 second-feet Sept. 28 (gage height, 3.10 feet).

REMARKS.—Records good. Some storage on lakes.

Daily and monthly discharge, in second-feet, 1929

| Day | July | Aug. | Sept. | Day | July | Aug. | Sept. | Day | July | Aug. | Sept. |
|---------|------|------|-------|---------|------|------|-------|---------|------|------|-------|
| 1..... | | 22 | 23 | 11..... | | 21 | 18 | 21..... | 44 | 18 | 13 |
| 2..... | | 22 | 22 | 12..... | | 22 | 15 | 22..... | 41 | 18 | 12 |
| 3..... | | 20 | 21 | 13..... | | 22 | 15 | 23..... | 38 | 18 | 11 |
| 4..... | | 32 | 20 | 14..... | | 21 | 16 | 24..... | 36 | 34 | 11 |
| 5..... | | 30 | 19 | 15..... | | 23 | 15 | 25..... | 35 | 25 | 11 |
| 6..... | | 24 | 19 | 16..... | 59 | 23 | 14 | 26..... | 32 | 23 | 11 |
| 7..... | | 22 | 20 | 17..... | 56 | 21 | 14 | 27..... | 29 | 23 | 11 |
| 8..... | | 22 | 20 | 18..... | 50 | 20 | 16 | 28..... | 28 | 24 | 10 |
| 9..... | | 22 | 18 | 19..... | 50 | 22 | 15 | 29..... | 28 | 25 | 11 |
| 10..... | | 21 | 18 | 20..... | 49 | 18 | 14 | 30..... | 26 | 24 | 11 |
| | | | | | | | | 31..... | 23 | 24 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------------|---------|---------|------|-----------------|-------------------|
| July 16-31..... | 59 | 23 | 39.0 | 0.281 | 0.17 |
| August..... | 34 | 18 | 22.8 | .164 | .19 |
| September..... | 23 | 10 | 15.5 | .112 | .12 |

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, 1929.

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 of West Branch of Penobscot River at Millinocket, Me., 1928-29

| Month | Discharge in second-feet | | | Corrected run-off in inches |
|----------------|--------------------------|-----------------------|-----------------|-----------------------------|
| | Observed Mean | Corrected for storage | | |
| | | Mean | Per square mile | |
| October..... | 3, 260 | 2, 800 | 1. 47 | 1. 70 |
| November..... | 3, 290 | 4, 240 | 2. 22 | 2. 48 |
| December..... | 3, 150 | 2, 350 | 1. 23 | 1. 42 |
| January..... | 3, 180 | 1, 880 | . 984 | 1. 13 |
| February..... | 3, 180 | 1, 460 | . 764 | . 80 |
| March..... | 3, 120 | 815 | . 427 | . 49 |
| April..... | 3, 730 | 7, 430 | 3. 89 | 4. 34 |
| May..... | 4, 010 | 9, 570 | 5. 01 | 5. 78 |
| June..... | 4, 270 | 3, 790 | 1. 98 | 2. 21 |
| July..... | 3, 240 | 1, 950 | 1. 02 | 1. 18 |
| August..... | 3, 090 | 1, 360 | . 712 | . 82 |
| September..... | 3, 200 | 728 | . 381 | . 42 |
| The year..... | 3, 390 | 3, 200 | 1. 68 | 22. 77 |

WEST BRANCH OF PENOBSCOT RIVER NEAR MEDWAY, ME.

LOCATION.—Water-stage recorder just above Nichatou Rapids, half 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, 1929.

EXTREMES.—Maximum discharge during year, 12,400 second-feet June 4 (gage height, 6.87 feet); minimum, 545 second-feet Sept. 2 (gage height, 1.28 feet).

1916–1929: Maximum discharge, 24,100 second-feet May 27, 1928 (gage height, 9.64 feet); minimum (estimated), 100 second-feet during 1923 and 1924.

REMARKS.—Records good except those for periods of ice effect (Jan. 3–5 and Jan. 8 to Feb. 23) and those for July 5 and Aug. 15–20, which were estimated. Flow regulated by storage reservoirs above station.

Daily and monthly discharge, in second-feet, 1928–29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|
| 1----- | 3,540 | 3,540 | 3,870 | 3,760 | 3,540 | 3,540 | 3,420 | 5,420 | 5,270 | 3,440 | 3,240 | 3,080 |
| 2----- | 3,650 | 3,650 | 3,520 | 3,650 | 3,440 | 3,340 | 3,540 | 5,420 | 6,310 | 3,240 | 3,650 | 2,240 |
| 3----- | 3,650 | 3,870 | 3,540 | 3,630 | 3,380 | 2,960 | 4,210 | 5,860 | 6,620 | 3,340 | 3,240 | 3,140 |
| 4----- | 3,540 | 3,330 | 3,540 | 3,540 | 3,460 | 3,060 | 4,590 | 6,780 | 7,560 | 2,040 | 2,970 | 3,150 |
| 5----- | 3,440 | 3,540 | 3,870 | 3,420 | 3,380 | 3,340 | 4,590 | 5,160 | 10,800 | 2,970 | 3,060 | 3,240 |
| 6----- | 3,590 | 3,650 | 3,870 | 3,270 | 3,320 | 3,440 | 4,590 | 4,460 | 7,780 | 3,440 | 3,240 | 3,240 |
| 7----- | 3,500 | 3,760 | 3,650 | 3,540 | 3,400 | 3,650 | 4,090 | 5,420 | 6,620 | 2,970 | 3,340 | 3,340 |
| 8----- | 3,440 | 3,650 | 3,760 | 3,910 | 3,520 | 3,540 | 3,770 | 5,420 | 5,560 | 3,240 | 3,150 | 2,870 |
| 9----- | 3,650 | 3,870 | 3,600 | 4,070 | 3,480 | 3,440 | 4,590 | 5,420 | 5,560 | 3,650 | 3,060 | 2,890 |
| 10----- | 3,440 | 3,760 | 3,440 | 4,100 | 2,990 | 3,240 | 5,130 | 5,270 | 5,130 | 3,760 | 3,060 | 2,970 |
| 11----- | 3,540 | 3,540 | 3,540 | 3,980 | 3,380 | 3,440 | 5,270 | 5,130 | 4,720 | 3,760 | 2,970 | 3,240 |
| 12----- | 3,240 | 3,440 | 3,540 | 3,890 | 3,440 | 3,540 | 4,990 | 4,170 | 4,590 | 3,760 | 2,810 | 3,440 |
| 13----- | 3,320 | 3,540 | 3,760 | 3,650 | 3,340 | 3,440 | 4,460 | 3,980 | 4,720 | 3,650 | 2,970 | 3,340 |
| 14----- | 3,290 | 3,650 | 3,650 | 3,800 | 3,320 | 3,540 | 3,980 | 4,990 | 4,590 | 3,330 | 3,060 | 3,240 |
| 15----- | 3,440 | 3,650 | 3,440 | 3,740 | 3,360 | 3,540 | 3,650 | 5,130 | 4,340 | 3,540 | 3,200 | 3,060 |
| 16----- | 3,540 | 3,760 | 3,540 | 3,650 | 3,400 | 3,540 | 4,460 | 4,860 | 4,130 | 3,540 | 3,400 | 2,970 |
| 17----- | 3,540 | 3,760 | 3,540 | 3,690 | 3,360 | 3,270 | 5,560 | 4,990 | 3,650 | 3,440 | 3,200 | 3,240 |
| 18----- | 3,980 | 3,690 | 3,650 | 3,690 | 3,340 | 3,540 | 6,310 | 4,590 | 3,980 | 3,540 | 2,500 | 3,340 |
| 19----- | 4,210 | 3,770 | 3,980 | 3,540 | 3,480 | 3,440 | 6,010 | 4,680 | 4,460 | 3,650 | 3,100 | 3,650 |
| 20----- | 4,460 | 4,100 | 3,870 | 3,540 | 3,460 | 3,340 | 5,560 | 3,980 | 4,460 | 3,540 | 3,100 | 3,540 |
| 21----- | 3,980 | 4,340 | 4,100 | 3,440 | 3,500 | 3,540 | 4,310 | 5,270 | 4,210 | 3,440 | 3,060 | 3,540 |
| 22----- | 3,760 | 4,460 | 3,870 | 3,540 | 3,580 | 3,650 | 4,210 | 5,270 | 4,100 | 3,440 | 3,150 | 3,120 |
| 23----- | 3,760 | 4,340 | 3,540 | 3,720 | 3,540 | 3,540 | 5,130 | 6,780 | 3,720 | 3,440 | 3,060 | 3,340 |
| 24----- | 3,980 | 4,340 | 3,650 | 3,870 | 3,540 | 3,120 | 4,990 | 5,710 | 3,440 | 3,340 | 3,240 | 3,150 |
| 25----- | 3,980 | 3,580 | 2,300 | 3,870 | 3,440 | 3,310 | 4,990 | 4,340 | 3,440 | 3,440 | 2,890 | 3,340 |
| 26----- | 3,980 | 3,540 | 3,380 | 3,670 | 3,540 | 3,650 | 5,420 | 3,770 | 3,540 | 3,340 | 2,890 | 3,650 |
| 27----- | 3,760 | 3,760 | 3,650 | 3,560 | 3,540 | 3,650 | 5,710 | 6,960 | 3,540 | 3,440 | 2,890 | 3,870 |
| 28----- | 3,540 | 3,870 | 3,650 | 3,760 | 3,540 | 3,650 | 4,750 | 4,860 | 3,540 | 3,150 | 3,150 | 3,540 |
| 29----- | 3,540 | 3,980 | 3,540 | 3,580 | ----- | 3,870 | 4,590 | 4,990 | 3,650 | 3,240 | 2,970 | 3,240 |
| 30----- | 3,650 | 3,980 | 3,540 | 3,580 | ----- | 3,870 | 5,710 | 4,860 | 3,440 | 3,540 | 3,060 | 3,150 |
| 31----- | 3,650 | ----- | 3,870 | 3,520 | ----- | 3,620 | ----- | 5,270 | ----- | 3,150 | 3,060 | ----- |

| Month | Observed | | | Corrected for storage | | Run-off in inches |
|----------------|----------|---------|-------|-----------------------|--------------------|----------------------|
| | Maximum | Minimum | Mean | Mean | Per square mile | |
| October----- | 4,460 | 3,240 | 3,660 | 3,200 | 1.51 | 1.74 |
| November----- | 4,460 | 3,330 | 3,790 | 4,740 | 2.24 | 2.50 |
| December----- | 4,100 | 2,300 | 3,620 | 2,820 | 1.33 | 1.53 |
| January----- | 4,100 | 3,270 | 3,680 | 2,370 | 1.12 | 1.29 |
| February----- | 3,580 | 2,990 | 3,430 | 1,710 | .807 | .84 |
| March----- | 3,870 | 2,960 | 3,470 | 1,170 | .552 | .64 |
| April----- | 6,310 | 3,420 | 4,750 | 8,440 | 3.98 | 4.44 |
| May----- | 6,780 | 3,770 | 5,120 | 10,700 | 5.05 | 5.82 |
| June----- | 10,800 | 3,440 | 4,920 | 4,440 | 2.09 | 2.33 |
| July----- | 3,760 | 2,040 | 3,380 | 2,100 | .991 | 1.14 |
| August----- | 3,650 | 2,500 | 3,090 | 1,350 | .637 | .73 |
| September----- | 3,870 | 2,240 | 3,240 | 766 | .361 | .40 |
| The year----- | 10,800 | 2,040 | 3,850 | 3,660 | 1.73 | 23.40 |

PENOBSCOT RIVER AT WEST ENFIELD, ME.

LOCATION.—Water-stage recorder at highway bridge, 1,000 feet below mouth of Piscataquis River and 3 miles west of Enfield, Penobscot County.

DRAINAGE AREA.—6,600 square miles.

RECORDS AVAILABLE.—November, 1901, to September, 1929.

EXTREMES.—Maximum discharge during year, 68,700 second-feet May 4 (gage height, 15.28 feet); minimum, 3,790 second-feet Sept. 8 (gage height, 2.09 feet).

1901-1929: 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 except those for periods of ice effect (Nov. 28 to Dec. 15 and Dec. 24 to Apr. 9) and those for Aug. 15 to Sept. 30, which are fair. Flow regulated by storage on West Branch. Gage-height record furnished by Thomas W. Clark, hydraulic engineer, Old Town, Me.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|--------|-------|--------|--------|--------|--------|-------|-------|-------|
| 1 | 7,470 | 9,120 | 6,960 | 15,400 | 8,580 | 6,200 | 10,800 | 48,200 | 20,300 | 8,270 | 5,290 | 4,420 |
| 2 | 7,730 | 8,830 | 7,470 | 13,900 | 8,490 | 6,170 | 11,900 | 43,100 | 18,600 | 7,210 | 5,290 | 4,320 |
| 3 | 7,470 | 8,830 | 8,270 | 12,800 | 8,300 | 6,170 | 13,000 | 48,200 | 16,500 | 6,960 | 5,400 | 4,100 |
| 4 | 6,960 | 9,120 | 8,550 | 12,200 | 7,860 | 6,150 | 13,500 | 65,000 | 15,800 | 6,580 | 5,520 | 4,320 |
| 5 | 6,710 | 9,410 | 8,830 | 11,500 | 8,140 | 6,170 | 13,400 | 62,200 | 17,300 | 5,520 | 5,400 | 4,520 |
| 6 | 6,340 | 9,410 | 8,830 | 10,800 | 7,310 | 6,220 | 13,500 | 51,000 | 17,700 | 5,750 | 5,290 | 4,630 |
| 7 | 6,220 | 9,410 | 7,730 | 12,500 | 7,290 | 6,270 | 13,900 | 47,500 | 16,200 | 6,340 | 5,400 | 4,630 |
| 8 | 6,340 | 9,120 | 7,210 | 14,900 | 7,470 | 6,320 | 16,000 | 45,500 | 14,600 | 6,960 | 5,400 | 4,320 |
| 9 | 6,460 | 8,830 | 7,600 | 15,000 | 7,600 | 6,390 | 21,600 | 41,900 | 13,600 | 8,830 | 5,290 | 4,740 |
| 10 | 6,580 | 8,830 | 7,730 | 14,200 | 7,370 | 6,360 | 28,000 | 37,100 | 12,200 | 8,830 | 5,180 | 4,320 |
| 11 | 6,580 | 8,270 | 8,410 | 13,400 | 6,810 | 6,270 | 29,100 | 33,500 | 11,900 | 8,270 | 4,850 | 4,320 |
| 12 | 6,580 | 7,730 | 7,730 | 12,500 | 7,010 | 6,360 | 28,000 | 29,100 | 11,500 | 7,730 | 5,400 | 4,520 |
| 13 | 6,580 | 7,470 | 7,730 | 12,000 | 7,390 | 6,860 | 26,000 | 25,500 | 11,200 | 7,210 | 5,400 | 4,740 |
| 14 | 6,840 | 7,470 | 7,840 | 11,300 | 7,420 | 7,080 | 23,000 | 23,500 | 11,200 | 6,840 | 5,400 | 4,960 |
| 15 | 6,840 | 7,470 | 7,680 | 10,700 | 7,470 | 7,500 | 21,200 | 21,600 | 10,300 | 6,580 | 5,290 | 4,520 |
| 16 | 6,960 | 7,470 | 7,730 | 10,200 | 7,440 | 7,840 | 20,700 | 20,300 | 9,700 | 6,840 | 5,290 | 4,850 |
| 17 | 6,960 | 7,730 | 7,470 | 9,350 | 7,340 | 7,950 | 26,500 | 20,300 | 9,120 | 6,840 | 5,400 | 4,630 |
| 18 | 8,830 | 8,830 | 8,550 | 8,950 | 7,060 | 7,890 | 41,900 | 19,800 | 8,000 | 6,580 | 4,630 | 4,740 |
| 19 | 12,200 | 10,300 | 11,200 | 9,090 | 6,840 | 8,490 | 45,500 | 17,700 | 8,270 | 6,580 | 4,630 | 4,520 |
| 20 | 13,900 | 13,900 | 13,200 | 9,530 | 6,980 | 8,690 | 43,100 | 18,600 | 8,270 | 6,710 | 4,630 | 4,740 |
| 21 | 13,900 | 16,200 | 13,200 | 10,800 | 6,860 | 9,210 | 41,300 | 20,300 | 7,730 | 6,710 | 4,740 | 4,850 |
| 22 | 12,500 | 15,400 | 12,200 | 10,800 | 7,010 | 10,000 | 38,300 | 19,800 | 8,000 | 6,460 | 4,630 | 4,420 |
| 23 | 11,500 | 13,600 | 10,600 | 10,600 | 6,960 | 10,300 | 35,900 | 19,400 | 8,270 | 6,220 | 4,630 | 4,520 |
| 24 | 11,200 | 12,500 | 9,120 | 10,800 | 6,910 | 10,400 | 33,500 | 19,000 | 8,000 | 5,980 | 5,180 | 4,630 |
| 25 | 11,900 | 11,900 | 9,120 | 10,300 | 6,610 | 10,200 | 32,400 | 18,200 | 8,000 | 5,980 | 5,290 | 4,520 |
| 26 | 12,500 | 10,600 | 8,270 | 10,400 | 6,460 | 10,400 | 37,100 | 16,900 | 8,270 | 5,750 | 5,180 | 4,320 |
| 27 | 11,900 | 9,410 | 9,000 | 10,000 | 6,410 | 10,600 | 44,300 | 15,800 | 8,270 | 5,520 | 4,740 | 4,520 |
| 28 | 11,200 | 8,550 | 9,260 | 9,440 | 6,270 | 10,500 | 43,700 | 17,300 | 8,270 | 5,520 | 4,740 | 4,630 |
| 29 | 10,900 | 8,000 | 13,200 | 9,730 | ----- | 10,400 | 43,100 | 14,600 | 8,270 | 5,290 | 4,630 | 4,320 |
| 30 | 10,600 | 7,860 | 17,500 | 9,500 | ----- | 10,400 | 53,100 | 13,900 | 8,830 | 5,400 | 4,630 | 4,320 |
| 31 | 10,000 | ----- | 17,300 | 9,120 | ----- | 10,200 | ----- | 17,700 | ----- | 5,400 | 4,630 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|--------|-----------------|-------------------|
| October | 13,900 | 6,220 | 8,990 | 1.36 | 1.57 |
| November | 16,200 | 7,470 | 9,720 | 1.47 | 1.64 |
| December | 17,500 | 6,960 | 9,530 | 1.44 | 1.66 |
| January | 15,400 | 8,950 | 11,300 | 1.71 | 1.97 |
| February | 8,580 | 6,270 | 7,270 | 1.10 | 1.14 |
| March | 10,600 | 6,150 | 8,060 | 1.22 | 1.41 |
| April | 53,100 | 10,800 | 28,800 | 4.36 | 4.86 |
| May | 65,000 | 13,900 | 29,400 | 4.45 | 5.13 |
| June | 20,300 | 7,730 | 11,500 | 1.74 | 1.94 |
| July | 8,830 | 5,290 | 6,630 | 1.00 | 1.15 |
| August | 5,520 | 4,630 | 5,080 | .77 | .89 |
| September | 4,960 | 4,100 | 4,530 | .686 | .77 |
| The year | 65,000 | 4,100 | 11,800 | 1.79 | 24.13 |

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. Prior to June 30, 1929, a chain gage at bridge was used.

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, 1929.

EXTREMES.—Maximum discharge during year, 14,500 second-feet May 4 (gage height, 11.4 feet); minimum, 200 second-feet Sept. 30 (gage height, 4.11 feet). 1902-1929: Maximum discharge, 35,100 second-feet Apr. 30, 1923 (gage height, 16.5 feet); minimum (estimated), 30 second-feet Feb. 28, 1904.

REMARKS.—Records good except those for periods of ice effect (Nov. 27 to Dec. 15 and Dec. 19 to Apr. 9), which are fair. Flow regulated by dams at outlets of several lakes and ponds.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|------|-------|
| 1 | 550 | 975 | 1,420 | 1,910 | 1,000 | 585 | 1,110 | 8,520 | 2,320 | 946 | 608 | 325 |
| 2 | 460 | 975 | 1,370 | 1,850 | 1,000 | 585 | 1,210 | 7,470 | 2,180 | 865 | 564 | 315 |
| 3 | 430 | 930 | 1,310 | 1,840 | 995 | 585 | 1,290 | 8,520 | 2,100 | 804 | 543 | 310 |
| 4 | 400 | 1,020 | 1,250 | 1,810 | 975 | 585 | 1,520 | 14,200 | 2,100 | 780 | 578 | 305 |
| 5 | 400 | 1,060 | 1,180 | 1,780 | 930 | 590 | 1,340 | 11,100 | 2,180 | 764 | 645 | 300 |
| 6 | 430 | 1,020 | 1,190 | 1,700 | 900 | 580 | 1,460 | 10,200 | 2,020 | 982 | 600 | 295 |
| 7 | 430 | 975 | 1,200 | 1,880 | 865 | 585 | 1,540 | 9,060 | 2,100 | 1,610 | 571 | 295 |
| 8 | 460 | 930 | 1,210 | 2,250 | 865 | 615 | 2,250 | 9,060 | 2,020 | 1,840 | 522 | 285 |
| 9 | 460 | 890 | 1,230 | 1,740 | 865 | 605 | 3,860 | 7,730 | 1,920 | 1,750 | 482 | 276 |
| 10 | 520 | 890 | 1,270 | 1,440 | 850 | 585 | 4,650 | 6,730 | 1,810 | 1,610 | 463 | 272 |
| 11 | 585 | 810 | 1,300 | 1,400 | 800 | 600 | 4,870 | 6,490 | 1,810 | 1,620 | 444 | 300 |
| 12 | 490 | 730 | 1,200 | 1,320 | 785 | 555 | 4,650 | 6,370 | 1,740 | 1,470 | 463 | 315 |
| 13 | 490 | 730 | 1,200 | 1,300 | 780 | 550 | 4,240 | 6,250 | 1,740 | 1,370 | 489 | 280 |
| 14 | 520 | 730 | 1,110 | 1,250 | 760 | 550 | 3,670 | 5,330 | 1,810 | 1,500 | 470 | 276 |
| 15 | 550 | 770 | 1,080 | 1,220 | 760 | 570 | 3,490 | 4,870 | 1,740 | 1,620 | 450 | 280 |
| 16 | 520 | 770 | 1,020 | 1,190 | 755 | 570 | 3,320 | 4,650 | 1,740 | 1,460 | 456 | 276 |
| 17 | 520 | 810 | 1,020 | 1,180 | 745 | 600 | 4,050 | 4,870 | 1,670 | 1,290 | 444 | 272 |
| 18 | 655 | 930 | 1,250 | 1,180 | 720 | 620 | 6,970 | 5,100 | 1,600 | 1,220 | 420 | 315 |
| 19 | 1,300 | 1,200 | 1,670 | 1,280 | 690 | 620 | 6,970 | 4,650 | 1,260 | 1,290 | 414 | 315 |
| 20 | 1,540 | 1,810 | 1,530 | 1,670 | 670 | 655 | 6,490 | 4,440 | 975 | 1,380 | 396 | 280 |
| 21 | 1,300 | 2,020 | 1,420 | 1,700 | 670 | 705 | 6,730 | 4,050 | 1,250 | 1,160 | 379 | 267 |
| 22 | 1,110 | 1,670 | 1,360 | 1,490 | 660 | 780 | 6,250 | 3,490 | 1,540 | 1,000 | 368 | 249 |
| 23 | 975 | 1,600 | 1,300 | 1,460 | 635 | 860 | 6,020 | 3,320 | 1,540 | 919 | 362 | 236 |
| 24 | 1,110 | 1,480 | 1,250 | 1,460 | 620 | 950 | 5,560 | 3,160 | 1,480 | 858 | 420 | 226 |
| 25 | 1,420 | 1,600 | 1,200 | 1,410 | 620 | 965 | 5,560 | 3,320 | 1,810 | 788 | 456 | 226 |
| 26 | 1,250 | 1,480 | 1,160 | 1,280 | 640 | 940 | 6,970 | 3,160 | 2,100 | 748 | 414 | 222 |
| 27 | 1,160 | 1,420 | 1,110 | 1,270 | 650 | 950 | 8,790 | 3,000 | 1,950 | 708 | 396 | 226 |
| 28 | 1,110 | 1,300 | 1,110 | 1,250 | 590 | 930 | 7,730 | 2,550 | 1,740 | 692 | 374 | 208 |
| 29 | 1,110 | 1,110 | 2,700 | 1,140 | ----- | 905 | 8,250 | 2,320 | 1,810 | 708 | 362 | 204 |
| 30 | 1,060 | 1,300 | 2,400 | 1,060 | ----- | 950 | 10,500 | 2,020 | 1,410 | 676 | 346 | 200 |
| 31 | 975 | ----- | 2,070 | 1,020 | ----- | 1,020 | ----- | 2,400 | ----- | 630 | 330 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 1,540 | 400 | 784 | 0.733 | 0.85 |
| November | 2,020 | 730 | 1,130 | 1.06 | 1.18 |
| December | 2,700 | 1,020 | 1,360 | 1.27 | 1.46 |
| January | 2,250 | 1,020 | 1,480 | 1.38 | 1.59 |
| February | 1,000 | 590 | 778 | .727 | .76 |
| March | 1,020 | 550 | 701 | .655 | .76 |
| April | 10,500 | 1,110 | 4,700 | 4.39 | 4.90 |
| May | 14,200 | 2,020 | 5,750 | 5.37 | 6.19 |
| June | 2,320 | 975 | 1,780 | 1.66 | 1.85 |
| July | 1,840 | 630 | 1,130 | 1.06 | 1.22 |
| August | 645 | 330 | 459 | .429 | .49 |
| September | 325 | 200 | 272 | .254 | .28 |
| The year | 14,200 | 200 | 1,700 | 1.59 | 21.53 |

MATTAWAMKEAG RIVER AT MATTAWAMKEAG, ME.

LOCATION.—Water-stage recorder at Gordon Falls, 3 miles above Maine Central Railroad bridge at Mattawamkeag, Penobscot County, and 3½ miles above mouth of river. Chain gage at railroad bridge used prior to Feb. 21, 1929.

DRAINAGE AREA.—1,500 square miles.

RECORDS AVAILABLE.—August, 1902, to September, 1929.

EXTREMES.—Maximum discharge during year 16,100 second-feet May 5 (gage height, 9.75 feet); minimum, 150 second-feet Sept. 25-28 and 30.

1902-1929: Maximum discharge, about 43,900 second-feet May 1, 1923 (gage height, 19.55 feet); minimum, 86 second-feet Oct. 4-12, 1905, Sept. 19 and Oct. 6, 1906, Sept. 24-29, 1908, and Oct. 14-17, 1910.

REMARKS.—Records good except those for periods of ice effect (Nov. 28 to Dec. 4, Dec. 6-14, and Dec. 22 to Apr. 3), which are fair. Some storage on lakes.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|------|-------|
| 1 | 1,190 | 2,090 | 1,540 | 3,630 | 1,380 | 600 | 1,840 | 14,700 | 3,280 | 1,590 | 310 | 288 |
| 2 | 1,140 | 1,960 | 1,530 | 3,320 | 1,310 | 600 | 2,150 | 14,200 | 3,080 | 1,390 | 288 | 288 |
| 3 | 1,020 | 1,830 | 1,540 | 3,040 | 1,230 | 600 | 2,380 | 14,400 | 2,710 | 1,200 | 265 | 288 |
| 4 | 970 | 1,960 | 1,540 | 2,840 | 1,160 | 600 | 2,650 | 15,500 | 2,530 | 1,020 | 325 | 265 |
| 5 | 870 | 2,090 | 1,570 | 2,780 | 1,140 | 600 | 2,770 | 16,100 | 2,530 | 836 | 356 | 265 |
| 6 | 820 | 1,960 | 1,700 | 2,870 | 1,140 | 600 | 3,020 | 15,800 | 2,890 | 722 | 387 | 265 |
| 7 | 770 | 1,960 | 1,880 | 3,010 | 1,160 | 635 | 3,150 | 15,200 | 2,890 | 700 | 408 | 265 |
| 8 | 770 | 1,830 | 2,000 | 3,120 | 1,200 | 660 | 3,830 | 14,400 | 2,770 | 876 | 387 | 265 |
| 9 | 770 | 1,700 | 2,090 | 3,080 | 1,190 | 670 | 4,440 | 13,400 | 2,560 | 956 | 364 | 265 |
| 10 | 770 | 1,640 | 2,160 | 2,870 | 1,190 | 680 | 5,530 | 12,000 | 2,350 | 1,040 | 364 | 250 |
| 11 | 720 | 1,500 | 2,230 | 2,560 | 1,060 | 660 | 6,840 | 10,500 | 2,180 | 1,040 | 364 | 250 |
| 12 | 770 | 1,380 | 2,200 | 2,380 | 1,020 | 650 | 6,840 | 8,930 | 2,120 | 884 | 364 | 288 |
| 13 | 820 | 1,250 | 2,160 | 2,320 | 1,010 | 650 | 6,840 | 7,290 | 2,070 | 722 | 364 | 288 |
| 14 | 870 | 1,190 | 2,050 | 2,280 | 990 | 650 | 6,620 | 6,180 | 2,070 | 649 | 364 | 288 |
| 15 | 920 | 1,190 | 1,960 | 2,230 | 1,010 | 650 | 6,180 | 5,140 | 2,020 | 649 | 364 | 288 |
| 16 | 970 | 1,140 | 1,830 | 2,320 | 1,040 | 650 | 5,960 | 4,280 | 1,660 | 649 | 364 | 310 |
| 17 | 870 | 1,080 | 1,700 | 2,410 | 870 | 700 | 6,400 | 3,980 | 1,160 | 642 | 341 | 325 |
| 18 | 1,080 | 1,500 | 1,570 | 2,560 | 770 | 780 | 8,890 | 3,950 | 956 | 621 | 341 | 325 |
| 19 | 1,700 | 1,960 | 3,320 | 2,630 | 675 | 780 | 11,500 | 4,130 | 1,120 | 600 | 325 | 288 |
| 20 | 2,380 | 2,680 | 3,830 | 2,530 | 650 | 860 | 13,100 | 4,440 | 1,120 | 593 | 318 | 243 |
| 21 | 2,840 | 3,320 | 3,320 | 2,380 | 650 | 995 | 13,400 | 4,780 | 1,260 | 575 | 288 | 208 |
| 22 | 3,160 | 3,480 | 2,990 | 2,280 | 645 | 1,160 | 13,400 | 4,780 | 1,340 | 557 | 288 | 180 |
| 23 | 3,000 | 3,160 | 2,530 | 2,150 | 640 | 1,380 | 12,600 | 4,610 | 1,640 | 531 | 265 | 180 |
| 24 | 2,680 | 3,000 | 2,190 | 2,010 | 640 | 1,480 | 11,800 | 4,280 | 1,660 | 522 | 312 | 168 |
| 25 | 2,680 | 2,840 | 1,920 | 1,860 | 620 | 1,600 | 11,000 | 4,440 | 1,540 | 487 | 312 | 160 |
| 26 | 2,680 | 2,530 | 1,780 | 1,710 | 610 | 1,520 | 11,500 | 4,610 | 1,340 | 487 | 297 | 160 |
| 27 | 2,680 | 2,380 | 1,820 | 1,670 | 600 | 1,510 | 12,800 | 4,130 | 1,340 | 420 | 293 | 160 |
| 28 | 2,530 | 2,090 | 1,900 | 1,620 | 600 | 1,500 | 13,600 | 3,830 | 1,340 | 395 | 288 | 160 |
| 29 | 2,380 | 1,900 | 2,230 | 1,610 | ----- | 1,490 | 14,200 | 3,410 | 1,440 | 364 | 288 | 151 |
| 30 | 2,380 | 1,700 | 3,230 | 1,500 | ----- | 1,490 | 14,700 | 2,830 | 1,560 | 341 | 288 | 160 |
| 31 | 2,230 | ----- | 3,900 | 1,440 | ----- | 1,610 | ----- | 2,890 | ----- | 325 | 288 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 3,160 | 720 | 1,590 | 1.06 | 1.21 |
| November | 3,480 | 1,080 | 2,010 | 1.34 | 1.50 |
| December | 3,800 | 1,530 | 2,200 | 1.47 | 1.70 |
| January | 3,630 | 1,440 | 2,420 | 1.61 | 1.86 |
| February | 1,380 | 600 | 936 | .624 | .65 |
| March | 1,610 | 600 | 836 | .624 | .72 |
| April | 14,700 | 1,840 | 7,990 | 5.33 | 5.95 |
| May | 16,100 | 2,830 | 8,040 | 5.36 | 6.18 |
| June | 3,280 | 956 | 1,950 | 1.30 | 1.45 |
| July | 1,590 | 325 | 722 | .481 | .55 |
| August | 403 | 265 | 328 | .219 | .25 |
| September | 325 | 150 | 241 | .161 | .18 |
| The year | 16,100 | 150 | 2,450 | 1.63 | 22.21 |

PISCATAQUIS RIVER NEAR FOXCROFT, ME.

LOCATION.—Staff gage at Lows Bridge, three-quarters of a mile above mouth of Black Stream and $4\frac{1}{2}$ miles above Foxcroft, Piscataquis County.

DRAINAGE AREA.—286 square miles.

RECORDS AVAILABLE.—August, 1902, to September, 1929.

EXTREMES.—Maximum discharge during year, 9,210 second-feet May 3 (gage height, 10.7 feet); minimum, 29 second-feet Sept. 29 (gage height, 1.64 feet).

1902–1929: Maximum discharge, about 21,700 second-feet Sept. 29, 1909; minimum, 5 second-feet Aug. 6, 1905, and Nov. 22, 1908.

REMARKS.—Records fair. Discharge estimated Dec. 2 to Apr. 9, July 21, Aug. 11–13, and 15–17. Flow regulated by operation of power plants.

Daily and monthly discharge, in second-feet, 1928–29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|------|-------|-------|-------|------|------|-------|
| 1 | 345 | 436 | 258 | 450 | 156 | 96 | 610 | 3,000 | 1,550 | 314 | 32 | 35 |
| 2 | 233 | 430 | 275 | 395 | 140 | 63 | 710 | 2,390 | 1,100 | 267 | 43 | 66 |
| 3 | 213 | 340 | 345 | 425 | 150 | 120 | 665 | 6,740 | 905 | 195 | 34 | 72 |
| 4 | 237 | 520 | 330 | 390 | 190 | 260 | 640 | 7,260 | 730 | 63 | 37 | 74 |
| 5 | 195 | 660 | 325 | 480 | 190 | 110 | 645 | 4,080 | 625 | 154 | 54 | 82 |
| 6 | 100 | 590 | 335 | 400 | 190 | 166 | 765 | 3,480 | 660 | 107 | 54 | 100 |
| 7 | 154 | 520 | 345 | 1,020 | 190 | 390 | 785 | 2,780 | 625 | 83 | 57 | 63 |
| 8 | 205 | 590 | 260 | 870 | 194 | 440 | 1,650 | 2,780 | 490 | 141 | 66 | 45 |
| 9 | 163 | 418 | 195 | 800 | 132 | 290 | 2,710 | 2,250 | 395 | 80 | 72 | 96 |
| 10 | 180 | 290 | 260 | 495 | 140 | 285 | 3,600 | 1,950 | 424 | 68 | 52 | 83 |
| 11 | 141 | 285 | 187 | 400 | 172 | 310 | 2,450 | 1,550 | 424 | 72 | 45 | 117 |
| 12 | 151 | 254 | 250 | 380 | 190 | 172 | 2,050 | 1,180 | 356 | 68 | 65 | 96 |
| 13 | 170 | 320 | 177 | 360 | 190 | 230 | 1,550 | 1,180 | 290 | 50 | 70 | 133 |
| 14 | 325 | 249 | 210 | 370 | 190 | 270 | 1,360 | 1,750 | 304 | 42 | 82 | 114 |
| 15 | 378 | 272 | 100 | 520 | 156 | 425 | 1,180 | 1,360 | 229 | 89 | 85 | 44 |
| 16 | 213 | 195 | 124 | 555 | 114 | 250 | 1,270 | 1,180 | 520 | 57 | 90 | 68 |
| 17 | 229 | 133 | 156 | 590 | 140 | 420 | 2,670 | 1,140 | 555 | 62 | 65 | 80 |
| 18 | 1,020 | 389 | 140 | 460 | 104 | 800 | 4,950 | 870 | 424 | 58 | 41 | 76 |
| 19 | 1,450 | 835 | 460 | 410 | 91 | 735 | 3,600 | 980 | 362 | 57 | 98 | 82 |
| 20 | 1,140 | 1,550 | 335 | 470 | 93 | 660 | 2,780 | 1,270 | 309 | 52 | 69 | 74 |
| 21 | 905 | 1,180 | 220 | 485 | 98 | 715 | 2,560 | 1,100 | 262 | 40 | 66 | 56 |
| 22 | 800 | 870 | 172 | 430 | 114 | 730 | 2,150 | 905 | 173 | 60 | 70 | 40 |
| 23 | 660 | 730 | 250 | 345 | 102 | 730 | 1,950 | 809 | 187 | 48 | 76 | 69 |
| 24 | 730 | 555 | 250 | 270 | 124 | 660 | 1,850 | 730 | 280 | 50 | 229 | 56 |
| 25 | 905 | 555 | 220 | 235 | 122 | 590 | 1,950 | 695 | 225 | 49 | 221 | 45 |
| 26 | 695 | 490 | 210 | 210 | 98 | 520 | 3,480 | 625 | 267 | 48 | 119 | 38 |
| 27 | 237 | 490 | 164 | 190 | 87 | 485 | 3,720 | 625 | 395 | 48 | 72 | 45 |
| 28 | 249 | 490 | 180 | 215 | 91 | 520 | 3,360 | 520 | 285 | 32 | 69 | 40 |
| 29 | 490 | 389 | 1,100 | 230 | ----- | 510 | 5,200 | 490 | 191 | 45 | 64 | 29 |
| 30 | 490 | 400 | 835 | 210 | ----- | 400 | 5,200 | 395 | 267 | 44 | 58 | 45 |
| 31 | 460 | ----- | 620 | 184 | ----- | 460 | ----- | 1,850 | ----- | 32 | 52 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 1,450 | 100 | 447 | 1.56 | 1.80 |
| November | 1,550 | 133 | 514 | 1.80 | 2.01 |
| December | 1,100 | 100 | 300 | 1.05 | 1.21 |
| January | 1,020 | 184 | 427 | 1.49 | 1.72 |
| February | 194 | 87 | 141 | .493 | .51 |
| March | 800 | 63 | 412 | 1.44 | 1.66 |
| April | 5,200 | 610 | 2,270 | 7.94 | 8.86 |
| May | 7,260 | 395 | 1,880 | 6.57 | 7.57 |
| June | 1,550 | 173 | 460 | 1.61 | 1.80 |
| July | 314 | 32 | 83.1 | .291 | .34 |
| August | 229 | 32 | 74.4 | .260 | .30 |
| September | 133 | 29 | 68.8 | .241 | .27 |
| The year | 7,260 | 29 | 591 | 2.07 | 28.05 |

PISCATAQUIS RIVER AT MEDFORD, ME.

LOCATION.—Water-stage recorder $1\frac{1}{4}$ miles above lower ferry in Medford, Piscataquis County, $3\frac{1}{2}$ miles above mouth of Schoodic Stream and 16 miles above confluence with Penobscot River. Prior to Aug. 13, 1929, a staff gage at lower ferry was used.

DRAINAGE AREA.—1,170 square miles.

RECORDS AVAILABLE.—June, 1924, to September, 1929.

EXTREMES.—Maximum discharge during year, 27,600 second-feet May 4 (gage height, 13.2 feet); minimum, 278 second-feet Sept. 29 (gage height, 1.67 feet).
1924-1929: Maximum discharge, that of May 4, 1923; minimum, 172 second-feet Nov. 10, 1924 (gage height, 1.82 feet).

REMARKS.—Records good except those for period of ice effect, Nov. 30 to Apr. 8, which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------|-------|-------|
| 1..... | 1,670 | 1,510 | 1,210 | 3,760 | 1,280 | 965 | 1,840 | 14,200 | 7,110 | 1,190 | 700 | 461 |
| 2..... | 1,620 | 1,460 | 1,190 | 3,670 | 1,210 | 980 | 2,170 | 11,600 | 4,450 | 1,060 | 700 | 461 |
| 3..... | 1,370 | 1,460 | 1,180 | 3,580 | 1,210 | 1,000 | 2,440 | 15,800 | 4,070 | 1,020 | 665 | 499 |
| 4..... | 1,100 | 1,460 | 1,180 | 3,570 | 1,080 | 1,020 | 2,430 | 27,200 | 3,360 | 860 | 700 | 505 |
| 5..... | 1,020 | 1,790 | 1,220 | 3,530 | 1,250 | 1,040 | 2,410 | 20,000 | 2,730 | 780 | 700 | 499 |
| 6..... | 1,020 | 1,790 | 1,310 | 3,040 | 1,250 | 1,110 | 2,440 | 15,500 | 2,730 | 740 | 665 | 499 |
| 7..... | 900 | 1,670 | 1,320 | 3,280 | 1,250 | 1,250 | 2,580 | 13,800 | 2,880 | 780 | 665 | 526 |
| 8..... | 900 | 1,560 | 1,330 | 3,890 | 1,240 | 1,370 | 4,200 | 12,600 | 3,040 | 940 | 665 | 474 |
| 9..... | 1,020 | 1,510 | 1,350 | 3,360 | 1,220 | 1,370 | 7,020 | 10,700 | 2,580 | 1,420 | 665 | 461 |
| 10..... | 1,020 | 1,460 | 1,370 | 3,010 | 1,170 | 1,280 | 10,100 | 8,680 | 2,300 | 1,240 | 630 | 505 |
| 11..... | 1,060 | 1,280 | 1,370 | 2,730 | 1,140 | 1,240 | 9,520 | 7,360 | 2,580 | 1,100 | 630 | 505 |
| 12..... | 1,020 | 1,280 | 1,320 | 2,510 | 1,120 | 1,190 | 8,680 | 6,130 | 2,440 | 980 | 630 | 499 |
| 13..... | 1,190 | 1,140 | 1,240 | 2,340 | 1,080 | 1,200 | 7,880 | 5,890 | 2,040 | 860 | 630 | 486 |
| 14..... | 1,280 | 1,190 | 1,140 | 2,250 | 1,070 | 1,280 | 6,370 | 4,830 | 1,910 | 780 | 628 | 519 |
| 15..... | 1,280 | 1,140 | 1,040 | 2,170 | 1,050 | 1,260 | 6,130 | 4,070 | 1,320 | 700 | 643 | 519 |
| 16..... | 1,190 | 1,240 | 1,030 | 2,140 | 1,040 | 1,300 | 6,130 | 4,450 | 1,320 | 860 | 651 | 436 |
| 17..... | 1,190 | 1,240 | 1,090 | 2,210 | 1,020 | 1,790 | 9,240 | 5,230 | 1,320 | 980 | 605 | 486 |
| 18..... | 2,170 | 1,790 | 1,210 | 2,440 | 1,000 | 1,980 | 16,500 | 4,070 | 1,140 | 860 | 547 | 486 |
| 19..... | 3,890 | 2,440 | 2,040 | 2,880 | 995 | 2,170 | 15,500 | 3,890 | 1,140 | 900 | 505 | 467 |
| 20..... | 3,710 | 4,640 | 1,870 | 2,850 | 980 | 2,220 | 12,900 | 4,450 | 1,100 | 900 | 505 | 425 |
| 21..... | 3,040 | 4,830 | 1,620 | 2,840 | 970 | 2,170 | 11,300 | 4,260 | 1,020 | 1,020 | 554 | 403 |
| 22..... | 2,580 | 3,710 | 1,440 | 2,800 | 965 | 2,170 | 10,100 | 3,890 | 900 | 780 | 533 | 376 |
| 23..... | 2,170 | 2,880 | 1,370 | 2,580 | 955 | 2,170 | 8,960 | 3,200 | 820 | 780 | 533 | 376 |
| 24..... | 2,170 | 2,730 | 1,420 | 2,380 | 950 | 2,010 | 8,140 | 2,880 | 900 | 820 | 877 | 420 |
| 25..... | 3,040 | 2,300 | 1,670 | 2,270 | 940 | 1,810 | 7,360 | 3,360 | 940 | 860 | 1,060 | 425 |
| 26..... | 3,360 | 2,300 | 1,670 | 2,100 | 940 | 1,770 | 11,000 | 3,040 | 940 | 780 | 820 | 397 |
| 27..... | 3,040 | 2,040 | 1,850 | 1,950 | 940 | 1,750 | 14,200 | 2,440 | 1,060 | 665 | 717 | 360 |
| 28..... | 2,440 | 1,790 | 2,070 | 1,830 | 940 | 1,770 | 12,600 | 2,300 | 1,060 | 560 | 605 | 345 |
| 29..... | 2,440 | 1,460 | 4,790 | 1,670 | ----- | 1,770 | 13,500 | 2,170 | 1,280 | 630 | 540 | 317 |
| 30..... | 2,170 | 1,320 | 4,360 | 1,510 | ----- | 1,790 | 20,000 | 2,170 | 1,320 | 630 | 519 | 308 |
| 31..... | 1,670 | ----- | 3,890 | 1,330 | ----- | 1,800 | ----- | 5,660 | ----- | 665 | 486 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 3,890 | 900 | 1,860 | 1.59 | 1.83 |
| November..... | 4,830 | 1,140 | 1,950 | 1.67 | 1.86 |
| December..... | 4,790 | 1,030 | 1,680 | 1.44 | 1.66 |
| January..... | 3,890 | 1,330 | 2,660 | 2.27 | 2.62 |
| February..... | 1,280 | 940 | 1,080 | .923 | .96 |
| March..... | 2,220 | 965 | 1,550 | 1.32 | 1.52 |
| April..... | 20,000 | 1,840 | 8,480 | 7.25 | 8.09 |
| May..... | 27,200 | 2,170 | 7,610 | 6.50 | 7.49 |
| June..... | 7,110 | 820 | 2,060 | 1.76 | 1.96 |
| July..... | 1,420 | 560 | 875 | .748 | .86 |
| August..... | 1,060 | 486 | 644 | .550 | .63 |
| September..... | 526 | 308 | 448 | .383 | .43 |
| The year..... | 27,200 | 308 | 2,580 | 2.21 | 29.91 |

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, 1929.

EXTREMES.—Maximum discharge during year, 3,870 second-feet May 6 (gage height, 7.49 feet); minimum, 84 second-feet Sept. 30 (gage height, 1.83 feet).

1924-1929: Maximum discharge, that of May 6, 1929; minimum, 20 second-feet Jan. 25, 1925 (gage height, 1.36 feet).

REMARKS.—Records good except those for estimated periods, which are fair. Flow ordinarily regulated completely by dams and storage reservoirs.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|----------|-------|----------|----------|-------|----------|----------|----------|----------|------|-------|-------|
| 1----- | 850 | 385 | 360 | * 1, 170 | 360 | 380 | 365 | 3, 200 | * 950 | 285 | 315 | 210 |
| 2----- | 885 | 370 | 290 | * 1, 220 | 365 | 345 | 345 | 3, 240 | * 830 | 275 | 290 | 260 |
| 3----- | 875 | 355 | 335 | 1, 230 | 310 | 255 | 355 | 3, 380 | * 1, 000 | 280 | 285 | 325 |
| 4----- | 560 | 300 | 310 | 1, 200 | 375 | 355 | 345 | 3, 740 | * 930 | 210 | 220 | 315 |
| 5----- | 410 | 360 | 335 | 720 | 400 | 380 | 355 | 3, 760 | * 960 | 285 | 280 | 330 |
| 6----- | 410 | 370 | 345 | 340 | 415 | 370 | 350 | 3, 760 | * 910 | 245 | 275 | 350 |
| 7----- | 375 | 400 | 350 | 405 | 445 | 390 | 295 | 3, 700 | * 980 | 225 | 290 | 290 |
| 8----- | 375 | 415 | * 350 | 455 | 380 | 365 | 390 | 3, 600 | * 950 | 300 | 270 | * 300 |
| 9----- | 395 | 395 | * 300 | 485 | 375 | 380 | 425 | 3, 460 | 895 | 310 | 310 | * 350 |
| 10----- | 375 | 395 | 355 | 525 | 275 | 265 | 1, 150 | 3, 280 | 920 | 275 | 305 | 310 |
| 11----- | 370 | 325 | 375 | 555 | 380 | 300 | 2, 090 | 3, 090 | 905 | 290 | 240 | 295 |
| 12----- | 375 | 350 | 330 | * 530 | 380 | 360 | 2, 900 | * 2, 800 | 875 | 290 | 305 | 300 |
| 13----- | 340 | 370 | 340 | * 360 | 355 | * 3, 120 | * 2, 100 | 840 | 280 | 280 | 320 | 340 |
| 14----- | 335 | 385 | 360 | * 600 | 370 | 375 | * 2, 780 | * 1, 540 | 620 | 215 | 305 | 285 |
| 15----- | 400 | 375 | 380 | * 590 | 365 | 365 | 2, 600 | * 1, 260 | 265 | 290 | 305 | 220 |
| 16----- | 355 | 380 | 350 | * 580 | 345 | 325 | 2, 390 | * 1, 260 | 210 | 290 | 300 | 320 |
| 17----- | 350 | 370 | 385 | * 600 | 255 | 245 | 2, 420 | * 1, 260 | 340 | 295 | * 300 | 320 |
| 18----- | 340 | 435 | 390 | * 620 | 380 | 355 | 2, 750 | * 980 | 375 | 300 | * 300 | 285 |
| 19----- | 360 | 910 | 410 | * 850 | 415 | 360 | 2, 980 | 860 | 270 | 270 | 335 | 285 |
| 20----- | 335 | 960 | 430 | 1, 260 | 410 | 335 | * 2, 950 | 965 | 280 | 265 | 340 | 290 |
| 21----- | 300 | 990 | 440 | 1, 270 | 430 | 365 | * 2, 900 | 1, 000 | 270 | 240 | 320 | 250 |
| 22----- | 370 | 985 | 440 | 1, 220 | 345 | 375 | * 2, 850 | 995 | 265 | 295 | 340 | 210 |
| 23----- | 370 | 975 | 350 | 1, 190 | * 360 | * 370 | * 2, 800 | 995 | 225 | 280 | 350 | 235 |
| 24----- | 695 | * 975 | 325 | 1, 170 | * 260 | * 240 | * 2, 750 | 1, 000 | 280 | 270 | 265 | 235 |
| 25----- | 1, 220 | 880 | 335 | 1, 150 | * 370 | * 440 | * 2, 700 | 940 | 300 | 280 | 220 | 230 |
| 26----- | 1, 500 | 895 | 390 | 1, 090 | * 360 | 445 | 2, 650 | 935 | 295 | 305 | 320 | 215 |
| 27----- | 1, 250 | 870 | 410 | 985 | * 360 | 405 | 2, 600 | 905 | 290 | 295 | 300 | 210 |
| 28----- | * 1, 050 | 595 | 865 | 1, 000 | 350 | 415 | 2, 560 | 945 | 305 | 295 | 305 | 205 |
| 29----- | * 780 | 270 | * 1, 360 | 650 | ----- | 375 | 2, 730 | 955 | 275 | 310 | 305 | 188 |
| 30----- | 635 | 335 | * 1, 200 | 340 | ----- | 550 | 3, 000 | 810 | 255 | 300 | 325 | 184 |
| 31----- | 400 | ----- | * 1, 230 | 345 | ----- | 235 | ----- | 940 | ----- | 300 | 280 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|--------|-----------------|-------------------|
| October----- | 1, 500 | 300 | 569 | 1. 65 | 1. 90 |
| November----- | 990 | 270 | 546 | 1. 59 | 1. 77 |
| December----- | 1, 360 | 290 | 465 | 1. 35 | 1. 56 |
| January----- | 1, 270 | 340 | 798 | 2. 32 | 2. 68 |
| February----- | 445 | 255 | 364 | 1. 06 | 1. 10 |
| March----- | 550 | 235 | 357 | 1. 04 | 1. 20 |
| April----- | 3, 120 | 295 | 1, 960 | 5. 70 | 6. 36 |
| May----- | 3, 760 | 810 | 1, 990 | 5. 78 | 6. 66 |
| June----- | 1, 000 | 210 | 569 | 1. 65 | 1. 84 |
| July----- | 310 | 210 | 279 | . 811 | . 94 |
| August----- | 350 | 220 | 297 | . 863 | . 99 |
| September----- | 350 | 184 | 271 | . 788 | . 88 |
| The year----- | 3, 760 | 184 | 707 | 2. 06 | 27. 88 |

* Estimated.

PLEASANT RIVER AT MILO, ME.

LOCATION.—Water-stage recorder 2 miles above Snows Bridge in Milo, Piscataquis County, and $8\frac{1}{4}$ miles above confluence with Piscataquis River. Prior to June 17, 1929, chain gage at bridge was used.

DRAINAGE AREA.—325 square miles.

RECORDS AVAILABLE.—June, 1920, to September, 1929.

EXTREMES.—Maximum discharge during year, 8,300 second-feet May 4 (gage height, 6.96 feet); minimum, 39 second-feet Sept. 25–28 (gage height, 1.39 feet).

1920–1929: Maximum discharge, 24,400 second-feet Apr. 30, 1923 (gage height, 14.33 feet); minimum, 22 second-feet July 29, Aug 2, and Sept. 11, 1921 (gage height, 2.10 feet).

REMARKS.—Records good, except those for Nov. 25 to Apr. 14 and June 16, which were estimated. Flow partly regulated by power development at Brownville and by storage dams.

Daily and monthly discharge, in second-feet, 1928–29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|------|-------|-------|-------|------|------|-------|
| 1..... | 452 | 505 | 475 | 1,500 | 530 | 340 | 450 | 3,920 | 1,900 | 376 | 244 | 139 |
| 2..... | 361 | 505 | 470 | 1,470 | 530 | 375 | 470 | 3,060 | 1,440 | 330 | 230 | 146 |
| 3..... | 309 | 690 | 505 | 1,450 | 520 | 395 | 515 | 5,300 | 745 | 311 | 204 | 149 |
| 4..... | 271 | 1,170 | 505 | 1,450 | 505 | 400 | 520 | 7,260 | 860 | 293 | 208 | 136 |
| 5..... | 271 | 860 | 505 | 1,480 | 505 | 410 | 520 | 5,780 | 773 | 284 | 244 | 105 |
| 6..... | 296 | 767 | 515 | 1,570 | 520 | 410 | 520 | 3,920 | 980 | 262 | 230 | 114 |
| 7..... | 296 | 620 | 530 | 1,680 | 555 | 425 | 515 | 3,920 | 800 | 244 | 223 | 124 |
| 8..... | 296 | 522 | 550 | 1,900 | 580 | 470 | 520 | 3,260 | 1,300 | 525 | 215 | 100 |
| 9..... | 302 | 490 | 565 | 1,720 | 565 | 490 | 530 | 2,460 | 558 | 792 | 219 | 139 |
| 10..... | 328 | 468 | 575 | 1,660 | 540 | 505 | 550 | 2,080 | 640 | 576 | 212 | 116 |
| 11..... | 348 | 445 | 590 | 1,510 | 520 | 505 | 575 | 3,060 | 1,040 | 560 | 204 | 108 |
| 12..... | 335 | 445 | 610 | 1,370 | 500 | 505 | 600 | 1,740 | 734 | 355 | 219 | 108 |
| 13..... | 409 | 131 | 575 | 1,200 | 475 | 505 | 640 | 1,240 | 800 | 298 | 208 | 105 |
| 14..... | 348 | 296 | 550 | 800 | 460 | 505 | 680 | 1,100 | 514 | 284 | 197 | 103 |
| 15..... | 375 | 234 | 505 | 1,080 | 445 | 505 | 723 | 920 | 430 | 293 | 197 | 73 |
| 16..... | 309 | 361 | 505 | 1,050 | 440 | 530 | 920 | 1,240 | 600 | 386 | 190 | 114 |
| 17..... | 348 | 460 | 575 | 1,070 | 430 | 530 | 980 | 1,990 | 330 | 370 | 193 | 111 |
| 18..... | 800 | 490 | 690 | 1,130 | 470 | 520 | 3,700 | 1,170 | 432 | 370 | 186 | 98 |
| 19..... | 1,300 | 712 | 1,020 | 1,070 | 400 | 520 | 3,060 | 1,370 | 350 | 381 | 182 | 92 |
| 20..... | 1,300 | 1,580 | 920 | 1,000 | 340 | 530 | 2,560 | 1,660 | 311 | 438 | 172 | 80 |
| 21..... | 1,040 | 1,580 | 800 | 930 | 315 | 530 | 2,460 | 1,170 | 302 | 425 | 162 | 65 |
| 22..... | 920 | 1,040 | 745 | 860 | 295 | 540 | 2,260 | 1,440 | 293 | 350 | 158 | 57 |
| 23..... | 800 | 712 | 690 | 800 | 285 | 520 | 1,580 | 860 | 288 | 340 | 168 | 98 |
| 24..... | 800 | 640 | 650 | 735 | 270 | 515 | 1,510 | 920 | 288 | 335 | 360 | 92 |
| 25..... | 920 | 600 | 640 | 680 | 270 | 505 | 1,370 | 980 | 288 | 320 | 275 | 80 |
| 26..... | 778 | 600 | 630 | 640 | 265 | 490 | 3,700 | 920 | 335 | 311 | 244 | 67 |
| 27..... | 670 | 610 | 630 | 590 | 265 | 490 | 3,920 | 630 | 403 | 200 | 212 | 67 |
| 28..... | 610 | 610 | 870 | 550 | 285 | 475 | 3,700 | 670 | 345 | 212 | 193 | 63 |
| 29..... | 548 | 590 | 2,460 | 520 | ----- | 450 | 4,820 | 778 | 504 | 244 | 182 | 48 |
| 30..... | 505 | 522 | 1,740 | 505 | ----- | 445 | 5,540 | 800 | 464 | 252 | 165 | 92 |
| 31..... | 522 | ----- | 1,540 | 505 | ----- | 445 | ----- | 1,740 | ----- | 244 | 158 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 1,300 | 271 | 554 | 1.70 | 1.96 |
| November..... | 1,580 | 131 | 642 | 1.98 | 2.21 |
| December..... | 2,460 | 470 | 746 | 2.30 | 2.65 |
| January..... | 1,900 | 505 | 1,110 | 3.42 | 3.94 |
| February..... | 580 | 265 | 431 | 1.33 | 1.38 |
| March..... | 540 | 340 | 477 | 1.47 | 1.70 |
| April..... | 5,540 | 450 | 1,680 | 5.17 | 5.77 |
| May..... | 7,260 | 630 | 2,170 | 6.68 | 7.70 |
| June..... | 1,900 | 288 | 635 | 1.95 | 2.18 |
| July..... | 792 | 200 | 354 | 1.09 | 1.26 |
| August..... | 360 | 158 | 208 | .640 | .74 |
| September..... | 149 | 48 | 99.6 | .306 | .34 |
| The year..... | 7,260 | 48 | 762 | 2.34 | 31.83 |

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 mouth of river.

DRAINAGE AREA.—301 square miles.

RECORDS AVAILABLE.—October, 1915, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,860 second-feet Apr. 30 (gage height, 4.86 feet); minimum, 21 second-feet Oct. 6 (gage height, 0.52 foot).

1915-1929: Maximum discharge, 5,680 second-feet May 2, 1923; minimum (estimated), 5 second-feet several times in July and August, 1921.

REMARKS.—Records good except those for estimated periods, which are fair. Distribution of flow affected by storage reservoirs.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|-------|-------|-------|-------|-------|---------|-------|-------|------|-------|
| 1..... | 345 | 444 | 294 | * 655 | 309 | * 330 | 484 | 1,790 | 1,340 | 496 | 176 | 136 |
| 2..... | 325 | 412 | 270 | * 605 | 300 | * 305 | 554 | 1,650 | 1,310 | 532 | 172 | 127 |
| 3..... | 365 | 366 | 268 | * 560 | * 295 | 268 | 576 | 1,720 | 1,220 | 562 | 174 | 123 |
| 4..... | 288 | 338 | 260 | 504 | * 295 | 249 | 580 | 1,790 | 1,100 | 562 | 171 | 118 |
| 5..... | 271 | 315 | 257 | * 460 | * 295 | 243 | 585 | 1,790 | 1,070 | 549 | 211 | 110 |
| 6..... | 176 | 312 | * 255 | 420 | * 295 | * 235 | 630 | 1,790 | 1,010 | 544 | 222 | 105 |
| 7..... | 204 | 348 | * 255 | 524 | 294 | * 230 | 652 | 1,790 | 980 | * 510 | 235 | 103 |
| 8..... | 209 | 404 | 254 | * 575 | 291 | * 225 | 775 | 1,760 | 1,010 | 432 | 222 | 103 |
| 9..... | 204 | 396 | 261 | * 585 | 285 | * 225 | 1,010 | 1,650 | 1,100 | 366 | 209 | 103 |
| 10..... | 201 | 359 | * 250 | 544 | * 280 | * 225 | 1,220 | 1,520 | 1,040 | 335 | 194 | 103 |
| 11..... | 201 | 332 | * 245 | 488 | * 280 | * 220 | 1,280 | 1,400 | 1,010 | 315 | 176 | 103 |
| 12..... | 206 | 309 | * 245 | * 470 | * 275 | * 220 | 1,160 | 1,370 | 980 | 297 | 169 | 102 |
| 13..... | 222 | 288 | * 240 | * 465 | * 275 | * 230 | 1,070 | 1,340 | 1,040 | 291 | 165 | 100 |
| 14..... | 240 | 271 | 240 | * 460 | * 275 | * 255 | 1,070 | 1,250 | 1,010 | 279 | 165 | 100 |
| 15..... | 254 | 262 | 235 | * 455 | * 275 | * 270 | 925 | 1,190 | 710 | 274 | 165 | 106 |
| 16..... | 265 | 262 | 230 | * 450 | * 270 | * 275 | 800 | 1,160 | 675 | 265 | 167 | 108 |
| 17..... | 274 | 262 | 224 | * 400 | * 270 | * 280 | 900 | 1,100 | 652 | 257 | 167 | 110 |
| 18..... | 294 | 271 | 254 | * 460 | * 265 | * 285 | 1,310 | 1,100 | 608 | 249 | 165 | 118 |
| 19..... | 332 | 306 | 325 | * 520 | * 260 | 300 | 1,620 | * 1,090 | 652 | 246 | 165 | 120 |
| 20..... | 448 | 396 | 472 | 554 | * 260 | 315 | 1,790 | 1,010 | 630 | 243 | 158 | 121 |
| 21..... | 520 | 532 | 585 | * 535 | * 255 | 352 | 1,790 | 1,040 | 630 | 238 | 148 | 121 |
| 22..... | 540 | 585 | * 575 | * 510 | * 255 | 404 | 1,780 | 1,070 | 630 | 232 | 142 | 118 |
| 23..... | 540 | 576 | 540 | 492 | * 255 | 520 | 1,620 | 1,010 | * 575 | 224 | 134 | 111 |
| 24..... | 576 | 532 | 480 | 464 | * 250 | 562 | 1,520 | 1,070 | 568 | 222 | 140 | 106 |
| 25..... | 608 | 480 | 432 | 428 | * 250 | 554 | 1,430 | 1,190 | 544 | 184 | 152 | 102 |
| 26..... | 608 | 420 | 388 | 404 | * 250 | 524 | 1,550 | 1,250 | 500 | 196 | 167 | 97 |
| 27..... | 585 | 370 | 356 | * 385 | * 280 | 488 | 1,680 | 1,220 | 452 | 198 | 172 | 94 |
| 28..... | 572 | 342 | 373 | * 365 | * 320 | 464 | 1,520 | 1,250 | 420 | 194 | 172 | 90 |
| 29..... | 554 | 325 | 540 | * 350 | ----- | 436 | 1,680 | 1,220 | 428 | 191 | 163 | 85 |
| 30..... | 520 | 306 | 630 | * 335 | ----- | 420 | 1,790 | 1,160 | 464 | 184 | 154 | 84 |
| 31..... | 484 | ----- | * 725 | 319 | ----- | 424 | ----- | 1,280 | ----- | 181 | 144 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 608 | 176 | 369 | 1.23 | 1.42 |
| November..... | 585 | 262 | 371 | 1.23 | 1.37 |
| December..... | 725 | 224 | 353 | 1.17 | 1.35 |
| January..... | 655 | 319 | 477 | 1.58 | 1.82 |
| February..... | 320 | 250 | 277 | .920 | .96 |
| March..... | 562 | 220 | 333 | 1.11 | 1.28 |
| April..... | 1,790 | 484 | 1,170 | 3.89 | 4.34 |
| May..... | 1,790 | 1,010 | 1,360 | 4.52 | 5.21 |
| June..... | 1,340 | 420 | 812 | 2.70 | 3.01 |
| July..... | 562 | 181 | 318 | 1.06 | 1.22 |
| August..... | 235 | 134 | 173 | .575 | .66 |
| September..... | 136 | 84 | 108 | .359 | .40 |
| The year..... | 1,790 | 84 | 511 | 1.70 | 23.04 |

* 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, 1929.

REMARKS.—Lake is 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 at The Forks. Record furnished by Hollingsworth & Whitney Co.

Daily gage height, in feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 15.2 | | | | 15.7 | 14.9 | 14.25 | 16.55 | | 17.35 | | |
| 2 | | 15.5 | | 16.2 | | | | | | | 16.3 | 15.3 |
| 3 | 15.15 | | 16.35 | | 15.6 | 14.8 | 14.3 | 16.95 | 17.5 | 17.3 | | |
| 4 | | | | 16.1 | | | | | | | | 15.25 |
| 5 | 15.15 | 15.6 | 16.45 | | | | 14.3 | | 17.45 | 17.2 | 16.15 | |
| 6 | | | | | 15.55 | 14.8 | | 17.5 | | | | 15.2 |
| 7 | | 15.6 | 16.35 | 16.15 | | | | | 17.45 | | 16.1 | |
| 8 | 15.1 | | | | 15.5 | 14.75 | 14.35 | 17.5 | | 17.2 | | |
| 9 | | 15.65 | | 16.1 | | | | | | | 16.0 | 15.05 |
| 10 | 15.0 | | 16.4 | | | | 14.45 | 17.4 | 17.45 | 17.15 | | |
| 11 | | | | 16.1 | 15.45 | 14.65 | | | | | | 14.95 |
| 12 | 14.95 | 15.7 | 16.35 | | | | 14.5 | | 17.4 | 17.05 | 15.95 | |
| 13 | | | | | 15.45 | 14.55 | | 17.0 | | | | 14.9 |
| 14 | | 15.7 | 16.35 | 16.05 | | | | | 17.5 | | 15.85 | |
| 15 | 14.85 | | | | 15.35 | 14.5 | 14.7 | 16.9 | | 16.9 | | |
| 16 | | 15.7 | | 16.0 | | | | | | | 15.85 | 14.8 |
| 17 | 14.85 | | 16.25 | | | | 14.8 | 17.0 | 17.45 | 16.85 | | |
| 18 | | | | 16.0 | 15.3 | 14.5 | | | | | | 14.7 |
| 19 | 15.05 | 15.9 | 16.2 | | | | 15.05 | | 17.4 | 16.8 | 15.8 | |
| 20 | | | | | 15.2 | 14.4 | | 17.1 | | | | 14.6 |
| 21 | | 16.0 | 16.2 | 15.95 | | | | | 17.4 | | 15.75 | |
| 22 | 15.15 | | | | 15.15 | 14.3 | 15.2 | 17.1 | | 16.7 | | |
| 23 | | 16.1 | | 15.9 | | | | | | | 15.7 | 14.45 |
| 24 | 15.3 | | 16.15 | | | | 15.3 | 17.0 | 17.3 | 16.65 | | |
| 25 | | | | 15.85 | 15.1 | 14.3 | | | | | | 14.35 |
| 26 | 15.35 | 16.15 | 16.15 | | | | 15.45 | | 17.45 | 16.55 | 15.65 | |
| 27 | | | | | 14.95 | 14.25 | | 17.15 | | | | 14.3 |
| 28 | | 16.2 | 16.1 | 15.85 | | 14.3 | 16.0 | 17.2 | 17.45 | | 15.6 | |
| 29 | 15.5 | | | | | | | | | 16.45 | | |
| 30 | | 16.25 | 16.1 | 15.8 | | | | | | | 15.5 | 14.1 |
| 31 | 15.5 | | | | | | | 17.4 | | 16.4 | | |

KENNEBEC RIVER AT MOOSEHEAD, ME.

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

DRAINAGE AREA.—1,240 square miles.

RECORDS AVAILABLE.—October, 1919, to September, 1929.

EXTREMES.—Maximum discharge during year, 13,600 second-feet May 9 (gage height, 9.19 feet); minimum, 478 second-feet Oct. 21 (gage height, 2.93 feet). 1919-1929: Maximum discharge, that of May 9, 1929; minimum, about 62 second-feet Apr. 7-15, 1923.

REMARKS.—Records good. Leakage and occasional opening of gates in west outlet dam diverts some water down west channel. Flow regulated by operation of gates at Moosehead Lake.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|
| 1..... | 1,740 | 496 | 950 | 1,580 | 2,470 | 2,740 | 508 | 562 | 4,920 | 2,160 | 2,720 | 2,320 |
| 2..... | 1,620 | 496 | 1,380 | 1,580 | 2,380 | 2,690 | 508 | 1,500 | 6,590 | 2,140 | 2,700 | 2,300 |
| 3..... | 1,520 | 502 | 1,370 | 1,580 | 2,360 | 2,670 | 508 | 2,720 | 6,510 | 2,100 | 2,620 | 2,300 |
| 4..... | 1,460 | 508 | 1,390 | 1,580 | 2,480 | 2,640 | 508 | 5,260 | 4,970 | 2,010 | 2,470 | 2,300 |
| 5..... | 1,710 | 514 | 1,460 | 1,840 | 2,500 | 2,620 | 508 | 10,200 | 3,380 | 1,900 | 2,410 | 2,240 |
| 6..... | 1,720 | 520 | 1,750 | 2,290 | 2,530 | 2,400 | 514 | 12,000 | 3,750 | 2,080 | 2,410 | 2,220 |
| 7..... | 1,770 | 520 | 2,010 | 2,280 | 2,620 | 2,280 | 514 | 12,800 | 4,340 | 2,320 | 2,410 | 2,230 |
| 8..... | 2,000 | 514 | 2,220 | 2,280 | 2,540 | 2,260 | 520 | 13,100 | 2,940 | 2,420 | 2,410 | 2,230 |
| 9..... | 2,070 | 520 | 2,340 | 2,260 | 2,520 | 2,400 | 527 | 13,300 | 1,920 | 2,410 | 2,410 | 2,260 |
| 10..... | 2,250 | 710 | 2,340 | 2,080 | 2,640 | 2,530 | 534 | 13,400 | 1,870 | 2,400 | 1,790 | 2,060 |
| 11..... | 2,260 | 940 | 2,410 | 1,790 | 2,640 | 2,580 | 534 | 13,200 | 2,100 | 2,460 | 1,640 | 2,200 |
| 12..... | 2,300 | 1,130 | 2,480 | 1,980 | 2,620 | 2,780 | 541 | 12,400 | 1,830 | 2,470 | 1,940 | 2,320 |
| 13..... | 2,100 | 1,270 | 2,480 | 2,240 | 2,620 | 2,830 | 534 | 9,120 | 1,850 | 2,440 | 2,320 | 2,170 |
| 14..... | 1,490 | 1,320 | 2,240 | 2,240 | 2,690 | 2,460 | 534 | 7,080 | 2,020 | 2,470 | 2,410 | 2,140 |
| 15..... | 1,300 | 1,240 | 2,170 | 2,230 | 2,800 | 2,170 | 534 | 4,830 | 1,810 | 2,500 | 2,640 | 2,050 |
| 16..... | 1,280 | 1,000 | 2,480 | 2,230 | 2,770 | 1,820 | 534 | 3,760 | 1,810 | 2,470 | 2,480 | 1,930 |
| 17..... | 1,180 | 638 | 2,470 | 2,230 | 2,740 | 1,430 | 541 | 3,840 | 1,660 | 2,520 | 2,220 | 1,900 |
| 18..... | 508 | 508 | 2,110 | 2,200 | 2,780 | 1,760 | 548 | 2,960 | 1,840 | 2,620 | 2,160 | 1,900 |
| 19..... | 496 | 520 | 1,890 | 2,200 | 2,880 | 2,110 | 548 | 3,560 | 1,420 | 2,660 | 2,140 | 1,920 |
| 20..... | 484 | 534 | 1,530 | 1,710 | 2,880 | 2,400 | 534 | 4,790 | 1,750 | 2,610 | 2,160 | 1,940 |
| 21..... | 478 | 534 | 1,630 | 1,330 | 2,860 | 2,180 | 527 | 5,240 | 1,880 | 2,610 | 2,180 | 1,940 |
| 22..... | 484 | 534 | 1,870 | 1,520 | 2,860 | 1,600 | 520 | 5,240 | 2,000 | 2,590 | 2,180 | 1,850 |
| 23..... | 484 | 541 | 1,980 | 1,720 | 2,850 | 770 | 514 | 3,210 | 1,760 | 2,620 | 2,230 | 1,840 |
| 24..... | 490 | 548 | 2,260 | 1,710 | 2,820 | 514 | 508 | 1,600 | 1,810 | 2,620 | 2,030 | 1,840 |
| 25..... | 490 | 548 | 2,540 | 1,710 | 2,800 | 795 | 508 | 1,610 | 1,830 | 2,660 | 1,870 | 1,850 |
| 26..... | 496 | 555 | 2,610 | 1,870 | 2,770 | 1,280 | 496 | 1,630 | 1,840 | 2,750 | 2,040 | 1,850 |
| 27..... | 496 | 562 | 2,720 | 2,110 | 2,770 | 950 | 508 | 1,670 | 1,840 | 2,750 | 2,100 | 1,840 |
| 28..... | 496 | 555 | 1,890 | 2,100 | 2,740 | 585 | 520 | 1,700 | 1,940 | 2,720 | 2,420 | 1,840 |
| 29..... | 496 | 555 | 810 | 2,280 | ----- | 690 | 534 | 1,780 | 2,070 | 2,720 | 2,200 | 1,850 |
| 30..... | 496 | 562 | 1,100 | 2,500 | ----- | 508 | 548 | 1,900 | 2,160 | 2,720 | 2,260 | 1,830 |
| 31..... | 496 | ----- | 1,580 | 2,470 | ----- | 508 | ----- | 1,970 | ----- | 2,720 | 2,290 | ----- |

| Month | Observed discharge (second-feet) | | | Gain or loss in storage at Brassua and Moosehead Lakes (mil- lions of cubic feet) | Discharge corrected for storage (second-feet) | | Run-off in inches |
|----------------|-------------------------------------|---------|-------|---|---|----------------------|----------------------|
| | Maximum | Minimum | Mean | | Mean | Per square mi. | |
| October..... | 2,300 | 478 | 1,180 | +1,226 | 1,640 | 1.32 | 1.52 |
| November..... | 1,320 | 496 | 663 | +3,401 | 1,980 | 1.60 | 1.78 |
| December..... | 2,720 | 810 | 1,950 | -1,517 | 1,380 | 1.11 | 1.28 |
| January..... | 2,500 | 1,330 | 1,990 | -2,129 | 1,200 | .968 | 1.12 |
| February..... | 2,880 | 2,360 | 2,680 | -4,819 | 688 | .555 | .58 |
| March..... | 2,830 | 508 | 1,870 | -2,569 | 911 | .735 | .85 |
| April..... | 548 | 496 | 524 | +12,740 | 5,440 | 4.39 | 4.90 |
| May..... | 13,400 | 562 | 5,740 | +5,472 | 7,780 | 6.27 | 7.23 |
| June..... | 6,590 | 1,420 | 2,610 | -66 | 2,640 | 2.13 | 2.38 |
| July..... | 2,750 | 1,900 | 2,470 | -4,916 | 634 | .511 | .59 |
| August..... | 2,720 | 1,640 | 2,260 | -6,301 | (^a) | (^a) | (^a) |
| September..... | 2,320 | 1,830 | 2,050 | -5,605 | (^a) | (^a) | (^a) |
| The year..... | 13,400 | 478 | 2,170 | -4,951 | 2,030 | 1.64 | 22.23 |

* Apparent depletion of storage slightly exceeded total discharge past gage.

NOTE.—No correction for evaporation. Some diversion at west outlet dam. Leakage varies 10 to 100 second-feet. Flow estimated 150 second-feet May 10 to June 10 and Aug. 4 to Sept. 30 when one gate was partly open.

KENNEBEC RIVER AT THE FORKS, ME.

LOCATION.—Water-stage recorder half a mile above highway bridge and 1 mile above mouth of Dead River at The Forks, Somerset County.

DRAINAGE AREA.—1,570 square miles.

RECORDS AVAILABLE.—September, 1901, to September, 1928.

EXTREMES.—Maximum discharge during year, 19,100 second-feet May 6 (gage height, 9.44 feet); minimum, 775 second-feet Nov. 18 (gage height, 2.25 feet).

1901-1929: Maximum discharge, 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 except those for Nov. 3, 4, 27-30. and July 17, which were estimated. Corrections for ice effect Dec. 1 to Mar. 14 based on several discharge measurements. Flow regulated by storage in Moosehead and Brassua Lakes.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|
| 1..... | 1,950 | 802 | 1,230 | 2,230 | 2,660 | 3,070 | 870 | 4,080 | 5,720 | 2,540 | 3,050 | 2,640 |
| 2..... | 2,030 | 793 | 1,600 | 2,230 | 2,660 | 2,930 | 880 | 4,930 | 5,210 | 2,310 | 2,920 | 2,550 |
| 3..... | 1,870 | 800 | 1,800 | 2,190 | 2,660 | 2,930 | 840 | 7,280 | 7,780 | 2,380 | 2,370 | 2,640 |
| 4..... | 1,730 | 820 | 1,870 | 2,160 | 2,700 | 3,130 | 870 | 12,800 | 6,820 | 2,390 | 2,900 | 2,550 |
| 5..... | 1,730 | 920 | 1,890 | 2,130 | 2,720 | 3,130 | 930 | 15,800 | 4,270 | 2,220 | 2,650 | 2,560 |
| 6..... | 1,950 | 1,070 | 2,080 | 2,410 | 2,740 | 3,130 | 1,020 | 18,200 | 4,350 | 2,230 | 2,990 | 2,460 |
| 7..... | 1,850 | 1,070 | 2,410 | 2,700 | 2,780 | 2,840 | 1,070 | 17,800 | 5,180 | 2,710 | 3,000 | 2,460 |
| 8..... | 2,030 | 1,070 | 2,510 | 2,700 | 2,780 | 2,740 | 1,540 | 17,800 | 4,020 | 2,670 | 2,440 | 2,460 |
| 9..... | 2,120 | 1,070 | 2,550 | 2,680 | 2,780 | 2,700 | 2,280 | 17,100 | 3,660 | 3,070 | 2,900 | 2,460 |
| 10..... | 2,410 | 1,120 | 2,550 | 2,640 | 2,800 | 2,780 | 2,840 | 16,800 | 2,570 | 2,770 | 2,740 | 2,550 |
| 11..... | 2,440 | 1,180 | 2,630 | 2,410 | 2,840 | 2,850 | 2,550 | 16,400 | 2,660 | 2,760 | 2,550 | 2,280 |
| 12..... | 2,460 | 1,290 | 2,740 | 2,280 | 2,850 | 2,990 | 2,190 | 15,100 | 2,380 | 2,660 | 2,550 | 2,550 |
| 13..... | 2,640 | 1,350 | 2,740 | 2,480 | 2,870 | 3,050 | 1,800 | 11,300 | 2,030 | 2,780 | 2,640 | 2,550 |
| 14..... | 2,190 | 1,470 | 2,440 | 2,570 | 2,910 | 3,110 | 1,470 | 8,690 | 2,300 | 2,770 | 2,740 | 2,460 |
| 15..... | 1,600 | 1,470 | 1,800 | 2,570 | 2,970 | 2,640 | 1,350 | 6,740 | 2,510 | 2,700 | 3,130 | 2,370 |
| 16..... | 1,540 | 1,470 | 2,800 | 2,570 | 3,010 | 2,550 | 1,290 | 4,930 | 2,320 | 2,690 | 3,130 | 2,370 |
| 17..... | 1,600 | 1,200 | 2,780 | 2,570 | 2,970 | 1,730 | 1,660 | 5,180 | 2,280 | 2,740 | 2,550 | 2,370 |
| 18..... | 1,660 | 980 | 2,720 | 2,550 | 3,070 | 1,950 | 2,280 | 4,680 | 2,200 | 2,780 | 2,460 | 2,370 |
| 19..... | 1,730 | 920 | 2,300 | 2,550 | 3,030 | 2,280 | 2,460 | 4,200 | 2,260 | 2,820 | 2,460 | 2,280 |
| 20..... | 1,660 | 1,350 | 2,130 | 2,160 | 3,030 | 2,740 | 2,030 | 5,680 | 2,160 | 2,980 | 2,370 | 2,280 |
| 21..... | 1,410 | 1,290 | 1,840 | 1,760 | 3,030 | 2,840 | 2,550 | 7,010 | 2,150 | 2,870 | 2,460 | 2,370 |
| 22..... | 1,180 | 1,230 | 2,160 | 1,890 | 3,050 | 2,460 | 2,460 | 6,770 | 2,140 | 2,880 | 2,460 | 2,370 |
| 23..... | 1,020 | 1,180 | 2,320 | 2,110 | 3,050 | 1,470 | 2,280 | 5,540 | 2,070 | 3,020 | 2,460 | 2,370 |
| 24..... | 1,230 | 1,120 | 2,610 | 2,130 | 3,090 | 1,870 | 2,760 | 2,760 | 2,200 | 2,920 | 2,550 | 2,280 |
| 25..... | 1,180 | 1,070 | 2,840 | 2,110 | 3,130 | 830 | 2,030 | 1,970 | 2,180 | 2,900 | 2,190 | 2,280 |
| 26..... | 820 | 1,020 | 2,870 | 2,060 | 3,130 | 1,290 | 2,740 | 2,520 | 2,350 | 2,980 | 2,190 | 2,280 |
| 27..... | 860 | 1,020 | 2,890 | 2,190 | 3,130 | 1,600 | 3,530 | 2,370 | 2,380 | 2,930 | 2,370 | 2,280 |
| 28..... | 860 | 1,020 | 2,890 | 2,410 | 3,090 | 1,970 | 4,320 | 2,900 | 2,470 | 2,980 | 2,370 | 2,280 |
| 29..... | 870 | 1,020 | 1,840 | 2,550 | ----- | 960 | 5,180 | 2,390 | 2,410 | 3,000 | 2,460 | 2,280 |
| 30..... | 840 | 1,020 | 1,550 | 2,740 | ----- | 870 | 4,440 | 2,370 | 2,540 | 2,960 | 2,550 | 2,280 |
| 31..... | 811 | ----- | 2,370 | 2,680 | ----- | 840 | ----- | 3,220 | ----- | 3,050 | 2,550 | ----- |

| Month | Observed | | | Corrected for storage in Brassua and Moosehead Lakes | | Run-off in inches |
|----------------|----------|---------|-------|--|-----------------|-------------------|
| | Maximum | Minimum | Mean | Mean | Per square mile | |
| October..... | 2,640 | 811 | 1,620 | 2,080 | 1.32 | 1.52 |
| November..... | 1,470 | 793 | 1,110 | 2,420 | 1.54 | 1.72 |
| December..... | 2,890 | 1,230 | 2,310 | 1,740 | 1.11 | 1.28 |
| January..... | 2,740 | 1,760 | 2,370 | 1,580 | 1.01 | 1.16 |
| February..... | 3,130 | 2,660 | 2,910 | 1,910 | .585 | .61 |
| March..... | 3,130 | 830 | 2,270 | 1,310 | .834 | .96 |
| April..... | 5,180 | 840 | 2,120 | 7,040 | 4.48 | 5.00 |
| May..... | 18,200 | 1,970 | 8,220 | 10,360 | 6.56 | 7.56 |
| June..... | 8,210 | 2,030 | 3,260 | 3,280 | 2.09 | 2.33 |
| July..... | 3,070 | 2,220 | 2,760 | 924 | .589 | .68 |
| August..... | 3,130 | 2,190 | 2,630 | 277 | .176 | .20 |
| September..... | 2,640 | 2,280 | 2,410 | 240 | .158 | .18 |
| The year..... | 18,200 | 793 | 2,840 | 2,681 | 1.71 | 23.20 |

DEAD RIVER AT THE FORKS, ME.

LOCATION.—Water-stage recorder $1\frac{1}{2}$ miles west of The Forks, Somerset, County.

DRAINAGE AREA.—878 square miles.

RECORDS AVAILABLE.—September, 1901, to August, 1907; March, 1910, to September, 1929.

EXTREMES.—Maximum discharge during year, 17,600 second-feet May 3 (gage height, 8.93 feet); minimum, 189 second-feet Sept. 8 (gage height, 1.78 feet).

1901-1907; 1910-1929: Maximum discharge, 23,800 second-feet Apr. 30, 1923; minimum stage, 0.2 foot Sept. 12, 13, and 17, 1918 (discharge not determined).

REMARKS.—Records good. Corrections for ice effect Dec. 8 to Apr. 17 based on frequent discharge measurements. Discharge June 8 and 9 estimated. Some storage on lakes.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|-------|-------|--------|-------|------|------|-------|
| 1..... | 778 | 1,310 | 1,200 | 800 | 710 | 420 | 1,100 | 8,820 | 1,790 | 734 | 274 | 218 |
| 2..... | 992 | 1,540 | 1,030 | 660 | 680 | 400 | 1,100 | 8,800 | 3,100 | 630 | 274 | 230 |
| 3..... | 556 | 1,700 | 1,030 | 590 | 640 | 395 | 1,090 | 12,200 | 2,110 | 600 | 260 | 206 |
| 4..... | 824 | 1,280 | 992 | 600 | 610 | 385 | 1,080 | 15,800 | 1,840 | 745 | 295 | 236 |
| 5..... | 723 | 1,100 | 968 | 610 | 600 | 400 | 1,100 | 13,400 | 1,440 | 590 | 281 | 288 |
| 6..... | 650 | 1,140 | 982 | 620 | 580 | 435 | 1,170 | 13,100 | 1,340 | 554 | 260 | 218 |
| 7..... | 581 | 1,080 | 884 | 725 | 570 | 435 | 1,740 | 11,800 | 1,040 | 545 | 254 | 224 |
| 8..... | 538 | 1,020 | 895 | 860 | 565 | 430 | 3,450 | 10,900 | 1,030 | 536 | 248 | 189 |
| 9..... | 509 | 955 | 895 | 970 | 565 | 420 | 6,320 | 8,480 | 1,550 | 536 | 274 | 200 |
| 10..... | 491 | 908 | 885 | 920 | 555 | 420 | 8,180 | 6,960 | 896 | 527 | 267 | 230 |
| 11..... | 473 | 824 | 885 | 825 | 555 | 430 | 8,180 | 5,540 | 975 | 509 | 260 | 328 |
| 12..... | 386 | 766 | 870 | 725 | 555 | 445 | 7,880 | 4,370 | 960 | 500 | 248 | 378 |
| 13..... | 581 | 712 | 850 | 650 | 555 | 475 | 5,520 | 5,780 | 905 | 491 | 309 | 281 |
| 14..... | 1,050 | 701 | 825 | 570 | 555 | 500 | 3,780 | 4,560 | 789 | 491 | 330 | 330 |
| 15..... | 968 | 701 | 825 | 525 | 585 | 545 | 3,030 | 4,490 | 992 | 482 | 309 | 375 |
| 16..... | 896 | 767 | 825 | 500 | 565 | 590 | 2,440 | 3,970 | 1,550 | 473 | 267 | 394 |
| 17..... | 908 | 1,100 | 810 | 490 | 570 | 640 | 2,010 | 3,970 | 1,160 | 446 | 302 | 309 |
| 18..... | 1,720 | 1,570 | 835 | 610 | 680 | 710 | 2,730 | 4,180 | 1,050 | 386 | 316 | 346 |
| 19..... | 8,560 | 2,350 | 1,050 | 745 | 570 | 800 | 4,380 | 3,550 | 1,000 | 419 | 242 | 288 |
| 20..... | 3,240 | 3,780 | 1,250 | 1,040 | 565 | 885 | 4,420 | 3,460 | 1,040 | 402 | 230 | 274 |
| 21..... | 1,640 | 4,430 | 1,230 | 1,460 | 555 | 970 | 3,550 | 3,500 | 1,410 | 402 | 224 | 316 |
| 22..... | 1,200 | 3,900 | 1,040 | 1,320 | 545 | 1,050 | 3,870 | 4,430 | 905 | 386 | 230 | 309 |
| 23..... | 1,410 | 2,730 | 870 | 1,240 | 525 | 1,170 | 2,660 | 3,030 | 1,160 | 370 | 288 | 295 |
| 24..... | 3,070 | 1,620 | 860 | 1,160 | 520 | 1,170 | 3,040 | 2,260 | 1,270 | 346 | 362 | 274 |
| 25..... | 2,190 | 1,090 | 860 | 1,030 | 500 | 1,160 | 3,230 | 1,800 | 1,400 | 316 | 378 | 267 |
| 26..... | 1,100 | 1,640 | 850 | 910 | 480 | 1,170 | 3,880 | 1,990 | 1,500 | 309 | 295 | 260 |
| 27..... | 908 | 1,720 | 780 | 860 | 465 | 1,160 | 6,910 | 1,800 | 1,840 | 265 | 288 | 267 |
| 28..... | 1,340 | 2,000 | 735 | 825 | 445 | 1,140 | 8,090 | 1,780 | 757 | 295 | 236 | 260 |
| 29..... | 1,440 | 1,940 | 765 | 790 | ----- | 1,140 | 8,710 | 1,840 | 734 | 302 | 230 | 242 |
| 30..... | 1,040 | 1,630 | 825 | 765 | ----- | 1,130 | 9,490 | 1,650 | 745 | 285 | 236 | 236 |
| 31..... | 1,090 | ----- | 850 | 745 | ----- | 1,120 | ----- | 2,130 | ----- | 281 | 295 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 3,560 | 386 | 1,200 | 1.37 | 1.88 |
| November..... | 4,430 | 701 | 1,600 | 1.82 | 2.03 |
| December..... | 1,250 | 735 | 918 | 1.05 | 1.21 |
| January..... | 1,460 | 490 | 810 | .923 | 1.06 |
| February..... | 710 | 445 | 562 | .640 | .67 |
| March..... | 1,170 | 385 | 727 | .828 | .95 |
| April..... | 9,490 | 1,080 | 4,130 | 4.70 | 5.24 |
| May..... | 15,800 | 1,650 | 5,820 | 6.63 | 7.64 |
| June..... | 3,100 | 734 | 1,280 | 1.46 | 1.63 |
| July..... | 745 | 281 | 458 | .522 | .60 |
| August..... | 378 | 224 | 276 | .314 | .36 |
| September..... | 394 | 189 | 275 | .313 | .35 |
| The year..... | 15,800 | 189 | 1,510 | 1.72 | 23.32 |

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, 1929. November, 1901, to May, 1907, at site 1 mile upstream.

EXTREMES.—Maximum discharge during year, 12,900 second-feet May 3 (gage height, 13.88 feet); minimum, 31 second-feet for short periods in July, August, and September (gage height, 2.29 feet).

1925-1929: Maximum discharge, 18,600 second-feet Nov. 4, 1927 (gage height, 17.83 feet); minimum, 25 second-feet Sept. 15, 1926 (gage height, 2.18 feet).

REMARKS.—Records good except those for periods of ice effect (Dec. 10-14 and Dec. 20 to Apr. 6) and for estimated period, which are fair. Low-water discharge affected by power plant.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|------|------|-------|-------|------|------|------|-------|
| 1 | 248 | 230 | 290 | 545 | 340 | 215 | 950 | 2,470 | 770 | 285 | 63 | 47 |
| 2 | 255 | 341 | 285 | 500 | 330 | 215 | 915 | 2,580 | 543 | 200 | 63 | 53 |
| 3 | 216 | 332 | 420 | 495 | 320 | 210 | 885 | 8,480 | 694 | 235 | 55 | 76 |
| 4 | 192 | 320 | 335 | 495 | 315 | 205 | 885 | 7,530 | 693 | 144 | 79 | 84 |
| 5 | 186 | 465 | 335 | 500 | 315 | 220 | 1,010 | 3,910 | 490 | 180 | 120 | 71 |
| 6 | 206 | 425 | 335 | 515 | 315 | 240 | 1,490 | 3,650 | 471 | 150 | 104 | 64 |
| 7 | 168 | 354 | 285 | 1,290 | 310 | 365 | 2,290 | 3,040 | 376 | 148 | 81 | 76 |
| 8 | 205 | 354 | 286 | 1,330 | 305 | 320 | 5,700 | 2,690 | 371 | 160 | 71 | 53 |
| 9 | 205 | 363 | 267 | 625 | 305 | 310 | 6,120 | 1,840 | 270 | 162 | 69 | 77 |
| 10 | 189 | 323 | 280 | 580 | 300 | 300 | 5,140 | 1,410 | 294 | 150 | 59 | 86 |
| 11 | 197 | 265 | 280 | 545 | 290 | 295 | 3,040 | 1,660 | 255 | 148 | 52 | 80 |
| 12 | 203 | 285 | 280 | 510 | 285 | 300 | 2,140 | 1,530 | 244 | 134 | 70 | |
| 13 | 194 | 311 | 270 | 495 | 280 | 330 | 1,530 | 1,530 | 213 | 118 | 58 | |
| 14 | 226 | 216 | 270 | 480 | 275 | 485 | 1,410 | 1,250 | 230 | 116 | 68 | |
| 15 | 251 | 248 | 290 | 455 | 275 | 540 | 1,290 | 1,330 | 319 | 146 | 69 | 34 |
| 16 | 237 | 280 | 290 | 425 | 270 | 565 | 1,290 | 1,570 | 307 | 136 | 170 | 93 |
| 17 | 300 | 285 | 311 | 385 | 265 | 880 | 2,830 | 1,410 | 274 | 134 | 110 | 87 |
| 18 | 685 | 400 | 465 | 400 | 265 | 810 | 4,580 | 1,250 | 237 | 106 | 60 | 71 |
| 19 | 1,210 | 845 | 894 | 680 | 260 | 620 | 3,650 | 1,090 | 216 | 124 | 116 | 62 |
| 20 | 1,210 | 1,620 | 620 | 1,330 | 255 | 565 | 2,470 | 1,700 | 270 | 118 | 88 | 63 |
| 21 | 1,060 | 1,330 | 460 | 895 | 250 | 650 | 2,300 | 1,530 | 189 | 93 | 67 | 60 |
| 22 | 750 | 1,020 | 385 | 660 | 250 | 730 | 2,090 | 1,290 | 270 | 99 | 56 | 49 |
| 23 | 460 | 880 | 445 | 585 | 245 | 810 | 1,530 | 1,210 | 173 | 102 | 59 | 57 |
| 24 | 680 | 712 | 500 | 500 | 240 | 770 | 1,450 | 1,250 | 273 | 76 | 285 | 61 |
| 25 | 950 | 465 | 460 | 450 | 235 | 750 | 1,890 | 985 | 192 | 95 | 290 | 60 |
| 26 | 719 | 490 | 320 | 410 | 230 | 750 | 4,440 | 764 | 319 | 78 | 192 | 54 |
| 27 | 845 | 345 | 270 | 400 | 225 | 795 | 4,440 | 686 | 190 | 72 | 124 | 56 |
| 28 | 738 | 263 | 555 | 370 | 220 | 795 | 3,520 | 644 | 180 | 71 | 100 | 58 |
| 29 | 656 | 295 | 1,250 | 370 | — | 680 | 5,430 | 620 | 300 | 70 | 92 | 31 |
| 30 | 554 | 377 | 725 | 365 | — | 640 | 4,440 | 609 | 225 | 87 | 84 | 60 |
| 31 | 341 | — | 620 | 350 | — | 680 | — | 712 | — | 58 | 82 | — |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 1,210 | 168 | 469 | 1.34 | 1.54 |
| November | 1,620 | 216 | 480 | 1.37 | 1.53 |
| December | 1,250 | 267 | 422 | 1.20 | 1.38 |
| January | 1,330 | 350 | 579 | 1.65 | 1.90 |
| February | 340 | 220 | 278 | .792 | .82 |
| March | 880 | 205 | 517 | 1.47 | 1.70 |
| April | 6,120 | 885 | 2,700 | 7.69 | 8.58 |
| May | 8,480 | 609 | 2,010 | 5.73 | 6.61 |
| June | 700 | 180 | 315 | .897 | 1.00 |
| July | 285 | 58 | 129 | .368 | .42 |
| August | 290 | 52 | 98.6 | .281 | .32 |
| September | 93 | 31 | 65.4 | .186 | .21 |
| The year | 8,480 | 31 | 673 | 1.92 | 26.01 |

SANDY RIVER NEAR MERCER, ME.

LOCATION.—Water-stage recorder at Davis ferry, 3 miles north of Mercer village, Somerset County.

DRAINAGE AREA.—534 square miles.

RECORDS AVAILABLE.—October, 1928, to September, 1929.

EXTREMES.—Maximum discharge during period, 12,200 second-feet May 4 (gage height, 9.93 feet); minimum, 59 second-feet Sept. 30 (gage height, 2.32 feet).

REMARKS.—Records good except those for period of ice effect, Nov. 29 to Apr. 6, which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|-----------------|------|-------|
| 1..... | | 494 | 545 | 615 | 440 | 305 | 1,890 | 3,090 | 902 | 38 ³ | 105 | 81 |
| 2..... | | 512 | 430 | 550 | 430 | 320 | 1,790 | 2,740 | 760 | 35 ³ | 100 | 64 |
| 3..... | | 524 | 500 | 450 | 395 | 280 | 1,540 | 6,930 | 640 | 327 | 105 | 63 |
| 4..... | | 642 | 510 | 445 | 395 | 285 | 1,760 | 2,000 | 600 | 295 | 141 | 64 |
| 5..... | | 730 | 500 | 410 | 395 | 310 | 2,130 | 4,160 | 551 | 272 | 135 | 94 |
| 6..... | | 642 | 530 | 530 | 390 | 445 | 3,180 | 4,460 | 530 | 26 ³ | 107 | 87 |
| 7..... | | 579 | 490 | 1,640 | 370 | 745 | 4,260 | 3,660 | 537 | 25 ³ | 74 | 80 |
| 8..... | | 551 | 470 | 1,250 | 400 | 770 | 7,740 | 3,460 | 494 | 24 ³ | 80 | 70 |
| 9..... | | 506 | 460 | 955 | 385 | 620 | 6,320 | 2,450 | 460 | 25 ³ | 98 | 62 |
| 10..... | | 476 | 525 | 910 | 350 | 490 | 6,090 | 1,960 | 430 | 24 ³ | 110 | 75 |
| 11..... | | 445 | 520 | 870 | 365 | 425 | 3,760 | 1,700 | 411 | 23 ³ | 105 | 85 |
| 12..... | | 435 | 510 | 820 | 350 | 415 | 3,000 | 1,520 | 383 | 22 ³ | 135 | 67 |
| 13..... | | 411 | 490 | 800 | 380 | 480 | 2,300 | 1,580 | 361 | 21 ³ | 114 | 68 |
| 14..... | | 402 | 500 | 780 | 360 | 615 | 2,030 | 1,360 | 344 | 18 ³ | 110 | 70 |
| 15..... | | 420 | 480 | 770 | 355 | 820 | 1,820 | 1,310 | 357 | 19 ³ | 114 | 81 |
| 16..... | | 415 | 470 | 760 | 365 | 780 | 1,960 | 1,640 | 402 | 20 ³ | 119 | 89 |
| 17..... | | 445 | 470 | 750 | 340 | 1,050 | 4,160 | 1,820 | 392 | 20 ³ | 127 | 75 |
| 18..... | | 558 | 605 | 745 | 350 | 1,030 | 7,260 | 1,310 | 348 | 19 ³ | 147 | 85 |
| 19..... | 1,050 | 895 | 820 | 330 | 820 | 5,420 | 1,180 | 315 | 315 | 19 ³ | 138 | 78 |
| 20..... | 1,760 | 730 | 1,200 | 370 | 940 | 4,360 | 1,960 | 311 | 17 ³ | 147 | 75 | |
| 21..... | | 1,360 | 585 | 1,110 | 350 | 1,180 | 3,960 | 1,560 | 299 | 14 ³ | 138 | 73 |
| 22..... | | 986 | 545 | 970 | 345 | 1,330 | 3,030 | 1,360 | 280 | 20 ³ | 130 | 68 |
| 23..... | | 828 | 510 | 860 | 340 | 1,640 | 2,740 | 1,180 | 291 | 24 ³ | 130 | 62 |
| 24..... | | 752 | 545 | 770 | 315 | 1,490 | 2,480 | 1,060 | 299 | 20 ³ | 124 | 67 |
| 25..... | | 760 | 560 | 690 | 305 | 1,340 | 2,650 | 1,310 | 307 | 16 ³ | 107 | 77 |
| 26..... | 895 | 614 | 570 | 620 | 300 | 1,280 | 4,680 | 1,180 | 291 | 14 ³ | 132 | 71 |
| 27..... | 745 | 494 | 560 | 580 | 310 | 1,200 | 4,880 | 1,010 | 307 | 13 ³ | 161 | 67 |
| 28..... | 663 | 482 | 860 | 600 | 315 | 1,300 | 3,960 | 895 | 315 | 13 ³ | 146 | 62 |
| 29..... | 649 | 495 | 1,520 | 550 | ----- | 1,240 | 5,640 | 820 | 352 | 12 ³ | 141 | 60 |
| 30..... | 600 | 535 | 1,200 | 490 | ----- | 1,180 | 5,100 | 730 | 402 | 11 ³ | 132 | 59 |
| 31..... | 537 | ----- | 720 | 460 | ----- | 1,200 | ----- | 722 | ----- | 10 ³ | 149 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|--------------------|---------|---------|-------|------------------|-------------------|
| October 26-31..... | 895 | 537 | 682 | 1.7 ⁸ | 0.29 |
| November..... | 1,760 | 402 | 643 | 1.20 | 1.34 |
| December..... | 1,520 | 430 | 606 | 1.13 | 1.30 |
| January..... | 1,640 | 410 | 767 | 1.44 | 1.66 |
| February..... | 440 | 300 | 361 | .676 | .70 |
| March..... | 1,640 | 280 | 849 | 1.59 | 1.83 |
| April..... | 7,740 | 1,540 | 3,730 | 6.69 | 7.80 |
| May..... | 9,000 | 722 | 2,230 | 4.18 | 4.82 |
| June..... | 902 | 280 | 423 | .792 | .88 |
| July..... | 388 | 107 | 214 | .401 | .46 |
| August..... | 161 | 74 | 123 | .230 | .27 |
| September..... | 94 | 59 | 726 | .137 | .16 |

SEBASTICOOK RIVER NEAR PITTSFIELD, ME.

LOCATION.—Water-stage recorder $1\frac{1}{4}$ 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, 1929.

EXTREMES.—Maximum discharge during period, 7,440 second-feet Apr. 20 (gauge height, 8.81 feet); minimum, 27 second-feet Sept. 17 (gauge height, 1.00 foot).

REMARKS.—Records good except those for period of ice effect (Dec. 21 to Apr. 4) and those for Nov. 24 to Dec. 17, which were estimated. Distribution of flow affected by storage and pondage.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|------|-------|-------|-------|-------|------|------|-------|
| 1 | | 1,540 | 1,030 | 1,110 | 555 | 490 | 1,950 | 4,250 | 630 | 380 | 110 | 220 |
| 2 | | 1,490 | 945 | 920 | 520 | 490 | 2,170 | 4,250 | 720 | 360 | 240 | 205 |
| 3 | | 1,490 | 875 | 860 | 505 | 490 | 2,340 | 4,250 | 875 | 365 | 50 | 186 |
| 4 | | 1,540 | 835 | 875 | 505 | 490 | 2,440 | 4,380 | 945 | 210 | 48 | 245 |
| 5 | | 1,750 | 860 | 900 | 505 | 505 | 2,580 | 4,660 | 1,120 | 415 | 156 | 290 |
| 6 | | 1,860 | 900 | 970 | 505 | 680 | 2,880 | 4,660 | 1,260 | 285 | 144 | 230 |
| 7 | | 1,920 | 920 | 1,100 | 510 | 650 | 3,120 | 4,520 | 1,250 | 180 | 140 | 290 |
| 8 | | 1,920 | 920 | 1,130 | 590 | 520 | 3,500 | 4,250 | 1,130 | 365 | 144 | 102 |
| 9 | | 1,920 | 920 | 1,100 | 530 | 530 | 3,990 | 3,990 | 1,020 | 192 | 144 | 154 |
| 10 | | 1,920 | 900 | 1,070 | 495 | 670 | 4,380 | 3,500 | 950 | 205 | 130 | 215 |
| 11 | | 1,970 | 875 | 1,030 | 530 | 620 | 4,660 | 3,000 | 850 | 200 | 45 | 215 |
| 12 | | 1,970 | 860 | 1,010 | 530 | 655 | 4,520 | 2,520 | 805 | 205 | 45 | 166 |
| 13 | | 1,750 | 835 | 980 | 520 | 520 | 4,380 | 2,140 | 750 | 680 | 245 | 205 |
| 14 | | 772 | 825 | 945 | 520 | 500 | 4,120 | 1,860 | 715 | 275 | 52 | 154 |
| 15 | | 632 | 835 | 920 | 520 | 500 | 3,870 | 1,660 | 685 | 138 | 164 | 138 |
| 16 | | 620 | 860 | 900 | 510 | 510 | 3,740 | 1,510 | 620 | 85 | 156 | 200 |
| 17 | | 626 | 920 | 885 | 510 | 590 | 4,380 | 1,450 | 615 | 116 | 172 | 69 |
| 18 | | 768 | 960 | 850 | 505 | 640 | 5,900 | 1,410 | 565 | 100 | 60 | 205 |
| 19 | | 900 | 1,020 | 885 | 530 | 690 | 7,160 | 1,370 | 525 | 122 | 160 | 76 |
| 20 | | 1,240 | 1,100 | 960 | 525 | 760 | 7,440 | 1,400 | 540 | 55 | 180 | 150 |
| 21 | | 1,540 | 1,160 | 920 | 520 | 1,100 | 7,160 | 1,450 | 545 | 56 | 220 | 170 |
| 22 | | 1,750 | 1,150 | 875 | 520 | 1,390 | 6,600 | 1,460 | 500 | 138 | 250 | 39 |
| 23 | | 1,920 | 1,090 | 835 | 510 | 1,920 | 6,040 | 1,430 | 435 | 196 | 164 | 37 |
| 24 | | 1,890 | 1,030 | 795 | 505 | 2,010 | 5,490 | 1,340 | 420 | 122 | 455 | 37 |
| 25 | | 1,800 | 995 | 790 | 505 | 1,990 | 4,940 | 1,420 | 420 | 270 | 200 | 146 |
| 26 | | 1,640 | 995 | 765 | 500 | 1,840 | 4,800 | 1,450 | 520 | 192 | 205 | 168 |
| 27 | 1,490 | 1,340 | 1,030 | 750 | 500 | 1,710 | 4,660 | 1,380 | 520 | 215 | 166 | 140 |
| 28 | 1,490 | 1,050 | 1,100 | 735 | 495 | 1,660 | 4,520 | 1,160 | 510 | 53 | 152 | 122 |
| 29 | 1,590 | 1,020 | 1,160 | 730 | | 1,640 | 4,250 | | 960 | 530 | 198 | 36 |
| 30 | 1,700 | 1,050 | 1,210 | 720 | | 1,660 | 4,120 | | 800 | 475 | 178 | 140 |
| 31 | 1,640 | | 1,200 | 705 | | 1,750 | | | 800 | | 210 | 150 |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|---------------|---------|---------|-------|-----------------|-------------------|
| October 27-31 | 1,700 | 1,490 | 1,580 | 2.64 | 0.49 |
| November | 1,970 | 620 | 1,450 | 2.43 | 2.71 |
| December | 1,210 | 825 | 970 | 1.64 | 1.89 |
| January | 1,130 | 705 | 90 | 1.61 | 1.74 |
| February | 590 | 495 | 517 | 1.865 | 1.90 |
| March | 2,010 | 490 | 973 | 1.63 | 1.83 |
| April | 7,440 | 1,950 | 4,400 | 7.36 | 8.21 |
| May | 4,660 | 800 | 2,410 | 4.03 | 4.65 |
| June | 1,260 | 420 | 715 | 1.20 | 1.34 |
| July | 680 | 53 | 218 | .365 | .42 |
| August | 455 | 45 | 102 | .271 | .31 |
| September | 290 | 36 | 158 | .264 | .29 |

COBBOSSSECONTEE 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, 1929.

REMARKS.—Discharge determined from flow over dam, through gates and waterwheels, and 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., Cumberland Mills, Me.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 290 | 290 | 290 | 290 | 290 | 290 | 585 | 1,540 | 270 | 270 | 210 | 13 |
| 2..... | 290 | 290 | 13 | 290 | 290 | 290 | 675 | 1,200 | 13 | 270 | 210 | 60 |
| 3..... | 290 | 290 | 290 | 290 | 13 | 13 | 745 | 1,540 | 270 | 270 | 210 | 190 |
| 4..... | 290 | 13 | 290 | 290 | 290 | 290 | 703 | 2,220 | 270 | 13 | 13 | 190 |
| 5..... | 290 | 290 | 290 | 290 | 290 | 290 | 690 | 2,260 | 270 | 270 | 200 | 190 |
| 6..... | 290 | 290 | 290 | 13 | 290 | 290 | 720 | 1,690 | 270 | 270 | 210 | 190 |
| 7..... | 13 | 290 | 290 | 290 | 290 | 290 | 705 | 1,180 | 270 | 13 | 210 | 190 |
| 8..... | 290 | 290 | 290 | 290 | 290 | 290 | 930 | 1,040 | 270 | 270 | 210 | 13 |
| 9..... | 290 | 290 | 13 | 290 | 290 | 290 | 1,080 | 1,060 | 13 | 270 | 210 | 190 |
| 10..... | 290 | 290 | 290 | 290 | 13 | 13 | 730 | 1,060 | 270 | 270 | 210 | 190 |
| 11..... | 290 | 13 | 290 | 290 | 290 | 405 | 400 | 1,060 | 270 | 270 | 13 | 190 |
| 12..... | 290 | 108 | 290 | 290 | 290 | 435 | 400 | 815 | 270 | 270 | 210 | 190 |
| 13..... | 290 | 290 | 290 | 13 | 290 | 459 | 400 | 545 | 270 | 270 | 210 | 190 |
| 14..... | 13 | 290 | 290 | 290 | 290 | 591 | 1,310 | 395 | 270 | 50 | 210 | 190 |
| 15..... | 290 | 290 | 290 | 290 | 290 | 725 | 1,620 | 400 | 270 | 270 | 210 | 13 |
| 16..... | 290 | 290 | 13 | 290 | 290 | 1,030 | 1,540 | 395 | 13 | 270 | 210 | 190 |
| 17..... | 290 | 290 | 290 | 290 | 13 | 1,220 | 1,660 | 393 | 270 | 270 | 210 | 190 |
| 18..... | 290 | 13 | 290 | 290 | 290 | 1,320 | 2,300 | 393 | 270 | 270 | 13 | 190 |
| 19..... | 290 | 290 | 290 | 350 | 290 | 1,200 | 2,960 | 350 | 270 | 270 | 210 | 190 |
| 20..... | 290 | 290 | 290 | 210 | 290 | 1,060 | 2,400 | 393 | 270 | 270 | 210 | 190 |
| 21..... | 240 | 290 | 290 | 465 | 290 | 1,060 | 2,260 | 393 | 270 | 13 | 210 | 190 |
| 22..... | 290 | 290 | 290 | 472 | 290 | 1,070 | 1,780 | 393 | 270 | 210 | 210 | 13 |
| 23..... | 290 | 290 | 13 | 461 | 290 | 1,080 | 1,460 | 350 | 13 | 210 | 210 | 190 |
| 24..... | 290 | 290 | 290 | 360 | 13 | 1,240 | 1,460 | 310 | 270 | 210 | 210 | 190 |
| 25..... | 290 | 13 | 13 | 297 | 290 | 1,280 | 985 | 310 | 270 | 210 | 13 | 190 |
| 26..... | 290 | 290 | 290 | 290 | 290 | 1,160 | 1,400 | 13 | 270 | 210 | 210 | 190 |
| 27..... | 290 | 290 | 290 | 150 | 290 | 980 | 2,260 | 300 | 270 | 210 | 210 | 190 |
| 28..... | 13 | 290 | 290 | 290 | 290 | 825 | 1,840 | 290 | 270 | 13 | 210 | 190 |
| 29..... | 290 | 150 | 290 | 290 | ----- | 715 | 1,560 | 280 | 270 | 210 | 210 | 13 |
| 30..... | 290 | 290 | 13 | 290 | ----- | 605 | 1,720 | 140 | 13 | 210 | 210 | 110 |
| 31..... | 290 | ----- | 290 | 290 | ----- | 545 | ----- | 270 | ----- | 210 | 210 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 290 | 13 | 262 | 1.19 | 1.37 |
| November..... | 290 | 13 | 242 | 1.10 | 1.23 |
| December..... | 290 | 13 | 236 | 1.07 | 1.23 |
| January..... | 472 | 13 | 286 | 1.30 | 1.50 |
| February..... | 290 | 13 | 250 | 1.14 | 1.19 |
| March..... | 1,320 | 13 | 689 | 3.13 | 3.61 |
| April..... | 2,960 | 400 | 1,310 | 5.95 | 6.64 |
| May..... | 2,260 | 13 | 741 | 3.37 | 3.88 |
| June..... | 270 | 13 | 227 | 1.03 | 1.15 |
| July..... | 270 | 13 | 212 | .964 | 1.11 |
| August..... | 210 | 13 | 184 | .836 | .96 |
| September..... | 190 | 13 | 154 | .706 | .78 |
| The year..... | 2,960 | 13 | 400 | 1.82 | 24.65 |

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 village of Gorham, Coos County.

DRAINAGE AREA.—1,390 square miles.

RECORDS AVAILABLE.—March to September, 1929.

EXTREMES.—Maximum discharge during period, 13,900 second-feet May 4 (gage height, 8.38 feet); minimum, 1,160 second-feet Aug. 17 (gage height, 2.74 feet).

REMARKS.—Records good. Regulation from about 29,607,000,000 cubic feet of storage in Rangeley system of lakes.

Daily and monthly discharge, in second-feet, 1929

| Day | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|--------|-------|-------|-------|-------|
| 1..... | | 2,530 | 6,580 | 2,530 | 2,460 | 1,820 | 1,760 |
| 2..... | | 2,530 | 6,580 | 2,460 | 2,460 | 1,870 | 1,820 |
| 3..... | | 2,460 | 10,100 | 3,010 | 2,380 | 1,820 | 1,710 |
| 4..... | | 2,530 | 13,200 | 2,550 | 2,310 | 1,870 | 1,710 |
| 5..... | | 2,770 | 12,100 | 2,530 | 2,380 | 1,930 | 1,820 |
| 6..... | | 3,360 | 11,800 | 2,530 | 2,310 | 1,870 | 1,760 |
| 7..... | | 3,640 | 11,800 | 2,530 | 2,310 | 1,760 | 1,760 |
| 8..... | | 5,160 | 12,500 | 2,530 | 2,460 | 1,820 | 1,710 |
| 9..... | | 6,320 | 12,500 | 2,380 | 2,380 | 1,820 | 1,760 |
| 10..... | | 6,850 | 12,500 | 2,380 | 2,380 | 1,870 | 1,870 |
| 11..... | | 6,850 | 12,500 | 2,310 | 2,380 | 1,990 | 1,820 |
| 12..... | | 6,320 | 11,800 | 2,380 | 2,380 | 1,930 | 1,820 |
| 13..... | | 5,380 | 10,800 | 2,530 | 2,380 | 1,820 | 1,870 |
| 14..... | | 4,740 | 8,530 | 2,460 | 2,460 | 1,820 | 1,870 |
| 15..... | | 4,020 | 7,680 | 2,770 | 2,530 | 1,870 | 1,820 |
| 16..... | | 3,360 | 6,850 | 2,690 | 2,380 | 1,870 | 1,870 |
| 17..... | 2,460 | 3,180 | 6,850 | 2,460 | 2,240 | 1,820 | 1,760 |
| 18..... | 2,380 | 3,640 | 7,960 | 2,380 | 2,110 | 1,820 | 1,760 |
| 19..... | 2,460 | 3,540 | 8,240 | 2,380 | 2,050 | 1,870 | 1,710 |
| 20..... | 2,530 | 3,270 | 9,440 | 2,380 | 1,990 | 1,820 | 1,820 |
| 21..... | 2,530 | 3,360 | 8,240 | 2,310 | 1,990 | 1,820 | 1,870 |
| 22..... | 2,610 | 3,180 | 7,400 | 2,310 | 1,990 | 1,820 | 1,820 |
| 23..... | 2,690 | 3,270 | 6,850 | 2,310 | 1,990 | 1,820 | 1,820 |
| 24..... | 2,850 | 8,180 | 5,380 | 2,310 | 1,990 | 1,820 | 1,760 |
| 25..... | 2,770 | 3,360 | 4,640 | 2,380 | 1,990 | 1,870 | 1,710 |
| 26..... | 2,610 | 4,950 | 4,420 | 2,380 | 1,990 | 1,930 | 1,760 |
| 27..... | 2,530 | 5,600 | 4,020 | 2,380 | 1,990 | 1,820 | 1,760 |
| 28..... | 2,460 | 5,270 | 3,820 | 2,380 | 1,990 | 1,870 | 1,820 |
| 29..... | 2,380 | 6,580 | 3,360 | 2,460 | 2,050 | 1,930 | 1,760 |
| 30..... | 2,310 | 6,850 | 3,010 | 2,460 | 1,990 | 1,870 | 1,710 |
| 31..... | 2,460 | | 3,010 | | 1,820 | 1,820 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|------------------|---------|---------|-------|-----------------|-------------------|
| March 17-31..... | 2,850 | 2,310 | 2,540 | 1.83 | 1.02 |
| April..... | 6,850 | 2,460 | 4,270 | 3.07 | 3.42 |
| May..... | 13,200 | 3,010 | 8,200 | 5.91 | 6.81 |
| June..... | 3,010 | 2,310 | 2,470 | 1.78 | 1.99 |
| July..... | 2,530 | 1,820 | 2,200 | 1.59 | 1.83 |
| August..... | 1,990 | 1,760 | 1,850 | 1.33 | 1.53 |
| September..... | 1,870 | 1,710 | 1,790 | 1.29 | 1.44 |

ANDROSCOGGIN RIVER AT RUMFORD, ME.

LOCATION.—Gages in pond 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, 1929.

REMARKS.—Discharge computed from flow over dam and through wheels. Regulation from about 29,600,000,000 cubic feet of storage in Rangeley system of lakes. Records furnished by Charles A. Mixer, chief engineer, Rumford Falls Power Co.

Daily and monthly discharge, in second-feet, 1928–29

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

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|--------|-----------------|-------------------|
| October..... | 4,290 | 2,370 | 2,840 | 1.36 | 1.57 |
| November..... | 4,380 | 1,910 | 3,000 | 1.44 | 1.61 |
| December..... | 4,260 | 2,080 | 2,780 | 1.33 | 1.53 |
| January..... | 5,790 | 2,650 | 3,320 | 1.69 | 1.83 |
| February..... | 5,330 | 2,630 | 2,910 | 1.39 | 1.45 |
| March..... | 6,160 | 2,660 | 3,860 | 1.85 | 2.13 |
| April..... | 14,700 | 4,000 | 7,950 | 3.80 | 4.24 |
| May..... | 22,000 | 3,920 | 10,400 | 4.98 | 5.74 |
| June..... | 3,680 | 2,310 | 2,980 | 1.43 | 1.60 |
| July..... | 3,090 | 1,870 | 2,450 | 1.17 | 1.35 |
| August..... | 2,350 | 1,710 | 2,030 | .97 | 1.12 |
| September..... | 2,230 | 1,430 | 1,980 | .947 | 1.06 |
| The year..... | 22,000 | 1,430 | 3,880 | 1.86 | 25.23 |

ANDROSCOGGIN RIVER NEAR AUBURN, ME.

LOCATION.—Water-stage recorder $1\frac{1}{2}$ miles below mouth of Little Androscoggin River in Auburn, Androscoggin County.

DRAINAGE AREA.—3,260 square miles.

RECORDS AVAILABLE.—November, 1928, to September, 1929.

EXTREMES.—Maximum discharge during period, 40,100 second-feet May 4 (gage height, 11.98 feet); minimum, 634 second-feet Sept. 2 (gage height, 0.91 foot).

REMARKS.—Records good. Regulation from about 29,600,000,000 cubic feet of storage in Rangeley system of lakes and by operation of power plants above.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|--------|--------|--------|-------|-------|-------|-------|
| 1 | | 3,330 | 4,190 | 3,920 | 3,620 | 9,900 | 20,300 | 5,300 | 3,940 | 2,430 | 690 |
| 2 | | 1,890 | 4,530 | 3,820 | 3,420 | 10,900 | 16,900 | 5,320 | 3,930 | 2,470 | 640 |
| 3 | | 3,140 | 4,360 | 3,330 | 1,850 | 9,120 | 20,800 | 5,080 | 3,520 | 1,700 | 2,640 |
| 4 | | 3,680 | 4,100 | 4,510 | 3,980 | 8,720 | 36,600 | 4,800 | 1,880 | 880 | 2,580 |
| 5 | | 3,800 | 3,780 | 4,300 | 4,450 | 8,650 | 33,700 | 4,340 | 3,470 | 2,610 | 2,060 |
| 6 | | 3,550 | 4,200 | 4,110 | 4,420 | 10,100 | 27,100 | 4,320 | 3,290 | 2,640 | 2,610 |
| 7 | | 3,420 | 6,430 | 4,330 | 4,880 | 12,600 | 26,000 | 4,270 | 2,520 | 2,520 | 1,520 |
| 8 | | 3,620 | 8,050 | 3,760 | 5,350 | 18,800 | 24,600 | 3,970 | 3,780 | 2,490 | 715 |
| 9 | | 1,780 | 6,430 | 3,960 | 4,760 | 23,000 | 22,800 | 3,340 | 3,900 | 2,410 | 2,680 |
| 10 | | 3,320 | 5,800 | 3,010 | 4,050 | 23,400 | 21,000 | 4,110 | 4,050 | 1,630 | 2,600 |
| 11 | | 3,690 | 5,550 | 4,320 | 4,800 | 20,300 | 19,400 | 4,090 | 3,920 | 825 | 2,640 |
| 12 | | 3,110 | 5,110 | 4,510 | 4,600 | 17,500 | 18,300 | 4,250 | 4,040 | 2,790 | 2,590 |
| 13 | | 3,100 | 4,560 | 4,080 | 4,460 | 16,500 | 17,700 | 4,020 | 2,600 | 2,500 | 2,300 |
| 14 | | 3,150 | 5,280 | 4,030 | 5,480 | 13,700 | 16,800 | 4,040 | 1,200 | 2,620 | 1,350 |
| 15 | | 3,060 | 5,220 | 3,960 | 6,100 | 11,900 | 15,500 | 3,470 | 3,180 | 2,490 | 670 |
| 16 | | 2,140 | 4,470 | 3,500 | 6,660 | 11,900 | 14,600 | 2,250 | 3,220 | 2,450 | 2,410 |
| 17 | | 3,680 | 4,470 | 2,660 | 6,700 | 14,200 | 14,300 | 3,830 | 3,160 | 1,550 | 2,340 |
| 18 | | 4,140 | 4,200 | 4,180 | 7,520 | 18,600 | 13,100 | 3,800 | 2,920 | 725 | 2,360 |
| 19 | | 4,830 | 4,490 | 4,400 | 7,620 | 19,600 | 12,600 | 3,680 | 2,920 | 2,880 | 2,340 |
| 20 | | 5,820 | 6,440 | 4,260 | 8,500 | 18,100 | 13,100 | 3,650 | 2,200 | 2,610 | 2,210 |
| 21 | | 5,430 | 7,440 | 4,080 | 8,670 | 16,000 | 14,600 | 3,360 | 850 | 2,550 | 1,300 |
| 22 | | 4,680 | 6,780 | 3,920 | 9,090 | 13,400 | 13,700 | 2,780 | 2,680 | 2,670 | 665 |
| 23 | | 3,030 | 6,120 | 3,440 | 10,900 | 13,900 | 12,700 | 2,300 | 2,500 | 2,580 | 2,370 |
| 24 | 4,240 | 3,080 | 5,840 | 1,800 | 11,500 | 12,500 | 11,100 | 3,400 | 2,500 | 1,830 | 2,280 |
| 25 | 3,000 | 1,710 | 5,740 | 3,750 | 12,100 | 12,400 | 10,600 | 8,800 | 2,460 | 690 | 2,060 |
| 26 | 4,360 | 3,750 | 5,050 | 4,400 | 11,600 | 13,600 | 10,200 | 3,840 | 2,380 | 2,600 | 2,210 |
| 27 | 4,110 | 4,340 | 4,220 | 3,760 | 10,200 | 17,800 | 8,850 | 3,540 | 1,500 | 2,520 | 2,250 |
| 28 | 4,090 | 6,030 | 4,550 | 3,600 | 10,200 | 17,400 | 8,420 | 3,850 | 690 | 2,500 | 1,730 |
| 29 | 1,670 | 6,990 | 4,740 | | 9,130 | 18,500 | 7,100 | 2,630 | 2,480 | 2,440 | 930 |
| 30 | 3,830 | 6,180 | 4,340 | | 8,700 | 24,500 | 7,100 | 2,130 | 2,450 | 2,540 | 2,540 |
| 31 | | 4,310 | 4,150 | | 8,400 | | 6,250 | | 2,580 | 1,590 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|--------|-----------------|-------------------|
| November 24-30 | 4,360 | 1,670 | 3,610 | 1.11 | 0.29 |
| December | 6,990 | 1,710 | 3,800 | 1.17 | 1.35 |
| January | 8,050 | 3,780 | 5,180 | 1.59 | 1.83 |
| February | 4,510 | 1,800 | 3,850 | 1.18 | 1.23 |
| March | 12,100 | 1,850 | 6,890 | 2.11 | 2.43 |
| April | 24,500 | 8,650 | 15,200 | 4.66 | 5.20 |
| May | 36,600 | 6,250 | 16,600 | 5.09 | 5.86 |
| June | 5,320 | 2,130 | 3,790 | 1.16 | 1.29 |
| July | 4,050 | 690 | 2,800 | .859 | .99 |
| August | 2,880 | 690 | 2,180 | .669 | .77 |
| September | 2,680 | 640 | 1,960 | .601 | .67 |

MAGALLOWAY RIVER AT AZISCOHOS DAM, ME.

LOCATION.—Staff gage at Azischohos Dam, Oxford County, 15 miles above mouth.

DRAINAGE AREA.—233 square miles.

RECORDS AVAILABLE.—January, 1912, to September, 1929.

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., Lewiston, Me.

Monthly discharge, 1928-29

| Month | Discharge in second-feet | | | | Run-off in inches |
|----------------|--------------------------|---------|-------|-----------------|-------------------|
| | Maximum | Minimum | Mean | Per square mile | |
| October..... | 1,650 | 33 | 598 | 2.57 | 2.96 |
| November..... | 1,140 | 36 | 112 | .481 | .54 |
| December..... | 78 | 38 | 49 | .217 | .24 |
| January..... | 1,400 | 78 | 608 | 2.61 | 3.01 |
| February..... | 1,540 | 674 | 1,250 | 5.36 | 5.58 |
| March..... | 1,170 | 32 | 411 | 1.76 | 2.03 |
| April..... | 1,540 | 32 | 437 | 1.88 | 2.10 |
| May..... | 3,080 | 36 | 1,510 | 6.48 | 7.47 |
| June..... | 1,670 | 39 | 709 | 3.04 | 3.39 |
| July..... | 1,330 | 560 | 742 | 3.18 | 3.67 |
| August..... | 1,300 | 543 | 849 | 3.64 | 4.20 |
| September..... | 1,160 | 591 | 696 | 2.96 | 3.34 |
| The year..... | 3,080 | 32 | 661 | 2.84 | 38.53 |

SWIFT RIVER NEAR ROXBURY, ME.

LOCATION.—Water-stage recorder $2\frac{1}{2}$ miles below Roxbury, Oxford County, and 6 miles above confluence with Androscoggin River.

DRAINAGE AREA.—86 square miles.

RECORDS AVAILABLE.—June to September, 1929.

EXTREMES.—Maximum discharge during period, 128 second-feet June 16 (gage height, 1.97 feet); minimum not determined.

REMARKS.—Records good except those for July 27, 28, July 30 to Aug. 3, Aug. 10, 23, and Aug. 29 to Sept. 1, which were estimated.

Daily and monthly discharge, in second-feet, 1929

| Day | June | July | Aug. | Sept. | Day | June | July | Aug. | Sept. |
|-----------------|------|------|------|---------|---------|------|-----------------|-------------------|-------|
| 1..... | | 94 | 6.5 | 7.0 | 16..... | 101 | 31 | 61 | 11 |
| 2..... | | 62 | 6.0 | 6.8 | 17..... | 64 | 20 | 27 | 8.8 |
| 3..... | | 42 | 6.0 | 7.2 | 18..... | 48 | 16 | 17 | 11 |
| 4..... | | 34 | 42 | 7.8 | 19..... | 53 | 18 | 13 | 14 |
| 5..... | | 36 | 35 | 10 | 20..... | 41 | 20 | 10 | 11 |
| 6..... | | 35 | 20 | 11 | 21..... | 47 | 16 | 9.1 | 9.8 |
| 7..... | | 30 | 15 | 11 | 22..... | 63 | 13 | 7.8 | 9.0 |
| 8..... | | 55 | 11 | 10 | 23..... | 52 | 10 | 7.0 | 8.2 |
| 9..... | | 41 | 9.1 | 10 | 24..... | 45 | 10 | 51 | 7.4 |
| 10..... | | 34 | 7.5 | 11 | 25..... | 49 | 9.7 | 31 | 7.0 |
| 11..... | | 29 | 8.8 | 12 | 26..... | 64 | 9.4 | 17 | 7.0 |
| 12..... | | 22 | 11 | 10 | 27..... | 44 | 7.5 | 11 | 7.0 |
| 13..... | | 18 | 9.7 | 8.8 | 28..... | 34 | 7.5 | 8.5 | 7.0 |
| 14..... | | 27 | 14 | 9.1 | 29..... | 82 | 7.8 | 8.0 | 7.0 |
| 15..... | | 63 | 50 | 12 | 30..... | 74 | 7.0 | 7.5 | 7.0 |
| | | | | | 31..... | | 7.0 | 7.0 | |
| | | | | | | | | | |
| Month | | | | Maximum | Minimum | Mean | Per square mile | Run-off in inches | |
| June 16-30..... | | | | 101 | 34 | 57.4 | 0.667 | 0.37 | |
| July..... | | | | 94 | 7.0 | 26.8 | .312 | .36 | |
| August..... | | | | 61 | 6.0 | 17.6 | .205 | .24 | |
| September..... | | | | 14 | 6.8 | 9.20 | .107 | .12 | |

PRESUMPCOT RIVER BASIN

PRESUMPCOT RIVER AT OUTLET OF SEBAGO LAKE, N.E.

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, 1929.

REMARKS.—Discharge computed from flow through wheels and water wasted at regulating gates. About 18 second-feet diverted by Portland water district and leakage through dam not included in discharge. Flow completely regulated by Sebago Lake (area, 46 square miles). Record furnished by S. D. Warren Co.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|------|-------|-------|-------|-------|------|-------|
| 1 | 753 | 834 | 780 | 833 | 834 | 835 | 828 | 830 | 842 | 835 | 693 | 213 |
| 2 | 836 | 814 | 299 | 833 | 832 | 793 | 779 | 807 | 477 | 836 | 685 | 271 |
| 3 | 833 | 812 | 799 | 833 | 332 | 289 | 783 | 810 | 830 | 835 | 637 | 751 |
| 4 | 835 | 269 | 769 | 834 | 824 | 825 | 786 | 1,400 | 859 | 236 | 257 | 774 |
| 5 | 760 | 832 | 823 | 826 | 835 | 839 | 793 | 1,430 | 848 | 760 | 651 | 800 |
| 6 | 383 | 810 | 835 | 130 | 834 | 806 | 765 | 1,690 | 890 | ----- | 675 | 775 |
| 7 | 418 | 810 | 834 | 807 | 835 | 814 | 158 | 2,020 | 846 | 987 | 684 | 749 |
| 8 | 748 | 822 | 833 | 833 | 835 | 832 | 813 | 1,440 | 890 | 834 | 675 | 373 |
| 9 | 833 | 808 | 371 | 831 | 826 | 807 | 817 | 1,180 | 220 | 834 | 660 | 753 |
| 10 | 822 | 833 | 824 | 827 | 346 | 192 | 800 | 969 | 837 | 834 | 624 | 729 |
| 11 | 830 | 224 | 836 | 833 | 831 | 833 | 805 | 778 | 836 | 835 | 355 | 747 |
| 12 | 762 | 258 | 831 | 831 | 833 | 836 | 787 | 313 | 835 | 808 | 661 | 745 |
| 13 | 349 | 743 | 834 | 349 | 833 | 835 | 800 | 837 | 833 | 811 | 859 | 747 |
| 14 | 223 | 834 | 832 | 826 | 834 | 773 | 192 | 849 | 834 | 327 | 706 | 663 |
| 15 | 791 | 835 | 824 | 833 | 834 | 738 | 814 | 1,610 | 773 | 723 | 663 | 380 |
| 16 | 833 | 836 | 270 | 833 | 831 | 615 | 775 | 1,720 | 219 | 690 | 662 | 767 |
| 17 | 833 | 829 | 823 | 833 | 350 | 92 | 631 | 1,250 | 829 | 664 | 648 | 755 |
| 18 | 832 | 370 | 803 | 833 | 827 | 826 | 756 | 949 | 834 | 677 | 280 | 765 |
| 19 | 833 | 813 | 829 | 544 | 833 | 775 | 831 | 220 | 834 | 665 | 662 | 764 |
| 20 | 363 | 821 | 834 | 268 | 834 | 745 | 788 | 944 | 836 | 643 | 666 | 763 |
| 21 | 237 | 801 | 834 | 783 | 835 | 771 | 118 | 1,040 | 836 | 322 | 666 | 607 |
| 22 | 740 | 792 | 828 | 823 | 838 | 738 | 815 | 1,250 | 779 | 674 | 668 | 329 |
| 23 | 831 | 830 | 281 | 826 | 835 | 752 | 898 | 1,000 | 242 | 663 | 678 | 793 |
| 24 | 804 | 789 | 416 | 829 | 374 | 162 | 815 | 860 | 835 | 665 | 635 | 772 |
| 25 | 797 | 373 | 345 | 832 | 826 | 818 | 809 | 822 | 835 | 674 | 295 | 771 |
| 26 | 809 | 795 | 826 | 831 | 836 | 731 | 800 | 253 | 835 | 659 | 733 | 744 |
| 27 | 572 | 798 | 804 | 390 | 837 | 795 | 815 | 854 | 835 | 629 | 671 | 751 |
| 28 | 312 | 794 | 836 | 829 | 836 | 793 | 241 | 867 | 834 | 336 | 675 | 714 |
| 29 | 742 | 689 | 820 | 833 | ----- | 758 | 813 | 869 | 783 | 662 | 687 | 360 |
| 30 | 833 | 828 | 278 | 835 | ----- | 767 | 808 | 286 | 105 | 663 | 606 | 747 |
| 31 | 833 | ----- | 822 | 831 | ----- | 154 | ----- | 803 | ----- | 680 | 648 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 836 | 223 | 690 | 1.58 | 1.82 |
| November | 836 | 224 | 723 | 1.66 | 1.85 |
| December | 836 | 270 | 709 | 1.63 | 1.88 |
| January | 835 | 130 | 748 | 1.72 | 1.98 |
| February | 837 | 332 | 764 | 1.75 | 1.82 |
| March | 839 | 92 | 688 | 1.58 | 1.82 |
| April | 831 | 118 | 711 | 1.63 | 1.82 |
| May | 2,020 | 220 | 998 | 2.29 | 2.64 |
| June | 860 | 195 | 736 | 1.69 | 1.80 |
| July | 987 | 0 | 654 | 1.50 | 1.73 |
| August | 733 | 257 | 620 | 1.42 | 1.64 |
| September | 800 | 213 | 662 | 1.52 | 1.70 |
| The year | 2,020 | 0 | 725 | 1.66 | 22.59 |

SACO RIVER BASIN

SACO RIVER NEAR CONWAY, N. H.

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

DRAINAGE AREA.—385 square miles.

RECORDS AVAILABLE.—February to September, 1929.

EXTREMES.—Maximum gage height during period, 12.97 feet May 3 (discharge not determined); minimum discharge, 69 second-feet Sept. 4 (gage height, 1.92 feet).

REMARKS.—Records good except those for period of ice effect (Feb. 22 to Mar. 30) and those for June 24 to July 30, which were estimated.

Daily and monthly discharge, in second-feet, 1929

| Day | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept |
|-----|------|-------|-------|--------|-------|------|------|------|
| 1 | | 410 | 2,290 | 3,280 | 947 | 820 | 104 | 86 |
| 2 | | 400 | 2,220 | 4,080 | 833 | 530 | 97 | 80 |
| 3 | | 395 | 2,160 | 16,900 | 784 | 450 | 104 | 74 |
| 4 | | 400 | 2,220 | 7,700 | 756 | 380 | 184 | 71 |
| 5 | | 480 | 2,570 | 4,380 | 721 | 350 | 184 | 80 |
| 6 | | 615 | 2,640 | 4,700 | 693 | 350 | 153 | 102 |
| 7 | | 605 | 3,700 | 3,980 | 637 | 350 | 148 | 106 |
| 8 | | 465 | 6,900 | 3,440 | 592 | 330 | 135 | 118 |
| 9 | | 440 | 6,380 | 2,570 | 549 | 310 | 120 | 133 |
| 10 | | 425 | 4,590 | 2,160 | 508 | 295 | 111 | 223 |
| 11 | | 435 | 2,870 | 1,980 | 482 | 280 | 146 | 292 |
| 12 | | 455 | 2,500 | 2,220 | 451 | 270 | 273 | 203 |
| 13 | | 520 | 2,100 | 2,500 | 428 | 265 | 216 | 162 |
| 14 | | 840 | 1,800 | 2,040 | 424 | 280 | 162 | 148 |
| 15 | | 810 | 1,580 | 3,280 | 714 | 270 | 223 | 176 |
| 16 | | 1,280 | 1,480 | 3,360 | 637 | 255 | 372 | 164 |
| 17 | | 1,780 | 1,920 | 3,110 | 477 | 240 | 234 | 143 |
| 18 | | 1,140 | 2,500 | 2,100 | 415 | 220 | 176 | 143 |
| 19 | | 1,100 | 1,980 | 2,040 | 376 | 205 | 156 | 140 |
| 20 | | 1,240 | 1,800 | 2,570 | 410 | 196 | 146 | 130 |
| 21 | | 1,340 | 1,980 | 1,980 | 410 | 188 | 130 | 120 |
| 22 | | 405 | 1,380 | 1,800 | 447 | 180 | 118 | 113 |
| 23 | | 415 | 2,160 | 1,690 | 1,580 | 381 | 174 | 113 |
| 24 | | 400 | 2,660 | 1,640 | 1,530 | 390 | 178 | 108 |
| 25 | | 400 | 2,430 | 2,160 | 2,220 | 400 | 168 | 108 |
| 26 | | 385 | 2,200 | 5,640 | 1,740 | 400 | 152 | 106 |
| 27 | | 395 | 2,240 | 4,820 | 1,530 | 400 | 140 | 102 |
| 28 | | 410 | 2,020 | 3,790 | 1,480 | 500 | 130 | 91 |
| 29 | | | 1,920 | 8,210 | 1,430 | 580 | 122 | 88 |
| 30 | | | 1,880 | 4,810 | 1,380 | 600 | 110 | 86 |
| 31 | | | 1,800 | | 1,190 | | 106 | 86 |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|------------------|-------------------|
| February 22-28 | 415 | 385 | 401 | 1.04 | 0.27 |
| March | 2,660 | 395 | 1,170 | 3.04 | 3.50 |
| April | 8,210 | 1,480 | 3,090 | 8.03 | 8.96 |
| May | 16,900 | 1,190 | 3,100 | 8.05 | 9.28 |
| June | 947 | 376 | 545 | 1.42 | 1.58 |
| July | 820 | 106 | 268 | .66 ^a | .80 |
| August | 372 | 86 | 150 | .36 ^a | .45 |
| September | 292 | 71 | 128 | .33 ² | .37 |

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, 1929.

EXTREMES.—Maximum discharge during year, 10,800 second-feet May 6; minimum, 125 second-feet Sept. 8 (gage height, 1.87 feet).

1916-1929: 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 Oct. 1 to Mar. 19, and Mar. 28 to May 11, July 6, 7, Aug. 31, and Sept. 1, which were estimated. Flow somewhat regulated by power development at Great Falls.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|------|-------|
| 1 | 1,180 | 920 | 1,040 | 1,880 | 2,160 | 1,410 | 5,790 | 8,300 | 3,660 | 1,590 | 640 | 500 |
| 2 | 990 | 910 | 980 | 1,890 | 2,050 | 1,400 | 5,680 | 8,500 | 3,440 | 1,600 | 650 | 479 |
| 3 | 980 | 895 | 1,020 | 1,890 | 2,010 | 1,370 | 5,300 | 8,710 | 2,800 | 1,600 | 640 | 558 |
| 4 | 970 | 910 | 1,060 | 1,900 | 2,010 | 1,390 | 5,110 | 9,020 | 2,720 | 1,520 | 700 | 523 |
| 5 | 1,130 | 940 | 1,040 | 1,930 | 1,900 | 1,470 | 4,950 | 9,550 | 2,650 | 1,440 | 680 | 498 |
| 6 | 1,230 | 930 | 1,040 | 2,010 | 1,820 | 1,570 | 5,110 | 10,600 | 2,520 | 1,460 | 660 | 479 |
| 7 | 1,160 | 955 | 965 | 2,140 | 1,780 | 1,740 | 5,430 | 10,300 | 2,380 | 1,490 | 640 | 505 |
| 8 | 1,130 | 945 | 920 | 2,290 | 1,760 | 1,830 | 5,945 | 9,900 | 2,320 | 1,520 | 630 | 479 |
| 9 | 1,090 | 940 | 910 | 2,370 | 1,680 | 1,960 | 6,760 | 9,580 | 2,120 | 1,230 | 630 | 621 |
| 10 | 1,050 | 955 | 905 | 2,370 | 1,610 | 2,060 | 7,660 | 9,060 | 2,060 | 1,190 | 640 | 700 |
| 11 | 1,000 | 870 | 885 | 2,350 | 1,660 | 2,160 | 7,860 | 8,530 | 1,930 | 1,160 | 680 | 961 |
| 12 | 970 | 970 | 880 | 2,340 | 1,600 | 2,290 | 8,070 | 8,160 | 1,800 | 1,160 | 640 | 939 |
| 13 | 940 | 920 | 880 | 2,290 | 1,530 | 2,470 | 8,070 | 7,470 | 1,740 | 1,160 | 630 | 928 |
| 14 | 890 | 905 | 870 | 2,270 | 1,480 | 2,630 | 7,980 | 6,790 | 1,740 | 1,100 | 640 | 785 |
| 15 | 920 | 885 | 840 | 2,270 | 1,420 | 2,900 | 7,860 | 6,450 | 1,740 | 1,110 | 660 | 670 |
| 16 | 995 | 885 | 785 | 2,280 | 1,390 | 3,140 | 7,760 | 6,450 | 1,740 | 1,100 | 730 | 818 |
| 17 | 890 | 980 | 1,020 | 2,390 | 1,370 | 3,380 | 7,810 | 6,280 | 1,800 | 1,060 | 700 | 785 |
| 18 | 920 | 1,020 | 1,220 | 2,480 | 1,350 | 3,650 | 7,840 | 6,280 | 1,740 | 1,100 | 670 | 660 |
| 19 | 905 | 1,110 | 1,450 | 2,630 | 1,340 | 3,990 | 7,760 | 6,280 | 1,600 | 1,100 | 720 | 558 |
| 20 | 955 | 1,270 | 1,550 | 2,900 | 1,350 | 4,190 | 7,640 | 6,280 | 1,530 | 983 | 700 | 549 |
| 21 | 965 | 1,430 | 1,620 | 2,980 | 1,370 | 4,340 | 7,660 | 6,110 | 1,480 | 917 | 650 | 514 |
| 22 | 990 | 1,570 | 1,680 | 3,100 | 1,370 | 4,950 | 7,690 | 5,940 | 1,460 | 1,000 | 603 | 558 |
| 23 | 990 | 1,580 | 1,770 | 3,070 | 1,380 | 5,770 | 7,450 | 5,600 | 1,460 | 895 | 576 | 594 |
| 24 | 1,110 | 1,590 | 1,790 | 3,010 | 1,390 | 6,280 | 7,250 | 5,430 | 1,490 | 873 | 680 | 594 |
| 25 | 1,090 | 1,600 | 1,700 | 2,940 | 1,400 | 6,450 | 7,150 | 5,110 | 1,410 | 840 | 585 | 576 |
| 26 | 1,030 | 1,490 | 1,600 | 2,840 | 1,410 | 6,620 | 7,180 | 4,950 | 1,410 | 818 | 660 | 514 |
| 27 | 1,000 | 1,310 | 1,570 | 2,780 | 1,430 | 6,620 | 7,220 | 4,790 | 1,370 | 785 | 630 | 549 |
| 28 | 1,000 | 1,240 | 1,820 | 2,590 | 1,440 | 6,540 | 7,320 | 4,490 | 1,380 | 752 | 612 | 603 |
| 29 | 1,010 | 1,110 | 1,880 | 2,470 | ----- | 6,450 | 7,520 | 4,340 | 1,520 | 741 | 594 | 462 |
| 30 | 965 | 1,090 | 1,820 | 2,460 | ----- | 6,160 | 7,840 | 4,190 | 1,480 | 680 | 594 | 680 |
| 31 | 930 | ----- | 1,840 | 2,300 | ----- | 5,870 | ----- | 3,890 | ----- | 660 | 585 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 1,230 | 890 | 1,010 | 0.777 | 0.90 |
| November | 1,600 | 870 | 1,100 | .846 | .94 |
| December | 1,880 | 785 | 1,270 | .977 | 1.13 |
| January | 3,100 | 1,880 | 2,430 | 1.87 | 2.16 |
| February | 2,160 | 1,340 | 1,590 | 1.22 | 1.27 |
| March | 6,620 | 1,370 | 3,650 | 2.81 | 3.24 |
| April | 8,070 | 4,950 | 7,020 | 5.40 | 6.02 |
| May | 10,600 | 3,890 | 7,010 | 5.39 | 6.21 |
| June | 3,660 | 1,370 | 1,950 | 1.50 | 1.67 |
| July | 1,600 | 660 | 1,120 | .862 | .99 |
| August | 730 | 576 | 647 | .498 | .57 |
| September | 961 | 462 | 621 | .478 | .53 |
| The year | 10,600 | 462 | 2,460 | 1.89 | 25.63 |

SACO RIVER BASIN

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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, 1929.

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

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|
| 1..... | 1,600 | 1,120 | 1,380 | 1,660 | 2,240 | 1,690 | 5,370 | 8,700 | 4,880 | 1,290 | 709 | 809 |
| 2..... | 1,180 | 1,110 | 856 | 2,900 | 1,880 | 1,770 | 5,530 | 9,090 | 4,470 | 1,750 | 721 | 495 |
| 3..... | 1,020 | 1,060 | 1,440 | 1,720 | 1,740 | 1,360 | 5,160 | 9,660 | 3,970 | 1,950 | 1,040 | 638 |
| 4..... | 1,110 | 784 | 1,770 | 1,960 | 2,760 | 1,940 | 4,800 | 9,660 | 2,840 | 1,320 | 460 | 661 |
| 5..... | 1,340 | 1,290 | 1,270 | 1,690 | 2,010 | 1,800 | 4,930 | 9,770 | 2,920 | 1,690 | 842 | 643 |
| 6..... | 1,070 | 1,170 | 1,490 | 1,480 | 2,090 | 2,160 | 4,780 | 10,600 | 2,640 | 1,310 | 971 | 768 |
| 7..... | 1,230 | 1,080 | 1,430 | 2,910 | 2,250 | 2,900 | 4,950 | 10,500 | 2,740 | 1,000 | 694 | 231 |
| 8..... | 1,460 | 1,190 | 1,370 | 2,620 | 2,300 | 3,020 | 5,830 | 9,730 | 2,380 | 1,380 | 857 | 561 |
| 9..... | 1,270 | 1,290 | 890 | 2,540 | 2,080 | 2,820 | 6,120 | 8,740 | 2,630 | 1,500 | 768 | 645 |
| 10..... | 1,110 | 1,520 | 1,370 | 2,920 | 1,830 | 2,260 | 6,670 | 7,980 | 2,800 | 1,280 | 1,050 | 614 |
| 11..... | 1,170 | 916 | 973 | 2,400 | 2,660 | 3,120 | 7,280 | 7,620 | 2,120 | 1,260 | 415 | 1,300 |
| 12..... | 1,270 | 981 | 1,220 | 2,100 | 1,950 | 2,570 | 7,900 | 6,700 | 1,960 | 1,240 | 735 | 1,160 |
| 13..... | 1,170 | 1,080 | 1,140 | 2,070 | 1,860 | 2,620 | 7,940 | 6,200 | 1,630 | 1,130 | 761 | 1,170 |
| 14..... | 746 | 943 | 1,080 | 3,260 | 1,780 | 2,790 | 7,410 | 5,540 | 1,860 | 1,250 | 734 | 909 |
| 15..... | 1,100 | 948 | 1,080 | 2,150 | 1,810 | 2,870 | 7,720 | 5,380 | 1,990 | 1,410 | 721 | 515 |
| 16..... | 1,180 | 1,020 | 893 | 2,220 | 1,760 | 3,650 | 6,940 | 5,320 | 1,620 | 1,020 | 653 | 821 |
| 17..... | 873 | 1,530 | 1,420 | 2,360 | 1,560 | 4,190 | 7,600 | 5,210 | 2,100 | 1,000 | 986 | 878 |
| 18..... | 935 | 705 | 1,450 | 2,150 | 2,180 | 4,460 | 8,440 | 4,530 | 2,070 | 956 | 453 | 1,130 |
| 19..... | 997 | 1,390 | 1,720 | 2,370 | 1,800 | 4,350 | 8,100 | 5,140 | 2,080 | 1,280 | 696 | 965 |
| 20..... | 1,240 | 1,480 | 1,880 | 3,200 | 1,650 | 4,980 | 7,380 | 5,280 | 1,720 | 1,350 | 946 | 814 |
| 21..... | 1,080 | 1,650 | 1,950 | 3,770 | 1,630 | 5,740 | 7,070 | 5,160 | 1,760 | 1,120 | 1,150 | 717 |
| 22..... | 1,190 | 1,730 | 1,830 | 3,700 | 1,040 | 6,440 | 7,700 | 4,900 | 1,380 | 1,030 | 712 | 121 |
| 23..... | 1,220 | 1,870 | 1,310 | 3,980 | 1,600 | 7,700 | 7,320 | 4,620 | 1,630 | 1,200 | 795 | 598 |
| 24..... | 1,090 | 1,810 | 2,240 | 3,340 | 1,180 | 8,100 | 6,930 | 4,360 | 1,870 | 877 | 1,020 | 572 |
| 25..... | 1,520 | 1,230 | 855 | 3,380 | 2,040 | 8,920 | 6,410 | 3,860 | 1,760 | 809 | 651 | 688 |
| 26..... | 1,170 | 2,310 | 1,720 | 2,900 | 1,620 | 8,170 | 6,380 | 3,640 | 1,480 | 809 | 779 | 767 |
| 27..... | 1,270 | 1,510 | 1,540 | 2,620 | 1,750 | 7,330 | 6,500 | 4,010 | 1,570 | 870 | 886 | 661 |
| 28..... | 820 | 1,620 | 2,310 | 3,200 | 1,660 | 6,890 | 6,890 | 3,500 | 1,290 | 822 | 866 | 810 |
| 29..... | 1,320 | 516 | 1,940 | 2,950 | ----- | 6,320 | 7,550 | 4,060 | 1,480 | 850 | 690 | 258 |
| 30..... | 1,140 | 1,200 | 1,950 | 2,510 | ----- | 5,670 | 8,110 | 4,930 | 1,240 | 764 | 646 | 754 |
| 31..... | 1,050 | ----- | 2,620 | 2,460 | ----- | 5,310 | ----- | 4,650 | ----- | 741 | 1,020 | ----- |

| Month | Maximum | Minimum | Mean | Per square mil. | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 1,600 | 746 | 1,160 | 0.748 | 0.86 |
| November..... | 2,310 | 516 | 1,270 | .819 | .91 |
| December..... | 2,620 | 855 | 1,500 | .968 | 1.12 |
| January..... | 3,980 | 1,480 | 2,630 | 1.70 | 1.96 |
| February..... | 2,760 | 1,040 | 1,880 | 1.21 | 1.26 |
| March..... | 8,920 | 1,360 | 4,320 | 2.79 | 3.22 |
| April..... | 8,440 | 4,780 | 6,710 | 4.33 | 4.83 |
| May..... | 10,600 | 3,500 | 6,420 | 4.14 | 4.77 |
| June..... | 4,880 | 1,240 | 2,220 | 1.43 | 1.60 |
| July..... | 1,950 | 741 | 1,180 | .761 | .88 |
| August..... | 1,150 | 415 | 788 | .508 | .59 |
| September..... | 1,300 | 121 | 722 | .466 | .52 |
| The year..... | 10,600 | 121 | 2,570 | 1.66 | 22.52 |

OSSISPEE RIVER AT CORNISH, ME.

LOCATION.—Water-stage recorder at highway bridge in Cornish, York County, 1¼ miles above confluence with Saco River. Prior to Aug. 21, 1929, a chain gage at same site and datum was used.

DRAINAGE AREA.—455 square miles.

RECORDS AVAILABLE.—July, 1916, to September, 1929.

EXTREMES.—Maximum discharge during year, 3,760 second-feet May 5 (gage height, 5.55 feet); minimum, 28 second-feet Sept. 7 (gage height, -0.40 foot). 1916-1929: Maximum discharge, 6,740 second-feet Apr. 30, 1923 (gage height, 8.76 feet); minimum, that of Sept. 7, 1929.

REMARKS.—Records good except those for periods of ice effect (Dec. 11-16 and Dec. 24 to Mar. 17), which are fair. Flow affected by storage in Great Ossipee Lake and power development at Kezar Falls.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 268 | 268 | 284 | 530 | 575 | 595 | 2,230 | 3,040 | 915 | 394 | 255 | 202 |
| 2..... | 209 | 268 | 284 | 535 | 540 | 575 | 2,410 | 2,680 | 980 | 375 | 255 | 168 |
| 3..... | 224 | 268 | 284 | 535 | 560 | 555 | 2,230 | 3,220 | 765 | 375 | 226 | 173 |
| 4..... | 209 | 284 | 284 | 590 | 575 | 540 | 2,140 | 3,490 | 935 | 356 | 338 | 178 |
| 5..... | 352 | 268 | 284 | 540 | 565 | 565 | 2,060 | 3,670 | 680 | 435 | 303 | 194 |
| 6..... | 352 | 253 | 335 | 600 | 555 | 655 | 2,320 | 3,580 | 599 | 435 | 270 | 191 |
| 7..... | 335 | 300 | 370 | 660 | 540 | 645 | 2,410 | 3,310 | 573 | 414 | 255 | 130 |
| 8..... | 300 | 268 | 335 | 690 | 585 | 595 | 2,770 | 3,130 | 524 | 435 | 240 | 65 |
| 9..... | 318 | 253 | 300 | 810 | 550 | 565 | 2,950 | 2,950 | 524 | 394 | 240 | 194 |
| 10..... | 284 | 284 | 284 | 935 | 565 | 535 | 3,040 | 2,590 | 501 | 394 | 240 | 261 |
| 11..... | 264 | 300 | 280 | 1,190 | 565 | 590 | 2,950 | 2,320 | 478 | 375 | 240 | 327 |
| 12..... | 253 | 268 | 285 | 1,070 | 540 | 640 | 2,770 | 2,140 | 456 | 414 | 270 | 331 |
| 13..... | 253 | 284 | 295 | 1,060 | 495 | 690 | 2,500 | 1,980 | 456 | 414 | 255 | 352 |
| 14..... | 238 | 268 | 300 | 980 | 460 | 720 | 2,320 | 1,740 | 456 | 394 | 255 | 360 |
| 15..... | 253 | 268 | 305 | 965 | 470 | 765 | 2,140 | 1,820 | 458 | 375 | 255 | 352 |
| 16..... | 253 | 268 | 320 | 965 | 495 | 830 | 2,140 | 1,820 | 524 | 394 | 270 | 334 |
| 17..... | 253 | 430 | 335 | 970 | 495 | 910 | 2,410 | 1,980 | 501 | 375 | 199 | 331 |
| 18..... | 268 | 450 | 352 | 1,010 | 465 | 980 | 2,860 | 1,900 | 478 | 478 | 186 | 320 |
| 19..... | 253 | 450 | 450 | 1,070 | 455 | 1,120 | 2,590 | 1,820 | 478 | 478 | 212 | 306 |
| 20..... | 268 | 495 | 430 | 1,130 | 460 | 1,190 | 2,500 | 1,820 | 456 | 456 | 226 | 258 |
| 21..... | 300 | 472 | 410 | 1,060 | 465 | 1,500 | 2,500 | 1,660 | 435 | 435 | 232 | 210 |
| 22..... | 268 | 472 | 370 | 1,060 | 455 | 1,740 | 2,680 | 1,660 | 414 | 435 | 229 | 223 |
| 23..... | 268 | 450 | 370 | 995 | 465 | 2,230 | 2,590 | 1,500 | 414 | 414 | 212 | 261 |
| 24..... | 318 | 450 | 400 | 955 | 540 | 2,590 | 2,320 | 1,500 | 394 | 414 | 246 | 255 |
| 25..... | 300 | 410 | 425 | 900 | 660 | 2,590 | 2,320 | 1,260 | 394 | 375 | 249 | 240 |
| 26..... | 284 | 430 | 460 | 840 | 650 | 2,680 | 2,500 | 1,260 | 414 | 356 | 246 | 221 |
| 27..... | 284 | 410 | 500 | 780 | 645 | 2,590 | 2,680 | 1,260 | 394 | 320 | 235 | 221 |
| 28..... | 285 | 472 | 540 | 745 | 580 | 2,590 | 2,680 | 1,190 | 394 | 320 | 226 | 204 |
| 29..... | 284 | 370 | 585 | 710 | ----- | 2,410 | 2,950 | 1,120 | 394 | 303 | 229 | 202 |
| 30..... | 268 | 300 | 550 | 720 | ----- | 2,320 | 3,040 | 1,050 | 394 | 286 | 223 | 229 |
| 31..... | 268 | ----- | 540 | 635 | ----- | 2,230 | ----- | 980 | ----- | 270 | 159 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 352 | 209 | 276 | 0.607 | 0.70 |
| November..... | 495 | 253 | 348 | .765 | .85 |
| December..... | 585 | 280 | 372 | .818 | .94 |
| January..... | 1,190 | 530 | 846 | 1.86 | 2.14 |
| February..... | 660 | 455 | 535 | 1.18 | 1.23 |
| March..... | 2,680 | 535 | 1,280 | 2.81 | 3.24 |
| April..... | 3,040 | 2,060 | 2,530 | 5.56 | 6.20 |
| May..... | 3,670 | 980 | 2,110 | 4.64 | 5.35 |
| June..... | 980 | 394 | 522 | 1.15 | 1.28 |
| July..... | 478 | 270 | 390 | .857 | .99 |
| August..... | 338 | 159 | 241 | .530 | .61 |
| September..... | 360 | 65 | 243 | .534 | .60 |
| The year..... | 3,670 | 65 | 809 | 1.78 | 24.13 |

SALMON FALLS RIVER BASIN

SALMON FALLS RIVER NEAR LEBANON, ME.

LOCATION.—Water-stage recorder at Stair Falls, $2\frac{1}{2}$ miles above Little River and 2 miles south of South Lebanon, in township of Lebanon, York County.

DRAINAGE AREA.—147 square miles.

RECORDS AVAILABLE.—November, 1928, to September, 1929.

EXTREMES.—Maximum discharge during period, 1,540 second-feet Mar. 23 (gage height, 4.50 feet); minimum, 9 second-feet July 14, Aug. 11, and Sept. 1 (gage height, 1.04 feet).

REMARKS.—Records good. Dams at outlet of several ponds above station control flow to large extent.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|-------|-------|-----|------|------|------|-------|
| 1 | | 28 | 67 | 200 | 230 | 480 | 575 | 54 | 174 | 94 | 10 |
| 2 | | 38 | 174 | 140 | 205 | 685 | 395 | 34 | 136 | 68 | 11 |
| 3 | | 166 | 146 | 93 | 130 | 500 | 605 | 192 | 148 | 57 | 88 |
| 4 | | 170 | 138 | 215 | 250 | 445 | 635 | 194 | 46 | 20 | 80 |
| 5 | | 178 | 38 | 210 | 275 | 490 | 680 | 190 | 94 | 84 | 75 |
| 6 | | 188 | 260 | 210 | 480 | 495 | 520 | 190 | 126 | 85 | 75 |
| 7 | | 166 | 355 | 330 | 435 | 540 | 440 | 182 | 36 | 78 | 64 |
| 8 | | 64 | 330 | 335 | 355 | 540 | 470 | 85 | 80 | 78 | 14 |
| 9 | | 17 | 250 | 235 | 285 | 545 | 440 | 65 | 126 | 75 | 104 |
| 10 | | 150 | 156 | 194 | 230 | 565 | 375 | 196 | 124 | 53 | 102 |
| 11 | | 150 | 150 | 260 | 265 | 480 | 255 | 174 | 124 | 38 | 102 |
| 12 | | 148 | 42 | 240 | 260 | 350 | 305 | 174 | 118 | 110 | 80 |
| 13 | | 146 | 84 | 225 | 305 | 280 | 275 | 172 | 30 | 95 | 80 |
| 14 | | 146 | 158 | 230 | 330 | 355 | 250 | 166 | 11 | 91 | 63 |
| 15 | | 53 | 158 | 215 | 575 | 300 | 400 | 95 | 98 | 91 | 18 |
| 16 | | 32 | 140 | 170 | 640 | 315 | 425 | 58 | 126 | 93 | 98 |
| 17 | | 158 | 132 | 128 | 635 | 815 | 420 | 158 | 104 | 64 | 72 |
| 18 | | 230 | 128 | 225 | 595 | 1,040 | 355 | 146 | 116 | 28 | 84 |
| 19 | | 178 | 280 | 190 | 225 | 590 | 905 | 405 | 150 | 112 | 94 |
| 20 | | 170 | 190 | 225 | 240 | 685 | 585 | 395 | 140 | 76 | 89 |
| 21 | 156 | 178 | 255 | 250 | 730 | 635 | 350 | 140 | 14 | 87 | 56 |
| 22 | 160 | 58 | 210 | 260 | 855 | 900 | 590 | 54 | 110 | 78 | 18 |
| 23 | 160 | 30 | 205 | 215 | 1,340 | 620 | 310 | 25 | 100 | 75 | 90 |
| 24 | 118 | 29 | 186 | 124 | 1,370 | 500 | 240 | 156 | 100 | 65 | 85 |
| 25 | 33 | 32 | 174 | 245 | 1,100 | 395 | 235 | 150 | 120 | 25 | 83 |
| 26 | 174 | 156 | 112 | 245 | 790 | 505 | 215 | 162 | 110 | 97 | 85 |
| 27 | 152 | 172 | 114 | 245 | 720 | 505 | 255 | 146 | 72 | 75 | 86 |
| 28 | 170 | 306 | 210 | 245 | 625 | 380 | 235 | 150 | 16 | 85 | 74 |
| 29 | 124 | 170 | 210 | | 530 | 465 | 230 | 100 | 110 | 75 | 19 |
| 30 | | 99 | 210 | | 460 | 515 | 142 | 48 | 106 | 85 | 94 |
| 31 | | 124 | 220 | | 365 | | 118 | | 102 | 44 | |

| Month | Maximum | Minimum | Mean | Per square m e | Run-off in inches |
|----------------|---------|---------|------|-------------------|----------------------|
| November 19-30 | 178 | 24 | 135 | 0.918 | 0.41 |
| December | 306 | 17 | 130 | .884 | 1.02 |
| January | 355 | 38 | 175 | 1.19 | 1.37 |
| February | 335 | 93 | 220 | 1.50 | 1.56 |
| March | 1,370 | 130 | 538 | 3.66 | 4.22 |
| April | 1,040 | 280 | 538 | 3.66 | 4.08 |
| May | 680 | 118 | 365 | 2.48 | 2.88 |
| June | 196 | 25 | 132 | .898 | 1.00 |
| July | 174 | 11 | 95.6 | .650 | .75 |
| August | 110 | 20 | 73.4 | .499 | .58 |
| September | 104 | 10 | 68.5 | .466 | .52 |

MERRIMACK RIVER BASIN

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

LOCATION.—Water-stage recorder $1\frac{1}{2}$ miles below Hancock Branch and $2\frac{1}{4}$ miles northeast of Lincoln, Grafton County.

DRAINAGE AREA.—103 square miles.

RECORDS AVAILABLE.—November, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 8,000 second-feet May 3 (gage height, 7.47 feet); minimum, 40 second-feet Mar. 8 (gage height, 1.47 feet).

REMARKS.—Records good.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|---------|-------|-------|-------|-------|-------|------|------|-------|
| 1. | | 146 | • 123 | 92 | 72 | 321 | 1,150 | 494 | 442 | • 53 | 46 |
| 2. | | 105 | • 116 | 77 | 68 | 330 | 1,790 | 468 | 354 | • 52 | 45 |
| 3. | | 82 | • 112 | • 77 | 60 | 267 | 4,880 | 435 | 281 | 51 | 42 |
| 4. | | 77 | • 109 | • 77 | 54 | 278 | 1,830 | 429 | 245 | 103 | 40 |
| 5. | | 74 | • 102 | • 77 | 72 | 514 | 1,450 | 374 | 232 | 86 | 52 |
| 6. | | 72 | • 950 | • 79 | 221 | 772 | 1,500 | 407 | 197 | 78 | 50 |
| 7. | | • 70 | 865 | • 79 | 43 | 1,850 | 1,350 | 359 | 177 | 67 | 49 |
| 8. | | • 68 | 288 | • 82 | 40 | 2,510 | 1,030 | 320 | 197 | 59 | 46 |
| 9. | | • 66 | • 190 | 86 | • 40 | 2,300 | 789 | 281 | 162 | 55 | 46 |
| 10. | | 64 | • 158 | 86 | • 40 | 1,460 | 667 | 255 | 152 | 53 | 75 |
| 11. | | 102 | • 130 | • 84 | • 40 | 958 | 650 | 228 | 135 | 113 | 72 |
| 12. | | 79 | • 116 | • 82 | 56 | 828 | 910 | 200 | 120 | 135 | 51 |
| 13. | | 70 | • 105 | • 82 | 244 | 672 | 940 | 177 | 120 | 81 | 46 |
| 14. | | 59 | • 92 | • 79 | 262 | 576 | 753 | 180 | 137 | 70 | 58 |
| 15. | | 53 | • 82 | 79 | 225 | 494 | 2,180 | 442 | 137 | 86 | 76 |
| 16. | | 53 | • 79 | 77 | 820 | 443 | 1,760 | 311 | 103 | 93 | 59 |
| 17. | | 45 | • 74 | 72 | 1,040 | 488 | 1,280 | 238 | 95 | 76 | 53 |
| 18. | | 630 | • 342 | 70 | 331 | 521 | 930 | 200 | 90 | 68 | 70 |
| 19. | | 325 | • 1,230 | 68 | 207 | 418 | 970 | 191 | 90 | 63 | 57 |
| 20. | | 203 | 750 | 70 | 239 | 370 | 1,080 | 228 | 86 | 61 | 51 |
| 21. | | 154 | 424 | • 70 | 212 | 400 | 816 | 200 | 76 | 58 | 48 |
| 22. | | 127 | • 248 | • 70 | 342 | 359 | 718 | 197 | 73 | 56 | 46 |
| 23. | | • 112 | • 190 | • 70 | 672 | 348 | 619 | 162 | 70 | 57 | 46 |
| 24. | | • 102 | • 150 | • 70 | 1,620 | 370 | 634 | 259 | 72 | 76 | 45 |
| 25. | | • 98 | • 120 | 70 | 743 | 743 | 854 | 325 | 73 | 61 | 44 |
| 26. | | • 95 | • 92 | 74 | 603 | 1,970 | 658 | 461 | 72 | 53 | 43 |
| 27. | | • 95 | • 82 | 79 | 436 | 1,400 | 595 | 298 | 64 | 51 | 43 |
| 28. | | 230 | 314 | • 74 | 353 | 1,220 | 595 | 259 | 59 | 48 | 43 |
| 29. | | 212 | 225 | • 74 | 272 | 2,580 | 595 | 418 | 71 | 49 | 44 |
| 30. | | 158 | 130 | • 84 | 244 | 1,300 | 580 | 379 | 61 | 50 | 44 |
| 31. | | • 130 | 95 | ----- | 253 | ----- | 558 | ----- | 55 | 49 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| December | 630 | 45 | 130 | 1.26 | 1.45 |
| January | 1,230 | 74 | 240 | 2.33 | 2.69 |
| February | 92 | 68 | 76.9 | .747 | .78 |
| March | 1,620 | 40 | 320 | 3.11 | 3.58 |
| April | 2,580 | 267 | 902 | 8.76 | 9.77 |
| May | 4,880 | 558 | 1,130 | 11.0 | 12.68 |
| June | 494 | 162 | 306 | 2.97 | 3.31 |
| July | 442 | 55 | 139 | 1.35 | 1.56 |
| August | 185 | 48 | 68.1 | .661 | .76 |
| September | 76 | 40 | 51.0 | .495 | .55 |

• Stage-discharge relation affected by ice.

• Estimated.

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, 1929; gage heights only prior to 1903.

EXTREMES.—Maximum discharge during year, 17,900 second-feet May 3 (gage height, 14.14 feet); minimum, 78 second-feet Sept. 2 (gage height, 0.27 foot).

1903-1929: Maximum discharge, 60,000 second-feet Nov. 4, 1927 (gage height, 27.4 feet); minimum, 45 second-feet several times during August, September, and October, 1923.

REMARKS.—Records good except those for period of ice effect (Nov. 27 to Mar. 24) and those for low stages, which are fair. Discharge estimated Aug. 18. Some regulation during low water.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | Jul'y | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|-------|-------------------|------|-------|
| 1..... | 476 | 476 | 553 | 412 | 482 | 406 | 2,930 | 3,970 | 1,170 | 1,1 ⁰⁰ | 198 | 177 |
| 2..... | 494 | 494 | 553 | 401 | 470 | 389 | 3,060 | 4,760 | 1,050 | 1,070 | 202 | 177 |
| 3..... | 476 | 574 | 547 | 378 | 447 | 412 | 2,540 | 13,300 | 1,030 | 794 | 191 | 170 |
| 4..... | 298 | 865 | 547 | 368 | 435 | 395 | 2,480 | 10,400 | 970 | 630 | 213 | 177 |
| 5..... | 401 | 848 | 540 | 378 | 418 | 595 | 3,030 | 5,190 | 922 | 574 | 294 | 177 |
| 6..... | 395 | 737 | 534 | 534 | 406 | 1,150 | 5,870 | 5,620 | 884 | 630 | 308 | 177 |
| 7..... | 494 | 729 | 534 | 530 | 453 | 1,440 | 6,270 | 4,900 | 804 | 630 | 294 | 170 |
| 8..... | 406 | 630 | 447 | 786 | 494 | 1,040 | 11,400 | 4,360 | 705 | 746 | 247 | 170 |
| 9..... | 418 | 581 | 418 | 682 | 488 | 874 | 10,800 | 3,190 | 630 | 674 | 220 | 180 |
| 10..... | 424 | 547 | 429 | 623 | 476 | 652 | 7,380 | 2,670 | 527 | 595 | 205 | 378 |
| 11..... | 424 | 482 | 424 | 581 | 453 | 668 | 4,100 | 2,410 | 494 | 476 | 213 | 1,760 |
| 12..... | 349 | 453 | 424 | 534 | 435 | 660 | 3,450 | 2,480 | 453 | 435 | 574 | 705 |
| 13..... | 364 | 441 | 435 | 488 | 395 | 960 | 2,800 | 2,670 | 527 | 589 | 453 | 406 |
| 14..... | 359 | 424 | 424 | 470 | 406 | 1,960 | 2,410 | 2,340 | 601 | 568 | 298 | 389 |
| 15..... | 349 | 418 | 435 | 447 | 406 | 2,080 | 2,080 | 6,720 | 1,500 | 464 | 251 | 574 |
| 16..... | 364 | 435 | 384 | 418 | 389 | 3,380 | 1,960 | 5,980 | 970 | 441 | 330 | 435 |
| 17..... | 359 | 729 | 406 | 447 | 378 | 4,900 | 2,800 | 5,190 | 770 | 674 | 330 | 330 |
| 18..... | 344 | 1,440 | 1,380 | 470 | 373 | 3,580 | 3,260 | 3,320 | 668 | 616 | 250 | 277 |
| 19..... | 821 | 1,470 | 2,410 | 1,760 | 384 | 2,800 | 2,740 | 3,450 | 574 | 616 | 232 | 330 |
| 20..... | 903 | 2,670 | 1,300 | 3,000 | 378 | 2,800 | 2,280 | 3,970 | 705 | 621 | 232 | 281 |
| 21..... | 713 | 1,960 | 990 | 1,700 | 368 | 2,740 | 2,860 | 2,980 | 645 | 277 | 224 | 224 |
| 22..... | 547 | 1,440 | 786 | 1,250 | 378 | 2,860 | 2,670 | 2,480 | 668 | 290 | 152 | 224 |
| 23..... | 507 | 1,220 | 560 | 922 | 378 | 6,770 | 2,410 | 2,150 | 630 | 277 | 205 | 213 |
| 24..... | 1,030 | 1,020 | 494 | 821 | 378 | 6,920 | 2,340 | 2,020 | 623 | 268 | 224 | 205 |
| 25..... | 1,150 | 903 | 464 | 675 | 373 | 7,350 | 2,930 | 3,120 | 1,310 | 277 | 205 | 220 |
| 26..... | 856 | 778 | 447 | 623 | 373 | 5,620 | 9,100 | 2,410 | 1,370 | 264 | 202 | 205 |
| 27..... | 645 | 698 | 418 | 609 | 373 | 3,710 | 7,380 | 1,960 | 990 | 264 | 213 | 198 |
| 28..... | 630 | 616 | 406 | 520 | 395 | 2,670 | 5,190 | 1,760 | 804 | 235 | 205 | 202 |
| 29..... | 668 | 588 | 435 | 514 | ----- | 2,220 | 9,540 | 1,640 | 1,580 | 235 | 198 | 205 |
| 30..... | 494 | 560 | 429 | 514 | ----- | 2,020 | 6,660 | 1,500 | 1,340 | 224 | 170 | 194 |
| 31..... | 470 | ----- | 418 | 501 | ----- | 2,080 | ----- | 1,360 | ----- | 213 | 198 | ----- |

| Month | Maximum | Minimum | Mean | Per square mil. | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 1,150 | 298 | 536 | 0.872 | 1.01 |
| November..... | 2,670 | 418 | 841 | 1.37 | 1.53 |
| December..... | 2,410 | 384 | 612 | .995 | 1.15 |
| January..... | 3,000 | 368 | 731 | 1.19 | 1.37 |
| February..... | 494 | 368 | 414 | .673 | .70 |
| March..... | 7,350 | 389 | 2,450 | 3.98 | 4.59 |
| April..... | 11,400 | 1,960 | 4,490 | 7.30 | 8.14 |
| May..... | 13,300 | 1,360 | 3,880 | 6.31 | 7.28 |
| June..... | 1,580 | 453 | 860 | 1.40 | 1.56 |
| July..... | 1,160 | 213 | 469 | .763 | .88 |
| August..... | 574 | 152 | 249 | .405 | .47 |
| September..... | 1,760 | 170 | 318 | .517 | .58 |
| The year..... | 13,300 | 152 | 1,320 | 2.15 | 20.26 |

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.—1,460 square miles.

RECORDS AVAILABLE.—July, 1903, to September, 1929.

EXTREMES.—Maximum discharge during year, 27,300 second-feet May 4 (gage height, 17.67 feet); minimum, 466 second-feet Sept. 29 (gage height, 3.41 feet).

1903-1929: 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 for periods of ice effect (Nov. 27 to Dec. 1, Dec. 22-27, and Dec. 30 to March. 13), which are fair. Seasonal storage in Winnepesaukee, Squam, and Newfound Lakes.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|--------|--------|--------|-------|-------|-------|-------|
| 1..... | 1,390 | 1,590 | 1,300 | 1,210 | 1,640 | 1,440 | 5,470 | 7,900 | 2,900 | 2,190 | 1,020 | 902 |
| 2..... | 1,390 | 1,540 | 1,300 | 1,180 | 1,440 | 1,340 | 6,180 | 7,320 | 2,610 | 2,190 | 982 | 790 |
| 3..... | 1,390 | 1,540 | 1,490 | 1,160 | 1,260 | 1,210 | 5,300 | 14,900 | 2,560 | 2,080 | 950 | 950 |
| 4..... | 1,390 | 1,490 | 1,490 | 1,100 | 1,440 | 1,300 | 4,800 | 21,400 | 2,250 | 1,590 | 998 | 958 |
| 5..... | 1,390 | 1,800 | 1,590 | 1,110 | 1,490 | 1,540 | 5,130 | 10,900 | 2,190 | 1,540 | 942 | 950 |
| 6..... | 1,260 | 1,740 | 1,440 | 1,160 | 1,490 | 2,020 | 8,700 | 10,100 | 2,190 | 1,540 | 1,110 | 950 |
| 7..... | 1,050 | 1,590 | 1,390 | 2,250 | 1,390 | 2,310 | 9,100 | 8,900 | 2,190 | 1,260 | 1,090 | 950 |
| 8..... | 1,260 | 1,690 | 1,300 | 2,550 | 1,340 | 2,130 | 15,500 | 8,900 | 1,970 | 1,540 | 1,100 | 862 |
| 9..... | 1,340 | 1,590 | 1,200 | 1,910 | 1,260 | 1,740 | 16,700 | 7,130 | 1,540 | 1,910 | 1,100 | 950 |
| 10..... | 1,340 | 1,540 | 1,300 | 1,690 | 1,100 | 1,490 | 13,100 | 6,180 | 1,800 | 1,640 | 1,010 | 1,300 |
| 11..... | 1,340 | 1,300 | 1,260 | 1,490 | 1,190 | 1,640 | 8,100 | 5,470 | 1,690 | 1,440 | 910 | 3,070 |
| 12..... | 1,300 | 1,340 | 1,300 | 1,340 | 1,260 | 1,640 | 6,000 | 5,130 | 1,700 | 1,490 | 1,210 | 2,130 |
| 13..... | 1,210 | 1,490 | 1,300 | 1,260 | 1,300 | 1,910 | 5,300 | 5,470 | 1,690 | 1,390 | 1,540 | 1,340 |
| 14..... | 1,260 | 1,440 | 1,260 | 1,300 | 1,190 | 2,610 | 4,640 | 5,130 | 1,700 | 1,180 | 1,300 | 1,160 |
| 15..... | 1,300 | 1,300 | 1,210 | 1,340 | 1,200 | 3,490 | 4,160 | 7,510 | 2,020 | 1,190 | 1,300 | 1,070 |
| 16..... | 1,390 | 1,300 | 1,090 | 1,300 | 1,160 | 4,480 | 4,160 | 10,700 | 2,560 | 1,490 | 1,210 | 1,210 |
| 17..... | 1,390 | 1,300 | 1,260 | 1,210 | 1,080 | 6,180 | 5,470 | 9,700 | 2,250 | 1,440 | 1,260 | 1,100 |
| 18..... | 1,490 | 1,800 | 1,540 | 1,190 | 1,170 | 5,470 | 6,940 | 6,940 | 1,860 | 1,340 | 1,030 | 1,080 |
| 19..... | 1,540 | 2,310 | 3,540 | 1,260 | 1,300 | 4,640 | 6,180 | 5,820 | 1,860 | 1,260 | 1,040 | 990 |
| 20..... | 2,080 | 3,070 | 2,740 | 3,140 | 1,300 | 4,640 | 5,300 | 7,320 | 1,740 | 1,190 | 1,080 | 998 |
| 21..... | 1,690 | 3,340 | 2,130 | 3,710 | 1,340 | 4,800 | 5,640 | 6,370 | 1,800 | 878 | 1,110 | 966 |
| 22..... | 1,740 | 2,490 | 1,440 | 2,940 | 1,300 | 5,470 | 6,940 | 5,640 | 1,740 | 1,060 | 1,090 | 798 |
| 23..... | 1,740 | 2,080 | 1,190 | 2,370 | 1,260 | 8,700 | 6,180 | 4,960 | 1,590 | 1,140 | 1,080 | 894 |
| 24..... | 1,740 | 1,860 | 1,260 | 2,020 | 1,190 | 10,100 | 5,470 | 4,480 | 1,590 | 1,160 | 1,100 | 950 |
| 25..... | 2,310 | 1,640 | 1,090 | 1,960 | 1,260 | 10,300 | 5,820 | 5,300 | 2,130 | 1,180 | 1,080 | 878 |
| 26..... | 2,020 | 1,440 | 1,300 | 1,740 | 1,340 | 7,510 | 11,600 | 5,130 | 2,310 | 1,100 | 1,070 | 894 |
| 27..... | 1,800 | 1,340 | 1,440 | 1,740 | 1,390 | 7,510 | 12,800 | 4,480 | 2,310 | 1,010 | 1,140 | 934 |
| 28..... | 1,390 | 1,340 | 1,690 | 1,800 | 1,440 | 6,180 | 9,100 | 4,010 | 1,970 | 790 | 1,140 | 950 |
| 29..... | 1,540 | 1,300 | 1,490 | 1,910 | ----- | 5,130 | 11,800 | 3,780 | 2,130 | 966 | 1,090 | 685 |
| 30..... | 1,690 | 1,340 | 1,440 | 1,860 | ----- | 4,480 | 13,200 | 3,420 | 2,370 | 1,070 | 966 | 830 |
| 31..... | 1,590 | ----- | 1,300 | 1,740 | ----- | 4,320 | ----- | 3,210 | ----- | 1,070 | 1,020 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 2,310 | 1,050 | 1,510 | 1.03 | 1.19 |
| November..... | 3,340 | 1,300 | 1,700 | 1.16 | 1.29 |
| December..... | 3,540 | 1,090 | 1,490 | 1.02 | 1.18 |
| January..... | 3,710 | 1,100 | 1,740 | 1.19 | 1.37 |
| February..... | 1,640 | 1,080 | 1,300 | .890 | .93 |
| March..... | 10,300 | 1,210 | 4,120 | 2.82 | 3.25 |
| April..... | 16,700 | 4,160 | 7,830 | 5.36 | 5.98 |
| May..... | 21,400 | 3,210 | 7,210 | 4.94 | 5.70 |
| June..... | 2,940 | 1,540 | 2,040 | 1.40 | 1.56 |
| July..... | 2,190 | 790 | 1,360 | .932 | 1.07 |
| August..... | 1,540 | 910 | 1,100 | .753 | .87 |
| September..... | 3,070 | 685 | 1,080 | .740 | .83 |
| The year..... | 21,400 | 685 | 2,710 | 1.86 | 25.22 |

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, 1929.

REMARKS.—Discharge obtained from flow over dam and through the various 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, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|--------|--------|--------|-------|-------|-------|-------|
| 1----- | 2,450 | 2,270 | 1,930 | 2,300 | 2,590 | 2,240 | 9,220 | 19,600 | 4,940 | 2,800 | 1,430 | 1,060 |
| 2----- | 2,100 | 2,340 | 1,270 | 2,190 | 2,590 | 2,460 | 9,450 | 14,200 | 5,130 | 2,830 | 1,380 | 693 |
| 3----- | 2,080 | 1,990 | 2,250 | 2,470 | 1,570 | 2,440 | 11,700 | 10,800 | 3,860 | 2,710 | 521 | 1,250 |
| 4----- | 2,180 | 1,480 | 2,090 | 2,040 | 2,070 | 1,510 | 10,800 | 17,100 | 3,630 | 2,380 | 935 | 1,280 |
| 5----- | 2,200 | 2,190 | 2,390 | 2,220 | 2,140 | 2,390 | 9,020 | 27,700 | 2,980 | 1,470 | 1,240 | 1,200 |
| 6----- | 1,800 | 2,270 | 2,280 | 1,740 | 2,070 | 2,910 | 9760 | 20,900 | 3,110 | 1,790 | 1,260 | 1,250 |
| 7----- | 1,270 | 2,320 | 2,240 | 2,300 | 2,040 | 4,450 | 11,400 | 16,600 | 3,080 | 1,300 | 1,200 | 512 |
| 8----- | 2,140 | 2,390 | 1,980 | 4,840 | 2,730 | 6,450 | 16,000 | 15,900 | 2,920 | 1,630 | 1,280 | 954 |
| 9----- | 1,900 | 2,290 | 1,370 | 4,480 | 3,340 | 5,390 | 20,500 | 15,400 | 2,590 | 1,960 | 1,310 | 1,140 |
| 10----- | 1,800 | 1,830 | 2,180 | 4,010 | 3,140 | 4,680 | 20,700 | 12,800 | 2,420 | 2,130 | 1,140 | 1,820 |
| 11----- | 2,240 | 1,350 | 1,670 | 3,420 | 2,460 | 3,590 | 20,300 | 11,000 | 1,610 | 2,030 | 1,170 | 2,410 |
| 12----- | 1,690 | 2,110 | 1,800 | 2,940 | 2,970 | 3,620 | 13,600 | 9,850 | 2,300 | 2,080 | 1,620 | 3,150 |
| 13----- | 1,810 | 2,000 | 1,840 | 2,730 | 2,880 | 3,580 | 9,960 | 8,340 | 2,100 | 2,650 | 1,650 | 1,930 |
| 14----- | 1,470 | 2,020 | 1,900 | 1,840 | 2,660 | 3,990 | 9,560 | 8,280 | 2,470 | 1,330 | 1,860 | 346 |
| 15----- | 1,920 | 1,900 | 1,590 | 2,560 | 2,580 | 6,570 | 8,030 | 7,710 | 1,710 | 1,980 | 1,830 | 927 |
| 16----- | 1,910 | 1,780 | 1,200 | 2,260 | 2,390 | 8,190 | 7,800 | 8,490 | 2,170 | 1,620 | 1,410 | 1,750 |
| 17----- | 1,750 | 1,450 | 2,020 | 2,110 | 2,490 | 11,800 | 7,230 | 13,700 | 3,050 | 1,650 | 1,750 | 1,370 |
| 18----- | 2,230 | 1,130 | 2,160 | 2,390 | 1,620 | 16,300 | 9,000 | 12,700 | 3,360 | 1,640 | 1,060 | 1,260 |
| 19----- | 1,950 | 3,000 | 4,030 | 2,410 | 2,290 | 11,900 | 13,000 | 12,100 | 2,390 | 1,330 | 1,490 | 1,260 |
| 20----- | 2,060 | 3,050 | 4,300 | 3,940 | 2,300 | 9,920 | 12,300 | 10,200 | 2,440 | 275 | 1,240 | 916 |
| 21----- | 1,890 | 4,360 | 3,120 | 5,520 | 2,280 | 10,100 | 11,000 | 12,400 | 2,390 | 829 | 1,180 | 1,180 |
| 22----- | 2,260 | 3,400 | 2,200 | 6,380 | 2,270 | 9,050 | 11,100 | 9,940 | 2,330 | 1,480 | 1,170 | 861 |
| 23----- | 2,230 | 2,790 | 1,790 | 5,760 | 2,050 | 10,300 | 15,300 | 9,080 | 3,050 | 1,480 | 1,210 | 1,060 |
| 24----- | 2,500 | 2,200 | 2,280 | 4,380 | 2,140 | 19,100 | 12,500 | 7,870 | 2,500 | 1,380 | 1,370 | 1,120 |
| 25----- | 2,690 | 2,010 | 1,160 | 4,020 | 1,390 | 21,500 | 12,700 | 6,930 | 2,240 | 1,480 | 905 | 1,160 |
| 26----- | 3,030 | 2,250 | 1,970 | 3,540 | 2,040 | 18,500 | 12,900 | 7,780 | 2,360 | 1,520 | 1,460 | 1,560 |
| 27----- | 2,540 | 1,790 | 2,070 | 3,300 | 2,240 | 15,300 | 16,000 | 8,460 | 3,300 | 1,500 | 1,330 | 1,180 |
| 28----- | 1,700 | 1,660 | 3,160 | 2,940 | 2,320 | 12,900 | 18,700 | 7,090 | 3,050 | 898 | 1,310 | 477 |
| 29----- | 2,380 | 1,400 | 3,120 | 3,030 | ----- | 11,000 | 16,100 | 5,840 | 2,890 | 1,130 | 1,300 | 810 |
| 30----- | 2,170 | 2,040 | 2,560 | 2,570 | ----- | 9,930 | 16,000 | 6,040 | 2,180 | 1,090 | 1,280 | 1,120 |
| 31----- | 2,270 | ----- | 2,540 | 2,430 | ----- | 9,200 | ----- | 5,770 | ----- | 1,120 | 751 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|--------|-----------------|-------------------|
| October----- | 3,030 | 1,270 | 2,080 | 0.732 | 0.84 |
| November----- | 4,360 | 1,130 | 2,170 | .764 | .85 |
| December----- | 4,300 | 1,160 | 2,210 | .778 | .90 |
| January----- | 6,380 | 1,740 | 3,200 | 1.13 | 1.30 |
| February----- | 3,340 | 1,390 | 2,340 | .824 | .86 |
| March----- | 21,500 | 1,510 | 8,430 | 2.97 | 3.42 |
| April----- | 20,700 | 7,230 | 12,700 | 4.47 | 4.99 |
| May----- | 27,700 | 5,770 | 11,600 | 4.08 | 4.70 |
| June----- | 5,130 | 1,610 | 2,820 | .993 | 1.11 |
| July----- | 2,830 | 275 | 1,660 | .585 | .67 |
| August----- | 1,860 | 521 | 1,290 | .454 | .52 |
| September----- | 3,150 | 346 | 1,220 | .430 | .48 |
| The year----- | 27,700 | 275 | 4,330 | 1.52 | 20.64 |

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, 1929.

REMARKS.—Discharge obtained from flow over dam and through the various wheels and gates, including water wasted from diverted areas of South Branch of Nashua, Sudbury, and Cochituate drainage basins. Wasted water is deducted from observed flow to give net discharge from net drainage area. Flow regulated to some extent by operation of power plants and storage in Lake Winnepesaukee and other reservoirs. Entire record furnished by J. R. Baldwin, chief engineer of the Essex Co.; estimate of quantities wasted into the Merrimack furnished by Metropolitan Water & Sewerage Board of Boston.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|--------|--------|--------|--------|--------|-------------------|-------|-------|-------|
| 1 | 6,163 | 4,918 | 3,701 | 5,106 | 5,354 | 6,072 | 14,328 | 23,695 | 6,850 | 4,127 | 2,059 | 411 |
| 2 | 5,596 | 4,352 | 3,906 | 6,445 | 5,558 | 6,137 | 15,232 | 18,337 | 6,342 | 4,607 | 1,925 | 763 |
| 3 | 4,402 | 3,731 | 5,363 | 6,867 | 4,529 | 5,605 | 15,972 | 17,952 | 5,462 | 3,878 | 1,147 | 2,198 |
| 4 | 4,048 | 3,746 | 5,585 | 5,267 | 6,170 | 6,063 | 15,064 | 27,192 | 5,907 | 2,932 | 592 | 1,948 |
| 5 | 3,836 | 5,212 | 5,289 | 4,570 | 5,245 | 7,711 | 13,992 | 32,492 | 4,907 | 3,103 | 1,987 | 1,867 |
| 6 | 4,866 | 4,862 | 5,096 | 4,565 | 4,530 | 11,715 | 13,575 | 25,612 | 3,88 ^a | 2,894 | 2,155 | 1,830 |
| 7 | 2,728 | 4,358 | 5,326 | 8,661 | 5,889 | 15,685 | 15,605 | 23,452 | 4,258 | 2,940 | 1,992 | 1,352 |
| 8 | 4,942 | 4,650 | 5,526 | 8,482 | 11,005 | 14,590 | 16,970 | 22,352 | 4,711 | 3,867 | 1,939 | 305 |
| 9 | 4,554 | 4,599 | 4,038 | 8,285 | 11,885 | 13,227 | 21,146 | 20,705 | 4,016 | 3,415 | 1,915 | 1,883 |
| 10 | 4,319 | 3,940 | 5,316 | 7,845 | 10,953 | 10,847 | 22,440 | 17,645 | 4,008 | 3,140 | 1,083 | 1,088 |
| 11 | 3,819 | 3,427 | 4,671 | 7,509 | 10,206 | 10,743 | 19,614 | 15,060 | 4,28 ^a | 3,069 | 215 | 1,803 |
| 12 | 2,315 | 4,138 | 4,655 | 6,867 | 9,269 | 9,756 | 15,750 | 13,075 | 3,947 | 2,945 | 1,845 | 2,315 |
| 13 | 2,972 | 5,844 | 4,172 | 5,386 | 8,562 | 10,155 | 13,875 | 12,927 | 3,677 | 2,202 | 2,356 | 2,791 |
| 14 | 3,382 | 4,420 | 3,882 | 6,645 | 7,805 | 12,602 | 12,796 | 12,155 | 3,10 ^a | 1,085 | 2,533 | 2,143 |
| 15 | 5,101 | 4,513 | 3,137 | 6,071 | 7,185 | 17,907 | 12,769 | 11,742 | 3,111 | 2,665 | 2,494 | 794 |
| 16 | 3,902 | 3,914 | 2,967 | 4,984 | 6,990 | 23,330 | 12,631 | 13,657 | 2,269 | 2,651 | 2,442 | 2,232 |
| 17 | 3,822 | 3,132 | 5,086 | 4,997 | 4,994 | 25,362 | 14,696 | 16,840 | 5,207 | 2,603 | 1,333 | 2,429 |
| 18 | 3,830 | 872 | 4,550 | 4,810 | 6,358 | 24,806 | 18,880 | 15,920 | 5,071 | 2,517 | 1,417 | 2,373 |
| 19 | 3,475 | 4,366 | 5,059 | 7,147 | 6,620 | 21,870 | 21,075 | 13,765 | 3,961 | 2,457 | 2,374 | 2,129 |
| 20 | 4,057 | 4,652 | 7,160 | 9,718 | 6,238 | 20,040 | 19,780 | 12,897 | 3,70 ^a | 1,694 | 2,325 | 2,202 |
| 21 | 2,317 | 5,752 | 7,454 | 11,849 | 5,733 | 19,590 | 19,212 | 14,275 | 3,662 | 885 | 2,134 | 1,200 |
| 22 | 5,471 | 7,093 | 6,140 | 11,324 | 4,277 | 19,012 | 24,409 | 14,652 | 3,273 | 2,575 | 2,122 | 521 |
| 23 | 5,139 | 5,989 | 4,379 | 10,127 | 5,975 | 21,924 | 25,971 | 13,595 | 3,26 ^a | 2,511 | 2,269 | 2,015 |
| 24 | 5,114 | 5,810 | 5,227 | 8,452 | 5,590 | 29,667 | 23,732 | 12,410 | 4,206 | 2,485 | 1,347 | 1,048 |
| 25 | 5,115 | 3,373 | 3,521 | 7,556 | 5,776 | 29,525 | 20,170 | 11,007 | 4,31 ^a | 2,491 | 214 | 1,574 |
| 26 | 5,542 | 5,462 | 4,788 | 7,128 | 5,258 | 27,032 | 19,286 | 10,220 | 4,759 | 2,446 | 2,064 | 1,366 |
| 27 | 6,015 | 4,941 | 4,779 | 5,737 | 5,157 | 23,000 | 23,370 | 10,632 | 5,433 | 1,365 | 2,219 | 1,372 |
| 28 | 4,363 | 4,257 | 4,690 | 6,779 | 6,434 | 20,832 | 23,899 | 9,395 | 5,021 | 334 | 2,114 | 1,206 |
| 29 | 5,583 | 1,951 | 7,234 | 6,457 | ----- | 18,289 | 22,267 | 8,380 | 5,274 | 2,198 | 1,908 | 420 |
| 30 | 5,251 | 4,235 | 7,100 | 5,466 | ----- | 16,027 | 23,277 | 7,772 | 3,20 ^a | 2,426 | 1,832 | 1,594 |
| 31 | 4,671 | ----- | 6,537 | 5,259 | ----- | 14,487 | ----- | 6,762 | ----- | 2,262 | 1,016 | ----- |

| Month | Mean discharge in second-feet | | | | Run-off in inches (corrected) | Rainfall in inches (mean of 34 stations) |
|-----------|-------------------------------|---------------------------|------------------------|-----------------------------|-------------------------------|--|
| | Observed | Wasted into the Merrimack | Corrected for net area | Per square mile (corrected) | | |
| October | 4,410 | 59 | 4,351 | 0.977 | 1.126 | 1.99 |
| November | 4,417 | 59 | 4,358 | .979 | 1.093 | 2.05 |
| December | 5,045 | 83 | 4,962 | 1.115 | 1.286 | 2.30 |
| January | 6,979 | 136 | 6,843 | 1.537 | 1.772 | 3.70 |
| February | 6,769 | 147 | 6,622 | 1.487 | 1.548 | 3.88 |
| March | 16,568 | 323 | 16,245 | 3.649 | 4.207 | 3.29 |
| April | 18,393 | 614 | 17,779 | 3.993 | 4.456 | 5.69 |
| May | 15,696 | 452 | 15,244 | 3.424 | 3.948 | 4.21 |
| June | 4,366 | 34 | 4,332 | .973 | 1.086 | 3.07 |
| July | 2,605 | 11 | 2,594 | .583 | .672 | 1.27 |
| August | 1,787 | 6 | 1,781 | .400 | .461 | 2.31 |
| September | 1,633 | 6 | 1,627 | .365 | .407 | 2.15 |
| The year | 7,396 | 161 | 7,235 | 1.625 | 22.062 | 35.91 |

BAKERS RIVER NEAR RUMNEY, N. H.

LOCATION.—Water-stage recorder 150 feet above mouth of Eastmar Brook and 2 miles west of Rumney, Grafton County.

DRAINAGE AREA.—140 square miles.

RECORDS AVAILABLE.—November, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 4,850 second-feet May 3 (gage height, 7.52 feet); minimum, 24 second-feet Aug. 1-3 and Sept. 3-6 (gage height, 1.40 feet).

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

REMARKS.—Records good except those for periods of ice effect (Dec. 8, 9, 23-27, Jan. 2-5, 9-18, Jan. 26 to Feb. 6, and Mar. 1-6), which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|------|------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | | 108 | 96 | 81 | 71 | 719 | 708 | 164 | 17' | 25 | 29 |
| 2..... | | 104 | 82 | 79 | 67 | 752 | 870 | 150 | 123 | 24 | 28 |
| 3..... | | 99 | 76 | 65 | 556 | 2,860 | 148 | 9' | 25 | 25 | 25 |
| 4..... | | 99 | 71 | 72 | 68 | 575 | 1,370 | 145 | 8' | 41 | 24 |
| 5..... | | 106 | 69 | 68 | 91 | 900 | 870 | 134 | 8' | 54 | 24 |
| 6..... | | 106 | 154 | 68 | 169 | 1,730 | 810 | 178 | 8' | 50 | 25 |
| 7..... | | 86 | 284 | 78 | 176 | 1,590 | 810 | 150 | 75 | 40 | 26 |
| 8..... | | 84 | 181 | 94 | 123 | 3,000 | 675 | 126 | 18' | 32 | 28 |
| 9..... | | 81 | 148 | 96 | 94 | 2,370 | 489 | 108 | 12' | 30 | 29 |
| 10..... | | 81 | 123 | 90 | 82 | 1,370 | 400 | 99 | 9' | 29 | 364 |
| 11..... | | 75 | 106 | 81 | 72 | 752 | 350 | 90 | 7' | 51 | 480 |
| 12..... | | 91 | 97 | 78 | 82 | 590 | 346 | 82 | 6' | 110 | 159 |
| 13..... | 78 | 78 | 92 | 78 | 176 | 489 | 329 | 75 | 5' | 60 | 96 |
| 14..... | 76 | 81 | 88 | 78 | 319 | 396 | 287 | 79 | 6' | 44 | 104 |
| 15..... | 79 | 76 | 85 | 78 | 319 | 346 | 655 | 354 | 8' | 44 | 136 |
| 16..... | 81 | 79 | 82 | 76 | 840 | 346 | 1,140 | 204 | 5' | 65 | 97 |
| 17..... | 159 | 84 | 79 | 75 | 930 | 634 | 930 | 126 | 5' | 50 | 79 |
| 18..... | 236 | 400 | 79 | 74 | 599 | 781 | 570 | 92 | 4' | 41 | 85 |
| 19..... | 225 | 393 | 386 | 74 | 502 | 665 | 565 | 86 | 4' | 35 | 71 |
| 20..... | 451 | 253 | 423 | 74 | 533 | 556 | 781 | 134 | 4' | 32 | 87 |
| 21..... | 271 | 188 | 274 | 72 | 533 | 870 | 524 | 106 | 4' | 30 | 53 |
| 22..... | 206 | 110 | 225 | 74 | 840 | 752 | 431 | 86 | 3' | 30 | 47 |
| 23..... | 173 | 97 | 191 | 72 | 1,540 | 629 | 343 | 75 | 3' | 31 | 44 |
| 24..... | 148 | 91 | 157 | 72 | 1,590 | 594 | 322 | 115 | 3' | 79 | 42 |
| 25..... | 136 | 86 | 132 | 72 | 995 | 870 | 542 | 217 | 3' | 62 | 41 |
| 26..... | 102 | 84 | 115 | 72 | 840 | 2,430 | 368 | 154 | 4' | 42 | 38 |
| 27..... | 102 | 82 | 108 | 69 | 752 | 1,460 | 296 | 110 | 3' | 34 | 35 |
| 28..... | 94 | 171 | 97 | 72 | 590 | 995 | 262 | 96 | 3' | 31 | 34 |
| 29..... | 113 | 228 | 92 | ----- | 447 | 2,040 | 228 | 228 | 3' | 30 | 34 |
| 30..... | 96 | 154 | 86 | ----- | 389 | 1,100 | 206 | 164 | 2' | 30 | 41 |
| 31..... | 117 | 117 | 85 | ----- | 468 | 176 | ----- | ----- | 2' | 30 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|---------------------|---------|---------|-------|-----------------|-------------------|
| November 13-30..... | 451 | 76 | 157 | 1.12 | 0.75 |
| December..... | 400 | 75 | 128 | .914 | 1.05 |
| January..... | 423 | 69 | 141 | 1.01 | 1.16 |
| February..... | 96 | 68 | 76.5 | .546 | .57 |
| March..... | 1,590 | 65 | 463 | 3.21 | 3.82 |
| April..... | 3,000 | 346 | 1,030 | 7.36 | 8.21 |
| May..... | 2,860 | 176 | 629 | 4.49 | 5.18 |
| June..... | 354 | 75 | 136 | .871 | 1.08 |
| July..... | 188 | 28 | 67.2 | .480 | .55 |
| August..... | 110 | 24 | 42.3 | .302 | .35 |
| September..... | 480 | 24 | 79.2 | .566 | .63 |

SMITH RIVER NEAR BRISTOL, N. H.

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

DRAINAGE AREA.—78.5 square miles.

RECORDS AVAILABLE.—May, 1918, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,170 second-feet Mar. 17; minimum, 4.6 second-feet Aug. 22 (gage height, 0.40 foot).

1918-1929: Maximum discharge, 5,800 second-feet Nov. 4, 1927 (gage height, 7.02 feet); minimum, 3 second-feet Oct. 2, 1927 (gage height, 0.48 foot).

REMARKS.—Records good except those for periods of ice effect (Nov. 26-29, Dec. 6-17, and Dec. 23 to Mar. 20), which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|-------|-------|-----|-------|------|------|-------|
| 1 | 35 | 36 | 62 | 68 | 42 | 57 | 417 | 300 | 70 | 81 | 16 | 7.2 |
| 2 | 29 | 44 | 70 | 63 | 38 | 54 | 436 | 247 | 61 | 62 | 10 | 7.7 |
| 3 | 26 | 44 | 71 | 62 | 35 | 60 | 380 | 640 | 58 | 39 | 11 | 8.1 |
| 4 | 25 | 51 | 68 | 62 | 38 | 56 | 346 | 640 | 55 | 31 | 23 | 7.7 |
| 5 | 20 | 51 | 66 | 66 | 37 | 108 | 398 | 494 | 54 | 31 | 20 | 8.1 |
| 6 | 21 | 50 | 42 | 107 | 46 | 164 | 514 | 380 | 54 | 30 | 16 | 9.0 |
| 7 | 22 | 56 | 35 | 222 | 76 | 186 | 596 | 330 | 54 | 26 | 21 | 16 |
| 8 | 26 | 38 | 29 | 186 | 80 | 222 | 640 | 315 | 46 | 33 | 12 | 14 |
| 9 | 15 | 38 | 24 | 142 | 73 | 222 | 640 | 272 | 39 | 36 | 12 | 32 |
| 10 | 23 | 36 | 21 | 153 | 80 | 210 | 554 | 222 | 38 | 29 | 12 | 81 |
| 11 | 16 | 31 | 19 | 133 | 65 | 198 | 362 | 186 | 29 | 24 | 38 | 164 |
| 12 | 26 | 50 | 18 | 105 | 54 | 222 | 272 | 164 | 32 | 23 | 70 | 99 |
| 13 | 25 | 44 | 17 | 89 | 48 | 259 | 247 | 153 | 25 | 28 | 38 | 89 |
| 14 | 17 | 35 | 16 | 73 | 50 | 398 | 222 | 142 | 38 | 16 | 26 | 50 |
| 15 | 20 | 30 | 15 | 68 | 56 | 554 | 210 | 247 | 108 | 29 | 22 | 34 |
| 16 | 21 | 29 | 17 | 42 | 51 | 822 | 222 | 315 | 89 | 24 | 20 | 30 |
| 17 | 17 | 45 | 30 | 58 | 46 | 1,120 | 346 | 286 | 52 | 20 | 16 | 26 |
| 18 | 35 | 65 | 153 | 81 | 54 | 1,070 | 494 | 222 | 46 | 17 | 15 | 23 |
| 19 | 98 | 73 | 272 | 198 | 56 | 968 | 455 | 198 | 39 | 16 | 14 | 22 |
| 20 | 112 | 122 | 198 | 330 | 60 | 918 | 398 | 286 | 40 | 17 | 14 | 20 |
| 21 | 99 | 99 | 153 | 234 | 56 | 870 | 640 | 260 | 38 | 16 | 10 | 17 |
| 22 | 63 | 76 | 122 | 164 | 58 | 822 | 596 | 234 | 32 | 15 | 5.5 | 16 |
| 23 | 57 | 71 | 89 | 122 | 60 | 918 | 494 | 198 | 31 | 14 | 8.6 | 14 |
| 24 | 71 | 58 | 65 | 89 | 60 | 870 | 398 | 164 | 31 | 20 | 14 | 15 |
| 25 | 81 | 52 | 60 | 74 | 52 | 776 | 417 | 222 | 32 | 11 | 14 | 14 |
| 26 | 68 | 51 | 70 | 65 | 60 | 596 | 640 | 198 | 28 | 16 | 13 | 16 |
| 27 | 57 | 51 | 63 | 60 | 51 | 494 | 596 | 153 | 30 | 20 | 12 | 12 |
| 28 | 52 | 50 | 112 | 56 | 60 | 380 | 436 | 132 | 30 | 11 | 6.4 | 13 |
| 29 | 51 | 50 | 175 | 51 | ----- | 315 | 455 | 110 | 41 | 14 | 5.9 | 13 |
| 30 | 45 | 51 | 122 | 48 | ----- | 286 | 417 | 94 | 41 | 13 | 5.9 | 30 |
| 31 | 42 | ----- | 83 | 46 | ----- | 300 | ----- | 85 | ----- | 14 | 6.4 | ----- |

| Month | Maximum | Minimum | Mean | Pe ² square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------------------|-------------------|
| October | 112 | 15 | 42.4 | 0.540 | 0.62 |
| November | 122 | 29 | 52.6 | .670 | .75 |
| December | 272 | 15 | 76.0 | .968 | 1.12 |
| January | 330 | 42 | 107 | 1.36 | 1.57 |
| February | 80 | 35 | 55.1 | .702 | .73 |
| March | 1,120 | 54 | 468 | 5.96 | 6.87 |
| April | 640 | 210 | 441 | 5.62 | 6.27 |
| May | 640 | 85 | 254 | 3.24 | 3.74 |
| June | 108 | 25 | 45.4 | .578 | .64 |
| July | 81 | 11 | 25.0 | .318 | .37 |
| August | 70 | 5.5 | 17.0 | .217 | .25 |
| September | 164 | 7.2 | 30.3 | .386 | .43 |
| The year | 1,120 | 5.5 | 135 | 1.72 | 23.36 |

CONTOOCCOOK RIVER AT PENACOOK, N. H.

LOCATION.—Water-stage recorder at two islands between two highway bridges in Penacook, Merrimack County.

DRAINAGE AREA.—763 square miles.

RECORDS AVAILABLE.—November, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 8,330 second-feet Mar. 24 (gage height, 5.70 feet); minimum, 70 second-feet Sept. 28 (gage height, 1.09 feet).

REMARKS.—Records good except those for periods of ice effect (Dec. 7–11, 15–17, 23–25, and Jan. 1 to Mar. 4), which are fair. Some diurnal regulation.

Daily and monthly discharge, in second-feet, 1928–29

| Day | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | | 473 | 724 | 734 | 664 | 3,190 | 3,820 | 1,340 | 647 | 305 | 250 |
| 2..... | | 473 | 664 | 724 | 664 | 3,820 | 3,400 | 1,220 | 588 | 255 | 240 |
| 3..... | | 452 | 630 | 706 | 664 | 3,820 | 3,500 | 1,090 | 537 | 230 | 235 |
| 4..... | | 489 | 604 | 698 | 664 | 3,500 | 4,400 | 1,040 | 529 | 265 | 225 |
| 5..... | | 579 | 596 | 698 | 921 | 3,090 | 4,400 | 1,090 | 505 | 275 | 206 |
| 6..... | | 604 | 810 | 698 | 1,510 | 3,090 | 4,280 | 1,080 | 481 | 216 | 216 |
| 7..... | | 570 | 1,120 | 715 | 1,800 | 3,290 | 4,160 | 1,090 | 465 | 202 | 211 |
| 8..... | | 497 | 1,540 | 762 | 2,150 | 3,500 | 3,930 | 1,040 | 465 | 220 | 225 |
| 9..... | | 489 | 1,140 | 810 | 1,990 | 3,600 | 3,710 | 987 | 446 | 206 | 270 |
| 10..... | 545 | 481 | 1,010 | 890 | 1,680 | 3,500 | 3,290 | 850 | 432 | 202 | 287 |
| 11..... | 529 | 529 | 910 | 954 | 1,390 | 3,090 | 2,890 | 734 | 413 | 211 | 413 |
| 12..... | 452 | 473 | 850 | 1,010 | 1,280 | 2,690 | 2,500 | 753 | 439 | 255 | 481 |
| 13..... | 465 | 513 | 810 | 965 | 1,400 | 2,500 | 2,240 | 724 | 420 | 311 | 426 |
| 14..... | 529 | 505 | 762 | 860 | 2,010 | 2,320 | 1,970 | 706 | 432 | 305 | 406 |
| 15..... | 513 | 446 | 744 | 772 | 3,290 | 2,320 | 2,050 | 706 | 394 | 281 | 380 |
| 16..... | 497 | 406 | 724 | 698 | 4,920 | 2,320 | 2,410 | 772 | 311 | 281 | 329 |
| 17..... | 505 | 374 | 715 | 672 | 5,730 | 2,890 | 2,600 | 800 | 354 | 335 | 281 |
| 18..... | 513 | 656 | 715 | 672 | 5,600 | 3,930 | 2,600 | 715 | 400 | 311 | 270 |
| 19..... | 481 | 1,020 | 1,020 | 664 | 5,190 | 4,160 | 2,320 | 681 | 387 | 287 | 311 |
| 20..... | 562 | 1,120 | 1,440 | 664 | 4,920 | 4,040 | 2,410 | 664 | 361 | 255 | 323 |
| 21..... | 706 | 1,010 | 1,770 | 664 | 4,780 | 4,400 | 2,690 | 638 | 342 | 230 | 317 |
| 22..... | 715 | 860 | 1,430 | 664 | 5,460 | 5,730 | 2,600 | 656 | 329 | 245 | 265 |
| 23..... | 698 | 715 | 1,180 | 664 | 6,990 | 5,730 | 2,410 | 724 | 260 | 235 | 265 |
| 24..... | 647 | 579 | 1,060 | 664 | 8,330 | 4,920 | 2,240 | 734 | 265 | 216 | 270 |
| 25..... | 630 | 513 | 998 | 664 | 7,990 | 4,280 | 2,050 | 706 | 342 | 202 | 230 |
| 26..... | 521 | 481 | 943 | 664 | 6,660 | 4,400 | 1,960 | 706 | 394 | 216 | 211 |
| 27..... | 545 | 537 | 890 | 664 | 5,600 | 4,780 | 1,830 | 715 | 374 | 174 | 202 |
| 28..... | 452 | 762 | 850 | 664 | 4,920 | 4,650 | 1,710 | 698 | 311 | 197 | 178 |
| 29..... | 432 | 965 | 820 | ----- | 4,160 | 4,400 | 1,650 | 698 | 287 | 230 | 183 |
| 30..... | 458 | 943 | 791 | ----- | 3,600 | 4,160 | 1,540 | 681 | 260 | 230 | 220 |
| 31..... | ----- | 810 | 762 | ----- | 3,190 | ----- | 1,430 | ----- | 275 | 230 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|---------------------|---------|---------|-------|-----------------|-------------------|
| November 10–30..... | 715 | 432 | 543 | 0.712 | 0.56 |
| December..... | 1,120 | 374 | 623 | .817 | .94 |
| January..... | 1,770 | 596 | 936 | 1.23 | 1.42 |
| February..... | 1,010 | 664 | 738 | .967 | 1.01 |
| March..... | 8,330 | 664 | 3,550 | 4.65 | 5.36 |
| April..... | 5,730 | 2,320 | 3,740 | 4.90 | 5.47 |
| May..... | 4,400 | 1,430 | 2,740 | 3.59 | 4.14 |
| June..... | 1,340 | 638 | 835 | 1.09 | 1.22 |
| July..... | 647 | 260 | 401 | .526 | .61 |
| August..... | 335 | 174 | 246 | .322 | .37 |
| September..... | 481 | 178 | 278 | .364 | .41 |

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 (revised).

RECORDS AVAILABLE.—November, 1920, to September, 1929.

EXTREMES.—Maximum discharge during year, 655 second-feet Mar. 17 (gage height, 4.80 feet); minimum not determined.

1920-1929: Maximum discharge, 1,050 second-feet Mar. 10, 1921 (gage height, 5.4 feet); minimum, 0.4 second-foot Aug. 15, 1926.

REMARKS.—Records good except those for low water, for periods of ice effect (Jan. 4, 5, 12-19, and Jan. 22 to Mar. 12), and for estimated periods, which are fair. Flow regulated by several storage reservoirs.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 78 | 89 | 22 | 33 | 30 | 24 | ° 186 | ° 233 | 42 | ° 26 | ° 10 | ° 2 |
| 2..... | 78 | 82 | 24 | 54 | 23 | 10 | ° 170 | ° 490 | ° 36 | ° 24 | ° 8 | ° 4 |
| 3..... | 79 | 46 | ° 72 | 54 | 10 | 14 | ° 156 | ° 540 | ° 43 | ° 22 | ° 5 | 40 |
| 4..... | 74 | 9 | ° 93 | 52 | 27 | 29 | ° 140 | ° 480 | 44 | ° 20 | ° 14 | 44 |
| 5..... | 78 | 55 | ° 94 | 38 | 24 | 16 | ° 138 | ° 320 | 44 | ° 19 | ° 42 | 48 |
| 6..... | 50 | 74 | ° 94 | 110 | 21 | 20 | ° 170 | ° 340 | 52 | ° 18 | ° 42 | 3 |
| 7..... | 34 | 76 | ° 68 | 164 | 35 | 15 | ° 178 | ° 370 | 48 | ° 17 | ° 37 | 4 |
| 8..... | 68 | 76 | ° 40 | 167 | 23 | 15 | ° 160 | ° 320 | 27 | ° 16 | ° 30 | 2 |
| 9..... | 80 | 56 | ° 11 | 154 | 24 | 10 | ° 152 | ° 280 | ° 29 | ° 16 | ° 2 | 3 |
| 10..... | 86 | 15 | 63 | 124 | 24 | 10 | ° 141 | 228 | ° 30 | ° 14 | ° 2 | 40 |
| 11..... | 88 | 8 | 69 | 83 | 29 | 20 | ° 139 | 179 | ° 29 | ° 13 | ° 1 | 44 |
| 12..... | 80 | 16 | 60 | 59 | 27 | 20 | ° 145 | 156 | ° 28 | ° 12 | ° 41 | 42 |
| 13..... | 60 | 17 | 72 | 54 | 24 | 102 | 124 | 147 | ° 28 | ° 13 | ° 41 | 2 |
| 14..... | 9 | 18 | 42 | 76 | 26 | 236 | 118 | 120 | ° 28 | ° 12 | ° 41 | 2 |
| 15..... | 58 | 22 | 10 | 91 | 19 | 378 | 114 | 144 | ° 27 | ° 11 | ° 2 | 2 |
| 16..... | 84 | 19 | 4 | 80 | 10 | 477 | 111 | ° 170 | ° 26 | ° 43 | ° 2 | 4 |
| 17..... | 84 | 18 | 52 | 79 | 11 | 584 | 174 | ° 150 | ° 25 | ° 46 | ° 2 | 40 |
| 18..... | 79 | 2 | 80 | 181 | 19 | 450 | 222 | ° 137 | ° 26 | ° 46 | ° 18 | 44 |
| 19..... | 78 | 56 | 46 | 209 | 10 | 302 | 236 | ° 150 | ° 26 | 46 | 41 | 24 |
| 20..... | 53 | 58 | 57 | 194 | 23 | ° 390 | 223 | ° 162 | ° 26 | 18 | 42 | 2 |
| 21..... | 11 | 75 | 56 | 178 | 22 | ° 350 | 389 | 142 | ° 27 | ° 8 | 42 | 12 |
| 22..... | 62 | 73 | 38 | 110 | 34 | 308 | 508 | 144 | ° 29 | ° 7 | 14 | 3 |
| 23..... | 82 | 74 | 16 | 59 | 29 | 427 | 404 | 146 | ° 32 | ° 7 | 2 | 4 |
| 24..... | 83 | 38 | 40 | 49 | 28 | 487 | 356 | 121 | ° 34 | ° 14 | 2 | 4 |
| 25..... | 85 | 6 | 5 | 44 | 37 | 413 | ° 440 | 109 | ° 38 | ° 45 | 2 | 46 |
| 26..... | 82 | 50 | 60 | 40 | 27 | 338 | ° 580 | 94 | ° 46 | ° 46 | 40 | 46 |
| 27..... | 56 | 56 | 44 | 22 | 32 | 300 | ° 570 | 94 | ° 54 | ° 46 | 45 | 46 |
| 28..... | 32 | 14 | 51 | 34 | 27 | 248 | ° 370 | 88 | 53 | ° 45 | 43 | 5 |
| 29..... | 84 | 4 | 27 | 30 | ----- | 219 | ° 390 | 82 | 36 | ° 40 | 43 | 2 |
| 30..... | 84 | 12 | 19 | 35 | ----- | 189 | ° 335 | 55 | ° 30 | ° 28 | ° 11 | 4 |
| 31..... | 84 | ----- | 82 | 35 | ----- | 178 | ----- | 68 | ----- | ° 17 | ° 2 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 88 | 9 | 68.5 | 1.42 | 1.64 |
| November..... | 80 | 2 | 40.5 | .842 | .94 |
| December..... | 94 | 4 | 48.7 | 1.01 | 1.16 |
| January..... | 200 | 22 | 86.8 | 1.80 | 2.08 |
| February..... | 37 | 10 | 24.1 | .501 | .52 |
| March..... | 584 | 10 | 212 | 4.41 | 5.08 |
| April..... | 580 | 111 | 251 | 5.22 | 5.82 |
| May..... | 540 | 55 | 202 | 4.20 | 4.84 |
| June..... | 54 | 25 | 34.8 | .723 | .81 |
| July..... | 46 | 7 | 24.4 | .507 | .58 |
| August..... | 45 | 1 | 21.6 | .449 | .52 |
| September..... | 48 | 2 | 18.9 | .393 | .44 |
| The year..... | 584 | 1 | 86.6 | 1.80 | 24.43 |

° Estimated.

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

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

DRAINAGE AREA.—54.5 square miles (revised).

RECORDS AVAILABLE.—August, 1924, to September, 1929.

EXTREMES.—Maximum discharge during year, 715 second-feet Apr. 27 and 28 (gage height, 4.3 feet); minimum, 4.5 second-feet Sept. 28–30 (gage height, 0.40 foot).

1924–1929: Maximum discharge, 2,100 second-feet Nov. 5, 1927 (gage height, 6.30 feet); minimum, 4 second-feet Sept. 26 and 29, 1925 (gage height, 0.40 foot).

REMARKS.—Records good except those between 330 and 560 second-feet, which may be poor, and those for periods of ice effect (Nov. 26–28, Dec. 6–9, 21–25, Jan. 2–4, and Jan. 9 to Mar. 16), which are fair. Small storage regulation by Long Pond and others.

Daily and monthly discharge, in second-feet, 1928–29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | 111 | 27 | 37 | 73 | 55 | 51 | 306 | 328 | 55 | 34 | 10 | 6.1 |
| 2..... | 130 | 27 | 39 | 68 | 49 | 51 | 328 | 352 | 45 | 28 | 9.4 | 5.8 |
| 3..... | 117 | 27 | 39 | 68 | 45 | 51 | 306 | 402 | 37 | 26 | 9.8 | 5.8 |
| 4..... | 106 | 34 | 45 | 64 | 41 | 55 | 284 | 430 | 32 | 24 | 13 | 5.5 |
| 5..... | 94 | 34 | 49 | 59 | 37 | 68 | 284 | 522 | 27 | 22 | 12 | 5.5 |
| 6..... | 84 | 31 | 51 | 130 | 36 | 89 | 328 | 460 | 27 | 20 | 11 | 6.1 |
| 7..... | 68 | 30 | 59 | 157 | 43 | 106 | 284 | 430 | 26 | 20 | 9.4 | 7.2 |
| 8..... | 59 | 31 | 49 | 130 | 89 | 100 | 306 | 352 | 24 | 18 | 8.7 | 6.5 |
| 9..... | 55 | 34 | 45 | 117 | 84 | 94 | 352 | 244 | 23 | 17 | 9.8 | 8.7 |
| 10..... | 49 | 34 | 43 | 106 | 78 | 89 | 328 | 284 | 22 | 16 | 8.7 | 16 |
| 11..... | 45 | 32 | 43 | 94 | 73 | 84 | 306 | 264 | 20 | 15 | 13 | 15 |
| 12..... | 39 | 31 | 40 | 84 | 68 | 94 | 284 | 224 | 19 | 14 | 14 | 13 |
| 13..... | 37 | 30 | 37 | 78 | 64 | 100 | 284 | 208 | 18 | 14 | 13 | 8.7 |
| 14..... | 35 | 30 | 37 | 68 | 59 | 111 | 244 | 186 | 18 | 14 | 13 | 7.2 |
| 15..... | 32 | 30 | 37 | 64 | 59 | 208 | 224 | 186 | 21 | 14 | 17 | 7.2 |
| 16..... | 30 | 28 | 35 | 59 | 55 | 284 | 224 | 178 | 20 | 14 | 18 | 6.5 |
| 17..... | 29 | 28 | 39 | 59 | 49 | 430 | 244 | 171 | 18 | 13 | 14 | 6.8 |
| 18..... | 28 | 31 | 73 | 68 | 49 | 460 | 244 | 164 | 18 | 13 | 12 | 7.9 |
| 19..... | 28 | 36 | 111 | 94 | 51 | 430 | 224 | 171 | 18 | 12 | 10 | 6.8 |
| 20..... | 30 | 49 | 100 | 106 | 49 | 352 | 244 | 178 | 20 | 12 | 9.8 | 5.8 |
| 21..... | 27 | 49 | 100 | 94 | 45 | 352 | 352 | 178 | 22 | 11 | 9.4 | 5.8 |
| 22..... | 26 | 47 | 89 | 106 | 43 | 402 | 352 | 178 | 51 | 10 | 8.7 | 5.5 |
| 23..... | 26 | 47 | 84 | 111 | 41 | 490 | 352 | 171 | 64 | 10 | 9.0 | 5.5 |
| 24..... | 30 | 47 | 84 | 100 | 39 | 670 | 352 | 157 | 43 | 9.4 | 13 | 5.5 |
| 25..... | 28 | 45 | 73 | 89 | 39 | 630 | 430 | 157 | 45 | 14 | 12 | 5.2 |
| 26..... | 27 | 42 | 68 | 78 | 40 | 490 | 556 | 143 | 68 | 15 | 10 | 5.2 |
| 27..... | 26 | 41 | 68 | 73 | 47 | 376 | 715 | 136 | 64 | 14 | 8.7 | 5.2 |
| 28..... | 27 | 39 | 78 | 68 | 55 | 402 | 715 | 130 | 51 | 14 | 7.9 | 4.9 |
| 29..... | 28 | 37 | 89 | 59 | ----- | 352 | 670 | 111 | 55 | 16 | 7.9 | 4.5 |
| 30..... | 28 | 35 | 84 | 59 | ----- | 328 | 490 | 89 | 47 | 14 | 7.2 | 4.5 |
| 31..... | 28 | ----- | 78 | 59 | ----- | 284 | ----- | 68 | ----- | 12 | 6.5 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 130 | 26 | 48.6 | 0.892 | 1.03 |
| November..... | 49 | 27 | 35.4 | .650 | .73 |
| December..... | 111 | 35 | 61.4 | 1.13 | 1.30 |
| January..... | 157 | 59 | 85.2 | 1.56 | 1.80 |
| February..... | 89 | 36 | 52.9 | .971 | 1.01 |
| March..... | 670 | 51 | 261 | 4.73 | 5.52 |
| April..... | 715 | 224 | 354 | 6.57 | 7.25 |
| May..... | 522 | 68 | 234 | 4.27 | 4.95 |
| June..... | 68 | 18 | 33.9 | .622 | .69 |
| July..... | 34 | 9.4 | 16.1 | .275 | .34 |
| August..... | 18 | 6.5 | 10.8 | .178 | .23 |
| September..... | 16 | 4.5 | 7.00 | .128 | .14 |
| The year..... | 715 | 4.5 | 100 | 1.83 | 24.99 |

BLACKWATER RIVER NEAR CONTOOCOOK, N. H.

LOCATION.—Chain gage at highway bridge 150 feet north of Webster-Hopkinton town line and $3\frac{1}{2}$ miles from Contoocook, Merrimack County.

DRAINAGE AREA.—131 square miles.

RECORDS AVAILABLE.—May, 1918, to September, 1920; February, 1927, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,870 second-feet Mar. 25 (gage height, 11.06 feet); minimum, 24 second-feet Sept. 6 (gage height, 2.02 feet).

1918-1920, 1927-1929: Maximum discharge, 2,730 second-feet Mar. 29, 1920 (gage height, 15.0 feet); minimum, 20 second-feet Aug. 4, 1919 (gage height, 1.90 feet).

REMARKS.—Records fair. Stage-discharge relation affected by ice Dec. 8-10, 16, 17, 24-27, Dec. 31 to Jan. 5, Jan. 11-18, Jan. 23 to Feb. 6, and Feb. 11 to Mar. 12. Slight diurnal regulation and small seasonal storage in Pleasant Pond.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|-------|-------|-----|-------|------|------|-------|
| 1 | 82 | 63 | 64 | 95 | 102 | 95 | 572 | 616 | 140 | 88 | 36 | 28 |
| 2 | 76 | 64 | 70 | 82 | 102 | 95 | 726 | 484 | 124 | 82 | 34 | 27 |
| 3 | 88 | 66 | 72 | 82 | 102 | 95 | 770 | 528 | 116 | 82 | 32 | 26 |
| 4 | 57 | 70 | 76 | 74 | 88 | 88 | 660 | 814 | 109 | 73 | 37 | 26 |
| 5 | 65 | 74 | 82 | 66 | 88 | 102 | 572 | 968 | 109 | 69 | 32 | 26 |
| 6 | 72 | 72 | 82 | 109 | 88 | 204 | 616 | 814 | 109 | 56 | 32 | 25 |
| 7 | 70 | 67 | 74 | 143 | 124 | 308 | 726 | 682 | 102 | 51 | 33 | 25 |
| 8 | 65 | 62 | 76 | 204 | 156 | 352 | 792 | 616 | 102 | 53 | 33 | 26 |
| 9 | 62 | 62 | 75 | 194 | 156 | 330 | 858 | 528 | 95 | 60 | 34 | 31 |
| 10 | 66 | 58 | 68 | 165 | 165 | 287 | 858 | 418 | 95 | 52 | 34 | 36 |
| 11 | 70 | 57 | 59 | 131 | 131 | 224 | 704 | 352 | 88 | 51 | 39 | 82 |
| 12 | 65 | 55 | 75 | 131 | 116 | 184 | 506 | 287 | 82 | 55 | 44 | 116 |
| 13 | 64 | 55 | 68 | 116 | 116 | 214 | 418 | 266 | 82 | 55 | 38 | 95 |
| 14 | 61 | 53 | 69 | 95 | 109 | 396 | 374 | 224 | 82 | 52 | 60 | 75 |
| 15 | 55 | 52 | 64 | 95 | 109 | 682 | 330 | 287 | 116 | 48 | 61 | 61 |
| 16 | 52 | 51 | 60 | 88 | 102 | 1,030 | 330 | 396 | 204 | 45 | 60 | 53 |
| 17 | 53 | 53 | 65 | 88 | 95 | 1,250 | 462 | 506 | 204 | 42 | 56 | 49 |
| 18 | 58 | 61 | 88 | 95 | 95 | 1,320 | 660 | 506 | 148 | 38 | 51 | 45 |
| 19 | 59 | 70 | 148 | 165 | 95 | 1,280 | 792 | 418 | 109 | 38 | 47 | 44 |
| 20 | 66 | 95 | 194 | 287 | 102 | 1,190 | 770 | 418 | 95 | 37 | 39 | 42 |
| 21 | 82 | 109 | 156 | 484 | 102 | 1,170 | 814 | 440 | 82 | 35 | 36 | 42 |
| 22 | 88 | 116 | 102 | 484 | 102 | 1,280 | 1,010 | 418 | 82 | 32 | 32 | 39 |
| 23 | 76 | 102 | 82 | 330 | 95 | 1,560 | 1,120 | 396 | 82 | 34 | 32 | 38 |
| 24 | 76 | 88 | 76 | 234 | 38 | 1,830 | 946 | 330 | 82 | 34 | 32 | 35 |
| 25 | 82 | 82 | 76 | 174 | 38 | 1,830 | 770 | 308 | 82 | 34 | 31 | 35 |
| 26 | 82 | 82 | 74 | 148 | 88 | 1,540 | 792 | 308 | 82 | 34 | 31 | 34 |
| 27 | 82 | 82 | 65 | 131 | 88 | 1,190 | 924 | 287 | 74 | 35 | 31 | 33 |
| 28 | 76 | 64 | 109 | 109 | 88 | 946 | 946 | 256 | 73 | 38 | 30 | 32 |
| 29 | 72 | 62 | 140 | 102 | ----- | 770 | 814 | 224 | 73 | 39 | 30 | 32 |
| 30 | 69 | 57 | 156 | 102 | ----- | 616 | 704 | 194 | 72 | 41 | 29 | 30 |
| 31 | 63 | ----- | 109 | 102 | ----- | 528 | ----- | 174 | ----- | 39 | 28 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 88 | 52 | 69.5 | 0.531 | 0.61 |
| November | 116 | 51 | 69.5 | .531 | .59 |
| December | 194 | 59 | 89.5 | .683 | .79 |
| January | 484 | 66 | 158 | 1.21 | 1.40 |
| February | 165 | 88 | 106 | .809 | .84 |
| March | 1,830 | 88 | 741 | 5.66 | 6.52 |
| April | 1,120 | 330 | 711 | 5.43 | 6.06 |
| May | 968 | 174 | 434 | 3.31 | 3.82 |
| June | 204 | 72 | 103 | .786 | .88 |
| July | 88 | 32 | 49.1 | .375 | .43 |
| August | 61 | 28 | 38.5 | .294 | .34 |
| September | 116 | 25 | 42.9 | .327 | .36 |
| The year | 1,830 | 25 | 219 | 1.67 | 22.64 |

MERRIMACK RIVER BASIN

57

SUNCOOK RIVER AT NORTH CHICHESTER, N. H.

LOCATION.—Water-stage recorder 500 feet from Chichester depot, North Chichester, Merrimack County, and 2½ miles above mouth of Little Suncook River.

DRAINAGE AREA.—157 square miles.

RECORDS AVAILABLE.—May, 1918, to November, 1927; November, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 2,350 second-feet Mar. 16 (gage height, 9.14 feet); minimum, 2.8 second-feet Nov. 26 (gage height, 0.94 foot). 1918-1929: 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 good except those for periods of ice effect (Dec. 7, 8, 14, 15, 22, and Dec. 30 to Mar. 12), which are fair. Flow regulated by storage at several points above Pittsfield.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|------|------|-------|-------|-------|-----|-------|------|------|-------|
| 1..... | | 107 | 39 | 120 | 120 | 610 | 454 | 116 | 148 | 50 | 6.8 |
| 2..... | | 26 | 170 | 85 | 100 | 710 | 394 | 117 | 132 | 62 | 6.0 |
| 3..... | | 122 | 165 | 30 | 35 | 610 | 718 | 197 | 137 | 86 | 5.6 |
| 4..... | | 128 | 175 | 100 | 290 | 550 | 940 | 158 | 15 | 16 | 4.4 |
| 5..... | | 125 | 105 | 105 | 310 | 538 | 860 | 154 | 133 | 48 | 5.6 |
| 6..... | | 179 | 150 | 110 | 550 | 562 | 810 | 144 | 65 | 55 | 8.0 |
| 7..... | | 125 | 600 | 125 | 640 | 598 | 735 | 144 | 12 | 52 | 10 |
| 8..... | | 75 | 460 | 140 | 480 | 610 | 685 | 78 | 116 | 38 | 12 |
| 9..... | 161 | 37 | 340 | 155 | 420 | 574 | 538 | 49 | 128 | 63 | 29 |
| 10..... | 84 | 128 | 220 | 160 | 400 | 526 | 454 | 171 | 130 | 38 | 27 |
| 11..... | 23 | 98 | 110 | 160 | 410 | 442 | 370 | 144 | 128 | 28 | 16 |
| 12..... | 44 | 88 | 120 | 135 | 400 | 394 | 324 | 138 | 120 | 52 | 40 |
| 13..... | 148 | 198 | 30 | 125 | 688 | 370 | 312 | 134 | 60 | 54 | 43 |
| 14..... | 100 | 140 | 130 | 115 | 1,060 | 358 | 283 | 138 | 13 | 54 | 33 |
| 15..... | 92 | 80 | 120 | 110 | 1,550 | 336 | 490 | 66 | 127 | 58 | 14 |
| 16..... | 56 | 35 | 120 | 80 | 2,110 | 370 | 598 | 27 | 119 | 58 | 16 |
| 17..... | 90 | 118 | 120 | 50 | 2,210 | 724 | 586 | 136 | 130 | 41 | 38 |
| 18..... | 32 | 196 | 130 | 130 | 1,920 | 910 | 478 | 116 | 131 | 11 | 47 |
| 19..... | 146 | 210 | 220 | 105 | 1,530 | 810 | 430 | 126 | 132 | 45 | 19 |
| 20..... | 113 | 238 | 310 | 110 | 1,310 | 660 | 478 | 116 | 60 | 54 | 44 |
| 21..... | 76 | 176 | 210 | 110 | 1,030 | 760 | 442 | 128 | 8.5 | 50 | 24 |
| 22..... | 78 | 105 | 150 | 120 | 1,080 | 860 | 409 | 62 | 124 | 46 | 10 |
| 23..... | 160 | 44 | 140 | 80 | 1,730 | 710 | 360 | 15 | 110 | 49 | 14 |
| 24..... | 102 | 176 | 120 | 30 | 1,700 | 562 | 812 | 130 | 44 | 52 | 33 |
| 25..... | 26 | 46 | 115 | 70 | 1,280 | 478 | 298 | 131 | 85 | 7.2 | 34 |
| 26..... | 114 | 186 | 80 | 100 | 1,000 | 514 | 514 | 136 | 46 | 5.6 | 30 |
| 27..... | 72 | 210 | 90 | 120 | 860 | 490 | 262 | 130 | 32 | 16 | 31 |
| 28..... | 116 | 302 | 130 | 120 | 735 | 430 | 242 | 135 | 10 | 49 | 27 |
| 29..... | 27 | 322 | 115 | ----- | 635 | 526 | 216 | 63 | 37 | 10 | 8.5 |
| 30..... | 158 | 225 | 110 | ----- | 574 | 538 | 148 | 22 | 52 | 7.2 | 6.8 |
| 31..... | ----- | 245 | 115 | ----- | 550 | ----- | 218 | ----- | 52 | 6.8 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|--------------------|---------|---------|------|-----------------|-------------------|
| November 9-30..... | 161 | 23 | 91.7 | 0.584 | 0.48 |
| December..... | 322 | 26 | 145 | .924 | 1.07 |
| January..... | 600 | 30 | 168 | 1.07 | 1.23 |
| February..... | 160 | 30 | 107 | .632 | .71 |
| March..... | 2,210 | 35 | 894 | 5.69 | 6.56 |
| April..... | 910 | 336 | 571 | 3.64 | 4.06 |
| May..... | 940 | 148 | 463 | 2.95 | 3.40 |
| June..... | 197 | 15 | 114 | .726 | .81 |
| July..... | 148 | 8.5 | 85.0 | .541 | .62 |
| August..... | 86 | 5.6 | 40.1 | .255 | .29 |
| September..... | 47 | 4.4 | 21.4 | .136 | .15 |

SOUHEGAN RIVER AT MERRIMACK, N. H.

LOCATION.—Water-stage recorder at head of Atherton Falls, Merrimack, Hillsborough County, and 1½ miles above confluence with Merrimack River.

DRAINAGE AREA.—168 square miles.

RECORDS AVAILABLE.—July, 1909, to September, 1929.

EXTREMES.—Maximum discharge during year, 2,460 second-feet Apr. 22 (gage height, 6.51 feet); minimum, 19 second-feet Sept. 30 (gage height, 1.98 feet).

1909-1929: Maximum discharge, 10,400 second-feet Apr. 8, 1924 (gage height, 11.82 feet); minimum, 13 second-feet Sept. 9, 1923 (gage height, 1.88 feet).

REMARKS.—Records good except those for estimated periods, which may be poor.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|------|------|-----|------|-------|-------|-------|------|------|------|-------|
| 1..... | 118 | 110 | 128 | 150 | 160 | 168 | 900 | 665 | 182 | 128 | 32 | 23 |
| 2..... | 128 | 110 | 175 | 201 | 160 | 168 | 1,100 | 560 | 112 | 120 | 28 | 23 |
| 3..... | 138 | 110 | 190 | 178 | 145 | 174 | 900 | 1,220 | 120 | 106 | 25 | 21 |
| 4..... | 120 | 104 | 198 | 236 | 152 | 189 | 780 | 1,440 | 130 | 80 | 29 | 21 |
| 5..... | 108 | 110 | 201 | 185 | 125 | 210 | 820 | 890 | 140 | 80 | 32 | 20 |
| 6..... | 108 | 125 | 195 | 802 | 140 | 252 | 880 | 890 | 130 | 88 | 32 | 21 |
| 7..... | 108 | 114 | 172 | 402 | 156 | 360 | 800 | 1,010 | 128 | 72 | 32 | 29 |
| 8..... | 96 | 114 | 225 | 299 | 186 | 625 | 880 | 960 | 128 | 62 | 30 | 22 |
| 9..... | 120 | 125 | 125 | 213 | 210 | 495 | 890 | 720 | 104 | 74 | 30 | 22 |
| 10..... | 140 | 148 | 116 | 201 | 231 | 450 | 750 | 595 | 106 | 66 | 32 | 22 |
| 11..... | 153 | 110 | 112 | 152 | 249 | 390 | 550 | 506 | 114 | 54 | 34 | 22 |
| 12..... | 130 | 104 | 115 | 155 | 264 | 336 | 488 | 442 | 104 | 52 | 36 | 39 |
| 13..... | 108 | 114 | 122 | 180 | 270 | 360 | 540 | 434 | 94 | 46 | 37 | 34 |
| 14..... | 98 | 110 | 114 | 270 | 246 | 420 | 470 | 384 | 94 | 49 | 36 | 30 |
| 15..... | 92 | 100 | 112 | 360 | 228 | 630 | 456 | 434 | 94 | 37 | 34 | 33 |
| 16..... | 106 | 100 | 100 | 295 | 210 | 1,050 | 515 | 492 | 92 | 40 | 31 | 26 |
| 17..... | 104 | 100 | 108 | 240 | 201 | 1,440 | 890 | 545 | 84 | 44 | 29 | 21 |
| 18..... | 104 | 82 | 175 | 250 | 216 | 1,500 | 1,190 | 420 | 90 | 36 | 28 | 22 |
| 19..... | 112 | 102 | 242 | 330 | 239 | 1,410 | 1,070 | 363 | 90 | 44 | 26 | 22 |
| 20..... | 116 | 155 | 175 | 445 | 210 | 1,350 | 1,070 | 692 | 88 | 34 | 25 | 21 |
| 21..... | 150 | 170 | 185 | 400 | 180 | 1,240 | 1,550 | 565 | 132 | 29 | 25 | 21 |
| 22..... | 110 | 140 | 162 | 303 | 162 | 1,440 | 2,020 | 610 | 128 | 27 | 24 | 21 |
| 23..... | 116 | 138 | 96 | 274 | 150 | 1,680 | 1,220 | 470 | 108 | 29 | 25 | 22 |
| 24..... | 128 | 130 | 90 | 228 | 135 | 2,220 | 1,040 | 384 | 114 | 33 | 22 | 25 |
| 25..... | 155 | 104 | 92 | 192 | 132 | 1,980 | 950 | 363 | 281 | 25 | 22 | 33 |
| 26..... | 135 | 96 | 155 | 182 | 144 | 1,650 | 1,130 | 327 | 242 | 27 | 22 | 25 |
| 27..... | 120 | 108 | 100 | 160 | 168 | 1,410 | 1,010 | 315 | 216 | 30 | 20 | 20 |
| 28..... | 98 | 98 | 128 | 155 | 180 | 1,200 | 720 | 281 | 155 | 25 | 24 | 20 |
| 29..... | 106 | 96 | 118 | 155 | 180 | 1,080 | 1,010 | 228 | 158 | 24 | 33 | 20 |
| 30..... | 130 | 88 | 110 | 155 | 180 | 960 | 890 | 198 | 170 | 32 | 22 | 20 |
| 31..... | 120 | 106 | 155 | 155 | 180 | 900 | 210 | 210 | 32 | 28 | 23 | 20 |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 155 | 92 | 119 | 0.708 | 6.82 |
| November..... | 170 | 82 | 114 | .679 | .76 |
| December..... | 242 | 90 | 143 | .851 | .98 |
| January..... | 802 | 150 | 255 | 1.52 | 1.75 |
| February..... | 270 | 125 | 187 | 1.11 | 1.16 |
| March..... | 2,220 | 168 | 892 | 5.31 | 6.12 |
| April..... | 2,020 | 456 | 916 | 5.45 | 6.08 |
| May..... | 1,440 | 198 | 569 | 3.39 | 3.91 |
| June..... | 281 | 84 | 131 | .780 | .87 |
| July..... | 128 | 24 | 52.4 | .312 | .36 |
| August..... | 37 | 20 | 28.3 | .168 | .19 |
| September..... | 39 | 20 | 24.0 | .143 | .16 |
| The year..... | 2,220 | 20 | 287 | 1.71 | 23.16 |

° Estimated.

° Stage-discharge relation affected by ice.

SOUTH BRANCH OF NASHUA RIVER AT CLINTON, MASS.

LOCATION.—At Wachusett Dam, 1 mile south of Clinton, Worcester County.

DRAINAGE AREA.—108.84 square miles since 1914.

RECORDS AVAILABLE.—July, 1896, to September, 1929.

REMARKS.—Flow regulated by storage in Wachusett Reservoir and other ponds. Discharge corrected for storage. Record furnished by water division of the Metropolitan District Commission.

Monthly discharge and rainfall, 1928-29

| Month | Run-off in million of gallons | Discharge per square mile | | Run-off in inches | Rainfall in inches |
|----------------|-------------------------------|----------------------------|-------------|-------------------|--------------------|
| | | Million of gallons per day | Second-feet | | |
| October..... | 1,342.2 | 0.398 | 0.616 | 0.710 | 1.99 |
| November..... | 1,469.2 | .450 | .696 | .776 | 2.40 |
| December..... | 2,267.0 | .672 | 1.040 | 1.199 | 2.08 |
| January..... | 4,047.3 | 1.200 | 1.856 | 2.140 | 4.80 |
| February..... | 4,369.1 | 1.434 | 2.218 | 2.310 | 4.28 |
| March..... | 9,290.5 | 2.754 | 4.260 | 4.912 | 3.40 |
| April..... | 9,368.2 | 2.873 | 4.445 | 4.953 | 5.83 |
| May..... | 7,285.2 | 2.159 | 3.341 | 3.851 | 4.62 |
| June..... | 1,929.9 | .591 | .914 | 1.020 | 3.09 |
| July..... | 500.7 | .148 | .230 | .265 | .85 |
| August..... | 237.5 | .070 | .109 | .125 | 1.50 |
| September..... | 513.8 | .157 | .243 | .272 | 2.00 |
| The year..... | 42,620.6 | 1.073 | 1.660 | 22.533 | 36.84 |

SUDBURY RIVER AT FRAMINGHAM CENTER, MASS.

LOCATION.—At Framingham Reservoir No. 1 dam half a mile above outlet of Farm Pond, three-fourths mile southwest of Framingham Center, Middlesex County.

DRAINAGE AREA.—75.2 square miles since 1881.

RECORDS AVAILABLE.—January, 1875, to September, 1929.

REMARKS.—Discharge corrected for storage and diversions. Municipal water supplies of surrounding towns are diverted from reservoirs above. Wachusett Reservoir on South Branch of Nashua is diverted into Sudbury Reservoir. Records furnished by water division of the Metropolitan District Commission.

Monthly discharge and rainfall, 1928-29

| Month | Run-off in million of gallons | Discharge per square mile | | Run-off in inches | Rainfall in inches |
|----------------|-------------------------------|----------------------------|-------------|-------------------|--------------------|
| | | Million of gallons per day | Second-feet | | |
| October..... | 1,229.3 | 0.526 | 0.814 | 0.938 | 3.52 |
| November..... | 1,329.9 | .589 | .912 | 1.018 | 2.16 |
| December..... | 1,959.6 | .841 | 1.301 | 1.500 | 2.68 |
| January..... | 3,069.5 | 1.317 | 2.037 | 2.349 | 3.99 |
| February..... | 3,180.9 | 1.511 | 2.337 | 2.434 | 3.84 |
| March..... | 6,209.6 | 2.664 | 4.121 | 4.751 | 3.14 |
| April..... | 6,626.6 | 2.941 | 4.551 | 5.070 | 7.30 |
| May..... | 4,180.6 | 1.793 | 2.775 | 3.199 | 3.65 |
| June..... | 514.6 | .228 | .353 | .394 | 1.65 |
| July..... | —258.6 | — .111 | — .172 | — .198 | .90 |
| August..... | —136.6 | — .059 | — .091 | — .105 | 2.14 |
| September..... | —56.4 | — .025 | — .039 | — .043 | 2.11 |
| The year..... | 27,849.0 | 1.015 | 1.570 | 21.307 | 37.08 |

LAKE COCHITUATE AT COCHITUATE, MASS.

LOCATION.—At outlet three-eighths of a mile north of Cochituate railroad station, Middlesex County, and $1\frac{1}{4}$ miles above confluence with Sudbury River.

DRAINAGE AREA.—17.58 square miles since 1911.

RECORDS AVAILABLE.—January, 1863, to September, 1929.

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

Monthly discharge and rainfall, 1928-29

| Month | Run-off in million of gallons | Discharge per square mile | | Run-off in inches | Rainfall in inches |
|----------------|-------------------------------------|----------------------------------|-------------|----------------------|-----------------------|
| | | Million of gallons per day | Second-feet | | |
| October..... | 331.4 | 0.608 | 0.941 | 1.08 | 3.31 |
| November..... | 298.3 | .566 | .875 | .98 | 2.17 |
| December..... | 482.2 | .885 | 1.369 | 1.58 | 2.71 |
| January..... | 712.0 | 1.306 | 2.021 | 2.33 | 4.00 |
| February..... | 663.0 | 1.347 | 2.084 | 2.17 | 3.59 |
| March..... | 1,416.4 | 2.599 | 4.021 | 4.64 | 3.17 |
| April..... | 1,483.6 | 2.817 | 4.358 | 4.86 | 7.40 |
| May..... | 1,485.2 | 1.496 | 2.314 | 2.67 | 3.36 |
| June..... | 126.7 | .240 | .372 | .41 | 1.86 |
| July..... | —9.8 | — .018 | — .028 | — .03 | .93 |
| August..... | —17.1 | — .031 | — .049 | — .06 | 1.93 |
| September..... | —10.8 | — .020 | — .032 | — .04 | 1.21 |
| The year..... | 6,291.1 | .981 | 1.518 | 20.59 | 35.64 |

TAUNTON RIVER BASIN

WADING RIVER NEAR NORTON, MASS.

LOCATION.—Staff gage at bridge on highway No. 140, three-fourths mile above confluence with Rumford River making Threemile River and 1½ miles southeast of Norton, Bristol County.

DRAINAGE AREA.—42.4 square miles.

RECORDS AVAILABLE.—June, 1925, to September, 1929.

EXTREMES.—Maximum discharge during year, 480 second-feet Mar. 7 (gage height, 7.40 feet); minimum, 2.6 second-feet Sept. 30 (gage height, 4.00 feet).
1925-1929: Maximum discharge, that of Mar. 7, 1929; minimum, 0.3 second-foot Sept. 10, 1926.

REMARKS.—Record good. Some diurnal regulation from power plants and week-end storage.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1 | 15 | 21 | 34 | 33 | 96 | 96 | 127 | 223 | 64 | 15 | 7.2 | 6.1 |
| 2 | 12 | 32 | 33 | 80 | 62 | 90 | 114 | 196 | 55 | 12 | 7.5 | 5.0 |
| 3 | 12 | 34 | 50 | 64 | 60 | 96 | 114 | 214 | 96 | 18 | 6.4 | 5.0 |
| 4 | 12 | 43 | 74 | 74 | 74 | 148 | 108 | 214 | 85 | 15 | 5.2 | 4.7 |
| 5 | 12 | 63 | 39 | 39 | 50 | 180 | 96 | 180 | 90 | 17 | 5.8 | 6.9 |
| 6 | 13 | 36 | 32 | 96 | 57 | 380 | 108 | 180 | 90 | 15 | 4.7 | 6.1 |
| 7 | 9.5 | 60 | 34 | 214 | 120 | 480 | 85 | 172 | 55 | 20 | 6.1 | 5.2 |
| 8 | 9.1 | 40 | 30 | 172 | 214 | 250 | 102 | 172 | 27 | 12 | 4.7 | 6.9 |
| 9 | 9.8 | 51 | 32 | 156 | 164 | 250 | 85 | 156 | 30 | 22 | 6.9 | 7.8 |
| 10 | 8.8 | 30 | 42 | 148 | 172 | 205 | 80 | 134 | 21 | 28 | 6.1 | 8.2 |
| 11 | 8.2 | 17 | 64 | 134 | 164 | 188 | 120 | 114 | 21 | 62 | 6.4 | 7.8 |
| 12 | 7.5 | 24 | 36 | 102 | 127 | 141 | 102 | 96 | 21 | 30 | 6.4 | 6.4 |
| 13 | 8.2 | 21 | 46 | 96 | 120 | 164 | 156 | 134 | 24 | 25 | 7.2 | 6.4 |
| 14 | 7.5 | 30 | 54 | 108 | 120 | 188 | 134 | 108 | 27 | 17 | 8.2 | 7.5 |
| 15 | 8.2 | 45 | 32 | 114 | 102 | 250 | 134 | 120 | 28 | 12 | 7.2 | 6.9 |
| 16 | 9.1 | 32 | 31 | 120 | 74 | 250 | 164 | 114 | 23 | 35 | 6.9 | 6.9 |
| 17 | 8.8 | 24 | 25 | 108 | 64 | 232 | 430 | 96 | 14 | 55 | 6.9 | 8.2 |
| 18 | 8.2 | 16 | 90 | 120 | 85 | 205 | 314 | 80 | 25 | 40 | 5.0 | 8.2 |
| 19 | 13 | 25 | 80 | 141 | 96 | 156 | 164 | 85 | 25 | 9.1 | 5.2 | 7.8 |
| 20 | 56 | 22 | 46 | 134 | 64 | 141 | 196 | 156 | 32 | 10 | 8.2 | 7.5 |
| 21 | 74 | 31 | 74 | 134 | 39 | 164 | 314 | 180 | 29 | 4.7 | 7.8 | 6.9 |
| 22 | 90 | 32 | 38 | 120 | 57 | 114 | 336 | 180 | 25 | 5.8 | 7.8 | 6.4 |
| 23 | 60 | 32 | 36 | 114 | 64 | 114 | 292 | 164 | 23 | 7.5 | 6.4 | 6.9 |
| 24 | 80 | 27 | 31 | 108 | 42 | 108 | 250 | 148 | 21 | 20 | 6.9 | 5.8 |
| 25 | 60 | 28 | 29 | 108 | 85 | 120 | 205 | 127 | 16 | 23 | 6.1 | 5.8 |
| 26 | 69 | 29 | 23 | 85 | 60 | 141 | 250 | 120 | 26 | 17 | 7.2 | 5.2 |
| 27 | 33 | 30 | 30 | 102 | 69 | 172 | 232 | 134 | 27 | 6.1 | 6.9 | 4.7 |
| 28 | 42 | 33 | 90 | 108 | 96 | 156 | 196 | 96 | 25 | 6.4 | 6.4 | 4.3 |
| 29 | 51 | 27 | 102 | 127 | ----- | 172 | 270 | 108 | 22 | 6.9 | 6.4 | 3.6 |
| 30 | 33 | 29 | 90 | 85 | ----- | 141 | 232 | 62 | 18 | 6.1 | 6.9 | 2.6 |
| 31 | 36 | ----- | 74 | 90 | ----- | 120 | ----- | 74 | ----- | 7.5 | 6.4 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 90 | 7.5 | 28.3 | 0.667 | 0.77 |
| November | 63 | 16 | 32.1 | .757 | .84 |
| December | 102 | 23 | 49.1 | 1.16 | 1.34 |
| January | 214 | 33 | 111 | 2.62 | 3.02 |
| February | 214 | 39 | 92.8 | 2.19 | 2.28 |
| March | 480 | 90 | 181 | 4.27 | 4.92 |
| April | 430 | 80 | 184 | 4.34 | 4.84 |
| May | 223 | 62 | 140 | 3.30 | 3.80 |
| June | 96 | 14 | 36.2 | .854 | .95 |
| July | 62 | 4.7 | 18.8 | .443 | .51 |
| August | 8.2 | 4.7 | 6.56 | .155 | .18 |
| September | 8.2 | 2.6 | 6.26 | .148 | .17 |
| The year | 480 | 2.6 | 73.7 | 1.74 | 23.62 |

PROVIDENCE RIVER BASIN

BLACKSTONE RIVER AT WORCESTER, MASS.

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

DRAINAGE AREA.—31.5 square miles.

RECORDS AVAILABLE.—August, 1923, to September, 1929.

EXTREMES.—Maximum discharge during year, 473 second-feet Apr. 16 (gage height, 3.86 feet); minimum, 0.8 second-foot Sept. 23 (gage height, 0.08 foot).
1923-1929: Maximum discharge, 790 second-feet Nov. 4, 1927 (gage height, 4.95 feet); minimum, 0.3 second-foot Nov. 12 and 13, 1926.

REMARKS.—Records good. Discharge estimated June 5, July 5, Sept. 29 and 30. Diversions from about 7.0 square miles of drainage area above station. Flow regulated by storage reservoirs.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | 28 | 16 | 35 | 22 | 17 | 52 | 37 | 100 | 40 | 22 | 16 | 12 |
| 2..... | 29 | 14 | 24 | 30 | 17 | 34 | 59 | 92 | 38 | 11 | 13 | 9.4 |
| 3..... | 22 | 16 | 30 | 29 | 17 | 27 | 51 | 196 | 41 | 15 | 7.3 | 6.9 |
| 4..... | 17 | 18 | 20 | 20 | 17 | 40 | 43 | 235 | 43 | 20 | 2.2 | 6.3 |
| 5..... | 14 | 24 | 30 | 17 | 24 | 111 | 51 | 163 | 40 | 22 | 6.6 | 5.6 |
| 6..... | 9.0 | 30 | 28 | 37 | 30 | 312 | 47 | 127 | 38 | 24 | 7.6 | 5.4 |
| 7..... | 7.9 | 17 | 22 | 72 | 132 | 226 | 33 | 133 | 35 | 30 | 12 | 6.0 |
| 8..... | 14 | 29 | 27 | 55 | 235 | 97 | 48 | 134 | 31 | 8.6 | 16 | 4.1 |
| 9..... | 18 | 36 | 28 | 37 | 108 | 81 | 76 | 115 | 28 | 7.8 | 10 | 9.1 |
| 10..... | 16 | 22 | 27 | 42 | 90 | 58 | 42 | 87 | 28 | 18 | 8.9 | 18 |
| 11..... | 18 | 16 | 17 | 57 | 80 | 59 | 59 | 83 | 34 | 17 | 2.5 | 12 |
| 12..... | 19 | 14 | 10 | 44 | 59 | 55 | 75 | 77 | 31 | 18 | 13 | 7.1 |
| 13..... | 13 | 13 | 12 | 26 | 47 | 89 | 89 | 84 | 28 | 14 | 15 | 11 |
| 14..... | 11 | 14 | 16 | 26 | 46 | 140 | 127 | 75 | 24 | 7.6 | 15 | 9.4 |
| 15..... | 17 | 22 | 19 | 29 | 48 | 168 | 51 | 81 | 29 | 16 | 14 | 2.7 |
| 16..... | 12 | 20 | 15 | 30 | 39 | 166 | 115 | 77 | 24 | 13 | 12 | 12 |
| 17..... | 13 | 17 | 27 | 32 | 24 | 120 | 235 | 76 | 23 | 12 | 5.6 | 9.1 |
| 18..... | 15 | 16 | 44 | 39 | 30 | 81 | 244 | 58 | 24 | 14 | 2.1 | 7.8 |
| 19..... | 15 | 16 | 16 | 72 | 31 | 70 | 157 | 64 | 13 | 13 | 12 | 6.7 |
| 20..... | 14 | 25 | 20 | 68 | 37 | 69 | 121 | 101 | 15 | 12 | 11 | 9.4 |
| 21..... | 8.8 | 21 | 25 | 55 | 46 | 86 | 226 | 102 | 13 | 12 | 9.6 | 11 |
| 22..... | 13 | 18 | 11 | 44 | 39 | 138 | 342 | 119 | 27 | 12 | 9.1 | 6.6 |
| 23..... | 31 | 17 | 7.6 | 42 | 25 | 66 | 272 | 104 | 23 | 12 | 8.6 | 7.0 |
| 24..... | 39 | 16 | 7.8 | 42 | 22 | 31 | 183 | 83 | 26 | 13 | 5.7 | 9.4 |
| 25..... | 30 | 15 | 8.4 | 32 | 19 | 24 | 139 | 85 | 3 | 13 | 1.4 | 8.4 |
| 26..... | 20 | 14 | 9.1 | 22 | 22 | 27 | 156 | 93 | 3 | 13 | 7.8 | 9.1 |
| 27..... | 26 | 14 | 28 | 19 | 40 | 51 | 156 | 96 | 20 | 11 | 9.1 | 6.7 |
| 28..... | 18 | 13 | 44 | 17 | 89 | 34 | 145 | 70 | 14 | 9.1 | 6.1 | .9 |
| 29..... | 29 | 14 | 39 | 16 | ----- | 24 | 106 | 67 | 14 | 9.9 | 1.6 | .9 |
| 30..... | 18 | 16 | 25 | 16 | ----- | 43 | 138 | 64 | 13 | 8.6 | 3.3 | 3.2 |
| 31..... | 15 | ----- | 27 | 17 | ----- | 40 | ----- | 56 | ----- | 10 | 10 | ----- |

| Month | Observed | | | Mean, corrected for diversions |
|----------------|----------|---------|------|--------------------------------|
| | Maximum | Minimum | Mean | |
| October..... | 39 | 7.9 | 18.5 | 30.0 |
| November..... | 36 | 13 | 18.4 | 29.4 |
| December..... | 42 | 7.6 | 22.5 | 33.1 |
| January..... | 79 | 16 | 35.7 | 46.3 |
| February..... | 235 | 17 | 51.1 | 61.6 |
| March..... | 312 | 24 | 84.5 | 95.3 |
| April..... | 342 | 33 | 121 | 131 |
| May..... | 235 | 56 | 99.9 | 111 |
| June..... | 43 | 13 | 28.0 | 39.5 |
| July..... | 30 | 7.6 | 14.1 | 25.8 |
| August..... | 16 | 1.4 | 8.84 | 19.3 |
| September..... | 18 | .9 | 7.77 | 14.8 |
| The year..... | 342 | .9 | 42.4 | 53.0 |

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

RECORDS AVAILABLE.—February to September.

RECORDS AVAILABLE.—February to September, 1929.

EXTREMES.—Maximum discharge during period, 4,570 second-feet Mar. 7 (gage height, 7.05 feet); minimum, 28 second-feet Sept. 30 (gage height, 0.73 foot).

A stage of 14.0 feet occurred during flood of November, 1927 (discharge, about 22,200 second-feet).

REMARKS.—Records good. Storage at headwaters for water supply of Worcester. Woonsocket mills pipe line diverts above gage.

| Day | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|-------|-------|------|------|------|-------|
| 1 | | 834 | 848 | 1,790 | 602 | 300 | 186 | 72 |
| 2 | | 679 | 820 | 1,480 | 350 | 327 | 200 | 49 |
| 3 | | 542 | 770 | 1,520 | 539 | 311 | 177 | 126 |
| 4 | | 729 | 767 | 1,790 | 593 | 187 | 102 | 116 |
| 5 | | 1,440 | 752 | 1,700 | 552 | 201 | 225 | 118 |
| 6 | | 3,410 | 670 | 1,560 | 552 | 214 | 264 | 105 |
| 7 | | 4,160 | 492 | 1,440 | 536 | 174 | 211 | 116 |
| 8 | | 2,810 | 704 | 1,660 | 456 | 280 | 230 | 137 |
| 9 | | 1,880 | 754 | 1,480 | 245 | 350 | 213 | 536 |
| 10 | | 1,220 | 704 | 1,260 | 397 | 340 | 200 | 542 |
| 11 | | 1,260 | 780 | 1,040 | 474 | 300 | 79 | 374 |
| 12 | | 1,080 | 890 | 780 | 472 | 292 | 223 | 320 |
| 13 | | 1,080 | 980 | 1,010 | 392 | 224 | 194 | 285 |
| 14 | | 1,610 | 1,010 | 1,010 | 388 | 144 | 254 | 188 |
| 15 | | 2,690 | 1,150 | 1,010 | 264 | 251 | 279 | 166 |
| 16 | | 2,580 | 1,400 | 950 | 201 | 266 | 248 | 289 |
| 17 | | 2,160 | 4,030 | 980 | 314 | 272 | 148 | 226 |
| 18 | | 1,840 | 3,900 | 780 | 368 | 262 | 90 | 252 |
| 19 | | 1,440 | 2,750 | 679 | 840 | 246 | 216 | 178 |
| 20 | | 1,180 | 2,020 | 1,290 | 360 | 184 | 223 | 186 |
| 21 | | 1,120 | 2,580 | 1,610 | 381 | 82 | 187 | 127 |
| 22 | 654 | 1,120 | 4,030 | 1,700 | 266 | 234 | 195 | 112 |
| 23 | 496 | 1,010 | 3,770 | 1,440 | 130 | 236 | 200 | 206 |
| 24 | 330 | 1,010 | 2,750 | 1,220 | 274 | 220 | 176 | 185 |
| 25 | 517 | 1,120 | 2,260 | 1,080 | 397 | 226 | 74 | 200 |
| 26 | 654 | 1,150 | 2,180 | 1,010 | 564 | 234 | 199 | 184 |
| 27 | 729 | 1,120 | 2,060 | 1,120 | 517 | 223 | 188 | 166 |
| 28 | 834 | 1,040 | 1,790 | 1,040 | 435 | 90 | 188 | 122 |
| 29 | | 1,010 | 2,160 | 780 | 322 | 192 | 195 | 65 |
| 30 | | 834 | 2,160 | 542 | 222 | 194 | 194 | 133 |
| 31 | | 729 | | 578 | | 196 | 142 | |

| Month | Observed | | | Corrected mean ° |
|----------------|----------|---------|--------------------|------------------|
| | Maximum | Minimum | Mean | |
| March..... | 4, 160 | 542 | 1, 4 ³⁰ | 1, 480 |
| April..... | 4, 030 | 492 | 1, 730 | 1, 730 |
| May..... | 1, 790 | 542 | 1, 2 ¹⁰ | 1, 200 |
| June..... | 602 | 130 | 3 ⁴⁷ | 388 |
| July..... | 350 | 82 | 2 ¹⁴ | 216 |
| August..... | 279 | 74 | 1 ³⁰ | 173 |
| September..... | 542 | 49 | 1 ¹⁵ | 171 |

* Corrected for diversion from Nashua River Basin at Worcester but not corrected for storage nor for amount by-passed the gage in pipe line to Woonsocket mills.

THAMES RIVER BASIN

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). Zero of gage is 63.21 feet above mean sea level.

DRAINAGE AREA.—712 square miles.

RECORDS AVAILABLE.—July, 1918, to September, 1929.

EXTREMES.—Maximum discharge during year, 6,870 second-feet Mar. 7 (gage height, 12.6 feet); minimum, 49 second-feet Sept. 2 and 3 (gage height, 3.67 feet).

1918-1929: Maximum discharge, about 12,500 second-feet Nov. 5, 1927 (gage height, from floodmarks, 16.6 feet); minimum, 30 second-feet Aug. 23, 1919.

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

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1 | 365 | 717 | 816 | 774 | 1,020 | 1,650 | 1,640 | 3,470 | 1,310 | 582 | 312 | 51 |
| 2 | 498 | 620 | 654 | 1,310 | 884 | 1,480 | 1,760 | 3,070 | 680 | 708 | 143 | 50 |
| 3 | 492 | 560 | 927 | 1,250 | 529 | 1,170 | 1,650 | 3,190 | 1,110 | 598 | 240 | 222 |
| 4 | 431 | 466 | 984 | 989 | 956 | 1,830 | 1,490 | 3,630 | 1,250 | 231 | 142 | 264 |
| 5 | 434 | 890 | 874 | 700 | 938 | 2,930 | 1,510 | 3,440 | 1,040 | 480 | 354 | 288 |
| 6 | 430 | 956 | 920 | 1,640 | 888 | 5,790 | 1,510 | 3,280 | 894 | 496 | 367 | 292 |
| 7 | 279 | 753 | 721 | 4,150 | 2,050 | 6,490 | 1,450 | 3,300 | 968 | 258 | 368 | 60 |
| 8 | 466 | 744 | 651 | 2,790 | 5,000 | 4,690 | 1,660 | 3,260 | 867 | 438 | 346 | 53 |
| 9 | 473 | 752 | 371 | 2,030 | 3,800 | 3,360 | 1,680 | 2,830 | 488 | 438 | 359 | 289 |
| 10 | 492 | 632 | 612 | 2,000 | 2,790 | 2,350 | 1,630 | 2,540 | 880 | 495 | 164 | 298 |
| 11 | 417 | 388 | 842 | 2,320 | 2,670 | 2,270 | 1,680 | 2,080 | 1,010 | 562 | 88 | 301 |
| 12 | 391 | 632 | 688 | 1,930 | 2,200 | 2,040 | 1,800 | 1,880 | 864 | 492 | 418 | 304 |
| 13 | 342 | 601 | 667 | 1,480 | 1,810 | 2,090 | 1,840 | 2,200 | 780 | 228 | 372 | 257 |
| 14 | 188 | 616 | 629 | 1,440 | 1,590 | 2,760 | 1,690 | 2,090 | 684 | 151 | 360 | 81 |
| 15 | 420 | 572 | 570 | 1,400 | 1,400 | 4,230 | 1,980 | 1,940 | 524 | 424 | 378 | 51 |
| 16 | 388 | 590 | 348 | 1,240 | 1,120 | 4,280 | 2,180 | 1,840 | 258 | 436 | 202 | 276 |
| 17 | 394 | 520 | 662 | 1,180 | 750 | 3,860 | 4,090 | 1,810 | 612 | 489 | 244 | 262 |
| 18 | 396 | 292 | 1,020 | 1,450 | 1,220 | 3,350 | 4,860 | 1,520 | 793 | 429 | 129 | 276 |
| 19 | 454 | 620 | 1,230 | 2,110 | 1,330 | 2,750 | 4,080 | 1,380 | 682 | 358 | 451 | 276 |
| 20 | 783 | 755 | 1,040 | 2,450 | 1,150 | 2,370 | 3,160 | 2,400 | 676 | 230 | 440 | 243 |
| 21 | 690 | 732 | 905 | 2,200 | 1,100 | 2,180 | 3,830 | 2,790 | 651 | 182 | 340 | 128 |
| 22 | 834 | 706 | 757 | 1,860 | 1,060 | 2,020 | 5,440 | 3,040 | 498 | 392 | 312 | 52 |
| 23 | 892 | 660 | 421 | 1,630 | 956 | 1,900 | 5,340 | 2,700 | 751 | 360 | 306 | 296 |
| 24 | 1,530 | 499 | 646 | 1,520 | 617 | 1,870 | 4,370 | 2,280 | 548 | 406 | 160 | 306 |
| 25 | 1,560 | 298 | 364 | 1,370 | 1,100 | 2,120 | 3,620 | 2,100 | 690 | 372 | 51 | 289 |
| 26 | 1,170 | 615 | 683 | 1,070 | 1,190 | 2,270 | 3,820 | 2,160 | 740 | 356 | 274 | 234 |
| 27 | 794 | 648 | 779 | 698 | 1,530 | 2,430 | 3,650 | 2,200 | 788 | 167 | 278 | 146 |
| 28 | 496 | 594 | 1,200 | 1,180 | 1,870 | 2,200 | 3,050 | 1,920 | 712 | 94 | 286 | 60 |
| 29 | 860 | 321 | 1,510 | 1,170 | ----- | 1,960 | 4,130 | 1,730 | 545 | 370 | 308 | 51 |
| 30 | 806 | 565 | 958 | 924 | ----- | 1,720 | 4,250 | 1,270 | 292 | 344 | 256 | 272 |
| 31 | 742 | ----- | 914 | 1,010 | ----- | 1,530 | ----- | 1,360 | ----- | 326 | 67 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 1,560 | 188 | 610 | 0.856 | 0.99 |
| November | 956 | 292 | 610 | .856 | .96 |
| December | 1,510 | 348 | 786 | 1.10 | 1.27 |
| January | 4,150 | 698 | 1,590 | 2.23 | 2.57 |
| February | 5,000 | 529 | 1,550 | 2.18 | 2.27 |
| March | 6,490 | 1,170 | 2,710 | 3.81 | 4.39 |
| April | 5,440 | 1,450 | 2,830 | 3.97 | 4.43 |
| May | 3,630 | 1,270 | 2,410 | 3.38 | 3.90 |
| June | 1,310 | 251 | 736 | 1.03 | 1.15 |
| July | 708 | 94 | 384 | .539 | .62 |
| August | 451 | 51 | 275 | .386 | .44 |
| September | 306 | 50 | 201 | .282 | .31 |
| The year | 6,490 | 50 | 1,220 | 1.71 | 23.30 |

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.

DRAINAGE AREA.—406 square miles.

RECORDS AVAILABLE.—November, 1919, to September, 1921; September, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 6,110 second-feet Feb. 8 (gage height, 7.8 feet); minimum, about 50 second-feet during low water when mills above shut down.

1919-1921, 1928-29: Maximum discharge, 8,900 second-feet Dec. 15, 1920 (gage height, 9.0 feet); minimum, 25 second-feet Sept. 27, 1920, and Sept. 10, 1921 (gage height, 1.45 feet).

REMARKS.—Records good except those for periods of ice effect, Dec. 23-25, Jan. 14-20, 25-31, Feb. 1, 2, and 22-25, which are fair. Discharge estimated Oct. 1 and 2; partly estimated for extremely low stages. No record Sept. 19-30, 1928. Regulations from mill upstream.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Sept. | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | Jul | Aug. | Sept. |
|-----|-------|------|------|------|-------|-------|-------|-------|-------|------|-----|------|-------|
| 1 | | 250 | 282 | 502 | 406 | 500 | 977 | 916 | 1,850 | 640 | 273 | 136 | 136 |
| 2 | 701 | 275 | 293 | 614 | 700 | 500 | 772 | 1,000 | 1,560 | 477 | 220 | 240 | 140 |
| 3 | 486 | 264 | 317 | 491 | 696 | 474 | 546 | 978 | 3,100 | 446 | 287 | 196 | 136 |
| 4 | 760 | 264 | 372 | 498 | 469 | 440 | 960 | 829 | 3,670 | 446 | 142 | 136 | 170 |
| 5 | 626 | 326 | 462 | 498 | 436 | 427 | 2,160 | 960 | 2,300 | 415 | 282 | 152 | 147 |
| 6 | 482 | 320 | 376 | 499 | 1,530 | 394 | 4,670 | 1,300 | 2,230 | 385 | 144 | 165 | 146 |
| 7 | 433 | 291 | 316 | 381 | 2,350 | 2,140 | 3,440 | 1,420 | 2,510 | 390 | 146 | 176 | 150 |
| 8 | 420 | 290 | 304 | 326 | 1,740 | 4,740 | 1,970 | 1,240 | 2,370 | 416 | 270 | 168 | 103 |
| 9 | 310 | 288 | 356 | 261 | 1,380 | 2,240 | 1,510 | 1,090 | 1,750 | 276 | 218 | 170 | 180 |
| 10 | 386 | 291 | 340 | 326 | 954 | 1,660 | 1,260 | 1,030 | 1,490 | 344 | 278 | 190 | 183 |
| 11 | 328 | 299 | 292 | 322 | 1,310 | 1,380 | 1,190 | 1,260 | 1,340 | 316 | 270 | 288 | 146 |
| 12 | 309 | 280 | 315 | 304 | 1,120 | 1,120 | 1,020 | 1,460 | 1,210 | 294 | 226 | 212 | 160 |
| 13 | 346 | 234 | 308 | 296 | 857 | 906 | 1,560 | 1,680 | 1,470 | 282 | 171 | 174 | 168 |
| 14 | 394 | 229 | 311 | 305 | 856 | 658 | 2,620 | 1,440 | 1,340 | 294 | 176 | 206 | 138 |
| 15 | 308 | 268 | 294 | 286 | 800 | 618 | 3,360 | 1,360 | 1,270 | 230 | 270 | 217 | 128 |
| 16 | 222 | 238 | 294 | 236 | 750 | 548 | 2,850 | 1,350 | 1,250 | 250 | 178 | 200 | 146 |
| 17 | 297 | 242 | 289 | 352 | 700 | 497 | 2,360 | 3,540 | 1,150 | 226 | 177 | 131 | 145 |
| 18 | 286 | 277 | 231 | 631 | 850 | 548 | 1,780 | 3,440 | 989 | 228 | 177 | 98 | 152 |
| 19 | | 378 | 286 | 717 | 1,200 | 550 | 1,550 | 2,330 | 890 | 210 | 178 | 122 | 150 |
| 20 | | 592 | 326 | 520 | 1,500 | 524 | 1,360 | 1,800 | 2,080 | 210 | 165 | 150 | 130 |
| 21 | | 448 | 333 | 516 | 1,250 | 478 | 1,280 | 2,950 | 1,900 | 213 | 110 | 142 | 113 |
| 22 | | 342 | 340 | 386 | 1,010 | 480 | 1,210 | 4,200 | 2,070 | 198 | 175 | 143 | 95 |
| 23 | | 378 | 330 | 260 | 769 | 460 | 1,260 | 3,140 | 1,600 | 192 | 178 | 153 | 108 |
| 24 | | 700 | 300 | 300 | 608 | 420 | 1,230 | 2,220 | 1,290 | 194 | 177 | 169 | 123 |
| 25 | | 703 | 220 | 280 | 600 | 460 | 1,200 | 1,810 | 1,630 | 214 | 176 | 138 | 120 |
| 26 | | 452 | 286 | 271 | 550 | 534 | 1,550 | 2,120 | 1,570 | 284 | 172 | 157 | 116 |
| 27 | | 358 | 278 | 270 | 550 | 684 | 1,730 | 1,970 | 1,270 | 334 | 171 | 160 | 108 |
| 28 | | 292 | 252 | 516 | 550 | 1,160 | 1,400 | 1,610 | 1,020 | 319 | 174 | 160 | 90 |
| 29 | | 380 | 224 | 814 | 550 | | 1,260 | 2,820 | 848 | 236 | 152 | 161 | 72 |
| 30 | | 342 | 318 | 460 | 550 | | 1,080 | 2,560 | 736 | 186 | 154 | 152 | 101 |
| 31 | | 311 | | 469 | 500 | | 932 | | 708 | | 146 | 134 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 703 | 229 | 342 | 0.842 | 0.97 |
| November | 462 | 230 | 308 | .759 | .85 |
| December | 814 | 286 | 416 | 1.02 | 1.18 |
| January | 2,350 | 406 | 906 | 2.23 | 2.57 |
| February | 4,740 | 394 | 912 | 2.25 | 2.34 |
| March | 4,670 | 846 | 1,690 | 4.16 | 4.80 |
| April | 4,200 | 829 | 1,860 | 4.58 | 5.11 |
| May | 3,670 | 708 | 1,630 | 4.01 | 4.62 |
| June | 640 | 186 | 305 | .751 | .84 |
| July | 262 | 110 | 185 | .456 | .53 |
| August | 288 | 98 | 168 | .414 | .48 |
| September | 170 | 72 | 130 | .320 | .36 |
| The year | 4,740 | 72 | 737 | 1.82 | 24.65 |

CONNECTICUT RIVER BASIN

SECOND CONNECTICUT LAKE NEAR PITTSBURG, N. H.

LOCATION.—Staff gage at Second Lake outlet dam of Upper Connecticut River & Lake Improvement Co., 12 miles northeast of Pittsburg, Coos County. Zero of gage is 1,858.2 feet above mean sea level.

DRAINAGE AREA.—41.5 square miles.

RECORDS AVAILABLE.—October, 1922, to September, 1929.

EXTREMES.—Maximum contents during year, 822,000,000 cubic feet May 16 (gage height, 13.05 feet); minimum, 89,600,000 cubic feet Feb. 16 (gage height, 1.95 feet).

1922-1929: Maximum contents, 1,045,000,000 cubic feet Sept. 11, 1924 (gage height, 15.8 feet); minimum, 30,300,000 cubic feet Feb. 1 to Mar. 19, 1923 (gage height, 0.7 foot).

REMARKS.—Normal capacity of lake is 979,000,000 cubic feet at gage height, 15.0 feet.

Daily gage height, in feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|------|------|------|------|-------|-------|-------|-------|-------|
| 1 | 7.75 | 11.70 | 11.25 | | | | | | 11.20 | | 11.00 | 9.20 |
| 2 | 7.80 | 11.75 | | | 2.30 | 2.10 | | | | | | |
| 3 | 7.85 | 11.85 | | | | | | | | | 10.40 | |
| 4 | 7.90 | 12.00 | | | | | | 12.85 | | | | 8.75 |
| 5 | 7.95 | | | 3.60 | | | | | | 11.30 | | |
| 6 | 8.05 | | | 3.40 | | | 2.45 | | | 11.30 | | 7.75 |
| 7 | 8.15 | | | | | | | | | | 10.90 | 7.00 |
| 8 | 8.20 | | 10.20 | | | | | | 11.10 | | | |
| 9 | 8.05 | | | | 2.05 | 2.25 | | | | | 10.80 | |
| 10 | 7.95 | 11.10 | | | | | | 9.50 | | | 10.70 | |
| 11 | 8.00 | 10.95 | | | | | | 9.65 | | | | |
| 12 | 8.00 | | | 2.55 | | | | | | | | |
| 13 | 8.50 | | | | | | 6.10 | 11.35 | | 11.80 | 10.60 | |
| 14 | 9.15 | 11.10 | | | | | | | | | | 3.80 |
| 15 | 9.60 | | 9.65 | | | 2.15 | | | 11.70 | | 10.65 | |
| 16 | 9.80 | | | 2.40 | 1.95 | 2.15 | | 13.05 | | | | |
| 17 | 10.60 | 11.00 | | | | | | | | | 10.40 | |
| 18 | 10.90 | | | | | | | 12.60 | | | | |
| 19 | 12.45 | 11.85 | 9.60 | 2.60 | | | | | | 12.10 | 10.00 | |
| 20 | 12.75 | | | | | | 4.40 | | | 12.10 | | |
| 21 | 12.45 | | | | | | | | | | | 2.90 |
| 22 | 12.10 | | 9.80 | | | | | 11.20 | 12.35 | | 9.08 | |
| 23 | 11.65 | | 9.70 | | 2.05 | 2.45 | | | | | | |
| 24 | 11.85 | 12.65 | 9.60 | | | | | | | | 9.90 | |
| 25 | 12.35 | | | | | | | 11.05 | | | | |
| 26 | 12.65 | | | 2.90 | | | | | 12.85 | | 9.90 | |
| 27 | 12.80 | 12.00 | | | | | 4.70 | | | 11.70 | | 2.55 |
| 28 | 12.60 | | 8.15 | | | | | | | | | 2.55 |
| 29 | 12.30 | | 7.75 | | | | | | 12.15 | | 9.75 | |
| 30 | 12.00 | | | | | 2.25 | | | | | | |
| 31 | 11.75 | | 6.50 | 2.75 | | | | | | | 9.45 | |

FIRST CONNECTICUT LAKE NEAR PITTSBURG, N. H.

LOCATION.—Staff gage at First Lake outlet dam of Upper Connecticut River & Lake Improvement Co., 6 miles northeast of Pittsburg, Coos County. Zero of gage is 1,609.9 feet above mean sea level.

DRAINAGE AREA.—81.4 square miles.

RECORDS AVAILABLE.—October, 1916, to September, 1929.

EXTREMES.—Maximum contents during year, 2,822,000,000 cubic feet Oct. 24 (gage height, 25.55 feet); minimum, 269,600,000 cubic feet Mar. 14 and 15 (gage height, 2.3 feet).

1916-1929: Maximum contents, 2,916,000,000 cubic feet June 5 and 6, 1926 (gage height, 26.2 feet); minimum, 252,500,000 cubic feet Feb. 17, 1917, and May 6 and 7, 1922 (gage height, 2.1 feet).

REMARKS.—Capacity of lake, 3,026,000,000 cubic feet at gage height 27 feet.

Daily gage height, in feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | Jul. | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 23.70 | 25.45 | 22.85 | 13.50 | 13.35 | 3.95 | 4.80 | 16.85 | 22.30 | 22.20 | 15.70 | 7.60 |
| 2 | 23.70 | 25.45 | 22.55 | 13.20 | 13.10 | 3.75 | 4.95 | 17.40 | 22.15 | 22.15 | 15.10 | 7.60 |
| 3 | 23.65 | 25.25 | 22.20 | 12.85 | 12.90 | 3.55 | 5.10 | 18.50 | 22.05 | 22.05 | 14.50 | 7.50 |
| 4 | 23.65 | 25.05 | 21.90 | 12.50 | 12.65 | 3.40 | 5.25 | 20.20 | 22.05 | 21.90 | 13.85 | 7.40 |
| 5 | 23.60 | 24.95 | 21.50 | 12.05 | 12.45 | 3.20 | 5.40 | 21.20 | 22.05 | 21.95 | 13.20 | 7.50 |
| 6 | 23.60 | 24.85 | 21.20 | 11.65 | 12.20 | 3.10 | 5.60 | 22.35 | 22.05 | 21.90 | 12.60 | 7.50 |
| 7 | 23.55 | 24.65 | 20.80 | 11.70 | 11.95 | ----- | 5.80 | 23.40 | 22.05 | 21.85 | 12.00 | 7.55 |
| 8 | 23.55 | 24.55 | 20.45 | 11.80 | 11.65 | 2.90 | 6.25 | 23.65 | 21.95 | 21.85 | 12.00 | 7.70 |
| 9 | 23.55 | 23.35 | 20.05 | 11.90 | 11.30 | 2.80 | 7.20 | 23.80 | 21.90 | 21.90 | 12.00 | 7.75 |
| 10 | 23.60 | 24.20 | 19.65 | 12.00 | 10.95 | 2.70 | 8.20 | 23.70 | 21.90 | 21.90 | 11.40 | 7.90 |
| 11 | 23.10 | 23.95 | 19.25 | 12.10 | 10.65 | 2.60 | 8.90 | 23.50 | 21.90 | 21.95 | 10.70 | 7.90 |
| 12 | 22.60 | 23.70 | 18.95 | 12.20 | 10.30 | 2.50 | 9.40 | 23.45 | 21.90 | 21.95 | 10.00 | 7.85 |
| 13 | 22.15 | 23.40 | 18.45 | 12.15 | 9.90 | 2.40 | 9.90 | 23.70 | 21.95 | 21.95 | 9.35 | 7.80 |
| 14 | 21.95 | 23.00 | 18.00 | 12.15 | 9.50 | 2.30 | 10.40 | 23.80 | 21.95 | 22.05 | 9.15 | 7.75 |
| 15 | 21.65 | 22.65 | 17.65 | 12.10 | 9.10 | 2.30 | 10.80 | 23.80 | 22.10 | 22.10 | 9.10 | 7.70 |
| 16 | 21.70 | 22.30 | 17.15 | 12.10 | 8.65 | 2.75 | 11.15 | 23.80 | 22.15 | 22.05 | 9.25 | 7.60 |
| 17 | 22.00 | 22.00 | 16.70 | 12.00 | 8.20 | 2.85 | 11.50 | 23.90 | 22.15 | 22.05 | 9.15 | 7.50 |
| 18 | 22.95 | 21.85 | 16.30 | 12.10 | 7.80 | 2.90 | 11.85 | 23.95 | 22.15 | 22.00 | 9.00 | 7.40 |
| 19 | 23.55 | 21.75 | 15.90 | 12.15 | 7.35 | 3.00 | 12.10 | 23.80 | 22.15 | 22.10 | 8.95 | 7.30 |
| 20 | 24.05 | 22.20 | 15.90 | 12.30 | 6.90 | 3.15 | 12.40 | 23.80 | 22.10 | 21.90 | 8.90 | 7.10 |
| 21 | 24.60 | 22.65 | 16.05 | 12.50 | 6.45 | 3.25 | 12.60 | 23.65 | 22.10 | 21.60 | 8.90 | 6.90 |
| 22 | 25.00 | 22.90 | 16.15 | 12.65 | 6.00 | 3.45 | 12.80 | 23.50 | 22.30 | 21.35 | 8.90 | 6.75 |
| 23 | 25.30 | 23.20 | 15.95 | 12.80 | 5.60 | 3.60 | 13.00 | 23.10 | 22.30 | 20.85 | 8.75 | 6.65 |
| 24 | 25.50 | 23.45 | 15.70 | 12.95 | 5.25 | 3.75 | 13.20 | 23.00 | 22.25 | 20.25 | 8.65 | 6.50 |
| 25 | 25.30 | 23.65 | 15.30 | 13.10 | 4.95 | 3.85 | 13.50 | 23.10 | 22.25 | 19.70 | 8.55 | 6.40 |
| 26 | 25.00 | 23.85 | 15.00 | 13.20 | 4.65 | 4.05 | 13.80 | 23.10 | 22.40 | 19.15 | 8.50 | 6.30 |
| 27 | 24.70 | 24.05 | 14.70 | 13.30 | 4.40 | 4.20 | 14.25 | 23.05 | 22.40 | 18.65 | 8.35 | 6.20 |
| 28 | 24.80 | 23.75 | 14.45 | 13.35 | 4.15 | 4.35 | 14.80 | 22.80 | 22.35 | 17.95 | 8.20 | 6.00 |
| 29 | 25.00 | 23.45 | 14.20 | 13.40 | ----- | 4.45 | 15.45 | 22.55 | 22.25 | 17.35 | 8.00 | 5.85 |
| 30 | 25.20 | 23.15 | 14.00 | 13.40 | ----- | 4.55 | 16.40 | 22.50 | 22.20 | 16.80 | 7.85 | 5.70 |
| 31 | 25.35 | ----- | 13.80 | 13.45 | ----- | 4.70 | ----- | 22.45 | ----- | 16.20 | 7.70 | ----- |

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

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

DRAINAGE AREA.—81.4 square miles.

RECORDS AVAILABLE.—April, 1917, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,340 second-feet May 9 (gage height, 3.71 feet); minimum, 2.8 second-feet Mar. 16 (gage height, 1.40 feet).

1917-1929: Maximum discharge, 1,580 second-feet Feb. 2, 1928; minimum, that of Mar. 16, 1929.

REMARKS.—Records good except those for periods of ice effect, which are fair. 4,100,000,000 cubic feet of storage developed above station.

Daily and monthly discharge, in second-feet, 1927-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 75 | 77 | 805 | 805 | 379 | 278 | 4.8 | 31 | 438 | 505 | 865 | 288 |
| 2..... | 75 | 283 | 795 | 775 | 400 | 258 | * 4.8 | 36 | 387 | 505 | 855 | 119 |
| 3..... | 75 | 528 | 766 | 805 | 406 | 244 | 4.8 | 44 | 244 | 498 | 815 | 294 |
| 4..... | 75 | 528 | 775 | 795 | 406 | 229 | 4.8 | 47 | 239 | 354 | 855 | 201 |
| 5..... | 75 | 535 | 795 | 795 | 406 | 220 | 5.2 | 55 | 239 | 294 | 825 | 202 |
| 6..... | 70 | 542 | 785 | 448 | 452 | 203 | 5.2 | 59 | 234 | 220 | 805 | 267 |
| 7..... | 70 | 550 | 775 | * 18 | 512 | 191 | 6.3 | 785 | 234 | 97 | 322 | 294 |
| 8..... | 70 | 565 | 775 | * 18 | 505 | 178 | * 6.8 | 1,320 | 160 | 53 | 80 | 299 |
| 9..... | 70 | 558 | 805 | * 18 | 517 | 159 | * 8.7 | 1,330 | 75 | 53 | 431 | 299 |
| 10..... | 778 | 550 | 805 | * 18 | 528 | 148 | 9.4 | 1,110 | 51 | 53 | 835 | 299 |
| 11..... | | | | | | | | | | | | |
| 12..... | 1,060 | 542 | 805 | * 62 | 528 | 134 | 9.4 | 568 | 51 | 53 | 855 | 299 |
| 13..... | 1,060 | 542 | 795 | 140 | 550 | 127 | 10 | 388 | 49 | 53 | 855 | 294 |
| 14..... | 889 | 686 | 795 | 138 | 588 | 124 | 12 | 417 | 49 | 55 | 688 | 288 |
| 15..... | 512 | 805 | 775 | 127 | 580 | 118 | 12 | 573 | 47 | 61 | 95 | 278 |
| 16..... | 245 | 795 | 805 | 127 | 572 | 55 | 13 | 690 | 49 | 92 | 155 | 283 |
| 17..... | | | | | | | | | | | | |
| 18..... | 59 | 805 | 795 | 181 | 580 | 3.5 | 14 | 845 | 72 | 111 | 290 | 288 |
| 19..... | 61 | 805 | 805 | 127 | 580 | * 3.1 | 14 | 957 | 90 | 111 | 338 | 294 |
| 20..... | 66 | 805 | 795 | 127 | 580 | * 3.1 | 15 | 1,070 | 90 | 77 | 268 | 294 |
| 21..... | 64 | 408 | 513 | 62 | 588 | * 3.5 | 16 | 1,060 | 90 | 317 | 173 | 288 |
| 22..... | 66 | 61 | 26 | * 17 | 580 | * 3.5 | 17 | 1,060 | 90 | 505 | 77 | 278 |
| 23..... | | | | | | | | | | | | |
| 24..... | 68 | 61 | 26 | * 18 | 572 | 3.5 | 18 | 1,050 | 90 | 408 | 53 | 272 |
| 25..... | 155 | 61 | 226 | 19 | 558 | 3.5 | 18 | 1,050 | 146 | 684 | 133 | 267 |
| 26..... | 197 | 61 | 731 | 18 | 485 | 3.5 | 19 | 750 | 195 | 845 | 288 | 229 |
| 27..... | 466 | * 64 | 531 | 18 | 426 | 3.9 | 20 | 394 | 191 | 835 | 206 | 203 |
| 28..... | 699 | 64 | 805 | 18 | 393 | 3.9 | 20 | 309 | 191 | 835 | 134 | 199 |
| 29..... | | | | | | | | | | | | |
| 30..... | 680 | 64 | 815 | 18 | 356 | 3.9 | 21 | 315 | 328 | 845 | 186 | 191 |
| 31..... | 511 | 427 | 805 | 17 | 326 | 3.5 | 21 | 493 | 512 | 845 | 244 | 191 |
| 1..... | 77 | 815 | 805 | 76 | 299 | * 3.9 | 27 | 612 | 505 | 845 | 239 | 186 |
| 2..... | 77 | 805 | 795 | * 111 | ----- | 3.9 | 27 | 444 | 498 | 855 | 272 | 182 |
| 3..... | 77 | 815 | 815 | 111 | ----- | * 4.3 | 30 | 267 | 505 | 845 | 288 | 178 |
| 4..... | 77 | ----- | 825 | 181 | ----- | 4.8 | ----- | 384 | ----- | 855 | 288 | ----- |

| Month | Observed discharge in second-feet | | | Gain or loss in storage (millions of cubic feet) | Discharge in second-feet corrected for storage | | Run-off in inches |
|----------------|-----------------------------------|---------|------|--|--|-----------------|-------------------|
| | Maximum | Minimum | Mean | | Mean | Per square mile | |
| October..... | 1,060 | 59 | 277 | +509.2 | 467 | 5.74 | 6.62 |
| November..... | 815 | 61 | 474 | -308.8 | 354 | 4.35 | 4.85 |
| December..... | 825 | 26 | 709 | -1,468.8 | 160 | 1.97 | 2.27 |
| January..... | 805 | 17 | 200 | -251.7 | 106 | 1.30 | 1.50 |
| February..... | 588 | 299 | 488 | -963.8 | 89.2 | 1.10 | 1.14 |
| March..... | 278 | 3.1 | 87.9 | +56.8 | 109 | 1.34 | 1.54 |
| April..... | 30 | 4.8 | 13.8 | +1,499.2 | 592 | 7.27 | 8.11 |
| May..... | 1,330 | 31 | 597 | +1,020.1 | 978 | 12.00 | 13.83 |
| June..... | 512 | 47 | 205 | +30.0 | 216 | 2.65 | 2.96 |
| July..... | 855 | 53 | 412 | -791.2 | 116 | 1.43 | 1.65 |
| August..... | 865 | 53 | 413 | -1,033.4 | 27.5 | .338 | .39 |
| September..... | 299 | 119 | 251 | -616.0 | 13.8 | .170 | .19 |
| The year..... | 1,330 | 3.1 | 344 | -2,318.4 | 270 | 3.32 | 45.05 |

* Stage-discharge relation affected by ice.

CONNECTICUT RIVER AT WATERFORD, VT.

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

DRAINAGE AREA.—1,600 square miles.

RECORDS AVAILABLE.—March, 1927, to September, 1929.

EXTREMES.—Maximum discharge during year, 27,900 second-feet Apr. 10 (gage height, 664.10 feet); minimum, 450 second-feet Sept. 2 (gage height, 654.59 feet).

1927-1929: Maximum discharge, 43,800 second-feet Apr. 9, 1928 (gage height, 667.45 feet); minimum, 231 second-feet Aug. 8, 1927 (gage height, 654.18 feet).

REMARKS.—Records good except those for periods of ice effect (Jan. 2-6, 11-17, Jan. 26 to Mar. 5, and Mar. 9-12) and those for estimated periods (Oct. 7, 28, Nov. 4, 11, Dec. 9, and 16), which are fair. Slight diurnal regulation. 4,100,000 cubic feet of storage developed above station. Gage-height record furnished by New England Power Construction Co.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|--------|--------|-------|-------|-------|-------|--------|--------|-------|-------|-------|-------|
| 1..... | 1,760 | 2,170 | 2,460 | 1,760 | 1,390 | 850 | 5,320 | 18,100 | 2,460 | 3,650 | 1,390 | 690 |
| 2..... | 1,630 | 2,170 | 2,310 | 1,760 | 1,280 | 810 | 5,560 | 12,900 | 2,170 | 4,870 | 1,340 | 480 |
| 3..... | 1,390 | 2,030 | 2,460 | 1,630 | 1,280 | 935 | 5,090 | 14,500 | 2,170 | 3,650 | 1,280 | 730 |
| 4..... | 1,280 | 2,960 | 2,610 | 1,510 | 1,280 | 980 | 4,440 | 22,300 | 2,170 | 2,940 | 1,280 | 890 |
| 5..... | 1,180 | 3,470 | 2,770 | 1,510 | 1,280 | 980 | 4,870 | 25,300 | 2,030 | 2,610 | 1,450 | 650 |
| 6..... | 1,180 | 3,470 | 2,610 | 1,510 | 1,280 | 1,280 | 9,780 | 21,000 | 2,170 | 2,310 | 1,760 | 935 |
| 7..... | 1,200 | 2,940 | 2,310 | 2,460 | 1,280 | 1,340 | 12,200 | 17,300 | 2,170 | 1,760 | 1,760 | 810 |
| 8..... | 1,180 | 2,940 | 1,890 | 2,770 | 1,340 | 1,340 | 14,500 | 15,700 | 2,170 | 1,890 | 1,630 | 730 |
| 9..... | 1,080 | 2,610 | 1,840 | 2,170 | 1,340 | 1,180 | 20,200 | 13,300 | 1,890 | 1,630 | 1,230 | 730 |
| 10..... | 1,130 | 2,460 | 1,890 | 1,760 | 1,390 | 980 | 26,600 | 10,800 | 1,630 | 1,390 | 1,180 | 890 |
| 11..... | 1,180 | 2,280 | 1,760 | 1,510 | 1,230 | 890 | 25,300 | 8,550 | 1,510 | 1,230 | 1,280 | 850 |
| 12..... | 1,510 | 2,310 | 1,890 | 1,340 | 1,280 | 810 | 18,100 | 6,300 | 1,340 | 1,080 | 1,630 | 2,030 |
| 13..... | 2,310 | 2,030 | 2,170 | 1,230 | 1,280 | 1,080 | 10,400 | 7,100 | 1,340 | 1,030 | 1,890 | 1,510 |
| 14..... | 4,870 | 1,890 | 2,170 | 980 | 1,180 | 1,510 | 6,300 | 6,830 | 1,180 | 1,030 | 1,630 | 1,130 |
| 15..... | 5,320 | 2,030 | 2,030 | 1,080 | 1,230 | 2,610 | 5,800 | 7,100 | 1,760 | 1,180 | 2,030 | 1,390 |
| 16..... | 3,290 | 2,170 | 1,900 | 1,080 | 1,280 | 4,040 | 5,560 | 8,850 | 2,940 | 1,510 | 1,760 | 1,890 |
| 17..... | 2,310 | 2,460 | 2,030 | 1,080 | 1,230 | 4,870 | 4,870 | 9,470 | 2,610 | 1,230 | 2,030 | 1,890 |
| 18..... | 3,470 | 2,770 | 2,460 | 2,610 | 1,230 | 4,650 | 5,800 | 7,950 | 1,760 | 1,080 | 1,510 | 1,510 |
| 19..... | 7,660 | 6,050 | 5,800 | 2,310 | 1,340 | 4,240 | 6,830 | 7,100 | 1,390 | 980 | 1,230 | 1,890 |
| 20..... | 10,800 | 9,160 | 5,560 | 4,870 | 1,340 | 4,440 | 5,560 | 8,550 | 1,450 | 1,030 | 1,180 | 1,630 |
| 21..... | 9,780 | 11,100 | 4,040 | 4,870 | 1,280 | 4,650 | 5,320 | 8,850 | 1,760 | 1,510 | 850 | 1,280 |
| 22..... | 6,830 | 9,160 | 2,610 | 4,040 | 1,230 | 5,560 | 5,560 | 7,380 | 2,030 | 1,280 | 730 | 935 |
| 23..... | 4,240 | 5,560 | 1,760 | 3,290 | 1,230 | 7,380 | 5,090 | 5,800 | 2,460 | 1,390 | 730 | 810 |
| 24..... | 4,240 | 4,040 | 1,280 | 2,610 | 1,230 | 7,950 | 5,320 | 4,870 | 2,170 | 1,390 | 730 | 1,080 |
| 25..... | 6,300 | 3,470 | 1,760 | 2,170 | 1,180 | 7,380 | 5,320 | 4,650 | 2,170 | 1,510 | 810 | 1,030 |
| 26..... | 6,300 | 2,940 | 2,170 | 2,030 | 1,130 | 6,830 | 9,160 | 4,240 | 2,170 | 1,450 | 1,030 | 850 |
| 27..... | 4,870 | 1,890 | 2,170 | 1,760 | 1,030 | 6,300 | 14,100 | 3,840 | 4,040 | 1,450 | 935 | 890 |
| 28..... | 3,710 | 1,760 | 2,310 | 1,630 | 1,130 | 5,800 | 16,100 | 3,470 | 3,290 | 1,340 | 730 | 730 |
| 29..... | 3,290 | 2,170 | 2,310 | 1,510 | ----- | 4,870 | 15,300 | 3,110 | 2,610 | 1,390 | 770 | 850 |
| 30..... | 2,940 | 2,610 | 2,310 | 1,390 | ----- | 4,040 | 18,900 | 2,610 | 2,460 | 1,510 | 770 | 545 |
| 31..... | 2,460 | ----- | 1,890 | 1,510 | ----- | 3,840 | ----- | 2,610 | ----- | 1,390 | 730 | ----- |

| Month | Observed discharge in second-feet | | | Gain or loss in storage (millions of cubic feet) | Discharge in second-feet corrected for storage | | Run-off in inches |
|----------------|-----------------------------------|---------|--------|--|--|-----------------|-------------------|
| | Maximum | Minimum | Mean | | Mean | Per square mile | |
| October..... | 10,800 | 1,080 | 3,570 | +509.2 | 3,760 | 2.35 | 2.71 |
| November..... | 11,100 | 1,760 | 3,500 | -308.8 | 3,380 | 2.11 | 2.35 |
| December..... | 5,800 | 1,280 | 2,440 | -1,468.8 | 1,890 | 1.18 | 1.36 |
| January..... | 4,870 | 980 | 2,060 | -251.7 | 1,960 | 1.22 | 1.41 |
| February..... | 1,390 | 1,030 | 1,260 | -963.8 | 859 | .537 | .56 |
| March..... | 7,950 | 810 | 3,370 | +56.8 | 3,390 | 2.12 | 2.44 |
| April..... | 26,600 | 4,440 | 10,100 | +1,499.2 | 10,700 | 6.66 | 7.46 |
| May..... | 25,300 | 2,610 | 9,690 | +1,020.1 | 10,100 | 6.31 | 7.28 |
| June..... | 4,040 | 1,180 | 2,120 | +30.0 | 2,130 | 1.32 | 1.48 |
| July..... | 4,870 | 980 | 1,730 | -791.2 | 1,440 | .90 | 1.04 |
| August..... | 2,030 | 730 | 1,270 | -1,033.4 | 881 | .551 | .64 |
| September..... | 2,030 | 480 | 1,080 | -616.0 | 838 | .524 | .58 |
| The year..... | 26,600 | 480 | 3,530 | -2,318.4 | 3,450 | 2.1f | 29.31 |

CONNECTICUT RIVER AT SOUTH NEWBURY, VT.

LOCATION.—Chain gage at highway bridge at South Newbury, Orleans County, 4 miles above mouth of Waits River.

DRAINAGE AREA.—2,830 square miles.

RECORDS AVAILABLE.—July, 1918, to September, 1929.

EXTREMES.—Maximum discharge during year, 31,600 second-feet Apr. 11 (gage height, 23.05 feet); minimum, 560 second-feet Sept. 3 (gage height, 0.78 foot).
1918-1929: Maximum discharge, 78,000 second-feet Nov. 5, 1927 (gage height, 35.4 feet); minimum, 460 second-feet Sept. 24, 1921 (gage height, 0.30 foot).

REMARKS.—Records good except those for period of ice effect (Dec. 8 to Mar. 27), which are fair. Slight diurnal regulation. 4,100,000,000 cubic feet of storage developed above station.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|--------|--------|-------|-------|-------|--------|--------|--------|-------|-------|-------|-------|
| 1..... | 2,710 | 3,070 | 3,820 | 2,890 | 1,710 | 1,780 | 8,240 | 23,900 | 3,820 | 4,550 | 1,600 | 860 |
| 2..... | 2,260 | 2,260 | 3,620 | 2,710 | 1,860 | 1,780 | 9,920 | 21,000 | 3,570 | 6,440 | 1,570 | 800 |
| 3..... | 2,020 | 2,180 | 3,430 | 2,350 | 1,820 | 1,710 | 9,140 | 22,300 | 3,430 | 5,540 | 1,500 | 710 |
| 4..... | 1,740 | 3,250 | 3,520 | 2,260 | 1,820 | 1,820 | 8,240 | 29,300 | 3,570 | 4,120 | 1,500 | 980 |
| 5..... | 1,780 | 4,020 | 3,820 | 2,180 | 1,860 | 1,940 | 7,760 | 29,500 | 3,370 | 3,520 | 1,680 | 1,100 |
| 6..... | 1,600 | 4,440 | 5,100 | 2,620 | 1,740 | 2,530 | 11,600 | 29,500 | 3,340 | 3,520 | 2,020 | 950 |
| 7..... | 1,600 | 4,020 | 3,620 | 3,520 | 1,940 | 3,070 | 17,900 | 25,300 | 3,430 | 3,070 | 2,180 | 1,070 |
| 8..... | 1,640 | 3,520 | 2,890 | 3,720 | 2,020 | 2,530 | 21,600 | 23,500 | 3,190 | 2,710 | 2,100 | 1,040 |
| 9..... | 1,740 | 3,250 | 2,620 | 3,430 | 1,980 | 2,180 | 26,800 | 19,600 | 3,070 | 2,710 | 1,860 | 1,040 |
| 10..... | 1,740 | 2,890 | 2,710 | 2,890 | 2,020 | 1,900 | 30,000 | 16,000 | 2,770 | 2,260 | 1,540 | 1,130 |
| 11..... | 1,500 | 2,710 | 2,890 | 2,440 | 1,900 | 1,740 | 31,100 | 13,000 | 2,570 | 1,980 | 1,400 | 1,250 |
| 12..... | 1,570 | 2,800 | 2,980 | 2,180 | 1,710 | 1,740 | 26,400 | 11,000 | 2,270 | 1,710 | 1,680 | 1,250 |
| 13..... | 2,260 | 2,620 | 2,980 | 1,900 | 1,740 | 2,020 | 18,900 | 10,400 | 2,030 | 1,710 | 2,530 | 1,980 |
| 14..... | 3,520 | 2,440 | 3,070 | 1,680 | 1,820 | 3,250 | 12,700 | 9,920 | 2,100 | 1,570 | 2,260 | 1,710 |
| 15..... | 5,100 | 2,260 | 2,980 | 1,640 | 2,020 | 5,320 | 9,920 | 11,100 | 2,870 | 1,940 | 2,100 | 1,600 |
| 16..... | 4,660 | 2,100 | 2,710 | 1,680 | 2,260 | 8,880 | 9,010 | 13,400 | 4,440 | 2,180 | 2,710 | 2,260 |
| 17..... | 2,980 | 2,020 | 2,800 | 1,680 | 1,860 | 11,100 | 9,140 | 14,400 | 4,070 | 2,100 | 2,530 | 2,440 |
| 18..... | 2,980 | 2,530 | 3,340 | 2,020 | 1,820 | 9,010 | 11,100 | 12,700 | 3,270 | 1,740 | 2,180 | 2,100 |
| 19..... | 6,090 | 3,520 | 5,650 | 3,520 | 1,820 | 7,760 | 12,000 | 10,900 | 2,710 | 1,640 | 1,710 | 2,020 |
| 20..... | 10,600 | 8,120 | 6,680 | 6,320 | 1,820 | 8,360 | 10,600 | 13,400 | 2,570 | 1,570 | 1,570 | 2,100 |
| 21..... | 12,000 | 12,400 | 5,540 | 6,200 | 1,710 | 9,010 | 10,600 | 13,100 | 2,710 | 1,600 | 1,460 | 1,820 |
| 22..... | 10,000 | 11,700 | 4,120 | 5,650 | 1,640 | 10,000 | 11,000 | 11,300 | 3,270 | 1,710 | 1,160 | 1,570 |
| 23..... | 7,160 | 9,140 | 2,980 | 4,440 | 1,640 | 12,400 | 10,400 | 9,270 | 3,670 | 1,740 | 950 | 1,320 |
| 24..... | 5,540 | 6,680 | 1,860 | 3,720 | 1,640 | 13,800 | 9,920 | 7,760 | 4,170 | 1,680 | 1,010 | 1,290 |
| 25..... | 7,160 | 4,770 | 2,530 | 3,250 | 1,600 | 13,000 | 10,000 | 7,160 | 4,550 | 1,780 | 1,160 | 1,100 |
| 26..... | 8,000 | 4,120 | 3,250 | 2,890 | 1,640 | 12,100 | 15,000 | 6,440 | 4,330 | 1,860 | 1,220 | 1,070 |
| 27..... | 6,920 | 3,520 | 3,620 | 2,440 | 1,640 | 11,100 | 20,600 | 6,320 | 4,770 | 1,860 | 1,360 | 1,070 |
| 28..... | 5,430 | 2,980 | 4,020 | 2,100 | 1,780 | 10,600 | 21,100 | 5,650 | 5,170 | 1,640 | 1,290 | 1,040 |
| 29..... | 4,880 | 3,070 | 4,020 | 1,860 | ----- | 8,490 | 22,600 | 5,100 | 4,330 | 1,680 | 980 | 920 |
| 30..... | 3,250 | 3,430 | 3,820 | 1,900 | ----- | 7,760 | 25,700 | 4,660 | 3,870 | 1,780 | 890 | 950 |
| 31..... | 3,620 | ----- | 3,250 | 1,820 | ----- | 6,920 | ----- | 4,220 | ----- | 1,740 | 920 | ----- |

| Month | Observed discharge in second-feet | | | Gain or loss in storage (millions of cubic feet) | Discharge in second-feet corrected for storage | | Run-off in inches |
|----------------|-----------------------------------|---------|--------|--|--|-----------------|-------------------|
| | Maximum | Minimum | Mean | | Mean | Per square mile | |
| October..... | 12,000 | 1,500 | 4,320 | +509.2 | 4,510 | 1.59 | 1.83 |
| November..... | 12,400 | 2,020 | 4,190 | -308.8 | 4,080 | 1.44 | 1.61 |
| December..... | 6,680 | 1,860 | 3,560 | -1,468.8 | 3,010 | 1.06 | 1.22 |
| January..... | 6,320 | 1,640 | 2,900 | -251.7 | 2,810 | .993 | 1.14 |
| February..... | 2,260 | 1,600 | 1,820 | -963.8 | 1,420 | .502 | .52 |
| March..... | 13,800 | 1,710 | 6,310 | +56.8 | 6,330 | 2.24 | 2.58 |
| April..... | 31,100 | 7,760 | 15,300 | +1,499.2 | 15,900 | 5.62 | 6.27 |
| May..... | 29,500 | 4,220 | 14,200 | +1,020.1 | 14,600 | 5.16 | 5.95 |
| June..... | 5,100 | 2,020 | 3,420 | +30.0 | 3,430 | 1.21 | 1.35 |
| July..... | 6,440 | 1,570 | 2,440 | -791.2 | 2,140 | .756 | .87 |
| August..... | 2,710 | 890 | 1,630 | -1,033.4 | 1,250 | .442 | .51 |
| September..... | 2,440 | 710 | 1,350 | -616.0 | 1,110 | .392 | .44 |
| The year..... | 31,100 | 710 | 5,140 | -2,318.4 | 5,070 | 1.79 | 24.29 |

CONNECTICUT RIVER AT WHITE RIVER JUNCTION, VT.

LOCATION.—Chain gage on 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.

DRAINAGE AREA.—4,120 square miles.

RECORDS AVAILABLE.—November, 1911, to September, 1929.

EXTREMES.—Maximum discharge during year, 39,400 second-feet May 6 (gage height, 16.7 feet); minimum, 740 second-feet Sept. 4 (gage height, 4.09 feet). 1911–1929: 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 (December 8, 10, 11, 27, 28, and Jan. 3 to Mar. 17) and those for estimated period (June 4 to July 17), which are fair. Flow regulated by reservoirs above stations. Gage-height record furnished by New England Power Construction Co.

Daily and monthly discharge, in second feet, 1928–29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|--------|--------|-------|-------|-------|--------|--------|--------|-------|-------|-------|-------|
| 1----- | 3,940 | 4,320 | 4,320 | 4,320 | 2,360 | 1,940 | 15,500 | 32,900 | 6,890 | 7,34C | 2,220 | 1,070 |
| 2----- | 3,560 | 3,940 | 5,110 | 3,750 | 2,360 | 1,940 | 19,100 | 29,500 | 5,530 | 9,08C | 1,940 | 1,070 |
| 3----- | 3,200 | 3,750 | 4,710 | 3,380 | 2,360 | 1,940 | 16,200 | 29,500 | 4,710 | 7,65C | 1,940 | 1,120 |
| 4----- | 2,840 | 4,610 | 4,710 | 3,200 | 2,360 | 2,080 | 14,500 | 37,200 | 5,000 | 5,80C | 1,940 | 875 |
| 5----- | 2,520 | 4,710 | 5,110 | 3,020 | 2,360 | 2,220 | 14,800 | 37,200 | 4,750 | 5,08C | 2,220 | 1,270 |
| 6----- | 2,520 | 5,530 | 5,110 | 3,020 | 2,360 | 2,840 | 24,500 | 38,900 | 4,890 | 4,99C | 2,220 | 1,440 |
| 7----- | 2,220 | 5,530 | 4,320 | 5,530 | 2,360 | 4,320 | 29,500 | 35,400 | 4,920 | 4,34C | 2,680 | 1,220 |
| 8----- | 2,220 | 5,110 | 3,750 | 6,190 | 2,360 | 3,750 | 33,700 | 31,600 | 4,470 | 3,98C | 2,840 | 1,170 |
| 9----- | 2,220 | 4,710 | 3,380 | 5,320 | 2,360 | 3,020 | 36,700 | 27,000 | 4,280 | 3,96C | 2,680 | 1,500 |
| 10----- | 2,220 | 4,320 | 3,200 | 4,710 | 2,220 | 2,680 | 38,100 | 22,100 | 3,820 | 3,29C | 2,080 | 3,020 |
| 11----- | 2,220 | 3,940 | 3,200 | 3,940 | 2,220 | 2,360 | 37,600 | 18,700 | 3,560 | 2,83C | 2,080 | 4,510 |
| 12----- | 2,080 | 3,750 | 3,200 | 3,200 | 2,220 | 2,080 | 35,000 | 15,500 | 3,260 | 2,50C | 2,080 | 2,520 |
| 13----- | 2,220 | 3,660 | 3,560 | 2,840 | 2,220 | 3,200 | 27,800 | 13,800 | 2,890 | 2,46C | 2,680 | 2,680 |
| 14----- | 3,020 | 3,380 | 3,940 | 2,520 | 2,220 | 6,190 | 19,100 | 13,500 | 3,050 | 2,33C | 3,200 | 2,840 |
| 15----- | 5,530 | 3,200 | 3,940 | 2,360 | 2,220 | 8,390 | 14,800 | 17,200 | 5,140 | 3,04C | 2,840 | 3,750 |
| 16----- | 5,970 | 3,380 | 3,940 | 2,360 | 2,360 | 20,900 | 13,500 | 19,100 | 6,230 | 3,04C | 3,560 | 3,750 |
| 17----- | 5,320 | 3,560 | 3,940 | 2,360 | 2,360 | 23,300 | 14,200 | 20,600 | 5,510 | 2,88C | 3,560 | 3,380 |
| 18----- | 4,320 | 5,110 | 6,190 | 3,020 | 2,220 | 16,900 | 16,900 | 18,300 | 4,450 | 2,52C | 3,020 | 3,380 |
| 19----- | 5,530 | 6,970 | 8,130 | 7,130 | 2,220 | 14,200 | 17,600 | 15,500 | 3,730 | 2,52C | 2,680 | 3,020 |
| 20----- | 10,800 | 11,100 | 9,450 | 8,910 | 2,080 | 15,500 | 16,900 | 19,100 | 3,500 | 2,22C | 2,220 | 2,840 |
| 21----- | 13,800 | 14,800 | 8,910 | 8,390 | 2,080 | 15,900 | 18,700 | 18,300 | 3,700 | 2,08C | 2,080 | 2,840 |
| 22----- | 12,300 | 14,800 | 6,890 | 7,620 | 1,940 | 20,200 | 19,100 | 16,600 | 4,390 | 2,08C | 1,940 | 2,220 |
| 23----- | 9,450 | 12,300 | 4,710 | 6,190 | 1,940 | 27,800 | 18,300 | 13,500 | 4,980 | 2,22C | 1,560 | 2,080 |
| 24----- | 7,620 | 8,650 | 3,940 | 5,110 | 1,940 | 31,100 | 16,900 | 11,700 | 7,040 | 2,36C | 1,270 | 1,800 |
| 25----- | 7,870 | 6,890 | 3,200 | 4,710 | 1,940 | 25,300 | 17,600 | 11,400 | 7,120 | 2,22C | 1,500 | 1,800 |
| 26----- | 9,450 | 5,970 | 3,380 | 4,130 | 1,940 | 22,500 | 27,800 | 10,600 | 7,540 | 2,52C | 1,560 | 1,680 |
| 27----- | 8,650 | 4,710 | 3,750 | 3,750 | 1,940 | 22,100 | 31,600 | 9,720 | 6,980 | 2,52C | 1,680 | 1,560 |
| 28----- | 7,370 | 3,380 | 4,130 | 3,380 | 2,080 | 19,100 | 30,300 | 8,910 | 7,040 | 2,36C | 1,680 | 1,500 |
| 29----- | 6,420 | 3,940 | 4,320 | 3,200 | ----- | 15,500 | 35,400 | 7,870 | 6,780 | 2,36C | 1,560 | 1,270 |
| 30----- | 5,750 | 4,130 | 4,710 | 2,840 | ----- | 13,500 | 35,400 | 6,890 | 5,880 | 2,22C | 1,320 | 1,440 |
| 31----- | 5,110 | ----- | 5,110 | 2,840 | ----- | 12,900 | ----- | 6,890 | ----- | 2,22C | 1,120 | ----- |

| Month | Observed discharge in second-feet | | | Gain or loss in storage (millions of cubic feet) | Discharge, in second-feet, corrected for storage | | Run-off in inches |
|----------------|-----------------------------------|---------|--------|--|--|-----------------|-------------------|
| | Maximum | Minimum | Mean | | Mean | Per square mile | |
| October----- | 13,800 | 2,080 | 5,430 | +509.2 | 5,620 | 1.36 | 1.57 |
| November----- | 14,800 | 3,200 | 5,760 | -308.8 | 5,650 | 1.37 | 1.63 |
| December----- | 9,450 | 3,200 | 4,720 | -1,468.8 | 4,170 | 1.01 | 1.16 |
| January----- | 8,910 | 2,360 | 4,300 | -251.7 | 4,200 | 1.02 | 1.18 |
| February----- | 2,360 | 1,940 | 2,200 | -963.8 | 1,800 | .437 | .46 |
| March----- | 31,100 | 1,940 | 11,800 | +56.8 | 11,800 | 2.86 | 3.30 |
| April----- | 38,100 | 13,500 | 23,600 | +1,499.2 | 24,100 | 5.85 | 6.53 |
| May----- | 38,900 | 6,890 | 19,800 | +1,020.1 | 20,200 | 4.90 | 5.65 |
| June----- | 7,540 | 2,890 | 5,070 | +30.0 | 5,080 | 1.23 | 1.37 |
| July----- | 9,080 | 2,080 | 3,450 | -791.2 | 3,160 | .767 | .88 |
| August----- | 3,560 | 1,120 | 2,190 | -1,033.4 | 1,810 | .439 | .51 |
| September----- | 4,510 | 875 | 2,150 | -616.0 | 1,920 | .466 | .52 |
| The year----- | 38,900 | 875 | 7,570 | -2,318.4 | 7,490 | 1.82 | 24.66 |

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, 1929.

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

Daily and monthly discharge, in second feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
| 1----- | 6,840 | 7,650 | 6,690 | 5,020 | 6,450 | 6,080 | 24,800 | 43,700 | 10,900 | 8,710 | 3,440 | 1,480 |
| 2----- | 5,390 | 8,460 | 3,440 | 5,820 | 6,410 | 5,940 | 32,200 | 39,600 | 5,940 | 9,820 | 4,120 | 709 |
| 3----- | 5,390 | 6,510 | 7,550 | 5,770 | 3,750 | 2,190 | 29,500 | 42,800 | 6,090 | 11,900 | 3,770 | 2,610 |
| 4----- | 5,010 | 2,150 | 7,750 | 5,220 | 6,020 | 5,760 | 26,200 | 39,700 | 8,230 | 8,380 | 1,930 | 2,890 |
| 5----- | 6,040 | 6,450 | 9,000 | 7,520 | 5,860 | 6,810 | 25,300 | 35,700 | 7,550 | 10,700 | 4,120 | 3,440 |
| 6----- | 7,160 | 8,180 | 8,030 | 5,560 | 4,640 | 9,240 | 36,000 | 49,000 | 7,340 | 7,080 | 3,840 | 2,930 |
| 7----- | 1,640 | 8,890 | 7,970 | 10,200 | 6,890 | 12,200 | 45,200 | 47,100 | 10,300 | 3,810 | 3,720 | 2,120 |
| 8----- | 4,960 | 8,600 | 5,880 | 9,860 | 7,230 | 10,100 | 52,700 | 43,300 | 4,990 | 5,510 | 4,700 | 1,140 |
| 9----- | 3,970 | 8,410 | 1,680 | 9,290 | 6,490 | 9,610 | 48,900 | 37,700 | 8,340 | 5,930 | 4,080 | 3,420 |
| 10----- | 3,980 | 7,430 | 6,050 | 8,710 | 5,390 | 6,560 | 47,100 | 31,400 | 5,120 | 6,240 | 4,190 | 5,490 |
| 11----- | 4,980 | 3,340 | 4,540 | 7,860 | 5,730 | 7,140 | 45,700 | 30,000 | 5,730 | 5,500 | 4,460 | 9,750 |
| 12----- | 4,300 | 5,180 | 4,680 | 6,410 | 5,640 | 6,900 | 44,700 | 20,200 | 4,170 | 5,190 | 4,610 | 5,680 |
| 13----- | 6,930 | 4,800 | 5,700 | 5,240 | 5,940 | 10,500 | 41,400 | 18,600 | 3,540 | 3,740 | 4,400 | 1,490 |
| 14----- | 760 | 5,520 | 7,070 | 7,250 | 4,960 | 16,700 | 32,700 | 17,000 | 7,390 | 1,880 | 3,460 | 4,170 |
| 15----- | 5,830 | 5,520 | 6,090 | 5,560 | 6,690 | 27,500 | 26,700 | 21,000 | 12,400 | 4,900 | 5,120 | 4,470 |
| 16----- | 9,330 | 5,730 | 3,850 | 3,930 | 5,600 | 42,300 | 21,500 | 28,000 | 10,800 | 4,590 | 4,560 | 5,330 |
| 17----- | 7,200 | 8,210 | 6,430 | 2,890 | 51,800 | 23,100 | 29,200 | 8,330 | 4,720 | 7,700 | 6,180 | 6,180 |
| 18----- | 8,060 | 3,140 | 11,500 | 5,440 | 5,730 | 35,300 | 30,200 | 27,100 | 8,460 | 3,720 | 2,430 | 4,920 |
| 19----- | 11,000 | 9,160 | 14,400 | 14,100 | 5,370 | 32,000 | 28,700 | 23,600 | 7,680 | 6,990 | 5,020 | 5,060 |
| 20----- | 13,400 | 12,400 | 14,600 | 20,000 | 4,730 | 31,300 | 33,400 | 28,000 | 8,250 | 4,560 | 4,740 | 5,510 |
| 21----- | 11,500 | 14,300 | 14,400 | 17,200 | 6,440 | 34,900 | 44,800 | 27,700 | 6,760 | 270 | 3,160 | 4,600 |
| 22----- | 13,100 | 15,900 | 9,520 | 15,300 | 6,100 | 40,500 | 42,900 | 24,500 | 7,360 | 3,980 | 3,300 | 2,800 |
| 23----- | 13,000 | 16,500 | 5,360 | 14,700 | 5,130 | 64,200 | 39,300 | 20,400 | 5,740 | 3,000 | 3,230 | 5,340 |
| 24----- | 12,400 | 15,400 | 5,500 | 12,400 | 2,370 | 63,300 | 36,200 | 17,800 | 9,550 | 3,050 | 2,790 | 4,560 |
| 25----- | 12,300 | 7,160 | 2,630 | 10,900 | 6,240 | 51,500 | 37,900 | 18,300 | 10,400 | 4,210 | 1,410 | 2,740 |
| 26----- | 11,300 | 8,920 | 6,160 | 6,860 | 7,240 | 37,200 | 47,100 | 15,100 | 11,000 | 4,310 | 2,660 | 2,700 |
| 27----- | 9,350 | 7,020 | 6,930 | 4,000 | 6,570 | 36,500 | 48,800 | 16,800 | 10,200 | 5,390 | 2,880 | 3,750 |
| 28----- | 6,800 | 7,780 | 7,670 | 6,730 | 4,340 | 35,600 | 44,100 | 15,300 | 9,360 | 2,460 | 2,820 | 1,610 |
| 29----- | 8,540 | 8,000 | 8,330 | 7,040 | ----- | 29,300 | 46,100 | 13,300 | 11,900 | 4,440 | 2,640 | 1,160 |
| 30----- | 7,290 | 6,690 | 5,410 | 5,760 | ----- | 27,700 | 50,200 | 11,300 | 7,420 | 4,370 | 2,410 | 4,000 |
| 31----- | 6,170 | ----- | 6,700 | 4,680 | ----- | 23,700 | ----- | 11,500 | ----- | 3,200 | 3,310 | ----- |

| Month | Observed discharge in second-feet | | | Gain or loss in storage (millions of cubic feet) | Discharge in second-feet corrected for storage | | Run-off in inches |
|----------------|-----------------------------------|---------|--------|--|--|-----------------|-------------------|
| | Maximum | Minimum | Mean | | Mean | Per square mile | |
| October----- | 13,400 | 760 | 7,550 | +257.7 | 7,640 | 1.05 | 1.21 |
| November----- | 16,500 | 2,150 | 7,950 | -518.8 | 7,750 | 1.07 | 1.19 |
| December----- | 14,600 | 1,680 | 7,170 | -1,672.5 | 6,540 | .902 | 1.04 |
| January----- | 20,000 | 3,930 | 8,390 | -240.4 | 8,300 | 1.14 | 1.31 |
| February----- | 7,240 | 2,370 | 5,600 | -972.6 | 5,200 | .717 | .75 |
| March----- | 64,200 | 2,190 | 25,200 | +857.2 | 25,500 | 3.52 | 4.06 |
| April----- | 52,700 | 21,500 | 37,800 | +2,184.4 | 38,600 | 5.32 | 5.94 |
| May----- | 49,000 | 11,300 | 27,200 | +914.3 | 27,600 | 3.81 | 4.39 |
| June----- | 12,400 | 3,540 | 8,040 | -345.5 | 7,910 | 1.09 | 1.22 |
| July----- | 11,900 | 270 | 5,240 | -1,195.4 | 4,800 | .662 | .76 |
| August----- | 7,000 | 1,410 | 3,690 | -1,319.6 | 3,200 | .441 | .51 |
| September----- | 9,750 | 709 | 3,830 | -827.3 | 3,510 | .484 | .54 |
| The year----- | 64,200 | 270 | 12,300 | -2,878.5 | 12,200 | 1.68 | 22.92 |

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, 1929.

EXTREMES.—Maximum discharge during year, 75,700 second-feet Mar. 25 (gage height, 22.3 feet); minimum, 726 second-feet July 22 (gage height, 0.51 foot). 1904-1929: 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 fair. Stage-discharge relation affected by ice Dec. 31 to Mar. 15. Flow regulated by storage reservoirs above station.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|-------|-------|
| 1..... | 6,950 | 7,420 | 6,950 | 8,960 | 6,050 | 6,950 | 29,800 | 54,400 | 14,800 | 8,690 | 4,200 | 1,510 |
| 2..... | 7,910 | 9,240 | 5,300 | 8,420 | 6,720 | 7,660 | 35,600 | 49,100 | 8,420 | 9,270 | 4,350 | 1,290 |
| 3..... | 6,270 | 8,960 | 7,420 | 8,690 | 6,050 | 6,720 | 35,200 | 49,500 | 8,960 | 9,270 | 3,650 | 2,140 |
| 4..... | 6,050 | 4,890 | 8,960 | 8,420 | 5,300 | 6,490 | 32,500 | 58,100 | 7,660 | 9,270 | 2,720 | 2,720 |
| 5..... | 7,180 | 6,950 | 9,810 | 8,160 | 6,050 | 8,420 | 30,900 | 57,200 | 11,300 | 10,700 | 3,250 | 3,670 |
| 6..... | 5,830 | 8,420 | 10,100 | 7,660 | 5,620 | 11,900 | 34,400 | 54,800 | 7,660 | 12,600 | 4,030 | 3,250 |
| 7..... | 3,850 | 8,960 | 9,810 | 11,900 | 6,950 | 13,500 | 43,900 | 55,200 | 10,100 | 5,470 | 3,580 | 2,720 |
| 8..... | 5,620 | 11,900 | 7,660 | 12,900 | 7,180 | 13,500 | 49,100 | 52,700 | 10,700 | 5,620 | 4,500 | 1,680 |
| 9..... | 5,300 | 9,240 | 4,030 | 12,600 | 6,950 | 11,300 | 53,100 | 46,700 | 6,490 | 5,830 | 5,300 | 2,870 |
| 10..... | 5,200 | 9,240 | 5,620 | 11,900 | 5,620 | 9,240 | 50,700 | 40,300 | 7,180 | 7,180 | 5,100 | 4,300 |
| 11..... | 4,890 | 6,270 | 6,050 | 11,300 | 5,830 | 10,700 | 48,300 | 37,900 | 7,420 | 6,070 | 3,580 | 6,270 |
| 12..... | 6,490 | 5,620 | 9,810 | 6,270 | 6,050 | 7,420 | 46,700 | 32,900 | 7,180 | 5,830 | 5,100 | 8,690 |
| 13..... | 6,270 | 6,270 | 5,410 | 8,690 | 6,050 | 11,300 | 45,900 | 24,200 | 5,200 | 6,070 | 6,050 | 4,400 |
| 14..... | 4,210 | 6,050 | 6,950 | 9,520 | 5,830 | 18,800 | 38,700 | 21,000 | 6,950 | 2,970 | 4,400 | 3,500 |
| 15..... | 4,500 | 6,270 | 6,950 | 8,420 | 7,180 | 28,700 | 32,900 | 25,300 | 11,300 | 4,270 | 4,500 | 3,940 |
| 16..... | 8,420 | 6,490 | 5,300 | 7,420 | 6,950 | 35,200 | 31,300 | 30,900 | 13,200 | 6,070 | 4,590 | 5,620 |
| 17..... | 10,400 | 6,720 | 5,830 | 6,270 | 6,490 | 46,300 | 28,700 | 33,300 | 11,000 | 5,830 | 4,690 | 5,300 |
| 18..... | 7,660 | 5,830 | 8,160 | 6,720 | 6,270 | 41,900 | 34,400 | 32,900 | 9,520 | 4,300 | 4,690 | 5,620 |
| 19..... | 10,400 | 7,420 | 15,100 | 16,400 | 6,720 | 36,000 | 33,300 | 27,900 | 9,240 | 4,970 | 3,330 | 4,300 |
| 20..... | 13,800 | 11,300 | 16,400 | 20,200 | 6,490 | 37,200 | 36,000 | 32,900 | 10,100 | 5,300 | 3,670 | 4,210 |
| 21..... | 13,200 | 15,100 | 15,400 | 19,200 | 6,720 | 35,200 | 43,100 | 31,700 | 8,690 | 1,670 | 4,120 | 3,760 |
| 22..... | 16,800 | 16,800 | 14,100 | 17,400 | 7,180 | 36,000 | 54,400 | 32,900 | 5,830 | 2,720 | 3,580 | 2,320 |
| 23..... | 14,100 | 16,800 | 11,000 | 16,800 | 6,720 | 64,000 | 46,700 | 29,000 | 6,270 | 3,670 | 3,500 | 4,030 |
| 24..... | 14,800 | 18,100 | 10,400 | 15,400 | 5,300 | 71,900 | 42,700 | 25,300 | 7,660 | 2,670 | 2,870 | 3,250 |
| 25..... | 14,400 | 13,800 | 6,270 | 13,800 | 6,490 | 67,800 | 42,700 | 23,800 | 10,100 | 4,690 | 1,620 | 2,720 |
| 26..... | 14,100 | 8,960 | 7,180 | 8,960 | 7,910 | 50,700 | 54,400 | 24,900 | 11,600 | 4,870 | 2,520 | 2,870 |
| 27..... | 12,600 | 9,520 | 10,100 | 5,830 | 8,960 | 45,900 | 61,000 | 21,000 | 11,900 | 6,970 | 3,100 | 2,870 |
| 28..... | 6,490 | 7,660 | 10,100 | 6,490 | 7,420 | 38,700 | 55,600 | 19,500 | 10,100 | 2,270 | 3,170 | 2,260 |
| 29..... | 10,700 | 5,300 | 9,810 | 6,490 | ----- | 36,800 | 56,800 | 18,100 | 11,300 | 4,590 | 2,790 | 1,730 |
| 30..... | 8,960 | 6,950 | 9,240 | 6,270 | ----- | 32,500 | 62,300 | 16,800 | 11,600 | 4,210 | 3,170 | 3,100 |
| 31..... | 7,660 | ----- | 8,960 | 6,270 | ----- | 29,800 | ----- | 13,200 | ----- | 3,940 | 3,100 | ----- |

| Month | Observed discharge in second-feet | | | Gain or loss in storage (millions of cubic feet) | Discharge, in second-feet, corrected for storage | | Run-off in inches |
|----------------|-----------------------------------|---------|--------|--|--|-----------------|-------------------|
| | Maximum | Minimum | Mean | | Mean | Per square mile | |
| October..... | 14,800 | 3,850 | 8,630 | -1,472 | 8,080 | 1.01 | 1.16 |
| November..... | 18,100 | 4,890 | 9,110 | -1,828 | 8,410 | 1.05 | 1.17 |
| December..... | 16,400 | 4,030 | 8,710 | -1,868 | 8,010 | 1.00 | 1.15 |
| January..... | 20,200 | 5,830 | 10,600 | -228 | 10,500 | 1.31 | 1.51 |
| February..... | 8,960 | 5,300 | 6,540 | -2,255 | 5,610 | .701 | .73 |
| March..... | 71,900 | 6,490 | 28,300 | +3,980 | 29,800 | 3.72 | 4.29 |
| April..... | 62,300 | 28,700 | 43,000 | +4,846 | 44,900 | 5.61 | 6.26 |
| May..... | 58,100 | 13,200 | 34,600 | +1,327 | 35,100 | 4.39 | 5.06 |
| June..... | 14,800 | 5,200 | 9,310 | -1,256 | 8,830 | 1.10 | 1.23 |
| July..... | 12,600 | 1,620 | 5,730 | -2,520 | 4,790 | .599 | .69 |
| August..... | 6,050 | 1,620 | 3,830 | -2,561 | 2,880 | .360 | .42 |
| September..... | 8,690 | 1,290 | 3,560 | -1,620 | 2,940 | .368 | .41 |
| The year..... | 71,900 | 1,290 | 14,400 | -5,454 | 14,200 | 1.78 | 24.08 |

CONNECTICUT RIVER AT THOMPSONVILLE, CONN.

LOCATION.—Two water-stage recorders; one in pool above Enfield Dam, 1 mile below Thompsonville, Hartford County, zero of which is 38.48 feet above mean sea level; the other on canal below Windsor Lock.

DRAINAGE AREA.—9,740 square miles.

RECORDS AVAILABLE.—July, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 84,800 second-feet Mar. 25; minimum, 970 second-feet Sept. 29.

Maximum stage known, 12.3 feet Nov. 4, 1927.

REMARKS.—Records good above 4,000 second-feet and fair below. Stage-discharge relation affected by ice Dec. 31, Jan. 9, 11, Jan. 13 to Mar. 3, and Mar. 8-12. Seasonal storage in lakes and reservoirs above. Northern Connecticut Power Co.'s canal diverts below gage; flow is included in discharge tables.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
| 1 | 7,710 | 8,740 | 8,740 | 8,320 | 7,420 | 8,240 | 31,300 | 66,100 | 14,300 | 10,200 | 5,260 | 2,510 |
| 2 | 9,640 | 9,410 | 7,870 | 8,960 | 7,060 | 7,780 | 33,900 | 57,400 | 12,700 | 9,760 | 3,350 | 1,800 |
| 3 | 9,050 | 8,410 | 8,800 | 8,680 | 6,700 | 6,940 | 38,700 | 55,300 | 9,440 | 9,440 | 2,400 | 2,430 |
| 4 | 7,980 | 7,940 | 9,720 | 8,510 | 7,820 | 8,280 | 36,300 | 63,900 | 8,850 | 9,760 | 3,350 | 3,580 |
| 5 | 8,290 | 7,740 | 10,400 | 7,880 | 8,070 | 10,400 | 33,100 | 67,800 | 9,100 | 9,840 | 4,310 | 4,520 |
| 6 | 8,370 | 8,770 | 11,400 | 8,120 | 8,030 | 17,800 | 33,700 | 63,800 | 10,200 | 10,600 | 6,350 | 4,160 |
| 7 | 6,640 | 9,640 | 11,400 | 15,700 | 11,500 | 22,100 | 43,900 | 63,900 | 9,700 | 7,790 | 6,090 | 3,840 |
| 8 | 7,820 | 10,500 | 10,200 | 13,200 | 13,900 | 20,000 | 49,300 | 61,700 | 11,100 | 7,510 | 5,370 | 2,600 |
| 9 | 8,070 | 11,700 | 7,260 | 15,600 | 13,900 | 16,400 | 55,400 | 55,300 | 8,960 | 7,120 | 6,480 | 2,670 |
| 10 | 7,120 | 9,800 | 7,110 | 12,500 | 12,500 | 12,300 | 55,400 | 46,400 | 9,600 | 7,220 | 5,870 | 4,480 |
| 11 | 7,060 | 8,760 | 8,220 | 12,600 | 12,600 | 12,000 | 53,400 | 40,100 | 9,410 | 7,440 | 3,910 | 7,550 |
| 12 | 6,900 | 7,920 | 7,820 | 11,500 | 11,200 | 12,200 | 53,400 | 38,000 | 9,110 | 7,120 | 4,410 | 9,250 |
| 13 | 6,940 | 9,270 | 7,180 | 11,000 | 8,420 | 12,300 | 55,300 | 27,600 | 8,220 | 6,550 | 6,310 | 8,510 |
| 14 | 6,920 | 7,890 | 7,590 | 11,600 | 8,770 | 24,100 | 47,800 | 24,800 | 7,170 | 4,200 | 5,880 | 6,720 |
| 15 | 6,350 | 7,440 | 8,100 | 9,500 | 8,350 | 41,000 | 40,100 | 23,400 | 7,100 | 4,570 | 5,790 | 3,580 |
| 16 | 8,220 | 7,700 | 6,680 | 7,550 | 8,050 | 53,300 | 35,500 | 30,800 | 11,300 | 5,910 | 5,790 | 5,860 |
| 17 | 9,640 | 7,920 | 8,020 | 6,910 | 7,070 | 67,800 | 36,300 | 34,000 | 12,600 | 5,950 | 5,620 | 7,640 |
| 18 | 9,960 | 6,180 | 8,920 | 7,550 | 7,910 | 65,800 | 40,300 | 34,600 | 10,200 | 6,040 | 4,690 | 7,440 |
| 19 | 9,680 | 8,160 | 11,800 | 9,720 | 8,660 | 49,300 | 41,100 | 33,200 | 9,270 | 6,000 | 6,180 | 7,510 |
| 20 | 12,200 | 10,400 | 16,200 | 20,700 | 7,950 | 42,800 | 40,900 | 32,200 | 8,700 | 6,070 | 6,340 | 7,040 |
| 21 | 14,200 | 14,000 | 16,200 | 26,000 | 8,070 | 43,600 | 52,800 | 34,700 | 8,800 | 3,880 | 6,150 | 6,230 |
| 22 | 14,600 | 16,200 | 14,000 | 21,600 | 7,820 | 45,500 | 65,200 | 36,300 | 8,000 | 4,090 | 5,430 | 3,660 |
| 23 | 15,000 | 17,400 | 10,300 | 18,400 | 7,260 | 59,500 | 61,700 | 33,100 | 6,760 | 4,910 | 4,790 | 3,670 |
| 24 | 16,000 | 17,100 | 8,370 | 17,300 | 6,130 | 82,100 | 53,400 | 27,700 | 8,550 | 4,510 | 4,750 | 6,800 |
| 25 | 14,800 | 16,400 | 7,220 | 15,700 | 7,180 | 82,500 | 50,400 | 25,400 | 10,000 | 4,580 | 3,390 | 6,530 |
| 26 | 14,400 | 12,000 | 7,360 | 13,400 | 7,680 | 68,200 | 59,600 | 24,800 | 11,600 | 5,190 | 3,280 | 5,210 |
| 27 | 13,300 | 11,500 | 7,750 | 9,440 | 9,340 | 55,400 | 70,800 | 21,400 | 11,900 | 5,830 | 3,660 | 4,520 |
| 28 | 12,100 | 10,300 | 8,900 | 7,780 | 9,180 | 49,400 | 67,700 | 20,200 | 11,400 | 3,600 | 2,900 | 2,970 |
| 29 | 9,520 | 6,840 | 8,730 | 7,600 | ----- | 44,500 | 65,900 | 19,000 | 10,900 | 3,010 | 4,480 | 1,370 |
| 30 | 11,300 | 7,190 | 8,160 | 7,820 | ----- | 37,700 | 70,600 | 17,900 | 12,000 | 5,950 | 4,440 | 2,370 |
| 31 | 10,200 | ----- | 8,370 | 7,500 | ----- | 33,100 | ----- | 15,600 | ----- | 5,300 | 3,860 | ----- |

| Month | Observed discharge in second-feet | | | Gain or loss in storage (millions of cubic feet) | Discharge, in second-feet, corrected for storage | | Run-off in inches |
|-----------|-----------------------------------|---------|--------|--|--|-----------------|-------------------|
| | Maximum | Minimum | Mean | | Mean | Per square mile | |
| October | 15,000 | 5,920 | 9,930 | -1,472 | 9,380 | 0.963 | 1.11 |
| November | 17,400 | 6,180 | 10,100 | -1,828 | 9,390 | .965 | 1.08 |
| December | 16,200 | 6,680 | 9,320 | -1,868 | 8,620 | .885 | 1.02 |
| January | 26,000 | 6,910 | 12,100 | -228 | 12,000 | 1.23 | 1.42 |
| February | 13,900 | 6,130 | 8,880 | -2,255 | 7,940 | .815 | .85 |
| March | 83,100 | 6,940 | 35,900 | +3,980 | 37,400 | 3.84 | 4.43 |
| April | 70,800 | 31,300 | 49,200 | +4,846 | 51,100 | 5.25 | 5.86 |
| May | 67,800 | 15,600 | 38,600 | +1,327 | 39,100 | 4.01 | 4.62 |
| June | 14,300 | 6,760 | 9,910 | -1,256 | 9,420 | .967 | 1.08 |
| July | 10,600 | 3,010 | 6,450 | -2,520 | 5,510 | .566 | .65 |
| August | 6,350 | 2,400 | 4,870 | -2,561 | 3,910 | .401 | .46 |
| September | 9,250 | 1,370 | 4,910 | -1,620 | 4,290 | .440 | .49 |
| The year | 83,100 | 1,370 | 16,700 | -5,454 | 16,500 | 1.69 | 23.07 |

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, 1929.

EXTREMES.—Maximum discharge during period, 7,540 second-feet May 4 (gage height, 10.80 feet); minimum, 52 second-feet Aug. 29 (gage height, 1.64 feet).

REMARKS.—Records good except those for periods of ice effect (Nov. 27–30, Dec. 7–13, and Dec. 22 to Mar. 23), which are fair.

Daily and monthly discharge, in second-feet, 1928–29

| Day | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1. | | 508 | 302 | 246 | 201 | 1,300 | 2,580 | 514 | 1,390 | 146 | 102 |
| 2. | | 508 | 322 | 246 | 232 | 1,900 | 2,420 | 414 | 985 | 141 | 102 |
| 3. | | 514 | 307 | 224 | 220 | 1,420 | 6,380 | 508 | 612 | 124 | 120 |
| 4. | | 508 | 297 | 246 | 246 | 1,360 | 5,720 | 496 | 48 | 171 | 122 |
| 5. | | 538 | 292 | 232 | 297 | 2,040 | 3,090 | 478 | 675 | 287 | 129 |
| 6. | | 772 | 538 | 228 | 409 | 4,020 | 3,270 | 631 | 555 | 317 | 106 |
| 7. | | 550 | 1,170 | 228 | 348 | 3,720 | 3,090 | 575 | 414 | 322 | 132 |
| 8. | | 538 | 694 | 232 | 237 | 4,520 | 2,820 | 484 | 42 | 228 | 120 |
| 9. | | 526 | 532 | 237 | 201 | 6,620 | 2,040 | 403 | 35 | 177 | 111 |
| 10. | | 502 | 508 | 259 | 184 | 4,840 | 1,620 | 392 | 297 | 141 | 180 |
| 11. | | 484 | 414 | 287 | 180 | 2,740 | 1,420 | 338 | 287 | 171 | 217 |
| 12. | | 455 | 370 | 263 | 180 | 2,180 | 1,360 | 307 | 257 | 520 | 190 |
| 13. | | 437 | 287 | 259 | 241 | 1,720 | 1,480 | 348 | 227 | 472 | 158 |
| 14. | | 397 | 348 | 241 | 550 | 1,550 | 1,240 | 370 | 333 | 246 | 161 |
| 15. | 370 | 375 | 343 | 237 | 1,300 | 1,360 | 1,830 | 1,510 | 625 | 581 | 472 |
| 16. | 392 | 359 | 338 | 232 | 2,110 | 1,360 | 1,970 | 882 | 345 | 779 | 414 |
| 17. | 544 | 409 | 327 | 224 | 1,900 | 1,690 | 1,720 | 526 | 263 | 364 | 246 |
| 18. | 950 | 1,180 | 386 | 250 | 1,140 | 2,110 | 1,270 | 392 | 217 | 250 | 322 |
| 19. | 1,360 | 1,220 | 2,110 | 241 | 1,080 | 1,830 | 1,360 | 631 | 322 | 232 | 297 |
| 20. | 2,260 | 819 | 1,580 | 241 | 1,550 | 1,510 | 1,830 | 544 | 397 | 180 | 209 |
| 21. | 1,480 | 694 | 890 | 228 | 1,450 | 1,900 | 1,360 | 538 | 257 | 180 | 180 |
| 22. | 1,080 | 556 | 631 | 224 | 2,040 | 1,760 | 1,110 | 792 | 224 | 146 | 138 |
| 23. | 935 | 472 | 508 | 237 | 5,060 | 1,900 | 985 | 1,020 | 189 | 168 | 164 |
| 24. | 726 | 397 | 449 | 237 | 3,360 | 1,690 | 928 | 985 | 22 | 213 | 158 |
| 25. | 675 | 364 | 386 | 228 | 2,110 | 2,180 | 1,050 | 950 | 225 | 268 | 144 |
| 26. | 581 | 409 | 370 | 213 | 1,830 | 3,720 | 882 | 1,170 | 220 | 209 | 120 |
| 27. | 538 | 364 | 322 | 198 | 1,580 | 4,120 | 798 | 785 | 18 | 190 | 129 |
| 28. | 526 | 338 | 302 | 184 | 1,390 | 3,090 | 701 | 538 | 157 | 144 | 124 |
| 29. | 520 | 437 | 254 | ----- | 1,160 | 5,280 | 662 | 644 | 241 | 95 | 129 |
| 30. | 508 | 364 | 254 | ----- | 1,080 | 4,840 | 606 | 662 | 224 | 129 | 152 |
| 31. | ----- | 348 | 263 | ----- | 1,300 | ----- | 550 | ----- | 171 | 122 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------------|---------|---------|-------|-----------------|-------------------|
| November 15–30. | 2,260 | 370 | 840 | 1.99 | 1.18 |
| December | 1,220 | 338 | 527 | 1.25 | 1.44 |
| January | 2,110 | 254 | 519 | 1.23 | 1.42 |
| February | 2,110 | 184 | 236 | .558 | .58 |
| March | 5,060 | 180 | 1,130 | 2.67 | 3.08 |
| April | 6,620 | 1,300 | 2,680 | 6.34 | 7.07 |
| May | 6,380 | 550 | 1,880 | 4.44 | 5.12 |
| June | 1,510 | 307 | 628 | 1.48 | 1.65 |
| July | 1,300 | 152 | 379 | .896 | 1.03 |
| August | 779 | 95 | 249 | .689 | .68 |
| September | 472 | 102 | 178 | .421 | .47 |

MOOSE RIVER AT ST. JOHNSBURY, VT.

LOCATION.—Chain gage at highway bridge on United States Route 2, three-fourths mile above mouth of river in St. Johnsbury, Caledonia County.]

DRAINAGE AREA.—112 square miles.

RECORDS AVAILABLE.—August, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 5,720 second-feet Apr. '30 (gage height, 8.09 feet); minimum, 10 second-feet Sept. 3-5 (gage height, 1.86 feet).

REMARKS.—Records fair except those for periods of ice effect (Dec. 8-14, Dec. 21 to Jan. 18, and Jan. 21 to Mar. 13), which may be poor.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 100 | 122 | 122 | 55 | 93 | 57 | 485 | 1,160 | 93 | 386 | 19 | 17 |
| 2..... | 86 | 122 | 130 | 49 | 93 | 57 | 608 | 905 | 86 | 289 | 18 | 12 |
| 3..... | 74 | 130 | 122 | 48 | 86 | 58 | 530 | 2,460 | 80 | 130 | 19 | 10 |
| 4..... | 66 | 210 | 122 | 46 | 86 | 62 | 444 | 4,450 | 93 | 68 | 23 | 10 |
| 5..... | 57 | 234 | 130 | 46 | 80 | 68 | 608 | 1,550 | 80 | 114 | 41 | 11 |
| 6..... | 65 | 154 | 122 | 130 | 80 | 146 | 1,550 | 1,340 | 107 | 93 | 54 | 12 |
| 7..... | 67 | 154 | 100 | 165 | 80 | 130 | 2,020 | 1,340 | 107 | 68 | 65 | 12 |
| 8..... | 61 | 146 | 93 | 138 | 80 | 100 | 2,160 | 1,160 | 86 | 69 | 43 | 12 |
| 9..... | 58 | 122 | 86 | 122 | 74 | 86 | 4,220 | 868 | 74 | 55 | 30 | 13 |
| 10..... | 61 | 122 | 86 | 114 | 74 | 80 | 4,950 | 530 | 61 | 45 | 22 | 23 |
| 11..... | 51 | 114 | 86 | 74 | 74 | 74 | 1,340 | 424 | 55 | 39 | 29 | 34 |
| 12..... | 48 | 86 | 86 | 66 | 69 | 74 | 728 | 424 | 49 | 32 | 51 | 32 |
| 13..... | 52 | 74 | 80 | 56 | 69 | 130 | 508 | 464 | 45 | 27 | 100 | 21 |
| 14..... | 93 | 86 | 80 | 51 | 67 | 234 | 444 | 404 | 65 | 39 | 54 | 23 |
| 15..... | 107 | 58 | 80 | 48 | 65 | 580 | 404 | 555 | 234 | 130 | 53 | 122 |
| 16..... | 86 | 86 | 86 | 46 | 62 | 1,160 | 368 | 795 | 222 | 60 | 197 | 100 |
| 17..... | 74 | 114 | 93 | 46 | 62 | 905 | 508 | 580 | 100 | 39 | 69 | 55 |
| 18..... | 197 | 247 | 368 | 93 | 62 | 444 | 665 | 368 | 68 | 29 | 42 | 48 |
| 19..... | 555 | 508 | 424 | 1,440 | 61 | 530 | 530 | 404 | 80 | 26 | 38 | 57 |
| 20..... | 608 | 795 | 289 | 635 | 60 | 665 | 424 | 608 | 80 | 24 | 30 | 40 |
| 21..... | 368 | 795 | 165 | 508 | 59 | 530 | 608 | 464 | 93 | 23 | 24 | 32 |
| 22..... | 247 | 404 | 100 | 386 | 58 | 728 | 530 | 319 | 86 | 22 | 19 | 29 |
| 23..... | 185 | 260 | 93 | 289 | 57 | 1,160 | 580 | 247 | 57 | 20 | 20 | 25 |
| 24..... | 368 | 210 | 100 | 234 | 56 | 945 | 530 | 222 | 130 | 19 | 32 | 22 |
| 25..... | 464 | 197 | 107 | 185 | 55 | 905 | 635 | 289 | 165 | 30 | 67 | 20 |
| 26..... | 289 | 146 | 114 | 154 | 55 | 760 | 1,250 | 210 | 234 | 27 | 44 | 19 |
| 27..... | 185 | 138 | 93 | 138 | 58 | 608 | 2,460 | 173 | 197 | 24 | 27 | 18 |
| 28..... | 146 | 100 | 86 | 130 | 58 | 464 | 1,340 | 146 | 93 | 22 | 23 | 18 |
| 29..... | 165 | 122 | 107 | 114 | ----- | 386 | 2,460 | 130 | 86 | 24 | 20 | 16 |
| 30..... | 138 | 122 | 86 | 107 | ----- | 334 | 4,220 | 114 | 138 | 41 | 18 | 16 |
| 31..... | 107 | ----- | 69 | 100 | ----- | 351 | ----- | 107 | ----- | 26 | 17 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 608 | 48 | 169 | 1.51 | 1.74 |
| November..... | 795 | 58 | 206 | 1.84 | 2.05 |
| December..... | 424 | 69 | 126 | 1.12 | 1.29 |
| January..... | 1,440 | 46 | 188 | 1.68 | 1.94 |
| February..... | 93 | 55 | 69.0 | .616 | .64 |
| March..... | 1,160 | 57 | 413 | 3.69 | 4.25 |
| April..... | 4,950 | 368 | 1,270 | 11.3 | 12.61 |
| May..... | 4,450 | 107 | 748 | 6.68 | 7.70 |
| June..... | 234 | 45 | 105 | .938 | 1.05 |
| July..... | 386 | 19 | 65.8 | .588 | .68 |
| August..... | 197 | 17 | 42.2 | .377 | .43 |
| September..... | 122 | 10 | 29.3 | .262 | .29 |
| The year..... | 4,950 | 10 | 286 | 2.55 | 34.67 |

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 October, 1927; October, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 12,600 second-feet Apr. 6 (gage height, 10.74 feet); minimum, 98 second-feet Sept. 9 (gage height, 2.81 feet). 1915-1929: 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 for periods of ice effect (Dec. 8-16 and Dec. 23 to Mar. 16) and those for estimated periods (Oct. 1-22 and Sept. 15-30), which are good. No storage above since flood of November, 1927.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|-------|-------|-------|--------|--------|-------|-------|-------|------|-------|
| 1..... | 295 | 252 | 440 | 252 | 377 | 382 | 5,110 | 4,180 | 866 | 1,760 | 199 | 168 |
| 2..... | 285 | 252 | 554 | 252 | 364 | 364 | 6,100 | 3,910 | 768 | 1,320 | 187 | 168 |
| 3..... | 248 | 289 | 519 | 259 | 354 | 345 | 4,000 | 5,500 | 782 | 995 | 193 | 168 |
| 4..... | 235 | 445 | 525 | 252 | 345 | 364 | 3,640 | 4,820 | 747 | †31 | 224 | 171 |
| 5..... | 240 | 468 | 548 | 255 | 336 | 445 | 4,450 | 3,910 | 720 | †17 | 345 | 193 |
| 6..... | 150 | 377 | 616 | 579 | 336 | 1,040 | 9,190 | 4,540 | 938 | 740 | 282 | 130 |
| 7..... | 240 | 350 | 440 | 955 | 336 | 1,160 | 8,460 | 4,360 | 775 | †42 | 255 | 156 |
| 8..... | 260 | 350 | 382 | 754 | 382 | 708 | 9,190 | 3,910 | 662 | 694 | 228 | 168 |
| 9..... | 196 | 323 | 350 | 519 | 408 | 536 | 7,560 | 2,950 | 591 | 668 | 215 | 146 |
| 10..... | 235 | 282 | 323 | 548 | 403 | 513 | 5,110 | 2,510 | 548 | 548 | 218 | 1,400 |
| 11..... | 238 | 282 | 310 | 490 | 387 | 490 | 3,550 | 2,240 | 507 | 440 | 274 | 1,780 |
| 12..... | 215 | 252 | 302 | 451 | 368 | 507 | 3,030 | 1,990 | 525 | 434 | 403 | 688 |
| 13..... | 190 | 259 | 302 | 396 | 368 | 955 | 2,800 | 1,820 | 451 | 387 | 314 | 434 |
| 14..... | 220 | 248 | 314 | 354 | 373 | 2,370 | 2,510 | 1,660 | 513 | 424 | 259 | 387 |
| 15..... | 260 | 248 | 332 | 345 | 387 | 2,800 | 2,240 | 3,630 | 1,490 | 656 | 289 | 690 |
| 16..... | 230 | 245 | 350 | 341 | 403 | 7,340 | 2,240 | 3,280 | 880 | 424 | 573 | 660 |
| 17..... | 235 | 297 | 440 | 336 | 418 | 5,900 | 2,800 | 2,950 | 688 | 359 | 323 | 310 |
| 18..... | 400 | 810 | 2,070 | 462 | 440 | 2,880 | 3,110 | 2,240 | 548 | 336 | 259 | 360 |
| 19..... | 980 | 636 | 1,710 | 5,110 | 398 | 3,110 | 2,800 | 2,510 | 479 | 373 | 231 | 350 |
| 20..... | 750 | 1,440 | 1,160 | 2,580 | 345 | 4,450 | 2,880 | 3,460 | 462 | 336 | 221 | 310 |
| 21..... | 650 | 1,160 | 845 | 1,280 | 306 | 4,180 | 4,450 | 2,370 | 451 | 297 | 206 | 280 |
| 22..... | 530 | 859 | 496 | 1,080 | 282 | 7,340 | 4,360 | 2,110 | 502 | 278 | 193 | 183 |
| 23..... | 387 | 682 | 440 | 817 | 282 | 10,200 | 4,540 | 1,820 | 642 | 263 | 190 | 196 |
| 24..... | 387 | 616 | 403 | 803 | 285 | 9,700 | 4,450 | 1,660 | 1,870 | 259 | 199 | 196 |
| 25..... | 408 | 573 | 429 | 616 | 285 | 5,500 | 5,500 | 1,930 | 1,540 | 297 | 202 | 195 |
| 26..... | 350 | 490 | 445 | 598 | 285 | 5,500 | 11,100 | 1,610 | 2,110 | 373 | 196 | 194 |
| 27..... | 302 | 392 | 451 | 536 | 298 | 4,730 | 8,000 | 1,420 | 1,200 | 323 | 193 | 190 |
| 28..... | 302 | 364 | 434 | 502 | 364 | 3,820 | 5,700 | 1,280 | 910 | 274 | 174 | 175 |
| 29..... | 302 | 468 | 392 | 468 | ----- | 2,950 | 8,700 | 1,160 | 1,460 | 263 | 168 | 150 |
| 30..... | 289 | 445 | 336 | 434 | ----- | 2,720 | 5,900 | 1,160 | 1,200 | 231 | 168 | 280 |
| 31..... | 270 | ----- | 293 | 398 | ----- | 3,030 | ----- | 1,040 | ----- | 231 | 168 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 980 | 150 | 332 | 0.483 | 0.56 |
| November..... | 1,440 | 245 | 472 | .687 | .77 |
| December..... | 2,070 | 293 | 547 | .796 | .92 |
| January..... | 5,110 | 252 | 743 | 1.08 | 1.24 |
| February..... | 440 | 282 | 354 | .515 | .54 |
| March..... | 10,200 | 345 | 3,110 | 4.53 | 5.22 |
| April..... | 11,100 | 2,240 | 5,120 | 7.45 | 8.31 |
| May..... | 5,500 | 1,040 | 2,710 | 3.94 | 4.54 |
| June..... | 2,110 | 451 | 858 | 1.25 | 1.40 |
| July..... | 1,760 | 231 | 525 | .764 | .88 |
| August..... | 573 | 168 | 244 | .355 | .41 |
| September..... | 1,780 | 130 | 363 | .528 | .59 |
| The year..... | 11,100 | 130 | 1,280 | 1.86 | 25.38 |

MASCOMA RIVER AT MASCOMA, N. H.

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

DRAINAGE AREA.—148 square miles.

RECORDS AVAILABLE.—August, 1923, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,230 second-feet Mar. 24 (gage height, 4.42 feet); minimum, 1.4 second-feet Sept. 1 (gage height, 1.03 feet). 1923-1929: 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 excellent. Flow regulated by 1,500,000,000 cubic feet of storage developed above gage.

Daily and monthly discharge, in second-feet, 1923-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|-------|-------|-------|-------|------|------|-------|
| 1 | 119 | 140 | 131 | 115 | 129 | 117 | 448 | 839 | 17C | 139 | 119 | 23 |
| 2 | 119 | 140 | 115 | 142 | 74 | 115 | 551 | 659 | 15C | 141 | 117 | 92 |
| 3 | 117 | 98 | 137 | 142 | 2 | 99 | 578 | 736 | 14C | 139 | 119 | 115 |
| 4 | 117 | 64 | 137 | 137 | 131 | 119 | 520 | 1,060 | 141 | 113 | 105 | 117 |
| 5 | 117 | 142 | 137 | 135 | 131 | 117 | 498 | 1,110 | 134 | 137 | 123 | 123 |
| 6 | 115 | 142 | 137 | 117 | 127 | 115 | 612 | 892 | 145 | 130 | 123 | 123 |
| 7 | 115 | 142 | 137 | 147 | 131 | 115 | 790 | 750 | 151 | 115 | 121 | 117 |
| 8 | 117 | 142 | 131 | 142 | 127 | 115 | 924 | 672 | 13C | 141 | 121 | 103 |
| 9 | 123 | 140 | 115 | 147 | 66 | 113 | 1,080 | 578 | 121 | 139 | 119 | 128 |
| 10 | 123 | 135 | 142 | 142 | 8 | 105 | 1,080 | 483 | 14C | 139 | 130 | 132 |
| 11 | 121 | 131 | 137 | 145 | 129 | 119 | 868 | 403 | 14C | 139 | 130 | 134 |
| 12 | 121 | 137 | 137 | 133 | 129 | 115 | 665 | 343 | 14C | 139 | 123 | 137 |
| 13 | 123 | 137 | 135 | 121 | 129 | 119 | 509 | 299 | 14C | 132 | 123 | 139 |
| 14 | 123 | 137 | 131 | 145 | 127 | 123 | 417 | 275 | 14C | 119 | 125 | 121 |
| 15 | 117 | 135 | 125 | 137 | 125 | 125 | 362 | 339 | 13C | 141 | 125 | 113 |
| 16 | 115 | 135 | 109 | 145 | 68 | 121 | 339 | 535 | 13C | 141 | 128 | 139 |
| 17 | 115 | 131 | 131 | 145 | 15 | 117 | 378 | 685 | 15C | 141 | 119 | 139 |
| 18 | 115 | 127 | 133 | 137 | 140 | 165 | 562 | 665 | 15C | 139 | 103 | 139 |
| 19 | 117 | 137 | 131 | 125 | 133 | 221 | 697 | 568 | 15C | 137 | 123 | 139 |
| 20 | 119 | 133 | 137 | 103 | 133 | 366 | 672 | 562 | 15C | 119 | 125 | 139 |
| 21 | 117 | 129 | 142 | 137 | 131 | 466 | 704 | 573 | 151 | 105 | 123 | 123 |
| 22 | 127 | 129 | 133 | 133 | 113 | 564 | 876 | 498 | 134 | 132 | 123 | 107 |
| 23 | 129 | 129 | 113 | 135 | 115 | 832 | 860 | 425 | 12C | 132 | 123 | 132 |
| 24 | 131 | 123 | 133 | 131 | 99 | 1,180 | 723 | 362 | 144 | 130 | 115 | 130 |
| 25 | 133 | 119 | 115 | 131 | 121 | 1,120 | 647 | 378 | 141 | 130 | 98 | 130 |
| 26 | 135 | 131 | 137 | 127 | 121 | 834 | 723 | 412 | 141 | 130 | 117 | 125 |
| 27 | 133 | 127 | 137 | 111 | 121 | 723 | 1,030 | 366 | 141 | 123 | 117 | 121 |
| 28 | 127 | 127 | 137 | 137 | 121 | 635 | 1,040 | 306 | 13C | 109 | 117 | 115 |
| 29 | 140 | 127 | 145 | 137 | ----- | 525 | 1,900 | 262 | 130 | 128 | 115 | 103 |
| 30 | 140 | 142 | 115 | 133 | ----- | 439 | 924 | 226 | 117 | 125 | 113 | 119 |
| 31 | 140 | ----- | 137 | 131 | ----- | 395 | ----- | 201 | ----- | 123 | 84 | ----- |

| Month | Observed discharge in second-feet | | | Gain or loss in storage (millions of cubic feet) | Discharge in second-feet, corrected for storage | | Run-off in inches |
|-----------|-----------------------------------|---------|------|--|---|-----------------|-------------------|
| | Maximum | Minimum | Mean | | Mean | Per square mile | |
| October | 140 | 115 | 123 | -86.5 | 90.9 | 0.614 | 0.71 |
| November | 142 | 64 | 130 | -108.0 | 88.6 | .599 | .67 |
| December | 145 | 109 | 131 | -101.7 | 93.3 | .630 | .73 |
| January | 147 | 103 | 134 | +53.3 | 154 | 1.04 | 1.20 |
| February | 140 | 2 | 107 | -92.3 | 68.6 | .464 | .48 |
| March | 1,180 | 99 | 338 | +401.4 | 488 | 3.30 | 3.80 |
| April | 1,080 | 339 | 699 | +218.2 | 822 | 5.55 | 6.19 |
| May | 1,110 | 201 | 531 | -39.8 | 516 | 3.49 | 4.02 |
| June | 170 | 117 | 143 | -83.5 | 110 | .743 | .83 |
| July | 141 | 105 | 131 | -200.2 | 33.4 | .226 | .26 |
| August | 130 | 84 | 118 | -218.2 | 36.8 | .249 | .29 |
| September | 139 | 23 | 121 | -177.3 | 52.2 | .353 | .39 |
| The year | 1,180 | 2 | 226 | -395.1 | 213 | 1.44 | 19.57 |

OTTAUQUECHEE RIVER AT WOODSTOCK, VT.

LOCATION.—Chain gage at middle bridge in Woodstock, Windsor County, half a mile above mouth of South Branch of Ottauquechee River. Zero of gage is 670.60 feet above mean sea level.

DRAINAGE AREA.—126 square miles.

RECORDS AVAILABLE.—June, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, about 7,650 second-feet Apr. 26 (gage height, 8.50 feet); minimum, 11 second-feet Sept. 5 (gage height, 2.60 feet).

Maximum stage known, about 20.1 feet November, 1927.

REMARKS.—Records good except those for periods of ice effect (Nov. 27, 28, Dec. 8-10, 21-26, 31, Jan. 17, 18, and Jan. 22 to Mar. 16) and for estimated period (Jan. 1-16), which are fair. Some diurnal regulation. Small seasonal storage in reservoir at Plymouth.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1 | 89 | 84 | 123 | 89 | 96 | 112 | 1,060 | 1,060 | 162 | 215 | 35 | 20 |
| 2 | 86 | 88 | 135 | 86 | 94 | 94 | 1,480 | 1,020 | 140 | 11* | 34 | 18 |
| 3 | 73 | 82 | 123 | 82 | 94 | 90 | 840 | 2,300 | 140 | 9* | 30 | 20 |
| 4 | 69 | 125 | 112 | 80 | 94 | 110 | 765 | 1,210 | 137 | 8* | 77 | 20 |
| 5 | 72 | 108 | 116 | 78 | 96 | 129 | 1,110 | 970 | 129 | 9* | 74 | 14 |
| 6 | 38 | 103 | 123 | 92 | 96 | 248 | 2,470 | 1,060 | 162 | 8* | 53 | 16 |
| 7 | 70 | 88 | 103 | 110 | 106 | 200 | 2,650 | 970 | 129 | 9* | 47 | 15 |
| 8 | 77 | 86 | 89 | 89 | 112 | 140 | 2,650 | 765 | 116 | 15* | 29 | 18 |
| 9 | 53 | 80 | 78 | 92 | 105 | 110 | 1,840 | 570 | 101 | 11* | 30 | 60 |
| 10 | 68 | 62 | 74 | 103 | 92 | 99 | 880 | 455 | 90 | 8* | 36 | 540 |
| 11 | 72 | 80 | 73 | 88 | 83 | 97 | 570 | 385 | 84 | 74 | 162 | 660 |
| 12 | 63 | 92 | 92 | 80 | 77 | 116 | 540 | 362 | 74 | 57 | 200 | 230 |
| 13 | 53 | 74 | 88 | 78 | 74 | 200 | 480 | 320 | 74 | 5* | 76 | 112 |
| 14 | 73 | 76 | 80 | 78 | 74 | 730 | 408 | 282 | 142 | 53 | 62 | 59 |
| 15 | 78 | 63 | 76 | 80 | 76 | 1,850 | 362 | 925 | 300 | 63 | 62 | 300 |
| 16 | 68 | 73 | 96 | 88 | 92 | 3,470 | 320 | 925 | 135 | 43 | 53 | 162 |
| 17 | 70 | 110 | 96 | 103 | 103 | 1,320 | 480 | 730 | 103 | 38 | 52 | 125 |
| 18 | 84 | 146 | 1,290 | 215 | 97 | 925 | 510 | 480 | 89 | 32 | 40 | 50 |
| 19 | 187 | 127 | 385 | 1,990 | 92 | 880 | 455 | 695 | 83 | 4* | 39 | 96 |
| 20 | 150 | 265 | 265 | 630 | 90 | 925 | 480 | 730 | 86 | 46 | 33 | 86 |
| 21 | 133 | 174 | 135 | 340 | 90 | 925 | 840 | 510 | 77 | 41 | 33 | 78 |
| 22 | 112 | 146 | 89 | 215 | 90 | 3,250 | 695 | 430 | 69 | 36 | 32 | 72 |
| 23 | 105 | 129 | 84 | 137 | 90 | 4,950 | 730 | 340 | 68 | 28 | 28 | 62 |
| 24 | 125 | 118 | 83 | 116 | 90 | 3,470 | 880 | 340 | 89 | 26 | 30 | 53 |
| 25 | 120 | 118 | 90 | 108 | 92 | 1,320 | 1,260 | 570 | 105 | 36 | 33 | 62 |
| 26 | 110 | 108 | 96 | 103 | 96 | 1,320 | 5,850 | 430 | 96 | 53 | 34 | 51 |
| 27 | 84 | 103 | 105 | 101 | 110 | 1,020 | 2,840 | 320 | 74 | 41 | 20 | 52 |
| 28 | 96 | 101 | 129 | 99 | 114 | 730 | 1,600 | 265 | 67 | 31 | 18 | 49 |
| 29 | 89 | 99 | 110 | 97 | ----- | 570 | 4,160 | 230 | 135 | 30 | 20 | 54 |
| 30 | 96 | 99 | 96 | 96 | ----- | 510 | 1,540 | 200 | 116 | 6* | 32 | 56 |
| 31 | 92 | ----- | 92 | 96 | ----- | 510 | ----- | 187 | ----- | 5* | 25 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 187 | 38 | 88.9 | 0.706 | 0.81 |
| November | 265 | 62 | 107 | .849 | .95 |
| December | 1,290 | 73 | 151 | 1.20 | 1.38 |
| January | 1,990 | 78 | 188 | 1.49 | 1.72 |
| February | 114 | 74 | 93.4 | .741 | .77 |
| March | 4,950 | 90 | 981 | 7.79 | 8.98 |
| April | 5,850 | 320 | 1,350 | 10.7 | 11.94 |
| May | 2,300 | 187 | 646 | 5.13 | 5.91 |
| June | 300 | 67 | 112 | .889 | .99 |
| July | 215 | 26 | 66.5 | .528 | .61 |
| August | 200 | 18 | 49.3 | .391 | .45 |
| September | 660 | 14 | 107 | .849 | .95 |
| The year | 5,850 | 14 | 329 | 2.61 | 35.46 |

SUGAR RIVER AT WEST CLAREMONT, N. H.

LOCATION.—Water-stage recorder 0.2 mile below Redwater Brook at West Claremont, Sullivan County.

DRAINAGE AREA.—270 square miles.

RECORDS AVAILABLE.—October, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 3,440 second-feet Mar. 23 (gage height, 5.16 feet); minimum, 26 second-feet Oct. 11 (gage height, 0.84 foot).

REMARKS.—Records good except those for periods of ice effect (Jan. 4-6 and Jan. 15 to Mar. 12), which are fair, and those for estimated periods (Oct. 7-10 and Oct. 12 to Nov. 28), which may be poor.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 109 | 140 | 118 | 154 | 95 | 87 | 1,110 | 1,200 | 238 | 201 | 89 | 71 |
| 2..... | 93 | 135 | 120 | 146 | 91 | 91 | 1,340 | 1,050 | 183 | 168 | 82 | 71 |
| 3..... | 98 | 135 | 143 | 116 | 89 | 95 | 982 | 1,810 | 188 | 138 | 78 | 57 |
| 4..... | 95 | 125 | 149 | 113 | 113 | 118 | 890 | 2,060 | 186 | 123 | 95 | 59 |
| 5..... | 84 | 135 | 160 | 109 | 100 | 154 | 990 | 1,440 | 174 | 130 | 91 | 67 |
| 6..... | 75 | 200 | 177 | 141 | 87 | 292 | 1,340 | 1,340 | 183 | 130 | 89 | 62 |
| 7..... | 79 | 140 | 136 | 534 | 87 | 332 | 1,240 | 1,200 | 188 | 113 | 65 | 63 |
| 8..... | 125 | 135 | 123 | 292 | 98 | 284 | 1,490 | 1,130 | 188 | 138 | 60 | 82 |
| 9..... | 84 | 140 | 138 | 253 | 113 | 250 | 1,390 | 960 | 141 | 126 | 60 | 180 |
| 10..... | 78 | 160 | 152 | 232 | 111 | 225 | 1,110 | 808 | 149 | 118 | 56 | 390 |
| 11..... | 68 | 135 | 116 | 207 | 113 | 225 | 845 | 737 | 146 | 104 | 170 | 354 |
| 12..... | 72 | 120 | 133 | 192 | 113 | 225 | 709 | 667 | 118 | 93 | 219 | 216 |
| 13..... | 62 | 120 | 120 | 174 | 100 | 394 | 618 | 588 | 102 | 93 | 136 | 154 |
| 14..... | 71 | 135 | 126 | 174 | 100 | 822 | 564 | 518 | 171 | 80 | 116 | 133 |
| 15..... | 130 | 125 | 100 | 177 | 91 | 1,130 | 552 | 758 | 765 | 100 | 118 | 138 |
| 16..... | 92 | 120 | 126 | 183 | 95 | 2,210 | 582 | 845 | 408 | 91 | 133 | 136 |
| 17..... | 88 | 115 | 152 | 198 | 82 | 2,000 | 875 | 928 | 272 | 82 | 109 | 118 |
| 18..... | 94 | 115 | 482 | 222 | 98 | 1,290 | 1,290 | 737 | 210 | 80 | 87 | 111 |
| 19..... | 335 | 160 | 485 | 995 | 109 | 1,150 | 1,170 | 630 | 204 | 80 | 93 | 102 |
| 20..... | 270 | 310 | 318 | 852 | 102 | 1,490 | 1,290 | 890 | 390 | 75 | 87 | 102 |
| 21..... | 220 | 310 | 239 | 485 | 116 | 1,540 | 2,060 | 758 | 276 | 68 | 82 | 89 |
| 22..... | 210 | 260 | 146 | 399 | 128 | 1,940 | 2,060 | 737 | 204 | 89 | 73 | 75 |
| 23..... | 200 | 245 | 149 | 332 | 95 | 3,200 | 1,600 | 588 | 180 | 86 | 75 | 91 |
| 24..... | 280 | 170 | 149 | 272 | 82 | 2,670 | 1,390 | 512 | 168 | 93 | 78 | 82 |
| 25..... | 280 | 150 | 160 | 256 | 77 | 1,820 | 1,440 | 612 | 171 | 116 | 82 | 73 |
| 26..... | 220 | 165 | 174 | 219 | 84 | 1,490 | 2,190 | 540 | 154 | 102 | 91 | 77 |
| 27..... | 150 | 150 | 141 | 174 | 73 | 1,290 | 1,820 | 455 | 188 | 98 | 73 | 82 |
| 28..... | 130 | 140 | 204 | 177 | 80 | 1,050 | 1,340 | 390 | 138 | 86 | 70 | 68 |
| 29..... | 140 | 130 | 246 | 177 | ----- | 838 | 1,490 | 340 | 201 | 102 | 73 | 70 |
| 30..... | 130 | 111 | 152 | 143 | ----- | 758 | 1,490 | 309 | 171 | 82 | 71 | 84 |
| 31..... | 140 | ----- | 168 | 120 | ----- | 765 | ----- | 284 | ----- | 86 | 60 | ----- |

| Month | Discharge in second-feet | | | Gain or loss in storage (millions of cubic feet) | Discharge in second-feet, corrected for storage | | Run-off in inches |
|----------------|--------------------------|---------|-------|--|---|-----------------|-------------------|
| | Maximum | Minimum | Mean | | Mean | Per square mile | |
| October..... | 335 | 62 | 139 | -165 | 77.2 | 0.286 | 0.33 |
| November..... | 310 | 111 | 158 | -102 | 118 | .437 | .49 |
| December..... | 485 | 100 | 177 | -102 | 139 | .515 | .59 |
| January..... | 935 | 109 | 263 | -42 | 247 | .915 | 1.05 |
| February..... | 128 | 73 | 96.9 | +84 | 132 | .489 | .51 |
| March..... | 3,200 | 87 | 975 | +399 | 1,120 | 4.15 | 4.78 |
| April..... | 2,190 | 552 | 1,240 | +367 | 1,380 | 5.11 | 5.70 |
| May..... | 2,060 | 284 | 833 | -66 | 808 | 2.99 | 3.45 |
| June..... | 765 | 102 | 211 | -292 | 98.2 | .364 | .41 |
| July..... | 201 | 68 | 106 | -144 | 51.7 | .191 | .22 |
| August..... | 219 | 56 | 92.3 | -68 | 66.9 | .248 | .29 |
| September..... | 390 | 57 | 115 | -34 | 102 | .378 | .42 |
| The year..... | 3,200 | 56 | 369 | -165 | 364 | 1.35 | 18.24 |

WEST RIVER AT NEWFANE, VT.

LOCATION.—Chain gage at highway bridge $1\frac{1}{4}$ miles northeast of Newfane, Windham County.

DRAINAGE AREA.—310 square miles.

RECORDS AVAILABLE.—September, 1919, to September, 1923; October, 1928, to September, 1929.

EXTREMES OF DISCHARGE.—Maximum discharge during year, 8,680 second-feet Mar. 23 (gage height, 10.57 feet); minimum, 22 second-feet Aug. 3 and Sept. 3-7 (gage height, 3.77 feet).

1919-1923, 1928-1929: Maximum and minimum discharge, same as given above.

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

REMARKS.—Records good except those for estimated periods (Oct. 1-10 and Apr. 1-9) and for periods of ice effect (Nov. 28 to Dec. 1, Dec. 21 to Jan. 19, and Jan. 20 to Mar. 15), which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1 | 100 | 131 | 131 | 167 | 170 | 195 | 2,000 | 1,880 | 207 | 222 | 35 | 33 |
| 2 | 100 | 167 | 206 | 170 | 174 | 188 | 3,000 | 2,120 | 183 | 179 | 35 | 27 |
| 3 | 100 | 133 | 210 | 202 | 174 | 192 | 2,000 | 3,960 | 183 | 141 | 35 | 24 |
| 4 | 100 | 188 | 222 | 188 | 174 | 202 | 1,800 | 2,510 | 190 | 127 | 50 | 24 |
| 5 | 100 | 198 | 192 | 178 | 170 | 241 | 2,200 | 1,760 | 190 | 138 | 69 | 24 |
| 6 | 100 | 161 | 284 | 222 | 167 | 330 | 4,000 | 1,760 | 218 | 119 | 83 | 24 |
| 7 | 100 | 155 | 229 | 330 | 202 | 443 | 4,400 | 1,760 | 272 | 119 | 65 | 24 |
| 8 | 100 | 161 | 174 | 284 | 222 | 356 | 4,400 | 1,430 | 183 | 98 | 69 | 27 |
| 9 | 100 | 178 | 152 | 241 | 202 | 284 | 3,100 | 1,080 | 157 | 113 | 52 | 44 |
| 10 | 100 | 161 | 145 | 222 | 181 | 214 | 1,760 | 850 | 144 | 124 | 48 | 562 |
| 11 | 80 | 148 | 145 | 202 | 155 | 210 | 1,180 | 721 | 136 | 83 | 95 | 250 |
| 12 | 74 | 136 | 152 | 192 | 136 | 210 | 1,130 | 600 | 111 | 63 | 429 | 196 |
| 13 | 78 | 120 | 155 | 174 | 128 | 284 | 985 | 640 | 103 | 61 | 160 | 113 |
| 14 | 70 | 109 | 164 | 170 | 133 | 750 | 850 | 492 | 106 | 56 | 100 | 108 |
| 15 | 93 | 117 | 167 | 167 | 161 | 1,240 | 762 | 1,280 | 2,000 | 52 | 93 | 342 |
| 16 | 95 | 122 | 184 | 167 | 131 | 5,960 | 806 | 1,230 | 562 | 61 | 67 | 203 |
| 17 | 84 | 139 | 210 | 192 | 131 | 4,400 | 1,130 | 1,330 | 342 | 65 | 61 | 154 |
| 18 | 80 | 184 | 3,120 | 237 | 131 | 2,240 | 1,330 | 806 | 222 | 52 | 56 | 196 |
| 19 | 794 | 184 | 1,530 | 5,420 | 155 | 1,590 | 1,130 | 940 | 176 | 49 | 48 | 176 |
| 20 | 413 | 584 | 794 | 2,240 | 152 | 2,240 | 1,430 | 985 | 207 | 46 | 44 | 206 |
| 21 | 214 | 624 | 383 | 794 | 142 | 2,100 | 3,810 | 1,030 | 150 | 42 | 44 | 95 |
| 22 | 192 | 307 | 280 | 584 | 152 | 4,400 | 2,380 | 985 | 130 | 44 | 38 | 83 |
| 23 | 188 | 250 | 222 | 356 | 142 | 8,260 | 1,880 | 721 | 193 | 40 | 40 | 74 |
| 24 | 184 | 202 | 181 | 222 | 145 | 7,270 | 2,000 | 721 | 160 | 29 | 90 | 69 |
| 25 | 206 | 195 | 202 | 206 | 167 | 3,060 | 2,920 | 1,030 | 200 | 44 | 113 | 65 |
| 26 | 152 | 181 | 202 | 178 | 152 | 3,360 | 6,510 | 680 | 210 | 200 | 78 | 59 |
| 27 | 145 | 167 | 202 | 174 | 167 | 2,780 | 3,960 | 562 | 207 | 147 | 50 | 56 |
| 28 | 148 | 158 | 202 | 174 | 184 | 2,120 | 2,780 | 680 | 210 | 85 | 42 | 50 |
| 29 | 167 | 148 | 202 | 174 | ----- | 1,650 | 6,320 | 370 | 762 | 67 | 38 | 50 |
| 30 | 178 | 136 | 202 | 174 | ----- | 1,540 | 2,780 | 318 | 342 | 54 | 35 | 48 |
| 31 | 133 | ----- | 174 | 170 | ----- | 1,280 | ----- | 250 | ----- | 46 | 35 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 794 | 70 | 154 | 0.467 | 0.57 |
| November | 624 | 109 | 195 | .629 | .70 |
| December | 3,120 | 131 | 355 | 1.15 | 1.33 |
| January | 5,420 | 167 | 470 | 1.52 | 1.75 |
| February | 222 | 128 | 161 | .519 | .54 |
| March | 8,260 | 188 | 1,920 | 6.1f | 7.14 |
| April | 6,510 | 762 | 2,490 | 8.0f | 8.96 |
| May | 3,960 | 260 | 1,140 | 3.6f | 4.24 |
| June | 2,000 | 103 | 282 | .910 | 1.02 |
| July | 222 | 29 | 89.2 | .288 | .33 |
| August | 429 | 35 | 74.1 | .299 | .28 |
| September | 562 | 24 | 110 | .355 | .40 |
| The year | 8,260 | 24 | 623 | 2.0f | 27.26 |

ASHUELOT RIVER NEAR GILSUM, N. H.

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

DRAINAGE AREA.—71.1 square miles (revised).

RECORDS AVAILABLE.—August, 1922, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,100 second-feet May 3 (gage height, 7.18 feet); minimum, 5.6 second-feet Sept. 19 (gage height, 0.65 foot).

1922-1929: Maximum discharge, 2,760 second-feet Nov. 4, 1927 (gage height, 11.34 feet); minimum, approximately 1 second-foot Oct. 6, 1922, and July 10, 1923.

REMARKS.—Records good except those for periods of ice effect (Dec. 7, 8, 10, Dec. 22 to Feb. 17, Feb. 21-27, and Mar. 9-15) and for estimated periods (Oct. 31, Nov. 1, 10, 11, 27, 28, Mar. 22, May 3, Sept. 19 and 20), which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | 70 | 43 | 49 | 55 | 49 | 45 | 379 | 451 | 79 | 34 | 28 | 15 |
| 2..... | 68 | 37 | 42 | 50 | 48 | 45 | 512 | 370 | 66 | 30 | 25 | 11 |
| 3..... | 66 | 45 | 42 | 48 | 46 | 45 | 442 | 826 | 58 | 24 | 26 | 20 |
| 4..... | 62 | 51 | 52 | 46 | 45 | 49 | 379 | 878 | 49 | 28 | 37 | 18 |
| 5..... | 61 | 57 | 64 | 45 | 44 | 133 | 379 | 648 | 49 | 23 | 28 | 19 |
| 6..... | 69 | 49 | 69 | 79 | 43 | 94 | 432 | 556 | 55 | 24 | 34 | 18 |
| 7..... | 67 | 50 | 53 | 183 | 58 | 189 | 442 | 502 | 54 | 24 | 22 | 19 |
| 8..... | 66 | 45 | 39 | 161 | 77 | 152 | 512 | 414 | 48 | 24 | 22 | 18 |
| 9..... | 60 | 45 | 29 | 134 | 104 | 110 | 556 | 338 | 41 | 26 | 28 | 22 |
| 10..... | 59 | 43 | 28 | 107 | 90 | 95 | 502 | 289 | 35 | 19 | 24 | 33 |
| 11..... | 56 | 41 | 28 | 89 | 79 | 87 | 405 | 229 | 31 | 17 | 40 | 27 |
| 12..... | 55 | 39 | 43 | 81 | 69 | 79 | 346 | 196 | 27 | 39 | 45 | 21 |
| 13..... | 56 | 38 | 24 | 75 | 60 | 99 | 308 | 173 | 22 | 28 | 31 | 19 |
| 14..... | 51 | 34 | 42 | 70 | 52 | 211 | 268 | 157 | 22 | 22 | 32 | 23 |
| 15..... | 53 | 30 | 21 | 68 | 49 | 338 | 240 | 233 | 64 | 21 | 26 | 14 |
| 16..... | 54 | 28 | 37 | 69 | 54 | 578 | 231 | 300 | 67 | 22 | 27 | 13 |
| 17..... | 50 | 34 | 40 | 71 | 60 | 624 | 289 | 346 | 71 | 18 | 27 | 16 |
| 18..... | 53 | 37 | 121 | 107 | 65 | 545 | 370 | 289 | 44 | 18 | 22 | 14 |
| 19..... | 60 | 50 | 161 | 144 | 67 | 471 | 370 | 256 | 40 | 19 | 22 | 15 |
| 20..... | 61 | 84 | 101 | 168 | 76 | 471 | 379 | 315 | 38 | 22 | 24 | 17 |
| 21..... | 42 | 76 | 71 | 148 | 64 | 481 | 624 | 300 | 39 | 20 | 23 | 19 |
| 22..... | 36 | 67 | 62 | 132 | 56 | 624 | 600 | 289 | 54 | 19 | 24 | 18 |
| 23..... | 49 | 49 | 51 | 120 | 52 | 852 | 502 | 231 | 45 | 19 | 21 | 19 |
| 24..... | 65 | 44 | 41 | 91 | 49 | 852 | 512 | 197 | 45 | 24 | 25 | 18 |
| 25..... | 61 | 42 | 35 | 78 | 45 | 672 | 600 | 218 | 39 | 43 | 18 | 19 |
| 26..... | 56 | 38 | 32 | 69 | 45 | 578 | 852 | 194 | 22 | 43 | 20 | 19 |
| 27..... | 57 | 41 | 30 | 67 | 43 | 512 | 774 | 165 | 30 | 34 | 17 | 21 |
| 28..... | 50 | 44 | 43 | 66 | 50 | 451 | 624 | 139 | 33 | 31 | 20 | 19 |
| 29..... | 59 | 48 | 57 | 60 | ----- | 379 | 624 | 121 | 49 | 30 | 19 | 19 |
| 30..... | 60 | 37 | 57 | 54 | ----- | 338 | 578 | 104 | 32 | 26 | 21 | 21 |
| 31..... | 52 | ----- | 60 | 51 | ----- | 322 | ----- | 94 | ----- | 26 | 20 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 70 | 36 | 57.5 | 0.809 | 0.93 |
| November..... | 84 | 28 | 45.5 | .640 | .71 |
| December..... | 161 | 21 | 52.4 | .737 | .85 |
| January..... | 183 | 45 | 89.9 | 1.26 | 1.45 |
| February..... | 104 | 43 | 58.5 | .823 | .86 |
| March..... | 852 | 45 | 339 | 4.77 | 5.60 |
| April..... | 852 | 231 | 468 | 6.58 | 7.34 |
| May..... | 878 | 94 | 317 | 4.46 | 5.14 |
| June..... | 97 | 26 | 46.7 | .657 | .73 |
| July..... | 43 | 17 | 25.7 | .361 | .42 |
| August..... | 45 | 17 | 25.7 | .361 | .42 |
| September..... | 33 | 11 | 18.8 | .264 | .29 |
| The year..... | 878 | 11 | 129 | 1.81 | 24.64 |

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 (revised).

RECORDS AVAILABLE.—February, 1907, to December, 1909; July, 1914, to September, 1929.

EXTREMES.—Maximum discharge during year, 4,310 second-feet Mar. 24 (gage height, 6.89 feet); minimum, 10 second-feet Sept. 15 (gage height, 2.07 feet).

1907–1909, 1914–1929: Maximum discharge, 8,940 second-feet Mar. 29, 1920 (gage height, 9.98 feet); minimum, 5 second-feet Aug. 12, 1923 (gage height, 1.87 feet).

REMARKS.—Records good except those for periods of ice effect (Nov. 28, Dec. 9 and 10, 24–27, Jan. 3–6, and Jan. 8 to Mar. 15), which are fair. Flow regulated somewhat by storage reservoir.

Daily and monthly discharge, in second-feet, 1928–29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 442 | 320 | 284 | 342 | 247 | 167 | 1,560 | 2,090 | 442 | 293 | 120 | 42 |
| 2..... | 470 | 294 | 320 | 293 | 251 | 143 | 1,690 | 1,690 | 320 | 275 | 108 | 49 |
| 3..... | 415 | 365 | 390 | 290 | 251 | 161 | 1,820 | 2,090 | 302 | 228 | 114 | 57 |
| 4..... | 442 | 293 | 390 | 251 | 255 | 187 | 1,560 | 3,410 | 365 | 200 | 22 | 91 |
| 5..... | 415 | 342 | 390 | 251 | 263 | 247 | 1,500 | 3,110 | 342 | 259 | 127 | 77 |
| 6..... | 390 | 342 | 442 | 255 | 228 | 530 | 1,500 | 2,660 | 342 | 207 | 132 | 70 |
| 7..... | 390 | 302 | 415 | 1,100 | 247 | 735 | 1,500 | 2,510 | 365 | 91 | 91 | 70 |
| 8..... | 390 | 342 | 342 | 952 | 390 | 562 | 1,690 | 2,370 | 390 | 167 | 87 | 26 |
| 9..... | 365 | 342 | 293 | 735 | 500 | 470 | 1,690 | 2,090 | 302 | 193 | 102 | 70 |
| 10..... | 342 | 342 | 280 | 595 | 415 | 442 | 1,620 | 1,620 | 320 | 161 | 143 | 54 |
| 11..... | 342 | 214 | 247 | 500 | 385 | 415 | 1,500 | 1,440 | 275 | 221 | 63 | 200 |
| 12..... | 342 | 224 | 284 | 442 | 302 | 365 | 1,440 | 1,100 | 267 | 137 | 114 | 167 |
| 13..... | 342 | 259 | 284 | 415 | 239 | 390 | 1,820 | 1,000 | 200 | 152 | 122 | 140 |
| 14..... | 342 | 228 | 271 | 415 | 228 | 905 | 1,050 | 860 | 298 | 63 | 161 | 73 |
| 15..... | 342 | 302 | 243 | 415 | 214 | 1,690 | 1,000 | 1,050 | 470 | 95 | 127 | 10 |
| 16..... | 320 | 193 | 130 | 415 | 214 | 2,960 | 1,100 | 1,150 | 390 | 149 | 132 | 47 |
| 17..... | 342 | 228 | 298 | 442 | 239 | 3,410 | 1,690 | 1,380 | 342 | 104 | 143 | 122 |
| 18..... | 342 | 161 | 320 | 530 | 280 | 3,110 | 2,370 | 1,150 | 320 | 127 | 132 | 140 |
| 19..... | 342 | 267 | 530 | 697 | 298 | 2,660 | 2,660 | 1,100 | 259 | 106 | 112 | 60 |
| 20..... | 320 | 316 | 530 | 860 | 284 | 2,510 | 2,090 | 1,150 | 415 | 137 | 117 | 73 |
| 21..... | 275 | 442 | 442 | 775 | 302 | 2,510 | 2,510 | 1,150 | 415 | 65 | 127 | 40 |
| 22..... | 293 | 365 | 365 | 697 | 280 | 2,660 | 3,410 | 1,150 | 311 | 104 | 80 | 104 |
| 23..... | 271 | 284 | 271 | 595 | 267 | 3,560 | 2,960 | 1,150 | 342 | 140 | 127 | 152 |
| 24..... | 284 | 293 | 293 | 415 | 275 | 4,810 | 2,370 | 952 | 320 | 99 | 130 | 137 |
| 25..... | 302 | 251 | 243 | 365 | 298 | 3,860 | 2,090 | 860 | 280 | 132 | 62 | 112 |
| 26..... | 342 | 302 | 251 | 342 | 120 | 2,960 | 2,370 | 735 | 390 | 161 | 77 | 122 |
| 27..... | 320 | 259 | 263 | 342 | 197 | 2,370 | 2,810 | 775 | 415 | 137 | 104 | 122 |
| 28..... | 130 | 228 | 284 | 342 | 193 | 2,090 | 2,510 | 660 | 306 | 80 | 149 | 132 |
| 29..... | 365 | 200 | 342 | 342 | ----- | 1,950 | 2,370 | 627 | 320 | 117 | 122 | 71 |
| 30..... | 267 | 228 | 342 | 316 | ----- | 1,820 | 2,370 | 562 | 342 | 127 | 112 | 77 |
| 31..... | 259 | ----- | 365 | 320 | ----- | 1,440 | ----- | 500 | ----- | 117 | 87 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 470 | 130 | 340 | 0.810 | 0.93 |
| November..... | 442 | 161 | 284 | .676 | .75 |
| December..... | 530 | 130 | 325 | .774 | .89 |
| January..... | 1,100 | 251 | 485 | 1.15 | 1.33 |
| February..... | 500 | 120 | 273 | .650 | .68 |
| March..... | 4,310 | 143 | 1,660 | 3.95 | 4.55 |
| April..... | 3,410 | 1,000 | 1,920 | 4.57 | 5.10 |
| May..... | 3,410 | 500 | 1,420 | 3.38 | 3.90 |
| June..... | 470 | 200 | 339 | .807 | .90 |
| July..... | 293 | 63 | 150 | .357 | .41 |
| August..... | 161 | 22 | 111 | .264 | .30 |
| September..... | 200 | 10 | 90.2 | .215 | .24 |
| The year..... | 4,310 | 10 | 620 | 1.48 | 19.98 |

OTTER BROOK NEAR KEENE, N. H.

LOCATION.—Water-stage recorder at bridge on Keene-Sullivan highway, $3\frac{1}{2}$ miles northeast of Keene, Cheshire County, and $3\frac{1}{2}$ miles above confluence with Minnewawa Brook.

DRAINAGE AREA.—41.8 square miles (revised).

RECORDS AVAILABLE.—October, 1923, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,040 second-feet Mar. 15; minimum, 2.7 second-feet Sept. 9 (gage height, 1.83 feet).

1923-1929: Maximum discharge, 2,000 second-feet Nov. 4, 1927 (gage height, 6.87 feet); minimum, 2 second-feet several days in August and November, 1924.

REMARKS.—Records good except those for periods of ice effect (Nov. 26 to Dec. 2 and Dec. 6 to Mar. 17) and for estimated period (Oct. 1-20), which are fair. Little if any utilization of storage above station.

Daily and monthly discharge, in second-feet, 1927-29

| Days | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | 52 | 36 | 32 | 19 | 19 | 6.6 | 242 | 204 | 41 | 31 | 6.3 | 5.1 |
| 2..... | 52 | 36 | 32 | 23 | 19 | 6.6 | 268 | 171 | 32 | 30 | 6.0 | 4.6 |
| 3..... | 52 | 34 | 43 | 11 | 11 | 6.9 | 196 | 695 | 37 | 29 | 5.1 | 4.6 |
| 4..... | 47 | 33 | 56 | 9.0 | 9.4 | 7.9 | 181 | 458 | 39 | 24 | 9.4 | 4.2 |
| 5..... | 48 | 36 | 58 | 7.9 | 12 | 69 | 188 | 329 | 38 | 27 | 7.2 | 3.3 |
| 6..... | 48 | 30 | 57 | 29 | 15 | 178 | 227 | 345 | 43 | 28 | 6.6 | 3.5 |
| 7..... | 18 | 35 | 57 | 27 | 27 | 103 | 196 | 345 | 39 | 20 | 6.3 | 3.1 |
| 8..... | 20 | 43 | 38 | 62 | 71 | 58 | 221 | 268 | 34 | 24 | 5.8 | 3.5 |
| 9..... | 25 | 46 | 31 | 51 | 65 | 21 | 221 | 207 | 25 | 27 | 6.9 | 6.0 |
| 10..... | 37 | 38 | 31 | 44 | 47 | 18 | 186 | 166 | 30 | 27 | 6.0 | 15 |
| 11..... | 42 | 30 | 27 | 45 | 31 | 14 | 156 | 132 | 34 | 25 | 13 | 11 |
| 12..... | 26 | 37 | 25 | 41 | 32 | 16 | 140 | 114 | 33 | 24 | 14 | 8.2 |
| 13..... | 18 | 36 | 23 | 37 | 22 | 56 | 138 | 108 | 32 | 23 | 11 | 6.3 |
| 14..... | 12 | 38 | 22 | 22 | 22 | 166 | 125 | 98 | 39 | 16 | 6.9 | 5.8 |
| 15..... | 23 | 36 | 22 | 28 | 19 | 620 | 112 | 152 | 44 | 20 | 6.9 | 6.6 |
| 16..... | 37 | 35 | 19 | 23 | 16 | 396 | 114 | 147 | 32 | 23 | 9.0 | 6.0 |
| 17..... | 44 | 35 | 20 | 32 | 9.8 | 326 | 191 | 125 | 32 | 20 | 6.0 | 6.0 |
| 18..... | 41 | 28 | 27 | 33 | 11 | 272 | 230 | 103 | 32 | 16 | 4.4 | 7.6 |
| 19..... | 32 | 41 | 26 | 65 | 7.6 | 242 | 210 | 103 | 32 | 15 | 3.3 | 6.6 |
| 20..... | 19 | 69 | 23 | 90 | 6.3 | 372 | 221 | 140 | 53 | 12 | 4.4 | 4.9 |
| 21..... | 14 | 50 | 22 | 74 | 6.6 | 279 | 494 | 127 | 32 | 11 | 5.8 | 4.9 |
| 22..... | 20 | 46 | 21 | 71 | 8.2 | 380 | 400 | 121 | 48 | 11 | 4.4 | 4.0 |
| 23..... | 29 | 43 | 16 | 59 | 6.9 | 745 | 322 | 101 | 32 | 12 | 5.5 | 6.6 |
| 24..... | 44 | 38 | 11 | 45 | 6.9 | 476 | 326 | 92 | 53 | 8.6 | 17 | 30 |
| 25..... | 39 | 31 | 11 | 40 | 6.9 | 314 | 400 | 97 | 42 | 9.4 | 9.0 | 31 |
| 26..... | 37 | 29 | 11 | 39 | 6.3 | 307 | 655 | 80 | 62 | 11 | 8.2 | 30 |
| 27..... | 32 | 31 | 12 | 22 | 6.6 | 265 | 449 | 76 | 38 | 8.2 | 8.2 | 31 |
| 28..... | 19 | 34 | 36 | 15 | 6.9 | 248 | 293 | 71 | 35 | 7.9 | 5.5 | 35 |
| 29..... | 28 | 27 | 31 | 23 | ----- | 213 | 322 | 68 | 42 | 10 | 4.2 | 31 |
| 30..... | 28 | 31 | 30 | 22 | ----- | 181 | 262 | 51 | 28 | 8.6 | 6.0 | 29 |
| 31..... | 35 | ----- | 22 | 20 | ----- | 181 | ----- | 48 | ----- | 6.6 | 5.1 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 52 | 12 | 32.8 | 0.785 | 0.90 |
| November..... | 69 | 27 | 37.1 | .888 | .99 |
| December..... | 58 | 11 | 28.8 | .689 | .79 |
| January..... | 90 | 7.9 | 36.2 | .866 | 1.00 |
| February..... | 71 | 6.3 | 18.8 | .450 | .47 |
| March..... | 745 | 6.6 | 211 | 5.05 | 5.82 |
| April..... | 655 | 112 | 256 | 6.12 | 6.83 |
| May..... | 695 | 48 | 172 | 4.11 | 4.74 |
| June..... | 62 | 25 | 36.4 | .871 | .97 |
| July..... | 31 | 6.6 | 18.2 | .435 | .50 |
| August..... | 17 | 3.3 | 7.21 | .172 | .20 |
| September..... | 35 | 3.1 | 11.8 | .282 | .31 |
| The year..... | 745 | 3.1 | 72.5 | 1.73 | 23.52 |

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

LOCATION.—Water-stage recorder at bridge one-fourth mile from Webb railroad station, Marlboro, Cheshire County.

DRAINAGE AREA.—36.6 square miles.

RECORDS AVAILABLE.—November, 1920, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,010 second-feet Mar. 23 (gage height, 4.77 feet); minimum, 1.0 second-foot several times in August and September (gage height, 1.20 feet).

1920-1929: Maximum discharge, 3,560 second-feet Nov. 4, 1927 (gage height, 7.15 feet); minimum, 0.4 second-foot Sept. 15-17, 1926.

REMARKS.—Records good except those for periods of ice effect (Dec. 6, 7, 23, 24, and Dec. 30, to Mar. 16), and for estimated periods (Nov. 9, 10, and 16), which may be fair. Flow regulated by several small storage ponds above station.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | 51 | 73 | 44 | 40 | 40 | 50 | 180 | 180 | 28 | 28 | 1.1 | 1.0 |
| 2..... | 46 | 98 | 54 | 50 | 50 | 50 | 165 | 160 | 26 | 26 | 2.4 | 4.3 |
| 3..... | 32 | 92 | 53 | 60 | 40 | 40 | 137 | 592 | 41 | 25 | 2.8 | 1.0 |
| 4..... | 40 | 77 | 58 | 60 | 50 | 60 | 120 | 348 | 41 | 7.5 | 1.7 | 3.3 |
| 5..... | 40 | 48 | 56 | 30 | 60 | 20 | 120 | 240 | 32 | 9.5 | 2.6 | 2.4 |
| 6..... | 42 | 29 | 50 | 100 | 40 | 130 | 165 | 286 | 33 | 17 | 1.0 | 1.1 |
| 7..... | 34 | 30 | 30 | 140 | 80 | 190 | 172 | 336 | 36 | 10 | 1.0 | 2.6 |
| 8..... | 34 | 34 | 39 | 120 | 110 | 170 | 158 | 220 | 28 | 15 | 2.0 | 2.4 |
| 9..... | 42 | 36 | 28 | 130 | 100 | 120 | 145 | 167 | 19 | 8.5 | 1.6 | 5.0 |
| 10..... | 46 | 24 | 49 | 110 | 100 | 100 | 133 | 141 | 28 | 7.0 | 1.1 | 4.2 |
| 11..... | 38 | 12 | 49 | 90 | 90 | 90 | 131 | 120 | 24 | 9.3 | 2.4 | 3.0 |
| 12..... | 30 | 29 | 34 | 80 | 70 | 70 | 141 | 108 | 20 | 10 | 11 | 2.2 |
| 13..... | 25 | 20 | 34 | 70 | 60 | 90 | 125 | 104 | 14 | 7.0 | 21 | 2.3 |
| 14..... | 24 | 19 | 26 | 60 | 70 | 410 | 108 | 92 | 40 | 4.8 | 13 | 2.7 |
| 15..... | 40 | 28 | 16 | 70 | 70 | 540 | 116 | 142 | 62 | 6.2 | 2.6 | 2.7 |
| 16..... | 40 | 24 | 18 | 70 | 70 | 500 | 108 | 141 | 30 | 5.2 | 3.8 | 3.6 |
| 17..... | 40 | 24 | 32 | 70 | 30 | 610 | 240 | 130 | 32 | 5.4 | 1.0 | 9.0 |
| 18..... | 36 | 24 | 78 | 60 | 60 | 373 | 250 | 104 | 28 | 12 | 1.0 | 23 |
| 19..... | 34 | 34 | 64 | 230 | 80 | 417 | 243 | 104 | 20 | 3.2 | 2.7 | 16 |
| 20..... | 30 | 71 | 49 | 200 | 70 | 320 | 286 | 155 | 26 | 5.0 | 1.0 | 18 |
| 21..... | 16 | 50 | 48 | 160 | 60 | 308 | 655 | 124 | 26 | 2.3 | 3.4 | 12 |
| 22..... | 30 | 38 | 36 | 160 | 60 | 377 | 476 | 129 | 31 | 6.2 | 1.0 | 1.0 |
| 23..... | 31 | 31 | 40 | 150 | 30 | 792 | 312 | 108 | 15 | 6.6 | 4.2 | 5.3 |
| 24..... | 40 | 26 | 50 | 130 | 40 | 491 | 301 | 86 | 30 | 6.6 | 6.3 | 7.6 |
| 25..... | 44 | 20 | 66 | 100 | 30 | 290 | 369 | 90 | 30 | 2.0 | 6.0 | 3.2 |
| 26..... | 36 | 30 | 70 | 90 | 40 | 278 | 630 | 82 | 55 | 1.6 | 4.0 | 1.5 |
| 27..... | 20 | 30 | 76 | 80 | 30 | 240 | 394 | 90 | 40 | 1.6 | 3.2 | 3.6 |
| 28..... | 16 | 30 | 85 | 90 | 30 | 207 | 246 | 67 | 32 | 2.6 | 1.0 | 3.6 |
| 29..... | 39 | 12 | 74 | 70 | ----- | 188 | 365 | 56 | 34 | 5.3 | 2.6 | 2.8 |
| 30..... | 34 | 14 | 40 | 80 | ----- | 155 | 250 | 50 | 20 | 7.0 | 3.0 | 7.8 |
| 31..... | 26 | ----- | 60 | 60 | ----- | 143 | ----- | 39 | ----- | 1.2 | 3.2 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 51 | 16 | 34.7 | 0.948 | 1.09 |
| November..... | 98 | 12 | 36.9 | 1.01 | 1.13 |
| December..... | 85 | 16 | 48.6 | 1.33 | 1.53 |
| January..... | 230 | 30 | 97.1 | 2.65 | 3.06 |
| February..... | 110 | 30 | 59.3 | 1.62 | 1.69 |
| March..... | 792 | 20 | 252 | 6.89 | 7.94 |
| April..... | 655 | 108 | 241 | 6.58 | 7.34 |
| May..... | 592 | 39 | 155 | 4.23 | 4.88 |
| June..... | 62 | 14 | 30.7 | .839 | .94 |
| July..... | 28 | 1.2 | 8.54 | .233 | .27 |
| August..... | 21 | 1.0 | 4.27 | .117 | .13 |
| September..... | 23 | 1.0 | 5.28 | .144 | .16 |
| The year..... | 792 | 1.0 | 81.4 | 2.22 | 30.16 |

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, 1929.

EXTREMES.—Maximum discharge during year, 1,080 second-feet Apr. 22 (gage height, 7.55 feet); minimum, 10 second-feet Aug. 11, Sept. 22 and 29 (gage height, 2.55 feet).

1916-1929: Maximum discharge, 1,760 second-feet June 25, 1922 (gage height, 8.65 feet); practically no flow Sept. 20, 1918, and Jan. 14, 1925.

REMARKS.—Records good except those for periods of ice effect and for estimated periods, which are probably fair. Flow regulated by storage in Lake Monomona and other reservoirs.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|------|-------|-------|-------|-------|-----|-------|------|------|-------|
| 1..... | 100 | a 80 | a 90 | 75 | b 93 | a 232 | a 283 | 326 | 53 | 90 | 67 | 17 |
| 2..... | 146 | a 80 | 36 | 63 | b 82 | a 251 | a 291 | 298 | 44 | 66 | 66 | 16 |
| 3..... | 148 | a 80 | 88 | a 64 | b 52 | a 128 | a 292 | 507 | 93 | 110 | 58 | 36 |
| 4..... | 170 | a 50 | 102 | a 50 | b 92 | a 190 | a 291 | 554 | 123 | 40 | 26 | 36 |
| 5..... | 121 | a 77 | 98 | a 125 | b 87 | 149 | a 253 | 458 | 93 | 46 | 47 | 40 |
| 6..... | 84 | 78 | 96 | a 105 | b 134 | 210 | 223 | 452 | 113 | 33 | 62 | 34 |
| 7..... | 49 | 78 | 90 | a 158 | b 174 | 215 | 200 | 465 | 120 | 24 | 33 | 27 |
| 8..... | 101 | 106 | 72 | a 180 | 222 | 208 | a 297 | 474 | 84 | 88 | 29 | 16 |
| 9..... | 148 | 133 | a 42 | a 150 | 180 | 160 | a 310 | 419 | 30 | 76 | 46 | 46 |
| 10..... | 166 | 64 | a 54 | 125 | 128 | 78 | a 292 | 338 | 102 | 70 | 62 | 43 |
| 11..... | 134 | 42 | a 50 | 169 | b 160 | a 96 | a 281 | 268 | 93 | 76 | 18 | 60 |
| 12..... | 68 | 43 | a 55 | b 60 | a 156 | a 116 | a 271 | 154 | 83 | 72 | 14 | 34 |
| 13..... | 54 | 70 | a 56 | b 54 | a 152 | 180 | a 300 | 179 | 86 | 58 | 38 | 28 |
| 14..... | 47 | 78 | a 55 | b 90 | a 147 | 380 | a 197 | 162 | 77 | 32 | 50 | 25 |
| 15..... | 102 | 99 | 50 | b 110 | a 152 | 485 | a 220 | 222 | 95 | 80 | 44 | 14 |
| 16..... | 140 | 76 | 35 | a 96 | a 157 | a 620 | a 260 | 237 | 34 | 76 | 40 | 22 |
| 17..... | a 128 | 58 | 65 | a 93 | a 80 | a 710 | a 298 | 220 | 113 | 63 | 29 | 22 |
| 18..... | a 126 | 36 | 84 | a 90 | a 180 | a 570 | a 405 | 188 | 74 | 72 | 15 | 44 |
| 19..... | a 127 | 74 | 78 | a 110 | a 167 | a 415 | a 440 | 157 | 76 | 75 | 24 | 17 |
| 20..... | a 70 | 104 | 90 | a 73 | b 175 | a 350 | a 480 | 377 | 105 | 60 | 42 | 16 |
| 21..... | a 47 | 94 | 92 | a 145 | b 180 | a 430 | a 700 | 346 | 80 | 33 | 38 | 17 |
| 22..... | a 100 | 116 | 48 | a 116 | b 182 | a 490 | a 960 | 297 | 114 | 64 | 30 | 10 |
| 23..... | a 116 | a 94 | 46 | b 103 | b 125 | a 560 | a 770 | 216 | 35 | 70 | 40 | 22 |
| 24..... | a 126 | a 80 | 78 | b 97 | b 80 | a 610 | 626 | 190 | 106 | 57 | 37 | 23 |
| 25..... | a 112 | a 38 | a 47 | b 82 | b 180 | a 560 | 519 | 164 | 124 | 70 | 19 | 35 |
| 26..... | a 114 | a 77 | a 68 | b 66 | b 240 | a 510 | 542 | 108 | 120 | 74 | 36 | 32 |
| 27..... | a 100 | a 71 | a 57 | b 40 | b 280 | 480 | 516 | 163 | 111 | 60 | 48 | 30 |
| 28..... | a 50 | a 68 | a 50 | b 102 | b 220 | 430 | 527 | 156 | 107 | 38 | 42 | 23 |
| 29..... | a 90 | a 69 | a 43 | b 100 | 321 | 590 | 138 | 132 | 49 | 48 | 10 | 28 |
| 30..... | a 105 | a 77 | 37 | b 100 | 248 | 486 | 75 | 42 | 64 | 37 | 28 | 28 |
| 31..... | a 100 | ----- | 50 | b 100 | ----- | a 211 | ----- | 144 | ----- | 66 | 27 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 170 | 47 | 106 | 1.32 | 1.52 |
| November..... | 133 | 36 | 76.3 | .954 | 1.06 |
| December..... | 102 | 35 | 64.6 | .808 | .93 |
| January..... | 180 | 40 | 101 | 1.26 | 1.45 |
| February..... | 280 | 52 | 151 | 1.89 | 1.97 |
| March..... | 710 | 78 | 342 | 4.28 | 4.93 |
| April..... | 960 | 197 | 404 | 5.05 | 5.63 |
| May..... | 554 | 75 | 273 | 3.41 | 3.93 |
| June..... | 132 | 30 | 80.1 | 1.11 | 1.24 |
| July..... | 110 | 24 | 62.6 | .782 | .90 |
| August..... | 67 | 14 | 38.8 | .485 | .56 |
| September..... | 60 | 10 | 27.4 | .342 | .38 |
| The year..... | 960 | 10 | 145 | 1.81 | 24.50 |

a Estimated.

b Stage-discharge relation affected by ice.

MILLERS RIVER AT ERVING, MASS.

LOCATION.—Water-stage recorder one-fourth 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, 1929.

EXTREMES.—Maximum discharge during year, 3,950 second-feet Apr. 22 (gauge height 5.00 feet); minimum, 18 second-feet Aug. 26 (gauge height, 1.07 feet).

1914-1929: Maximum discharge, 6,350 second-feet Nov. 4, 1927 (gauge height, 5.85 feet); practically no flow at times during 1915 and 1916.

REMARKS.—Records good except those for periods of ice effect and for estimated periods, which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------------------|------------------|------|--------------------|------------------|--------------------|-------|-------|------------------|------|------------------|-----------------|
| 1..... | 548 | ^a 420 | 547 | 258 | ^b 455 | 523 | 1,270 | 1,800 | 519 | 496 | 118 | 40 |
| 2..... | 416 | ^a 354 | 256 | 508 | ^b 435 | 615 | 1,290 | 1,440 | 224 | 386 | ^a 122 | 40 |
| 3..... | 552 | 379 | 452 | ^b 400 | ^b 417 | 373 | 1,170 | 2,120 | 291 | 450 | ^a 264 | 142 |
| 4..... | 568 | 216 | 466 | ^b 335 | ^b 540 | 472 | 1,090 | 2,450 | 330 | 140 | ^a 66 | 126 |
| 5..... | 500 | 334 | 601 | ^b 300 | ^b 530 | 768 | 1,100 | 2,200 | 407 | 387 | 29 | 154 |
| 6..... | 480 | 367 | 550 | ^b 592 | ^b 520 | 1,250 | 1,130 | 2,050 | 358 | 322 | 130 | 99 |
| 7..... | 444 | 398 | 442 | ^b 1,160 | 929 | 1,260 | 1,170 | 2,100 | 382 | 130 | 120 | ^a 80 |
| 8..... | 466 | 337 | 463 | ^b 1,230 | 854 | 1,240 | 1,280 | 2,240 | 336 | 258 | 118 | ^a 39 |
| 9..... | 404 | 499 | 268 | ^b 1,040 | 785 | 1,040 | 1,330 | 1,890 | 335 | 214 | 92 | 147 |
| 10..... | 488 | 401 | 419 | ^b 726 | 635 | 769 | 1,240 | 1,590 | 404 | 204 | 87 | 138 |
| 11..... | 496 | 344 | 314 | ^b 628 | 720 | ^a 752 | 1,200 | 1,380 | 382 | 270 | ^a 56 | 90 |
| 12..... | 568 | 354 | 348 | ^b 594 | 765 | ^a 670 | 1,210 | 1,080 | 342 | 282 | 101 | 49 |
| 13..... | 266 | 327 | 338 | ^b 340 | 808 | ^a 1,220 | 1,380 | 1,030 | 304 | 170 | 138 | 124 |
| 14..... | 254 | 314 | 370 | ^b 620 | 606 | ^a 1,840 | 1,050 | 932 | 410 | 167 | 72 | 69 |
| 15..... | 361 | 386 | 270 | ^b 520 | 507 | 2,660 | 1,220 | 1,060 | 419 | 206 | 82 | 138 |
| 16..... | 348 | 359 | 207 | ^b 452 | 472 | 3,220 | 1,290 | 1,220 | 369 | 203 | 106 | 74 |
| 17..... | 476 | 367 | 402 | ^b 382 | 336 | 3,170 | 1,630 | 1,130 | 412 | 193 | 105 | 118 |
| 18..... | 436 | 201 | 350 | ^b 550 | 456 | 2,480 | 2,160 | 1,120 | 358 | 200 | ^a 42 | 110 |
| 19..... | 504 | 402 | 582 | ^b 970 | 506 | 2,120 | 2,070 | 850 | 364 | 179 | 165 | 86 |
| 20..... | 386 | 484 | 543 | ^b 526 | ^b 526 | 1,880 | 2,020 | 1,300 | 442 | 110 | 120 | 35 |
| 21..... | 297 | 516 | 436 | ^b 860 | ^b 638 | 1,940 | 2,670 | 1,440 | 438 | 83 | 102 | 48 |
| 22..... | ^a 404 | 585 | 413 | ^b 770 | ^b 602 | 2,050 | 3,490 | 1,400 | ^a 596 | 164 | 116 | 82 |
| 23..... | ^a 430 | 438 | 196 | ^b 675 | ^b 665 | 2,330 | 3,130 | 1,220 | ^a 633 | 168 | 118 | 42 |
| 24..... | ^a 455 | 428 | 375 | ^b 660 | ^b 530 | 2,530 | 2,580 | 1,010 | 668 | 204 | 89 | 76 |
| 25..... | ^a 470 | 208 | 118 | ^b 490 | ^b 562 | 2,360 | 2,180 | 1,040 | 621 | 205 | 39 | 96 |
| 26..... | ^a 462 | 441 | 271 | ^b 610 | ^b 466 | 2,140 | 2,080 | 666 | 804 | 213 | 140 | 86 |
| 27..... | 430 | 350 | 308 | ^a 342 | 588 | 1,970 | 2,130 | 738 | 588 | 178 | 132 | 87 |
| 28..... | ^a 340 | 402 | 322 | ^a 412 | 608 | 1,860 | 1,940 | 628 | 542 | 83 | 121 | 56 |
| 29..... | ^a 400 | 160 | 353 | ^b 456 | ----- | 1,740 | 2,060 | 577 | 690 | 292 | 121 | 27 |
| 30..... | ^a 420 | 396 | 310 | ^b 500 | ----- | 1,480 | 1,990 | 438 | 474 | 149 | 110 | 74 |
| 31..... | ^a 400 | ----- | 377 | ^b 480 | ----- | 1,320 | ----- | 418 | ----- | 140 | 78 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 568 | 254 | 434 | 1.17 | 1.35 |
| November..... | 585 | 160 | 372 | 1.00 | 1.12 |
| December..... | 601 | 118 | 376 | 1.01 | 1.16 |
| January..... | 1,230 | 258 | 604 | 1.62 | 1.87 |
| February..... | 929 | 336 | 588 | 1.58 | 1.64 |
| March..... | 3,220 | 373 | 1,610 | 4.33 | 4.99 |
| April..... | 3,490 | 1,050 | 1,720 | 4.62 | 5.16 |
| May..... | 2,450 | 418 | 1,310 | 3.52 | 4.06 |
| June..... | 804 | 224 | 448 | 1.20 | 1.34 |
| July..... | 496 | 83 | 221 | .594 | .68 |
| August..... | 264 | 29 | 106 | .285 | .33 |
| September..... | 154 | 27 | 85.7 | .230 | .26 |
| The year..... | 3,490 | 27 | 657 | 1.77 | 23.96 |

^a Estimated.

^b Stage-discharge relation affected by ice.

SIP POND BROOK NEAR WINCHENDON, MASS.

LOCATION.—Water-stage recorder one-fourth mile below Massachusetts-New Hampshire State line, $1\frac{1}{2}$ miles below outlet of Sip Pond, and 3 miles north-west of Winchendon, Worcester County.

DRAINAGE AREA.—18.8 square miles.

RECORDS AVAILABLE.—May, 1916, to September, 1929.

EXTREMES.—Maximum discharge during year, 232 second-feet Apr. 22 (gage height, 8.65 feet); minimum, 2.1 second-feet Sept. 29 (gage height, 4.93 feet).

1916-1929: 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 for Nov. 25 to Dec. 1, Dec. 8, and Feb. 11-13, which were estimated. Flow regulated by storage in Pearly and Sip Ponds.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | 27 | 16 | 16 | 9.6 | 14 | 13 | 70 | 97 | 21 | 18 | 3.0 | 2.7 |
| 2..... | 25 | 15 | 7.5 | 13 | 14 | 15 | 71 | 76 | 16 | 13 | 4.1 | 2.6 |
| 3..... | 25 | 18 | 11 | 13 | 7.8 | 9.6 | 69 | 97 | 25 | 12 | 2.8 | 4.0 |
| 4..... | 20 | 11 | 12 | 13 | 13 | 20 | 56 | 120 | 21 | 5.8 | 2.9 | 2.7 |
| 5..... | 21 | 18 | 25 | 17 | 20 | 20 | 57 | 108 | 19 | 11 | 3.7 | 2.7 |
| 6..... | 22 | 17 | 25 | 22 | 16 | 29 | 62 | 108 | 20 | 12 | 4.0 | 2.4 |
| 7..... | 13 | 15 | 23 | 34 | 16 | 27 | 71 | 104 | 17 | 5.4 | 3.6 | 2.9 |
| 8..... | 19 | 13 | 14 | 44 | 12 | 40 | 73 | 116 | 16 | 9.9 | 2.9 | 2.7 |
| 9..... | 22 | 14 | 8.2 | 33 | 14 | 42 | 67 | 97 | 9.7 | 8.3 | 4.2 | 2.9 |
| 10..... | 20 | 8.9 | 13 | 29 | 9.2 | 46 | 67 | 81 | 16 | 8.8 | 2.9 | 3.5 |
| 11..... | 17 | 8.9 | 11 | 22 | 17 | 42 | 64 | 65 | 18 | 7.6 | 3.2 | 2.7 |
| 12..... | 16 | 18 | 13 | 23 | 16 | 36 | 60 | 57 | 13 | 5.4 | 3.4 | 2.7 |
| 13..... | 16 | 11 | 13 | 16 | 15 | 39 | 64 | 51 | 14 | 5.7 | 3.5 | 2.7 |
| 14..... | 9.9 | 12 | 11 | 27 | 10 | 57 | 56 | 42 | 14 | 5.6 | 3.4 | 2.8 |
| 15..... | 16 | 8.0 | 11 | 22 | 16 | 107 | 54 | 46 | 19 | 8.3 | 3.5 | 2.9 |
| 16..... | 17 | 11 | 6.0 | 30 | 17 | 146 | 52 | 50 | 20 | 8.8 | 3.4 | 2.9 |
| 17..... | 13 | 16 | 16 | 22 | 7.3 | 156 | 70 | 51 | 20 | 7.9 | 4.1 | 3.0 |
| 18..... | 13 | 8.2 | 21 | 22 | 18 | 133 | 98 | 50 | 16 | 5.0 | 2.8 | 2.9 |
| 19..... | 8.2 | 17 | 21 | 30 | 10 | 98 | 105 | 49 | 13 | 6.2 | 3.3 | 2.8 |
| 20..... | 10 | 15 | 20 | 17 | 13 | 83 | 115 | 64 | 13 | 5.0 | 6.5 | 2.7 |
| 21..... | 11 | 12 | 15 | 34 | 12 | 101 | 169 | 67 | 11 | 3.5 | 2.7 | 2.7 |
| 22..... | 16 | 16 | 19 | 27 | 16 | 115 | 227 | 62 | 11 | 4.6 | 3.7 | 2.7 |
| 23..... | 20 | 16 | 8.2 | 26 | 13 | 151 | 182 | 58 | 6.7 | 3.7 | 2.9 | 2.7 |
| 24..... | 18 | 17 | 17 | 24 | 7.8 | 178 | 142 | 45 | 15 | 4.7 | 4.0 | 2.7 |
| 25..... | 13 | 8.2 | 8.7 | 18 | 15 | 138 | 120 | 45 | 14 | 4.4 | 2.9 | 2.7 |
| 26..... | 12 | 15 | 15 | 21 | 11 | 115 | 128 | 52 | 13 | 4.3 | 2.8 | 3.8 |
| 27..... | 17 | 14 | 11 | 13 | 15 | 107 | 133 | 37 | 12 | 4.7 | 4.4 | 2.7 |
| 28..... | 10 | 12 | 11 | 18 | 10 | 101 | 107 | 29 | 13 | 2.5 | 2.8 | 3.0 |
| 29..... | 16 | 15 | 8.7 | 19 | ----- | 84 | 115 | 29 | 14 | 2.6 | 2.7 | 2.2 |
| 30..... | 14 | 14 | 6.0 | 21 | ----- | 74 | 115 | 26 | 16 | 4.6 | 2.8 | 3.4 |
| 31..... | 13 | ----- | 14 | 17 | ----- | 63 | ----- | 27 | ----- | 2.5 | 2.8 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 27 | 8.2 | 16.5 | 0.878 | 1.01 |
| November..... | 18 | 8.0 | 13.7 | .729 | .81 |
| December..... | 25 | 6.0 | 13.9 | .739 | .85 |
| January..... | 44 | 9.6 | 22.5 | 1.20 | 1.38 |
| February..... | 20 | 7.3 | 13.4 | .713 | .74 |
| March..... | 178 | 9.6 | 77.0 | 4.10 | 4.73 |
| April..... | 227 | 52 | 94.6 | 5.03 | 5.61 |
| May..... | 120 | 26 | 64.7 | 3.44 | 3.97 |
| June..... | 25 | 6.7 | 15.5 | .824 | .92 |
| July..... | 18 | 2.5 | 6.83 | .363 | .42 |
| August..... | 6.5 | 2.7 | 3.41 | .181 | .21 |
| September..... | 4.0 | 2.2 | 2.86 | .152 | .17 |
| The year..... | 227 | 2.2 | 28.8 | 1.53 | 20.82 |

PRIEST BROOK NEAR WINCHENDON, MASS.

LOCATION.—Staff gage at highway bridge 3 miles above confluence with Millers River and $3\frac{1}{2}$ miles west of Winchendon, Worcester County.

DRAINAGE AREA.—18.8 square miles.

RECORDS AVAILABLE.—May, 1916, to September, 1929.

EXTREMES.—Maximum discharge during year, 269 second-feet Mar. 24 (gage height, 4.80 feet); minimum, 0.1 second-foot several times in September (gage height, 2.18 feet).

1916-1929: Maximum discharge, 1,000 second-feet Nov. 4, 1927 (gage height, 6.8 feet); minimum, that of September, 1929.

REMARKS.—Records good except those for periods of ice effect (Dec. 23, Jan. 1-3, and Jan. 29 to Feb. 6), which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1 | 11 | 22 | 12 | 10 | 11 | 22 | 60 | 94 | 26 | 8.6 | 6.4 | 0.7 |
| 2 | 11 | 20 | 24 | 10 | 11 | 24 | 78 | 88 | 15 | 19 | 3.1 | .5 |
| 3 | 16 | 19 | 19 | 10 | 11 | 22 | 78 | 88 | 6.4 | 6.4 | 2.2 | .3 |
| 4 | 22 | 19 | 24 | 10 | 13 | 16 | 64 | 128 | 23 | 5.1 | 2.6 | .1 |
| 5 | 23 | 18 | 25 | 18 | 18 | 29 | 64 | 107 | 23 | 2.6 | 2.1 | .1 |
| 6 | 28 | 13 | 29 | 43 | 22 | 46 | 64 | 114 | 20 | 2.2 | 2.1 | .1 |
| 7 | 13 | 12 | 27 | 69 | 25 | 52 | 74 | 114 | 14 | 5.1 | 5.1 | .1 |
| 8 | 8.9 | 24 | 18 | 50 | 31 | 47 | 74 | 114 | 22 | 3.1 | 2.1 | .1 |
| 9 | 10 | 24 | 11 | 31 | 36 | 44 | 78 | 100 | 20 | 2.2 | 1.1 | .8 |
| 10 | 19 | 24 | 10 | 27 | 35 | 35 | 74 | 78 | 12 | 2.2 | 1.4 | 1.7 |
| 11 | 19 | 14 | 10 | 29 | 29 | 35 | 69 | 60 | 11 | 3.1 | 1.7 | 1.7 |
| 12 | 23 | 8.6 | 12 | 29 | 29 | 35 | 69 | 56 | 28 | 3.1 | 2.2 | 1.5 |
| 13 | 19 | 10 | 10 | 23 | 29 | 38 | 74 | 50 | 28 | 4.6 | 2.2 | 1.1 |
| 14 | 12 | 22 | 16 | 14 | 25 | 94 | 56 | 49 | 26 | 2.2 | 2.2 | 1.1 |
| 15 | 9.6 | 15 | 36 | 14 | 24 | 210 | 56 | 47 | 24 | 2.2 | 4.6 | 1.5 |
| 16 | 24 | 16 | 36 | 14 | 24 | 256 | 64 | 45 | 14 | 2.2 | 1.9 | 1.1 |
| 17 | 23 | 24 | 31 | 14 | 27 | 232 | 83 | 64 | 9.2 | 2.2 | 1.2 | 1.7 |
| 18 | 19 | 8.6 | 27 | 18 | 25 | 210 | 114 | 56 | 18 | 4.1 | 1.2 | 1.9 |
| 19 | 22 | 12 | 29 | 35 | 24 | 170 | 100 | 56 | 20 | 4.6 | .8 | 1.5 |
| 20 | 19 | 26 | 35 | 36 | 23 | 144 | 128 | 64 | 13 | 2.6 | .8 | 1.1 |
| 21 | 13 | 19 | 24 | 36 | 20 | 136 | 190 | 74 | 13 | 2.6 | .7 | 1.5 |
| 22 | 11 | 8.6 | 18 | 40 | 18 | 128 | 244 | 74 | 27 | 2.2 | .7 | 1.1 |
| 23 | 27 | 15 | 11 | 33 | 16 | 210 | 170 | 56 | 15 | 2.2 | .7 | .8 |
| 24 | 27 | 14 | 8.6 | 24 | 16 | 244 | 121 | 56 | 11 | 3.1 | 7.0 | .7 |
| 25 | 28 | 10 | 8.6 | 23 | 16 | 161 | 121 | 50 | 23 | 4.6 | .7 | .7 |
| 26 | 23 | 10 | 9.6 | 22 | 20 | 128 | 121 | 40 | 13 | 5.1 | .8 | .7 |
| 27 | 22 | 14 | 22 | 18 | 22 | 114 | 121 | 35 | 9.2 | 3.6 | 1.6 | .7 |
| 28 | 16 | 23 | 33 | 14 | 22 | 107 | 114 | 38 | 6.4 | 3.1 | .7 | .7 |
| 29 | 16 | 8.6 | 22 | 13 | ----- | 88 | 121 | 35 | 23 | 2.2 | .7 | .3 |
| 30 | 19 | 9.6 | 13 | 13 | ----- | 78 | 114 | 38 | 10 | 2.2 | .7 | .3 |
| 31 | 19 | ----- | 10 | 12 | ----- | 69 | ----- | 23 | ----- | 7.0 | .7 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 28 | 8.9 | 18.5 | 0.984 | 1.13 |
| November | 25 | 8.6 | 16.1 | .856 | .96 |
| December | 36 | 8.6 | 20.0 | 1.06 | 1.22 |
| January | 69 | 10 | 24.3 | 1.29 | 1.49 |
| February | 36 | 11 | 22.2 | 1.18 | 1.23 |
| March | 256 | 16 | 104 | 5.53 | 6.38 |
| April | 244 | 56 | 98.6 | 5.24 | 6.85 |
| May | 128 | 23 | 67.5 | 3.59 | 4.14 |
| June | 28 | 6.4 | 17.4 | .926 | 1.03 |
| July | 19 | 2.2 | 4.04 | .215 | .25 |
| August | 7.0 | .7 | 2.00 | .106 | .12 |
| September | 1.9 | .1 | .873 | .046 | .05 |
| The year | 256 | .1 | 33.0 | 1.76 | 23.85 |

SURFACE WATER SUPPLY, 1929, PART I

EAST BRANCH OF TULLY RIVER NEAR ATHOL, MAS.

LOCATION.—Staff gage at highway bridge half a mile below mouth of Lawrence Brook and $3\frac{1}{2}$ miles north of Athol, Worcester County.

DRAINAGE AREA.—50.2 square miles.

RECORDS AVAILABLE.—June, 1916, to September, 1929.

EXTREMES.—Maximum discharge during year, 692 second-feet Mar. 18 (gage height, 3.70 feet); minimum, 1.4 second-feet Sept. 4-7 (gage height, 0.20 foot).

1916-1929: Maximum discharge, 1,610 second-feet Nov. 4, 1927 (gage height, 5.10 feet); minimum, that of Sept. 4-7, 1929.

REMARKS.—Records fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | 49 | 31 | 40 | 37 | 41 | 50 | 176 | 220 | 44 | 46 | 4.5 | 2.0 |
| 2..... | 45 | 30 | 62 | 42 | 38 | 50 | 186 | 197 | 35 | 39 | 4.0 | 1.8 |
| 3..... | 44 | 31 | 62 | 41 | 38 | 48 | 176 | 232 | 32 | 23 | 3.1 | 1.8 |
| 4..... | 41 | 33 | 62 | 40 | 38 | 45 | 166 | 348 | 34 | 19 | 6.0 | 1.4 |
| 5..... | 41 | 33 | 72 | 42 | 36 | 58 | 166 | 316 | 35 | 19 | 5.2 | 1.4 |
| 6..... | 49 | 31 | 67 | 54 | 34 | 94 | 157 | 285 | 34 | 16 | 4.7 | 1.4 |
| 7..... | 54 | 30 | 58 | 166 | 58 | 157 | 186 | 300 | 41 | 14 | 3.8 | 1.8 |
| 8..... | 46 | 34 | 54 | 140 | 67 | 232 | 176 | 316 | 44 | 13 | 3.5 | 2.5 |
| 9..... | 41 | 45 | 47 | 115 | 76 | 148 | 186 | 285 | 36 | 12 | 4.0 | 3.3 |
| 10..... | 39 | 43 | 40 | 100 | 100 | 115 | 176 | 220 | 30 | 11 | 3.5 | 4.3 |
| 11..... | 36 | 38 | 33 | 72 | 100 | 94 | 166 | 176 | 26 | 11 | 7.4 | 5.2 |
| 12..... | 33 | 34 | 34 | 72 | 88 | 82 | 166 | 157 | 22 | 9.6 | 13 | 5.0 |
| 13..... | 31 | 31 | 31 | 62 | 67 | 88 | 140 | 131 | 21 | 7.7 | 9.3 | 4.3 |
| 14..... | 30 | 28 | 30 | 62 | 58 | 186 | 157 | 123 | 44 | 8.3 | 8.9 | 4.3 |
| 15..... | 28 | 27 | 28 | 54 | 58 | 348 | 148 | 123 | 82 | 11 | 5.7 | 4.0 |
| 16..... | 28 | 28 | 31 | 58 | 47 | 461 | 157 | 140 | 67 | 9.6 | 4.3 | 3.5 |
| 17..... | 28 | 26 | 35 | 62 | 42 | 546 | 208 | 148 | 48 | 8.3 | 3.5 | 3.3 |
| 18..... | 28 | 30 | 58 | 62 | 39 | 692 | 285 | 140 | 38 | 7.4 | 2.9 | 3.8 |
| 19..... | 28 | 30 | 67 | 62 | 44 | 384 | 300 | 131 | 33 | 6.6 | 2.7 | 3.8 |
| 20..... | 31 | 58 | 62 | 82 | 42 | 316 | 316 | 157 | 31 | 5.7 | 2.5 | 3.3 |
| 21..... | 31 | 54 | 54 | 88 | 42 | 316 | 402 | 166 | 38 | 5.5 | 2.4 | 3.1 |
| 22..... | 29 | 54 | 35 | 100 | 44 | 348 | 481 | 157 | 115 | 5.2 | 2.2 | 2.9 |
| 23..... | 30 | 47 | 29 | 100 | 42 | 421 | 208 | 140 | 131 | 4.7 | 1.8 | 2.5 |
| 24..... | 35 | 41 | 24 | 76 | 42 | 421 | 271 | 115 | 76 | 5.0 | 4.5 | 2.5 |
| 25..... | 38 | 37 | 23 | 62 | 39 | 461 | 271 | 108 | 62 | 6.3 | 6.9 | 2.5 |
| 26..... | 34 | 34 | 23 | 58 | 38 | 348 | 271 | 100 | 58 | 12 | 5.0 | 2.4 |
| 27..... | 31 | 30 | 21 | 58 | 44 | 300 | 271 | 94 | 48 | 16 | 4.5 | 2.2 |
| 28..... | 33 | 27 | 31 | 58 | 47 | 271 | 244 | 76 | 39 | 14 | 4.0 | 2.2 |
| 29..... | 40 | 24 | 44 | 50 | ----- | 244 | 232 | 67 | 62 | 12 | 2.9 | 2.0 |
| 30..... | 38 | 26 | 41 | 45 | ----- | 220 | 257 | 58 | 54 | 11 | 2.9 | 2.5 |
| 31..... | 33 | ----- | 36 | 42 | ----- | 176 | ----- | 54 | ----- | 7.2 | 2.5 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 54 | 28 | 36.2 | 0.721 | 0.83 |
| November..... | 58 | 24 | 34.8 | .693 | .77 |
| December..... | 72 | 21 | 43.0 | .857 | .99 |
| January..... | 166 | 37 | 69.7 | 1.39 | 1.60 |
| February..... | 100 | 34 | 51.8 | 1.03 | 1.07 |
| March..... | 692 | 45 | 249 | 4.96 | 5.72 |
| April..... | 481 | 140 | 223 | 4.44 | 4.95 |
| May..... | 348 | 54 | 170 | 3.39 | 3.91 |
| June..... | 131 | 21 | 48.7 | .970 | 1.08 |
| July..... | 46 | ----- | 12.8 | .255 | .26 |
| August..... | 13 | 1.8 | 4.58 | .091 | .10 |
| September..... | 5.2 | 1.4 | 2.90 | .058 | .06 |
| The year..... | 692 | 1.4 | 79.2 | 1.58 | 21.37 |

MOSS BROOK AT WENDELL DEPOT, MASS.

LOCATION.—Staff gage one-fourth mile above confluence with Millers River and one-fourth mile north of Wendell Depot, Franklin County.

DRAINAGE AREA.—12.2 square miles.

RECORDS AVAILABLE.—June, 1916, to September, 1929.

EXTREMES.—Maximum discharge during year occurred during period of no record in March; minimum, 0.2 second-foot Sept. 16 (gage height, 0.90 foot). 1916-1929: Maximum discharge, 775 second-feet Nov. 4, 1927 (gage height, 5.2 feet); minimum, that of Sept. 16, 1929.

REMARKS.—Records fair. Stage-discharge relation affected by ice Nov. 28, Dec. 8-11, 15, Dec. 22 to Jan. 3, Jan. 6 to Feb. 6, Feb. 12-16, and Feb. 19 to Mar. 5. Discharge estimated Mar. 8-31.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|-------|---------|------|-------|------|-----------------|-----|-------------------|------|------|-------|
| 1 | 8.0 | 8.8 | 14 | 5.7 | 7.4 | 8.8 | 39 | 51 | 13 | 10 | 1.3 | 0.5 |
| 2 | 6.3 | 7.8 | 15 | 5.4 | 7.4 | 8.6 | 36 | 40 | 10 | 9.4 | 1.5 | .4 |
| 3 | 5.7 | 8.3 | 16 | 4.9 | 7.2 | 8.3 | 36 | 154 | 9.7 | 7.6 | 1.3 | .4 |
| 4 | 12 | 7.4 | 20 | 4.5 | 7.2 | 8.0 | 37 | 139 | 10 | 6.3 | 3.1 | .3 |
| 5 | 9.7 | 7.2 | 17 | 5.0 | 7.2 | 19 | 35 | 71 | 10 | 5.9 | 1.9 | .3 |
| 6 | 11 | 7.2 | 15 | 34 | 7.0 | 53 | 44 | 106 | 12 | 6.3 | 1.7 | .8 |
| 7 | 11 | 8.3 | 13 | 39 | 94 | 32 | 51 | 125 | 14 | 6.1 | 1.3 | 1.2 |
| 8 | 11 | 10 | 11 | 118 | 172 | 25 | 45 | 100 | 13 | 5.9 | 1.5 | 3.6 |
| 9 | 10 | 11 | 11 | 45 | 125 | 22 | 42 | 60 | 11 | 4.9 | 2.2 | 3.8 |
| 10 | 8.6 | 11 | 10 | 14 | 125 | 19 | 39 | 51 | 9.4 | 4.5 | 1.4 | 3.1 |
| 11 | 7.6 | 9.1 | 10 | 11 | 88 | 18 | 39 | 48 | 9.4 | 4.5 | 2.1 | 2.1 |
| 12 | 7.8 | 8.6 | 9.7 | 7.4 | 64 | 17 | 40 | 40 | 7.2 | 4.2 | 1.6 | 1.7 |
| 13 | 7.4 | 7.2 | 9.7 | 7.0 | 45 | 18 | 42 | 34 | 6.3 | 3.9 | 1.5 | 1.9 |
| 14 | 8.3 | 7.6 | 10 | 7.4 | 36 | 20 | 40 | 36 | 6.5 | 4.2 | 1.6 | 1.7 |
| 15 | 7.4 | 9.1 | 11 | 9.1 | 30 | 222 | 39 | 39 | 8.8 | 3.9 | 1.4 | 1.3 |
| 16 | 6.3 | 9.1 | 13 | 9.1 | 25 | 190 | 46 | 37 | 6.3 | 3.5 | 1.4 | 1.3 |
| 17 | 6.1 | 8.0 | 20 | 9.1 | 22 | 170 | 94 | 35 | 5.9 | 3.4 | 1.5 | 1.3 |
| 18 | 8.0 | 8.3 | 16 | 9.1 | 18 | 150 | 125 | 32 | 5.2 | 3.1 | 1.0 | 1.6 |
| 19 | 11 | 10 | 15 | 13 | 15 | 112 | 94 | 66 | 14 | 3.1 | 1.1 | 1.3 |
| 20 | 8.6 | 10 | 16 | 36 | 13 | 96 | 94 | 42 | 24 | 3.1 | 1.0 | 1.2 |
| 21 | 7.8 | 9.1 | 14 | 35 | 12 | 72 | 179 | 39 | 21 | 2.8 | 1.0 | 1.2 |
| 22 | 7.2 | 8.8 | 12 | 32 | 12 | 72 | 139 | 42 | 51 | 2.8 | .8 | .8 |
| 23 | 7.4 | 9.1 | 10 | 29 | 11 | 110 | 106 | 35 | 36 | 2.6 | .7 | 1.2 |
| 24 | 10 | 12 | 10 | 18 | 11 | 190 | 88 | 31 | 25 | 2.6 | .7 | 1.1 |
| 25 | 8.6 | 9.7 | 9.4 | 10 | 10 | 155 | 55 | 31 | 20 | 3.4 | .7 | .8 |
| 26 | 7.0 | 8.6 | 8.8 | 9.1 | 9.7 | 110 | 75 | 27 | 16 | 3.4 | .6 | .9 |
| 27 | 6.3 | 9.1 | 8.6 | 8.6 | 9.7 | 90 | 51 | 24 | 17 | 2.9 | .6 | .8 |
| 28 | 9.1 | 9.7 | 7.6 | 8.0 | 9.1 | 70 | 44 | 21 | 15 | 2.6 | .4 | .8 |
| 29 | 11 | 11 | 7.4 | 7.6 | ----- | 59 | 68 | 19 | 16 | 2.7 | .4 | .8 |
| 30 | 9.4 | 13 | 6.7 | 7.4 | ----- | 48 | 66 | 18 | 14 | 1.9 | .4 | 1.2 |
| 31 | 8.8 | ----- | 6.3 | 7.4 | ----- | 38 | ----- | 18 | ----- | 1.3 | .5 | ----- |
| Month | Maximum | | Minimum | | Mean | | Per square mile | | Run-off in inches | | | |
| October | 12 | | 5.7 | | 8.53 | | 0.699 | | 0.81 | | | |
| November | 13 | | 7.2 | | 9.14 | | .749 | | .84 | | | |
| December | 20 | | 6.3 | | 12.0 | | .984 | | 1.13 | | | |
| January | 118 | | 4.5 | | 18.3 | | 1.50 | | 1.73 | | | |
| February | 125 | | 7.0 | | 33.6 | | 2.75 | | 2.86 | | | |
| March | 222 | | 8.0 | | 72.0 | | 5.90 | | 6.80 | | | |
| April | 179 | | 35 | | 64.3 | | 5.27 | | 5.88 | | | |
| May | 154 | | 18 | | 52.0 | | 4.26 | | 4.91 | | | |
| June | 51 | | 5.2 | | 14.6 | | 1.20 | | 1.34 | | | |
| July | 10 | | 1.3 | | 4.28 | | .351 | | .40 | | | |
| August | 3.1 | | .4 | | 1.23 | | .101 | | .12 | | | |
| September | 3.8 | | .3 | | 1.31 | | .107 | | .12 | | | |
| The year | 222 | | .3 | | 24.2 | | 1.98 | | 26.94 | | | |

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, 1929.

EXTREMES.—Maximum discharge during year, 12,100 second-feet Apr. 29 (gage height, 8.27 feet); minimum, 19 second-feet Aug. 11 (gage height, 1.32 feet).
 1913-1929: Maximum discharge, 50,600 second-feet July 8, 1915 (gage height, 15.7 feet); practically no flow June 17, 1921 (gage height, 0.70 foot).

REMARKS.—Records excellent except those for Jan. 3-5, 8-11, 14-19, Jan. 27 to Mar. 4, and Mar. 12-16, which were estimated. Flow regulated by Somerset and Davis Bridge Reservoirs.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1..... | 1,020 | 1,050 | 596 | 566 | 1,010 | 645 | 694 | 3,210 | 552 | 653 | 578 | 306 |
| 2..... | 1,050 | 1,070 | 200 | 681 | 1,050 | 502 | 1,440 | 2,730 | 154 | 714 | 702 | 262 |
| 3..... | 1,080 | 1,010 | 576 | 717 | 615 | 257 | 1,500 | 4,090 | 578 | 548 | 424 | 365 |
| 4..... | 1,070 | 978 | 813 | 623 | 664 | 345 | 1,320 | 3,880 | 822 | 209 | 172 | 245 |
| 5..... | 1,130 | 1,090 | 768 | 534 | 1,050 | 802 | 1,270 | 2,230 | 948 | 600 | 521 | 468 |
| 6..... | 1,020 | 938 | 674 | 658 | 1,080 | 1,180 | 1,080 | 1,350 | 954 | 418 | 713 | 494 |
| 7..... | 715 | 933 | 760 | 934 | 1,130 | 1,080 | 1,320 | 2,330 | 950 | 333 | 698 | 205 |
| 8..... | 1,080 | 1,060 | 715 | 421 | 1,060 | 780 | 1,560 | 2,020 | 488 | 575 | 628 | 74 |
| 9..... | 1,190 | 1,100 | 406 | 534 | 990 | 452 | 1,970 | 1,630 | 128 | 792 | 777 | 611 |
| 10..... | 1,070 | 991 | 974 | 746 | 360 | 328 | 1,840 | 1,200 | 664 | 842 | 350 | 577 |
| 11..... | 1,070 | 440 | 1,090 | 677 | 555 | 514 | 1,420 | 683 | 924 | 904 | 28 | 468 |
| 12..... | 1,010 | 1,010 | 835 | 554 | 1,040 | 848 | 1,220 | 436 | 888 | 872 | 284 | 508 |
| 13..... | 1,060 | 1,040 | 761 | 224 | 1,060 | 1,250 | 1,180 | 932 | 914 | 672 | 734 | 616 |
| 14..... | 1,050 | 1,120 | 634 | 333 | 1,070 | 3,860 | 1,030 | 1,180 | 746 | 286 | 760 | 217 |
| 15..... | 1,010 | 1,060 | 297 | 723 | 1,110 | 5,060 | 576 | 2,040 | 468 | 882 | 764 | 94 |
| 16..... | 895 | 1,060 | 160 | 530 | 1,040 | 4,700 | 903 | 1,890 | 178 | 932 | 626 | 480 |
| 17..... | 1,030 | 801 | 660 | 690 | 537 | 2,520 | 1,140 | 1,820 | 653 | 948 | 202 | 510 |
| 18..... | 1,020 | 178 | 1,020 | 840 | 649 | 1,600 | 1,360 | 1,320 | 842 | 1,030 | 82 | 629 |
| 19..... | 1,060 | 992 | 884 | 1,850 | 1,170 | 1,330 | 1,670 | 1,040 | 778 | 370 | 448 | 518 |
| 20..... | 884 | 1,070 | 840 | 624 | 1,090 | 1,520 | 1,330 | 1,290 | 888 | 654 | 866 | 575 |
| 21..... | 377 | 622 | 538 | 682 | 1,040 | 1,640 | 3,880 | 1,850 | 876 | 69 | 869 | 267 |
| 22..... | 599 | 655 | 390 | 795 | 528 | 2,480 | 2,990 | 2,450 | 618 | 724 | 708 | 82 |
| 23..... | 764 | 732 | 232 | 680 | 588 | 4,930 | 3,100 | 1,570 | 108 | 955 | 404 | 474 |
| 24..... | 1,050 | 840 | 306 | 765 | 262 | 4,270 | 3,540 | 1,500 | 705 | 968 | 198 | 505 |
| 25..... | 1,020 | 396 | 145 | 648 | 626 | 2,370 | 5,470 | 1,200 | 876 | 898 | 194 | 476 |
| 26..... | 1,030 | 746 | 592 | 622 | 516 | 2,470 | 7,760 | 453 | 801 | 797 | 588 | 484 |
| 27..... | 435 | 977 | 607 | 113 | 820 | 2,120 | 4,640 | 742 | 705 | 126 | 621 | 486 |
| 28..... | 128 | 864 | 630 | 401 | 650 | 1,420 | 3,810 | 1,040 | 821 | 74 | 558 | 572 |
| 29..... | 744 | 461 | 376 | 621 | ----- | 1,220 | 7,380 | 1,160 | 814 | 732 | 654 | 82 |
| 30..... | 1,070 | 580 | 123 | 935 | ----- | 997 | 5,100 | 622 | 210 | 736 | 706 | 291 |
| 31..... | 1,070 | ----- | 332 | 971 | ----- | 912 | ----- | 728 | ----- | 597 | 402 | ----- |

| Month | Observed discharge in second-feet | | | Gain or loss in storage in Somerset and Davis Bridge Reservoirs (millions of cubic feet) | Discharge in second-feet, corrected for storage | | Run-off in inches |
|----------------|-----------------------------------|---------|------|--|---|-----------------|-------------------|
| | Maximum | Minimum | Mean | | Mean | Per square mile | |
| October..... | 1,190 | ----- | 128 | 930 | -1,730 | 283 | 0.90 |
| November..... | 1,120 | ----- | 178 | 863 | -1,309 | 358 | 1.10 |
| December..... | 1,060 | ----- | 123 | 579 | -195 | 506 | 1.61 |
| January..... | 1,850 | ----- | 113 | 667 | +12 | 672 | 2.14 |
| February..... | 1,170 | ----- | 262 | 831 | -1,282 | 301 | .87 |
| March..... | 5,060 | ----- | 257 | 1,750 | +3,123 | 2,920 | 9.30 |
| April..... | 7,760 | ----- | 576 | 2,450 | +2,662 | 3,480 | 10.72 |
| May..... | 4,090 | ----- | 436 | 1,630 | +413 | 1,790 | 5.70 |
| June..... | 994 | ----- | 100 | 668 | -910 | 317 | .98 |
| July..... | 1,030 | ----- | 69 | 642 | -1,325 | 148 | .47 |
| August..... | 869 | ----- | 28 | 527 | -1,241 | 64.1 | .20 |
| September..... | 629 | ----- | 74 | 398 | -793 | 92.1 | .28 |
| The year..... | 7,760 | ----- | 28 | 995 | -2,575 | 914 | 34.27 |

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, 1929.

EXTREMES.—Maximum discharge during year, 990 second-feet Mar. 16 (gage height, 5.31 feet); minimum, 16 second-feet Sept. 4 (gage height, 2.35 feet). Maximum discharge known, 1,300 second-feet Nov. 4, 1927.

REMARKS.—Records good. Stage-discharge relation affected by ice Dec. 31 to Jan. 5 and Jan. 7 to Mar. 12. Discharge record includes water pumped from tunnel under construction. Station maintained in cooperation with Metropolitan District Water Supply Commission.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | 77 | 67 | 98 | 72 | 95 | 127 | 280 | 450 | 134 | 54 | 34 | 20 |
| 2..... | 74 | 62 | 113 | 98 | 100 | 98 | 295 | 380 | 123 | 53 | 37 | 18 |
| 3..... | 74 | 62 | 105 | 89 | 94 | 108 | 270 | 455 | 110 | 47 | 36 | 17 |
| 4..... | 74 | 70 | 102 | 81 | 77 | 113 | 250 | 545 | 105 | 44 | 37 | 16 |
| 5..... | 74 | 79 | 103 | 66 | 73 | 196 | 245 | 510 | 110 | 42 | 33 | 17 |
| 6..... | 86 | 77 | 102 | 150 | 78 | 370 | 265 | 450 | 118 | 42 | 26 | 18 |
| 7..... | 84 | 72 | 94 | 227 | 135 | 425 | 285 | 475 | 110 | 42 | 24 | 18 |
| 8..... | 82 | 69 | 81 | 123 | 288 | 296 | 270 | 490 | 98 | 41 | 23 | 20 |
| 9..... | 80 | 79 | 79 | 116 | 278 | 251 | 270 | 435 | 88 | 38 | 24 | 26 |
| 10..... | 80 | 72 | 77 | 133 | 268 | 227 | 270 | 370 | 80 | 38 | 26 | 33 |
| 11..... | 68 | 67 | 72 | 170 | 234 | 177 | 275 | 315 | 78 | 35 | 26 | 28 |
| 12..... | 68 | 64 | 73 | 147 | 176 | 170 | 315 | 275 | 93 | 31 | 25 | 24 |
| 13..... | 65 | 62 | 70 | 123 | 137 | 278 | 340 | 255 | 98 | 29 | 23 | 21 |
| 14..... | 56 | 66 | 69 | 91 | 132 | 600 | 320 | 230 | 103 | 30 | 24 | 21 |
| 15..... | 53 | 72 | 66 | 102 | 127 | 890 | 290 | 265 | 114 | 33 | 24 | 22 |
| 16..... | 51 | 75 | 67 | 104 | 112 | 990 | 325 | 285 | 103 | 30 | 22 | 20 |
| 17..... | 52 | 78 | 69 | 106 | 110 | 925 | 480 | 280 | 80 | 29 | 20 | 23 |
| 18..... | 53 | 81 | 119 | 123 | 108 | 670 | 610 | 265 | 72 | 28 | 23 | 33 |
| 19..... | 57 | 88 | 129 | 261 | 115 | 545 | 610 | 255 | 64 | 26 | 27 | 28 |
| 20..... | 69 | 117 | 107 | 296 | 105 | 480 | 580 | 340 | 62 | 24 | 27 | 24 |
| 21..... | 63 | 110 | 102 | 188 | 89 | 460 | 700 | 345 | 57 | 23 | 27 | 22 |
| 22..... | 53 | 98 | 75 | 148 | 79 | 480 | 910 | 380 | 58 | 22 | 27 | 22 |
| 23..... | 55 | 88 | 73 | 135 | 86 | 520 | 895 | 340 | 57 | 36 | 27 | 23 |
| 24..... | 91 | 77 | 64 | 106 | 97 | 525 | 720 | 290 | 54 | 24 | 29 | 20 |
| 25..... | 83 | 73 | 62 | 111 | 103 | 480 | 590 | 275 | 75 | 23 | 26 | 20 |
| 26..... | 70 | 63 | 60 | 106 | 103 | 455 | 570 | 260 | 98 | 24 | 22 | 21 |
| 27..... | 63 | 62 | 59 | 100 | 123 | 460 | 555 | 220 | 80 | 18 | 20 | 22 |
| 28..... | 73 | 59 | 102 | 94 | 133 | 420 | 500 | 205 | 64 | 34 | 20 | 24 |
| 29..... | 83 | 66 | 110 | 78 | ----- | 375 | 515 | 189 | 70 | 28 | 20 | 23 |
| 30..... | 77 | 66 | 94 | 84 | ----- | 320 | 510 | 173 | 63 | 29 | 21 | 25 |
| 31..... | 70 | ----- | 77 | 89 | ----- | 290 | ----- | 150 | ----- | 25 | 21 | ----- |

| Month | Observed | | | Pumpage from tunnel second-feet | Corrected for pumpage | | |
|----------------|----------|---------|------|---------------------------------|-----------------------|-----------------|-------------------|
| | Maximum | Minimum | Mean | | Mean | Per square mile | Run-off in inches |
| October..... | 91 | 51 | 69.6 | ----- | 69.6 | 0.709 | 0.82 |
| November..... | 117 | 59 | 74.7 | ----- | 74.7 | .76 | .85 |
| December..... | 129 | 59 | 85.9 | ----- | 85.9 | .875 | 1.01 |
| January..... | 296 | 66 | 126 | 0.1 | 126 | 1.28 | 1.48 |
| February..... | 288 | 73 | 131 | .2 | 131 | 1.33 | 1.38 |
| March..... | 990 | 98 | 410 | .6 | 409 | 4.16 | 4.80 |
| April..... | 910 | 245 | 444 | .8 | 443 | 4.51 | 5.03 |
| May..... | 545 | 150 | 327 | 1.0 | 326 | 3.32 | 3.83 |
| June..... | 134 | 54 | 87.3 | 1.5 | 85.8 | .874 | .98 |
| July..... | 54 | 18 | 33.0 | 1.5 | 31.5 | .32 | .37 |
| August..... | 37 | 20 | 25.8 | 1.6 | 24.2 | .24 | .28 |
| September..... | 33 | 16 | 22.3 | 1.6 | 20.7 | .211 | .24 |
| The year..... | 990 | 16 | 153 | .7 | 152 | 1.55 | 21.07 |

WARE RIVER AT GIBBS CROSSING, MASS.

LOCATION.—Water-stage recorder between bridges at Gibbs Crossing, Hampshire County, three-fourths mile above mouth of Beaver Brook and 3 miles below Ware.

DRAINAGE AREA.—199 square miles.

RECORDS AVAILABLE.—August, 1912, to September, 1929.

EXTREMES.—Maximum discharge during year, 2,170 second-feet Mar. 15 (gage height, 4.88 feet); minimum, 12 second-feet Sept. 2 (gage height, 1.27 feet). 1912-1929: Maximum discharge, 2,950 second-feet Apr. 8, 1924 (gage height, 6.25 feet); minimum, 5 second-feet Oct. 26, 1914.

REMARKS.—Records excellent except those for periods of ice effect Jan. 27 to Feb. 6, Feb. 10-16, and 20-26, which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept |
|---------|------|-------|------|------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 228 | 143 | 137 | 165 | 120 | 288 | 530 | 846 | 271 | 183 | 60 | 19 |
| 2..... | 202 | 140 | 217 | 171 | 105 | 213 | 545 | 744 | 177 | 133 | 62 | 18 |
| 3..... | 202 | 99 | 232 | 126 | 105 | 222 | 506 | 1,070 | 269 | 109 | 26 | 43 |
| 4..... | 184 | 41 | 232 | 120 | 170 | 327 | 466 | 1,240 | 257 | 33 | 30 | 34 |
| 5..... | 184 | 195 | 232 | 100 | 144 | 652 | 463 | 1,010 | 213 | 78 | 121 | 35 |
| 6..... | 188 | 213 | 225 | 260 | 108 | 1,380 | 482 | 888 | 207 | 75 | 92 | 37 |
| 7..... | 168 | 162 | 198 | 500 | 307 | 1,160 | 515 | 964 | 207 | 37 | 81 | 37 |
| 8..... | 252 | 137 | 132 | 380 | 642 | 746 | 536 | 986 | 167 | 109 | 53 | 57 |
| 9..... | 225 | 135 | 77 | 340 | 539 | 560 | 502 | 809 | 97 | 98 | 59 | 170 |
| 10..... | 181 | 103 | 225 | 380 | 523 | 402 | 514 | 674 | 210 | 85 | 33 | 124 |
| 11..... | 181 | 92 | 225 | 444 | 494 | 434 | 526 | 561 | 197 | 62 | 27 | 124 |
| 12..... | 202 | 192 | 168 | 333 | 368 | 398 | 508 | 492 | 147 | 70 | 41 | 53 |
| 13..... | 99 | 146 | 132 | 264 | 325 | 686 | 696 | 505 | 127 | 77 | 53 | 42 |
| 14..... | 92 | 126 | 126 | 200 | 270 | 1,690 | 640 | 442 | 137 | 31 | 47 | 41 |
| 15..... | 165 | 123 | 99 | 180 | 196 | 2,040 | 630 | 485 | 177 | 53 | 69 | 32 |
| 16..... | 184 | 121 | 47 | 190 | 170 | 1,940 | 648 | 546 | 183 | 83 | 78 | 31 |
| 17..... | 165 | 99 | 181 | 220 | 172 | 1,780 | 1,100 | 508 | 215 | 67 | 28 | 72 |
| 18..... | 146 | 68 | 228 | 260 | 266 | 1,330 | 1,450 | 451 | 127 | 62 | 20 | 83 |
| 19..... | 155 | 195 | 225 | 360 | 230 | 1,020 | 1,250 | 444 | 127 | 63 | 43 | 72 |
| 20..... | 132 | 232 | 240 | 380 | 184 | 870 | 1,100 | 699 | 117 | 48 | 57 | 62 |
| 21..... | 105 | 213 | 209 | 522 | 195 | 808 | 1,490 | 669 | 111 | 28 | 44 | 68 |
| 22..... | 158 | 206 | 140 | 394 | 147 | 820 | 1,820 | 706 | 87 | 48 | 50 | 45 |
| 23..... | 192 | 184 | 165 | 320 | 184 | 880 | 1,670 | 612 | 37 | 49 | 49 | 52 |
| 24..... | 192 | 110 | 323 | 284 | 215 | 890 | 1,420 | 500 | 170 | 63 | 43 | 67 |
| 25..... | 168 | 85 | 79 | 264 | 232 | 840 | 1,130 | 483 | 187 | 67 | 20 | 61 |
| 26..... | 184 | 209 | 206 | 216 | 214 | 805 | 1,100 | 432 | 197 | 75 | 45 | 51 |
| 27..... | 152 | 188 | 181 | 170 | 228 | 842 | 1,030 | 425 | 211 | 60 | 69 | 50 |
| 28..... | 74 | 162 | 174 | 186 | 240 | 740 | 1,080 | 380 | 174 | 20 | 59 | 43 |
| 29..... | 181 | 47 | 140 | 180 | ----- | 678 | 1,090 | 341 | 157 | 40 | 36 | 37 |
| 30..... | 217 | 140 | 162 | 160 | ----- | 566 | 1,040 | 265 | 90 | 70 | 47 | 57 |
| 31..... | 168 | ----- | 323 | 140 | ----- | 513 | ----- | 292 | ----- | 69 | 33 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 252 | 74 | 172 | 0.864 | 1.00 |
| November..... | 232 | 41 | 144 | .724 | .81 |
| December..... | 323 | 47 | 185 | .930 | 1.07 |
| January..... | 522 | 100 | 265 | 1.33 | 1.53 |
| February..... | 642 | 105 | 253 | 1.27 | 1.32 |
| March..... | 2,040 | 213 | 855 | 4.30 | 4.96 |
| April..... | 1,820 | 463 | 883 | 4.44 | 4.95 |
| May..... | 1,240 | 265 | 628 | 3.16 | 3.64 |
| June..... | 271 | 34 | 167 | .839 | .94 |
| July..... | 183 | 20 | 69.2 | .348 | .40 |
| August..... | 121 | 20 | 50.8 | .255 | .29 |
| September..... | 170 | 18 | 57.2 | .287 | .32 |
| The year..... | 2,040 | 18 | 311 | 1.56 | 21.23 |

CHICOPEE RIVER AT BIRCHAM BEND, MASS.

LOCATION.—Water-stage recorder at dam at Bircham Bend, Hampden County, three-fourths mile below Higher Brook and $5\frac{1}{2}$ miles above mouth.

DRAINAGE AREA.—704 square miles.

RECORDS AVAILABLE.—August, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 6,700 second-feet Mar. 15 (gage height, 5.44 feet); minimum, 16 second-feet Sept. 1 (leakage through wheels).

REMARKS.—Records good. Assistance in rating the station furnished by Metropolitan District Water Supply Commission.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 811 | 640 | 616 | 483 | 678 | 1,010 | 1,940 | 2,060 | 1,000 | 884 | 241 | 16 |
| 2..... | 726 | 614 | 466 | 957 | 573 | 783 | 1,840 | 2,740 | 1,060 | 623 | 315 | 48 |
| 3..... | 587 | 294 | 1,080 | 681 | 442 | 813 | 1,710 | 3,220 | 1,260 | 559 | 246 | 186 |
| 4..... | 614 | 246 | 806 | 716 | 760 | 1,180 | 1,630 | 3,690 | 911 | 316 | 105 | 326 |
| 5..... | 606 | 814 | 843 | 516 | 659 | 1,850 | 1,590 | 3,340 | 905 | 463 | 254 | 237 |
| 6..... | 542 | 697 | 747 | 752 | 728 | 3,920 | 1,530 | 3,180 | 776 | 409 | 372 | 169 |
| 7..... | 486 | 680 | 694 | 2,040 | 1,200 | 3,910 | 1,600 | 3,290 | 708 | 410 | 304 | 102 |
| 8..... | 799 | 589 | 549 | 1,220 | 2,320 | 2,880 | 1,790 | 3,290 | 704 | 327 | 261 | 35 |
| 9..... | 657 | 562 | 428 | 1,080 | 1,890 | 2,300 | 1,670 | 3,030 | 471 | 434 | 242 | 185 |
| 10..... | 640 | 348 | 729 | 1,160 | 1,950 | 1,800 | 1,660 | 2,710 | 949 | 622 | 156 | 215 |
| 11..... | 650 | 356 | 688 | 1,520 | 1,940 | 1,920 | 1,770 | 2,360 | 916 | 315 | 53 | 577 |
| 12..... | 846 | 764 | 641 | 1,180 | 1,660 | 1,670 | 2,010 | 2,080 | 725 | 161 | 283 | 435 |
| 13..... | 1,220 | 685 | 527 | 924 | 1,240 | 2,280 | 2,380 | 2,040 | 669 | 254 | 277 | 391 |
| 14..... | 336 | 648 | 557 | 982 | 1,140 | 3,950 | 2,310 | 1,880 | 852 | 376 | 299 | 534 |
| 15..... | 674 | 597 | 214 | 806 | 1,040 | 5,120 | 2,320 | 1,990 | 592 | 404 | 428 | 338 |
| 16..... | 676 | 556 | 138 | 699 | 719 | 4,930 | 2,170 | 2,100 | 451 | 281 | 459 | 205 |
| 17..... | 486 | 222 | 699 | 722 | 777 | 4,980 | 3,170 | 2,010 | 767 | 423 | 381 | 281 |
| 18..... | 513 | 182 | 697 | 759 | 995 | 4,320 | 3,820 | 1,780 | 642 | 357 | 214 | 353 |
| 19..... | 517 | 740 | 728 | 1,510 | 850 | 3,630 | 3,700 | 1,740 | 476 | 344 | 186 | 289 |
| 20..... | 300 | 707 | 780 | 2,180 | 887 | 3,170 | 3,430 | 2,540 | 491 | 128 | 176 | 277 |
| 21..... | 346 | 708 | 761 | 1,840 | 831 | 2,930 | 4,220 | 2,460 | 501 | 142 | 277 | 214 |
| 22..... | 673 | 769 | 590 | 1,370 | 659 | 2,810 | 5,020 | 2,640 | 240 | 196 | 267 | 56 |
| 23..... | 717 | 721 | 240 | 1,330 | 615 | 2,800 | 4,960 | 2,310 | 249 | 239 | 287 | 302 |
| 24..... | 562 | 605 | 610 | 960 | 513 | 2,860 | 4,350 | 2,000 | 504 | 293 | 116 | 278 |
| 25..... | 657 | 379 | 388 | 1,120 | 975 | 2,900 | 3,760 | 2,000 | 441 | 304 | 45 | 257 |
| 26..... | 601 | 808 | 693 | 708 | 813 | 2,750 | 3,580 | 1,880 | 828 | 280 | 196 | 225 |
| 27..... | 411 | 676 | 665 | 569 | 871 | 2,720 | 3,350 | 1,750 | 799 | 172 | 286 | 226 |
| 28..... | 331 | 607 | 613 | 890 | 1,040 | 2,540 | 3,160 | 1,540 | 804 | 72 | 197 | 231 |
| 29..... | 772 | 143 | 479 | 676 | ----- | 2,350 | 3,470 | 1,380 | 713 | 182 | 221 | 54 |
| 30..... | 677 | 623 | 414 | 557 | ----- | 2,020 | 3,330 | 1,240 | 579 | 293 | 272 | 392 |
| 31..... | 637 | ----- | 646 | 667 | ----- | 1,880 | ----- | 1,240 | ----- | 276 | 48 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 1,220 | 300 | 615 | 0.874 | 1.01 |
| November..... | 814 | 143 | 566 | .804 | .90 |
| December..... | 1,030 | 138 | 602 | .855 | .99 |
| January..... | 2,180 | 483 | 1,020 | 1.45 | 1.67 |
| February..... | 2,320 | 442 | 1,030 | 1.46 | 1.52 |
| March..... | 5,120 | 783 | 2,740 | 3.89 | 4.48 |
| April..... | 5,020 | 1,530 | 2,770 | 3.93 | 4.38 |
| May..... | 3,690 | 1,240 | 2,310 | 3.28 | 3.78 |
| June..... | 1,260 | 240 | 699 | .993 | 1.11 |
| July..... | 884 | 72 | 340 | .483 | .56 |
| August..... | 459 | 45 | 241 | .342 | .39 |
| September..... | 577 | 16 | 248 | .352 | .39 |
| The year..... | 5,120 | 16 | 1,100 | 1.56 | 21.18 |

SURFACE WATER SUPPLY, 1929, PART I

SWIFT RIVER AT WEST WARE, MASS.

LOCATION.—Water-stage-recorder 1,000 feet below dam at West Ware depot, 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, 1929.

EXTREMES.—Maximum discharge during year, 1,630 second-feet Mar. 17 (gauge height, 7.21 feet); minimum, 30 second-feet July 21 (gauge height, 1.94 feet).

1910-1929: Maximum discharge, 2,390 second-feet Apr. 7, 1923 (gauge height, 9.08 feet); minimum, 22 second-feet Sept. 22, 1914.

REMARKS.—Records excellent except those for periods of ice effect (Jan. 5, 8-10, Jan. 14 to Feb. 16, and Feb. 20-25) and for estimated periods (Oct. 8-10, 19, 20, June 27-30, Aug. 16-18, 23-25, 27, 28, and Sept. 6-8), which are fair. Numerous lakes, ponds and reservoirs above have considerable storage.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|-------|-------|-----|-------|------|------|-------|
| 1..... | 193 | 134 | 169 | 164 | 167 | 240 | 497 | 800 | 248 | 178 | 68 | 36 |
| 2..... | 180 | 131 | 202 | 180 | 158 | 229 | 497 | 720 | 213 | 162 | 65 | 34 |
| 3..... | 168 | 131 | 208 | 173 | 158 | 226 | 469 | 832 | 200 | 140 | 63 | 34 |
| 4..... | 151 | 145 | 208 | 197 | 169 | 222 | 455 | 992 | 200 | 127 | 74 | 33 |
| 5..... | 153 | 153 | 208 | 116 | 169 | 388 | 441 | 960 | 161 | 118 | 72 | 33 |
| 6..... | 182 | 153 | 208 | 306 | 169 | 705 | 455 | 896 | 165 | 118 | 70 | 33 |
| 7..... | 193 | 151 | 202 | 388 | 250 | 752 | 483 | 896 | 161 | 123 | 65 | 33 |
| 8..... | 175 | 149 | 189 | 375 | 362 | 644 | 469 | 960 | 180 | 120 | 59 | 57 |
| 9..... | 180 | 153 | 178 | 414 | 414 | 570 | 455 | 864 | 171 | 116 | 57 | 92 |
| 10..... | 189 | 153 | 167 | 388 | 455 | 455 | 455 | 768 | 164 | 116 | 57 | 92 |
| 11..... | 202 | 153 | 151 | 362 | 428 | 388 | 455 | 659 | 164 | 112 | 63 | 79 |
| 12..... | 211 | 151 | 145 | 321 | 375 | 375 | 512 | 599 | 153 | 101 | 61 | 72 |
| 13..... | 200 | 145 | 140 | 284 | 311 | 483 | 599 | 540 | 145 | 94 | 59 | 70 |
| 14..... | 184 | 138 | 138 | 238 | 267 | 832 | 599 | 453 | 140 | 94 | 57 | 74 |
| 15..... | 164 | 134 | 134 | 208 | 233 | 1,200 | 555 | 526 | 147 | 98 | 57 | 76 |
| 16..... | 153 | 134 | 136 | 193 | 202 | 1,550 | 555 | 555 | 113 | 94 | 54 | 70 |
| 17..... | 149 | 131 | 136 | 193 | 213 | 1,590 | 720 | 540 | 145 | 87 | 52 | 72 |
| 18..... | 145 | 138 | 150 | 215 | 206 | 1,310 | 928 | 497 | 138 | 81 | 50 | 83 |
| 19..... | 145 | 147 | 184 | 250 | 200 | 992 | 1,020 | 483 | 154 | 96 | 50 | 76 |
| 20..... | 147 | 175 | 189 | 428 | 171 | 832 | 960 | 555 | 170 | 74 | 50 | 70 |
| 21..... | 149 | 197 | 182 | 414 | 180 | 800 | 1,060 | 570 | 170 | 70 | 48 | 61 |
| 22..... | 134 | 195 | 164 | 388 | 178 | 784 | 1,310 | 599 | 171 | 74 | 46 | 57 |
| 23..... | 129 | 189 | 191 | 336 | 169 | 800 | 1,390 | 570 | 170 | 72 | 46 | 59 |
| 24..... | 142 | 175 | 178 | 260 | 171 | 832 | 1,160 | 512 | 140 | 72 | 46 | 57 |
| 25..... | 145 | 171 | 153 | 238 | 171 | 832 | 960 | 483 | 138 | 74 | 43 | 52 |
| 26..... | 136 | 160 | 138 | 215 | 175 | 784 | 896 | 441 | 200 | 76 | 39 | 50 |
| 27..... | 131 | 147 | 138 | 208 | 200 | 768 | 864 | 388 | 252 | 76 | 38 | 48 |
| 28..... | 136 | 136 | 158 | 206 | 236 | 720 | 832 | 362 | 203 | 74 | 36 | 46 |
| 29..... | 149 | 136 | 175 | 204 | ----- | 659 | 864 | 326 | 215 | 72 | 36 | 54 |
| 30..... | 142 | 134 | 162 | 197 | ----- | 599 | 864 | 301 | 200 | 72 | 36 | 85 |
| 31..... | 136 | ----- | 160 | 191 | ----- | 540 | ----- | 274 | ----- | 70 | 36 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 211 | 129 | 161 | 0.866 | 1.00 |
| November..... | 197 | 131 | 151 | .812 | .91 |
| December..... | 208 | 134 | 169 | .909 | 1.06 |
| January..... | 428 | 116 | 266 | 1.43 | 1.65 |
| February..... | 455 | 158 | 234 | 1.26 | 1.31 |
| March..... | 1,590 | 222 | 713 | 3.83 | 4.42 |
| April..... | 1,390 | 441 | 726 | 3.90 | 4.35 |
| May..... | 992 | 274 | 611 | 3.28 | 3.78 |
| June..... | 252 | 129 | 175 | .941 | 1.06 |
| July..... | 78 | 70 | 98.4 | .529 | .61 |
| August..... | 174 | 36 | 53.3 | .287 | .33 |
| September..... | 92 | 33 | 59.6 | .320 | .36 |
| The year..... | 1,590 | 33 | 285 | 1.53 | 20.82 |

QUABOAG RIVER AT WEST BRIMFIELD, MASS.

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

DRAINAGE AREA.—150 square miles.

RECORDS AVAILABLE.—August, 1909, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,140 second-feet Apr. 23 (gage height, 4.80 feet); minimum, 7.5 second-feet Aug. 31 (gage height, 1.64 feet).

1909-1929: Maximum discharge, 1,980 second-feet Mar. 17, 1920 (gage height, 5.3 feet); minimum, 2.5 second-feet Sept. 17 and 18, 1910 (gage height, 1.40 feet).

REMARKS.—Records excellent except those for periods of ice effect (Dec. 23-28, Dec. 31 to Feb. 28, and Mar. 11-13) and for estimated periods (July 25, 26, Aug. 8, 9, 22, 23, 25, and Sept. 19), which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1 | 130 | 126 | 124 | 135 | 142 | 205 | 413 | 750 | 336 | 128 | 58 | 19 |
| 2 | 111 | 112 | 138 | 140 | 126 | 180 | 348 | 719 | 211 | 115 | 64 | 28 |
| 3 | 107 | 113 | 138 | 136 | 130 | 177 | 363 | 846 | 197 | 96 | 45 | 84 |
| 4 | 162 | 126 | 128 | 147 | 133 | 199 | 159 | 771 | 183 | 90 | 53 | 38 |
| 5 | 150 | 128 | 138 | 128 | 135 | 386 | 333 | 745 | 172 | 81 | 50 | 27 |
| 6 | 147 | 130 | 128 | 211 | 142 | 604 | 368 | 704 | 162 | 74 | 45 | 22 |
| 7 | 113 | 103 | 152 | 242 | 202 | 623 | 345 | 745 | 154 | 68 | 43 | 26 |
| 8 | 115 | 122 | 118 | 252 | 281 | 506 | 830 | 668 | 112 | 31 | 38 | 27 |
| 9 | 122 | 142 | 115 | 341 | 344 | 542 | 326 | 668 | 128 | 65 | 31 | 109 |
| 10 | 147 | 113 | 109 | 315 | 386 | 406 | 333 | 614 | 130 | 55 | 21 | 76 |
| 11 | 142 | 124 | 88 | 294 | 341 | 344 | 359 | 570 | 120 | 64 | 31 | 49 |
| 12 | 157 | 126 | 130 | 271 | 298 | 315 | 421 | 520 | 118 | 41 | 66 | 19 |
| 13 | 147 | 107 | 118 | 238 | 249 | 405 | 421 | 506 | 112 | 46 | 55 | 82 |
| 14 | 113 | 107 | 109 | 197 | 214 | 835 | 425 | 493 | 105 | 43 | 45 | 34 |
| 15 | 136 | 107 | 98 | 164 | 194 | 891 | 421 | 493 | 88 | 65 | 53 | 26 |
| 16 | 140 | 105 | 105 | 154 | 172 | 968 | 450 | 468 | 76 | 59 | 50 | 55 |
| 17 | 124 | 94 | 109 | 152 | 167 | 889 | 668 | 426 | 96 | 45 | 30 | 45 |
| 18 | 106 | 111 | 138 | 138 | 160 | 787 | 709 | 406 | 82 | 45 | 30 | 46 |
| 19 | 103 | 115 | 145 | 224 | 160 | 803 | 730 | 454 | 78 | 49 | 52 | 65 |
| 20 | 107 | 142 | 145 | 356 | 145 | 745 | 761 | 506 | 65 | 38 | 49 | 56 |
| 21 | 105 | 138 | 147 | 252 | 154 | 688 | 1,030 | 502 | 88 | 22 | 36 | 31 |
| 22 | 115 | 167 | 120 | 425 | 154 | 643 | 1,030 | 498 | 84 | 66 | 40 | 49 |
| 23 | 113 | 164 | 138 | 265 | 149 | 643 | 1,020 | 476 | 45 | 50 | 71 | 66 |
| 24 | 135 | 118 | 118 | 214 | 145 | 599 | 996 | 458 | 64 | 58 | 88 | 45 |
| 25 | 124 | 111 | 113 | 197 | 147 | 551 | 960 | 450 | 108 | 50 | 60 | 59 |
| 26 | 124 | 105 | 99 | 183 | 150 | 570 | 954 | 425 | 128 | 46 | 43 | 59 |
| 27 | 113 | 105 | 103 | 177 | 170 | 528 | 896 | 405 | 128 | 40 | 46 | 45 |
| 28 | 128 | 120 | 111 | 172 | 191 | 502 | 841 | 359 | 111 | 31 | 27 | 40 |
| 29 | 133 | 90 | 147 | 172 | ----- | 471 | 835 | 333 | 130 | 58 | 22 | 16 |
| 30 | 120 | 107 | 145 | 162 | ----- | 463 | 782 | 308 | 88 | 55 | 11 | 76 |
| 31 | 118 | ----- | 133 | 164 | ----- | 425 | ----- | 265 | ----- | 52 | 8.7 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 167 | 103 | 128 | 0.853 | 0.96 |
| November | 167 | 90 | 119 | .793 | .88 |
| December | 152 | 88 | 124 | .827 | .95 |
| January | 425 | 128 | 215 | 1.43 | 1.65 |
| February | 366 | 126 | 192 | 1.28 | 1.33 |
| March | 966 | 177 | 545 | 3.63 | 4.18 |
| April | 1,080 | 326 | 608 | 4.05 | 4.52 |
| May | 846 | 265 | 534 | 3.56 | 4.10 |
| June | 236 | 45 | 120 | .800 | .89 |
| July | 128 | 22 | 60.5 | .403 | .46 |
| August | 88 | 8.7 | 43.9 | .293 | .34 |
| September | 109 | 16 | 44.4 | .296 | .33 |
| The year | 1,080 | 8.7 | 228 | 1.52 | 20.61 |

WESTFIELD RIVER AT KNIGHTVILLE, MASS.

LOCATION.—Chain gage at Pitcher Bridge in Knightville, Hampshire County, 1 mile north of 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, 1929.

EXTREMES.—Maximum discharge during year, 4,360 second-feet Apr. 21 (gage height, 6.55 feet); minimum, 16 second-feet Aug. 3 (gage height, 0.64 foot).

1909-1929: 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. 22 to Jan. 6, Jan. 13-19, and Jan. 26 to Mar. 6), which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1 | 136 | 64 | 162 | 79 | 66 | 139 | 650 | 760 | 132 | 58 | 19 | 18 |
| 2 | 120 | 66 | 191 | 80 | 64 | 122 | 678 | 650 | 120 | 50 | 18 | 18 |
| 3 | 103 | 80 | 156 | 71 | 62 | 116 | 495 | 1,180 | 175 | 42 | 16 | 18 |
| 4 | 96 | 100 | 134 | 68 | 59 | 176 | 472 | 820 | 94 | 39 | 31 | 18 |
| 5 | 88 | 105 | 224 | 59 | 56 | 340 | 405 | 705 | 92 | 42 | 31 | 17 |
| 6 | 156 | 71 | 139 | 450 | 56 | 1,180 | 890 | 1,260 | 178 | 53 | 26 | 20 |
| 7 | 174 | 65 | 80 | 291 | 149 | 820 | 890 | 1,180 | 149 | 48 | 23 | 24 |
| 8 | 118 | 90 | 139 | 179 | 340 | 570 | 678 | 760 | 127 | 38 | 20 | 28 |
| 9 | 103 | 86 | 139 | 142 | 450 | 540 | 595 | 595 | 177 | 28 | 23 | 92 |
| 10 | 109 | 80 | 125 | 185 | 360 | 340 | 545 | 520 | 88 | 36 | 28 | 66 |
| 11 | 92 | 73 | 118 | 215 | 298 | 270 | 520 | 450 | 79 | 36 | 27 | 58 |
| 12 | 82 | 68 | 127 | 203 | 240 | 224 | 760 | 382 | 71 | 30 | 32 | 43 |
| 13 | 80 | 60 | 132 | 144 | 194 | 678 | 650 | 340 | 62 | 28 | 39 | 38 |
| 14 | 70 | 55 | 103 | 90 | 154 | 2,570 | 595 | 306 | 90 | 28 | 32 | 41 |
| 15 | 70 | 53 | 86 | 64 | 127 | 3,050 | 570 | 340 | 80 | 26 | 31 | 44 |
| 16 | 66 | 64 | 96 | 60 | 100 | 3,170 | 650 | 405 | 70 | 24 | 28 | 36 |
| 17 | 64 | 70 | 116 | 92 | 90 | 2,350 | 1,180 | 520 | 62 | 23 | 25 | 32 |
| 18 | 66 | 77 | 405 | 109 | 105 | 890 | 1,100 | 382 | 52 | 21 | 21 | 39 |
| 19 | 60 | 116 | 316 | 1,260 | 100 | 890 | 960 | 428 | 42 | 22 | 26 | 35 |
| 20 | 54 | 274 | 122 | 405 | 84 | 1,100 | 1,030 | 650 | 37 | 21 | 21 | 31 |
| 21 | 48 | 134 | 73 | 228 | 68 | 890 | 4,090 | 545 | 58 | 21 | 21 | 29 |
| 22 | 43 | 96 | 64 | 197 | 86 | 1,710 | 1,910 | 570 | 129 | 21 | 21 | 26 |
| 23 | 39 | 84 | 55 | 168 | 80 | 2,810 | 1,340 | 450 | 92 | 24 | 20 | 24 |
| 24 | 86 | 77 | 50 | 125 | 79 | 1,710 | 1,520 | 382 | 175 | 21 | 20 | 21 |
| 25 | 64 | 70 | 54 | 109 | 77 | 960 | 2,020 | 340 | 244 | 26 | 19 | 20 |
| 26 | 52 | 65 | 64 | 96 | 84 | 1,430 | 2,810 | 313 | 178 | 32 | 17 | 19 |
| 27 | 55 | 70 | 80 | 90 | 109 | 890 | 1,710 | 277 | 179 | 26 | 18 | 20 |
| 28 | 134 | 73 | 90 | 80 | 146 | 705 | 1,180 | 224 | 73 | 23 | 18 | 21 |
| 29 | 100 | 100 | 103 | 80 | ----- | 622 | 2,350 | 182 | 66 | 22 | 18 | 20 |
| 30 | 84 | 118 | 92 | 75 | ----- | 595 | 1,030 | 212 | 64 | 21 | 18 | 25 |
| 31 | 64 | ----- | 84 | 71 | ----- | 545 | ----- | 176 | ----- | 20 | 18 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 174 | 39 | 86.3 | 0.533 | 0.61 |
| November | 274 | 53 | 86.8 | .536 | .90 |
| December | 405 | 50 | 126 | .778 | .90 |
| January | 1,260 | 59 | 180 | 1.11 | 1.28 |
| February | 450 | 56 | 139 | .858 | .89 |
| March | 3,170 | 116 | 1,040 | 6.42 | 7.40 |
| April | 4,090 | 405 | 1,140 | 7.04 | 7.86 |
| May | 1,260 | 176 | 526 | 3.25 | 3.75 |
| June | 244 | 37 | 102 | .630 | .70 |
| July | 58 | 20 | 30.6 | .189 | .22 |
| August | 39 | 16 | 23.4 | .144 | .17 |
| September | 92 | 17 | 31.4 | .194 | .22 |
| The year | 4,090 | 16 | 294 | 1.81 | 24.60 |

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, 1929.

EXTREMES.—Maximum discharge during year, 12,600 second-feet Apr. 21 (gauge height, 13.82 feet); minimum, 84 second-feet Sept. 2 (gauge height, 3.18 feet).
1914-1929: Maximum discharge, 42,500 second-feet Nov. 4, 1927 (gauge height, 25.41 feet); minimum, 9 second-feet Oct. 2, 1921 (gauge height, 2.78 feet).

REMARKS.—Records good except those for Oct. 4-9, which were estimated.
Water is diverted from Westfield Little River for Springfield water supply.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 555 | 298 | 445 | 268 | 397 | 676 | 1,580 | 2,000 | 523 | 249 | 129 | 93 |
| 2..... | 470 | 283 | 533 | 364 | 364 | 544 | 1,780 | 1,780 | 392 | 279 | 132 | 87 |
| 3..... | 470 | 290 | 588 | 311 | 337 | 480 | 1,420 | 3,020 | 491 | 253 | 142 | 98 |
| 4..... | 350 | 319 | 502 | 298 | 369 | 566 | 1,280 | 2,600 | 406 | 223 | 139 | 90 |
| 5..... | 300 | 378 | 594 | 268 | 311 | 1,100 | 1,460 | 1,950 | 430 | 227 | 126 | 90 |
| 6..... | 370 | 303 | 571 | 1,500 | 311 | 3,130 | 2,310 | 2,080 | 450 | 233 | 114 | 93 |
| 7..... | 510 | 283 | 465 | 1,740 | 1,100 | 2,080 | 2,360 | 3,020 | 528 | 203 | 114 | 95 |
| 8..... | 570 | 303 | 286 | 719 | 1,460 | 1,340 | 2,000 | 2,260 | 378 | 193 | 104 | 95 |
| 9..... | 400 | 346 | 350 | 486 | 1,030 | 1,060 | 1,700 | 1,740 | 341 | 163 | 109 | 145 |
| 10..... | 420 | 275 | 373 | 560 | 828 | 802 | 1,580 | 1,500 | 346 | 183 | 109 | 114 |
| 11..... | 450 | 303 | 311 | 646 | 732 | 828 | 1,620 | 1,310 | 324 | 164 | 114 | 155 |
| 12..... | 383 | 286 | 315 | 628 | 560 | 860 | 2,800 | 1,170 | 275 | 164 | 145 | 142 |
| 13..... | 341 | 324 | 332 | 416 | 491 | 1,740 | 2,910 | 1,170 | 283 | 164 | 117 | 129 |
| 14..... | 369 | 283 | 311 | 523 | 455 | 5,420 | 2,000 | 1,060 | 290 | 163 | 120 | 132 |
| 15..... | 420 | 286 | 346 | 324 | 435 | 6,650 | 1,740 | 1,860 | 290 | 193 | 120 | 132 |
| 16..... | 332 | 283 | 279 | 324 | 383 | 7,100 | 2,180 | 1,700 | 402 | 164 | 117 | 171 |
| 17..... | 328 | 290 | 406 | 355 | 350 | 5,680 | 3,940 | 1,620 | 279 | 153 | 120 | 151 |
| 18..... | 383 | 283 | 599 | 411 | 430 | 2,800 | 3,940 | 1,240 | 286 | 155 | 142 | 123 |
| 19..... | 387 | 283 | 893 | 2,260 | 445 | 2,360 | 2,700 | 1,170 | 264 | 143 | 195 | 112 |
| 20..... | 364 | 507 | 588 | 1,660 | 419 | 2,910 | 3,130 | 1,900 | 268 | 143 | 145 | 112 |
| 21..... | 346 | 577 | 425 | 960 | 332 | 2,910 | 9,400 | 1,620 | 249 | 133 | 114 | 106 |
| 22..... | 324 | 430 | 346 | 694 | 425 | 3,460 | 6,200 | 1,780 | 268 | 143 | 109 | 120 |
| 23..... | 311 | 319 | 223 | 617 | 364 | 4,540 | 4,060 | 1,310 | 307 | 133 | 109 | 132 |
| 24..... | 337 | 341 | 209 | 507 | 350 | 3,700 | 3,820 | 1,100 | 257 | 133 | 101 | 112 |
| 25..... | 346 | 324 | 216 | 435 | 402 | 2,600 | 4,300 | 1,200 | 544 | 133 | 95 | 106 |
| 26..... | 346 | 272 | 294 | 411 | 402 | 3,240 | 7,100 | 1,030 | 480 | 123 | 109 | 106 |
| 27..... | 315 | 246 | 279 | 550 | 507 | 2,800 | 4,180 | 926 | 440 | 117 | 106 | 106 |
| 28..... | 315 | 242 | 341 | 455 | 676 | 2,080 | 2,800 | 790 | 303 | 153 | 106 | 104 |
| 29..... | 337 | 242 | 383 | 528 | ----- | 1,820 | 4,060 | 770 | 311 | 133 | 106 | 104 |
| 30..... | 341 | 319 | 298 | 364 | ----- | 1,580 | 2,700 | 634 | 378 | 133 | 106 | 112 |
| 31..... | 311 | ----- | 319 | 411 | ----- | 1,420 | ----- | 640 | ----- | 142 | 98 | ----- |

| Month | Observed discharge in second-feet | | | Diversions from Westfield Little River in million of gallons | Discharge in second-feet, corrected for diversions | | Run-off in inches |
|----------------|-----------------------------------|---------|-------|--|--|-----------------|-------------------|
| | Maximum | Minimum | Mean | | Mean | Per square mile | |
| October..... | 570 | 300 | 381 | 500.12 | 406 | 0.819 | 0.94 |
| November..... | 577 | 242 | 317 | 468.16 | 341 | .688 | .77 |
| December..... | 893 | 209 | 401 | 473.33 | 424 | .855 | .99 |
| January..... | 2,260 | 268 | 645 | 496.13 | 670 | 1.35 | 1.56 |
| February..... | 1,460 | 311 | 524 | 447.88 | 543 | 1.10 | 1.14 |
| March..... | 7,100 | 480 | 2,520 | 496.95 | 2,550 | 5.14 | 5.93 |
| April..... | 9,400 | 1,280 | 3,100 | 478.77 | 3,130 | 6.31 | 7.04 |
| May..... | 3,020 | 634 | 1,550 | 551.90 | 1,570 | 3.17 | 3.66 |
| June..... | 544 | 249 | 359 | 555.66 | 388 | .782 | .87 |
| July..... | 279 | 117 | 172 | 582.26 | 201 | .405 | .47 |
| August..... | 195 | 95 | 120 | 562.70 | 148 | .298 | .34 |
| September..... | 171 | 87 | 116 | 572.67 | 145 | .292 | .33 |
| The year..... | 9,400 | 87 | 852 | 6,186.43 | 878 | 1.77 | 24.04 |

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, 1929.

EXTREMES.—Maximum discharge during year, 1,950 second-feet Apr. 21 (gage height, 4.62 feet); minimum not determined.

1910-1929: Maximum discharge, 5,860 second-feet Nov. 3, 1927 (gage height, 8.26 feet); practically no flow Oct. 26 and 27, 1914.

REMARKS.—Records poor.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1 | 85 | 20 | 60 | 25 | 19 | 62 | 206 | 216 | 68 | 17 | 9.0 | 6.7 |
| 2 | 75 | 20 | 69 | 21 | 19 | 57 | 204 | 193 | 58 | 16 | 8.8 | 8.8 |
| 3 | 65 | 23 | 65 | 19 | 18 | 54 | 153 | 354 | 50 | 14 | 8.5 | 8.8 |
| 4 | 60 | 30 | 70 | 18 | 18 | 88 | 144 | 267 | 45 | 14 | 11 | 8.8 |
| 5 | 55 | 35 | 76 | 18 | 17 | 150 | 173 | 229 | 38 | 14 | 12 | 9.0 |
| 6 | 98 | 23 | 50 | 162 | 16 | 265 | 309 | 222 | 78 | 14 | 10 | 9.2 |
| 7 | 108 | 21 | 30 | 115 | 80 | 160 | 238 | 342 | 64 | 14 | 9.5 | 11 |
| 8 | 65 | 28 | 66 | 87 | 120 | 106 | 204 | 222 | 49 | 14 | 7.8 | 10 |
| 9 | 48 | 27 | 65 | 70 | 120 | 83 | 184 | 300 | 40 | 12 | 8.3 | 13 |
| 10 | 50 | 25 | 60 | 80 | 114 | 76 | 180 | 213 | 36 | 12 | 8.5 | 17 |
| 11 | 41 | 23 | 55 | 95 | 98 | 87 | 184 | 152 | 32 | 12 | 9.0 | 15 |
| 12 | 37 | 21 | 58 | 68 | 82 | 96 | 330 | 124 | 28 | 12 | 9.0 | 14 |
| 13 | 35 | 20 | 62 | 41 | 71 | 327 | 246 | 120 | 26 | 11 | 8.8 | 12 |
| 14 | 31 | 18 | 60 | 30 | 60 | 905 | 204 | 115 | 37 | 10 | 8.8 | 11 |
| 15 | 30 | 18 | 56 | 26 | 52 | 175 | 198 | 258 | 33 | 10 | 10 | 9.0 |
| 16 | 30 | 20 | 47 | 23 | 45 | 905 | 255 | 210 | 29 | 11 | 11 | 7.6 |
| 17 | 29 | 21 | 52 | 26 | 40 | 556 | 520 | 189 | 24 | 10 | 9.0 | 6.4 |
| 18 | 32 | 22 | 146 | 49 | 44 | 309 | 431 | 149 | 20 | 10 | 8.0 | 5.5 |
| 19 | 28 | 36 | 132 | 304 | 37 | 297 | 330 | 180 | 17 | 9.8 | 8.0 | 5.0 |
| 20 | 25 | 70 | 132 | 176 | 32 | 368 | 418 | 206 | 15 | 9.8 | 8.0 | 4.7 |
| 21 | 23 | 45 | 86 | 109 | 28 | 342 | 1,490 | 198 | 24 | 9.8 | 7.6 | 4.5 |
| 22 | 20 | 34 | 46 | 80 | 38 | 556 | 685 | 194 | 54 | 9.2 | 6.7 | 4.3 |
| 23 | 19 | 27 | 29 | 63 | 36 | 601 | 480 | 148 | 38 | 9.0 | 6.4 | 4.2 |
| 24 | 45 | 22 | 18 | 52 | 35 | 498 | 529 | 127 | 68 | 9.0 | 7.4 | 4.1 |
| 25 | 28 | 23 | 18 | 46 | 36 | 300 | 660 | 141 | 100 | 9.8 | 9.0 | 4.1 |
| 26 | 24 | 19 | 20 | 37 | 39 | 536 | 935 | 115 | 70 | 12 | 7.4 | 4.0 |
| 27 | 25 | 20 | 25 | 30 | 51 | 315 | 467 | 105 | 45 | 12 | 6.2 | 4.7 |
| 28 | 32 | 23 | 30 | 27 | 68 | 246 | 312 | 94 | 29 | 10 | 6.0 | 7.0 |
| 29 | 57 | 32 | 37 | 24 | ----- | 214 | 435 | 102 | 23 | 10 | 5.4 | 8.8 |
| 30 | 45 | 42 | 33 | 22 | ----- | 185 | 276 | 102 | 20 | 10 | 5.5 | 9.8 |
| 31 | 29 | ----- | 28 | 20 | ----- | 176 | ----- | 80 | ----- | 9.8 | 5.7 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 108 | 19 | 45.9 | 0.886 | 1.00 |
| November | 70 | 18 | 26.9 | .608 | .57 |
| December | 146 | 18 | 57.5 | 1.08 | 1.24 |
| January | 304 | 18 | 63.3 | 1.19 | 1.37 |
| February | 120 | 16 | 51.2 | .966 | 1.01 |
| March | 905 | 54 | 317 | 5.98 | 6.89 |
| April | 1,490 | 144 | 379 | 7.15 | 7.98 |
| May | 354 | 80 | 183 | 3.45 | 8.98 |
| June | 100 | 15 | 41.9 | .791 | .88 |
| July | 17 | 9.0 | 11.5 | .217 | .25 |
| August | 12 | 5.4 | 8.27 | .156 | .18 |
| September | 17 | 4.0 | 8.27 | .156 | .17 |
| The year | 1,490 | 4.0 | 99.7 | 1.88 | 25.52 |

* Estimated.

* Stage-discharge relation affected by ice.

WESTFIELD LITTLE RIVER NEAR WESTFIELD, MASS.

LOCATION.—Water-stage recorder at diversion dam in Russel, 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, 1929.

REMARKS.—Water diverted at station for municipal supply of Springfield included in discharge records. Records are also corrected for storage in Borden Brook Reservoir. Records furnished by board of water commissioners, Springfield, Mass.

Corrected monthly discharge, 1922-29

| Month | Mean | Per square mile | Run-off in inches | Month | Mean | Per square mile | Run-off in inches |
|----------------------|------|-----------------|-------------------|----------------------|------|-----------------|-------------------|
| 1922-23 | | | | 1925-26 | | | |
| October..... | 30.8 | 0.635 | 0.73 | May..... | 77.2 | 1.59 | 1.83 |
| November..... | 26.9 | .555 | .62 | June..... | 24.4 | .503 | .56 |
| December..... | 23.1 | .476 | .55 | July..... | 14.3 | .295 | .34 |
| January..... | 86.7 | 1.79 | 2.06 | August..... | 30.7 | .633 | .73 |
| February..... | 58.8 | 1.21 | 1.26 | September..... | 11.9 | 2.45 | .27 |
| March..... | 211 | 4.35 | 5.02 | The year..... | | | |
| April..... | 316 | 6.52 | 7.27 | | 85.3 | 1.76 | 23.88 |
| May..... | 134 | 2.76 | 3.18 | 1926-27 | | | |
| June..... | 55.2 | 1.14 | 1.27 | October..... | 31.8 | .656 | .76 |
| July..... | 10.3 | .212 | .24 | November..... | 127 | 2.62 | 2.92 |
| August..... | 9.21 | .190 | .22 | December..... | 93.4 | 1.93 | 2.22 |
| September..... | 16.6 | .342 | .38 | January..... | 163 | 3.26 | 3.87 |
| The year..... | | | | February..... | 88.5 | 1.82 | 1.90 |
| | 81.5 | 1.68 | 22.80 | March..... | 262 | 5.20 | 6.00 |
| 1923-24 | | | | April..... | 75.2 | 1.55 | 1.73 |
| October..... | 100 | 2.06 | 2.38 | May..... | 117 | 2.41 | 2.73 |
| November..... | 94.6 | 1.95 | 2.18 | June..... | 75.5 | 1.56 | 1.74 |
| December..... | 171 | 3.53 | 4.07 | July..... | 29.5 | .608 | .70 |
| January..... | 163 | 3.36 | 3.87 | August..... | 145 | 2.99 | 3.45 |
| February..... | 41.0 | .845 | .91 | September..... | 88.6 | 1.83 | 2.04 |
| March..... | 85.9 | 1.77 | 2.04 | The year..... | | | |
| April..... | 439 | 9.05 | 10.10 | | 108 | 2.23 | 30.11 |
| May..... | 160 | 3.30 | 3.80 | 1927-28 | | | |
| June..... | 31.7 | .654 | .73 | October..... | 171 | 3.53 | 4.97 |
| July..... | 11.2 | .231 | .27 | November..... | 400 | 8.25 | 9.20 |
| August..... | 6.48 | .134 | .15 | December..... | 195 | 4.02 | 4.64 |
| September..... | 25.0 | .516 | .58 | January..... | 114 | 2.35 | 2.71 |
| The year..... | | | | February..... | 186 | 3.84 | 4.14 |
| | 111 | 2.29 | 31.08 | March..... | 113 | 2.33 | 2.69 |
| 1924-25 | | | | April..... | 245 | 5.05 | 5.63 |
| October..... | 24.1 | .497 | .57 | May..... | 138 | 2.85 | 3.29 |
| November..... | 45.5 | .938 | 1.05 | June..... | 149 | 3.07 | 3.42 |
| December..... | 58.6 | 1.21 | 1.40 | July..... | 109 | 2.25 | 2.59 |
| January..... | 16.4 | .338 | .39 | August..... | 178 | 3.67 | 4.23 |
| February..... | 205 | 4.23 | 4.40 | September..... | 85.3 | 1.76 | 1.96 |
| March..... | 230 | 4.74 | 5.46 | The year..... | | | |
| April..... | 122 | 2.52 | 2.81 | | 173 | 3.57 | 48.57 |
| May..... | 72.8 | 1.50 | 1.73 | 1928-29 | | | |
| June..... | 26.3 | .542 | .60 | October..... | 22.0 | .454 | .52 |
| July..... | 47.1 | .971 | 1.12 | November..... | 26.2 | .540 | .60 |
| August..... | 27.0 | .557 | .64 | December..... | 43.1 | .889 | 1.02 |
| September..... | 12.3 | 2.54 | .28 | January..... | 134 | 2.76 | 3.18 |
| The year..... | | | | February..... | 95.2 | 1.96 | 2.04 |
| | 73.1 | 1.51 | 20.45 | March..... | 295 | 6.08 | 7.01 |
| 1925-26 | | | | April..... | 335 | 6.91 | 7.71 |
| October..... | 30.2 | .623 | 0.72 | May..... | 127 | 2.62 | 3.02 |
| November..... | 86.8 | 1.79 | 2.00 | June..... | 23.5 | .485 | .54 |
| December..... | 143 | 2.95 | 3.40 | July..... | 5.59 | .115 | .13 |
| January..... | 74.1 | 1.53 | 1.76 | August..... | 3.20 | .066 | .08 |
| February..... | 69.7 | 1.44 | 1.50 | September..... | 6.11 | .126 | .14 |
| March..... | 137 | 2.82 | 3.25 | The year..... | | | |
| April..... | 327 | 6.74 | 7.52 | | 93.0 | 1.92 | 25.99 |

NORTHERN CONNECTICUT POWER CO.'S CANAL AT THOMPSONVILLE, CONN.

LOCATION.—Water-stage recorder 300 feet below intake at Enfield Dam on Connecticut River, 1 mile below Thompsonville, Hartford County. Zero of gage is 35.49 feet above mean sea level.

RECORDS AVAILABLE.—July, 1928, to September, 1929.

REMARKS.—Records excellent except those for period of ice effect, Jan. 14 to Mar. 3, and for estimated periods, July 21, Aug. 4-11, Sept. 11, and 12, which are fair. Canal used for navigation and power.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1..... | 1,130 | 1,460 | 1,090 | 967 | 1,420 | 1,380 | 1,260 | 1,300 | 1,380 | 1,420 | 1,460 | 656 |
| 2..... | 1,220 | 1,460 | 594 | 1,340 | 1,340 | 1,260 | 1,500 | 1,300 | 765 | 1,500 | 1,380 | 718 |
| 3..... | 1,170 | 1,340 | 1,300 | 1,260 | 698 | 677 | 1,540 | 1,300 | 1,340 | 1,420 | 1,130 | 1,13 |
| 4..... | 1,260 | 594 | 1,460 | 1,300 | 1,170 | 1,420 | 1,500 | 1,260 | 1,500 | 594 | 186 | 1,420 |
| 5..... | 1,220 | 1,220 | 1,460 | 1,090 | 1,420 | 1,500 | 1,500 | 786 | 1,580 | 1,420 | 26 | 1,460 |
| 6..... | 1,090 | 1,420 | 1,460 | 615 | 1,380 | 1,420 | 1,300 | 1,180 | 1,540 | 1,380 | 26 | 1,420 |
| 7..... | 586 | 1,460 | 1,460 | 1,010 | 1,260 | 1,460 | 744 | 1,300 | 1,500 | 718 | 26 | 1,380 |
| 8..... | 1,300 | 1,460 | 1,300 | 1,260 | 1,220 | 1,340 | 1,300 | 1,300 | 1,380 | 1,380 | 26 | 698 |
| 9..... | 1,550 | 1,420 | 615 | 1,380 | 1,170 | 1,220 | 1,420 | 1,300 | 704 | 1,500 | 26 | 1,170 |
| 10..... | 1,500 | 1,300 | 1,220 | 1,460 | 677 | 704 | 1,380 | 1,380 | 1,340 | 1,500 | 26 | 1,420 |
| 11..... | 1,500 | 656 | 1,500 | 1,380 | 1,170 | 1,300 | 1,380 | 1,300 | 1,460 | 1,500 | 221 | 1,380 |
| 12..... | 1,500 | 1,340 | 1,500 | 1,340 | 1,380 | 1,500 | 1,380 | 826 | 1,460 | 1,500 | 1,220 | 1,300 |
| 13..... | 1,380 | 1,550 | 1,460 | 635 | 1,420 | 1,460 | 1,340 | 1,380 | 1,500 | 1,420 | 1,340 | 1,300 |
| 14..... | 615 | 1,500 | 1,460 | 1,380 | 1,420 | 1,500 | 847 | 1,540 | 1,500 | 718 | 1,340 | 1,200 |
| 15..... | 1,300 | 1,500 | 1,380 | 1,550 | 1,420 | 1,380 | 1,340 | 1,540 | 1,380 | 1,260 | 1,340 | 718 |
| 16..... | 1,500 | 1,500 | 677 | 1,550 | 1,260 | 1,260 | 1,460 | 1,580 | 718 | 1,460 | 1,340 | 1,300 |
| 17..... | 1,460 | 1,340 | 1,300 | 1,460 | 677 | 786 | 1,500 | 1,580 | 1,340 | 1,500 | 1,300 | 1,340 |
| 18..... | 1,460 | 677 | 1,500 | 1,550 | 1,260 | 1,050 | 1,540 | 1,420 | 1,550 | 1,500 | 739 | 1,340 |
| 19..... | 1,420 | 1,300 | 1,550 | 1,380 | 1,380 | 1,300 | 1,460 | 765 | 1,550 | 1,500 | 1,260 | 1,340 |
| 20..... | 1,260 | 1,460 | 1,500 | 739 | 1,300 | 1,420 | 1,260 | 1,420 | 1,500 | 1,340 | 1,420 | 1,340 |
| 21..... | 615 | 1,500 | 1,460 | 1,300 | 1,420 | 1,420 | 786 | 1,540 | 1,580 | 501 | 1,420 | 1,220 |
| 22..... | 1,380 | 1,550 | 1,260 | 1,550 | 1,500 | 1,420 | 1,180 | 1,500 | 1,420 | 1,260 | 1,380 | 739 |
| 23..... | 1,550 | 1,550 | 698 | 1,550 | 1,260 | 1,340 | 1,340 | 1,500 | 822 | 1,460 | 1,380 | 1,170 |
| 24..... | 1,550 | 1,340 | 1,090 | 1,500 | 677 | 744 | 1,420 | 1,500 | 1,340 | 1,420 | 1,340 | 1,420 |
| 25..... | 1,550 | 615 | 635 | 1,500 | 1,340 | 1,090 | 1,420 | 1,380 | 1,500 | 1,460 | 677 | 1,460 |
| 26..... | 1,550 | 1,050 | 1,300 | 1,340 | 1,420 | 1,180 | 1,380 | 806 | 1,500 | 1,460 | 1,260 | 1,420 |
| 27..... | 1,300 | 1,130 | 1,550 | 536 | 1,460 | 1,380 | 1,460 | 1,420 | 1,500 | 1,380 | 1,380 | 1,420 |
| 28..... | 582 | 1,130 | 1,550 | 1,130 | 1,460 | 1,420 | 704 | 1,500 | 1,500 | 884 | 1,260 | 1,300 |
| 29..... | 1,420 | 904 | 1,380 | 946 | ----- | 1,340 | 1,130 | 1,500 | 1,460 | 1,300 | 1,420 | 718 |
| 30..... | 1,500 | 1,130 | 656 | 1,500 | ----- | 1,260 | 1,300 | 990 | 700 | 1,500 | 1,380 | 1,130 |
| 31..... | 1,500 | ----- | 946 | 1,500 | ----- | 704 | ----- | 1,380 | ----- | 1,460 | 1,260 | ----- |

| Month | Maximum | Minimum | Mean | Month | Maximum | Minimum | Mean |
|---------------|---------|---------|-------|----------------|---------|---------|-------|
| October..... | 1,550 | 582 | 1,260 | May..... | 1,580 | 765 | 1,320 |
| November..... | 1,550 | 594 | 1,260 | June..... | 1,590 | 704 | 1,360 |
| December..... | 1,550 | 594 | 1,240 | July..... | 1,500 | 501 | 1,310 |
| January..... | 1,550 | 536 | 1,260 | August..... | 1,460 | 26 | 967 |
| February..... | 1,500 | 677 | 1,250 | September..... | 1,460 | 656 | 1,200 |
| March..... | 1,500 | 677 | 1,250 | The year..... | 1,590 | 26 | 1,260 |
| April..... | 1,540 | 704 | 1,300 | | | | |

SCANTIC RIVER AT BROAD BROOK, CONN.

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

DRAINAGE AREA.—98.7 square miles.

RECORDS AVAILABLE.—August, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,190 second-foot M.s.r. 6 (gage height, 8.3 feet); minimum not determined.

1928-29: Maximum discharge, that of Mar. 6, 1929; minimum not determined.

REMARKS.—Records good except those for extremely low stages and for estimated periods (Jan. 8 and Mar. 7-11), which are fair. Low-water flow affected by operation of small reservoirs above station.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|-------|-------|-----|-------|------|------|-------|
| 1..... | 80 | 116 | 114 | 79 | 69 | 194 | 186 | 309 | 155 | 85 | 47 | 32 |
| 2..... | 94 | 103 | 66 | 150 | 43 | 168 | 163 | 255 | 128 | 97 | 52 | 34 |
| 3..... | 113 | 94 | 105 | 125 | 40 | 169 | 156 | 362 | 155 | 88 | 44 | 38 |
| 4..... | 78 | 75 | 113 | 109 | 83 | 249 | 150 | 395 | 122 | 67 | 38 | 47 |
| 5..... | 111 | 85 | 127 | 63 | 107 | 663 | 154 | 364 | 111 | 42 | 49 | 52 |
| 6..... | 90 | 119 | 101 | 180 | 107 | 1,090 | 192 | 305 | 111 | 56 | 58 | 53 |
| 7..... | 48 | 100 | 114 | 247 | 584 | 975 | 199 | 343 | 88 | 42 | 68 | 54 |
| 8..... | 79 | 118 | 91 | 195 | 535 | 600 | 201 | 340 | 75 | 39 | 76 | 40 |
| 9..... | 97 | 106 | 50 | 144 | 453 | 300 | 179 | 299 | 61 | 63 | 73 | 44 |
| 10..... | 95 | 104 | 84 | 139 | 266 | 200 | 177 | 241 | 116 | 70 | 57 | 47 |
| 11..... | 76 | 47 | 94 | 156 | 228 | 190 | 206 | 201 | 98 | 75 | 48 | 51 |
| 12..... | 51 | 64 | 94 | 152 | 173 | 181 | 264 | 185 | 82 | 81 | 57 | 39 |
| 13..... | 59 | 89 | 94 | 105 | 129 | 212 | 337 | 217 | 94 | 72 | 59 | 66 |
| 14..... | 61 | 84 | 98 | 120 | 120 | 363 | 334 | 191 | 70 | 51 | 63 | 52 |
| 15..... | 63 | 105 | 72 | 98 | 103 | 638 | 313 | 203 | 63 | 40 | 63 | 50 |
| 16..... | 84 | 87 | 41 | 124 | 74 | 613 | 290 | 212 | 40 | 34 | 60 | 64 |
| 17..... | 101 | 79 | 77 | 132 | 58 | 467 | 456 | 210 | 53 | 31 | 44 | 51 |
| 18..... | 92 | 46 | 98 | 107 | 122 | 351 | 663 | 174 | 57 | 34 | 40 | 67 |
| 19..... | 87 | 58 | 103 | 229 | 113 | 223 | 512 | 179 | 76 | 44 | 44 | 68 |
| 20..... | 83 | 130 | 81 | 212 | 106 | 226 | 332 | 281 | 79 | 58 | 32 | 50 |
| 21..... | 59 | 109 | 100 | 224 | 84 | 216 | 548 | 307 | 89 | 53 | 30 | 39 |
| 22..... | 100 | 105 | 56 | 137 | 116 | 208 | 801 | 348 | 39 | 49 | 38 | 30 |
| 23..... | 118 | 127 | 41 | 122 | 70 | 198 | 664 | 299 | 38 | 62 | 57 | 38 |
| 24..... | 114 | 96 | 60 | 118 | 47 | 200 | 474 | 232 | 47 | 74 | 60 | 46 |
| 25..... | 113 | 48 | 52 | 98 | 81 | 227 | 352 | 270 | 39 | 72 | 47 | 50 |
| 26..... | 107 | 71 | 95 | 80 | 93 | 210 | 347 | 257 | 78 | 73 | 58 | 51 |
| 27..... | 110 | 112 | 84 | 55 | 153 | 216 | 338 | 250 | 72 | 56 | 60 | 42 |
| 28..... | 58 | 114 | 94 | 119 | 178 | 206 | 288 | 195 | 85 | 41 | 62 | 34 |
| 29..... | 103 | 63 | 76 | 130 | ----- | 192 | 385 | 174 | 62 | 42 | 52 | 27 |
| 30..... | 111 | 74 | 53 | 110 | ----- | 158 | 368 | 148 | 50 | 41 | 46 | 36 |
| 31..... | 120 | ----- | 77 | 109 | ----- | 146 | ----- | 203 | ----- | 40 | 36 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 120 | 48 | 88.9 | 0.901 | 1.04 |
| November..... | 130 | 46 | 90.9 | .921 | 1.03 |
| December..... | 127 | 41 | 84.0 | .851 | .98 |
| January..... | 247 | 55 | 135 | 1.37 | 1.58 |
| February..... | 584 | 40 | 155 | 1.57 | 1.64 |
| March..... | 1,090 | 146 | 331 | 3.35 | 3.86 |
| April..... | 801 | 150 | 334 | 3.38 | 3.77 |
| May..... | 395 | 148 | 256 | 2.59 | 2.99 |
| June..... | 155 | 38 | 81.1 | .822 | .92 |
| July..... | 97 | 31 | 57.2 | .580 | .67 |
| August..... | 76 | 30 | 52.2 | .529 | .61 |
| September..... | 68 | 27 | 46.4 | .470 | .52 |
| The year..... | 1,090 | 27 | 143 | 1.45 | 19.61 |

FARMINGTON RIVER NEAR NEW BOSTON, MASS.

LOCATION.—Water-stage recorder at highway bridge one-fourth 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, 1929.

EXTREMES.—Maximum discharge during year, 2,590 second-feet Apr. 21 (gage height, 6.95 feet); minimum, 5.7 second-feet Aug. 30 and 31 (gage height, 2.38 feet).

1913-1929: 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 good except those for periods of ice effect and for estimated periods, which are fair. Flow affected by storage in Otis Reservoir; capacity, 880,000,000 cubic feet.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|----------|---------|---------|------|-----------|------|-------|---------|---------|------|------|------|-------|
| 1 | 100 | 124 | 147 | 134 | 69 | 100 | 288 | 569 | 179 | 107 | 70 | 30 |
| 2 | 112 | 43 | 172 | 168 | 66 | 69 | 298 | 423 | 93 | 40 | 8.5 | 100 |
| 3 | 156 | 42 | 163 | 134 | 73 | 66 | 258 | 760 | 145 | 31 | 26 | 101 |
| 4 | 156 | 100 | 128 | 66 | 96 | 179 | 249 | 564 | 134 | 28 | 114 | 98 |
| 5 | 156 | 177 | 124 | 134 | 96 | 278 | 309 | 444 | 198 | 25 | 124 | 86 |
| 6 | 66 | 170 | 114 | 240 | 94 | 204 | 696 | 480 | 198 | 31 | 124 | 16 |
| 7 | 96 | 165 | 60 | 138 | 107 | 161 | 523 | 607 | 88 | 98 | 120 | 59 |
| 8 | 156 | 139 | 66 | 128 | 466 | 141 | 423 | 607 | 69 | 98 | 114 | 110 |
| 9 | 156 | 46 | 179 | 134 | 414 | 128 | 946 | 528 | 130 | 107 | 20 | 120 |
| 10 | 152 | 46 | 179 | 145 | 330 | 118 | 354 | 414 | 132 | 136 | 36 | 118 |
| 11 | 154 | 124 | 179 | 156 | 231 | 118 | 365 | 243 | 130 | 99 | 105 | 112 |
| 12 | 125 | 126 | 163 | 105 | 156 | 114 | 601 | 234 | 122 | 19 | 100 | 45 |
| 13 | 54 | 128 | 130 | 120 | 114 | 275 | 559 | 228 | 118 | 23 | 96 | 10 |
| 14 | 80 | 130 | 69 | 138 | 116 | 1,100 | 423 | 218 | 114 | 88 | 96 | 55 |
| 15 | 91 | 128 | 73 | 156 | 122 | 962 | 365 | 358 | 68 | 109 | 98 | 110 |
| 16 | 107 | 51 | 105 | 179 | 88 | 1,320 | 466 | 365 | 134 | 107 | 21 | 107 |
| 17 | 158 | 45 | 130 | 231 | 88 | 978 | 813 | 354 | 120 | 82 | 37 | 101 |
| 18 | 174 | 126 | 237 | 386 | 124 | 569 | 694 | 295 | 109 | 16 | 124 | 101 |
| 19 | 110 | 145 | 204 | 457 | 114 | 523 | 564 | 246 | 105 | 13 | 128 | 52 |
| 20 | 52 | 179 | 168 | 258 | 90 | 504 | 674 | 295 | 116 | 54 | 124 | 11 |
| 21 | 145 | 154 | 134 | 182 | 107 | 494 | 2,070 | 312 | 60 | 107 | 120 | 34 |
| 22 | 147 | 134 | 43 | 134 | 124 | 720 | 1,320 | 323 | 47 | 132 | 122 | 98 |
| 23 | 143 | 64 | 48 | 114 | 80 | 772 | 892 | 261 | 107 | 145 | 8.8 | 98 |
| 24 | 147 | 43 | 124 | 124 | 96 | 655 | 827 | 228 | 107 | 145 | 30 | 98 |
| 25 | 132 | 124 | 105 | 105 | 114 | 485 | 978 | 243 | 109 | 78 | 86 | 96 |
| 26 | 52 | 118 | 88 | 96 | 114 | 707 | 1,320 | 212 | 126 | 16 | 86 | 72 |
| 27 | 53 | 114 | 80 | 124 | 122 | 543 | 1,020 | 186 | 112 | 62 | 86 | 14 |
| 28 | 179 | 43 | 114 | 114 | 128 | 431 | 772 | 172 | 85 | 132 | 82 | 36 |
| 29 | 184 | 80 | 124 | 110 | | 381 | 885 | 165 | 66 | 134 | 19 | 108 |
| 30 | 179 | 145 | 134 | 105 | | 312 | 688 | 149 | 69 | 132 | 6.0 | 112 |
| 31 | 156 | | 134 | 77 | | 288 | | 126 | | 130 | 5.7 | |
| Month | Maximum | Minimum | Mean | Month | | | Maximum | Minimum | Mean | | | |
| October | 184 | 52 | 127 | May | | | 760 | 126 | 342 | | | |
| November | 179 | 42 | 108 | June | | | 186 | 47 | 109 | | | |
| December | 237 | 43 | 126 | July | | | 145 | 13 | 81.4 | | | |
| January | 457 | 66 | 158 | August | | | 128 | 5.7 | 75.2 | | | |
| February | 466 | 66 | 141 | September | | | 120 | 10 | 76.8 | | | |
| March | 1,320 | 66 | 442 | | | | | | | | | |
| April | 2,070 | 249 | 688 | The year | | | 2,070 | 5.7 | 206 | | | |

^a Estimated.

^b Stage-discharge relation affected by ice.

FARMINGTON RIVER AT TARIFFVILLE, CONN.

LOCATION.—Water-stage recorder at Tariffville, Hartford County, between upper and lower highway bridges, 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, 1929.

EXTREMES.—Maximum discharge during year, 7,220 second-feet Apr. 22 (gage height, 7.3 feet); minimum, 189 second-feet July 30 and Sept. 30 (gage height, 0.92 foot).

1928-29: Maximum discharge, 7,220 second-feet Aug. 27, 1928, and Apr. 22, 1929 (gage height, 7.3 feet); minimum, that of July 30 and Sept. 30, 1929.

REMARKS.—Records good. Discharge based on operating records from power plant Oct. 9, Jan. 3-6, 8-20, May 29 to June 11, July 18-29, and Sept. 15-22. City of Hartford diverts approximately 18,000,000 gallons a day from Nepaug River near Collinsville for domestic water supply. Flow is regulated at reservoirs upstream.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 430 | 482 | 514 | 409 | 538 | 1,160 | 1,270 | 2,500 | 1,050 | 369 | 309 | 215 |
| 2..... | 598 | 452 | 508 | 532 | 496 | 898 | 1,840 | 2,130 | 760 | 404 | 313 | 198 |
| 3..... | 622 | 472 | 598 | 420 | 415 | 768 | 1,800 | 2,680 | 520 | 419 | 322 | 195 |
| 4..... | 616 | 396 | 604 | 452 | 388 | 932 | 1,200 | 3,380 | 750 | 354 | 271 | 198 |
| 5..... | 610 | 270 | 596 | 383 | 484 | 2,040 | 1,340 | 2,720 | 710 | 229 | 205 | 226 |
| 6..... | 610 | 490 | 568 | 1,400 | 502 | 4,810 | 1,810 | 2,330 | 790 | 291 | 222 | 247 |
| 7..... | 532 | 484 | 502 | 2,320 | 2,180 | 4,020 | 2,330 | 2,720 | 870 | 259 | 291 | 259 |
| 8..... | 393 | 502 | 419 | 1,080 | 3,510 | 2,080 | 1,800 | 2,830 | 710 | 237 | 279 | 219 |
| 9..... | 490 | 519 | 346 | 950 | 2,280 | 1,540 | 1,640 | 2,330 | 470 | 317 | 287 | 195 |
| 10..... | 538 | 480 | 366 | 950 | 1,460 | 1,150 | 1,500 | 1,980 | 370 | 349 | 291 | 247 |
| 11..... | 514 | 392 | 435 | 1,200 | 1,130 | 1,270 | 1,930 | 1,750 | 600 | 430 | 275 | 275 |
| 12..... | 514 | 229 | 425 | 1,050 | 832 | 1,240 | 2,280 | 1,160 | 532 | 404 | 354 | 300 |
| 13..... | 466 | 414 | 414 | 620 | 722 | 1,700 | 3,640 | 1,300 | 479 | 349 | 373 | 255 |
| 14..... | 349 | 446 | 452 | 480 | 670 | 3,450 | 3,250 | 1,270 | 457 | 275 | 345 | 247 |
| 15..... | 302 | 430 | 442 | 540 | 664 | 4,780 | 2,440 | 1,420 | 425 | 208 | 340 | 215 |
| 16..... | 450 | 419 | 344 | 520 | 640 | 4,940 | 2,380 | 1,660 | 369 | 279 | 326 | 210 |
| 17..... | 484 | 446 | 319 | 620 | 520 | 5,100 | 4,480 | 1,580 | 309 | 322 | 313 | 240 |
| 18..... | 520 | 308 | 532 | 660 | 490 | 3,860 | 5,100 | 1,380 | 435 | 330 | 237 | 370 |
| 19..... | 538 | 251 | 670 | 1,270 | 646 | 2,720 | 4,200 | 1,200 | 409 | 320 | 202 | 400 |
| 20..... | 488 | 520 | 595 | 1,620 | 550 | 2,380 | 3,250 | 1,840 | 399 | 330 | 251 | 280 |
| 21..... | 414 | 508 | 496 | 921 | 400 | 2,230 | 4,610 | 1,880 | 409 | 280 | 283 | 290 |
| 22..... | 320 | 466 | 388 | 740 | 480 | 2,180 | 6,840 | 2,080 | 435 | 200 | 322 | 215 |
| 23..... | 490 | 414 | 309 | 728 | 550 | 2,440 | 6,290 | 1,800 | 409 | 220 | 326 | 195 |
| 24..... | 496 | 409 | 213 | 575 | 538 | 2,440 | 4,480 | 1,420 | 244 | 330 | 295 | 208 |
| 25..... | 490 | 323 | 293 | 501 | 478 | 2,130 | 3,510 | 1,580 | 355 | 260 | 229 | 237 |
| 26..... | 479 | 244 | 272 | 532 | 584 | 2,030 | 3,640 | 1,340 | 526 | 370 | 198 | 247 |
| 27..... | 458 | 418 | 399 | 468 | 899 | 2,280 | 3,770 | 1,160 | 520 | 340 | 205 | 240 |
| 28..... | 383 | 378 | 446 | 435 | 1,240 | 1,840 | 2,890 | 1,200 | 468 | 250 | 229 | 240 |
| 29..... | 291 | 354 | 479 | 544 | ----- | 1,620 | 3,250 | 1,030 | 550 | 195 | 267 | 208 |
| 30..... | 490 | 238 | 419 | 586 | ----- | 1,460 | 3,130 | 995 | 432 | 233 | 271 | 192 |
| 31..... | 490 | ----- | 425 | 550 | ----- | 1,200 | ----- | 770 | ----- | 300 | 271 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 622 | 291 | 480 | 0.844 | 0.97 |
| November..... | 520 | 229 | 405 | .712 | .79 |
| December..... | 670 | 213 | 445 | .782 | .90 |
| January..... | 2,320 | 383 | 774 | 1.36 | 1.57 |
| February..... | 3,510 | 388 | 867 | 1.52 | 1.58 |
| March..... | 5,100 | 768 | 2,340 | 4.11 | 4.74 |
| April..... | 6,840 | 1,200 | 3,030 | 5.33 | 5.95 |
| May..... | 3,380 | 770 | 1,790 | 3.15 | 3.63 |
| June..... | 1,050 | 244 | 525 | .923 | 1.03 |
| July..... | 430 | 195 | 305 | .536 | .62 |
| August..... | 373 | 198 | 281 | .494 | .57 |
| September..... | 400 | 192 | 242 | .425 | .47 |
| The year..... | 6,840 | 192 | 957 | 1.68 | 22.82 |

HOCKANUM RIVER NEAR EAST HARTFORD, CONN.

LOCATION.—Water-stage recorder at Case & Marshall paper mill, $1\frac{1}{2}$ miles below confluence with South Branch of Hockanum River and $2\frac{1}{4}$ miles east of East Hartford, Hartford County,

DRAINAGE AREA.—75.5 square miles.

RECORDS AVAILABLE.—September, 1919, to September, 1921; July, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,090 second-feet Feb. 7 (gage height, 6.6 feet); minimum, 0.7 second-foot Sept. 1 (gage height, 0.64 foot).
1919–1921, 1928–29: 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, 1928–29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1 | 92 | 90 | 27 | 85 | 92 | 158 | 211 | 252 | 118 | 77 | 70 | 16 |
| 2 | 110 | 74 | 8 | 93 | 63 | 111 | 166 | 236 | 69 | 98 | 343 | 9 |
| 3 | 86 | 74 | 71 | 89 | 11 | 54 | 141 | 294 | 205 | 102 | 130 | 5 |
| 4 | 91 | 67 | 90 | 85 | 69 | 238 | 120 | 274 | 138 | 33 | 45 | 4 |
| 5 | 78 | 56 | 96 | 59 | 87 | 403 | 133 | 232 | 112 | 56 | 135 | 4 |
| 6 | 45 | 72 | 95 | 21 | 89 | 588 | 103 | 310 | 108 | 61 | 97 | 57 |
| 7 | 9 | 70 | 94 | 199 | 501 | 409 | 128 | 305 | 120 | 20 | 93 | 54 |
| 8 | 88 | 52 | 49 | 125 | 536 | 255 | 224 | 286 | 104 | 86 | 94 | 9 |
| 9 | 120 | 56 | 4 | 90 | 193 | 137 | 153 | 231 | 46 | 94 | 94 | 94 |
| 10 | 84 | 82 | 66 | 105 | 117 | 126 | 154 | 222 | 89 | 89 | 71 | 96 |
| 11 | 69 | 11 | 95 | 145 | 239 | 191 | 155 | 165 | 95 | 89 | 26 | 69 |
| 12 | 70 | 88 | 95 | 114 | 156 | 153 | 182 | 129 | 93 | 89 | 78 | 94 |
| 13 | 37 | 88 | 93 | 14 | 121 | 153 | 138 | 252 | 93 | 86 | 94 | 68 |
| 14 | 14 | 76 | 93 | 70 | 89 | 244 | 158 | 149 | 94 | 48 | 93 | 37 |
| 15 | 65 | 56 | 63 | 93 | 92 | 296 | 257 | 171 | 65 | 63 | 95 | 16 |
| 16 | 8 | 47 | 5 | 92 | 64 | 187 | 215 | 172 | 23 | 72 | 94 | 11 |
| 17 | 7 | 78 | 68 | 90 | 16 | 187 | 350 | 172 | 82 | 61 | 70 | 65 |
| 18 | 90 | 11 | 89 | 90 | 75 | 255 | 370 | 140 | 94 | 63 | 31 | 75 |
| 19 | 70 | 72 | 90 | 96 | 103 | 152 | 287 | 103 | 95 | 65 | 72 | 89 |
| 20 | 37 | 98 | 89 | 28 | 95 | 133 | 215 | 326 | 94 | 43 | 91 | 67 |
| 21 | 9 | 98 | 86 | 151 | 88 | 161 | 427 | 240 | 100 | 17 | 92 | 57 |
| 22 | 68 | 68 | 64 | 122 | 100 | 152 | 520 | 321 | 95 | 57 | 87 | 13 |
| 23 | 94 | 73 | 6 | 117 | 98 | 88 | 448 | 238 | 29 | 74 | 84 | 34 |
| 24 | 92 | 50 | 65 | 120 | 10 | 108 | 360 | 201 | 70 | 74 | 58 | 46 |
| 25 | 79 | 30 | 26 | 130 | 70 | 177 | 305 | 215 | 92 | 74 | 8 | 24 |
| 26 | 68 | 114 | 63 | 96 | 134 | 175 | 314 | 190 | 92 | 75 | 49 | 42 |
| 27 | 49 | 108 | 58 | 7 | 168 | 193 | 278 | 250 | 93 | 52 | 64 | 40 |
| 28 | 25 | 95 | 62 | 72 | 178 | 183 | 195 | 178 | 95 | 20 | 63 | 41 |
| 29 | 105 | 29 | 47 | 92 | ----- | 143 | 348 | 175 | 95 | 52 | 62 | 8 |
| 30 | 120 | 43 | 18 | 91 | ----- | 94 | 305 | 128 | 40 | 61 | 58 | 30 |
| 31 | 96 | ----- | 58 | 91 | ----- | 22 | ----- | 230 | ----- | 65 | 29 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 120 | 7 | 66.9 | 0.886 | 1.02 |
| November | 114 | 11 | 87.5 | .894 | 1.00 |
| December | 96 | 4 | 82.4 | .826 | .95 |
| January | 199 | 7 | 92.6 | 1.22 | 1.41 |
| February | 536 | 10 | 130 | 1.72 | 1.79 |
| March | 588 | 22 | 191 | 2.53 | 2.92 |
| April | 520 | 103 | 245 | 3.25 | 3.63 |
| May | 326 | 103 | 219 | 2.90 | 3.34 |
| June | 205 | 23 | 91.3 | 1.21 | 1.35 |
| July | 102 | 17 | 65.0 | .861 | .99 |
| August | 343 | 8 | 82.9 | 1.10 | 1.27 |
| September | 96 | 4 | 42.7 | .566 | .63 |
| The year | 588 | 4 | 113 | 1.50 | 20.30 |

SALMON RIVER NEAR EAST HAMPTON, CONN.

LOCATION.—Water-stage recorder at Comstock Bridge, on Hartford-Middlesex County line, $3\frac{1}{2}$ miles southeast of East Hampton, Middlesex County.

DRAINAGE AREA.—105 square miles.

RECORDS AVAILABLE.—July, 1928, to September, 1929; April, 1905, to March, 1906, at Leesville, $3\frac{1}{2}$ miles downstream.

EXTREMES.—Maximum discharge during year, 3,700 second-feet Mar. 5 (gage height, 4.4 feet); minimum, about 14 second-feet July 18.

1928-29: Maximum and minimum discharge, same as above.

REMARKS.—Records excellent except those for periods of ice effect (Dec. 23-27, Jan. 14-18, 25-31, Feb. 1-5 and 19-24) and for estimated periods (Oct. 17 to Dec. 13, Mar. 15-20, and July 3 to Sept. 30), which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 51 | 70 | 220 | 144 | 120 | 400 | 188 | 422 | 106 | 43 | 21 | 18 |
| 2..... | 47 | 70 | 130 | 200 | 110 | 369 | 182 | 374 | 95 | 37 | 21 | 16 |
| 3..... | 42 | 63 | 140 | 163 | 110 | 515 | 161 | 1,100 | 89 | 35 | 17 | 24 |
| 4..... | 42 | 75 | 120 | 135 | 95 | 550 | 161 | 714 | 87 | 31 | 21 | 22 |
| 5..... | 43 | 150 | 90 | 136 | 95 | 2,010 | 218 | 503 | 84 | 26 | 24 | 20 |
| 6..... | 80 | 96 | 100 | 1,020 | 93 | 2,620 | 314 | 503 | 78 | 44 | 21 | 22 |
| 7..... | 64 | 90 | 90 | 673 | 1,630 | 1,160 | 291 | 764 | 80 | 47 | 21 | 20 |
| 8..... | 52 | 75 | 90 | 358 | 937 | 558 | 225 | 515 | 93 | 26 | 17 | 16 |
| 9..... | 44 | 90 | 80 | 346 | 416 | 387 | 201 | 395 | 82 | 35 | 17 | 30 |
| 10..... | 42 | 80 | 90 | 364 | 354 | 303 | 232 | 331 | 72 | 30 | 15 | 23 |
| 11..... | 41 | 70 | 104 | 338 | 271 | 282 | 299 | 291 | 63 | 44 | 110 | 24 |
| 12..... | 41 | 60 | 91 | 246 | 224 | 270 | 303 | 311 | 57 | 28 | 175 | 26 |
| 13..... | 41 | 55 | 80 | 213 | 205 | 395 | 344 | 491 | 51 | 39 | 67 | 24 |
| 14..... | 42 | 72 | 76 | 180 | 167 | 676 | 291 | 359 | 46 | 28 | 49 | 22 |
| 15..... | 41 | 52 | 77 | 160 | 148 | 725 | 262 | 345 | 57 | 30 | 48 | 16 |
| 16..... | 39 | 52 | 76 | 160 | 145 | 580 | 452 | 321 | 69 | 31 | 33 | 32 |
| 17..... | 40 | 62 | 90 | 170 | 140 | 455 | 1,270 | 295 | 51 | 26 | 36 | 24 |
| 18..... | 40 | 52 | 192 | 260 | 141 | 335 | 745 | 244 | 47 | 14 | 26 | 27 |
| 19..... | 75 | 58 | 161 | 422 | 130 | 282 | 450 | 303 | 52 | 25 | 36 | 28 |
| 20..... | 175 | 67 | 123 | 294 | 120 | 262 | 354 | 491 | 45 | 29 | 28 | 22 |
| 21..... | 166 | 89 | 134 | 211 | 110 | 255 | 970 | 475 | 42 | 24 | 24 | 20 |
| 22..... | 97 | 66 | 103 | 209 | 160 | 251 | 957 | 450 | 38 | 22 | 24 | 16 |
| 23..... | 77 | 66 | 85 | 161 | 140 | 274 | 690 | 317 | 39 | 17 | 26 | 26 |
| 24..... | 165 | 88 | 85 | 150 | 130 | 291 | 455 | 253 | 38 | 18 | 22 | 25 |
| 25..... | 183 | 60 | 95 | 140 | 139 | 247 | 423 | 291 | 39 | 24 | 18 | 26 |
| 26..... | 116 | 60 | 85 | 140 | 149 | 291 | 587 | 244 | 58 | 19 | 36 | 19 |
| 27..... | 75 | 52 | 80 | 140 | 361 | 274 | 422 | 205 | 46 | 33 | 24 | 22 |
| 28..... | 65 | 45 | 224 | 140 | 515 | 236 | 336 | 176 | 42 | 25 | 20 | 22 |
| 29..... | 106 | 50 | 189 | 130 | ----- | 215 | 1,040 | 153 | 76 | 21 | 18 | 20 |
| 30..... | 90 | 60 | 131 | 130 | ----- | 191 | 576 | 139 | 55 | 18 | 22 | 20 |
| 31..... | 70 | ----- | 129 | 120 | ----- | 188 | ----- | 127 | ----- | 15 | 18 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 183 | 39 | 73.9 | 0.704 | 0.81 |
| November..... | 150 | 45 | 69.8 | .665 | .74 |
| December..... | 224 | 76 | 115 | 1.10 | 1.27 |
| January..... | 1,020 | 120 | 247 | 2.35 | 2.71 |
| February..... | 1,630 | 93 | 263 | 2.50 | 2.60 |
| March..... | 2,620 | 188 | 511 | 4.87 | 5.62 |
| April..... | 1,270 | 161 | 448 | 4.27 | 4.76 |
| May..... | 1,100 | 127 | 384 | 3.66 | 4.22 |
| June..... | 106 | 38 | 62.6 | .596 | .66 |
| July..... | 47 | 14 | 28.5 | .271 | .31 |
| August..... | 175 | 15 | 34.0 | .324 | .37 |
| September..... | 32 | 16 | 22.4 | .213 | .24 |
| The year..... | 2,620 | 14 | 188 | 1.79 | 24.31 |

HOUSATONIC RIVER BASIN

HOUSATONIC RIVER NEAR GREAT BARRINGTON, MASS.

LOCATION.—Staff gage at highway bridge at Van Deusenville, just above Williams River and 2 miles north of Great Barrington, Berkshire County.

DRAINAGE AREA.—280 square miles.

RECORDS AVAILABLE.—May, 1913, to September, 1929.

EXTREMES.—Maximum discharge during year, about 4,200 second-feet Mar. 17 (gage height, 8.06 feet); minimum, about 18 second-feet Sept. 3.

1913-1929: Maximum discharge, about 5,690 second-feet Nov. 5, 1927 (gage height, about 10 feet); no flow at times, caused by storing.

REMARKS.—Records fair. Discharge estimated Aug. 25-31, Sept. 3 and 4. Considerable diurnal regulation.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|-------|-------|-------|------|------|------|-------|
| 1 | 338 | 153 | 318 | 131 | 131 | 318 | 1,050 | 1,780 | 563 | 379 | 71 | 31 |
| 2 | 358 | 119 | 280 | 172 | 133 | 338 | 1,180 | 1,450 | 427 | 338 | 82 | 39 |
| 3 | 318 | 138 | 299 | 233 | 135 | 169 | 1,120 | 1,380 | 358 | 210 | 104 | 18 |
| 4 | 299 | 163 | 338 | 358 | 145 | 280 | 1,120 | 1,450 | 299 | 186 | 133 | 21 |
| 5 | 299 | 210 | 358 | 358 | 145 | 512 | 1,120 | 1,450 | 280 | 140 | 124 | 169 |
| 6 | 260 | 299 | 421 | 512 | 169 | 1,250 | 1,120 | 1,310 | 444 | 128 | 131 | 280 |
| 7 | 318 | 246 | 400 | 466 | 204 | 1,250 | 1,120 | 1,380 | 400 | 119 | 124 | 379 |
| 8 | 338 | 226 | 400 | 444 | 253 | 1,120 | 1,120 | 1,250 | 379 | 104 | 115 | 421 |
| 9 | 280 | 204 | 318 | 379 | 299 | 1,050 | 1,380 | 1,120 | 358 | 163 | 96 | 466 |
| 10 | 253 | 135 | 299 | 338 | 257 | 919 | 1,380 | 1,120 | 318 | 223 | 138 | 421 |
| 11 | 223 | 163 | 338 | 358 | 204 | 984 | 1,380 | 1,180 | 260 | 280 | 145 | 400 |
| 12 | 177 | 216 | 358 | 299 | 131 | 1,120 | 1,580 | 1,180 | 169 | 260 | 135 | 299 |
| 13 | 94 | 338 | 338 | 280 | 131 | 1,640 | 1,510 | 1,120 | 210 | 226 | 161 | 299 |
| 14 | 104 | 318 | 318 | 246 | 158 | 2,380 | 1,380 | 1,250 | 260 | 78 | 145 | 379 |
| 15 | 102 | 280 | 246 | 216 | 177 | 3,490 | 1,380 | 1,180 | 338 | 117 | 466 | 619 |
| 16 | 156 | 213 | 299 | 338 | 174 | 4,130 | 1,710 | 1,120 | 299 | 140 | 368 | 512 |
| 17 | 299 | 188 | 400 | 338 | 220 | 3,840 | 2,040 | 1,120 | 280 | 161 | 194 | 400 |
| 18 | 318 | 220 | 489 | 400 | 250 | 3,210 | 2,110 | 1,120 | 299 | 133 | 148 | 183 |
| 19 | 299 | 299 | 489 | 796 | 210 | 2,580 | 2,180 | 1,120 | 227 | 106 | 135 | 181 |
| 20 | 299 | 400 | 444 | 706 | 158 | 1,910 | 2,450 | 984 | 210 | 98 | 131 | 122 |
| 21 | 257 | 338 | 379 | 706 | 163 | 1,710 | 3,070 | 919 | 318 | 111 | 126 | 145 |
| 22 | 299 | 358 | 299 | 358 | 153 | 1,910 | 3,770 | 919 | 280 | 117 | 117 | 145 |
| 23 | 358 | 358 | 253 | 299 | 133 | 1,780 | 3,140 | 984 | 227 | 135 | 122 | 140 |
| 24 | 358 | 379 | 177 | 379 | 48 | 1,970 | 2,720 | 856 | 210 | 115 | 109 | 172 |
| 25 | 358 | 318 | 156 | 338 | 280 | 2,180 | 3,000 | 856 | 207 | 148 | | 172 |
| 26 | 318 | 299 | 216 | 260 | 318 | 1,910 | 2,930 | 619 | 177 | 191 | | 174 |
| 27 | 246 | 358 | 257 | 233 | 358 | 1,780 | 2,720 | 856 | 143 | 161 | 75 | 163 |
| 28 | 318 | 299 | 358 | 204 | 338 | 1,580 | 2,520 | 796 | 188 | 128 | | 161 |
| 29 | 246 | 299 | 318 | 174 | | 1,380 | 2,180 | 796 | 280 | 104 | | 174 |
| 30 | 197 | 338 | 257 | 131 | | 1,250 | 1,910 | 766 | 338 | 111 | | 188 |
| 31 | 174 | | 246 | 135 | | 1,120 | | 706 | | 72 | | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 358 | 94 | 266 | 0.950 | 1.10 |
| November | 400 | 119 | 262 | .936 | 1.04 |
| December | 489 | 156 | 325 | 1.16 | 1.34 |
| January | 796 | 131 | 341 | 1.22 | 1.41 |
| February | 358 | 48 | 196 | .700 | .73 |
| March | 4,130 | 169 | 1,650 | 5.89 | 6.79 |
| April | 3,770 | 1,050 | 1,910 | 6.82 | 7.61 |
| May | 1,780 | 706 | 1,100 | 3.93 | 4.53 |
| June | 563 | 143 | 291 | 1.04 | 1.16 |
| July | 379 | 72 | 161 | .575 | .66 |
| August | 466 | | 133 | .475 | .55 |
| September | 619 | 18 | 241 | .861 | .96 |
| The year | 4,130 | 18 | 575 | 2.05 | 27.88 |

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, 1929.

EXTREMES.—Maximum discharge during year, 6,850 second-feet Mar. 17 (gauge height, 11.1 feet); minimum, 7 second-feet Aug. 4 (gauge height, 0.30 feet) 1912-1929: Maximum discharge, about 11,700 second-feet Nov. 5, 1927 (gauge height, 15.7 feet); practically no flow at times, caused by regulation.

REMARKS.—Records excellent except those for periods of ice effect (Jan. 5 to Feb. 10 and Feb. 28 to Mar. 2), and for estimated periods, which are fair. Low-water flow completely regulated. Diversions for domestic supply in Massachusetts probably offset by return of sewage.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|---------|---------|---------|---------|---------|-------|------|------|-------|
| 1----- | 600 | 413 | 494 | 291 | * 420 | 550 | 1,910 | * 3,360 | 620 | 452 | 184 | 45 |
| 2----- | 605 | 358 | 574 | 290 | * 410 | 500 | * 1,860 | * 2,920 | 631 | 399 | 138 | 141 |
| 3----- | 513 | 375 | 508 | 399 | 340 | 482 | * 1,820 | * 2,580 | 620 | 280 | 294 | 130 |
| 4----- | 570 | 322 | 454 | 386 | 400 | 458 | * 1,730 | * 2,420 | 519 | 154 | 90 | 131 |
| 5----- | 540 | 340 | 547 | 380 | 420 | 1,140 | * 1,780 | * 2,110 | 508 | 340 | 136 | 102 |
| 6----- | 500 | 377 | 568 | 800 | 360 | 1,890 | * 1,900 | * 2,070 | 552 | 281 | 136 | 88 |
| 7----- | 452 | 328 | 580 | * 1,080 | 650 | 2,240 | 2,600 | * 2,060 | 494 | 256 | 138 | 87 |
| 8----- | 612 | 367 | 509 | * 1,110 | 1,100 | * 1,860 | 2,580 | * 2,000 | 548 | 340 | 261 | 57 |
| 9----- | 452 | 368 | * 360 | 900 | * 1,280 | 2,500 | * 1,980 | * 1,980 | 517 | 293 | 206 | 184 |
| 10----- | 513 | * 410 | * 310 | 780 | 800 | * 1,120 | * 2,240 | * 1,840 | 500 | 246 | 192 | 250 |
| 11----- | 622 | * 290 | * 340 | 800 | * 730 | * 950 | * 2,290 | * 1,630 | 438 | 273 | 114 | 196. |
| 12----- | 428 | * 210 | 339 | 800 | * 680 | * 970 | * 2,510 | * 1,450 | 380 | 279 | 169 | 164 |
| 13----- | 388 | * 280 | 348 | 550 | * 460 | 1,630 | * 3,380 | * 1,310 | 315 | 268 | 297 | 326 |
| 14----- | 399 | * 300 | 336 | * 300 | 539 | 3,560 | * 3,490 | * 1,280 | 306 | 220 | 159 | 340 |
| 15----- | 474 | 366 | 338 | * 350 | 532 | 5,140 | * 3,090 | * 1,350 | 514 | 232 | 203 | 254 |
| 16----- | 424 | 345 | 376 | 380 | 500 | 6,160 | * 2,850 | * 1,680 | 314 | 220 | 448 | 182 |
| 17----- | 461 | 344 | 332 | 460 | 480 | 6,830 | * 3,480 | * 1,080 | 435 | 240 | 124 | 158 |
| 18----- | 463 | 218 | 441 | 600 | 342 | * 6,510 | * 3,850 | * 1,640 | 348 | 225 | 46 | 186 |
| 19----- | 396 | 375 | 650 | 1,300 | 491 | * 5,300 | * 3,760 | * 1,480 | 311 | 220 | 51 | 184 |
| 20----- | 462 | 482 | 570 | 1,200 | * 510 | 4,110 | * 3,430 | * 1,610 | 328 | 184 | 164 | 179 |
| 21----- | 522 | * 450 | 482 | 1,200 | * 390 | * 3,310 | * 4,430 | * 1,600 | 328 | 105 | 177 | 278 |
| 22----- | * 260 | * 480 | * 420 | 1,000 | * 430 | * 2,940 | * 5,370 | * 1,780 | 384 | 191 | 172 | 119 |
| 23----- | * 260 | * 490 | 278 | 780 | * 520 | * 3,060 | * 5,660 | * 1,740 | 162 | 198 | 142 | 145 |
| 24----- | 288 | * 450 | 273 | 600 | * 340 | * 3,140 | * 5,390 | * 1,550 | 290 | 180 | 118 | 176 |
| 25----- | 488 | * 370 | 201 | 500 | * 450 | * 3,140 | * 4,710 | * 1,430 | 348 | 188 | 70 | 128 |
| 26----- | 423 | * 370 | 286 | 600 | * 460 | * 3,140 | * 4,340 | * 1,290 | 293 | 204 | 114 | 136 |
| 27----- | 480 | * 280 | 299 | 440 | * 470 | 3,190 | * 4,260 | * 1,220 | 412 | 284 | 112 | 130 |
| 28----- | 282 | 348 | 406 | 550 | 600 | 3,020 | * 4,140 | * 1,080 | 354 | 112 | 94 | 120 |
| 29----- | 392 | 277 | 480 | 400 | ----- | * 2,590 | * 4,110 | 1,170 | 568 | 222 | 122 | 106 |
| 30----- | 437 | 222 | 286 | * 530 | ----- | * 2,360 | * 3,860 | 546 | 350 | 188 | 126 | 88 |
| 31----- | 360 | ----- | 284 | * 450 | ----- | * 2,070 | ----- | 728 | ----- | 147 | 82 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October----- | 622 | 260 | 454 | 9.705 | 0.81 |
| November----- | 490 | 210 | 356 | .553 | .62 |
| December----- | 650 | 201 | 409 | .635 | .73 |
| January----- | 1,300 | 290 | 641 | .995 | 1.15 |
| February----- | 1,100 | 340 | 526 | .87 | .85 |
| March----- | 6,830 | 458 | 2,730 | 4.2 | 4.89 |
| April----- | 5,660 | 1,720 | 3,310 | 5.14 | 5.74 |
| May----- | 3,360 | 546 | 1,700 | 2.64 | 3.04 |
| June----- | 631 | 162 | 423 | .657 | .73 |
| July----- | 452 | 105 | 239 | .371 | .43 |
| August----- | 448 | 46 | 157 | .24 | .28 |
| September----- | 340 | 45 | 161 | .270 | .28 |
| The year----- | 6,830 | 45 | 927 | 1.44 | 19.55 |

* Based upon operating records from power plant.

HOUSATONIC RIVER AT STEVENSON, CONN.

LOCATION.—Water-stage recorder a quarter of a mile below Stevenson Dam of Connecticut Light & Power Co., 7 miles above Derby, New Haven County, and junction with Naugatuck River.

DRAINAGE AREA.—1,550 square miles.

RECORDS AVAILABLE.—August, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 12,900 second-feet Mar. 6 (gage height, 10.9 feet); minimum not determined, occurs frequently when power plant is practically shut down.

1928-29: Maximum and minimum discharge, same as above.

REMARKS.—Records good. Discharge partly estimated during low water. Low-water flow completely regulated at power plant above gage; other regulation and diversion upstream.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|--------|--------|-------|-------|-------|-------|-------|
| 1..... | 1,250 | 794 | 1,230 | 795 | 1,200 | 3,100 | 4,270 | 7,040 | 1,960 | 981 | 440 | 202 |
| 2..... | 1,320 | 834 | 1,520 | 1,220 | 1,250 | 3,040 | 4,020 | 6,340 | 1,500 | 964 | 444 | 160 |
| 3..... | 1,250 | 1,010 | 1,140 | 944 | 846 | 2,870 | 3,750 | 6,490 | 1,290 | 1,290 | 438 | 356 |
| 4..... | 2,080 | 512 | 1,470 | 1,320 | 1,100 | 2,810 | 3,190 | 6,080 | 1,500 | 364 | 326 | 318 |
| 5..... | 1,740 | 1,220 | 1,210 | 918 | 932 | 5,960 | 3,170 | 5,260 | 1,457 | 732 | 352 | 315 |
| 6..... | 864 | 1,060 | 1,320 | 3,400 | 1,100 | 11,200 | 4,340 | 4,700 | 1,260 | 594 | 422 | 422 |
| 7..... | 519 | 868 | 1,160 | 4,620 | 5,610 | 7,960 | 4,730 | 5,730 | 1,789 | 641 | 425 | 364 |
| 8..... | 1,530 | 1,120 | 1,500 | 2,900 | 6,430 | 5,530 | 5,110 | 5,640 | 1,459 | 640 | 446 | 76 |
| 9..... | 1,630 | 862 | 732 | 2,240 | 4,820 | 4,660 | 4,860 | 4,840 | 1,589 | 656 | 417 | 424 |
| 10..... | 1,540 | 630 | 963 | 2,290 | 3,820 | 3,960 | 4,680 | 4,560 | 1,520 | 681 | 469 | 482 |
| 11..... | 711 | 811 | 868 | 3,360 | 3,000 | 3,320 | 5,200 | 4,160 | 1,359 | 766 | 2,800 | 402 |
| 12..... | 654 | 794 | 878 | 3,000 | 2,420 | 2,900 | 5,570 | 3,230 | 1,259 | 522 | 1,010 | 422 |
| 13..... | 1,400 | 1,060 | 976 | 1,900 | 1,700 | 3,610 | 7,860 | 3,990 | 878 | 428 | 458 | 418 |
| 14..... | 518 | 872 | 1,000 | 1,580 | 1,720 | 6,070 | 7,210 | 3,840 | 1,170 | 259 | 444 | 355 |
| 15..... | 654 | 602 | 976 | 1,140 | 1,760 | 11,400 | 6,900 | 3,840 | 1,030 | 554 | 675 | 267 |
| 16..... | 951 | 708 | 584 | 1,170 | 1,680 | 11,800 | 6,880 | 3,640 | 1,259 | 556 | 492 | 519 |
| 17..... | 966 | 628 | 1,150 | 1,300 | 1,940 | 11,600 | 8,900 | 3,660 | 715 | 541 | 856 | 718 |
| 18..... | 918 | 820 | 1,470 | 1,500 | 1,770 | 10,500 | 9,310 | 2,980 | 1,060 | 564 | 470 | 698 |
| 19..... | 827 | 810 | 1,470 | 2,930 | 1,110 | 8,780 | 8,240 | 2,990 | 1,150 | 434 | 460 | 684 |
| 20..... | 1,240 | 882 | 1,480 | 3,600 | 1,130 | 7,420 | 7,230 | 3,870 | 818 | 822 | 350 | 570 |
| 21..... | 1,110 | 1,430 | 1,240 | 3,410 | 1,370 | 6,250 | 9,100 | 3,900 | 855 | 230 | 474 | 360 |
| 22..... | 1,040 | 1,050 | 1,120 | 2,210 | 1,260 | 5,660 | 12,200 | 4,390 | 547 | 572 | 474 | 188 |
| 23..... | 969 | 1,090 | 632 | 2,320 | 1,080 | 5,110 | 11,600 | 4,080 | 250 | 510 | 458 | 1,220 |
| 24..... | 668 | 933 | 904 | 1,770 | 1,290 | 5,280 | 10,500 | 3,790 | 768 | 362 | 253 | 1,360 |
| 25..... | 725 | 866 | 576 | 1,600 | 1,320 | 5,400 | 8,990 | 3,970 | 841 | 443 | 288 | 768 |
| 26..... | 1,020 | 830 | 907 | 1,540 | 2,280 | 5,570 | 9,420 | 3,510 | 706 | 391 | 416 | 1,300 |
| 27..... | 1,270 | 672 | 840 | 953 | 2,540 | 5,670 | 8,470 | 3,160 | 665 | 428 | 435 | 890 |
| 28..... | 836 | 680 | 947 | 1,950 | 3,710 | 5,320 | 7,560 | 2,910 | 1,150 | 274 | 436 | 851 |
| 29..... | 1,110 | 598 | 790 | 588 | ----- | 5,000 | 9,420 | 2,880 | 1,450 | 415 | 440 | 178 |
| 30..... | 989 | 802 | 934 | 1,330 | ----- | 4,730 | 8,210 | 2,330 | 794 | 419 | 458 | 488 |
| 31..... | 915 | ----- | 944 | 1,280 | ----- | 4,360 | ----- | 1,780 | ----- | 404 | 150 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 2,080 | 518 | 1,070 | 0.690 | 0.80 |
| November..... | 1,430 | 512 | 862 | .556 | .62 |
| December..... | 1,520 | 576 | 1,060 | .684 | .79 |
| January..... | 4,620 | 588 | 1,970 | 1.27 | 1.46 |
| February..... | 6,430 | 846 | 2,150 | 1.39 | 1.45 |
| March..... | 11,800 | 2,810 | 6,050 | 3.90 | 4.50 |
| April..... | 12,200 | 3,170 | 7,030 | 4.54 | 5.06 |
| May..... | 7,040 | 1,780 | 4,170 | 2.69 | 3.10 |
| June..... | 1,960 | 250 | 1,130 | .729 | .81 |
| July..... | 1,290 | 230 | 553 | .357 | .41 |
| August..... | 2,800 | 150 | 531 | .343 | .40 |
| September..... | 1,360 | 76 | 526 | .339 | .38 |
| The year..... | 12,200 | 76 | 2,260 | 1.46 | 19.78 |

NAUGATUCK RIVER NEAR NAUGATUCK, CONN.

LOCATION.—Water-stage recorder one-fifth 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, 1929.

EXTREMES.—Maximum stage during year, 6.7 feet Feb. 7 (discharge not determined); minimum discharge, about 81 second-feet Sept. 3, 1929 (gauge height, about 0.63 foot).

1918-1921, 1928-29: 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, caused by regulation; minimum gauge height, that of Sept. 3, 1929.

REMARKS.—Records good except those for estimated periods and for extremely high and extremely low stages, which are fair. Discharge estimated or partly estimated Dec. 8 to Jan. 25, Jan. 31, and July 14 to Sept. 30. Slight regulation caused by operation of small reservoirs upstream.

Daily discharge, in second-feet, 1928-29

| Day | Sept. | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|------|-------|------|-------|-------|-------|-------|-------|-------|------|-------|-------|
| 1 | | 183 | 137 | 372 | 266 | 202 | 545 | 492 | 824 | 296 | 170 | 105 | 92 |
| 2 | | 180 | 141 | 310 | 210 | 188 | 555 | 560 | 755 | 243 | 155 | 103 | 84 |
| 3 | | 188 | 134 | 253 | 226 | 175 | 560 | 461 | 1,460 | 247 | 139 | 98 | 80 |
| 4 | | 183 | 176 | 234 | 192 | 183 | 634 | 465 | 1,070 | 234 | 111 | 92 | 94 |
| 5 | | 183 | 219 | 225 | 200 | 175 | 2,640 | 755 | 818 | 222 | 128 | 98 | 92 |
| 6 | | 258 | 185 | 240 | 2,700 | 175 | 3,830 | 891 | 891 | 222 | 126 | 92 | 109 |
| 7 | | 191 | 158 | 198 | 515 | 3,770 | 1,540 | 884 | 1,480 | 222 | 119 | 98 | 111 |
| 8 | | 185 | 167 | 170 | 475 | 1,720 | 831 | 643 | 992 | 210 | 128 | 96 | 109 |
| 9 | | 170 | 170 | 210 | 475 | 792 | 665 | 555 | 748 | 188 | 122 | 98 | 141 |
| 10 | | 165 | 160 | 250 | 600 | 671 | 485 | 679 | 648 | 180 | 132 | 90 | 155 |
| 11 | | 155 | 144 | 200 | 525 | 501 | 496 | 850 | 570 | 178 | 134 | 1,250 | 113 |
| 12 | 243 | 148 | 158 | 180 | 310 | 388 | 552 | 1,240 | 621 | 168 | 128 | 434 | 107 |
| 13 | 237 | 144 | 148 | 160 | 240 | 307 | 1,280 | 1,660 | 792 | 168 | 109 | 201 | 111 |
| 14 | 291 | 130 | 148 | 155 | 270 | 300 | 2,300 | 1,100 | 593 | 165 | 96 | 158 | 105 |
| 15 | 231 | 144 | 150 | 150 | 260 | 286 | 2,000 | 920 | 660 | 160 | 111 | 146 | 103 |
| 16 | 194 | 146 | 145 | 150 | 310 | 272 | 1,670 | 1,780 | 626 | 141 | 111 | 132 | 102 |
| 17 | 207 | 148 | 144 | 170 | 330 | 263 | 1,290 | 3,120 | 535 | 144 | 111 | 109 | 131 |
| 18 | 236 | 153 | 128 | 452 | 635 | 263 | 779 | 1,830 | 448 | 144 | 109 | 92 | 201 |
| 19 | 343 | 196 | 166 | 320 | 810 | 286 | 660 | 1,220 | 611 | 139 | 130 | 128 | 139 |
| 20 | 773 | 175 | 237 | 250 | 460 | 266 | 638 | 990 | 1,050 | 150 | 111 | 115 | 111 |
| 21 | 520 | 146 | 207 | 268 | 370 | 219 | 605 | 2,860 | 981 | 147 | 92 | 113 | 107 |
| 22 | 333 | 160 | 180 | 206 | 364 | 262 | 605 | 2,260 | 1,010 | 134 | 113 | 111 | 107 |
| 23 | 250 | 164 | 165 | 234 | 288 | 253 | 731 | 1,570 | 638 | 148 | 107 | 109 | 107 |
| 24 | 240 | 162 | 150 | 212 | 250 | 205 | 731 | 1,100 | 540 | 132 | 108 | 102 | 109 |
| 25 | 222 | 170 | 132 | 170 | 269 | 240 | 621 | 990 | 962 | 164 | 109 | 90 | 105 |
| 26 | 204 | 158 | 144 | 153 | 272 | 340 | 719 | 1,590 | 648 | 342 | 115 | 96 | 107 |
| 27 | 196 | 139 | 132 | 154 | 236 | 773 | 713 | 1,060 | 510 | 202 | 105 | 102 | 107 |
| 28 | 183 | 144 | 130 | 450 | 243 | 906 | 580 | 924 | 439 | 222 | 89 | 98 | 100 |
| 29 | 175 | 155 | 119 | 300 | 201 | ----- | 535 | 1,690 | 422 | 320 | 100 | 102 | 96 |
| 30 | 168 | 150 | 170 | 220 | 189 | ----- | 488 | 1,020 | 450 | 185 | 105 | 100 | 89 |
| 31 | ----- | 141 | ----- | 200 | 199 | ----- | 474 | ----- | 344 | ----- | 102 | 100 | ----- |

Monthly discharge, in second-feet, of Naugatuck River near Naugatuck, Conn., 1928-29

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------------|---------|---------|-------|-----------------|-------------------|
| 1928 | | | | | |
| September 12-30..... | 773 | 168 | 276 | 1.12 | 0.79 |
| 1928-29 | | | | | |
| October..... | 258 | 130 | 165 | 0.668 | 0.77 |
| November..... | 237 | 119 | 158 | .640 | .71 |
| December..... | 452 | 150 | 233 | .948 | 1.09 |
| January..... | 2,700 | 189 | 416 | 1.68 | 1.94 |
| February..... | 3,770 | 175 | 514 | 2.08 | 2.17 |
| March..... | 3,830 | 474 | 992 | 4.02 | 4.64 |
| April..... | 3,120 | 461 | 1,210 | 4.90 | 5.47 |
| May..... | 1,480 | 344 | 746 | 3.02 | 3.48 |
| June..... | 342 | 132 | 194 | .785 | .87 |
| July..... | 170 | 89 | 117 | .474 | .55 |
| August..... | 1,250 | 90 | 157 | .636 | .73 |
| September..... | 201 | 84 | 111 | .449 | .50 |
| The year..... | 3,830 | 84 | 417 | .169 | 22.92 |

HUDSON RIVER BASIN

HUDSON RIVER NEAR NEWCOMB, N. Y.

LOCATION.—Staff gage at highway bridge, half a mile downstream from outlet of Harris Lake, and 2 miles east of Newcomb, Essex County.

DRAINAGE AREA.—192 square miles.

RECORDS AVAILABLE.—September, 1925, to September, 1929.

EXTREMES.—Maximum discharge during year, 3,740 second-feet Apr. 8 (gage height, 6.45 feet); minimum, about 44 second-feet September 6–9.

1925–1929: Maximum discharge, 6,080 second-feet Apr. 9, 1928 (gage height, 8.0 feet); minimum, that of Sept. 6–9, 1929.

REMARKS.—Records good, except those for period of ice effect (Jan. 28 to Feb. 27) and for periods of backwater from logs (Oct. 1 to Nov. 20 and July 18 to Sept. 30), which are fair. Slight regulation by small storage reservoirs on headwaters.

Daily and monthly discharge, in second-feet, 1928–29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 150 | 170 | 234 | 204 | 220 | 118 | 910 | 1,120 | 466 | 840 | 120 | 55 |
| 2..... | 150 | 170 | 242 | 184 | 220 | 121 | 1,200 | 1,280 | 314 | 980 | 100 | 55 |
| 3..... | 140 | 190 | 252 | 178 | 200 | 123 | 1,360 | 1,440 | 285 | 775 | 95 | 50 |
| 4..... | 150 | 220 | 242 | 172 | 190 | 128 | 1,200 | 2,180 | 259 | 540 | 150 | 48 |
| 5..... | 160 | 280 | 224 | 161 | 180 | 133 | 1,120 | 2,080 | 238 | 514 | 260 | 46 |
| 6..... | 160 | 280 | 224 | 178 | 170 | 139 | 1,440 | 1,880 | 231 | 489 | 340 | 44 |
| 7..... | 150 | 240 | 220 | 231 | 160 | 149 | 2,490 | 1,700 | 231 | 442 | 340 | 44 |
| 8..... | 160 | 240 | 207 | 267 | 160 | 144 | 3,670 | 1,520 | 249 | 378 | 300 | 44 |
| 9..... | 140 | 240 | 191 | 303 | 160 | 133 | 3,670 | 1,200 | 252 | 338 | 240 | 44 |
| 10..... | 140 | 220 | 184 | 292 | 150 | 131 | 2,710 | 980 | 224 | 311 | 220 | 50 |
| 11..... | 150 | 200 | 181 | 277 | 140 | 128 | 2,080 | 775 | 194 | 252 | 200 | 60 |
| 12..... | 150 | 180 | 178 | 259 | 130 | 128 | 1,360 | 650 | 166 | 220 | 220 | 65 |
| 13..... | 130 | 170 | 172 | 242 | 130 | 149 | 910 | 710 | 161 | 197 | 180 | 75 |
| 14..... | 140 | 170 | 172 | 224 | 130 | 228 | 622 | 775 | 155 | 245 | 180 | 80 |
| 15..... | 180 | 160 | 161 | 207 | 120 | 318 | 540 | 840 | 164 | 338 | 170 | 110 |
| 16..... | 160 | 150 | 155 | 197 | 120 | 680 | 466 | 1,440 | 164 | 311 | 160 | 130 |
| 17..... | 170 | 180 | 166 | 191 | 120 | 1,280 | 442 | 1,610 | 161 | 267 | 160 | 140 |
| 18..... | 280 | 300 | 300 | 224 | 140 | 1,700 | 398 | 1,200 | 155 | 240 | 150 | 180 |
| 19..... | 550 | 420 | 398 | 442 | 130 | 1,520 | 420 | 910 | 158 | 380 | 130 | 240 |
| 20..... | 700 | 700 | 420 | 1,050 | 120 | 1,200 | 466 | 840 | 267 | 550 | 120 | 200 |
| 21..... | 600 | 1,050 | 398 | 1,360 | 120 | 980 | 489 | 775 | 420 | 420 | 110 | 160 |
| 22..... | 500 | 910 | 357 | 1,440 | 120 | 775 | 742 | 680 | 398 | 340 | 95 | 130 |
| 23..... | 420 | 742 | 318 | 1,050 | 120 | 980 | 710 | 595 | 357 | 280 | 90 | 110 |
| 24..... | 360 | 622 | 274 | 808 | 120 | 1,700 | 622 | 775 | 540 | 260 | 85 | 90 |
| 25..... | 360 | 466 | 249 | 650 | 120 | 2,380 | 540 | 840 | 980 | 240 | 85 | 85 |
| 26..... | 300 | 442 | 256 | 489 | 120 | 2,280 | 680 | 775 | 980 | 220 | 80 | 80 |
| 27..... | 280 | 338 | 242 | 420 | 120 | 2,080 | 1,440 | 680 | 910 | 200 | 80 | 70 |
| 28..... | 260 | 296 | 231 | 360 | 118 | 1,520 | 1,200 | 910 | 710 | 180 | 70 | 80 |
| 29..... | 240 | 288 | 228 | 320 | ----- | 1,200 | 1,360 | 710 | 775 | 160 | 60 | 75 |
| 30..... | 220 | 252 | 242 | 300 | ----- | 1,050 | 1,520 | 568 | 808 | 140 | 60 | 70 |
| 31..... | 190 | ----- | 224 | 260 | ----- | 910 | ----- | 489 | ----- | 120 | 55 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 700 | 130 | 253 | 1.32 | 1.52 |
| November..... | 1,050 | 150 | 343 | 1.79 | 2.00 |
| December..... | 420 | 155 | 243 | 1.27 | 1.46 |
| January..... | 1,440 | 161 | 417 | 2.17 | 2.50 |
| February..... | 220 | 118 | 145 | .755 | .79 |
| March..... | 2,380 | 118 | 790 | 4.11 | 4.74 |
| April..... | 3,670 | 398 | 1,230 | 6.41 | 7.18 |
| May..... | 2,180 | 489 | 1,060 | 5.52 | 6.36 |
| June..... | 980 | 155 | 379 | 1.97 | 2.20 |
| July..... | 980 | 120 | 360 | 1.88 | 2.17 |
| August..... | 340 | 55 | 152 | .792 | .91 |
| September..... | 240 | 44 | 90.3 | .470 | .52 |
| The year..... | 3,670 | 44 | 457 | 2.38 | 32.32 |

HUDSON RIVER AT GOOLEY, NEAR INDIAN LAKE, N. Y.

LOCATION.—Water-stage recorder half a mile upstream from Gooley, Essex County, 1 mile upstream from 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, 1929.

EXTREMES.—Maximum discharge during year not determined; minimum, 73 second-feet Sept. 9 (gage height, 1.48 feet).

1916-1929: Maximum discharge, 13,900 second-feet Apr. 12, 1922 (gage height, 10.0 feet); minimum, 44 second-feet Aug. 22 and 23, 1923.

REMARKS.—Records good July 7 to Sept. 30; others fair. Stage-discharge relation affected by ice and backwater from logs Oct. 1 to Mar. 22. Flow slightly regulated by storage.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|-------|---------|-------|-------|---------|---------|-------|-------|------|-------|
| 1 | 280 | 320 | 550 | * 550 | * 340 | 280 | * 4,000 | * 2,900 | * 755 | 195 | 99 | |
| 2 | 280 | 320 | 500 | | | 280 | | | | 191 | 94 | |
| 3 | 260 | 340 | 500 | | | 260 | | | | 187 | 91 | |
| 4 | 650 | 400 | 480 | | | 280 | | | | 268 | 88 | |
| 5 | 500 | 480 | 480 | | | 280 | | | | 390 | 83 | |
| 6 | 300 | 500 | 460 | * 800 | * 340 | 280 | * 1,320 | * 1,850 | * 801 | 462 | 77 | |
| 7 | 800 | 500 | 460 | | | 340 | | | | 680 | 502 | 75 |
| 8 | 600 | 460 | 440 | | | 340 | | | | 665 | 469 | 75 |
| 9 | 280 | 420 | 420 | | | 320 | | | | 628 | 402 | 83 |
| 10 | 240 | 380 | 400 | | | 300 | | | | 565 | 346 | 115 |
| 11 | 240 | 360 | 380 | 700 | * 340 | 280 | * 1,320 | * 1,850 | * 801 | 488 | 346 | 132 |
| 12 | 240 | 340 | 360 | | | 260 | | | | 424 | 351 | 125 |
| 13 | 300 | 750 | 360 | | | 320 | | | | 379 | 324 | 122 |
| 14 | 900 | 1,200 | 340 | | | 600 | | | | 600 | 288 | 147 |
| 15 | 360 | 850 | 320 | | | 1,400 | | | | 1,350 | 268 | 191 |
| 16 | 280 | 700 | 340 | * 1,150 | * 340 | 3,200 | * 1,800 | * 3,320 | * 801 | 1,000 | 288 | 200 |
| 17 | 280 | 700 | 360 | | | 3,800 | | | | 544 | 263 | 195 |
| 18 | 400 | 900 | 1,100 | | | 3,600 | | | | 436 | 249 | 244 |
| 19 | 800 | 900 | 1,500 | | | 2,800 | | | | 502 | 226 | 309 |
| 20 | 950 | 1,500 | 1,300 | | | 2,200 | | | | 695 | 208 | 283 |
| 21 | 850 | 1,800 | 950 | * 1,150 | * 340 | 240 | * 1,800 | * 1,500 | * 801 | 635 | 195 | 288 |
| 22 | 750 | 1,500 | 750 | | | 240 | | | | 509 | 170 | 217 |
| 23 | 650 | 1,200 | 600 | | | 220 | | | | 413 | 162 | 182 |
| 24 | 600 | 1,000 | 500 | | | 220 | | | | 368 | 182 | 162 |
| 25 | 550 | 850 | 460 | | | 260 | | | | 351 | 195 | 151 |
| 26 | 500 | 700 | 460 | * 1,150 | * 340 | 280 | * 1,800 | * 1,500 | * 801 | 362 | 158 | 143 |
| 27 | 460 | 650 | 460 | | | 280 | | | | 330 | 139 | 139 |
| 28 | 400 | 650 | 440 | | | 280 | | | | 288 | 125 | 132 |
| 29 | 380 | 600 | 440 | | | 280 | | | | 259 | 119 | 132 |
| 30 | 380 | 600 | 440 | | | 280 | | | | 230 | 115 | 129 |
| 31 | 340 | | 440 | | | | | | | | 204 | 105 |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 950 | 240 | 477 | 1.14 | 1.31 |
| November | 1,800 | 320 | 729 | 1.74 | 1.94 |
| December | 1,500 | 320 | 548 | 1.30 | 1.50 |
| January | | | 931 | 2.22 | 2.56 |
| February | | 220 | 315 | .750 | .78 |
| March | | 260 | 1,820 | 4.33 | 4.99 |
| April | | | 2,750 | 6.55 | 7.31 |
| May | | | 2,200 | 5.24 | 6.04 |
| June | | | 800 | 1.90 | 2.12 |
| July | | 204 | 666 | 1.69 | 1.83 |
| August | 502 | 105 | 254 | .905 | .70 |
| September | 309 | 75 | 150 | .357 | .40 |
| The year | | | 75 | 975 | 31.48 |

* Estimated.

HUDSON RIVER AT NORTH CREEK, N. Y.

LOCATION.—Chain gage at highway bridge in North Creek, Warren County, 100 feet upstream from mouth of North Creek.

DRAINAGE AREA.—792 square miles.

RECORDS AVAILABLE.—September, 1907 to September, 1929.

EXTREMES.—Maximum discharge during year, 10,400 second-feet Apr. 8 (gage height, 7.4 feet); minimum, 295 second-feet Sept. 1, 12, and 13 (gage height, 2.26 feet).

1907-1929: 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 periods of ice effect (Dec. 23-31, Jan. 4-6, 13-19, and Jan. 29 to Mar. 12) and for days of considerable range in stage, which are fair. Flow regulated by storage in Indian Lake and by numerous lakes and ponds in basin.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|
| 1 | 1,030 | 885 | 705 | 490 | 1,300 | 900 | 3,130 | 4,630 | 1,080 | 2,400 | 1,290 | 490 |
| 2 | 1,030 | 885 | 705 | 590 | 1,300 | 850 | 4,630 | 4,150 | 1,030 | 2,240 | 840 | 840 |
| 3 | 980 | 932 | 705 | 522 | 1,200 | 850 | 4,150 | 7,610 | 885 | 1,940 | 705 | 840 |
| 4 | 980 | 1,030 | 625 | 480 | 1,100 | 850 | 3,710 | 8,810 | 1,180 | 1,660 | 1,290 | 795 |
| 5 | 1,530 | 1,130 | 665 | 440 | 1,000 | 900 | 3,320 | 7,310 | 1,350 | 1,600 | 1,530 | 795 |
| 6 | 980 | 1,130 | 665 | 800 | 1,100 | 1,000 | 5,130 | 7,010 | 1,350 | 1,350 | 1,530 | 490 |
| 7 | 980 | 1,080 | 625 | 1,290 | 1,200 | 1,000 | 7,910 | 6,450 | 1,290 | 980 | 1,000 | 382 |
| 8 | 1,530 | 1,080 | 590 | 2,090 | 1,200 | 950 | 10,100 | 5,660 | 1,290 | 932 | 1,130 | 490 |
| 9 | 980 | 932 | 555 | 2,080 | 1,200 | 950 | 9,450 | 4,870 | 1,180 | 885 | 932 | 795 |
| 10 | 980 | 795 | 555 | 1,660 | 1,200 | 900 | 6,730 | 4,150 | 1,030 | 840 | 885 | 885 |
| 11 | 885 | 750 | 555 | 1,530 | 1,200 | 850 | 5,650 | 2,400 | 1,080 | 750 | 1,080 | 465 |
| 12 | 840 | 750 | 555 | 1,290 | 1,100 | 900 | 3,710 | 2,240 | 1,290 | 665 | 1,350 | 325 |
| 13 | 840 | 555 | 555 | 1,100 | 1,000 | 980 | 2,400 | 1,940 | 1,870 | 555 | 1,350 | 295 |
| 14 | 1,660 | 1,730 | 522 | 1,000 | 1,000 | 1,240 | 2,090 | 3,130 | 1,350 | 885 | 1,240 | 326 |
| 15 | 980 | 980 | 522 | 1,100 | 1,000 | 2,250 | 1,870 | 2,570 | 932 | 1,600 | 1,180 | 40 |
| 16 | 885 | 885 | 490 | 1,100 | 1,100 | 5,610 | 1,800 | 3,930 | 705 | 2,240 | 840 | 406 |
| 17 | 885 | 795 | 490 | 1,100 | 1,100 | 6,170 | 1,660 | 5,130 | 590 | 1,730 | 705 | 406 |
| 18 | 1,030 | 1,180 | 980 | 1,200 | 1,000 | 5,650 | 1,600 | 3,930 | 750 | 1,350 | 1,080 | 430 |
| 19 | 1,410 | 1,080 | 2,240 | 3,600 | 1,100 | 4,630 | 1,410 | 3,130 | 980 | 840 | 1,130 | 460 |
| 20 | 1,410 | 1,870 | 1,940 | 4,390 | 1,000 | 3,930 | 1,410 | 4,150 | 1,240 | 885 | 1,080 | 430 |
| 21 | 1,290 | 2,240 | 1,600 | 3,930 | 950 | 3,510 | 1,940 | 3,320 | 1,080 | 1,350 | 1,030 | 412 |
| 22 | 1,180 | 2,090 | 932 | 3,320 | 950 | 3,510 | 2,570 | 2,750 | 932 | 1,350 | 1,030 | 555 |
| 23 | 980 | 1,600 | 800 | 2,570 | 950 | 4,870 | 2,940 | 2,940 | 795 | 1,530 | 625 | 750 |
| 24 | 932 | 1,290 | 700 | 1,940 | 900 | 7,910 | 3,710 | 2,240 | 1,660 | 1,530 | 555 | 750 |
| 25 | 885 | 1,180 | 650 | 1,660 | 850 | 5,210 | 2,940 | 2,090 | 2,240 | 1,530 | 932 | 750 |
| 26 | 795 | 980 | 600 | 1,410 | 900 | 7,610 | 4,150 | 1,940 | 2,400 | 1,290 | 980 | 750 |
| 27 | 750 | 885 | 550 | 1,180 | 900 | 6,170 | 6,170 | 1,800 | 1,940 | 1,240 | 932 | 705 |
| 28 | 980 | 705 | 550 | 980 | 950 | 4,870 | 3,930 | 1,730 | 1,470 | 1,410 | 932 | 382 |
| 29 | 980 | 750 | 550 | 1,100 | ----- | 3,930 | 5,390 | 1,530 | 2,090 | 1,470 | 932 | 750 |
| 30 | 980 | 705 | 550 | 1,400 | ----- | 3,320 | 5,910 | 1,290 | 2,400 | 1,410 | 555 | 795 |
| 31 | 980 | ----- | 550 | 1,300 | ----- | 2,940 | ----- | 1,240 | ----- | 1,350 | 348 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 1,660 | 750 | 1,050 | 1.33 | 1.53 |
| November | 2,240 | 555 | 1,100 | 1.39 | 1.55 |
| December | 2,240 | 490 | 751 | 1.948 | 1.09 |
| January | 4,390 | 440 | 1,570 | 1.98 | 2.28 |
| February | 1,300 | 850 | 1,060 | 1.34 | 1.40 |
| March | 8,210 | 850 | 3,170 | 4.00 | 4.61 |
| April | 10,100 | 1,410 | 4,050 | 5.11 | 5.70 |
| May | 8,810 | 1,240 | 3,740 | 4.72 | 5.44 |
| June | 2,400 | 590 | 1,320 | 1.67 | 1.86 |
| July | 2,400 | 555 | 1,350 | 1.70 | 1.96 |
| August | 1,600 | 348 | 1,020 | 1.29 | 1.49 |
| September | 885 | 295 | 578 | .730 | .81 |
| The year | 10,100 | 295 | 1,730 | 2.18 | 29.72 |

HUDSON RIVER AT HADLEY, N. Y.

LOCATION.—Water-stage recorder at Hadley, Saratoga County, a quarter of a mile upstream from mouth of Sacandaga River and 400 feet downstream from mouth of Lake Luzerne outlet.

DRAINAGE AREA.—1,660 square miles.

RECORDS AVAILABLE.—July, 1921, to September, 1929.

EXTREMES.—Maximum discharge during year, 16,500 second-feet Mar. 26 (gage height, 12.0 feet); minimum, 564 second-feet Sept. 2 (gage height, 1.61 feet).

1921-1929: Maximum discharge, 33,100 second-feet Apr. 12, 1922 (gage height, 19.71 feet); minimum, 362 second-feet Sept. 3, 1923 (gage height, 1.19 feet).

REMARKS.—Records excellent except those for periods of backwater from ice or from flashboards on dam (Oct. 1 to Mar. 13 and Sept. 4-30), which are fair. Flow partly regulated by storage reservoirs and power operations.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|--------|--------|--------|-------|-------|-------|-------|
| 1----- | 1,400 | 1,200 | 1,100 | 1,000 | 2,000 | 1,500 | 7,350 | 9,200 | 2,770 | 3,840 | 1,760 | 615 |
| 2----- | 1,500 | 1,200 | 1,100 | 1,000 | 2,000 | 1,400 | 9,050 | 8,080 | 2,390 | 3,700 | 1,500 | 880 |
| 3----- | 1,400 | 1,300 | 1,100 | 1,000 | 1,900 | 1,400 | 8,710 | 10,600 | 2,330 | 3,400 | 1,240 | 1,040 |
| 4----- | 1,400 | 1,400 | 1,100 | 950 | 1,800 | 1,400 | 8,080 | 13,600 | 2,150 | 2,970 | 1,360 | 1,000 |
| 5----- | 1,900 | 1,500 | 1,100 | 900 | 1,700 | 1,500 | 7,350 | 12,400 | 2,340 | 2,840 | 1,760 | 1,000 |
| 6----- | 1,400 | 1,500 | 1,100 | 1,200 | 1,700 | 1,700 | 8,960 | 12,100 | 2,560 | 2,640 | 1,920 | 700 |
| 7----- | 1,400 | 1,400 | 950 | 1,900 | 1,800 | 1,800 | 12,600 | 11,300 | 2,470 | 2,270 | 2,030 | 600 |
| 8----- | 2,000 | 1,400 | 950 | 2,600 | 1,900 | 1,700 | 14,100 | 10,300 | 2,390 | 2,150 | 1,860 | 700 |
| 9----- | 1,400 | 1,300 | 900 | 2,600 | 2,000 | 1,600 | 14,100 | 9,220 | 2,210 | 2,030 | 1,500 | 1,300 |
| 10----- | 1,400 | 1,100 | 900 | 2,200 | 1,900 | 1,600 | 12,300 | 8,710 | 2,000 | 1,810 | 1,360 | 1,300 |
| 11----- | 1,200 | 1,100 | 900 | 2,000 | 1,800 | 1,500 | 9,900 | 6,480 | 1,980 | 1,700 | 1,460 | 1,300 |
| 12----- | 1,100 | 1,400 | 850 | 1,800 | 1,700 | 1,600 | 8,820 | 5,520 | 2,210 | 1,550 | 1,700 | 850 |
| 13----- | 1,200 | 1,100 | 850 | 1,600 | 1,600 | 1,800 | 7,350 | 5,040 | 2,270 | 1,410 | 1,700 | 750 |
| 14----- | 1,700 | 1,700 | 850 | 1,500 | 1,500 | 3,120 | 6,670 | 5,950 | 2,330 | 1,320 | 1,700 | 900 |
| 15----- | 1,300 | 1,600 | 850 | 1,600 | 1,600 | 5,750 | 5,680 | 5,360 | 2,000 | 2,090 | 1,650 | 850 |
| 16----- | 1,200 | 1,400 | 750 | 1,500 | 1,700 | 11,300 | 5,520 | 6,500 | 1,550 | 2,770 | 1,460 | 750 |
| 17----- | 1,200 | 1,200 | 800 | 1,500 | 1,700 | 13,200 | 5,360 | 8,120 | 1,400 | 2,700 | 1,120 | 900 |
| 18----- | 1,400 | 1,600 | 1,400 | 1,800 | 1,600 | 9,960 | 5,200 | 7,370 | 1,200 | 2,150 | 1,080 | 950 |
| 19----- | 1,800 | 1,600 | 2,800 | 5,000 | 1,700 | 9,380 | 5,040 | 6,330 | 1,550 | 1,920 | 1,360 | 850 |
| 20----- | 1,800 | 2,400 | 2,600 | 5,500 | 1,600 | 8,880 | 5,200 | 7,010 | 2,150 | 1,460 | 1,460 | 800 |
| 21----- | 1,700 | 2,800 | 2,200 | 5,500 | 1,500 | 8,200 | 6,190 | 6,670 | 2,000 | 1,550 | 1,360 | 850 |
| 22----- | 1,600 | 3,000 | 1,500 | 4,600 | 1,500 | 8,880 | 7,010 | 5,680 | 1,810 | 1,980 | 1,360 | 1,000 |
| 23----- | 1,400 | 2,200 | 1,300 | 3,800 | 1,500 | 11,000 | 7,520 | 5,040 | 1,550 | 1,980 | 1,240 | 1,200 |
| 24----- | 1,300 | 1,900 | 1,100 | 3,200 | 1,400 | 13,500 | 7,650 | 5,360 | 2,550 | 2,090 | 975 | 1,200 |
| 25----- | 1,300 | 1,800 | 1,100 | 2,800 | 1,400 | 13,900 | 7,790 | 4,560 | 3,840 | 2,210 | 940 | 1,200 |
| 26----- | 1,200 | 1,700 | 1,100 | 2,600 | 1,600 | 14,000 | 8,710 | 4,240 | 4,000 | 2,030 | 1,280 | 1,200 |
| 27----- | 1,200 | 1,500 | 1,100 | 2,200 | 1,900 | 12,300 | 9,930 | 3,920 | 3,470 | 1,810 | 1,280 | 1,000 |
| 28----- | 1,300 | 1,300 | 1,100 | 1,900 | 1,900 | 10,600 | 8,800 | 3,770 | 3,000 | 1,700 | 1,240 | 600 |
| 29----- | 1,300 | 1,400 | 1,100 | 2,000 | ----- | 9,220 | 9,460 | 3,840 | 3,920 | 1,980 | 1,200 | 850 |
| 30----- | 1,300 | 1,200 | 1,100 | 2,200 | ----- | 8,030 | 10,400 | 3,320 | 4,000 | 1,860 | 1,120 | 1,000 |
| 31----- | 1,300 | ----- | 1,100 | 2,000 | ----- | 7,180 | ----- | 2,970 | ----- | 1,760 | 820 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October----- | 2,000 | 1,100 | 1,420 | 0.855 | 0.99 |
| November----- | 3,000 | 1,100 | 1,570 | .946 | 1.06 |
| December----- | 2,800 | 750 | 1,190 | .717 | .83 |
| January----- | 5,500 | 900 | 2,320 | 1.40 | 1.61 |
| February----- | 2,000 | 1,400 | 1,710 | 1.03 | 1.07 |
| March----- | 14,000 | 1,400 | 6,410 | 3.86 | 4.45 |
| April----- | 14,100 | 5,040 | 8,360 | 5.04 | 5.62 |
| May----- | 13,600 | 2,970 | 7,050 | 4.25 | 4.90 |
| June----- | 4,080 | 1,200 | 2,430 | 1.46 | 1.63 |
| July----- | 3,840 | 1,320 | 2,180 | 1.31 | 1.51 |
| August----- | 2,030 | 820 | 1,410 | .850 | .98 |
| September----- | 1,300 | 600 | 938 | .565 | .63 |
| The year----- | 14,100 | 600 | 3,090 | 1.86 | 25.28 |

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, 1929.

EXTREMES.—Maximum mean daily discharge during year, 40,200 second-feet Mar. 25; minimum, 685 second-feet Sept. 2.

1887-1929: Maximum discharge, 120,000 second-feet Mar. 28, 1913; practically no flow at times when plant is shut down.

REMARKS.—Records poor. Discharge computed from flow over spillway, through wheels and through lock of Champlain Canal. Comparative studies with gaging stations above Mechanicville indicate that the record as published below is small, the discrepancy ranging from 5 to 10 per cent for high-water months, from 10 to 15 per cent for low-water months, and about 10 per cent for the year. Flow partly regulated by storage. 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, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|----------------|---------|-------|---------|--------|--------|--------|-----------------|--------|-------------------|-------|-------|-------|
| 1..... | 1,780 | 2,960 | 3,720 | 2,950 | 4,780 | 4,370 | 19,700 | 24,000 | 8,150 | 9,020 | 2,540 | 1,230 |
| 2..... | 3,020 | 2,740 | 2,930 | 2,910 | 4,540 | 3,610 | 22,000 | 21,500 | 7,470 | 8,260 | 2,390 | 685 |
| 3..... | 3,160 | 2,450 | 2,650 | 2,750 | 3,160 | 2,130 | 21,900 | 22,800 | 6,120 | 7,570 | 2,330 | 749 |
| 4..... | 3,080 | 1,770 | 3,550 | 2,770 | 3,630 | 3,230 | 20,500 | 26,700 | 5,760 | 7,350 | 1,550 | 925 |
| 5..... | 3,010 | 2,140 | 4,010 | 2,420 | 4,740 | 5,510 | 19,000 | 25,700 | 5,220 | 6,650 | 1,100 | 2,020 |
| 6..... | 2,280 | 2,980 | 4,690 | 2,050 | 4,330 | 9,270 | 22,500 | 24,800 | 5,310 | 6,430 | 2,290 | 1,790 |
| 7..... | 1,170 | 3,320 | 3,780 | 2,920 | 4,950 | 7,040 | 25,700 | 22,900 | 5,140 | 3,960 | 2,880 | 1,760 |
| 8..... | 2,000 | 3,290 | 2,590 | 3,550 | 5,320 | 5,560 | 30,600 | 23,100 | 5,240 | 4,560 | 2,700 | 839 |
| 9..... | 3,000 | 3,220 | 1,970 | 4,460 | 5,280 | 5,250 | 30,800 | 19,800 | 4,040 | 4,990 | 3,000 | 896 |
| 10..... | 3,070 | 2,840 | 2,130 | 4,800 | 3,450 | 2,590 | 27,800 | 18,200 | 3,870 | 4,790 | 2,300 | 3,660 |
| 11..... | 2,800 | 1,710 | 2,840 | 5,100 | 4,120 | 4,130 | 23,300 | 15,300 | 4,520 | 4,070 | 1,320 | 4,590 |
| 12..... | 2,320 | 2,740 | 3,380 | 4,370 | 4,320 | 6,200 | 24,900 | 13,200 | 4,060 | 3,990 | 2,160 | 4,030 |
| 13..... | 1,880 | 3,350 | 2,820 | 2,980 | 4,020 | 13,000 | 22,400 | 12,300 | 4,180 | 3,230 | 3,050 | 3,500 |
| 14..... | 933 | 3,490 | 2,850 | 3,600 | 3,750 | 23,000 | 19,900 | 10,800 | 4,360 | 2,140 | 2,960 | 3,459 |
| 15..... | 1,320 | 3,300 | 2,510 | 3,340 | 4,320 | 26,500 | 19,400 | 12,800 | 5,279 | 1,710 | 2,740 | 3,540 |
| 16..... | 2,450 | 3,630 | 1,500 | 2,740 | 3,250 | 33,900 | 20,200 | 13,900 | 4,666 | 2,960 | 2,550 | 3,780 |
| 17..... | 2,120 | 2,710 | 2,220 | 2,830 | 2,150 | 35,700 | 29,700 | 15,900 | 3,500 | 3,600 | 2,160 | 3,960 |
| 18..... | 2,890 | 1,890 | 4,700 | 6,720 | 2,810 | 32,100 | 21,600 | 14,700 | 3,640 | 3,590 | 1,210 | 3,690 |
| 19..... | 3,750 | 2,820 | 6,520 | 11,800 | 4,350 | 29,700 | 18,900 | 15,900 | 3,750 | 3,260 | 1,170 | 3,810 |
| 20..... | 3,800 | 4,230 | 8,270 | 9,540 | 4,100 | 27,900 | 18,800 | 16,400 | 4,850 | 2,390 | 2,350 | 3,400 |
| 21..... | 2,620 | 5,140 | 7,440 | 10,500 | 3,360 | 24,900 | 23,000 | 15,400 | 4,390 | 1,440 | 1,750 | 2,980 |
| 22..... | 3,960 | 6,090 | 5,880 | 9,590 | 2,720 | 26,000 | 27,100 | 14,300 | 3,760 | 2,260 | 1,520 | 1,770 |
| 23..... | 3,900 | 5,570 | 3,720 | 8,670 | 2,500 | 33,000 | 24,800 | 12,600 | 2,996 | 2,900 | 2,010 | 2,480 |
| 24..... | 4,650 | 5,220 | 3,600 | 7,450 | 1,840 | 37,700 | 23,700 | 12,500 | 4,350 | 2,740 | 2,020 | 2,710 |
| 25..... | 3,640 | 3,110 | 2,840 | 6,730 | 2,300 | 40,200 | 25,500 | 12,600 | 6,180 | 2,800 | 1,080 | 2,840 |
| 26..... | 3,460 | 3,320 | 3,770 | 5,840 | 3,780 | 39,400 | 31,600 | 11,600 | 7,040 | 3,050 | 1,130 | 2,800 |
| 27..... | 2,720 | 3,850 | 4,180 | 5,400 | 4,270 | 34,500 | 30,300 | 10,800 | 8,520 | 2,770 | 1,820 | 2,270 |
| 28..... | 1,850 | 3,350 | 4,260 | 4,710 | 4,810 | 29,500 | 27,800 | 9,540 | 7,920 | 1,950 | 1,900 | 1,570 |
| 29..... | 2,190 | 1,900 | 3,770 | 4,750 | ----- | 25,400 | 29,300 | 9,720 | 6,890 | 2,550 | 1,800 | 1,020 |
| 30..... | 2,770 | 2,940 | 2,120 | 4,590 | ----- | 22,100 | 27,400 | 7,940 | 8,590 | 3,110 | 1,860 | 1,540 |
| 31..... | 2,930 | ----- | 2,650 | 4,650 | ----- | 19,800 | ----- | 8,730 | ----- | 2,920 | 1,660 | ----- |
| Month | Maximum | | Minimum | | Mean | | Per square mile | | Run-off in inches | | | |
| October..... | 3,960 | | 933 | | 2,690 | | 0.598 | | 0.69 | | | |
| November..... | 6,090 | | 1,710 | | 3,270 | | .727 | | .81 | | | |
| December..... | 8,270 | | 1,500 | | 3,670 | | .816 | | .94 | | | |
| January..... | 11,800 | | 2,050 | | 5,080 | | 1.13 | | 1.30 | | | |
| February..... | 5,320 | | 1,840 | | 3,820 | | .849 | | .88 | | | |
| March..... | 40,200 | | 2,130 | | 19,800 | | 4.40 | | 5.07 | | | |
| April..... | 31,600 | | 18,800 | | 24,300 | | 5.40 | | 6.02 | | | |
| May..... | 26,700 | | 7,940 | | 16,000 | | 3.56 | | 4.10 | | | |
| June..... | 8,390 | | 2,990 | | 5,310 | | 1.18 | | 1.32 | | | |
| July..... | 9,020 | | 1,440 | | 3,960 | | .880 | | 1.01 | | | |
| August..... | 3,050 | | 1,080 | | 2,040 | | .453 | | .52 | | | |
| September..... | 4,590 | | 685 | | 2,480 | | .551 | | .61 | | | |
| The year..... | 40,200 | | 685 | | 7,720 | | 1.72 | | 23.27 | | | |

INDIAN LAKE RESERVOIR NEAR INDIAN LAKE, N. Y.

LOCATION.—Chain gage at storage dam at outlet of Indian Lake, 2 miles south of Indian Lake village, Hamilton County.

DRAINAGE AREA.—131 square miles.

RECORDS AVAILABLE.—July, 1900, to September, 1929.

EXTREMES.—Maximum stage during year, 35.9 feet May 3 and 4; minimum, 10.0 feet Mar. 13 and 14.

1900-1929: Maximum stage, 38.8 feet Mar. 28, 1913; minimum, 2.0 feet Mar. 9-18, 1907, and Jan. 3-17, 1910.

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, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|------|-------|------|-------|------|------|-------|
| 1 | 17.1 | 12.1 | 13.3 | 17.4 | 20.0 | 12.4 | 21.8 | 35.4 | 34.9 | 35.1 | 29.3 | 20.0 |
| 2 | 16.8 | 12.0 | 13.4 | 17.5 | 19.8 | 12.1 | 22.7 | 35.7 | 34.9 | 35.0 | 29.0 | 19.6 |
| 3 | 16.5 | 11.8 | 13.5 | 17.6 | 19.5 | 11.8 | 23.2 | 35.9 | 35.0 | 35.0 | 28.8 | 19.2 |
| 4 | 16.2 | 11.4 | 13.6 | 17.7 | 19.1 | 11.7 | 23.6 | 35.9 | 35.1 | 34.9 | 28.5 | 18.8 |
| 5 | 16.0 | 11.5 | 13.7 | 17.7 | 18.8 | 11.6 | 24.1 | 35.7 | 35.1 | 34.8 | 28.0 | 18.6 |
| 6 | 15.7 | 11.0 | 13.8 | 17.7 | 18.5 | 11.4 | 25.0 | 35.5 | 35.1 | 34.7 | 27.7 | 18.4 |
| 7 | 15.4 | 10.9 | 13.9 | 17.9 | 18.2 | 11.3 | 26.2 | 35.3 | 35.1 | 34.7 | 27.3 | 18.1 |
| 8 | 15.2 | 10.8 | 14.0 | 17.9 | 17.9 | 11.1 | 27.6 | 35.0 | 35.1 | 34.8 | 27.1 | 18.0 |
| 9 | 14.9 | 10.7 | 14.1 | 18.0 | 17.6 | 10.9 | 28.5 | 34.7 | 35.1 | 34.9 | 27.0 | 17.8 |
| 10 | 14.6 | 10.4 | 14.2 | 18.2 | 17.4 | 10.7 | 29.1 | 34.7 | 35.1 | 34.9 | 26.8 | 17.7 |
| 11 | 14.4 | 10.5 | 14.3 | 18.4 | 17.1 | 10.5 | 29.6 | 34.7 | 35.1 | 34.9 | 26.4 | 17.9 |
| 12 | 14.1 | 10.5 | 14.4 | 18.6 | 16.8 | 10.2 | 30.0 | 34.8 | 35.0 | 35.0 | 25.9 | 17.9 |
| 13 | 13.8 | 10.6 | 14.4 | 18.8 | 16.6 | 10.0 | 30.3 | 34.8 | 34.8 | 35.0 | 25.5 | 18.0 |
| 14 | 13.5 | 10.7 | 14.4 | 18.7 | 16.4 | 10.0 | 30.5 | 34.8 | 34.6 | 35.0 | 25.2 | 18.1 |
| 15 | 13.2 | 10.8 | 14.5 | 18.5 | 16.2 | 10.6 | 30.7 | 35.0 | 34.7 | 35.0 | 24.8 | 18.2 |
| 16 | 13.1 | 10.8 | 14.6 | 18.2 | 15.8 | 11.4 | 31.0 | 35.3 | 34.8 | 34.6 | 24.6 | 18.3 |
| 17 | 12.9 | 10.9 | 14.7 | 18.1 | 15.5 | 12.9 | 31.2 | 35.2 | 34.7 | 34.2 | 24.2 | 18.4 |
| 18 | 12.9 | 11.0 | 15.3 | 18.2 | 15.2 | 13.9 | 31.5 | 35.1 | 34.6 | 34.0 | 24.0 | 18.4 |
| 19 | 12.7 | 11.2 | 15.7 | 18.8 | 15.0 | 14.5 | 31.6 | 35.1 | 34.5 | 34.0 | 23.6 | 18.4 |
| 20 | 13.1 | 11.5 | 16.0 | 19.4 | 14.8 | 14.9 | 31.7 | 35.1 | 34.3 | 34.0 | 23.2 | 18.4 |
| 21 | 13.1 | 11.8 | 16.2 | 19.8 | 14.4 | 15.3 | 31.9 | 35.0 | 34.3 | 33.7 | 22.8 | 18.2 |
| 22 | 13.2 | 12.0 | 16.4 | 20.2 | 14.1 | 15.6 | 32.2 | 35.0 | 34.4 | 33.8 | 22.5 | 18.1 |
| 23 | 13.2 | 12.2 | 16.6 | 20.6 | 13.9 | 16.4 | 32.5 | 34.9 | 34.5 | 32.9 | 22.3 | 17.8 |
| 24 | 13.3 | 12.4 | 16.8 | 20.8 | 13.7 | 17.5 | 32.8 | 34.9 | 34.8 | 32.4 | 22.3 | 17.7 |
| 25 | 13.3 | 12.6 | 16.9 | 20.9 | 13.5 | 18.6 | 33.3 | 34.8 | 34.9 | 32.0 | 21.9 | 17.4 |
| 26 | 13.3 | 12.8 | 16.9 | 21.1 | 13.2 | 19.4 | 33.8 | 34.8 | 35.0 | 31.8 | 21.5 | 17.1 |
| 27 | 13.2 | 13.0 | 17.0 | 21.3 | 13.0 | 19.9 | 34.6 | 34.8 | 35.0 | 31.3 | 21.1 | 17.0 |
| 28 | 13.0 | 13.0 | 17.2 | 21.3 | 12.7 | 20.4 | 34.9 | 34.7 | 35.1 | 30.9 | 20.9 | 16.8 |
| 29 | 12.7 | 13.1 | 17.3 | 21.0 | ----- | 20.8 | 35.0 | 34.9 | 35.3 | 30.6 | 20.5 | 16.5 |
| 30 | 12.4 | 13.2 | 17.3 | 20.7 | ----- | 21.0 | 35.2 | 34.9 | 35.2 | 30.1 | 20.4 | 16.2 |
| 31 | 12.2 | ----- | 17.3 | 20.3 | ----- | 21.4 | ----- | 34.9 | ----- | 29.6 | 20.4 | ----- |

INDIAN RIVER NEAR INDIAN LAKE, N. Y.

LOCATION.—Water-stage recorder three-quarters of a mile downstream from dam at outlet of Indian Lake and 2 miles south of Indian Lake village. Hamilton County.

DRAINAGE AREA.—132 square miles.

RECORDS AVAILABLE.—July, 1912, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,940 second-feet May 3 (gauge height, 5.5 feet); practically no flow at times, when gates in dam are closed. 1912-1929: Maximum discharge, 3,460 second-feet Mar. 28, 1913 (gauge height, 7.8 feet); practically no flow at times.

REMARKS.—Records good. Flow regulated by storage in Indian Lake Reservoir.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|--------|-------|-------|------|-------|
| 1..... | 660 | 474 | 0.8 | 1.2 | 680 | 490 | 4.9 | 720 | 52 | 680 | 644 | 740 |
| 2..... | 640 | 474 | .8 | 1.4 | 680 | 490 | 6.2 | 843 | 53 | 611 | 442 | 739 |
| 3..... | 620 | 458 | .8 | 1.4 | 680 | 490 | 3.2 | 1,340 | 56 | 508 | 738 | 720 |
| 4..... | 620 | 458 | 1.0 | 1.4 | 680 | 474 | 2.9 | *1,870 | 79 | 490 | 965 | *710 |
| 5..... | 600 | 458 | 1.0 | 162 | 680 | 474 | *2.9 | *1,730 | 138 | 395 | 965 | *450 |
| 6..... | 600 | 458 | *.8 | 295 | 660 | 474 | *3.2 | 1,610 | 142 | 155 | 940 | 262 |
| 7..... | 580 | 442 | *1.0 | 292 | 660 | 458 | *9.2 | 1,520 | 146 | 20 | 644 | 467 |
| 8..... | 580 | 409 | .8 | 289 | 640 | 458 | *12 | 1,340 | 144 | 20 | 402 | 680 |
| 9..... | 580 | 315 | *.8 | 125 | 640 | 458 | *12 | 1,040 | 142 | 21 | 405 | 680 |
| 10..... | 560 | 287 | *.8 | 1.8 | 620 | 458 | *12 | 410 | 140 | 25 | 524 | 292 |
| 11..... | 560 | 254 | *.7 | 1.6 | 620 | 458 | *11 | 166 | 140 | 29 | 895 | 85 |
| 12..... | 542 | 180 | *.7 | 63 | 620 | 442 | 12 | 155 | 431 | 32 | 895 | 85 |
| 13..... | 542 | 22 | *.7 | 215 | 600 | 442 | 12 | 397 | 680 | 32 | 872 | *85 |
| 14..... | 525 | 1.8 | *.7 | 336 | 600 | 222 | 13 | 160 | *320 | 133 | 872 | *85 |
| 15..... | 508 | 1.2 | *.8 | 442 | 600 | 18 | 13 | 142 | *50 | 563 | 563 | *85 |
| 16..... | 508 | 1.0 | *1.0 | 442 | 580 | 17 | 14 | 841 | *50 | 1,010 | 369 | *85 |
| 17..... | 508 | 1.0 | *1.2 | 442 | 560 | 8.4 | 15 | 845 | *210 | 752 | 659 | *85 |
| 18..... | 427 | 1.0 | *1.8 | 442 | 560 | 4.2 | 15 | 640 | *530 | 354 | 850 | *85 |
| 19..... | 266 | 3.6 | *2.3 | 244 | 560 | 3.6 | 14 | 620 | *640 | 99 | 850 | *85 |
| 20..... | 191 | 4.9 | *2.5 | 7.9 | 542 | 5.5 | 15 | 620 | *280 | 434 | 828 | *85 |
| 21..... | 191 | 2.7 | 2.5 | 4.6 | 542 | 5.5 | 16 | 620 | *20 | 690 | 805 | 296 |
| 22..... | 160 | *1.8 | 2.3 | 2.9 | 542 | 7.1 | 20 | 600 | 20 | 972 | 508 | 474 |
| 23..... | 138 | *1.4 | 2.1 | 2.7 | 525 | 9.6 | 19 | 505 | 20 | 1,060 | 334 | 474 |
| 24..... | 138 | 1.2 | 1.8 | 2.7 | 525 | 9.2 | 17 | 407 | 25 | 1,060 | 617 | 474 |
| 25..... | 138 | 1.0 | 1.6 | 2.5 | 508 | 6.2 | 16 | 329 | 28 | 845 | 805 | 474 |
| 26..... | 138 | 1.0 | 1.6 | 2.3 | 508 | 6.2 | 20 | 326 | 38 | 720 | 805 | 474 |
| 27..... | 329 | 1.0 | 1.6 | 2.3 | 508 | 4.6 | 16 | 326 | 41 | 845 | 732 | 201 |
| 28..... | 490 | 1.0 | 1.4 | 212 | 490 | 4.2 | 126 | 191 | 104 | 940 | 732 | 420 |
| 29..... | 490 | *.8 | 1.4 | *720 | ----- | 3.2 | 389 | 43 | 448 | 940 | 498 | 580 |
| 30..... | 490 | *.8 | 1.4 | *700 | ----- | 2.9 | 658 | 46 | 700 | 965 | 226 | 580 |
| 31..... | 474 | ----- | 1.2 | *680 | ----- | 2.9 | ----- | 53 | ----- | 990 | *670 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 660 | 138 | 445 | 3.37 | 3.88 |
| November..... | 474 | .8 | 157 | 1.19 | 1.33 |
| December..... | 2.5 | .7 | 1.29 | .070 | .01 |
| January..... | 720 | 1.2 | 198 | 1.50 | 1.73 |
| February..... | 680 | 490 | 593 | 4.49 | 4.68 |
| March..... | 490 | 2.9 | 207 | 1.57 | 1.81 |
| April..... | 658 | 2.9 | 50.0 | .379 | .42 |
| May..... | 1,870 | 43 | 660 | 5.00 | 5.76 |
| June..... | 700 | 20 | 196 | 1.43 | 1.65 |
| July..... | 1,090 | 20 | 531 | 4.03 | 4.64 |
| August..... | 965 | 226 | 682 | 5.17 | 5.96 |
| September..... | 740 | 85 | 368 | 2.73 | 3.11 |
| The year..... | 1,870 | .7 | 340 | 2.53 | 34.98 |

* Estimated.

NOTE.—Elevation of water surface in Indian Lake Reservoir at end of year was 1.2 feet lower than at beginning of year, corresponding to a loss in storage of 175,000,000 cubic feet. This is equivalent to a flow of 5.55 second-feet, 0.042 second-foot per square mile, or a run-off of 0.57 inch on drainage area.

NORTH CREEK AT NORTH CREEK, N. Y.

LOCATION.—Staff gage 125 feet below abandoned dam in North Creek, Warren County, 1,000 feet above mouth.

DRAINAGE AREA.—21.8 square miles.

RECORDS AVAILABLE.—July, 1924, to September, 1929.

EXTREMES.—Maximum discharge during year, 727 second-feet Mar. 16 (gage height, 4.3 feet); minimum, 1.3 second-feet Nov. 17 (gage height, 1.08 feet).

1924-1929: Maximum discharge, 910 second-feet Apr. 5, 1928 (gage height, 4.5 feet); minimum, 0.3 second-foot Sept. 1, 1926, and Sept. 26, 1927.

REMARKS.—Records good except those for periods of ice effect (Dec. 10-15, Dec. 21 to Jan. 18, and Jan. 29 to Feb. 27) and for periods of backwater from Hudson River (Mar. 16, 17, 24-26, Apr. 7-10, and May 3-6), which are fair.

Daily and monthly discharge, in second-feet, 1924-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1 | 7.9 | 6.9 | 13 | 11 | 13 | 14 | 98 | 136 | 26 | 40 | 4.8 | 3.5 |
| 2 | 7.5 | 7.2 | 13 | 10 | 12 | 14 | 126 | 100 | 23 | 32 | 4.8 | 3.5 |
| 3 | 7.2 | 9.2 | 14 | 10 | 11 | 14 | 98 | 360 | 20 | 26 | 4.6 | 3.2 |
| 4 | 7.2 | 14 | 18 | 9 | 11 | 14 | 100 | 220 | 18 | 24 | 8.8 | 3.0 |
| 5 | 7.2 | 11 | 23 | 9 | 10 | 18 | 108 | 150 | 20 | 23 | 6.9 | 2.7 |
| 6 | 12 | 10 | 22 | 34 | 10 | 24 | 346 | 120 | 22 | 20 | 6.3 | 3.0 |
| 7 | 12 | 9.6 | 21 | 34 | 10 | 27 | 200 | 126 | 20 | 17 | 5.6 | 3.0 |
| 8 | 9.9 | 8.2 | 18 | 25 | 11 | 26 | 130 | 117 | 18 | 24 | 5.1 | 2.8 |
| 9 | 8.6 | 7.5 | 13 | 24 | 11 | 23 | 75 | 117 | 16 | 20 | 4.8 | 8.2 |
| 10 | 7.9 | 8.2 | 10 | 22 | 10 | 19 | 95 | 96 | 14 | 18 | 5.3 | 13 |
| 11 | 7.5 | 7.9 | 9 | 22 | 9 | 18 | 82 | 64 | 14 | 17 | 5.3 | 11 |
| 12 | 7.2 | 7.2 | 8 | 20 | 9 | 19 | 77 | 56 | 14 | 16 | 5.3 | 8.8 |
| 13 | 6.9 | 8.5 | 8 | 20 | 8 | 32 | 63 | 52 | 14 | 16 | 4.8 | 5.6 |
| 14 | 8.6 | 9.2 | 8 | 20 | 7 | 80 | 56 | 41 | 16 | 17 | 4.8 | 10 |
| 15 | 9.2 | 9.2 | 7 | 18 | 7 | 353 | 73 | 53 | 16 | 16 | 4.8 | 15 |
| 16 | 8.5 | 5.6 | 6.9 | 16 | 9 | 650 | 77 | 61 | 14 | 14 | 4.4 | 12 |
| 17 | 12 | 2.6 | 6.9 | 16 | 10 | 440 | 69 | 60 | 12 | 12 | 4.2 | 13 |
| 18 | 12 | 8.2 | 113 | 60 | 18 | 157 | 50 | 50 | 11 | 11 | 3.9 | 20 |
| 19 | 13 | 25 | 90 | 387 | 12 | 126 | 54 | 53 | 11 | 12 | 3.9 | 14 |
| 20 | 14 | 47 | 54 | 157 | 11 | 126 | 67 | 124 | 30 | 11 | 3.9 | 11 |
| 21 | 18 | 24 | 28 | 100 | 11 | 117 | 110 | 108 | 26 | 11 | 3.9 | 18 |
| 22 | 21 | 13 | 18 | 62 | 10 | 157 | 126 | 67 | 20 | 9.9 | 3.9 | 17 |
| 23 | 20 | 9.9 | 10 | 46 | 10 | 445 | 136 | 40 | 22 | 9.2 | 4.2 | 16 |
| 24 | 48 | 9.2 | 8 | 33 | 11 | 300 | 167 | 36 | 23 | 8.5 | 5.1 | 18 |
| 25 | 33 | 12 | 8 | 28 | 11 | 200 | 180 | 35 | 173 | 8.5 | 4.8 | 20 |
| 26 | 18 | 11 | 8 | 26 | 11 | 170 | 298 | 33 | 112 | 7.9 | 4.4 | 15 |
| 27 | 8.8 | 11 | 9 | 24 | 14 | 146 | 261 | 29 | 46 | 6.9 | 3.9 | 7.2 |
| 28 | 7.2 | 11 | 10 | 20 | 16 | 126 | 180 | 27 | 50 | 5.6 | 3.5 | 4.4 |
| 29 | 6.9 | 12 | 10 | 19 | ----- | 108 | 232 | 32 | 178 | 6.3 | 3.5 | 4.4 |
| 30 | 6.6 | 12 | 10 | 16 | ----- | 88 | 192 | 33 | 46 | 5.6 | 3.9 | 4.4 |
| 31 | 6.9 | ----- | 10 | 14 | ----- | 68 | ----- | 33 | ----- | 5.1 | 4.2 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 48 | 6.6 | 12.6 | 0.578 | 0.67 |
| November | 47 | 2.6 | 11.6 | .532 | .59 |
| December | 113 | 6.9 | 19.5 | .894 | 1.03 |
| January | 337 | 9 | 41.0 | 1.88 | 2.17 |
| February | 16 | 7 | 10.6 | .486 | .51 |
| March | 650 | 14 | 133 | 6.10 | 7.03 |
| April | 346 | 50 | 130 | 5.96 | 6.65 |
| May | 360 | 27 | 84.5 | 3.88 | 4.47 |
| June | 253 | 11 | 40.8 | 1.87 | 2.09 |
| July | 40 | 5.1 | 15.2 | .697 | .80 |
| August | 8.8 | 3.5 | 4.76 | .218 | .25 |
| September | 20 | 2.7 | 9.86 | .452 | .50 |
| The year | 650 | 2.6 | 43.0 | 1.97 | 26.76 |

SCHROON RIVER AT RIVERBANK, N. Y.

LOCATION.—Water-stage recorder at highway bridge at Riverbank, Warren County, 9 miles downstream from Schroon Lake Reservoir.

DRAINAGE AREA.—528 square miles.

RECORDS AVAILABLE.—September, 1907, to September, 1929.

EXTREMES.—Maximum discharge during year, 4,030 second-feet Mar. 26 (gauge height, 6.63 feet); minimum, 149 second-feet Sept. 30 (gauge height, 1.37 feet).

1907-1929: Maximum discharge, about 13,500 second-feet Mar. 28, 1913 (gauge height, 10.7 feet); minimum, 28 second-feet Oct. 17, 1909 (gauge height, 0.85 foot).

REMARKS.—Records good except those for periods of ice effect (Dec. 21-27, Dec. 31 to Jan. 20, Jan. 28 to Feb. 27, Mar. 3, and 8-10), which are fair. Discharge estimated June 29, 30, and July 7. Seasonal flow slightly affected by storage in Schroon and Brant Lakes.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1 | 222 | 237 | 318 | 340 | 550 | 334 | 2,860 | 3,060 | 1,080 | 940 | 304 | 182 |
| 2 | 228 | 231 | 307 | 340 | 550 | 334 | 2,960 | 2,860 | 1,010 | 910 | 296 | 179 |
| 3 | 231 | 240 | 290 | 340 | 500 | 340 | 3,060 | 2,960 | 910 | 880 | 296 | 177 |
| 4 | 231 | 237 | 296 | 320 | 500 | 334 | 2,960 | 3,260 | 850 | 880 | 293 | 174 |
| 5 | 228 | 240 | 296 | 320 | 480 | 345 | 2,860 | 3,360 | 792 | 820 | 282 | 172 |
| 6 | 225 | 243 | 293 | 340 | 460 | 349 | 2,960 | 3,360 | 765 | 792 | 282 | 169 |
| 7 | 222 | 237 | 296 | 340 | 440 | 345 | 3,260 | 3,360 | 738 | 738 | 279 | 169 |
| 8 | 219 | 234 | 293 | 360 | 420 | 340 | 3,670 | 3,260 | 710 | 738 | 266 | 159 |
| 9 | 219 | 231 | 293 | 380 | 420 | 340 | 3,890 | 3,060 | 655 | 682 | 266 | 182 |
| 10 | 199 | 228 | 300 | 380 | 400 | 340 | 3,780 | 2,860 | 630 | 655 | 262 | 210 |
| 11 | 199 | 234 | 296 | 400 | 400 | 341 | 3,460 | 2,560 | 605 | 605 | 256 | 204 |
| 12 | 196 | 517 | 290 | 380 | 380 | 361 | 3,290 | 2,340 | 550 | 580 | 259 | 188 |
| 13 | 196 | 542 | 279 | 360 | 360 | 361 | 2,960 | 2,160 | 524 | 542 | 262 | 182 |
| 14 | 193 | 606 | 276 | 360 | 360 | 421 | 2,660 | 1,960 | 519 | 510 | 250 | 190 |
| 15 | 190 | 465 | 286 | 340 | 360 | 637 | 2,470 | 1,960 | 514 | 501 | 246 | 188 |
| 16 | 193 | 445 | 272 | 340 | 360 | 1,230 | 2,340 | 2,020 | 501 | 478 | 243 | 188 |
| 17 | 199 | 373 | 286 | 340 | 360 | 1,550 | 2,290 | 2,060 | 496 | 465 | 237 | 190 |
| 18 | 207 | 362 | 326 | 400 | 360 | 2,230 | 2,200 | 2,020 | 433 | 449 | 234 | 193 |
| 19 | 207 | 445 | 337 | 550 | 360 | 2,470 | 2,110 | 1,980 | 465 | 445 | 231 | 188 |
| 20 | 213 | 506 | 361 | 750 | 360 | 2,660 | 2,060 | 2,060 | 470 | 409 | 228 | 179 |
| 21 | 210 | 542 | 380 | 940 | 340 | 2,660 | 2,240 | 2,020 | 457 | 389 | 222 | 179 |
| 22 | 222 | 546 | 380 | 1,040 | 340 | 2,760 | 2,470 | 1,980 | 461 | 381 | 216 | 174 |
| 23 | 231 | 555 | 360 | 1,040 | 340 | 2,960 | 2,560 | 1,800 | 465 | 369 | 213 | 166 |
| 24 | 234 | 470 | 340 | 1,010 | 340 | 3,360 | 2,660 | 1,720 | 580 | 365 | 207 | 169 |
| 25 | 237 | 453 | 340 | 975 | 340 | 3,890 | 2,760 | 1,640 | 710 | 365 | 204 | 166 |
| 26 | 253 | 537 | 360 | 940 | 340 | 4,000 | 2,760 | 1,520 | 792 | 357 | 202 | 161 |
| 27 | 243 | 619 | 360 | 850 | 340 | 4,000 | 2,960 | 1,440 | 820 | 345 | 199 | 164 |
| 28 | 240 | 496 | 357 | 750 | 345 | 3,890 | 3,060 | 1,320 | 850 | 334 | 196 | 159 |
| 29 | 240 | 478 | 361 | 700 | ----- | 3,560 | 3,160 | 1,260 | 880 | 330 | 193 | 154 |
| 30 | 240 | 401 | 353 | 650 | ----- | 3,360 | 3,160 | 1,220 | 910 | 326 | 190 | 151 |
| 31 | 237 | ----- | 340 | 600 | ----- | 3,060 | ----- | 1,150 | ----- | 311 | 188 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 253 | 190 | 219 | 0.415 | 0.48 |
| November | 555 | 228 | 392 | .742 | .83 |
| December | 380 | 272 | 320 | .603 | .70 |
| January | 1,040 | 320 | 554 | 1.05 | 1.21 |
| February | 550 | 340 | 397 | .752 | .78 |
| March | 4,000 | 334 | 1,710 | 3.24 | 3.74 |
| April | 3,890 | 2,060 | 2,860 | 5.42 | 6.05 |
| May | 3,360 | 1,150 | 2,240 | 4.24 | 4.89 |
| June | 1,080 | 457 | 673 | 1.27 | 1.42 |
| July | 940 | 311 | 545 | 1.03 | 1.19 |
| August | 304 | 188 | 242 | .452 | .53 |
| September | 210 | 151 | 177 | .335 | .37 |
| The year | 4,000 | 151 | 864 | 1.64 | 22.19 |

SACANDAGA RIVER NEAR HOPE, N. Y.

LOCATION.—Water-stage recorder $1\frac{1}{2}$ miles downstream from junction of East and West Branches of Sacandaga River and $4\frac{1}{2}$ miles upstream from Hope, Hamilton County. Prior to July 24, 1929, a staff gage 300 feet upstream was used; datum unchanged.

DRAINAGE AREA.—494 square miles.

RECORDS AVAILABLE.—September, 1911, to September, 1929.

EXTREMES.—Maximum discharge during year, 11,700 second-feet Mar. 24 (gage height, 7.6 feet); minimum, 60 second-feet Sept. 5 and 6 (gage height, 1.34 feet).

1911-1929: Maximum gage height, 11.7 feet, from flood marks, 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 fair prior to July 23 and good thereafter. Stage-discharge relation affected by ice Dec. 8-16, Dec. 21 to Jan. 18, Jan. 24 to Feb. 2, and Feb. 21 to Mar. 5. Occasional diurnal fluctuation due to operation of small dams upstream.

Daily and monthly discharge, in second-feet, 1929-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|-------|-------|-------|--------|--------|---------|-------|-------|-------|-------|
| 1..... | 315 | 361 | 386 | 440 | 700 | 460 | 4,700 | 3,580 | 1,230 | 2,170 | * 165 | 165 |
| 2..... | 273 | 361 | 338 | 440 | 650 | 420 | 5,210 | 3,580 | 1,230 | 1,510 | 170 | 114 |
| 3..... | 294 | 386 | 361 | 440 | 702 | 400 | 4,010 | 3,790 | 1,180 | 1,230 | 148 | 78 |
| 4..... | 235 | 499 | 468 | 420 | 702 | 440 | 3,180 | 3,790 | * 900 | 1,130 | 315 | 67 |
| 5..... | 294 | 499 | 468 | 420 | 665 | 500 | 3,180 | 4,010 | * 650 | 990 | 315 | 60 |
| 6..... | 294 | 530 | 412 | 500 | 630 | 562 | 9,510 | 3,790 | * 500 | 905 | 333 | 304 |
| 7..... | 294 | 499 | 338 | 650 | 665 | 562 | 10,500 | 3,580 | * 500 | 905 | 310 | 253 |
| 8..... | 294 | 499 | 320 | 650 | 665 | 530 | 7,900 | * 3,400 | * 400 | 905 | 300 | 194 |
| 9..... | 294 | 530 | 320 | 550 | 595 | 499 | 6,020 | * 3,200 | 361 | 665 | 305 | 482 |
| 10..... | 273 | 468 | 320 | 750 | 562 | 412 | 4,010 | * 2,900 | 386 | 595 | 289 | 663 |
| 11..... | 254 | 440 | 320 | 950 | 530 | 440 | 2,990 | * 2,400 | 361 | 468 | 316 | 524 |
| 12..... | 254 | 386 | 320 | 700 | 468 | 490 | 2,990 | 1,630 | 361 | 412 | 327 | 361 |
| 13..... | 254 | 386 | 360 | 600 | 468 | 702 | 2,640 | 1,280 | 361 | 338 | 211 | 316 |
| 14..... | 294 | 361 | 400 | 550 | 440 | 1,270 | 2,480 | 1,280 | 412 | 361 | 165 | 845 |
| 15..... | 273 | 361 | 440 | 500 | 412 | 4,020 | 2,320 | 1,390 | 412 | 338 | 150 | 713 |
| 16..... | 273 | 361 | 500 | 500 | 412 | 9,230 | 2,170 | 1,630 | 440 | 361 | 132 | 510 |
| 17..... | 294 | 386 | 562 | 550 | 440 | 5,760 | 2,170 | 1,760 | 440 | 315 | 132 | 616 |
| 18..... | 499 | 530 | 3,300 | 850 | 412 | 4,460 | 1,890 | 2,030 | 412 | 315 | 136 | 920 |
| 19..... | 595 | 630 | 2,170 | 3,920 | 440 | 3,580 | 1,890 | 2,990 | 412 | 412 | 136 | 607 |
| 20..... | 595 | 1,530 | 1,510 | 3,380 | 412 | 3,380 | 1,890 | 3,180 | * 500 | 338 | 113 | 476 |
| 21..... | 499 | 1,080 | 950 | 2,640 | 380 | 3,180 | 3,790 | 2,480 | * 600 | 273 | 97 | 410 |
| 22..... | 412 | 905 | 750 | 2,030 | 380 | 4,460 | 3,580 | 1,760 | * 600 | 228 | 92 | 356 |
| 23..... | 440 | 702 | 650 | 1,630 | 340 | 10,900 | 3,380 | 1,510 | 630 | 182 | 97 | 300 |
| 24..... | 562 | 665 | 600 | 1,400 | 340 | 11,300 | 3,580 | 1,390 | 1,040 | 169 | 110 | 268 |
| 25..... | 562 | 595 | 600 | 1,200 | 340 | 9,320 | 3,580 | 1,280 | 1,040 | 215 | 164 | 386 |
| 26..... | 530 | 412 | 550 | 1,000 | 380 | 6,610 | 6,020 | 1,390 | 948 | 361 | 186 | 379 |
| 27..... | 530 | 386 | 550 | 900 | 440 | 4,700 | 5,470 | 1,390 | 905 | 289 | 186 | 367 |
| 28..... | 499 | 361 | 550 | 800 | 460 | 4,460 | 3,790 | 1,280 | 990 | 244 | 177 | 356 |
| 29..... | 468 | 386 | 500 | 800 | ----- | 3,580 | 3,790 | 1,230 | 1,630 | 271 | 173 | 373 |
| 30..... | 386 | 386 | 480 | 750 | ----- | 2,990 | 3,580 | 1,230 | 1,390 | 244 | 169 | 373 |
| 31..... | 361 | ----- | 460 | 700 | ----- | 2,810 | ----- | 1,280 | ----- | 198 | 169 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 595 | 235 | 377 | 0.763 | 0.88 |
| November..... | 1,530 | 361 | 529 | 1.07 | 1.19 |
| December..... | 3,300 | 320 | 653 | 1.32 | 1.52 |
| January..... | 3,920 | 420 | 1,020 | 2.06 | 2.38 |
| February..... | 702 | 340 | 501 | 1.01 | 1.05 |
| March..... | 11,300 | 400 | 3,300 | 6.68 | 7.70 |
| April..... | 10,500 | 1,530 | 4,070 | 8.24 | 9.19 |
| May..... | 4,010 | 1,230 | 2,300 | 4.66 | 5.37 |
| June..... | 1,630 | 361 | 709 | 1.44 | 1.61 |
| July..... | 2,170 | 169 | 559 | 1.13 | 1.30 |
| August..... | 333 | 92 | 197 | .399 | .46 |
| September..... | 920 | 60 | 395 | .800 | .89 |
| The year..... | 11,300 | 60 | 1,220 | 2.47 | 33.54 |

* Estimated.

SACANDAGA RIVER AT HADLEY, N. Y.

LOCATION.—Water-stage recorder half a mile west of Hadley, Saratoga County, and 1 mile upstream from mouth.

DRAINAGE AREA.—1,060 square miles.

RECORDS AVAILABLE.—January, 1911, to September, 1929.

EXTREMES.—Maximum discharge during year, 18,400 second-feet Mar. 25 (gage height, 9.8 feet); minimum, 150 second-feet Sept. 7 (gage height, 2.52 feet).

1911-1929: Maximum discharge, about 35,500 second-feet Mar. 28, 1913 (gage height, 12.36 feet); minimum, about 61 second-feet Sept. 16, 1913 (gage height, 2.25 feet).

REMARKS.—Records good except those for period of ice effect, Dec. 23 to Mar. 16, which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|--------|--------|-------|-------|-------|------|-------|
| 1 | 522 | 840 | 699 | 900 | 1,500 | 850 | 7,250 | 7,740 | 2,870 | 2,870 | 401 | 281 |
| 2 | 491 | 800 | 880 | 900 | 1,400 | 800 | 8,240 | 6,790 | 2,690 | 2,870 | 335 | 270 |
| 3 | 461 | 800 | 1,030 | 900 | 1,400 | 850 | 8,770 | 6,350 | 2,270 | 2,690 | 299 | 255 |
| 4 | 449 | 880 | 1,080 | 900 | 1,400 | 800 | 8,590 | 6,350 | 1,890 | 2,520 | 341 | 207 |
| 5 | 437 | 1,030 | 1,140 | 850 | 1,300 | 850 | 7,740 | 6,790 | 1,520 | 2,270 | 455 | 173 |
| 6 | 437 | 1,070 | 1,190 | 900 | 1,200 | 1,000 | 8,240 | 6,940 | 1,370 | 2,040 | 574 | 158 |
| 7 | 449 | 1,020 | 1,030 | 1,100 | 1,100 | 1,100 | 10,000 | 6,640 | 1,370 | 1,750 | 554 | 165 |
| 8 | 479 | 979 | 1,020 | 1,100 | 1,100 | 1,300 | 11,900 | 6,350 | 1,270 | 1,460 | 522 | 377 |
| 9 | 473 | 1,080 | 934 | 1,100 | 1,100 | 1,200 | 11,900 | 5,940 | 1,110 | 1,430 | 509 | 502 |
| 10 | 473 | 1,090 | 864 | 1,100 | 1,100 | 1,200 | 10,400 | 5,540 | 979 | 1,320 | 515 | 1,250 |
| 11 | 491 | 1,020 | 768 | 1,300 | 1,000 | 1,100 | 8,770 | 4,910 | 880 | 1,180 | 515 | 1,650 |
| 12 | 479 | 970 | 744 | 1,300 | 950 | 1,100 | 7,570 | 4,090 | 864 | 1,020 | 522 | 1,620 |
| 13 | 461 | 916 | 760 | 1,200 | 900 | 1,200 | 6,940 | 2,870 | 856 | 848 | 560 | 1,440 |
| 14 | 479 | 880 | 792 | 1,100 | 850 | 1,700 | 6,350 | 2,690 | 840 | 713 | 503 | 1,490 |
| 15 | 522 | 840 | 824 | 1,100 | 900 | 3,000 | 5,940 | 2,690 | 952 | 678 | 455 | 1,750 |
| 16 | 515 | 816 | 848 | 1,000 | 950 | 5,500 | 5,800 | 3,060 | 1,030 | 678 | 413 | 1,820 |
| 17 | 528 | 816 | 961 | 1,000 | 950 | 11,500 | 5,800 | 3,350 | 1,020 | 636 | 389 | 1,720 |
| 18 | 827 | 856 | 1,840 | 1,200 | 900 | 13,900 | 5,670 | 3,660 | 925 | 574 | 353 | 1,740 |
| 19 | 1,340 | 988 | 3,450 | 2,000 | 900 | 13,500 | 5,410 | 3,760 | 824 | 615 | 323 | 1,820 |
| 20 | 1,620 | 1,460 | 3,450 | 3,600 | 900 | 11,900 | 5,160 | 3,980 | 840 | 713 | 305 | 1,710 |
| 21 | 1,430 | 2,190 | 2,820 | 3,800 | 850 | 10,000 | 5,940 | 4,200 | 1,140 | 685 | 275 | 1,550 |
| 22 | 1,230 | 1,890 | 1,820 | 3,600 | 800 | 11,100 | 7,100 | 4,320 | 1,310 | 567 | 245 | 1,820 |
| 23 | 1,080 | 1,630 | 1,500 | 3,200 | 800 | 12,200 | 7,900 | 4,200 | 1,340 | 455 | 265 | 1,120 |
| 24 | 1,180 | 1,430 | 1,300 | 2,800 | 800 | 15,600 | 7,900 | 4,090 | 1,460 | 395 | 329 | 1,020 |
| 25 | 1,230 | 1,260 | 1,200 | 2,600 | 800 | 18,000 | 7,740 | 3,980 | 1,820 | 383 | 383 | 824 |
| 26 | 1,260 | 1,040 | 1,200 | 2,200 | 800 | 15,600 | 8,420 | 3,870 | 2,120 | 467 | 377 | 713 |
| 27 | 1,120 | 840 | 1,100 | 2,000 | 850 | 13,000 | 8,950 | 3,660 | 2,190 | 664 | 383 | 699 |
| 28 | 1,010 | 840 | 1,100 | 1,900 | 850 | 11,100 | 8,950 | 3,450 | 2,190 | 601 | 365 | 664 |
| 29 | 988 | 864 | 1,100 | 1,700 | ----- | 9,670 | 8,770 | 3,350 | 2,350 | 509 | 341 | 622 |
| 30 | 970 | 916 | 1,000 | 1,600 | ----- | 8,420 | 8,240 | 3,160 | 2,690 | 473 | 317 | 608 |
| 31 | 907 | ----- | 950 | 1,500 | ----- | 7,410 | ----- | 3,060 | ----- | 473 | 305 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 1,620 | 437 | 785 | 0.741 | 0.85 |
| November | 2,109 | 800 | 1,070 | 1.01 | 1.13 |
| December | 3,450 | 699 | 1,270 | 1.20 | 1.38 |
| January | 3,800 | 850 | 1,660 | 1.57 | 1.81 |
| February | 1,500 | 800 | 1,010 | .953 | .99 |
| March | 18,000 | 800 | 8,660 | 6.28 | 7.24 |
| April | 11,900 | 5,160 | 7,880 | 7.43 | 8.29 |
| May | 7,740 | 2,690 | 4,580 | 4.32 | 4.98 |
| June | 2,870 | 824 | 1,500 | 1.42 | 1.58 |
| July | 2,870 | 383 | 1,110 | 1.05 | 1.21 |
| August | 574 | 245 | 401 | .378 | .44 |
| September | 1,820 | 158 | 985 | .929 | 1.04 |
| The year | 18,000 | 158 | 2,420 | 2.28 | 30.94 |

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 a point near first lock (No. 13) below.

RECORDS AVAILABLE.—May, 1919, to June, 1921; May, 1927, to September, 1929 Occasional discharge measurements made from 1895 to 1918.

REMARKS.—Records fair. Daily discharge determined by use of Chezy formula, variations in coefficient "C" throughout the season being computed from current-meter measurements. Flow regulated by demands of Champlain Canal and for floating logs. Operation of canal discontinued Dec. 11; resumed Apr. 14.

Daily and monthly discharge, in second-feet, 1927-29

| Day | Oct. | Nov. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|------|-------|-------|-------|-------|------|-------|
| 1 | 219 | 212 | ----- | 102 | • 149 | 217 | 234 | 234 |
| 2 | 223 | 209 | ----- | 108 | 152 | 215 | 233 | 232 |
| 3 | 213 | 203 | ----- | 118 | 152 | 217 | 231 | 232 |
| 4 | 218 | 194 | ----- | 119 | 158 | 223 | 234 | 232 |
| 5 | 215 | 198 | ----- | 115 | 165 | 224 | 234 | 235 |
| 6 | ----- | 223 | 192 | ----- | 111 | 182 | 226 | 232 |
| 7 | ----- | 213 | 190 | ----- | 105 | 193 | 224 | 230 |
| 8 | ----- | 210 | 199 | ----- | 107 | 190 | 226 | 230 |
| 9 | ----- | 212 | 195 | ----- | 109 | 175 | 242 | 238 |
| 10 | ----- | 209 | 182 | ----- | 115 | 175 | 232 | 233 |
| 11 | ----- | 214 | 179 | ----- | • 120 | 169 | 227 | 232 |
| 12 | ----- | 219 | 182 | ----- | 134 | 183 | 234 | 231 |
| 13 | ----- | 231 | 182 | ----- | 136 | 183 | 233 | 235 |
| 14 | ----- | 214 | 193 | ----- | 140 | • 186 | 233 | 235 |
| 15 | ----- | 206 | 187 | ----- | 135 | • 186 | 235 | 232 |
| 16 | ----- | 199 | 191 | ----- | 130 | 176 | 233 | 234 |
| 17 | ----- | 199 | 195 | ----- | 130 | 190 | 229 | 231 |
| 18 | ----- | 196 | 201 | ----- | 138 | 190 | 229 | 233 |
| 19 | ----- | 199 | 208 | ----- | 141 | 196 | 222 | 234 |
| 20 | ----- | 202 | 205 | ----- | • 112 | 144 | 189 | 228 |
| 21 | ----- | 200 | 205 | 97 | 141 | 198 | 231 | 234 |
| 22 | ----- | 202 | 207 | 98 | 145 | 192 | 234 | 231 |
| 23 | ----- | 209 | 205 | 108 | 160 | 197 | 232 | 233 |
| 24 | ----- | 215 | 195 | 108 | • 154 | 211 | 234 | 234 |
| 25 | ----- | 213 | 192 | 107 | • 153 | 210 | 229 | 232 |
| 26 | ----- | 210 | 183 | 100 | 155 | 214 | 231 | 236 |
| 27 | ----- | 208 | 195 | 107 | 154 | 214 | 229 | 231 |
| 28 | ----- | 204 | 180 | 106 | 161 | 210 | 228 | 236 |
| 29 | ----- | 210 | 166 | 96 | 152 | 215 | 231 | 234 |
| 30 | ----- | 204 | 202 | 104 | • 153 | 219 | 227 | 233 |
| 31 | ----- | 208 | ----- | ----- | • 161 | ----- | 232 | 228 |

| Month | Maxi- mum | Mini- mum | Mean | Month | Maxi- mum | Mini- mum | Mean |
|-------------|--------------|--------------|------|-----------|--------------|--------------|------|
| October | 231 | 196 | 210 | June | 219 | 149 | 187 |
| November | 212 | 166 | 194 | July | 242 | 215 | 229 |
| April 20-30 | 112 | 96 | 104 | August | 238 | 228 | 233 |
| May | 161 | 102 | 134 | September | 239 | 230 | 233 |

• Estimated.

BATTEN KILL AT ARLINGTON, VT.

LOCATION.—Chain gage on bridge at Arlington, Bennington County, 0.9 mile below mouth of Warm Brook.

DRAINAGE AREA.—151 square miles.

RECORDS AVAILABLE.—October, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 2,850 second-feet Apr. 26 (gage height, 7.14 feet); minimum, 55 second-feet Sept. 7 (gage height, 1.88 feet).

REMARKS.—Records good. Discharge estimated Oct. 1-7, Nov. 15-18, May 12, 26, June 16, and July 1-24. Stage discharge relation affected by ice Dec. 10, 11, Jan. 8, 9, 14-17, 28-30, Feb. 5, 6, 13-16, and 21-24.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1 | 138 | 159 | 246 | 194 | 194 | 149 | 750 | 1,830 | 274 | 262 | 80 | 67 |
| 2 | 124 | 170 | 219 | 288 | 194 | 130 | 1,010 | 1,750 | 259 | 233 | 82 | 67 |
| 3 | 119 | 181 | 219 | 246 | 181 | 120 | 750 | 2,070 | 259 | 208 | 82 | 64 |
| 4 | 115 | 232 | 259 | 219 | 181 | 139 | 660 | 1,750 | 246 | 202 | 181 | 62 |
| 5 | 117 | 206 | 288 | 181 | 181 | 259 | 750 | 1,310 | 232 | 197 | 139 | 62 |
| 6 | 113 | 170 | 288 | 304 | 181 | 352 | 1,450 | 1,190 | 423 | 222 | 120 | 66 |
| 7 | 112 | 181 | 232 | 352 | 194 | 274 | 1,070 | 1,070 | 304 | 186 | 101 | 74 |
| 8 | 110 | 206 | 206 | 288 | 194 | 206 | 1,520 | 900 | 246 | 177 | 88 | 130 |
| 9 | 110 | 181 | 181 | 246 | 206 | 194 | 1,250 | 750 | 219 | 181 | 149 | 139 |
| 10 | 110 | 170 | 170 | 232 | 232 | 181 | 900 | 660 | 206 | 159 | 120 | 274 |
| 11 | 110 | 170 | 170 | 219 | 170 | 170 | 578 | 518 | 170 | 159 | 259 | 206 |
| 12 | 99 | 159 | 170 | 194 | 170 | 181 | 578 | 518 | 159 | 146 | 206 | 130 |
| 13 | 130 | 149 | 181 | 181 | 159 | 618 | 460 | 518 | 159 | 125 | 130 | 101 |
| 14 | 170 | 149 | 181 | 181 | 149 | 1,250 | 518 | 479 | 170 | 105 | 110 | 319 |
| 15 | 120 | 154 | 170 | 181 | 139 | 1,670 | 498 | 850 | 1,010 | 192 | 101 | 442 |
| 16 | 120 | 157 | 170 | 232 | 139 | 2,230 | 518 | 900 | 960 | 131 | 98 | 232 |
| 17 | 110 | 174 | 206 | 304 | 139 | 1,910 | 660 | 850 | 405 | 105 | 91 | 219 |
| 18 | 319 | 229 | 1,190 | 750 | 170 | 1,130 | 618 | 618 | 336 | 90 | 83 | 370 |
| 19 | 750 | 219 | 850 | 1,750 | 194 | 800 | 578 | 850 | 405 | 158 | 73 | 206 |
| 20 | 442 | 498 | 498 | 1,190 | 170 | 705 | 618 | 850 | 304 | 160 | 77 | 149 |
| 21 | 304 | 319 | 370 | 618 | 170 | 660 | 1,190 | 660 | 259 | 106 | 74 | 139 |
| 22 | 232 | 259 | 274 | 423 | 159 | 900 | 1,070 | 578 | 246 | 90 | 64 | 120 |
| 23 | 194 | 232 | 259 | 336 | 149 | 1,520 | 900 | 498 | 219 | 76 | 87 | 120 |
| 24 | 288 | 219 | 246 | 304 | 149 | 2,580 | 850 | 498 | 219 | 70 | 246 | 110 |
| 25 | 274 | 206 | 259 | 274 | 139 | 1,450 | 1,070 | 578 | 246 | 194 | 130 | 101 |
| 26 | 219 | 181 | 246 | 274 | 139 | 1,190 | 2,760 | 500 | 304 | 194 | 90 | 99 |
| 27 | 17 | 181 | 232 | 246 | 149 | 1,130 | 2,580 | 423 | 259 | 130 | 85 | 98 |
| 28 | 206 | 170 | 246 | 232 | 149 | 900 | 1,830 | 387 | 336 | 110 | 74 | 95 |
| 29 | 194 | 194 | 232 | 219 | ----- | 750 | 2,670 | 352 | 387 | 110 | 71 | 90 |
| 30 | 181 | 181 | 194 | 206 | ----- | 618 | 1,750 | 336 | 304 | 93 | 64 | 96 |
| 31 | 159 | ----- | 181 | 206 | ----- | 578 | ----- | 319 | ----- | 87 | 73 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 750 | 99 | 192 | 1.27 | 1.46 |
| November | 498 | 149 | 202 | 1.34 | 1.50 |
| December | 1,190 | 170 | 285 | 1.89 | 2.18 |
| January | 1,750 | 181 | 357 | 2.36 | 2.72 |
| February | 232 | 139 | 169 | 1.12 | 1.17 |
| March | 2,580 | 120 | 805 | 5.33 | 6.14 |
| April | 2,760 | 460 | 1,100 | 7.28 | 8.12 |
| May | 2,070 | 319 | 818 | 5.42 | 6.25 |
| June | 1,010 | 159 | 318 | 2.11 | 2.35 |
| July | 262 | 70 | 150 | .993 | 1.14 |
| August | 259 | 64 | 111 | .735 | .85 |
| September | 442 | 62 | 148 | .980 | 1.09 |
| The year | 2,760 | 62 | 389 | 2.58 | 34.97 |

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, 1929.

EXTREMES.—Maximum discharge during year, 6,040 second-feet Mar. 14 (gage height, 8.4 feet); minimum, 43 second-feet July 24 (gage height, 1.76 feet).

1922-1929: 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. 8 to Jan. 19 and Jan. 26 to Mar. 3), which are fair. Discharge estimated Dec. 15-22. Diurnal fluctuation during low stages caused by operation of mills upstream.

Daily and monthly discharge, in second-feet, 1922-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 207 | 286 | 404 | 320 | 300 | 300 | 1,350 | 2,840 | 630 | 488 | 169 | 143 |
| 2..... | 186 | 277 | 474 | 380 | 320 | 280 | 1,810 | 2,630 | 576 | 433 | 160 | 139 |
| 3..... | 179 | 291 | 435 | 340 | 320 | 280 | 1,580 | 2,930 | 540 | 386 | 150 | 130 |
| 4..... | 173 | 314 | 490 | 320 | 320 | 300 | 1,350 | 3,390 | 516 | 371 | 198 | 107 |
| 5..... | 176 | 319 | 538 | 280 | 300 | 674 | 1,350 | 2,630 | 504 | 361 | 238 | 107 |
| 6..... | 169 | 295 | 630 | 420 | 280 | 1,150 | 1,980 | 2,430 | 656 | 391 | 210 | 120 |
| 7..... | 169 | 273 | 538 | 600 | 750 | 925 | 2,510 | 2,180 | 594 | 346 | 187 | 132 |
| 8..... | 165 | 273 | 440 | 440 | 850 | 616 | 2,560 | 1,980 | 504 | 323 | 170 | 192 |
| 9..... | 165 | 300 | 360 | 420 | 600 | 490 | 2,310 | 1,650 | 454 | 332 | 184 | 247 |
| 10..... | 158 | 282 | 320 | 420 | 480 | 435 | 1,810 | 1,420 | 417 | 295 | 211 | 554 |
| 11..... | 162 | 260 | 300 | 480 | 420 | 430 | 1,440 | 1,250 | 391 | 291 | 224 | 471 |
| 12..... | 162 | 255 | 280 | 380 | 400 | 616 | 1,580 | 1,100 | 366 | 273 | 300 | 391 |
| 13..... | 158 | 246 | 280 | 340 | 360 | 1,790 | 1,710 | 1,080 | 332 | 235 | 279 | 328 |
| 14..... | 191 | 234 | 300 | 320 | 340 | 4,190 | 1,580 | 970 | 348 | 202 | 291 | 397 |
| 15..... | 210 | 234 | 320 | 280 | 320 | 4,670 | 1,580 | 1,330 | 1,370 | 256 | 261 | 818 |
| 16..... | 180 | 238 | 340 | 260 | 320 | 5,030 | 1,710 | 1,520 | 1,310 | 243 | 240 | 671 |
| 17..... | 176 | 264 | 380 | 240 | 320 | 4,790 | 2,210 | 1,600 | 772 | 206 | 209 | 516 |
| 18..... | 336 | 348 | 900 | 1,300 | 340 | 3,120 | 2,260 | 1,290 | 552 | 174 | 199 | 667 |
| 19..... | 794 | 324 | 850 | 2,800 | 420 | 2,160 | 2,110 | 1,430 | 650 | 211 | 184 | 546 |
| 20..... | 740 | 457 | 700 | 2,310 | 320 | 1,760 | 2,160 | 1,880 | 584 | 211 | 180 | 428 |
| 21..... | 514 | 484 | 600 | 1,350 | 320 | 1,580 | 3,180 | 1,600 | 476 | 172 | 162 | 366 |
| 22..... | 399 | 399 | 560 | 978 | 300 | 1,620 | 3,690 | 1,420 | 422 | 178 | 157 | 328 |
| 23..... | 343 | 368 | 480 | 747 | 280 | 2,300 | 3,060 | 1,250 | 479 | 160 | 161 | 300 |
| 24..... | 383 | 348 | 440 | 636 | 260 | 3,390 | 2,620 | 1,160 | 618 | 135 | 292 | 286 |
| 25..... | 419 | 383 | 420 | 550 | 260 | 3,280 | 2,680 | 1,380 | 656 | 165 | 321 | 269 |
| 26..... | 373 | 324 | 400 | 480 | 260 | 2,560 | 4,660 | 1,180 | 662 | 298 | 205 | 243 |
| 27..... | 333 | 295 | 400 | 440 | 300 | 2,260 | 5,080 | 1,020 | 576 | 278 | 198 | 242 |
| 28..... | 324 | 286 | 380 | 400 | 360 | 1,960 | 3,760 | 935 | 510 | 205 | 183 | 223 |
| 29..... | 328 | 291 | 360 | 360 | ----- | 1,660 | 4,130 | 844 | 714 | 198 | 176 | 215 |
| 30..... | 324 | 305 | 340 | 340 | ----- | 1,440 | 3,960 | 788 | 582 | 209 | 157 | 214 |
| 31..... | 295 | ----- | 340 | 320 | ----- | 1,270 | ----- | 714 | ----- | 186 | 149 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 794 | 158 | 287 | 0.723 | 0.83 |
| November..... | 484 | 234 | 307 | .773 | .86 |
| December..... | 900 | 280 | 451 | 1.14 | 1.31 |
| January..... | 2,800 | 240 | 621 | 1.56 | 1.80 |
| February..... | 850 | 260 | 373 | .940 | .98 |
| March..... | 5,030 | 280 | 1,850 | 4.66 | 5.37 |
| April..... | 5,080 | 1,350 | 2,460 | 6.20 | 6.92 |
| May..... | 3,390 | 714 | 1,610 | 4.06 | 4.68 |
| June..... | 1,370 | 332 | 590 | 1.49 | 1.66 |
| July..... | 488 | 135 | 265 | .668 | .77 |
| August..... | 390 | 149 | 210 | .529 | .61 |
| September..... | 818 | 107 | 326 | .821 | .92 |
| The year..... | 5,080 | 107 | 780 | 1.96 | 26.71 |

KATADEROSSERAS CREEK NEAR WEST MILTON, N. Y.

LOCATION.—Water-stage recorder 500 feet downstream from mouth of Glowegee Creek and 1 mile east of West Milton, Saratoga County.

DRAINAGE AREA.—89 square miles.

RECORDS AVAILABLE.—July, 1927, to September, 1929.

EXTREMES.—Maximum discharge during year, 2,350 second-feet Mar. 16 (gage height, 7.5 feet); minimum, 10 second-feet Sept. 5 (gage height, 1.00 foot).
1927-1929: Maximum discharge, that of Mar. 16, 1929; minimum, 6.1 second-feet Aug. 23, 1927 (gage height, 0.86 foot).

REMARKS.—Records good except those for periods of ice effect (Dec. 11-14, 24-27, Jan. 13-17, Jan. 28 to Feb. 6, and Feb. 24-26) and for estimated periods, 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, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|------|------|------|------|---------|-------|-----|-------|---------|------|-------|
| 1..... | 36 | 50 | 85 | 63 | 55 | 125 | 330 | 228 | 108 | } * 100 | 41 | * 34 |
| 2..... | 41 | 64 | 108 | 58 | 55 | * 110 | 390 | 196 | 72 | | 38 | 30 |
| 3..... | 39 | 85 | 116 | 46 | 60 | 108 | 282 | 356 | 83 | | 36 | 29 |
| 4..... | 47 | 73 | 138 | 60 | 55 | 107 | 232 | 383 | 89 | | 61 | 29 |
| 5..... | 63 | 86 | 164 | 48 | 48 | 108 | 207 | 313 | 100 | | 64 | 29 |
| 6..... | 24 | 83 | 165 | 49 | 48 | 218 | 571 | 323 | 165 | } * 80 | 57 | 29 |
| 7..... | 50 | 67 | 118 | 108 | 46 | 233 | 472 | 313 | 122 | | 49 | 30 |
| 8..... | 52 | 83 | 99 | 50 | 74 | 160 | 326 | 267 | 117 | | 100 | 47 |
| 9..... | 34 | 107 | 76 | 54 | 103 | 145 | 248 | 205 | 65 | | 88 | 64 |
| 10..... | 48 | 87 | 64 | 69 | | 147 | 213 | 194 | 81 | | 127 | 62 |
| 11..... | 66 | 61 | 60 | 70 | | 129 | 184 | 141 | 84 | 92 | 88 | 178 |
| 12..... | 44 | 88 | 55 | 60 | | 127 | 522 | 146 | 65 | 72 | 75 | 94 |
| 13..... | 50 | 61 | 50 | 60 | | 319 | 512 | 179 | 68 | 63 | 59 | 74 |
| 14..... | 63 | 71 | 50 | 60 | | 1,180 | 375 | 147 | 194 | | 59 | 164 |
| 15..... | 66 | 76 | 49 | 48 | | 1,640 | 390 | 333 | 390 | | 64 | 149 |
| 16..... | 53 | 70 | 68 | 38 | * 55 | 2,110 | 487 | 335 | 154 | } * 80 | 56 | 90 |
| 17..... | 58 | 69 | 107 | 50 | | | 669 | 310 | 110 | | 48 | 75 |
| 18..... | 215 | 71 | 205 | 56 | | * 1,100 | 604 | 212 | 86 | | * 44 | 97 |
| 19..... | 227 | 93 | 182 | 424 | | | 441 | 331 | 89 | | * 42 | 75 |
| 20..... | 157 | 134 | 125 | 293 | | | 482 | 360 | 422 | | 40 | 64 |
| 21..... | 86 | 102 | 113 | 208 | | 435 | 1,020 | 258 | 143 | 68 | 38 | 55 |
| 22..... | 86 | 86 | 66 | 133 | | 560 | 710 | 212 | 93 | 57 | 36 | 54 |
| 23..... | 99 | 96 | 51 | 104 | | 858 | 430 | 174 | 80 | 53 | 34 | 50 |
| 24..... | 96 | 80 | 48 | 90 | 50 | 777 | 326 | 203 | 122 | 48 | 56 | 46 |
| 25..... | 87 | 73 | 48 | 86 | 55 | 501 | 345 | 332 | 136 | 60 | 60 | 46 |
| 26..... | 87 | 68 | 50 | 81 | 100 | 500 | 574 | 203 | 227 | 93 | 49 | 45 |
| 27..... | 72 | 72 | 55 | 66 | 179 | 409 | 375 | 184 | 159 | 70 | 45 | 41 |
| 28..... | 60 | 59 | 63 | 60 | 152 | 346 | 256 | 149 | 223 | 60 | 42 | 41 |
| 29..... | 81 | 60 | 64 | 60 | | 300 | 364 | 143 | 306 | 51 | 38 | 38 |
| 30..... | 81 | 64 | 58 | 55 | | 268 | 282 | 135 | * 173 | 50 | 40 | 39 |
| 31..... | 76 | | 54 | 55 | | 250 | | 124 | | 44 | 38 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 227 | 24 | 75.6 | 0.846 | 0.98 |
| November..... | 134 | 50 | 78.0 | .876 | .98 |
| December..... | 205 | 48 | 88.8 | .998 | 1.15 |
| January..... | 424 | 38 | 89.1 | 1.00 | 1.15 |
| February..... | 179 | 46 | 66.1 | .743 | .77 |
| March..... | 2,110 | 107 | 515 | 5.79 | 6.68 |
| April..... | 1,020 | 184 | 417 | 4.69 | 5.23 |
| May..... | 422 | 124 | 240 | 2.70 | 3.11 |
| June..... | 390 | 65 | 138 | 1.55 | 1.73 |
| July..... | | 44 | 78.5 | .882 | 1.02 |
| August..... | 88 | 34 | 50.6 | .569 | .66 |
| September..... | 225 | 29 | 68.9 | .774 | .86 |
| The year..... | 2,110 | 24 | 159 | 1.79 | 24.32 |

* Estimated.

HOOSIC RIVER NEAR EAGLE BRIDGE, N. Y.

LOCATION.—Water-stage recorder half a mile downstream from mouth of Walloomsac River and $1\frac{1}{2}$ miles southeast of Eagle Bridge, Pensselaer County.

DRAINAGE AREA.—512 square miles.

RECORDS AVAILABLE.—August, 1910, to March, 1922; July, 1923, to September, 1929.

EXTREMES.—Maximum discharge during year, 10,100 second-feet Mar. 14 (gage height, 10.9 feet); minimum, about 54 second-feet Sept. 1 (gage height, 3.26 feet).

1910-1929: 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 good except those for periods of ice effect (Jan. 13-19 and Feb. 21-26), which are fair. Diurnal fluctuation at medium and low stages caused by operation of power plants upstream.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1 | 350 | 273 | 474 | 325 | 350 | 436 | 1,910 | 2,770 | 538 | 398 | 146 | 64 |
| 2 | 335 | 273 | 528 | 528 | 390 | 398 | 2,170 | 2,560 | 534 | 325 | 143 | 100 |
| 3 | 325 | 311 | 480 | 408 | 386 | 398 | 1,670 | 3,080 | 546 | 292 | 128 | 135 |
| 4 | 306 | 301 | 484 | 381 | 386 | 387 | 1,500 | 2,900 | 510 | 248 | 131 | 125 |
| 5 | 320 | 282 | 486 | 325 | 365 | 1,370 | 1,620 | 2,290 | 574 | 285 | 177 | 101 |
| 6 | 311 | 269 | 540 | 541 | 350 | 2,380 | 2,870 | 2,290 | 718 | 269 | 160 | 104 |
| 7 | 301 | 278 | 408 | 790 | 874 | 1,560 | 2,760 | 2,300 | 534 | 244 | 157 | 113 |
| 8 | 311 | 296 | 365 | 486 | 997 | 884 | 2,490 | 2,030 | 570 | 239 | 152 | 93 |
| 9 | 296 | 325 | 365 | 492 | 613 | 671 | 2,030 | 1,670 | 430 | 220 | 160 | 126 |
| 10 | 306 | 320 | 360 | 480 | 880 | 571 | 1,790 | 1,400 | 442 | 248 | 164 | 155 |
| 11 | 301 | 296 | 350 | 648 | 708 | 552 | 1,620 | 1,240 | 376 | 260 | 154 | 143 |
| 12 | 287 | 256 | 340 | 414 | 558 | 802 | 2,510 | 1,100 | 355 | 220 | 171 | 144 |
| 13 | 248 | 273 | 340 | 380 | 434 | 2,890 | 2,720 | 1,170 | 345 | 189 | 174 | 125 |
| 14 | 310 | 278 | 330 | 360 | 466 | 8,440 | 2,160 | 990 | 315 | 177 | 154 | 123 |
| 15 | 273 | 265 | 296 | 360 | 386 | 7,960 | 2,100 | 2,110 | 473 | 248 | 138 | 213 |
| 16 | 256 | 269 | 311 | 340 | 428 | 8,090 | 2,430 | 2,070 | 442 | 209 | 143 | 202 |
| 17 | 256 | 320 | 355 | 550 | 394 | 6,010 | 3,390 | 2,030 | 355 | 183 | 120 | 186 |
| 18 | 273 | 335 | 945 | 1,900 | 415 | 2,920 | 3,270 | 1,500 | 375 | 154 | 95 | 197 |
| 19 | 392 | 315 | 907 | 3,400 | 630 | 2,360 | 2,660 | 1,590 | 236 | 174 | 141 | 175 |
| 20 | 306 | 606 | 636 | 1,400 | 381 | 2,490 | 2,560 | 1,970 | 334 | 159 | 157 | 149 |
| 21 | 292 | 558 | 516 | 824 | 360 | 2,220 | 5,430 | 1,620 | 370 | 122 | 122 | 127 |
| 22 | 282 | 425 | 376 | 702 | 340 | 2,700 | 4,710 | 1,670 | 278 | 169 | 124 | 94 |
| 23 | 260 | 414 | 365 | 600 | 340 | 5,480 | 3,360 | 1,350 | 239 | 168 | 110 | 154 |
| 24 | 360 | 360 | 425 | 570 | 340 | 4,330 | 3,140 | 1,180 | 270 | 154 | 124 | 155 |
| 25 | 386 | 360 | 392 | 474 | 320 | 3,450 | 3,840 | 1,400 | 278 | 168 | 134 | 125 |
| 26 | 330 | 360 | 425 | 480 | 340 | 3,520 | 7,990 | 1,130 | 439 | 180 | 136 | 117 |
| 27 | 309 | 311 | 403 | 447 | 528 | 3,070 | 5,770 | 1,010 | 371 | 168 | 126 | 115 |
| 28 | 248 | 311 | 436 | 447 | 588 | 2,490 | 8,850 | 898 | 370 | 138 | 128 | 113 |
| 29 | 320 | 282 | 392 | 396 | ----- | 2,220 | 5,520 | 808 | 638 | 165 | 113 | 96 |
| 30 | 296 | 355 | 365 | 365 | ----- | 1,910 | 3,700 | 730 | 470 | 171 | 116 | 124 |
| 31 | 282 | ----- | 350 | 403 | ----- | 1,730 | ----- | 681 | ----- | 152 | 103 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 392 | 248 | 304 | 0.594 | 0.68 |
| November | 606 | 256 | 329 | .643 | .72 |
| December | 945 | 296 | 443 | .865 | 1.00 |
| January | 3,400 | 325 | 652 | 1.27 | 1.46 |
| February | 997 | 320 | 483 | .943 | .98 |
| March | 8,440 | 387 | 2,730 | 5.33 | 6.14 |
| April | 7,990 | 1,500 | 3,110 | 6.07 | 6.77 |
| May | 3,080 | 681 | 1,660 | 3.24 | 3.74 |
| June | 718 | 239 | 423 | .826 | .92 |
| July | 398 | 122 | 210 | .410 | .47 |
| August | 177 | 95 | 139 | .271 | .31 |
| September | 213 | 64 | 133 | .260 | .29 |
| The year | 8,440 | 64 | 887 | 1.73 | 23.48 |

MOHAWK RIVER BELOW DELTA DAM, NEAR ROME, N. Y.

LOCATION.—Staff gage at Spring Brook fish hatchery, 1 mile downstream from Delta Dam and 4 miles north of Rome, Oneida County.

DRAINAGE AREA.—151 square miles.

RECORDS AVAILABLE.—October, 1927, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,940 second-feet May 3 (gage height, 5.4 feet); minimum, 146 second-feet Mar. 2-5, 18 and 19 (gage height, 1.4 feet).

1927-1929: Maximum discharge, 2,930 second-feet Apr. 8, 1928 (gage height, 6.9 feet); minimum, 89 second-feet Oct. 24 and 25, 1927 (gage height, 1.04 feet).

Maximum discharge known, 4,210 second-feet Mar. 9, 1921.

REMARKS.—Records good. During navigation season water is diverted into Delta Reservoir from Black River through Forestport feeder and Black River Canal. Flow is almost completely regulated at Delta Dam.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|------|-------|-------|------|-------|-------|------|------|-------|-------|
| 1 | 229 | 337 | 456 | 735 | * 690 | 209 | 475 | 780 | 437 | 253 | 253 | 600 |
| 2 | 229 | 337 | 256 | 735 | * 690 | 146 | 712 | 628 | 437 | 253 | 253 | * 460 |
| 3 | 243 | 337 | 165 | 690 | 690 | 146 | 758 | 1,570 | 437 | 253 | 253 | 340 |
| 4 | 253 | 337 | 165 | 690 | 668 | 146 | 668 | 1,580 | 437 | 253 | 253 | 340 |
| 5 | 253 | 337 | 165 | 690 | 645 | 157 | 690 | 1,180 | 437 | 253 | 266 | 340 |
| 6 | 266 | 337 | 165 | 690 | 645 | 185 | 1,210 | 1,230 | 437 | 253 | 253 | 320 |
| 7 | 253 | 337 | 165 | 690 | 474 | 185 | 1,340 | 955 | 434 | 322 | 253 | 320 |
| 8 | 253 | 337 | 414 | 825 | 478 | 185 | 1,490 | 758 | 419 | 475 | 291 | 320 |
| 9 | 253 | 337 | 735 | 1,030 | 668 | 175 | 1,060 | 578 | 419 | 307 | 329 | 260 |
| 10 | 278 | * 337 | 735 | 684 | 645 | 175 | 758 | 495 | 419 | 253 | 301 | 190 |
| 11 | * 337 | 337 | 735 | 668 | 645 | 175 | 437 | * 475 | 419 | 253 | * 286 | 300 |
| 12 | 337 | 337 | 735 | 1,000 | 645 | 165 | 475 | 456 | 419 | 253 | 253 | 300 |
| 13 | 337 | 337 | 735 | 800 | 645 | 196 | 690 | 419 | 419 | 253 | 253 | 300 |
| 14 | 337 | 337 | 735 | 495 | 645 | 279 | 645 | 418 | 419 | 253 | 253 | 320 |
| 15 | 337 | 337 | 735 | 495 | * 622 | 241 | 578 | 1,450 | 419 | 253 | 266 | * 320 |
| 16 | 337 | 337 | 735 | 565 | 537 | 253 | 578 | 1,370 | 419 | 253 | 253 | 300 |
| 17 | 337 | 459 | 735 | 830 | 456 | 175 | 1,060 | 1,080 | 419 | 253 | 253 | 300 |
| 18 | 352 | * 437 | 758 | 634 | 456 | 146 | 1,030 | 735 | 430 | 253 | 253 | 300 |
| 19 | 352 | 437 | 735 | 337 | 437 | 231 | 855 | 622 | 437 | 263 | 253 | 300 |
| 20 | 337 | 475 | 735 | 528 | 437 | 348 | 758 | 645 | 437 | 253 | 253 | 300 |
| 21 | * 337 | 475 | 735 | 690 | 437 | 218 | 980 | 495 | 437 | 253 | 260 | 300 |
| 22 | * 337 | 456 | 735 | 690 | 542 | 229 | 855 | 437 | 495 | 253 | 260 | * 300 |
| 23 | 337 | 456 | 735 | 690 | 600 | 279 | 622 | 352 | 437 | 253 | 240 | 300 |
| 24 | 337 | 456 | 735 | 690 | * 578 | 303 | 495 | 352 | 437 | 253 | 240 | 300 |
| 25 | 337 | 456 | 735 | 690 | 555 | 372 | 437 | 368 | 437 | 253 | 240 | 300 |
| 26 | 337 | 456 | 735 | 690 | 555 | 515 | 758 | 352 | 437 | 253 | 240 | 300 |
| 27 | 337 | 456 | 735 | 690 | 555 | 515 | 758 | 337 | 437 | 253 | 240 | 300 |
| 28 | 337 | 456 | 735 | 690 | 398 | 450 | 600 | 307 | 437 | 272 | 240 | 300 |
| 29 | 337 | 456 | 735 | 690 | --- | 307 | 1,140 | 293 | 303 | 279 | 240 | 300 |
| 30 | 337 | 456 | 735 | 690 | --- | 307 | 1,080 | 330 | 253 | 266 | 280 | 300 |
| 31 | 337 | --- | 735 | * 690 | --- | 307 | --- | 437 | --- | 253 | 480 | --- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 352 | 229 | 310 | 2.05 | 2.36 |
| November | 475 | 337 | 393 | 2.60 | 2.90 |
| December | 758 | 165 | 609 | 4.03 | 4.65 |
| January | 1,030 | 337 | 690 | 4.57 | 5.27 |
| February | 690 | 398 | 573 | 3.79 | 3.95 |
| March | 515 | 146 | 249 | 1.65 | 1.90 |
| April | 1,490 | 437 | 800 | 5.20 | 5.91 |
| May | 1,580 | 293 | 693 | 4.59 | 5.29 |
| June | 498 | 253 | 422 | 2.79 | 3.11 |
| July | 475 | 253 | 266 | 1.76 | 2.03 |
| August | 480 | 240 | 266 | 1.76 | 2.03 |
| September | 600 | 190 | 318 | 2.11 | 2.35 |
| The year | 1,580 | 146 | 465 | 3.03 | 41.75 |

* Estimated.

NOTE.—Loss in storage in Delta Reservoir during year, 265,000,000 cubic feet. This is equivalent to a flow of 8.4 second-feet, 0.056 second foot per square mile, or 0.75 inch run-off on drainage area. Diversion received from Black River drainage basin is offset in part by evaporation losses.

MOHAWK RIVER NEAR LITTLE FALLS, N. Y.

LOCATION.—Water-stage recorder 1,800 feet downstream from Rocky Rift Dam, 2 miles upstream from mouth of East Canada Creek and $4\frac{1}{2}$ miles southeast of Little Falls, Herkimer County. Zero of gage is 310.0 feet, Barge Canal datum.

DRAINAGE AREA.—1,390 square miles.

RECORDS AVAILABLE.—October, 1927, to September, 1929.

EXTREMES.—Maximum discharge during year, 27,600 second-feet Mar. 15 (gage height, 16.4 feet); minimum mean daily discharge (estimated), 650 second-feet Sept. 3.

1927–1929: Maximum and minimum discharge, same as above.

REMARKS.—Records good except those for periods of ice effect (Dec. 10–14, 21–28, Jan. 4, 5, and Jan. 24 to Feb. 26) and for estimated periods, which are fair. Water is diverted during navigation season from Black River through Forestport feeder, Black River Canal (flowing south), and Lansing Kill into Delta Reservoir, and from West Canada Creek through Ninemile feeder and Ninemile Creek to summit level of Barge Canal. A small amount of water may also be received from Oswego drainage basin through summit level, although it is possible that the amount of water thus gained is about equal to the amount similarly lost from Mohawk Basin. At Rocky Rift Dam water is diverted during canal season into Barge Canal for lockage and power purposes at Lock 16 near St. Johnsville. Regulation caused by operation of power plants and locks and by storage in Delta and Hinckley Reservoirs.

Daily discharge, in second-feet, 1928–29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|---------|---------|---------|---------|---------|---------|---------|-------|---------|
| 1..... | 1,020 | 1,510 | 5,850 | 1,950 | * 2,200 | 2,350 | 3,790 | 5,890 | * 1,740 | 3,220 | 1,050 | 1,130 |
| 2..... | 975 | 1,520 | 5,350 | 2,070 | * 2,200 | 2,020 | 7,290 | 4,670 | 1,570 | 2,780 | 1,030 | * 800 |
| 3..... | 1,010 | 1,680 | 3,410 | 1,960 | * 2,200 | 2,020 | 7,180 | 14,500 | 1,650 | 1,870 | 1,020 | * 650 |
| 4..... | 989 | 1,910 | 2,990 | 1,900 | * 2,200 | 2,300 | 5,820 | 15,300 | 1,540 | 1,560 | 1,290 | * 820 |
| 5..... | 905 | 1,990 | 3,180 | 1,900 | * 2,200 | 3,350 | 5,910 | *13,400 | 1,550 | 1,600 | 1,270 | * 930 |
| 6..... | 1,120 | 1,760 | 3,070 | 2,780 | * 2,200 | 4,740 | 15,100 | *12,100 | 1,780 | 1,400 | 1,320 | * 900 |
| 7..... | 1,100 | 1,620 | 2,570 | 3,700 | * 2,200 | 4,480 | *18,000 | *10,600 | 1,670 | 1,140 | 1,170 | * 900 |
| 8..... | 1,060 | 1,690 | 2,240 | 2,430 | * 2,200 | 4,150 | *17,500 | 7,660 | 1,660 | 1,180 | 1,090 | * 880 |
| 9..... | 1,090 | 1,770 | 1,750 | 2,430 | 2,200 | 3,070 | *16,000 | 5,240 | 1,500 | 1,450 | 1,100 | * 1,690 |
| 10..... | 1,130 | 1,810 | 2,000 | 2,700 | 2,200 | 2,640 | *12,000 | 3,880 | 1,490 | * 1,370 | 1,080 | 3,930 |
| 11..... | 1,090 | 1,690 | 2,000 | 3,070 | 2,200 | 2,330 | * 8,700 | 3,430 | 1,460 | * 1,310 | 1,050 | 2,200 |
| 12..... | 1,070 | 1,610 | 2,000 | 2,500 | 2,200 | 2,510 | * 8,600 | 2,810 | * 1,390 | * 1,280 | 1,020 | 1,310 |
| 13..... | 1,270 | 1,640 | 2,000 | 2,740 | 2,200 | 4,810 | * 8,890 | 2,950 | * 1,420 | * 1,270 | 956 | 1,300 |
| 14..... | 1,510 | 1,680 | 2,000 | * 2,200 | * 2,000 | 14,100 | 7,450 | 2,920 | * 1,430 | 1,460 | * 880 | 2,350 |
| 15..... | 1,310 | 1,660 | 2,110 | * 2,200 | * 2,000 | 23,000 | 5,460 | 8,150 | * 1,490 | 1,340 | 922 | 1,940 |
| 16..... | 1,270 | 1,570 | 2,260 | * 2,300 | * 2,000 | *23,700 | 5,950 | *11,000 | 1,450 | 1,340 | 1,060 | 1,540 |
| 17..... | 1,340 | 1,670 | 2,490 | * 2,600 | 2,000 | *12,400 | 8,960 | * 9,500 | 1,310 | 1,240 | 1,010 | 1,530 |
| 18..... | 2,440 | 1,960 | 3,850 | 4,010 | 2,000 | * 8,230 | 8,960 | * 6,500 | 1,360 | 1,250 | 892 | 1,680 |
| 19..... | 3,640 | 1,950 | 3,420 | 11,800 | 1,900 | 6,380 | 7,800 | 5,640 | 1,360 | 1,240 | * 900 | 1,400 |
| 20..... | 2,290 | 3,310 | 2,890 | * 6,960 | * 2,000 | 5,730 | 6,510 | 5,770 | 1,730 | 1,230 | * 840 | 1,240 |
| 21..... | 1,660 | 2,700 | 2,400 | * 4,600 | * 1,800 | 4,980 | 13,500 | 4,620 | 1,600 | 1,140 | * 800 | 1,030 |
| 22..... | 1,550 | 2,270 | 2,200 | 2,830 | * 1,800 | 6,560 | 9,880 | 3,700 | 1,420 | 1,030 | * 800 | 1,130 |
| 23..... | 1,430 | 1,900 | 2,000 | 2,390 | * 1,800 | 8,810 | 8,370 | 3,000 | 1,360 | 1,170 | * 850 | 1,350 |
| 24..... | 1,680 | 2,120 | 2,000 | 2,400 | 1,800 | 7,690 | 5,250 | 2,950 | * 1,460 | 1,170 | 1,070 | 1,340 |
| 25..... | 1,750 | 1,990 | 2,000 | 2,200 | 1,900 | 6,300 | 4,720 | 3,200 | * 1,720 | 1,380 | 1,040 | 1,250 |
| 26..... | 1,910 | 1,960 | 2,000 | 2,200 | 2,200 | 9,020 | 7,270 | 3,220 | * 2,100 | 1,390 | * 800 | 1,300 |
| 27..... | 1,780 | 1,860 | 2,000 | 2,200 | 2,350 | 7,550 | 9,000 | 2,620 | * 1,840 | 1,340 | * 810 | 1,300 |
| 28..... | 1,720 | 1,840 | 2,000 | 2,200 | 2,480 | 6,400 | 6,860 | 2,240 | * 2,220 | 1,040 | * 820 | 1,210 |
| 29..... | 1,850 | 1,990 | 2,290 | 2,200 | ----- | 5,740 | 6,950 | * 2,020 | * 2,860 | 1,330 | * 830 | 1,200 |
| 30..... | 1,820 | 2,530 | 2,130 | * 2,200 | ----- | 4,700 | 7,640 | * 1,920 | 4,020 | 1,470 | * 850 | 1,210 |
| 31..... | 1,720 | ----- | 2,010 | * 2,200 | ----- | 3,600 | ----- | * 2,060 | ----- | 1,120 | * 900 | ----- |

* Estimated.

Monthly discharge, in second-feet, of Mohawk River near Little Falls, N. Y., 1928-29

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 3,640 | 905 | 1,500 | 1.08 | 1.24 |
| November | 3,310 | 1,510 | 1,910 | 1.37 | 1.53 |
| December | 5,850 | 1,750 | 2,600 | 1.87 | 2.16 |
| January | 11,800 | 1,900 | 2,960 | 2.13 | 2.46 |
| February | 2,480 | 1,800 | 2,090 | 1.50 | 1.56 |
| March | 23,700 | 2,020 | 6,630 | 4.77 | 5.50 |
| April | 18,000 | 3,790 | 8,840 | 6.36 | 7.10 |
| May | 15,300 | 1,920 | 5,920 | 4.26 | 4.91 |
| June | 4,020 | 1,310 | 1,700 | 1.22 | 1.36 |
| July | 3,220 | 1,030 | 1,420 | 1.02 | 1.18 |
| August | 1,320 | 800 | 985 | .709 | .82 |
| September | 3,930 | 650 | 1,380 | .993 | 1.11 |
| The year | 23,700 | 650 | 3,170 | 2.28 | 30.93 |

Daily diversion, in second-feet, from Mohawk River into Barge Canal near Little Falls, N. Y., through Lock 16, 1928-29

| Day | Oct. | Nov. | Dec. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|-----|------|------|------|-------|
| 1 | 41 | 71 | 5 | 0 | 42 | 53 | 68 | 32 | 54 |
| 2 | 38 | 19 | 0 | 1 | 54 | 62 | 40 | 20 | 24 |
| 3 | 37 | 26 | 1 | 1 | 5 | 20 | 54 | 46 | 28 |
| 4 | 59 | 44 | 1 | 8 | 6 | 47 | 31 | 32 | 43 |
| 5 | 43 | 40 | 1 | 19 | 14 | 32 | 24 | 40 | 42 |
| 6 | 53 | 43 | 1 | 5 | 16 | 25 | 43 | 17 | 37 |
| 7 | 41 | 65 | 1 | 6 | 14 | 36 | 47 | 43 | 32 |
| 8 | 37 | 35 | 1 | 4 | 22 | 24 | 74 | 36 | 36 |
| 9 | 62 | 55 | | 7 | 34 | 39 | 46 | 28 | 43 |
| 10 | 40 | 36 | | 10 | 108 | 40 | 42 | 40 | 25 |
| 11 | 85 | 36 | | 41 | 78 | 69 | 35 | 31 | 49 |
| 12 | 47 | 36 | | 20 | 59 | 39 | 35 | 42 | 9 |
| 13 | 17 | 23 | | 14 | 8 | 54 | 39 | 47 | 59 |
| 14 | 24 | 16 | | 13 | 33 | 23 | 46 | 42 | 36 |
| 15 | 9 | 47 | | 29 | 20 | 42 | 35 | 57 | 37 |
| 16 | 61 | 50 | | 24 | 8 | 31 | 54 | 24 | 32 |
| 17 | 55 | 22 | | 24 | 5 | 50 | 46 | 20 | 43 |
| 18 | 67 | 37 | | 14 | 31 | 35 | 32 | 52 | 40 |
| 19 | 25 | 54 | | 17 | 32 | 47 | 54 | 12 | 45 |
| 20 | 54 | 45 | 0 | 44 | 17 | 51 | 66 | 17 | 44 |
| 21 | 36 | 43 | | 17 | 32 | 31 | 31 | 24 | 47 |
| 22 | 41 | 71 | | 15 | 35 | 23 | 31 | 20 | 43 |
| 23 | 48 | 82 | | 26 | 31 | 54 | 28 | 58 | 37 |
| 24 | 17 | 28 | | 14 | 25 | 46 | 28 | 74 | 36 |
| 25 | 44 | 25 | | 8 | 16 | 35 | 35 | 29 | 37 |
| 26 | 58 | 29 | | 17 | 5 | 31 | 54 | 62 | 44 |
| 27 | 53 | 12 | | 6 | 42 | 35 | 28 | 66 | 30 |
| 28 | 73 | 9 | | 11 | 51 | 46 | 31 | 39 | 55 |
| 29 | 11 | 15 | | 23 | 58 | 50 | 53 | 36 | 30 |
| 30 | 53 | 11 | | 66 | 40 | 24 | 39 | 51 | 25 |
| 31 | 56 | | | | 35 | | 35 | 13 | |

NOTE.—No flow during months for which no discharge is given. A constant lock leakage of approximately 12 second-feet during the canal season is not included in the above figures.

MOHAWK RIVER AT COHOES, N. Y.

LOCATION.—Water-stage recorder 50 feet below 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, 1929, at present location. From December, 1917, to July, 1925, at Crescent Dam, 2 miles upstream. From July to October, 1925, records of discharge were determined from gage heights above Cohoes Power & Light Corporation dam in conjunction with operating records at School Street plant. These records are comparable with records from present location.

EXTREMES.—Maximum discharge during year, 72,000 second-foot Mar. 16 (gage height, 18.3 feet); minimum, 40 second-foot Sept. 8 (gage height, 4.10 feet). 1925-1929: Maximum discharge, that of Mar. 16, 1929; minimum, 22 second-foot Oct. 2, 1927 (gage height, 3.83 feet).

REMARKS.—Records excellent except those for estimated periods and for extremely low stages, which are good. Diversions at Crescent Dam through Lock No. 6 for use in Barge Canal during the navigation season, and for municipal supply just above station, some of which is returned to river above measuring section. Considerable amount of water is received into Delta Reservoir from Black River Basin, through Black River Canal (flowing south) and Lansing Kill and, during navigation season, from Oswego River Basin through summit level of Barge Canal which partly compensate for diversions. Flow partly regulated by storage reservoirs above station. Diurnal fluctuation caused by operation of School Street plant.

Daily discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|---------|---------|---------|--------|--------|--------|---------|-------|-------|-------|
| 1..... | 1,710 | 2,430 | 6,070 | * 2,400 | 2,740 | 4,430 | 7,220 | 14,600 | 3,640 | 4,860 | 2,270 | 454 |
| 2..... | 1,870 | 2,650 | 4,760 | 2,570 | 3,230 | 5,380 | 9,180 | 10,600 | 3,740 | 4,440 | 1,760 | 324 |
| 3..... | 1,690 | 2,020 | 4,290 | 2,700 | 2,860 | 3,760 | 13,800 | 14,000 | 3,440 | 4,090 | 1,370 | 935 |
| 4..... | 1,600 | 1,470 | 6,510 | * 2,600 | 2,830 | 3,580 | 11,200 | 27,200 | 3,420 | 3,390 | 608 | 1,090 |
| 5..... | 1,390 | 2,550 | * 5,000 | 2,500 | 2,740 | 3,720 | 10,200 | 23,500 | 3,510 | 3,060 | 1,240 | 1,090 |
| 6..... | 944 | 2,420 | * 8,000 | * 1,300 | 2,860 | 5,590 | 23,900 | 21,500 | * 3,400 | 2,500 | 1,570 | 1,010 |
| 7..... | 944 | 2,420 | * 7,800 | 2,760 | 3,160 | 8,960 | 36,800 | 17,800 | * 3,200 | 1,740 | 1,620 | 1,280 |
| 8..... | 1,540 | 2,760 | * 4,800 | 3,110 | 3,180 | 7,830 | 30,900 | 15,600 | * 3,300 | 2,340 | 1,700 | 327 |
| 9..... | 1,530 | 2,800 | * 3,800 | 2,590 | 3,160 | 6,450 | 24,300 | 10,700 | * 1,700 | 2,020 | 1,720 | 1,460 |
| 10..... | 1,550 | 2,360 | * 3,200 | 2,510 | 3,380 | 5,390 | 18,100 | 8,220 | * 2,800 | 1,800 | 1,640 | 4,360 |
| 11..... | 1,680 | 1,680 | * 2,400 | 3,030 | 3,340 | 4,310 | 12,900 | 6,540 | 2,380 | 2,470 | 740 | 4,200 |
| 12..... | 1,440 | 2,630 | * 2,800 | 3,150 | 3,190 | 4,000 | 19,800 | 6,160 | 2,620 | 2,320 | 1,500 | 3,180 |
| 13..... | 1,300 | 2,460 | * 3,100 | 3,110 | 3,020 | 5,800 | 34,800 | 3,990 | 2,440 | 1,810 | 1,630 | 2,100 |
| 14..... | 943 | 2,430 | * 3,000 | 3,960 | 2,950 | 20,000 | 21,200 | 5,620 | * 2,500 | 1,190 | 1,770 | 2,490 |
| 15..... | 1,270 | 2,520 | * 3,000 | 1,420 | 2,960 | 62,700 | 17,700 | 10,600 | * 2,400 | 2,130 | 1,650 | 4,370 |
| 16..... | 1,660 | 2,370 | * 1,900 | 2,550 | 2,410 | 67,900 | 15,300 | 18,000 | * 1,450 | 1,970 | 1,750 | 3,050 |
| 17..... | 1,740 | 2,220 | * 3,200 | 2,450 | 2,780 | 51,900 | 24,000 | 17,700 | 1,640 | 1,480 | 1,160 | 2,380 |
| 18..... | 2,730 | 855 | * 3,300 | 2,590 | * 3,800 | 25,300 | 27,200 | 11,900 | 2,010 | 1,960 | 638 | 2,590 |
| 19..... | 4,240 | 2,620 | * 4,600 | 13,400 | * 2,900 | 17,700 | 20,300 | 10,300 | 2,340 | 1,560 | 1,660 | 2,710 |
| 20..... | 4,940 | 3,140 | * 4,800 | 18,000 | * 2,700 | 16,600 | 21,700 | 17,500 | 2,460 | 1,300 | 1,690 | 2,700 |
| 21..... | 2,260 | 4,500 | * 4,400 | 10,200 | * 3,100 | 14,300 | 46,400 | 11,100 | 3,390 | 601 | 1,640 | 2,260 |
| 22..... | 3,170 | 3,600 | * 3,600 | 6,330 | * 2,700 | 14,500 | 54,100 | 9,330 | 3,260 | 1,010 | 1,520 | 910 |
| 23..... | 2,890 | 3,270 | * 3,400 | 4,850 | 2,850 | 19,800 | 31,400 | 8,360 | 2,480 | 1,980 | 1,200 | 1,860 |
| 24..... | 2,770 | 3,230 | * 2,800 | 3,900 | 1,890 | 25,500 | 22,400 | 6,190 | 2,370 | 2,140 | 1,250 | 2,070 |
| 25..... | 2,650 | 3,130 | * 2,300 | 3,640 | 2,690 | 21,200 | 19,500 | 8,940 | 2,590 | 1,940 | 510 | 1,750 |
| 26..... | 2,620 | 2,970 | * 2,900 | 3,470 | 2,620 | 19,000 | 27,700 | 7,050 | 2,730 | 1,970 | 903 | 1,850 |
| 27..... | 1,960 | 2,350 | * 3,200 | 3,200 | 2,870 | 18,600 | 28,600 | 6,510 | 3,090 | 1,500 | 1,160 | 1,950 |
| 28..... | 1,890 | 1,890 | * 3,100 | 2,750 | 3,460 | 14,300 | 19,700 | 5,390 | 3,200 | 636 | 1,200 | 1,640 |
| 29..... | 2,350 | 3,050 | * 3,000 | 2,420 | ----- | 11,600 | 15,900 | 4,040 | 3,270 | 1,170 | 1,540 | 696 |
| 30..... | 2,280 | 6,930 | * 2,300 | 2,100 | ----- | 10,300 | 17,400 | 4,680 | 7,420 | 1,710 | 1,250 | 1,850 |
| 31..... | 2,420 | ----- | * 3,300 | 2,150 | ----- | 9,850 | ----- | 3,820 | ----- | 1,670 | 786 | ----- |

* Estimated.

Monthly discharge, in second-feet, of Mohawk River at Cohoes, N. Y., 1928-29

| Month | Maximum | Minimum | Mean | Per sq. ft. per mile | Run-off in inches |
|----------------|---------|---------|--------|----------------------|-------------------|
| October..... | 4,940 | 943 | 2,060 | 0.589 | 0.68 |
| November..... | 8,930 | 855 | 2,720 | .777 | .87 |
| December..... | 8,000 | 1,900 | 3,890 | 1.11 | 1.28 |
| January..... | 18,000 | 1,300 | 3,990 | 1.14 | 1.31 |
| February..... | 3,460 | 1,890 | 2,920 | .834 | .87 |
| March..... | 67,900 | 3,580 | 16,400 | 4.69 | 5.41 |
| April..... | 54,100 | 7,220 | 22,800 | 6.51 | 7.25 |
| May..... | 27,200 | 3,820 | 11,200 | 3.20 | 3.69 |
| June..... | 7,420 | 1,450 | 2,940 | .840 | .94 |
| July..... | 4,860 | 601 | 2,090 | .567 | .69 |
| August..... | 2,270 | 510 | 1,380 | .384 | .45 |
| September..... | 4,370 | 324 | 1,960 | .560 | .62 |
| The year..... | 67,900 | 324 | 6,210 | 1.77 | 24.07 |

Daily diversion, in second-feet, from Mohawk River through Barge Canal at Lock 6, at Crescent Dam, N. Y., 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1..... | 117 | 71 | 29 | | | | 110 | 138 | 154 | 126 | 146 | 127 |
| 2..... | 106 | 129 | 18 | | | | 58 | 172 | 131 | 148 | 70 | 98 |
| 3..... | 112 | 100 | 23 | | | | 58 | 166 | 121 | 166 | 58 | 127 |
| 4..... | 65 | 106 | 23 | | | | 52 | 81 | 154 | 160 | 87 | 132 |
| 5..... | 94 | 117 | 6 | | | | 104 | 98 | 108 | 137 | 105 | 132 |
| 6..... | 141 | 94 | 18 | | | | 100 | 121 | 137 | 153 | 99 | 127 |
| 7..... | 112 | 112 | 12 | | | | 60 | 138 | 137 | 124 | 87 | 121 |
| 8..... | 135 | 100 | 18 | | | | 54 | 103 | 178 | 118 | 82 | 109 |
| 9..... | 129 | 83 | 6 | | | | 53 | 108 | 106 | 122 | 64 | 92 |
| 10..... | 123 | 117 | 18 | | | | 65 | 166 | 172 | 82 | 128 | 87 |
| 11..... | 147 | 94 | 6 | | | | 133 | 148 | 137 | 140 | 141 | 104 |
| 12..... | 112 | 77 | 6 | | | | 59 | 137 | 154 | 134 | 176 | 122 |
| 13..... | 129 | 113 | 6 | | | | 66 | 130 | 177 | 146 | 170 | 116 |
| 14..... | 59 | 94 | 111 | | | | 53 | 96 | 95 | 128 | 129 | 133 |
| 15..... | 164 | 59 | | | 6 | | 105 | 126 | 165 | 93 | 88 | 116 |
| 16..... | 112 | 77 | | 6 | | 6 | 94 | 110 | 118 | 122 | 147 | 122 |
| 17..... | 94 | 48 | | | | | 82 | 116 | 118 | 105 | 141 | 110 |
| 18..... | 106 | 170 | | | | | 60 | 103 | 148 | 117 | 51 | 133 |
| 19..... | 130 | 112 | | | | | 105 | 103 | 119 | 157 | 51 | 116 |
| 20..... | 136 | 107 | | | | | 94 | 110 | 114 | 99 | 51 | 133 |
| 21..... | 95 | 84 | | | | | 67 | 91 | 154 | 58 | 51 | 163 |
| 22..... | 89 | 148 | | | | | 55 | 97 | 154 | 93 | 156 | 122 |
| 23..... | 106 | 142 | 6 | | | | 71 | 80 | 183 | 58 | 208 | 139 |
| 24..... | 129 | 136 | | | | | 111 | 91 | 137 | 105 | 162 | 132 |
| 25..... | 83 | 177 | | | | | 111 | 74 | 166 | 82 | 150 | 92 |
| 26..... | 106 | 58 | | | | | 111 | 196 | 166 | 82 | 121 | 103 |
| 27..... | 129 | 53 | | | | | 71 | 184 | 114 | 134 | 115 | 132 |
| 28..... | 123 | 64 | | | | | 70 | 115 | 160 | 134 | 138 | 86 |
| 29..... | 141 | 41 | | | | | 94 | 160 | 166 | 105 | 144 | 115 |
| 30..... | 106 | 12 | | | | | 105 | 154 | 144 | 87 | 127 | 163 |
| 31..... | 83 | | | | | | | 218 | | 76 | 121 | |

WEST CANADA CREEK AT HINCKLEY, N. Y.

LOCATION.—Water-stage recorder 1 mile downstream from Hinckley Dam at Hinckley, Oneida County, and 1¼ miles east of Prospect.

DRAINAGE AREA.—373 square miles.

RECORDS AVAILABLE.—June, 1919, to September, 1929.

EXTREMES.—Maximum discharge during year, 8,260 second-feet Apr. 7 (gage height, 8.1 feet); minimum, 148 second-feet Sept. 2 (gage height, 3.17 feet). 1919-1929: Maximum discharge, 10,800 second-feet Apr. 12, 1922 (gage height, 8.93 feet); practically no flow Aug. 31, 1924, caused by closing gates in dam (gage height, 2.50 feet).

REMARKS.—Records excellent except those for Apr. 11 to June 11, which are good. Discharge estimated Apr. 11. Flow regulated by storage in Hinckley Reservoir. Small diversion from Hinckley Reservoir for Utica water supply.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | Jun? | July | Aug. | Sept. |
|---------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1..... | 621 | 890 | 880 | 842 | 1,080 | 833 | 2,440 | 2,870 | 637 | 2,040 | 591 | 154 |
| 2..... | 621 | 900 | 860 | 842 | 1,080 | 890 | 4,320 | 2,260 | 555 | 1,380 | 591 | 287 |
| 3..... | 621 | 900 | 851 | 851 | 1,080 | 1,020 | 3,960 | 3,030 | 677 | 982 | 591 | 467 |
| 4..... | 621 | 890 | 860 | 851 | 1,080 | 1,050 | 3,060 | 5,390 | 598 | 815 | 598 | 500 |
| 5..... | 629 | 890 | 860 | 842 | 1,090 | 1,050 | 2,690 | 4,160 | 598 | 888 | 598 | 500 |
| 6..... | 629 | 890 | 860 | 842 | 1,120 | 1,030 | 4,710 | 3,750 | 605 | 621 | 598 | 507 |
| 7..... | 629 | 880 | 842 | 833 | 1,120 | 1,020 | 7,980 | 2,960 | 605 | 605 | 591 | 507 |
| 8..... | 653 | 870 | 842 | 833 | 1,110 | 1,040 | 7,700 | 2,510 | 605 | 807 | 569 | 507 |
| 9..... | 710 | 870 | 842 | 842 | 1,090 | 1,050 | 6,490 | 1,940 | 605 | 812 | 540 | 526 |
| 10..... | 710 | 880 | 842 | 842 | 1,110 | 1,040 | 4,920 | 1,450 | 605 | 803 | 533 | 520 |
| 11..... | 710 | 880 | 833 | 833 | 1,120 | 1,030 | 3,170 | 1,200 | 598 | 802 | 533 | 513 |
| 12..... | 710 | 880 | 833 | 833 | 1,110 | 1,050 | 2,260 | 1,070 | 605 | 795 | 526 | 513 |
| 13..... | 710 | 870 | 833 | 833 | 1,090 | 1,040 | 2,690 | 1,070 | 598 | 832 | 526 | 513 |
| 14..... | 710 | 870 | 824 | 842 | 1,080 | 1,050 | 2,260 | 1,060 | 59? | 613 | 526 | 520 |
| 15..... | 710 | 870 | 824 | 842 | 1,080 | 1,120 | 2,010 | 2,040 | 598 | 815 | 526 | 526 |
| 16..... | 710 | 870 | 824 | 860 | 1,080 | 1,340 | 1,780 | 3,550 | 59? | 800 | 526 | 526 |
| 17..... | 710 | 870 | 815 | 870 | 1,080 | 1,540 | 1,780 | 2,870 | 59? | 812 | 526 | 526 |
| 18..... | 710 | 860 | 806 | 870 | 1,090 | 1,640 | 1,710 | 2,420 | 59? | 788 | 526 | 533 |
| 19..... | 710 | 870 | 779 | 880 | 1,110 | 1,640 | 1,410 | 2,870 | 59? | 808 | 526 | 540 |
| 20..... | 710 | 870 | 779 | 930 | 1,110 | 1,640 | 1,440 | 2,600 | 60? | 804 | 526 | 540 |
| 21..... | 710 | 880 | 788 | 971 | 1,080 | 1,640 | 1,780 | 1,500 | 59? | 598 | 526 | 593 |
| 22..... | 710 | 900 | 824 | 1,050 | 1,030 | 1,640 | 2,260 | 1,390 | 59? | 776 | 526 | 788 |
| 23..... | 770 | 900 | 890 | 1,090 | 1,020 | 1,460 | 2,170 | 1,090 | 59? | 796 | 526 | 806 |
| 24..... | 833 | 900 | 920 | 1,090 | 1,000 | 1,200 | 1,860 | 1,070 | 591 | 798 | 526 | 806 |
| 25..... | 842 | 890 | 930 | 1,110 | 982 | 3,320 | 1,940 | 1,380 | 80? | 813 | 526 | 806 |
| 26..... | 842 | 890 | 930 | 1,110 | 940 | 4,160 | 3,350 | 1,260 | 79? | 797 | 520 | 806 |
| 27..... | 851 | 890 | 920 | 1,090 | 851 | 3,550 | 4,160 | 1,120 | 77? | 598 | 533 | 797 |
| 28..... | 880 | 890 | 920 | 1,090 | 842 | 3,060 | 3,160 | 920 | 77? | 598 | 540 | 797 |
| 29..... | 890 | 890 | 900 | 1,090 | ----- | 2,600 | 3,450 | 824 | 2,19? | 598 | 540 | 788 |
| 30..... | 890 | 890 | 860 | 1,090 | ----- | 2,340 | 3,850 | 702 | 3,02? | 591 | 533 | 779 |
| 31..... | 890 | ----- | 851 | 1,090 | ----- | 2,170 | ----- | 702 | ----- | 591 | 332 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 890 | 621 | 731 | 1.96 | 2.26 |
| November..... | 900 | 860 | 883 | 2.37 | 2.64 |
| December..... | 930 | 779 | 852 | 2.28 | 2.63 |
| January..... | 1,110 | 833 | 922 | 2.50 | 2.88 |
| February..... | 1,120 | 842 | 1,060 | 2.84 | 2.96 |
| March..... | 4,160 | 833 | 1,620 | 4.34 | 5.00 |
| April..... | 7,980 | 1,410 | 3,230 | 8.66 | 9.66 |
| May..... | 5,390 | 702 | 2,030 | 5.44 | 6.27 |
| June..... | 3,020 | 555 | 760 | 2.04 | 2.28 |
| July..... | 2,040 | 591 | 812 | 2.18 | 2.61 |
| August..... | 598 | 332 | 539 | 1.46 | 1.67 |
| September..... | 806 | 154 | 583 | 1.66 | 1.74 |
| The year..... | 7,980 | 154 | 1,170 | 3.14 | 42.50 |

NOTE.—Gain in storage in Hinckley Reservoir during year, 450,000,000 cubic feet. This is equivalent to a flow of 14.3 second-feet, 0.038 second-foot per square mile, or 0.52 inch run-off on drainage area.

WEST CANADA CREEK AT KAST BRIDGE, N. Y.

LOCATION.—Water-stage recorder 600 feet downstream from highway bridge at Kast Bridge, Herkimer County.

DRAINAGE AREA.—575 square miles.

RECORDS AVAILABLE.—May, 1905, to December, 1909; January, 1912, to December, 1913; October, 1920, to September, 1929.

EXTREMES.—Maximum discharge during year, 9,760 second-feet Apr. 8 (gage height, 5.8 feet); minimum, about 20 second-feet Sept. 3 (gage height, 0.90 foot).

1920-1929: Maximum discharge, about 16,500 second-feet June 21, 1922 (gage height, 7.3 feet); minimum, that of Sept. 3, 1929.

REMARKS.—Records good except those for periods of ice effect (Dec. 10-14, 22-24, Jan. 15-17, Feb. 14, 15, 21, 22, Mar. 14 and 15) and for estimated period (Jan. 30 to Feb. 1), which are fair. Flow regulated by storage in Hinckley Reservoir, and by power operations upstream. During canal season, Ninemile feeder diverts water from creek at Trenton Falls.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1 | 620 | 954 | 2,500 | 1,050 | 1,150 | 1,030 | 3,130 | 3,620 | 929 | 2,870 | 672 | 243 |
| 2 | 571 | 900 | 1,570 | 1,090 | 1,180 | 988 | 4,490 | 2,760 | 811 | 2,150 | 689 | 59 |
| 3 | 566 | 1,040 | 1,370 | 1,010 | 1,240 | 1,170 | 4,490 | 6,780 | 922 | 1,300 | 674 | 105 |
| 4 | 575 | 1,100 | 1,470 | 983 | 1,180 | 1,260 | 3,510 | 6,820 | 807 | 1,070 | 821 | 460 |
| 5 | 541 | 1,030 | 1,570 | 953 | 1,200 | 1,390 | 3,180 | 6,190 | 807 | 1,090 | 788 | 474 |
| 6 | 779 | 919 | 1,430 | 1,750 | 1,250 | 1,660 | 6,350 | 5,160 | 936 | 882 | 711 | 506 |
| 7 | 664 | 943 | 1,260 | 1,170 | 1,310 | 1,430 | 9,040 | 4,360 | 818 | 769 | 649 | 529 |
| 8 | 582 | 1,020 | 1,150 | 966 | 1,320 | 1,040 | 9,400 | 3,400 | 802 | 996 | 642 | 374 |
| 9 | 710 | 971 | 1,050 | 1,150 | 1,320 | 1,230 | 7,640 | 2,570 | 762 | 975 | 632 | 1,470 |
| 10 | 738 | 1,070 | 1,000 | 1,190 | 1,280 | 1,220 | 5,590 | 2,120 | 773 | 932 | 556 | 1,080 |
| 11 | 679 | 1,030 | 950 | 1,170 | 1,300 | 1,210 | 3,630 | 1,630 | 768 | 886 | 596 | 944 |
| 12 | 640 | 1,070 | 950 | 1,130 | 1,250 | 1,230 | 3,560 | 1,460 | 758 | 853 | 593 | 659 |
| 13 | 787 | 1,020 | 1,000 | 996 | 1,230 | 1,410 | 3,860 | 1,570 | 744 | 836 | 556 | 692 |
| 14 | 842 | 1,050 | 1,000 | 972 | 1,200 | 2,600 | 3,290 | 1,510 | 760 | 1,040 | 460 | 1,320 |
| 15 | 728 | 1,010 | 1,010 | 950 | 1,200 | 5,500 | 2,660 | 4,100 | 792 | 848 | 601 | 824 |
| 16 | 700 | 1,000 | 1,150 | 950 | 1,250 | 6,090 | 2,860 | 4,620 | 727 | 886 | 499 | 694 |
| 17 | 745 | 1,160 | 1,310 | 1,000 | 1,300 | 3,130 | 3,400 | 3,860 | 753 | 864 | 486 | 913 |
| 18 | 1,460 | 1,220 | 2,120 | 3,170 | 1,200 | 2,290 | 2,760 | 2,960 | 741 | 858 | 470 | 870 |
| 19 | 1,610 | 1,340 | 1,330 | 4,700 | 1,170 | 2,380 | 2,290 | 2,660 | 741 | 886 | 496 | 670 |
| 20 | 1,000 | 1,760 | 1,190 | 1,750 | 1,200 | 2,660 | 2,080 | 2,570 | 997 | 908 | 428 | 645 |
| 21 | 891 | 1,260 | 1,050 | 1,340 | 1,200 | 2,570 | 3,550 | 2,120 | 788 | 826 | 419 | 612 |
| 22 | 884 | 1,200 | 1,000 | 1,200 | 1,200 | 2,960 | 2,960 | 1,810 | 724 | 719 | 422 | 797 |
| 23 | 797 | 1,140 | 1,000 | 1,310 | 1,130 | 3,720 | 2,660 | 1,470 | 729 | 942 | 475 | 922 |
| 24 | 980 | 1,200 | 1,100 | 1,290 | 1,160 | 2,760 | 2,380 | 1,520 | 803 | 833 | 541 | 800 |
| 25 | 991 | 1,110 | 1,150 | 1,210 | 1,120 | 2,930 | 2,540 | 1,660 | 1,030 | 961 | 464 | 867 |
| 26 | 1,060 | 1,100 | 1,160 | 1,220 | 1,130 | 4,750 | 4,100 | 1,700 | 1,200 | 802 | 400 | 878 |
| 27 | 905 | 1,070 | 1,130 | 1,100 | 1,140 | 4,360 | 4,880 | 1,500 | 970 | 771 | 412 | 812 |
| 28 | 1,040 | 1,090 | 1,110 | 1,210 | 1,090 | 3,620 | 3,980 | 1,280 | 1,360 | 713 | 430 | 874 |
| 29 | 1,120 | 1,160 | 1,140 | 1,150 | ----- | 2,960 | 4,360 | 1,070 | 2,000 | 866 | 437 | 807 |
| 30 | 961 | 1,370 | 980 | 1,150 | ----- | 2,660 | 4,620 | 908 | 3,150 | 723 | 421 | 890 |
| 31 | 970 | ----- | 1,040 | 1,150 | ----- | 2,570 | ----- | 968 | ----- | 699 | 464 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 1,610 | 541 | 843 | 1.47 | 1.70 |
| November | 1,760 | 900 | 1,110 | 1.93 | 2.15 |
| December | 2,500 | 950 | 1,230 | 2.14 | 2.47 |
| January | 4,700 | 1,050 | 1,340 | 2.33 | 2.69 |
| February | 1,320 | 1,090 | 1,210 | 2.10 | 2.19 |
| March | 6,090 | 988 | 2,480 | 4.31 | 4.87 |
| April | 9,400 | 2,080 | 4,110 | 7.15 | 7.98 |
| May | 6,820 | 908 | 2,800 | 4.87 | 5.62 |
| June | 3,150 | 724 | 963 | 1.67 | 1.36 |
| July | 2,870 | 699 | 992 | 1.73 | 1.09 |
| August | 821 | 400 | 545 | 0.948 | 1.09 |
| September | 1,470 | 59 | 726 | 1.26 | 1.41 |
| The year | 9,400 | 59 | 1,530 | 2.66 | 36.12 |

NINEMILE FEEDER NEAR HOLLAND PATENT, N. Y.

LOCATION.—Water-stage recorder at mouth of feeder, half a mile downstream from highway bridge that is 3 miles east of Holland Patent, Oneida County.
 RECORDS AVAILABLE.—June, 1919, to September, 1929, during navigation seasons.
 REMARKS.—Records good. Discharge estimated Oct. 28–30, July 10, and Aug. 4–9. No diversion Nov. 10 to July 9. Intake at Trenton Falls on West Canada Creek. Water reaches Barge Canal through Niremile Creek.

Daily and monthly discharge, in second-feet, 1928–29

| Day | Oct. | Nov. | July | Aug. | Sept. | Day | Oct. | Nov. | July | Aug. | Sept. |
|-------------------|------|-------|--------------|--------------|-------|----------------|------|-------|--------------|--------------|-------|
| 1..... | 115 | 115 | ----- | 38 | 124 | 16..... | 116 | ----- | 39 | 133 | 4 |
| 2..... | 115 | 115 | ----- | 38 | 121 | 17..... | 116 | ----- | 38 | 133 | 11 |
| 3..... | 115 | 116 | ----- | 38 | 119 | 18..... | 108 | ----- | 38 | 133 | 7 |
| 4..... | 115 | 116 | ----- | 39 | 53 | 19..... | 14 | ----- | 39 | 133 | 4 |
| 5..... | 116 | 115 | ----- | ----- | 51 | 20..... | 5 | ----- | 39 | 133 | 3 |
| 6..... | 116 | 115 | ----- | 38 | 51 | 21..... | 51 | ----- | 39 | 133 | 3 |
| 7..... | 116 | 115 | ----- | | 81 | 22..... | 111 | ----- | 39 | 133 | 3 |
| 8..... | 115 | 116 | ----- | | 121 | 23..... | 113 | ----- | 39 | 134 | 3 |
| 9..... | 116 | 72 | ----- | | 118 | 24..... | 115 | ----- | 39 | 134 | 2 |
| 10..... | 116 | ----- | 38 | 38 | 17 | 25..... | 116 | ----- | 41 | 134 | 2 |
| 11..... | 116 | ----- | 38 | 38 | 8 | 26..... | 114 | ----- | 39 | 134 | 2 |
| 12..... | 116 | ----- | 38 | 38 | 5 | 27..... | 113 | ----- | 39 | 134 | 1 |
| 13..... | 117 | ----- | 45 | 68 | 7 | 28..... | 115 | ----- | 39 | 134 | 2 |
| 14..... | 116 | ----- | 43 | 133 | 12 | 29..... | | ----- | 41 | 134 | 2 |
| 15..... | 115 | ----- | 39 | 134 | 8 | 30..... | | ----- | 39 | 134 | 2 |
| | | | | | | 31..... | | 116 | ----- | 38 | 133 |
| Month | | | Maxi- mum | Mini- mum | Mean | Month | | | Maxi- mum | Mini- mum | Mean |
| October..... | | | 117 | 5 | 106 | August..... | | | 134 | ----- | 94.5 |
| November 1-9..... | | | 116 | 72 | 111 | September..... | | | 124 | 1 | 31.6 |
| July 10-31..... | | | 45 | 38 | 39.4 | | | | | | |

EAST CANADA CREEK AT DOIDGEVILLE, N. Y.

LOCATION.—Water-stage recorder just downstream from plant of Daniel Green Felt Shoe Co., in Dolgeville, Herkimer County.

DRAINAGE AREA.—261 square miles.

RECORDS AVAILABLE.—October, 1927, to September, 1929. Comparative records from station at High Falls, 1 mile downstream, September, 1898, to December, 1909, and January to November, 1912.

EXTREMES.—Maximum discharge during year, 6,600 second-feet Mar. 16 (gage height, 10.4 feet); minimum, 16 second-feet Sept. 30 (gage height, 5.47 feet). 1927–1929: Maximum discharge, 8,500 second-feet Apr. 8, 1928 (gage height, 11.2 feet); minimum, that of Sept. 30, 1929.

REMARKS.—Records fair except those for periods of ice effect (Nov. 27, 28, Dec. 6, 12, Dec. 21 to Jan. 18, and Jan. 25 to Mar. 14), and for estimated periods, which are poor. Regulation by storage in Canada lakes, capacity, 441,000,000 cubic feet, and by power-plant operation.

Daily and monthly discharge, in second-feet, 1928–29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1..... | 198 | * 410 | 546 | 140 | 380 | 280 | 2,890 | 1,120 | 348 | 764 | 138 | 127 |
| 2..... | 179 | * 390 | 561 | 240 | 260 | 160 | 3,920 | 921 | 316 | 848 | 111 | 93 |
| 3..... | 145 | * 390 | 478 | 240 | 190 | 140 | 2,770 | 2,830 | 360 | 619 | 116 | 71 |
| 4..... | 107 | * 500 | 470 | 240 | 190 | 150 | 2,020 | 3,520 | 272 | 387 | 231 | 136 |
| 5..... | 104 | * 520 | 519 | 190 | 440 | 320 | 2,020 | 2,480 | 182 | 350 | 312 | 84 |
| 6..... | 135 | * 380 | 480 | 260 | 420 | 500 | 5,070 | 1,860 | 367 | 344 | 242 | 96 |
| 7..... | 132 | * 390 | 340 | 300 | 360 | 360 | 4,960 | 1,500 | 283 | 277 | 162 | 120 |
| 8..... | 114 | 487 | 280 | 280 | * 300 | 240 | 4,350 | 1,150 | 215 | 330 | 123 | 100 |
| 9..... | 139 | 539 | 200 | 280 | * 240 | 190 | 2,690 | 963 | 189 | 392 | 184 | 562 |
| 10..... | 144 | 447 | 190 | 260 | 180 | 140 | 1,660 | 751 | 175 | 458 | 145 | 868 |
| 11..... | 132 | 374 | 300 | 280 | 160 | 200 | 1,060 | 665 | 155 | 420 | 175 | 558 |
| 12..... | 105 | 387 | 300 | 220 | 280 | 280 | 2,120 | 523 | 305 | 353 | 140 | 326 |
| 13..... | 194 | 404 | 321 | 150 | 500 | 440 | 1,810 | 566 | 280 | * 264 | 130 | 324 |
| 14..... | 244 | 411 | 339 | 160 | 550 | 1,300 | 1,320 | 627 | 294 | 263 | 144 | 1,390 |
| 15..... | 218 | 360 | 310 | 240 | 550 | 4,130 | 1,230 | 2,460 | 326 | 244 | 166 | 1,080 |
| 16..... | 208 | 388 | 326 | 220 | 420 | 5,920 | 1,350 | 2,480 | 195 | 174 | 123 | 684 |
| 17..... | 214 | 390 | 476 | 220 | 300 | 4,360 | 1,470 | 1,770 | 246 | 165 | 146 | 567 |
| 18..... | 896 | 572 | 1,240 | 440 | 190 | 2,720 | 1,260 | 1,080 | 158 | 122 | 107 | 820 |
| 19..... | 1,060 | 721 | 1,370 | 2,710 | 240 | 2,170 | 1,080 | 1,290 | 175 | 243 | 187 | 558 |
| 20..... | 698 | 1,190 | 961 | 2,180 | 360 | 2,020 | 1,110 | 1,780 | 403 | 208 | 200 | 386 |
| 21..... | 520 | 940 | 600 | 1,290 | 500 | 1,690 | 3,240 | 1,130 | * 326 | 145 | 223 | 276 |
| 22..... | * 540 | 736 | 420 | 908 | 440 | 2,710 | 2,880 | 880 | * 226 | 140 | 175 | 200 |
| 23..... | * 520 | 585 | 260 | 641 | * 320 | 5,220 | 2,030 | 632 | 184 | 100 | 220 | 273 |
| 24..... | * 490 | 547 | 220 | 478 | 200 | 5,790 | 1,440 | 812 | 220 | 124 | 388 | 244 |
| 25..... | * 400 | 518 | 200 | 344 | 170 | 4,650 | 1,590 | 1,280 | 381 | 204 | 192 | 231 |
| 26..... | * 410 | 427 | 300 | 320 | 200 | 3,590 | 2,080 | 856 | 507 | * 279 | 126 | 225 |
| 27..... | * 390 | 360 | 320 | 300 | 280 | 2,480 | 2,600 | 751 | 346 | 180 | 180 | 229 |
| 28..... | * 410 | 340 | 360 | 280 | 200 | 2,100 | 1,620 | 656 | 501 | 138 | 137 | 267 |
| 29..... | * 540 | 371 | 340 | 280 | ----- | 1,660 | 2,520 | 532 | 2,120 | 175 | 130 | 184 |
| 30..... | * 440 | 421 | 220 | 380 | ----- | 1,590 | 1,790 | 367 | 1,140 | 184 | 164 | 214 |
| 31..... | * 380 | ----- | 180 | 400 | ----- | 1,590 | ----- | 339 | ----- | 154 | 115 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 1,060 | 104 | 338 | 1.30 | 1.60 |
| November..... | 1,190 | 340 | 497 | 1.90 | 2.12 |
| December..... | 1,370 | 180 | 433 | 1.66 | 1.91 |
| January..... | 2,710 | 140 | 480 | 1.84 | 2.12 |
| February..... | 550 | 160 | 315 | 1.21 | 1.26 |
| March..... | 5,920 | 140 | 1,900 | 7.28 | 8.39 |
| April..... | 5,670 | 1,060 | 2,280 | 8.74 | 9.75 |
| May..... | 3,520 | 339 | 1,240 | 4.75 | 5.48 |
| June..... | 2,120 | 155 | 373 | 1.43 | 1.60 |
| July..... | 849 | 100 | 292 | 1.12 | 1.29 |
| August..... | 388 | 107 | 172 | .659 | .76 |
| September..... | 1,390 | 71 | 375 | 1.44 | 1.61 |
| The year..... | 5,920 | 71 | 727 | 2.79 | 37.79 |

* 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, 1929.

EXTREMES.—Maximum discharge during year, 15,200 second-feet Apr. 26 (gage height, 10.0 feet); minimum, 4.8 second-feet Sept. 6 and 7 (gage height, 0.36 foot).

1927-1929: Maximum discharge, 17,000 second-feet Nov. 4, 1927 (gage height, 10.5 feet); minimum, that of Sept. 6 and 7, 1929.

REMARKS.—Records fair except those for periods of ice effect (Jan. 4, 7-9, 14-17, Jan. 23 to Feb. 4, Feb. 11-27 and Mar. 8-11) and for estimated periods, which are poor. Entire low water flow diverted and regulated by city of New York at Gilboa Reservoir, 20 miles upstream.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|-------|--------|-------|-------|------|------|-------|
| 1----- | 16 | 16 | 38 | 22 | 42 | 366 | 390 | 3,020 | 720 | 165 | *13 | 6.0 |
| 2----- | 16 | 16 | 120 | 23 | 40 | 390 | 366 | 2,180 | 660 | 159 | *13 | 6.0 |
| 3----- | 16 | 16 | 120 | *22 | 40 | 390 | 341 | 1,860 | 600 | 145 | *14 | 6.0 |
| 4----- | 16 | 16 | 106 | 20 | 40 | 296 | 390 | 1,660 | 341 | 131 | *15 | 5.4 |
| 5----- | 16 | 16 | 93 | 26 | 39 | 500 | 490 | 2,070 | 318 | 125 | *16 | 5.4 |
| 6----- | 16 | 16 | 81 | 38 | 38 | 718 | 1,850 | 2,070 | 296 | 110 | *16 | 4.8 |
| 7----- | 16 | 16 | 69 | 28 | 38 | 440 | 990 | 2,180 | 276 | 93 | *17 | 4.8 |
| 8----- | 16 | 22 | 47 | 26 | 45 | 340 | 850 | 2,400 | 191 | 54 | *20 | 73 |
| 9----- | 16 | 28 | 47 | 26 | 60 | 300 | 720 | 1,570 | 128 | 48 | *25 | 69 |
| 10----- | 16 | 28 | 28 | 45 | 65 | 260 | 572 | 1,220 | 71 | 48 | *21 | 62 |
| 11----- | 16 | 16 | 22 | 49 | 55 | 240 | 1,870 | 1,060 | 69 | 46 | 19 | 56 |
| 12----- | 16 | 16 | 16 | 45 | 48 | 251 | 4,160 | 850 | 66 | *43 | 18 | 52 |
| 13----- | 16 | 16 | 16 | 23 | 44 | 1,000 | 4,370 | 850 | 64 | *41 | 18 | 48 |
| 14----- | 16 | 16 | 16 | 18 | 42 | 4,310 | 2,520 | 780 | 62 | *38 | 19 | 37 |
| 15----- | 16 | 16 | 16 | 16 | 42 | 5,960 | 1,140 | 690 | 60 | *36 | 24 | 77 |
| 16----- | 16 | 16 | 28 | 15 | 42 | 3,520 | 1,960 | 630 | 66 | *33 | 25 | 75 |
| 17----- | 22 | 16 | 47 | 14 | 46 | 1,860 | 3,020 | 415 | 60 | *31 | 21 | 71 |
| 18----- | 28 | 28 | 69 | 701 | 50 | 1,570 | 3,020 | 341 | 54 | *29 | 18 | 69 |
| 19----- | 22 | 22 | 58 | 660 | 48 | 2,380 | 2,400 | 465 | 50 | *27 | 17 | 58 |
| 20----- | 16 | 28 | 47 | 403 | 46 | 3,900 | 3,300 | 1,700 | 108 | *25 | 17 | 45 |
| 21----- | 16 | 28 | 38 | 214 | 44 | 3,590 | 10,900 | 1,760 | 105 | *23 | 16 | 26 |
| 22----- | 16 | 47 | 28 | 120 | 40 | 2,640 | 9,260 | 2,400 | 100 | *22 | 17 | 18 |
| 23----- | 16 | 47 | 28 | 100 | 40 | 1,660 | 6,080 | 1,660 | 93 | *20 | 18 | *16 |
| 24----- | 16 | 38 | 38 | 90 | 36 | 990 | 6,080 | 1,480 | 93 | *19 | 18 | *15 |
| 25----- | 22 | 28 | 47 | 80 | 36 | 1,220 | 7,150 | 1,480 | 385 | *18 | 17 | *14 |
| 26----- | 28 | 28 | 28 | 70 | 36 | 1,570 | 11,200 | 1,480 | 582 | *17 | *15 | 13 |
| 27----- | 16 | 16 | 28 | 65 | 200 | 1,220 | 7,370 | 990 | 248 | *16 | *12 | 12 |
| 28----- | 16 | 16 | 47 | 60 | 318 | 850 | 4,060 | 920 | 165 | *15 | *10 | 10 |
| 29----- | 16 | 16 | 38 | 50 | ----- | 720 | 5,480 | 850 | 178 | *14 | *9 | 7.4 |
| 30----- | 16 | 16 | 28 | 48 | ----- | 490 | 3,900 | 850 | 168 | *14 | *7 | 6.7 |
| 31----- | 16 | ----- | 16 | 46 | ----- | 390 | ----- | 780 | ----- | *13 | 6.0 | ----- |

| Month | Observed | | | Corrected for storage and diversion | | Natural run-off in inches |
|----------------|----------|---------|-------|-------------------------------------|-----------------|---------------------------|
| | Maximum | Minimum | Mean | Mean | Per square mile | |
| October----- | 28 | 16 | 17.4 | 60.4 | 0.114 | 0.13 |
| November----- | 47 | 16 | 22.0 | 89.5 | .168 | .10 |
| December----- | 120 | 16 | 46.7 | 152 | .286 | .33 |
| January----- | 701 | 14 | 102 | 355 | .667 | .77 |
| February----- | 318 | 36 | 59.3 | 319 | .600 | .62 |
| March----- | 5,960 | 240 | 1,430 | 3,140 | 5.90 | 6.80 |
| April----- | 11,200 | 341 | 3,540 | 4,100 | 7.71 | 8.60 |
| May----- | 3,030 | 341 | 1,380 | 1,480 | 2.78 | 3.20 |
| June----- | 720 | 50 | 213 | 445 | .836 | .93 |
| July----- | 165 | 13 | 52.2 | 94.0 | .177 | .20 |
| August----- | 25 | 6.0 | 16.5 | 19.5 | .037 | .04 |
| September----- | 77 | 4.8 | 32.3 | 105 | .197 | .22 |
| The year----- | 11,200 | 4.8 | 576 | 865 | 1.63 | 22.03 |

• Estimated.

FOX CREEK AT WEST BERNE, N. Y.

LOCATION.—Staff gage 500 feet upstream from highway bridge in West Berne, Albany County.

DRAINAGE AREA.—66 square miles.

RECORDS AVAILABLE.—August, 1924, to September, 1929.

EXTREMES.—Maximum discharge during year, 4,190 second-feet Apr. 21 (gage height, 7.8 feet); minimum, 1.4 second-feet Sept. 5 and 6 (gage height, 1.38 feet).

1924-1929: Maximum discharge, that of Apr. 21, 1929; minimum, 0.9 second-foot Aug. 31 to Sept. 4, 1926.

REMARKS.—Records good except those for periods of ice effect (Dec. 21 to Jan. 18 and Jan. 21 to Mar. 13), for period of backwater from weeds (Oct. 1 to Nov. 18), and for very low stages, which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|-------|-------|-----|-------|------|------|-------|
| 1..... | 5 | 8 | 14 | 4 | 5 | 55 | 117 | 156 | 33 | 14 | 1.9 | 1.9 |
| 2..... | 7 | 9 | 14 | 3 | 5 | 42 | 103 | 130 | 29 | 13 | 2.3 | 1.7 |
| 3..... | 8 | 9 | 14 | 3 | 5 | 38 | 86 | 170 | 25 | 13 | 3.8 | 1.7 |
| 4..... | 7 | 9 | 11 | 3 | 5 | 26 | 82 | 200 | 21 | 13 | 3.0 | 1.6 |
| 5..... | 7 | 8 | 14 | 3 | 5 | 32 | 177 | 170 | 23 | 10 | 3.0 | 1.4 |
| 6..... | 7 | 7 | 14 | 5 | 5 | 130 | 1,050 | 156 | 25 | 9.2 | 3.3 | 1.6 |
| 7..... | 4 | 7 | 13 | 6 | 7 | 110 | 780 | 170 | 21 | 8.2 | 3.5 | 2.5 |
| 8..... | 3 | 6 | 9.7 | 4 | 8 | 85 | 350 | 137 | 20 | 7.7 | 4.1 | 3.5 |
| 9..... | 5 | 5 | 8.2 | 4 | 8 | 55 | 233 | 115 | 18 | 5.9 | 8.2 | 3.8 |
| 10..... | 7 | 5 | 6.2 | 6 | 8 | 44 | 233 | 99 | 17 | 5.5 | 4.7 | 4.7 |
| 11..... | 7 | 4 | 5.8 | 5 | 7 | 38 | 372 | 94 | 15 | 4.7 | 4.1 | 3.5 |
| 12..... | 7 | 5 | 6.2 | 4 | 6 | 85 | 1,070 | 86 | 15 | 4.4 | 3.5 | 2.8 |
| 13..... | 6 | 8 | 7.2 | 3 | 6 | 440 | 750 | 78 | 14 | 4.1 | 3.3 | 2.5 |
| 14..... | 5 | 9 | 7.2 | 2 | 5 | 2,260 | 750 | 82 | 15 | 4.1 | 4.4 | 2.5 |
| 15..... | 6 | 10 | 6.2 | 2 | 5 | 2,990 | 535 | 117 | 18 | 3.8 | 4.4 | 3.0 |
| 16..... | 7 | 9 | 6.2 | 2 | 4 | 2,000 | 350 | 86 | 15 | 3.5 | 4.1 | 2.8 |
| 17..... | 6 | 9 | 6.2 | 3 | 5 | 842 | 329 | 74 | 11 | 3.3 | 3.8 | 2.5 |
| 18..... | 6 | 7 | 6.7 | 280 | 5 | 350 | 372 | 71 | 9.2 | 3.0 | 3.3 | 2.5 |
| 19..... | 8 | 6.2 | 8.2 | 170 | 5 | 288 | 462 | 162 | 9.2 | 3.3 | 2.5 | 2.1 |
| 20..... | 6 | 7.2 | 10 | 56 | 4 | 308 | 972 | 233 | 10 | 3.0 | 2.5 | 2.1 |
| 21..... | 5 | 10 | 8 | 28 | 4 | 233 | 3,000 | 200 | 11 | 2.5 | 2.5 | 2.1 |
| 22..... | 4 | 9.2 | 5 | 13 | 4 | 200 | 1,570 | 170 | 9.2 | 2.3 | 2.3 | 2.1 |
| 23..... | 5 | 8.2 | 4 | 10 | 4 | 502 | 1,120 | 127 | 7.7 | 2.3 | 2.3 | 2.1 |
| 24..... | 7 | 7.2 | 4 | 9 | 4 | 440 | 870 | 90 | 7.7 | 2.5 | 2.1 | 2.3 |
| 25..... | 8 | 8.2 | 4 | 8 | 6 | 269 | 810 | 76 | 9.2 | 2.5 | 2.1 | 2.8 |
| 26..... | 7 | 7.2 | 4 | 7 | 10 | 446 | 750 | 71 | 34 | 2.5 | 2.1 | 2.5 |
| 27..... | 7 | 6.2 | 4 | 6 | 20 | 233 | 395 | 67 | 20 | 2.5 | 2.3 | 2.3 |
| 28..... | 7 | 5.4 | 6 | 6 | 34 | 200 | 350 | 60 | 14 | 2.1 | 2.1 | 2.1 |
| 29..... | 8 | 5.4 | 5 | 5 | ----- | 170 | 288 | 42 | 14 | 2.1 | 2.1 | 2.1 |
| 30..... | 7 | 5.8 | 4 | 5 | ----- | 132 | 185 | 39 | 14 | 1.9 | 2.1 | 2.3 |
| 31..... | 8 | ----- | 4 | 5 | ----- | 127 | ----- | 39 | ----- | 1.9 | 2.1 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 8 | 3 | 6.35 | 0.100 | 0.12 |
| November..... | 10 | 4 | 7.34 | .111 | .12 |
| December..... | 14 | 4 | 7.74 | .117 | .13 |
| January..... | 280 | 2 | 21.6 | .327 | .38 |
| February..... | 34 | 4 | 7.11 | .108 | .11 |
| March..... | 2,990 | 26 | 425 | 6.44 | 7.42 |
| April..... | 3,000 | 82 | 617 | 9.35 | 10.43 |
| May..... | 233 | 39 | 115 | 1.74 | 2.01 |
| June..... | 34 | 7.7 | 16.8 | .255 | .28 |
| July..... | 14 | 1.9 | 5.22 | .079 | .09 |
| August..... | 8.2 | 1.9 | 3.15 | .048 | .06 |
| September..... | 4.7 | 1.4 | 2.45 | .037 | .04 |
| The year..... | 3,000 | 1.4 | 103 | 1.56 | 21.19 |

POESTEN KILL NEAR TROY, N. Y.

LOCATION.—Water-stage recorder 500 feet downstream from highway bridge on Troy-Eagle Mills road, 1½ miles west of Eagle Mills, and 3 miles east of Troy, Rensselaer County.

DRAINAGE AREA.—88 square miles.

RECORDS AVAILABLE.—July, 1923, to September, 1929.

EXTREMES.—Maximum discharge during year, 2,210 second-feet Mar. 14 (gage height, 5.6 feet); minimum, 2.0 second-feet Sept. 5 (gage height, 0.85 foot). 1923-1929: Maximum discharge, about 7,030 second-feet Nov. 4, 1927 (gage height, 8.4 feet); minimum, that of Sept. 5, 1929.

REMARKS.—Records good except those for periods of ice effect (Dec. 7-17, Jan. 1-9, 18, 19, and Jan. 25 to Mar. 5) and for estimated periods, which are fair. Practically entire low-water flow of Quaken Kill (about 5 second-feet) diverted for municipal use above station.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|------|------|------|------|------|-------|-------|------|------|------|-------|
| 1..... | | 28 | 109 | 26 | 20 | 95 | 221 | 325 | 50 | | 25 | 4.2 |
| 2..... | | 30 | 103 | 34 | 19 | 90 | 210 | 256 | 41 | | 24 | 3.0 |
| 3..... | | 28 | 77 | 26 | 18 | 85 | 175 | 286 | 37 | | 24 | 2.4 |
| 4..... | | 20 | 80 | 26 | 17 | 130 | 163 | 278 | 36 | | 14 | 2.2 |
| 5..... | | 19 | 84 | 28 | 16 | 300 | 172 | 227 | 34 | | 17 | 2.2 |
| 6..... | | 16 | 90 | 30 | 17 | 387 | 394 | 227 | 67 | | 17 | 5.4 |
| 7..... | | 13 | 55 | 28 | 160 | 294 | 396 | 241 | 52 | | 16 | 7.4 |
| 8..... | | 14 | 48 | 24 | 200 | 172 | 305 | 201 | 37 | | 14 | 8.2 |
| 9..... | | 34 | 27 | 38 | 26 | 160 | 138 | 256 | 158 | | 19 | 12 |
| 10..... | | 33 | 35 | 30 | 44 | 110 | 125 | 227 | 132 | | 14 | 16 |
| 11..... | | 33 | 34 | 30 | 80 | 120 | 221 | 112 | 20 | 42 | 7.4 | 15 |
| 12..... | | 33 | 33 | 28 | 26 | 200 | 682 | 100 | 18 | 33 | 7.8 | 12 |
| 13..... | | 32 | 32 | 28 | 18 | 44 | 540 | 792 | 112 | 14 | 27 | 8.5 |
| 14..... | | 23 | 28 | 26 | 15 | 34 | 1,900 | 558 | 105 | 15 | 25 | 11 |
| 15..... | | 27 | 27 | 24 | 15 | 34 | 1,790 | 486 | 275 | 23 | 25 | 13 |
| 16..... | | 29 | 34 | 26 | 14 | 34 | 1,500 | 586 | 301 | 44 | 27 | 12 |
| 17..... | | 29 | 46 | 32 | 15 | 38 | 1,000 | 755 | 305 | 27 | 27 | 8.5 |
| 18..... | | 29 | 61 | 98 | 240 | 50 | 558 | 680 | 210 | 24 | 26 | 5.0 |
| 19..... | | 68 | 58 | 88 | 220 | 42 | 432 | 558 | 231 | 34 | 24 | 6.8 |
| 20..... | | 50 | 172 | 66 | 105 | 38 | 422 | 618 | 221 | 21 | 21 | 9.0 |
| 21..... | | 28 | 105 | 42 | 73 | 32 | 362 | 1,570 | 238 | | 18 | 9.4 |
| 22..... | | 22 | 77 | 25 | 68 | 32 | 392 | 1,120 | 224 | | 11 | 9.4 |
| 23..... | | 27 | 58 | | 56 | 32 | 699 | 755 | 166 | | 7.4 | 9.4 |
| 24..... | | 39 | 49 | | 46 | 34 | 630 | 680 | 141 | | 6.8 | 9.0 |
| 25..... | | 40 | 42 | | 38 | 38 | 404 | 752 | 207 | | 17 | 4.8 |
| 26..... | | 35 | 33 | | 55 | | 500 | 1,100 | 158 | | 31 | 6.4 |
| 27..... | | 30 | 33 | | 28 | 180 | 420 | 680 | 122 | | 30 | 8.2 |
| 28..... | | 22 | 30 | | 24 | 100 | 350 | 468 | 100 | | 28 | 8.5 |
| 29..... | | 34 | 35 | | 22 | | 298 | 530 | 87 | | 27 | 8.5 |
| 30..... | | 39 | 42 | | 22 | | 248 | 409 | 74 | | 26 | 9.0 |
| 31..... | | 34 | | | 20 | | 224 | | 61 | | 26 | 7.4 |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 68 | 22 | 34.0 | 0.386 | 0.44 |
| November..... | 172 | 13 | 42.0 | .477 | .53 |
| December..... | 109 | | 46.4 | .527 | .61 |
| January..... | 240 | 14 | 45.9 | .522 | .60 |
| February..... | 200 | 16 | 60.5 | .688 | .72 |
| March..... | 1,900 | 85 | 478 | 5.43 | 6.26 |
| April..... | 1,570 | 163 | 551 | 6.26 | 6.98 |
| May..... | 325 | 61 | 190 | 2.16 | 2.49 |
| June..... | 67 | 14 | 41.0 | .466 | .52 |
| July..... | | 6.8 | 28.3 | .322 | .37 |
| August..... | 25 | 4.8 | 11.7 | .133 | .15 |
| September..... | 58 | 2.2 | 12.2 | .139 | .16 |
| The year..... | 1,900 | 2.2 | 129 | 1.47 | 19.83 |

• Estimated.

KINDERHOOK CREEK AT ROSSMAN, N. Y.

LOCATION.—Water-stage recorder at highway bridge in Rossmar, Columbia County, 1 mile upstream from confluence with Claverack Creek.

DRAINAGE AREA.—330 square miles.

RECORDS AVAILABLE.—March, 1906, to May, 1914; July, 1928, to September, 1929.

EXTREMES.—Maximum discharge during period July 25, 1928, to Sept. 30, 1929, 6,660 second-feet Mar. 14 (gage height, 6.9 feet); minimum, 16 second-feet Sept. 6 and 7, 1929 (gage height, 0.35 foot).

1906-1914, 1928-1929: Maximum discharge, 11,000 second-feet Jan. 10, 1910; practically no flow at times, when power plant is shut down.

REMARKS.—Records good except those for periods of ice effect (Dec. 7-14, 23, 24, Dec. 31 to Jan. 4, Jan. 11-18, and Jan. 26 to Mar. 4), which are fair. Diurnal fluctuation at low and medium stages caused by power operations upstream.

Daily discharge, in second-feet, 1928-29

| Day | July | Aug. | Sept. | Day | July | Aug. | Sept. | Day | Jul | Aug. | Sept. |
|---------|------|-------|-------|---------|------|------|-------|---------|-------|-------|-------|
| 1928 | | | | 1928 | | | | 1928 | | | |
| 1..... | | 566 | 875 | 11..... | | 524 | 390 | 21..... | | 290 | 273 |
| 2..... | | 628 | 704 | 12..... | | 462 | 396 | 22..... | | 264 | 216 |
| 3..... | | 489 | 864 | 13..... | | 450 | 322 | 23..... | | 670 | 204 |
| 4..... | | 755 | 1,300 | 14..... | | 370 | 303 | 24..... | | 593 | 233 |
| 5..... | | 852 | 884 | 15..... | | 305 | 266 | 25..... | 62 | 527 | 237 |
| 6..... | | 1,080 | 760 | 16..... | | 305 | 237 | 26..... | 518 | 1,970 | 197 |
| 7..... | | 1,260 | 664 | 17..... | | 290 | 273 | 27..... | 394 | 3,020 | 180 |
| 8..... | | 1,070 | 529 | 18..... | | 457 | 307 | 28..... | 1,390 | 1,700 | 194 |
| 9..... | | 830 | 458 | 19..... | | 387 | 320 | 29..... | 1,330 | 1,790 | 175 |
| 10..... | | 651 | 431 | 20..... | | 322 | 303 | 30..... | 920 | 1,380 | 168 |
| | | | | | | | | 31..... | 580 | 1,150 | ----- |

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | Jul | Aug. | Sept. |
|---------|------|-------|------|------|-------|-------|-------|-------|-------|-----|------|-------|
| 1928-29 | | | | | | | | | | | | |
| 1..... | 211 | 123 | 129 | 90 | 100 | 340 | 809 | 1,200 | 252 | 368 | 39 | 2 |
| 2..... | 190 | 100 | 197 | 85 | 95 | 280 | 816 | 1,050 | 237 | 250 | 30 | 27 |
| 3..... | 158 | 84 | 209 | 95 | 95 | 240 | 690 | 1,080 | 260 | 224 | 30 | 42 |
| 4..... | 138 | 103 | 214 | 100 | 90 | 340 | 599 | 1,010 | 252 | 174 | 27 | 24 |
| 5..... | 143 | 120 | 213 | 104 | 85 | 1,460 | 658 | 882 | 218 | 164 | 51 | 26 |
| 6..... | 121 | 103 | 211 | 137 | 90 | 2,160 | 1,200 | 890 | 333 | 174 | 54 | 30 |
| 7..... | 118 | 105 | 200 | 172 | 240 | 1,320 | 1,420 | 972 | 312 | 151 | 34 | 45 |
| 8..... | 175 | 103 | 180 | 102 | 900 | 812 | 1,280 | 868 | 255 | 175 | 28 | 38 |
| 9..... | 127 | 109 | 170 | 138 | 600 | 674 | 1,090 | 746 | 207 | 145 | 32 | 42 |
| 10..... | 140 | 111 | 160 | 166 | 440 | 518 | 1,100 | 670 | 222 | 117 | 24 | 27 |
| 11..... | 131 | 129 | 140 | 150 | 340 | 500 | 1,330 | 573 | 200 | 143 | 26 | 52 |
| 12..... | 130 | 147 | 120 | 130 | 260 | 611 | 2,070 | 524 | 155 | 154 | 58 | 53 |
| 13..... | 78 | 127 | 130 | 120 | 200 | 1,620 | 3,000 | 500 | 158 | 79 | 53 | 67 |
| 14..... | 114 | 148 | 120 | 110 | 160 | 5,110 | 2,350 | 467 | 174 | 62 | 37 | 57 |
| 15..... | 160 | 115 | 94 | 100 | 140 | 4,890 | 1,960 | 683 | 146 | 62 | 71 | 122 |
| 16..... | 138 | 121 | 93 | 90 | 130 | 4,300 | 1,900 | 718 | 125 | 165 | 40 | 114 |
| 17..... | 135 | 95 | 142 | 100 | 130 | 3,340 | 2,960 | 753 | 170 | 62 | 37 | 97 |
| 18..... | 122 | 76 | 135 | 140 | 140 | 1,680 | 3,040 | 599 | 131 | 62 | 28 | 95 |
| 19..... | 115 | 126 | 193 | 606 | 170 | 1,330 | 2,180 | 580 | 142 | 160 | 49 | 59 |
| 20..... | 90 | 143 | 177 | 515 | 160 | 1,280 | 2,120 | 795 | 189 | 48 | 36 | 73 |
| 21..... | 84 | 213 | 131 | 338 | 140 | 1,130 | 4,310 | 664 | 215 | 51 | 24 | 72 |
| 22..... | 118 | 182 | 107 | 290 | 130 | 1,100 | 3,960 | 781 | 152 | 65 | 26 | 37 |
| 23..... | 107 | 152 | 95 | 255 | 140 | 1,010 | 651 | 651 | 151 | 64 | 23 | 64 |
| 24..... | 113 | 130 | 95 | 207 | 150 | 1,280 | 2,810 | 573 | 185 | 61 | 20 | 44 |
| 25..... | 153 | 132 | 96 | 171 | 170 | 1,100 | 1,750 | 658 | 170 | 81 | 26 | 52 |
| 26..... | 146 | 127 | 112 | 140 | 170 | 1,240 | 2,650 | 590 | 341 | 44 | 45 | 51 |
| 27..... | 122 | 111 | 95 | 130 | 260 | 1,280 | 2,010 | 524 | 357 | 39 | 38 | 40 |
| 28..... | 130 | 126 | 91 | 130 | 480 | 1,010 | 1,510 | 472 | 303 | 57 | 35 | 39 |
| 29..... | 130 | 113 | 91 | 120 | ----- | 1,020 | 1,840 | 406 | 575 | 70 | 20 | 33 |
| 30..... | 125 | 134 | 76 | 120 | ----- | 830 | 1,510 | 331 | 506 | 51 | 22 | 53 |
| 31..... | 111 | ----- | 90 | 110 | ----- | 788 | ----- | 345 | ----- | 46 | 22 | ----- |

Monthly discharge, in second-feet, of Kinderhook Creek at Rossmar, N. Y., 1928-29

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|------------------|---------|---------|-------|-----------------|-------------------|
| 1928 | | | | | |
| July 25-31 | 1,390 | 394 | 823 | 2.49 | 0.65 |
| August | 3,020 | 264 | 820 | 2.48 | 2.86 |
| September | 1,300 | 168 | 422 | 1.28 | 1.43 |
| 1928-29 | | | | | |
| October | 211 | 78 | 131 | 0.397 | 0.46 |
| November | 213 | 76 | 124 | .376 | .42 |
| December | 214 | 76 | 139 | .421 | .49 |
| January | 606 | 85 | 170 | .515 | .59 |
| February | 900 | 85 | 222 | .673 | .70 |
| March | 5,110 | 240 | 1,450 | 4.39 | 5.06 |
| April | 4,310 | 599 | 1,900 | 5.76 | 6.43 |
| May | 1,200 | 331 | 696 | 2.11 | 2.43 |
| June | 575 | 125 | 236 | .715 | .80 |
| July | 368 | 39 | 117 | .355 | .41 |
| August | 71 | 22 | 35.6 | .108 | .12 |
| September | 122 | 24 | 53.2 | .161 | .18 |
| The year | 5,110 | 22 | 440 | 1.33 | 18.09 |

HUDSON RIVER BASIN

143

CATSKILL CREEK AT OAK HILL, N. Y.

LOCATION.—Chain gage at highway bridge in southernmost part of Oak Hill, Greene County.

DRAINAGE AREA.—97 square miles.

RECORDS AVAILABLE.—March to September, 1929.

EXTREMES.—Maximum discharge during period, 4,910 second-feet Apr. 20 (gage height, 10.1 feet); minimum, about 0.05 second-foot Sept. 5-7 (gage height, 2.65 feet).

REMARKS.—Records good except those for period of ice effect (Mar. 1-6) and for periods of extremely low discharge, which are fair.

Daily and monthly discharge, in second-feet, 1929

| Day | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-----|-------|------|------|-------|
| 1..... | 80 | 194 | 262 | 58 | 18 | 0.7 | 0.25 |
| 2..... | 55 | 152 | 230 | 48 | 16 | .5 | .15 |
| 3..... | 46 | 136 | 518 | 43 | 12 | .35 | .10 |
| 4..... | 38 | 129 | 262 | 38 | 10 | 1.4 | .10 |
| 5..... | 75 | 230 | 246 | 33 | 10 | 1.2 | .05 |
| 6..... | 260 | 1,030 | 230 | 41 | 8.1 | .7 | .05 |
| 7..... | 142 | 650 | 262 | 31 | 7.4 | .6 | .05 |
| 8..... | 84 | 464 | 194 | 24 | 6.5 | .45 | 1.2 |
| 9..... | 78 | 332 | 160 | 20 | 5.0 | .7 | 1.8 |
| 10..... | 43 | 314 | 138 | 17 | 5.0 | .7 | 2.7 |
| 11..... | 58 | 464 | 116 | 16 | 4.5 | .7 | 1.8 |
| 12..... | 78 | 2,140 | 103 | 13 | 3.8 | .7 | 1.8 |
| 13..... | 1,020 | 875 | 94 | 11 | 3.8 | .6 | 1.8 |
| 14..... | 1,850 | 600 | 89 | 8.9 | 4.5 | 2.7 | 5.0 |
| 15..... | 2,500 | 650 | 200 | 18 | 3.5 | 1.8 | 5.0 |
| 16..... | 2,270 | 600 | 136 | 13 | 3.1 | 1.8 | 6.5 |
| 17..... | 953 | 760 | 107 | 11 | 2.7 | 1.2 | 8.1 |
| 18..... | 550 | 705 | 89 | 8.9 | 2.7 | .7 | 5.6 |
| 19..... | 500 | 705 | 230 | 7.4 | 2.7 | .7 | 5.0 |
| 20..... | 454 | 1,900 | 262 | 50 | 2.7 | .7 | 5.0 |
| 21..... | 411 | 3,240 | 332 | 28 | 2.0 | .7 | 4.0 |
| 22..... | 550 | 1,560 | 314 | 17 | 1.8 | .5 | 4.0 |
| 23..... | 650 | 1,130 | 230 | 13 | 1.8 | .5 | 3.8 |
| 24..... | 575 | 1,130 | 178 | 14 | 1.5 | 1.2 | 3.8 |
| 25..... | 370 | 875 | 200 | 19 | 1.5 | 1.2 | 3.8 |
| 26..... | 650 | 1,270 | 152 | 20 | 2.7 | .7 | 3.8 |
| 27..... | 390 | 650 | 124 | 23 | 1.4 | .5 | 3.1 |
| 28..... | 332 | 550 | 114 | 18 | 1.2 | .35 | 2.9 |
| 29..... | 262 | 500 | 89 | 38 | 1.2 | .35 | 2.7 |
| 30..... | 230 | 332 | 99 | 24 | .7 | .35 | 3.5 |
| 31..... | 200 | ----- | 72 | ----- | .7 | .35 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| March..... | 2,500 | 38 | 508 | 5.24 | 6.04 |
| April..... | 3,240 | 129 | 809 | 8.34 | 9.30 |
| May..... | 518 | 72 | 188 | 1.94 | 2.24 |
| June..... | 58 | 7.4 | 24.1 | .248 | .28 |
| July..... | 13 | .7 | 4.79 | .049 | .06 |
| August..... | 2.7 | .35 | .826 | .079 | .01 |
| September..... | 8.1 | .05 | 2.92 | .030 | .03 |

RONDOUT CREEK AT ROSENDALE, N. Y.

LOCATION.—Water-stage recorder 150 feet upstream from highway bridge in Rosendale, Ulster County.

DRAINAGE AREA.—386 square miles.

RECORDS AVAILABLE.—July, 1901, to November, 1903; January, 1906, to December, 1913; August, 1926, to September, 1929.

EXTREMES.—Maximum discharge during year, 8,360 second-feet Mar. 15 (gage height, 9.9 feet); minimum, about 7 second-feet Aug. 9 (gage height, 1.50 feet).

1926-1929: Maximum discharge, 27,300 second-feet Aug. 27, 1928 (gage height, 21.9 feet); minimum, that of Aug. 9, 1929.

REMARKS.—Records good except those for periods of ice effect (Dec. 9, 10, 22, 23, and Jan. 2 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, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 209 | 213 | 518 | 187 | 190 | 550 | 770 | 1,390 | 583 | 402 | 86 | 75 |
| 2..... | 254 | 205 | 494 | 240 | 180 | 460 | 852 | 1,230 | 503 | 443 | 76 | 73 |
| 3..... | 229 | 169 | 320 | 220 | 170 | 400 | 740 | 1,700 | 431 | 370 | 62 | 44 |
| 4..... | 225 | 180 | 305 | 180 | 160 | 500 | 695 | 1,560 | 429 | 304 | 76 | 59 |
| 5..... | 226 | 180 | 290 | 200 | 150 | 2,000 | 1,150 | 1,230 | 397 | 192 | 66 | 66 |
| 6..... | 229 | 187 | 281 | 800 | 160 | 3,600 | 2,190 | 1,190 | 391 | 200 | 65 | 59 |
| 7..... | 225 | 187 | 233 | 700 | 550 | 2,680 | 1,820 | 1,680 | 402 | 216 | 76 | 75 |
| 8..... | 169 | 180 | 205 | 460 | 1,600 | 1,600 | 1,330 | 1,270 | 339 | 220 | 86 | 79 |
| 9..... | 191 | 183 | 200 | 340 | 1,200 | 1,240 | 1,150 | 1,070 | 233 | 212 | 43 | 76 |
| 10..... | 201 | 180 | 190 | 360 | 1,000 | 963 | 1,290 | 958 | 195 | 220 | 94 | 69 |
| 11..... | 170 | 173 | 198 | 340 | 800 | 890 | 1,670 | 845 | 241 | 233 | 179 | 98 |
| 12..... | 159 | 147 | 205 | 280 | 650 | 972 | 4,140 | 762 | 237 | 203 | 251 | 89 |
| 13..... | 176 | 163 | 187 | 240 | 500 | 1,700 | 4,910 | 732 | 220 | 199 | 212 | 74 |
| 14..... | 194 | 176 | 169 | 200 | 380 | 5,450 | 3,150 | 702 | 203 | 155 | 192 | 102 |
| 15..... | 149 | 159 | 205 | 180 | 300 | 6,860 | 2,320 | 1,110 | 207 | 125 | 235 | 155 |
| 16..... | 166 | 159 | 191 | 160 | 280 | 5,410 | 2,550 | 995 | 212 | 138 | 236 | 109 |
| 17..... | 183 | 159 | 160 | 170 | 260 | 4,160 | 4,270 | 808 | 165 | 149 | 148 | 87 |
| 18..... | 173 | 147 | 227 | 260 | 260 | 2,370 | 3,090 | 688 | 181 | 219 | 107 | 112 |
| 19..... | 183 | 156 | 276 | 1,100 | 320 | 1,700 | 2,070 | 722 | 165 | 382 | 90 | 106 |
| 20..... | 187 | 229 | 244 | 900 | 280 | 1,520 | 1,750 | 1,190 | 176 | 310 | 96 | 106 |
| 21..... | 191 | 245 | 191 | 650 | 260 | 1,390 | 5,210 | 1,190 | 272 | 199 | 95 | 62 |
| 22..... | 169 | 254 | 170 | 500 | 240 | 1,310 | 4,450 | 1,650 | 242 | 120 | 79 | 85 |
| 23..... | 183 | 229 | 160 | 380 | 240 | 1,660 | 2,890 | 1,150 | 157 | 176 | 84 | 80 |
| 24..... | 180 | 229 | 146 | 320 | 260 | 1,560 | 2,100 | 995 | 151 | 127 | 85 | 49 |
| 25..... | 176 | 213 | 166 | 280 | 280 | 1,270 | 1,780 | 1,030 | 468 | 136 | 84 | 80 |
| 26..... | 183 | 169 | 168 | 260 | 360 | 1,460 | 3,040 | 875 | 1,060 | 130 | 78 | 76 |
| 27..... | 209 | 201 | 179 | 240 | 500 | 1,310 | 1,990 | 740 | 483 | 102 | 62 | 82 |
| 28..... | 205 | 166 | 173 | 220 | 800 | 1,110 | 1,630 | 681 | 358 | 102 | 79 | 71 |
| 29..... | 166 | 159 | 169 | 220 | ----- | 995 | 2,580 | 882 | 871 | 100 | 73 | 88 |
| 30..... | 205 | 183 | 173 | 200 | ----- | 875 | 1,670 | 905 | 606 | 57 | 76 | 81 |
| 31..... | 183 | ----- | 242 | 200 | ----- | 863 | ----- | 688 | ----- | 86 | 73 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 254 | 149 | 192 | 0.497 | 0.67 |
| November..... | 254 | 147 | 186 | .482 | .64 |
| December..... | 518 | 146 | 227 | .588 | .68 |
| January..... | 1,100 | 160 | 354 | .917 | 1.06 |
| February..... | 1,600 | 150 | 440 | 1.14 | 1.19 |
| March..... | 6,860 | 400 | 1,890 | 4.90 | 5.65 |
| April..... | 5,210 | 695 | 2,310 | 5.98 | 6.67 |
| May..... | 1,700 | 681 | 1,050 | 2.72 | 3.14 |
| June..... | 1,090 | 151 | 353 | .915 | 1.02 |
| July..... | 443 | 57 | 201 | .521 | .60 |
| August..... | 251 | 43 | 108 | .580 | .82 |
| September..... | 155 | 44 | 82.2 | .213 | .24 |
| The year..... | 6,860 | 43 | 617 | 1.60 | 21.68 |

WALLKILL RIVER AT PELLETS ISLAND MOUNTAIN, N. Y.

LOCATION.—Chain gage at highway bridge in Pellets Island Mountain, Orange County, $4\frac{1}{2}$ miles south of Middletown.

DRAINAGE AREA.—385 square miles.

RECORDS AVAILABLE.—December, 1919, to September, 1929.

EXTREMES.—Maximum discharge during year, 4,170 second-feet Mar. 7 (gage height, 9.7 feet); minimum, 27 second-feet Sept. 2-5 (gage height, 2.31 feet).
1919-1929: Maximum discharge, 8,350 second-feet Mar. 16, 1920 (gage height, 20.7 feet, old datum); minimum, 17 second-feet Aug. 11 and 12, 1926 (gage height, 2.30 feet).

REMARKS.—Records good except those for period of ice effect, Jan. 23 to Feb. 27, which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|-------|-------|-------|-------|------|------|-------|
| 1 | 158 | 105 | 340 | 152 | 100 | 2,680 | 500 | 1,050 | 374 | 261 | 45 | 32 |
| 2 | 158 | 105 | 500 | 190 | 100 | 2,400 | 462 | 890 | 308 | 218 | 42 | 27 |
| 3 | 158 | 109 | 408 | 246 | 90 | 2,330 | 462 | 840 | 246 | 190 | 41 | 27 |
| 4 | 147 | 119 | 324 | 246 | 90 | 2,330 | 426 | 840 | 204 | 164 | 46 | 27 |
| 5 | 125 | 150 | 276 | 218 | 80 | 2,400 | 462 | 750 | 177 | 119 | 46 | 27 |
| 6 | 136 | 170 | 261 | 374 | 80 | 3,450 | 705 | 705 | 190 | 119 | 45 | 30 |
| 7 | 136 | 160 | 218 | 620 | 320 | 4,170 | 795 | 795 | 190 | 130 | 45 | 45 |
| 8 | 136 | 160 | 190 | 620 | 1,320 | 3,050 | 660 | 750 | 218 | 135 | 39 | 108 |
| 9 | 136 | 160 | 135 | 540 | 1,600 | 2,680 | 540 | 660 | 177 | 108 | 39 | 152 |
| 10 | 117 | 150 | 88 | 660 | 1,600 | 1,770 | 500 | 580 | 177 | 88 | 38 | 177 |
| 11 | 113 | 150 | 164 | 750 | 1,200 | 1,610 | 620 | 500 | 152 | 79 | 37 | 164 |
| 12 | 107 | 160 | 152 | 660 | 950 | 1,220 | 995 | 444 | 150 | 84 | 39 | 204 |
| 13 | 99 | 150 | 150 | 540 | 700 | 1,340 | 1,980 | 540 | 130 | 79 | 45 | 113 |
| 14 | 99 | 150 | 152 | 408 | 440 | 1,580 | 1,980 | 620 | 128 | 81 | 63 | 88 |
| 15 | 94 | 142 | 164 | 324 | 320 | 2,050 | 1,770 | 660 | 130 | 54 | 177 | 152 |
| 16 | 94 | 142 | 177 | 261 | 240 | 2,330 | 1,840 | 705 | 164 | 64 | 246 | 190 |
| 17 | 99 | 142 | 177 | 261 | 200 | 2,260 | 2,260 | 580 | 177 | 64 | 164 | 164 |
| 18 | 99 | 142 | 218 | 292 | 220 | 1,980 | 2,260 | 462 | 142 | 55 | 92 | 140 |
| 19 | 109 | 190 | 292 | 408 | 260 | 1,700 | 2,120 | 462 | 126 | 180 | 66 | 126 |
| 20 | 119 | 324 | 261 | 540 | 240 | 1,400 | 1,840 | 660 | 190 | 357 | 54 | 104 |
| 21 | 125 | 374 | 190 | 444 | 160 | 1,220 | 1,840 | 750 | 218 | 204 | 48 | 84 |
| 22 | 125 | 276 | 135 | 324 | 140 | 1,100 | 1,980 | 840 | 204 | 150 | 46 | 70 |
| 23 | 119 | 232 | 117 | 280 | 180 | 1,050 | 1,840 | 795 | 177 | 108 | 46 | 63 |
| 24 | 119 | 177 | 108 | 180 | 140 | 995 | 1,640 | 620 | 190 | 73 | 38 | 60 |
| 25 | 121 | 164 | 108 | 150 | 160 | 940 | 1,400 | 540 | 177 | 66 | 37 | 54 |
| 26 | 125 | 152 | 108 | 150 | 280 | 840 | 1,460 | 500 | 308 | 62 | 34 | 52 |
| 27 | 119 | 152 | 108 | 140 | 1,200 | 750 | 1,400 | 426 | 444 | 62 | 33 | 45 |
| 28 | 119 | 145 | 126 | 120 | 2,450 | 705 | 1,280 | 374 | 408 | 62 | 33 | 46 |
| 29 | 117 | 130 | 130 | 110 | ----- | 580 | 1,220 | 374 | 357 | 54 | 33 | 46 |
| 30 | 113 | 164 | 135 | 100 | ----- | 540 | 1,100 | 408 | 308 | 45 | 33 | 46 |
| 31 | 109 | ----- | 135 | 100 | ----- | 500 | ----- | 408 | ----- | 46 | 33 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 158 | 94 | 121 | 0.314 | 0.36 |
| November | 374 | 105 | 168 | .436 | .49 |
| December | 500 | 88 | 195 | .506 | .58 |
| January | 750 | 100 | 336 | .873 | 1.01 |
| February | 2,480 | 80 | 532 | 1.38 | 1.44 |
| March | 4,170 | 500 | 1,740 | 4.52 | 5.21 |
| April | 2,260 | 426 | 1,280 | 3.32 | 3.70 |
| May | 1,050 | 374 | 630 | 1.64 | 1.89 |
| June | 444 | 126 | 218 | .566 | .63 |
| July | 357 | 45 | 113 | .294 | .34 |
| August | 246 | 33 | 58.8 | .153 | .18 |
| September | 204 | 27 | 88.8 | .231 | .26 |
| The year | 4,170 | 27 | 456 | 1.18 | 15.99 |

WALKILL RIVER AT GARDINER, N. Y.

LOCATION.—Water-stage recorder at highway bridge 500 feet downstream from 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, 1929.

EXTREMES.—Maximum discharge during year, 9,450 second-feet Mar. 6 (gage height, 10.4 feet); minimum, about 29 second-feet Sept. 8 (gage height, 1.19 feet).

1924-1929: Maximum discharge, 12,900 second-feet Sept. 2, 1927 (gage height, 12.6 feet); minimum, 26 second-feet July 26, 1926 (gage height, 1.95 feet).

REMARKS.—Records good except those for periods of ice effect (Dec. 10-12, Dec. 23 to Jan. 5, and Jan. 13 to Feb. 26), for period June 17 to Sept. 30, and for estimated periods, which are fair. Large diurnal fluctuations during low and medium stages caused by power operations upstream.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|-------|---------|---------|---------|---------|-------|------|------|-------|
| 1 | 325 | 187 | 707 | 240 | 180 | 4,660 | 788 | 1,490 | * 555 | 500 | 65 | 55 |
| 2 | 292 | 171 | 796 | 340 | 170 | 4,500 | 762 | 1,340 | * 495 | 400 | 65 | 36 |
| 3 | 278 | 181 | 686 | 380 | 170 | 3,550 | 686 | 1,390 | 481 | 360 | 65 | 55 |
| 4 | 273 | 198 | 537 | 380 | 170 | 3,100 | 663 | * 1,340 | 34C | 180 | 80 | 65 |
| 5 | 269 | 222 | 468 | 440 | 160 | 5,620 | 988 | * 1,300 | 36C | 200 | 75 | 75 |
| 6 | 265 | 242 | 436 | 1,080 | 160 | 8,760 | 2,530 | * 1,200 | 355 | 180 | 130 | 70 |
| 7 | 252 | 243 | 359 | 1,040 | 1,100 | * 6,460 | 1,900 | * 1,500 | 33C | 140 | 75 | 60 |
| 8 | 269 | 273 | 302 | 767 | 2,800 | * 4,640 | 1,440 | * 1,300 | 298 | 180 | 60 | 48 |
| 9 | 260 | 234 | 243 | 1,140 | * 3,200 | * 3,290 | 1,100 | * 1,100 | 301 | 140 | 46 | 65 |
| 10 | 231 | 199 | 240 | 1,190 | * 2,600 | 2,400 | 1,220 | * 1,000 | 344 | 140 | 46 | 190 |
| 11 | 226 | 198 | 220 | 1,290 | * 1,900 | 2,010 | 1,740 | * 850 | 268 | 130 | 70 | 220 |
| 12 | 215 | 250 | 240 | 1,060 | 1,400 | 1,840 | 3,650 | 745 | 24C | 110 | 90 | 220 |
| 13 | 203 | 209 | 231 | 900 | 1,100 | 2,180 | * 4,360 | 813 | 222 | 110 | 200 | 180 |
| 14 | 205 | 207 | 220 | 700 | 800 | 3,940 | * 3,600 | 914 | 212 | 100 | 95 | 170 |
| 15 | 222 | 200 | 223 | 550 | 550 | 4,920 | * 3,100 | 1,540 | 255 | 110 | 100 | 140 |
| 16 | 206 | 213 | 198 | 440 | 440 | 4,080 | * 3,700 | 1,240 | 235 | 110 | 160 | 220 |
| 17 | 194 | 199 | 265 | 440 | 360 | 3,420 | * 4,400 | 992 | 30C | 75 | 280 | 280 |
| 18 | 197 | 201 | 278 | 460 | 380 | 2,740 | * 4,000 | 762 | 24C | 90 | 180 | 240 |
| 19 | 200 | 260 | 311 | 700 | 460 | 2,340 | * 3,600 | 745 | 28C | 170 | 190 | 200 |
| 20 | 200 | 495 | 346 | 1,000 | 420 | 2,060 | * 2,560 | 1,190 | 22C | 220 | 120 | 180 |
| 21 | 209 | 534 | 303 | 950 | 320 | 1,840 | 4,410 | 1,380 | 38C | 380 | 70 | 160 |
| 22 | 237 | 482 | 238 | 800 | 260 | 1,690 | 3,940 | 1,690 | 40C | 340 | 85 | 130 |
| 23 | 215 | 360 | 240 | 550 | 260 | 1,790 | 3,100 | 1,290 | 32C | 180 | 90 | * 110 |
| 24 | 202 | 321 | 200 | 320 | 260 | 1,740 | 2,450 | 1,060 | 36C | 150 | 75 | * 110 |
| 25 | 194 | 265 | 180 | 260 | 300 | 1,490 | 2,120 | 1,240 | 26C | 130 | 65 | * 90 |
| 26 | 199 | 286 | 180 | 240 | 900 | 1,390 | 2,450 | 1,000 | 40C | 120 | 80 | * 85 |
| 27 | 193 | 218 | 170 | 220 | 4,390 | 1,240 | 2,180 | 838 | 60C | 80 | 100 | * 75 |
| 28 | 205 | 188 | 170 | 200 | 6,840 | 1,100 | 1,840 | 674 | 70C | 85 | 60 | 75 |
| 29 | 226 | 191 | 180 | 190 | ----- | 956 | 2,120 | 618 | 55C | 130 | 65 | 80 |
| 30 | 201 | 250 | 190 | 180 | ----- | 779 | 1,740 | 735 | 50C | 140 | 55 | 80 |
| 31 | 182 | ----- | 200 | 180 | ----- | 788 | ----- | 745 | ----- | 75 | 55 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 325 | 182 | 227 | 0.317 | 0.37 |
| November | 534 | 171 | 256 | .358 | .40 |
| December | 796 | 170 | 308 | .430 | .50 |
| January | 1,290 | 180 | 601 | .839 | .97 |
| February | 6,840 | 160 | 1,140 | 1.59 | 1.66 |
| March | 8,760 | 779 | 2,950 | 4.12 | 4.75 |
| April | 4,410 | 663 | 2,440 | 3.41 | 3.80 |
| May | 1,690 | 618 | 1,100 | 1.54 | 1.78 |
| June | 700 | 212 | 360 | .503 | .56 |
| July | 500 | 75 | 176 | .246 | .28 |
| August | 280 | 46 | 96.5 | .135 | .16 |
| September | 280 | 36 | 125 | .175 | .20 |
| The year | 8,760 | 36 | 812 | 1.13 | 15.43 |

* Estimated.

SHAWANGUNK KILL AT PINE BUSH, N. Y.

LOCATION.—Staff gage at Hardenburg Bridge, half a mile northeast of Pine Bush, Orange County.

DRAINAGE AREA.—103 square miles.

RECORDS AVAILABLE.—September, 1924, to September, 1929.

EXTREMES.—Maximum discharge during year, 2,660 second-feet Mar. 5 (gage height, 7.2 feet); minimum, 9.2 second-feet Sept. 3-7 (gage height, 0.70 foot).
1924-1929: Maximum discharge, about 4,310 second-feet Sept. 1, 1927 (gage height, 10.5 feet); minimum, 7.5 second-feet July 27 and 28, 1926 (gage height, 0.70 foot).

REMARKS.—Records good except those for periods of ice effect (Dec. 6-13, 21-24, Dec. 31 to Jan. 5, Jan. 9 to Feb. 7, and Feb. 11-26), which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|-------|-------|-----|-------|------|------|-------|
| 1 | 41 | 34 | 93 | 34 | 24 | 344 | 109 | 171 | 79 | 33 | 11 | 10 |
| 2 | 41 | 34 | 118 | 44 | 24 | 328 | 122 | 160 | 66 | 29 | 11 | 10 |
| 3 | 41 | 40 | 93 | 50 | 22 | 344 | 97 | 148 | 54 | 27 | 13 | 9.2 |
| 4 | 41 | 40 | 77 | 43 | 22 | 500 | 87 | 148 | 51 | 23 | 22 | 9.2 |
| 5 | 41 | 38 | 67 | 90 | 22 | 1,670 | 316 | 148 | 56 | 20 | 18 | 9.2 |
| 6 | 41 | 38 | 60 | 738 | 22 | 1,520 | 848 | 183 | 59 | 19 | 18 | 9.2 |
| 7 | 41 | 38 | 50 | 265 | 280 | 575 | 249 | 350 | 51 | 18 | 11 | 10 |
| 8 | 41 | 34 | 48 | 154 | 785 | 264 | 183 | 148 | 46 | 18 | 11 | 23 |
| 9 | 47 | 34 | 44 | 220 | 620 | 221 | 171 | 137 | 43 | 18 | 11 | 24 |
| 10 | 41 | 32 | 40 | 240 | 344 | 103 | 444 | 113 | 40 | 18 | 11 | 24 |
| 11 | 38 | 30 | 38 | 240 | 130 | 148 | 545 | 99 | 36 | 22 | 12 | 23 |
| 12 | 38 | 34 | 38 | 180 | 75 | 195 | 1,240 | 93 | 32 | 17 | 14 | 20 |
| 13 | 38 | 38 | 36 | 130 | 60 | 610 | 1,140 | 124 | 32 | 13 | 18 | 21 |
| 14 | 38 | 38 | 34 | 90 | 50 | 1,320 | 535 | 185 | 27 | 13 | 28 | 28 |
| 15 | 38 | 38 | 38 | 75 | 44 | 1,060 | 402 | 350 | 34 | 13 | 49 | 33 |
| 16 | 38 | 34 | 40 | 70 | 48 | 695 | 876 | 171 | 33 | 13 | 18 | 23 |
| 17 | 38 | 34 | 45 | 65 | 60 | 420 | 921 | 124 | 33 | 13 | 18 | 21 |
| 18 | 38 | 34 | 57 | 70 | 70 | 249 | 495 | 95 | 29 | 13 | 15 | 24 |
| 19 | 38 | 53 | 55 | 200 | 70 | 221 | 368 | 137 | 24 | 42 | 13 | 24 |
| 20 | 41 | 114 | 51 | 140 | 55 | 221 | 576 | 208 | 30 | 46 | 12 | 23 |
| 21 | 38 | 71 | 48 | 100 | 44 | 195 | 1,060 | 248 | 42 | 32 | 12 | 22 |
| 22 | 38 | 55 | 44 | 70 | 32 | 195 | 740 | 290 | 34 | 23 | 12 | 22 |
| 23 | 36 | 51 | 40 | 60 | 28 | 280 | 420 | 148 | 23 | 22 | 11 | 17 |
| 24 | 34 | 43 | 36 | 55 | 30 | 221 | 264 | 111 | 22 | 18 | 11 | 17 |
| 25 | 30 | 40 | 34 | 46 | 50 | 171 | 249 | 208 | 34 | 15 | 11 | 12 |
| 26 | 30 | 34 | 36 | 44 | 460 | 171 | 455 | 116 | 59 | 15 | 11 | 12 |
| 27 | 32 | 32 | 36 | 36 | 1,160 | 160 | 264 | 93 | 44 | 14 | 11 | 11 |
| 28 | 34 | 30 | 32 | 28 | 875 | 126 | 368 | 85 | 27 | 10 | 11 | 11 |
| 29 | 34 | 30 | 24 | 26 | ----- | 113 | 385 | 79 | 38 | 22 | 10 | 11 |
| 30 | 34 | 55 | 21 | 24 | ----- | 116 | 208 | 148 | 52 | 16 | 10 | 11 |
| 31 | 34 | ----- | 24 | 24 | ----- | 113 | ----- | 113 | ----- | 13 | 10 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 47 | 30 | 37.8 | 0.367 | 0.42 |
| November | 114 | 30 | 41.7 | .405 | .45 |
| December | 118 | 21 | 48.3 | .469 | .54 |
| January | 738 | 24 | 118 | 1.15 | 1.33 |
| February | 1,160 | 22 | 197 | 1.91 | 1.99 |
| March | 1,670 | 103 | 415 | 4.03 | 4.65 |
| April | 1,240 | 87 | 471 | 4.57 | 5.10 |
| May | 350 | 79 | 159 | 1.54 | 1.78 |
| June | 79 | 22 | 41.0 | .358 | .44 |
| July | 46 | 13 | 20.5 | .199 | .23 |
| August | 49 | 10 | 14.6 | .142 | .16 |
| September | 33 | 9.2 | 17.5 | .170 | .19 |
| The year | 1,670 | 9.2 | 131 | 1.27 | 17.28 |

WAPPINGER CREEK NEAR WAPPINGER FALLS, N. Y.

LOCATION.—Water-stage recorder 2½ miles upstream from Wappinger Falls, Dutchess County.

DRAINAGE AREA.—186 square miles.

RECORDS AVAILABLE.—August, 1928, to September, 1929.

EXTREMES.—Maximum discharge during period, 2,630 second-feet Mar. 6 (gage height, 7.0 feet); minimum, 12 second-feet July 28 (gage height, 0.56 foot).

REMARKS.—Records good except those for periods of ice effect (Dec. 11, 19-27, and Jan. 3 to Mar. 5) and for period July 28 to Sept. 30, which are fair.

Daily discharge, in second-feet, 1928-29

| Day | Aug. | Sept. | Day | Aug. | Sept. | Day | Aug. | Sept. |
|---------|-------|-------|---------|-------|-------|---------|-------|-------|
| 1928 | | | | | | | | |
| 1..... | | 950 | 11..... | 1,010 | 344 | 21..... | 394 | 200 |
| 2..... | | 772 | 12..... | 748 | 326 | 22..... | 420 | 176 |
| 3..... | | 914 | 13..... | 560 | 290 | 23..... | 1,000 | 164 |
| 4..... | 1,040 | | 14..... | 456 | 286 | 24..... | 795 | 156 |
| 5..... | | 750 | 15..... | 376 | 254 | 25..... | 722 | 151 |
| 6..... | | 655 | 16..... | 317 | 243 | 26..... | 1,460 | 141 |
| 7..... | 725 | 605 | 17..... | 278 | 222 | 27..... | 1,780 | 134 |
| 8..... | 560 | 515 | 18..... | 629 | 222 | 28..... | 1,690 | 127 |
| 9..... | 1,680 | 448 | 19..... | 694 | 240 | 29..... | 1,740 | 120 |
| 10..... | 1,220 | 443 | 20..... | 484 | 254 | 30..... | 1,280 | 109 |
| | | | | | | 31..... | 1,230 | ----- |

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|-------|-------|-----|-------|------|------|-------|
| 1928-29 | | | | | | | | | | | | |
| 1..... | 109 | 63 | 99 | 48 | 48 | 600 | 240 | 547 | 140 | 83 | 18 | 20 |
| 2..... | 107 | 69 | 127 | 72 | 46 | 460 | 240 | 502 | 124 | 78 | 18 | 18 |
| 3..... | 109 | 64 | 111 | 65 | 44 | 420 | 215 | 484 | 119 | 61 | 20 | 18 |
| 4..... | 103 | 63 | 105 | 50 | 42 | 380 | 209 | 448 | 115 | 51 | 16 | 19 |
| 5..... | 93 | 74 | 95 | 38 | 42 | 1,400 | 312 | 408 | 110 | 50 | 22 | 18 |
| 6..... | 89 | 82 | 87 | 70 | 44 | 2,370 | 470 | 430 | 127 | 48 | 17 | 16 |
| 7..... | 82 | 69 | 79 | 110 | 700 | 1,660 | 497 | 520 | 119 | 53 | 19 | 20 |
| 8..... | 91 | 66 | 68 | 60 | 1,500 | 878 | 402 | 470 | 106 | 54 | 20 | 22 |
| 9..... | 91 | 60 | 62 | 65 | 1,000 | 655 | 353 | 390 | 99 | 45 | 18 | 22 |
| 10..... | 84 | 62 | 58 | 80 | 700 | 452 | 362 | 362 | 91 | 48 | 19 | 22 |
| 11..... | 86 | 62 | 55 | 160 | 440 | 443 | 497 | 294 | 83 | 40 | 120 | 24 |
| 12..... | 79 | 68 | 54 | 95 | 280 | 389 | 666 | 273 | 78 | 38 | 95 | 22 |
| 13..... | 72 | 75 | 49 | 65 | 180 | 748 | 1,320 | 294 | 67 | 37 | 55 | 19 |
| 14..... | 75 | 80 | 53 | 60 | 130 | 1,220 | 1,150 | 260 | 83 | 34 | 38 | 26 |
| 15..... | 80 | 77 | 49 | 40 | 110 | 1,400 | 985 | 349 | 83 | 35 | 36 | 26 |
| 16..... | 79 | 68 | 58 | 42 | 110 | 1,200 | 980 | 308 | 83 | 35 | 32 | 26 |
| 17..... | 70 | 56 | 70 | 44 | 110 | 960 | 1,550 | 260 | 71 | 37 | 30 | 28 |
| 18..... | 63 | 54 | 72 | 50 | 130 | 725 | 1,640 | 222 | 61 | 42 | 28 | 28 |
| 19..... | 62 | 72 | 85 | 420 | 150 | 605 | 1,260 | 237 | 54 | 46 | 28 | 28 |
| 20..... | 62 | 116 | 60 | 280 | 140 | 538 | 985 | 322 | 66 | 40 | 30 | 26 |
| 21..... | 62 | 116 | 48 | 140 | 130 | 479 | 1,530 | 331 | 78 | 34 | 30 | 26 |
| 22..... | 70 | 93 | 40 | 95 | 130 | 434 | 1,740 | 434 | 61 | 32 | 28 | 28 |
| 23..... | 72 | 82 | 40 | 80 | 140 | 448 | 1,400 | 331 | 51 | 38 | 26 | 26 |
| 24..... | 110 | 68 | 42 | 70 | 140 | 438 | 1,080 | 269 | 50 | 37 | 24 | 24 |
| 25..... | 109 | 68 | 42 | 70 | 160 | 366 | 940 | 349 | 53 | 34 | 22 | 22 |
| 26..... | 87 | 62 | 42 | 65 | 180 | 398 | 965 | 281 | 199 | 30 | 20 | 22 |
| 27..... | 74 | 57 | 38 | 60 | 260 | 384 | 800 | 229 | 140 | 28 | 24 | 22 |
| 28..... | 75 | 53 | 43 | 55 | 850 | 322 | 660 | 207 | 93 | 22 | 19 | 19 |
| 29..... | 74 | 62 | 39 | 55 | ----- | 286 | 775 | 187 | 91 | 20 | 22 | 20 |
| 30..... | 70 | 53 | 36 | 55 | ----- | 254 | 635 | 180 | 91 | 20 | 19 | 20 |
| 31..... | 66 | ----- | 42 | 50 | ----- | 250 | ----- | 159 | ----- | 20 | 19 | ----- |

*Monthly discharge, in second-feet, of Wappinger Creek near Wappinger Falls, N.Y.,
1928-29*

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|------------------|---------|---------|------|--------------------|----------------------|
| 1928 | | | | | |
| August 7-31..... | 1,780 | 278 | 890 | 4.78 | 4.44 |
| September..... | 1,040 | 109 | 375 | 2.02 | 2.25 |
| 1928-29 | | | | | |
| October..... | 110 | 62 | 82.4 | .443 | .51 |
| November..... | 116 | 52 | 70.1 | .377 | .42 |
| December..... | 127 | 36 | 62.8 | .338 | .39 |
| January..... | 420 | 38 | 87.4 | .470 | .54 |
| February..... | 1,500 | 42 | 283 | 1.52 | 1.58 |
| March..... | 2,370 | 250 | 696 | 3.74 | 4.31 |
| April..... | 1,740 | 209 | 829 | 4.46 | 4.98 |
| May..... | 547 | 159 | 333 | 1.79 | 2.06 |
| June..... | 199 | 50 | 92.9 | .499 | .56 |
| July..... | 83 | 20 | 41.0 | .220 | .25 |
| August..... | 120 | 16 | 30.1 | .162 | .19 |
| September..... | 28 | 16 | 22.6 | .122 | .14 |
| The year..... | 2,370 | 16 | 218 | 1.17 | 15.93 |

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, $3\frac{1}{2}$ miles below mouth of Dvars Kill.

DRAINAGE AREA.—113 square miles.

RECORDS AVAILABLE.—October, 1921, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,520 second-feet Feb. 7 (gage height, 3.60 feet).

1921–1929: Maximum discharge, about 4,000 second-feet Sept. 2, 1927, and July 6, 1928; maximum gage height, 4.58 feet, Sept. 2, 1927.

REMARKS.—Records good. Discharge estimated Jan. 10–12. 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, 1928–29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | 581 | 101 | 136 | 19 | 25 | 397 | 81 | 354 | 63 | 19 | 2.8 | 2 |
| 2..... | 819 | 89 | 143 | 38 | 18 | 404 | 75 | 293 | 54 | 21 | 2 | 2 |
| 3..... | 536 | 72 | 10 | 84 | 18 | 707 | 72 | 278 | 42 | 13 | 2 | 2 |
| 4..... | 29 | 74 | 9 | 61 | 12 | 391 | 109 | 278 | 21 | 2 | 2 | 2 |
| 5..... | 3 | 41 | 88 | 30 | 14 | 687 | 218 | 200 | 2 | 15 | 2 | 2 |
| 6..... | 2 | 2 | 91 | 378 | 16 | 857 | 214 | 154 | 23 | 15 | 2 | 3.7 |
| 7..... | 2 | 12 | 45 | 246 | 986 | 750 | 204 | 553 | 31 | 10 | 2 | 2 |
| 8..... | 2 | 22 | 32 | 71 | 1,150 | 454 | 102 | 470 | 47 | 2 | 2 | 2.2 |
| 9..... | 2 | 13 | 16 | 3 | 490 | 289 | 49 | 175 | 58 | 3.2 | 2.5 | 2.8 |
| 10..... | 2 | 21 | 2 | 5 | 382 | 266 | 159 | 109 | 45 | 7.1 | 2 | 2 |
| 11..... | 13 | 23 | 2 | 100 | 243 | 190 | 235 | 109 | 28 | 2.3 | 2 | 2 |
| 12..... | 2 | 21 | 10 | 120 | 128 | 167 | 345 | 116 | 20 | 2 | 2 | 2 |
| 13..... | 2 | 21 | 30 | 56 | 112 | 124 | 557 | 355 | 12 | 2 | 2 | 4.1 |
| 14..... | 3 | 21 | 30 | 45 | 75 | 445 | 251 | 472 | 9.9 | 2 | 2 | 2 |
| 15..... | 2 | 25 | 29 | 45 | 72 | 725 | 128 | 203 | 4.3 | 2 | 2 | 2 |
| 16..... | 2 | 23 | 22 | 42 | 75 | 358 | 642 | 54 | 6.2 | 2 | 2 | 2 |
| 17..... | 60 | 25 | 46 | 57 | 75 | 181 | 879 | 54 | 2.2 | 2 | 2 | 2 |
| 18..... | 154 | 27 | 66 | 93 | 72 | 181 | 290 | 52 | 12 | 2 | 2 | 2 |
| 19..... | 158 | 19 | 29 | 78 | 75 | 176 | 93 | 201 | 21 | 2 | 2 | 3.6 |
| 20..... | 118 | 19 | 27 | 56 | 78 | 162 | 166 | 384 | 24 | 2 | 2 | 2 |
| 21..... | 30 | 14 | 23 | 54 | 54 | 120 | 273 | 305 | 16 | 2 | 2 | 2 |
| 22..... | 4 | 14 | 21 | 54 | 40 | 116 | 424 | 399 | 10 | 2 | 2 | 2 |
| 23..... | 84 | 23 | 21 | 63 | 40 | 250 | 451 | 214 | 8.6 | 3 | 2 | 2 |
| 24..... | 31 | 68 | 25 | 78 | 38 | 298 | 196 | 110 | 2 | 2 | 2 | 2 |
| 25..... | 7 | 154 | 27 | 56 | 38 | 97 | 188 | 69 | 7.2 | 2 | 2 | 2 |
| 26..... | 2 | 145 | 18 | 56 | 450 | 97 | 952 | 75 | 3.3 | 2 | 2 | 2 |
| 27..... | 15 | 120 | 5 | 56 | 857 | 87 | 712 | 69 | 2 | 2 | 2 | 2 |
| 28..... | 81 | 52 | 11 | 45 | 744 | 87 | 412 | 61 | 14 | 2 | 3 | 2.2 |
| 29..... | 58 | 32 | 5 | 27 | ----- | 84 | 694 | 81 | 39 | 2 | 2 | 2 |
| 30..... | 16 | 16 | 11 | 25 | ----- | 145 | 552 | 87 | 26 | 2 | 2 | 2 |
| 31..... | 136 | ----- | 12 | 25 | ----- | 172 | ----- | 78 | ----- | 2 | 2 | ----- |

| Month | Observed | | | Corrected for storage and diversion | | Run-off in inches |
|----------------|----------|---------|------|-------------------------------------|-----------------|-------------------|
| | Maximum | Minimum | Mean | Mean | Per square mile | |
| October..... | 819 | 2 | 95.4 | 134 | 1.19 | 1.37 |
| November..... | 154 | 2 | 43.6 | 104 | .920 | 1.03 |
| December..... | 143 | 2 | 33.6 | 86 | .761 | .88 |
| January..... | 378 | 3 | 69.9 | 127 | 1.12 | 1.29 |
| February..... | 1,150 | 12 | 228 | 275 | 2.43 | 2.53 |
| March..... | 857 | 84 | 307 | 371 | 3.28 | 3.78 |
| April..... | 952 | 49 | 323 | 373 | 3.30 | 3.68 |
| May..... | 553 | 52 | 207 | 282 | 2.50 | 2.88 |
| June..... | 63 | 2 | 21.8 | 81.6 | .722 | .81 |
| July..... | 2 | 2 | 4.86 | 44.1 | .390 | .45 |
| August..... | 31 | 2 | 2.07 | 30.7 | .351 | .40 |
| September..... | 4.1 | 2 | 2.22 | 82.7 | .732 | .82 |
| The year..... | 1,150 | 2 | 111 | 166 | 1.47 | 19.92 |

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, 1929. November, 1903, to July, 1906, at Millington, three-fourths mile downstream.

EXTREMES.—Maximum discharge during year, 735 second-feet Feb. 28 (gage height, 7.03 feet); minimum, 2.8 second-feet Sept. 4 (gage height, 5.61 feet). 1903-1906, 1922-1929: 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. Discharge estimated Jan. 5-12, June 23-28, and Aug. 25-30. Stage-discharge relation affected by ice Jan. 13, 14, 21, 26-31, Feb. 1, 20, 21, 23, and 24.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|------|------|---------|------|------|------|-----|------|-----------------|------|-------------------|
| 1 | 63 | 21 | 120 | 38 | 15 | 565 | 71 | 256 | 71 | 18 | 7.5 | 5.7 |
| 2 | 59 | 25 | 130 | 121 | 16 | 400 | 67 | 208 | 56 | 18 | 8.7 | 5.7 |
| 3 | 54 | 25 | 106 | 113 | 15 | 345 | 59 | 174 | 48 | 16 | 7.1 | 3.1 |
| 4 | 52 | 30 | 96 | 70 | 15 | 319 | 54 | 154 | 44 | 14 | 8.7 | 3.1 |
| 5 | 49 | 40 | 80 | 65 | 15 | 345 | 63 | 138 | 40 | 14 | 9.5 | 6.1 |
| 6 | 52 | 36 | 67 | 130 | 16 | 490 | 144 | 128 | 42 | 14 | 7.1 | 8.7 |
| 7 | 52 | 29 | 50 | 550 | 267 | 430 | 154 | 231 | 37 | 14 | 7.5 | 12 |
| 8 | 42 | 28 | 41 | 150 | 400 | 293 | 128 | 208 | 43 | 13 | 7.9 | 39 |
| 9 | 38 | 25 | 38 | 65 | 345 | 256 | 102 | 164 | 49 | 12 | 6.8 | 37 |
| 10 | 44 | 25 | 36 | 38 | 243 | 185 | 86 | 136 | 38 | 12 | 4.4 | 27 |
| 11 | 40 | 26 | 34 | 270 | 164 | 144 | 93 | 106 | 33 | 12 | 7.1 | 17 |
| 12 | 38 | 24 | 30 | 200 | 103 | 114 | 206 | 91 | 30 | 11 | 7.5 | 12 |
| 13 | 40 | 25 | 31 | 130 | 48 | 108 | 332 | 120 | 27 | 10 | 6.8 | 12 |
| 14 | 28 | 23 | 37 | 90 | 33 | 164 | 256 | 126 | 25 | 9.9 | 7.1 | 11 |
| 15 | 23 | 23 | 39 | 64 | 31 | 256 | 185 | 126 | 25 | 9.9 | 18 | 15 |
| 16 | 27 | 20 | 34 | 47 | 30 | 256 | 260 | 113 | 25 | 9.9 | 14 | 11 |
| 17 | 26 | 22 | 38 | 39 | 29 | 231 | 460 | 93 | 25 | 9.9 | 7.9 | 13 |
| 18 | 25 | 23 | 55 | 46 | 33 | 174 | 400 | 80 | 31 | 9.5 | 8.3 | 29 |
| 19 | 42 | 22 | 60 | 96 | 36 | 140 | 293 | 110 | 23 | 14 | 18 | 18 |
| 20 | 51 | 27 | 47 | 105 | 22 | 120 | 196 | 268 | 20 | 15 | 16 | 11 |
| 21 | 44 | 26 | 36 | 83 | 16 | 106 | 164 | 243 | 20 | 12 | 12 | 12 |
| 22 | 38 | 24 | 27 | 56 | 27 | 100 | 196 | 256 | 20 | 11 | 8.3 | 7.5 |
| 23 | 40 | 27 | 23 | 54 | 22 | 121 | 208 | 185 | 20 | 11 | 7.9 | 9.5 |
| 24 | 48 | 28 | 17 | 64 | 19 | 185 | 164 | 150 | 19 | 11 | 10 | 7.9 |
| 25 | 41 | 25 | 19 | 47 | 27 | 154 | 156 | 174 | 20 | 10 | 10 | 5.7 |
| 26 | 27 | 22 | 18 | 38 | 204 | 134 | 630 | 140 | 30 | 9.9 | 10 | 7.9 |
| 27 | 25 | 23 | 19 | 28 | 665 | 113 | 630 | 108 | 28 | 9.5 | 10 | 8.3 |
| 28 | 22 | 21 | 29 | 22 | 735 | 98 | 460 | 90 | 30 | 9.1 | 12 | 4.4 |
| 29 | 23 | 22 | 36 | 19 | --- | 83 | 460 | 80 | 29 | 8.7 | 10 | 7.1 |
| 30 | 25 | 33 | 29 | 17 | --- | 73 | 345 | 88 | 20 | 8.3 | 9 | 7.1 |
| 31 | 23 | --- | 26 | 16 | --- | 71 | --- | 86 | --- | 7.9 | 7.5 | --- |
| Month | Maximum | | | Minimum | | | Mean | | | Per square mile | | Run-off in inches |
| October | 63 | | | 22 | | | 38.7 | | | 0.704 | | 0.81 |
| November | 40 | | | 20 | | | 25.7 | | | .467 | | .52 |
| December | 130 | | | 17 | | | 46.7 | | | .849 | | .98 |
| January | 550 | | | 16 | | | 92.6 | | | 1.68 | | 1.94 |
| February | 735 | | | 15 | | | 128 | | | 2.33 | | 2.43 |
| March | 565 | | | 71 | | | 212 | | | 3.85 | | 4.44 |
| April | 630 | | | 54 | | | 234 | | | 4.25 | | 4.74 |
| May | 268 | | | 80 | | | 149 | | | 2.71 | | 3.12 |
| June | 71 | | | 19 | | | 32.3 | | | .587 | | .65 |
| July | 18 | | | 7.9 | | | 11.8 | | | .215 | | .25 |
| August | 18 | | | 4.4 | | | 9.44 | | | .172 | | .20 |
| September | 39 | | | 3.1 | | | 12.5 | | | .227 | | .25 |
| The year | 735 | | | 3.1 | | | 82.5 | | | 1.50 | | 20.33 |

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, 1929.

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, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1 | 405 | 237 | 683 | 411 | 288 | 2,643 | 1,439 | 3,727 | 888 | 362 | 38 | 130 |
| 2 | 393 | 67 | 796 | 685 | 257 | 3,067 | 1,011 | 3,441 | 806 | 319 | 39 | 37 |
| 3 | 389 | 163 | 743 | 729 | 232 | 3,208 | 848 | 3,183 | 594 | 299 | 53 | 33 |
| 4 | 388 | 315 | 671 | 652 | 234 | 3,214 | 730 | 2,830 | 383 | 123 | 95 | 32 |
| 5 | 300 | 393 | 646 | 768 | 229 | 3,830 | 911 | 2,608 | 448 | 147 | 77 | 31 |
| 6 | 383 | 460 | 500 | 2,044 | 363 | 5,036 | 1,270 | 2,433 | 390 | 245 | 76 | 31 |
| 7 | 267 | 388 | 456 | 2,649 | 2,134 | 5,116 | 1,381 | 2,800 | 391 | 139 | 42 | 173 |
| 8 | 401 | 301 | 414 | 1,708 | 2,226 | 4,325 | 1,345 | 2,569 | 437 | 128 | 41 | 427 |
| 9 | 228 | 255 | 302 | 1,599 | 1,833 | 3,610 | 1,317 | 2,264 | 465 | 140 | 40 | 434 |
| 10 | 308 | 223 | 310 | 1,903 | 1,670 | 2,892 | 1,271 | 2,138 | 452 | 78 | 90 | 417 |
| 11 | 293 | 267 | 209 | 2,032 | 1,509 | 2,629 | 1,293 | 1,955 | 402 | 49 | 117 | 335 |
| 12 | 264 | 271 | 262 | 1,899 | 1,397 | 2,442 | 1,834 | 1,815 | 287 | 40 | 42 | 234 |
| 13 | 237 | 250 | 198 | 1,631 | 1,339 | 2,465 | 2,510 | 1,914 | 343 | 158 | 42 | 77 |
| 14 | 183 | 268 | 261 | 1,359 | 1,203 | 2,936 | 2,382 | 1,795 | 210 | 97 | 58 | 95 |
| 15 | 199 | 162 | 234 | 1,352 | 800 | 3,347 | 2,270 | 1,821 | 227 | 55 | 280 | 148 |
| 16 | 224 | 243 | 262 | 1,225 | 613 | 3,305 | 3,623 | 1,764 | 197 | 48 | 74 | 53 |
| 17 | 203 | 174 | 296 | 920 | 489 | 3,105 | 4,310 | 1,597 | 144 | 51 | 118 | 166 |
| 18 | 260 | 141 | 432 | 735 | 450 | 2,829 | 4,090 | 1,305 | 175 | 53 | 92 | 313 |
| 19 | 351 | 238 | 560 | 986 | 518 | 2,710 | 3,848 | 1,310 | 226 | 79 | 120 | 343 |
| 20 | 213 | 282 | 464 | 1,098 | 497 | 2,574 | 3,504 | 1,859 | 273 | 146 | 206 | 215 |
| 21 | 210 | 249 | 391 | 938 | 422 | 2,416 | 3,306 | 2,087 | 294 | 117 | 95 | 133 |
| 22 | 225 | 263 | 303 | 747 | 401 | 2,279 | 3,347 | 2,234 | 200 | 45 | 43 | 149 |
| 23 | 284 | 194 | 232 | 686 | 457 | 2,208 | 3,091 | 2,020 | 161 | 131 | 96 | 39 |
| 24 | 251 | 253 | 215 | 564 | 406 | 2,148 | 2,749 | 1,868 | 107 | 116 | 134 | 89 |
| 25 | 229 | 231 | 238 | 519 | 419 | 2,089 | 2,861 | 1,847 | 220 | 34 | 54 | 87 |
| 26 | 272 | 247 | 183 | 492 | 1,194 | 2,043 | 3,851 | 1,691 | 388 | 30 | 44 | 51 |
| 27 | 219 | 149 | 147 | 474 | 2,303 | 2,018 | 3,744 | 1,473 | 353 | 100 | 42 | 53 |
| 28 | 211 | 180 | 228 | 430 | 2,652 | 1,901 | 3,812 | 1,292 | 278 | 104 | 38 | 111 |
| 29 | 135 | 166 | 325 | 241 | ----- | 1,744 | 4,439 | 1,278 | 456 | 32 | 43 | 81 |
| 30 | 256 | 319 | 292 | 251 | ----- | 1,676 | 4,114 | 1,210 | 504 | 29 | 39 | 30 |
| 31 | 114 | ----- | 303 | 318 | ----- | 1,592 | ----- | 1,035 | ----- | 29 | 56 | ----- |

| Month | Discharge in second-feet | | | | | Run-off in inches |
|----------------|--------------------------|---------|-------|-------------------------------------|-----------------|-------------------|
| | Observed | | | Corrected for storage and diversion | | |
| | Maximum | Minimum | Mean | Mean | Per square mile | |
| October..... | 405 | 114 | 268 | 476 | 0.606 | 0.70 |
| November..... | 460 | 67 | 245 | 474 | .604 | .67 |
| December..... | 796 | 147 | 373 | 657 | .837 | .96 |
| January..... | 2,649 | 241 | 1,034 | 1,623 | 2.07 | 2.39 |
| February..... | 2,652 | 229 | 948 | 1,434 | 1.83 | 1.91 |
| March..... | 5,116 | 1,592 | 2,819 | 3,012 | 3.84 | 4.43 |
| April..... | 4,439 | 730 | 2,550 | 3,129 | 3.99 | 4.45 |
| May..... | 3,727 | 1,035 | 2,038 | 2,309 | 2.94 | 3.39 |
| June..... | 888 | 107 | 357 | 653 | .832 | .93 |
| July..... | 362 | 29 | 114 | 264 | .336 | .39 |
| August..... | 280 | 38 | 78.2 | 156 | .199 | .23 |
| September..... | 434 | 30 | 152 | 302 | .385 | .43 |
| The year..... | 5,116 | 29 | 915 | 1,206 | 1.54 | 20.87 |

ROCKAWAY RIVER AT BOONTON, N. J.

LOCATION.—Water-stage recorder below dam of the Jersey City waterworks at Boonton, Morris County.

DRAINAGE AREA.—119 square miles.

RECORDS AVAILABLE.—January, 1906, to September, 1929.

REMARKS.—Records good. Discharge estimated Oct. 28 to Nov. 2, Nov. 11–14, 18–20, 25–29, Dec. 23–28, and May 19–22. Stage-discharge relation affected by ice Jan. 1, 2, 14–17, and 25–31. Water for Jersey City water supply is diverted from Boonton Reservoir one-fourth mile above gage. Flow regulated by storage in reservoir. Daily-discharge table indicates flow over dam and through waste gates only.

Daily and monthly discharge, in second-feet, 1928–29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1 | 21 | 3 | 3.5 | 2 | 10 | 385 | 68 | 385 | 114 | 42 | 0.8 | 0.6 |
| 2 | 19 | 3 | 2.8 | 2 | 10 | 316 | 94 | 316 | 94 | 32 | .8 | .6 |
| 3 | 15 | 2.8 | 2.3 | 2.1 | 8.3 | 288 | 87 | 302 | 63 | 19 | .7 | .6 |
| 4 | 13 | 2.8 | 2.5 | 1.9 | 7.4 | 329 | 76 | 249 | 44 | 24 | .7 | .6 |
| 5 | 13 | 2.5 | 2.5 | 1.9 | 6.5 | 413 | 85 | 224 | 44 | 3.5 | .6 | .6 |
| 6 | 9.2 | 3.9 | 2.8 | 9.7 | 6.5 | 595 | 200 | 249 | 30 | 1.9 | .6 | .8 |
| 7 | 11 | 3.5 | 3.2 | 135 | 17 | 627 | 236 | 357 | 30 | 3.2 | .6 | .9 |
| 8 | 8.8 | 3.2 | 3.2 | 288 | 352 | 413 | 188 | 371 | 30 | 1.4 | .6 | 1.0 |
| 9 | 11 | 3.2 | 3.2 | 262 | 275 | 413 | 128 | 288 | 42 | .9 | .6 | 1.0 |
| 10 | 6.2 | 3.0 | 3.2 | 316 | 177 | 275 | 110 | 224 | 44 | .9 | .7 | 1.0 |
| 11 | 8.3 | 3 | 3.2 | 329 | 134 | 262 | 134 | 188 | 32 | .8 | .8 | .9 |
| 12 | 4.2 | 3 | 3.2 | 329 | 90 | 236 | 210 | 155 | 25 | .9 | .8 | .9 |
| 13 | 4.2 | 2 | 3.2 | 208 | 54 | 200 | 472 | 188 | 18 | .9 | .8 | 1.0 |
| 14 | 4.5 | 2 | 2.3 | 28 | 45 | 236 | 420 | 236 | 14 | .9 | .9 | 1.0 |
| 15 | 4.8 | 2.1 | .9 | 28 | 34 | 371 | 329 | 249 | 11 | .9 | 1.0 | 1.0 |
| 16 | 3.0 | 1.7 | 1.0 | 30 | 25 | 371 | 357 | 236 | 10 | .8 | .9 | 1.0 |
| 17 | 2.1 | 1.7 | 1.0 | 46 | 19 | 371 | 595 | 106 | 7.4 | .8 | .7 | 1.7 |
| 18 | 3.2 | 1 | 2.3 | 70 | 15 | 316 | 533 | 126 | 5.5 | .8 | .6 | 1.0 |
| 19 | 3.2 | 1 | 1.9 | 118 | 18 | 262 | 385 | 110 | 4.5 | .9 | .8 | .9 |
| 20 | 2.8 | 1 | 1.7 | 144 | 16 | 224 | 357 | 200 | 3.5 | .7 | .7 | .9 |
| 21 | 3.0 | .6 | 1.4 | 89 | 18 | 200 | 329 | 220 | 2.1 | .6 | .7 | .8 |
| 22 | 3.5 | .7 | 1.4 | 65 | 12 | 188 | 343 | 240 | .9 | .6 | .6 | .6 |
| 23 | 3.9 | .9 | 2.0 | 60 | 16 | 188 | 371 | 200 | .7 | .6 | .6 | .6 |
| 24 | 3.2 | 1.0 | 2.0 | 41 | 17 | 177 | 316 | 177 | .6 | .6 | .6 | .6 |
| 25 | 4.8 | 1 | 2.0 | 40 | 12 | 177 | 316 | 177 | .8 | .6 | .6 | .6 |
| 26 | 4.2 | 2 | 2.0 | 36 | 60 | 166 | 595 | 144 | .8 | .6 | .6 | .6 |
| 27 | 3.5 | 2 | 2.0 | 30 | 357 | 155 | 659 | 124 | 1.4 | .7 | .6 | .6 |
| 28 | 4 | 3 | 2.0 | 22 | 502 | 124 | 502 | 98 | 59 | .7 | .6 | .6 |
| 29 | 3 | 3 | 1.4 | 17 | ----- | 85 | 564 | 90 | 83 | .8 | .6 | .6 |
| 30 | 3 | 3.5 | 1.7 | 13 | ----- | 78 | 472 | 104 | 53 | .7 | .6 | .6 |
| 31 | 3 | ----- | 1.9 | 11 | ----- | 74 | ----- | 124 | ----- | .8 | .6 | ----- |

| Month | Discharge in second-feet | | | | | Run-off in inches |
|-----------|--------------------------|---------|------|-------------------------------------|-----------------|-------------------|
| | Observed | | | Corrected for storage and diversion | | |
| | Maximum | Minimum | Mean | Mean | Per square mile | |
| October | 21 | 2.1 | 6.65 | 93.2 | 0.783 | 0.90 |
| November | 3.9 | .6 | 2.24 | 88.1 | .740 | .83 |
| December | 3.5 | .9 | 2.25 | 103 | .866 | 1.00 |
| January | 329 | 1.9 | 89.3 | 226 | 1.90 | 2.19 |
| February | 502 | 6.5 | 82.6 | 208 | 1.75 | 1.82 |
| March | 627 | 74 | 275 | 376 | 3.16 | 3.64 |
| April | 659 | 68 | 318 | 427 | 3.59 | 4.00 |
| May | 385 | 90 | 210 | 306 | 2.57 | 2.96 |
| June | 114 | .6 | 28.9 | 134 | 1.13 | 1.26 |
| July | 42 | .6 | 4.66 | 60.0 | .504 | .58 |
| August | 1.0 | .6 | .69 | 28.0 | .235 | .27 |
| September | 1.7 | .6 | .81 | 46.5 | .391 | .44 |
| The year | 659 | .6 | 85.1 | 174 | 1.46 | 19.89 |

BEAVER BROOK AT OUTLET OF SPLITROCK POND, N. J.

LOCATION.—Water-stage recorder 50 feet below Splitrock Pond, 2 miles north-east of Hibernia, Morris County, and $3\frac{1}{2}$ miles above mouth of Hibernia Brook.

DRAINAGE AREA.—5.5 square miles.

RECORDS AVAILABLE.—October, 1925, to September, 1929.

REMARKS.—Records good. Discharge estimated Nov. 23-30. Entire flow is regulated by operation of sluice gate in Splitrock Pond Dam. Water-stage recorder operated and gage-height record of Splitrock Pond furnished by Jersey City Water Department.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|------|-------|------|------|-------|
| 1..... | 3.9 | 4.6 | 0.83 | 0.32 | 6.0 | 30 | 2.4 | 3.7 | 5.5 | 3.5 | 2.2 | 0.64 |
| 2..... | 4.0 | 4.6 | .70 | .41 | 6.0 | 30 | 2.2 | 3.9 | 3.1 | 3.5 | 2.2 | .64 |
| 3..... | 4.1 | 4.6 | .64 | .41 | 5.8 | 30 | 2.2 | 4.0 | 3.0 | 3.5 | 2.2 | .76 |
| 4..... | 4.2 | 4.6 | .64 | .41 | 5.8 | 11.8 | 2.2 | 12.5 | 3.1 | 3.4 | 2.2 | .83 |
| 5..... | 4.3 | 4.6 | .52 | .41 | 5.8 | 3.0 | 2.2 | 18.6 | 3.1 | 3.5 | 2.2 | .89 |
| 6..... | 4.3 | 4.6 | .36 | .70 | 5.8 | 33 | 19.2 | 19.4 | 3.2 | 3.5 | 2.2 | .76 |
| 7..... | 4.3 | 4.6 | .32 | 1.10 | 6.0 | 44 | 35 | 38 | 3.2 | 3.6 | 2.2 | .70 |
| 8..... | 4.4 | 4.6 | .29 | 1.40 | 6.1 | 43 | 23 | 38 | 3.1 | 3.6 | 1.98 | .76 |
| 9..... | 4.5 | 4.6 | .29 | 12 | 16.6 | 43 | 14 | 21.0 | 2.5 | 3.7 | 1.98 | .83 |
| 10..... | 4.8 | 4.4 | .29 | 23 | 24 | 42 | 21 | 8.2 | 2.1 | 3.9 | 2.1 | .83 |
| 11..... | 5.0 | 4.2 | .29 | 25 | 24 | 23 | 12.5 | 8.2 | 1.9 | 3.7 | 2.2 | .76 |
| 12..... | 5.1 | 3.9 | .29 | 25 | 24 | 2.8 | 22 | 8.2 | 2.3 | 3.4 | 2.2 | .76 |
| 13..... | 5.2 | 3.9 | .29 | 24 | 23 | 2.9 | 35 | 8.5 | 2.4 | 3.2 | 1.72 | .76 |
| 14..... | 5.0 | 3.9 | .29 | 24 | 12.5 | 3.2 | 35 | 19.8 | 2.4 | 3.3 | 1.56 | .83 |
| 15..... | 5.0 | 3.9 | .29 | 13.8 | 7.1 | 22 | 35 | 28 | 2.4 | 2.7 | 1.56 | .89 |
| 16..... | 5.1 | 13.5 | .29 | 6.5 | 7.0 | 43 | 34 | 28 | 2.5 | 2.5 | 1.56 | .96 |
| 17..... | 5.2 | 32 | .29 | 6.5 | 7.0 | 43 | 35 | 14.0 | 2.5 | 2.5 | 1.43 | 1.03 |
| 18..... | 5.3 | 32 | .32 | 6.5 | 3.6 | 42 | 35 | 4.5 | 2.5 | 2.6 | 1.56 | 1.10 |
| 19..... | 5.5 | 26 | .36 | 6.6 | 1.56 | 15.3 | 35 | 4.5 | 2.6 | 2.7 | 1.32 | 1.03 |
| 20..... | 5.1 | 26 | .36 | 6.2 | 1.56 | 6.5 | 34 | 4.4 | 2.5 | 2.5 | 1.10 | 1.03 |
| 21..... | 5.1 | 23 | .36 | 6.2 | 1.64 | 6.4 | 19.0 | 3.7 | 2.5 | 2.2 | 1.18 | 1.03 |
| 22..... | 5.1 | 6.2 | .36 | 6.4 | 1.64 | 6.2 | 10.0 | 11.4 | 2.5 | 2.2 | 1.25 | .89 |
| 23..... | 5.1 | .3 | .32 | 6.4 | 1.64 | 33 | 10.4 | 24 | 2.5 | 2.3 | 1.40 | .76 |
| 24..... | 5.1 | .3 | .32 | 6.4 | 1.64 | 25 | 10.4 | 24 | 2.5 | 2.5 | 1.10 | .64 |
| 25..... | 5.1 | .3 | .32 | 6.4 | 1.64 | 25 | 10.4 | 16.4 | 2.8 | 2.5 | .89 | .47 |
| 26..... | 5.1 | .3 | .36 | 6.4 | 1.64 | 24 | 35 | 8.7 | 3.2 | 2.5 | .89 | .41 |
| 27..... | 5.1 | .3 | .32 | 6.4 | 1.81 | 11.6 | 61 | 8.7 | 3.4 | 2.6 | .96 | .36 |
| 28..... | 5.1 | .3 | .32 | 6.4 | 19.5 | 2.6 | 55 | 8.7 | 3.4 | 2.7 | .96 | .29 |
| 29..... | 5.1 | .3 | .32 | 6.2 | ----- | 2.3 | 51 | 8.7 | 3.5 | 2.7 | .96 | .29 |
| 30..... | 5.0 | .3 | .32 | 6.2 | ----- | 2.2 | 17.6 | 8.7 | 3.5 | 2.7 | .76 | .27 |
| 31..... | 5.0 | ----- | .29 | 6.1 | ----- | 2.2 | ----- | 8.7 | ----- | 2.3 | .64 | ----- |

| Month | Maximum | Minimum | Mean | Month | Maximum | Minimum | Mean |
|---------------|---------|---------|------|----------------|---------|---------|------|
| October..... | 5.5 | 3.9 | 4.85 | May..... | 38 | 3.7 | 13.8 |
| November..... | 32 | .3 | 7.56 | June..... | 5.5 | 1.98 | 2.86 |
| December..... | 83 | .29 | 373 | July..... | 3.9 | 2.2 | 2.97 |
| January..... | 25 | .32 | 8.19 | August..... | 2.2 | .64 | 1.57 |
| February..... | 24 | 1.56 | 8.23 | September..... | 1.10 | .27 | .74 |
| March..... | 44 | 2.2 | 21.1 | The year..... | 61 | .27 | 7.99 |
| April..... | 61 | 2.2 | 23.9 | | | | |

WHIPPANY RIVER AT MORRISTOWN, N. J.

LOCATION.—Staff gage at Morristown sewage disposal plant, three-fourths mile below center of Morristown, Morris County, and 8 miles above mouth of river.

DRAINAGE AREA.—29 square miles.

RECORDS AVAILABLE.—August, 1921, to September, 1929.

EXTREMES.—Maximum discharge during year, about 830 second-feet Feb. 7 (gage height, 6.00 feet); minimum, 8 second-feet Sept. 3-5, (gage height, 0.84 foot).

1921-1929: Maximum discharge, about 1,100 second-feet Aug. 26, 1928 (gage height, 7.30 feet); minimum, 6.3 second-feet Oct. 5 and 7, 1921 (gage height, 0.80 foot).

REMARKS.—Records good. Discharge estimated because of ice Dec. 21-24, Jan. 13-17, 26-31, Feb. 1-5, 12-16, and 20-25. Gage-height record furnished by commissioner of Department of Public Works of Morristown.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | 41 | 33 | 185 | 29 | 22 | 81 | 50 | 110 | 41 | 24 | 12 | 10 |
| 2..... | 41 | 33 | 76 | 33 | 22 | 98 | 41 | 104 | 40 | 23 | 12 | 10 |
| 3..... | 50 | 33 | 41 | 30 | 24 | 86 | 41 | 104 | 38 | 18 | 12 | 8 |
| 4..... | 41 | 43 | 30 | 33 | 26 | 76 | 40 | 92 | 40 | 18 | 12 | 8 |
| 5..... | 40 | 50 | 34 | 40 | 28 | 163 | 50 | 86 | 41 | 18 | 12 | 8 |
| 6..... | 41 | 33 | 30 | 261 | 34 | 277 | 136 | 86 | 47 | 18 | 12 | 17 |
| 7..... | 41 | 33 | 30 | 86 | 411 | 122 | 60 | 200 | 45 | 18 | 12 | 12 |
| 8..... | 33 | 41 | 28 | 60 | 104 | 81 | 49 | 92 | 51 | 17 | 11 | 43 |
| 9..... | 33 | 33 | 27 | 40 | 55 | 76 | 45 | 81 | 42 | 18 | 11 | 52 |
| 10..... | 33 | 33 | 26 | 136 | 42 | 81 | 55 | 76 | 38 | 18 | 11 | 28 |
| 11..... | 33 | 33 | 25 | 70 | 25 | 65 | 53 | 70 | 36 | 17 | 11 | 17 |
| 12..... | 33 | 33 | 25 | 52 | 18 | 65 | 178 | 65 | 35 | 17 | 11 | 12 |
| 13..... | 33 | 34 | 26 | 36 | 18 | 65 | 122 | 104 | 30 | 16 | 11 | 12 |
| 14..... | 33 | 33 | 27 | 22 | 18 | 129 | 76 | 81 | 30 | 17 | 11 | 32 |
| 15..... | 33 | 25 | 25 | 22 | 18 | 129 | 70 | 81 | 35 | 17 | 25 | 20 |
| 16..... | 33 | 25 | 24 | 30 | 22 | 92 | 156 | 70 | 32 | 16 | 14 | 12 |
| 17..... | 33 | 25 | 25 | 36 | 27 | 81 | 200 | 58 | 32 | 16 | 11 | 22 |
| 18..... | 33 | 30 | 57 | 54 | 32 | 65 | 104 | 54 | 39 | 16 | 11 | 59 |
| 19..... | 56 | 31 | 40 | 54 | 32 | 60 | 86 | 122 | 30 | 25 | 31 | 20 |
| 20..... | 41 | 37 | 30 | 39 | 20 | 60 | 81 | 110 | 30 | 18 | 16 | 15 |
| 21..... | 35 | 28 | 22 | 31 | 18 | 58 | 86 | 116 | 30 | 14 | 12 | 12 |
| 22..... | 31 | 31 | 18 | 32 | 46 | 58 | 136 | 86 | 27 | 14 | 11 | 12 |
| 23..... | 33 | 35 | 20 | 38 | 26 | 70 | 98 | 65 | 26 | 14 | 11 | 12 |
| 24..... | 41 | 33 | 24 | 35 | 18 | 65 | 76 | 60 | 25 | 13 | 11 | 11 |
| 25..... | 31 | 31 | 28 | 33 | 22 | 56 | 92 | 86 | 25 | 13 | 11 | 11 |
| 26..... | 32 | 28 | 21 | 26 | 178 | 56 | 377 | 60 | 48 | 12 | 10 | 11 |
| 27..... | 33 | 28 | 22 | 22 | 293 | 52 | 170 | 54 | 28 | 12 | 10 | 11 |
| 28..... | 35 | 28 | 40 | 20 | 156 | 50 | 122 | 50 | 29 | 12 | 13 | 11 |
| 29..... | 33 | 27 | 25 | 20 | ----- | 49 | 200 | 48 | 30 | 12 | 11 | 11 |
| 30..... | 33 | 30 | 21 | 22 | ----- | 46 | 116 | 48 | 24 | 12 | 10 | 11 |
| 31..... | 33 | ----- | 20 | 22 | ----- | 50 | ----- | 47 | ----- | 12 | 11 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 56 | 31 | 36.3 | 1.25 | 1.44 |
| November..... | 50 | 25 | 32.3 | 1.11 | 1.24 |
| December..... | 185 | 18 | 34.6 | 1.19 | 1.37 |
| January..... | 261 | 20 | 47.2 | 1.63 | 1.88 |
| February..... | 411 | 18 | 62.7 | 2.16 | 2.25 |
| March..... | 277 | 46 | 82.6 | 2.85 | 3.29 |
| April..... | 377 | 40 | 106 | 3.66 | 4.08 |
| May..... | 200 | 47 | 82.8 | 2.86 | 3.30 |
| June..... | 51 | 24 | 34.8 | 1.20 | 1.34 |
| July..... | 25 | 12 | 16.3 | .562 | .65 |
| August..... | 31 | 10 | 12.6 | .434 | .50 |
| September..... | 59 | 8 | 17.7 | .610 | .68 |
| The year..... | 411 | 8 | 47.0 | 1.62 | 22.02 |

RAMAPO RIVER NEAR MAHWAH, N. J.

LOCATION.—Water-stage recorder at highway bridge three-fourths mile below mouth of Mahwah River and 1 mile west of Mahwah, Bergen County.

DRAINAGE AREA.—118 square miles.

RECORDS AVAILABLE.—February, 1903, to July, 1914; September, 1922, to September, 1929. Gage heights only 1907 to 1914.

EXTREMES.—Maximum discharge during year, about 1,560 second-feet Mar. 6 (gage heights, 6.47 feet); minimum mean daily discharge, about 8 second-feet Aug. 25.

1922-1929: Maximum discharge, about 2,760 second-feet Sept. 2, 1927 (gage height, 8.23 feet); minimum mean daily discharge, that of Aug. 25, 1929.

REMARKS.—Records good prior to June 15; thereafter, fair. Discharge estimated Apr. 16-23 and June 20-22.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|-------|-------|-------|-------|-----|-------|------|------|-------|
| 1 | 80 | 49 | 136 | 76 | 95 | 413 | 204 | 413 | 127 | 110 | 42 | 15 |
| 2 | 69 | 49 | 118 | 174 | 89 | 385 | 215 | 385 | 110 | 92 | 34 | 16 |
| 3 | 68 | 48 | 100 | 136 | 79 | 472 | 184 | 385 | 96 | 89 | 29 | 18 |
| 4 | 62 | 58 | 89 | 127 | 82 | 442 | 174 | 332 | 89 | 73 | 31 | 17 |
| 5 | 64 | 96 | 90 | 94 | 75 | 747 | 215 | 307 | 73 | 57 | 37 | 18 |
| 6 | 73 | 75 | 90 | 910 | 75 | 1,490 | 260 | 332 | 110 | 58 | 33 | 26 |
| 7 | 56 | 80 | 86 | 1,060 | 662 | 1,070 | 260 | 472 | 101 | 49 | 32 | 43 |
| 8 | 58 | 79 | 69 | 534 | 760 | 630 | 215 | 358 | 100 | 41 | 31 | 110 |
| 9 | 62 | 72 | 58 | 358 | 442 | 503 | 204 | 307 | 95 | 36 | 29 | 110 |
| 10 | 56 | 71 | 78 | 358 | 358 | 385 | 215 | 272 | 89 | 59 | 24 | 75 |
| 11 | 58 | 52 | 51 | 385 | 283 | 358 | 260 | 237 | 83 | 44 | 19 | 59 |
| 12 | 58 | 67 | 72 | 307 | 237 | 332 | 433 | 237 | 64 | 42 | 30 | 51 |
| 13 | 58 | 62 | 72 | 237 | 194 | 442 | 728 | 385 | 76 | 37 | 28 | 52 |
| 14 | 47 | 59 | 46 | 194 | 174 | 823 | 565 | 332 | 71 | 34 | 29 | 56 |
| 15 | 52 | 55 | 63 | 174 | 164 | 1,170 | 442 | 307 | 71 | 35 | 37 | 63 |
| 16 | 52 | 46 | 57 | 155 | 146 | 960 | 550 | 272 | 66 | 35 | 33 | 59 |
| 17 | 50 | 44 | 78 | 146 | 155 | 728 | 950 | 237 | 60 | 23 | 28 | 72 |
| 18 | 49 | 48 | 110 | 155 | 146 | 534 | 850 | 204 | 64 | 32 | 22 | 88 |
| 19 | 57 | 60 | 127 | 237 | 164 | 442 | 550 | 267 | 60 | 63 | 29 | 56 |
| 20 | 55 | 62 | 101 | 226 | 146 | 385 | 440 | 385 | 80 | 71 | 24 | 43 |
| 21 | 44 | 56 | 89 | 174 | 136 | 358 | 440 | 385 | 85 | 51 | 16 | 33 |
| 22 | 52 | 67 | 76 | 164 | 136 | 332 | 600 | 413 | 80 | 57 | 15 | 28 |
| 23 | 51 | 57 | 64 | 155 | 136 | 332 | 650 | 332 | 71 | 45 | 14 | 22 |
| 24 | 58 | 55 | 79 | 146 | 118 | 307 | 503 | 283 | 98 | 30 | 12 | 18 |
| 25 | 62 | 41 | 62 | 136 | 127 | 283 | 466 | 272 | 118 | 32 | 8 | 17 |
| 26 | 53 | 39 | 64 | 146 | 248 | 283 | 795 | 226 | 164 | 26 | 12 | 19 |
| 27 | 62 | 44 | 76 | 118 | 472 | 272 | 597 | 204 | 136 | 26 | 12 | 18 |
| 28 | 41 | 43 | 79 | 118 | 630 | 237 | 518 | 194 | 110 | 21 | 20 | 19 |
| 29 | 66 | 52 | 76 | 110 | ----- | 204 | 630 | 184 | 155 | 35 | 25 | 12 |
| 30 | 48 | 59 | 69 | 101 | ----- | 204 | 503 | 164 | 110 | 37 | 23 | 16 |
| 31 | 47 | ----- | 78 | 89 | ----- | 204 | ----- | 146 | ----- | 36 | 21 | ----- |

| Month | Maximum | Minimum | Mean | For square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 80 | 41 | 57.0 | 0.483 | 0.56 |
| November | 96 | 39 | 58.2 | .493 | .55 |
| December | 136 | 46 | 80.7 | .684 | .79 |
| January | 1,060 | 76 | 242 | 2.05 | 2.36 |
| February | 760 | 75 | 233 | 1.97 | 2.05 |
| March | 1,490 | 204 | 507 | 4.30 | 4.96 |
| April | 950 | 174 | 454 | 3.85 | 4.30 |
| May | 472 | 146 | 298 | 2.53 | 2.92 |
| June | 164 | 60 | 93.7 | .794 | .89 |
| July | 110 | 21 | 47.6 | .403 | .46 |
| August | 42 | 8 | 25.1 | .213 | .25 |
| September | 110 | 12 | 41.6 | .353 | .39 |
| The year | 1,490 | 8 | 178 | 1.51 | 20.48 |

RAMAPO RIVER AT POMPTON LAKES, N. J.

LOCATION.—Water-stage recorders at hydroelectric plant in borough of Pompton Lakes, Passaic County, 1½ miles above mouth of Ramapo River.

DRAINAGE AREA.—160 square miles.

RECORDS AVAILABLE.—October, 1921, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,940 second-feet (flow through turbines not included) Mar. 6 (gage height, 1.24 feet).

1921-1929: Maximum discharge, about 7,220 second-feet (flow through turbines not included) Sept. 2, 1927 (gage height, 2.68 feet).

REMARKS.—Records good. Discharge in tailrace estimated Nov. 10-12 and Feb. 8. Flow regulated by storage in pond. Daily discharge includes flow over spillway and through turbines. Gage-height and power-house records furnished by Jersey Central Power & Light Co.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|-------|-------|-------|-------|-----|-------|------|------|-------|
| 1 | 140 | 27 | 169 | 62 | 154 | 679 | 251 | 619 | 219 | 98 | 109 | 10 |
| 2 | 144 | 19 | 194 | 125 | 147 | 537 | 282 | 525 | 190 | 104 | 10 | 10 |
| 3 | 131 | 19 | 170 | 117 | 147 | 694 | 258 | 525 | 60 | 106 | 38 | 10 |
| 4 | 127 | 58 | 89 | 133 | 147 | 667 | 244 | 481 | 115 | 10 | 10 | 10 |
| 5 | 114 | 63 | 81 | 141 | 129 | 957 | 272 | 411 | 168 | 113 | 89 | 10 |
| 6 | 140 | 71 | 57 | 874 | 41 | 1,940 | 332 | 427 | 76 | 111 | 10 | 10 |
| 7 | 53 | 60 | 127 | 1,470 | 690 | 1,600 | 339 | 610 | 128 | 10 | 10 | 111 |
| 8 | 92 | 49 | 120 | 749 | 1,080 | 950 | 299 | 539 | 168 | 104 | 10 | 109 |
| 9 | 48 | 52 | 39 | 514 | 643 | 697 | 270 | 433 | 161 | 60 | 10 | 123 |
| 10 | 40 | 57 | 48 | 489 | 489 | 518 | 271 | 375 | 161 | 10 | 109 | 121 |
| 11 | 29 | 52 | 45 | 561 | 394 | 470 | 322 | 331 | 73 | 10 | 10 | 48 |
| 12 | 48 | 52 | 41 | 431 | 325 | 437 | 541 | 312 | 104 | 104 | 10 | 104 |
| 13 | 118 | 110 | 51 | 340 | 270 | 507 | 1,070 | 459 | 111 | 98 | 10 | 10 |
| 14 | 36 | 34 | 86 | 263 | 251 | 920 | 829 | 453 | 104 | 10 | 56 | 111 |
| 15 | 59 | 59 | 29 | 261 | 228 | 1,470 | 661 | 412 | 111 | 10 | 10 | 10 |
| 16 | 56 | 34 | 58 | 229 | 217 | 1,280 | 846 | 360 | 10 | 96 | 109 | 111 |
| 17 | 51 | 35 | 57 | 222 | 200 | 1,000 | 1,660 | 310 | 98 | 10 | 10 | 10 |
| 18 | 57 | 51 | 90 | 222 | 210 | 742 | 1,430 | 277 | 98 | 10 | 10 | 117 |
| 19 | 26 | 94 | 128 | 288 | 189 | 618 | 1,030 | 307 | 104 | 10 | 63 | 148 |
| 20 | 69 | 66 | 100 | 315 | 205 | 538 | 779 | 530 | 98 | 100 | 56 | 10 |
| 21 | 3 | 62 | 88 | 253 | 197 | 481 | 719 | 525 | 104 | 10 | 10 | 110 |
| 22 | 60 | 41 | 129 | 221 | 197 | 444 | 844 | 579 | 117 | 102 | 10 | 10 |
| 23 | 59 | 50 | 86 | 213 | 197 | 436 | 829 | 449 | 10 | 102 | 102 | 10 |
| 24 | 75 | 97 | 81 | 203 | 197 | 415 | 689 | 378 | 104 | 10 | 10 | 94 |
| 25 | 61 | 36 | 88 | 212 | 197 | 371 | 605 | 372 | 98 | 11 | 10 | 10 |
| 26 | 55 | 69 | 53 | 206 | 229 | 356 | 1,250 | 316 | 141 | 126 | 10 | 10 |
| 27 | 52 | 36 | 74 | 171 | 687 | 346 | 974 | 279 | 155 | 96 | 10 | 94 |
| 28 | 3 | 26 | 93 | 150 | 879 | 312 | 764 | 259 | 104 | 10 | 109 | 10 |
| 29 | 45 | 42 | 101 | 120 | ----- | 287 | 964 | 262 | 139 | 10 | 10 | 10 |
| 30 | 41 | 65 | 79 | 154 | ----- | 265 | 749 | 230 | 148 | 10 | 10 | 10 |
| 31 | 31 | ----- | 98 | 154 | ----- | 268 | ----- | 219 | ----- | 12 | 118 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-------------------|-------------------|
| October | 144 | 3 | 66.5 | 0.41 ^c | 0.48 |
| November | 110 | 19 | 52.9 | .331 | .37 |
| December | 194 | 29 | 88.7 | .554 | .64 |
| January | 1,470 | 62 | 318 | 1.96 | 2.29 |
| February | 1,080 | 41 | 319 | 1.96 | 2.07 |
| March | 1,940 | 265 | 684 | 4.28 | 4.93 |
| April | 1,660 | 244 | 679 | 4.24 | 4.73 |
| May | 619 | 219 | 405 | 2.55 | 2.92 |
| June | 219 | 10 | 116 | .725 | .81 |
| July | 126 | 10 | 54.3 | .339 | .39 |
| August | 109 | 10 | 37.4 | .234 | .27 |
| September | 148 | 10 | 52.4 | .328 | .37 |
| The year | 1,940 | 3 | 239 | 1.46 | 20.27 |

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, 1929.

EXTREMES.—Maximum gage height during year, 100.6 feet Jan. 9-26, Mar. 7 and 8; minimum, 99.55 feet Aug. 13, 14, and 17.

1898-1903, 1907-1929: Maximum gage height, about 104.0 feet Oct. 9-14, 1903; minimum, 98.25 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 this date. Records furnished by Morris Canal & Banking Co.

Daily gage height, in feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
| 1 | 99.85 | 99.85 | 99.95 | 99.95 | 100.01 | 100.3 | 100.2 | 100.3 | 100.0 | 100.0 | 99.7 | 99.7 |
| 2 | 99.85 | 99.82 | 99.95 | 100.05 | 100.0 | 100.3 | 100.2 | 100.25 | 100.0 | 100.0 | 99.7 | 99.7 |
| 3 | 99.85 | 99.85 | 99.95 | 100.05 | 100.0 | 100.3 | 100.25 | 100.2 | 99.95 | 99.95 | 99.7 | 99.7 |
| 4 | 99.85 | 99.85 | 99.95 | 100.0 | 99.7 | 100.25 | 100.25 | 100.2 | 99.9 | 99.9 | 99.65 | 99.7 |
| 5 | 99.85 | 99.9 | 99.95 | 100.0 | 99.7 | 100.3 | 100.2 | 100.2 | 99.9 | 99.9 | 99.65 | 99.7 |
| 6 | 99.85 | 99.9 | 99.95 | 100.35 | 99.75 | 100.5 | 100.2 | 100.15 | 99.95 | 99.9 | 99.65 | 99.7 |
| 7 | 99.82 | 99.9 | 99.92 | 100.4 | 100.0 | 100.6 | 100.2 | 100.1 | 99.9 | 99.9 | 99.65 | 99.7 |
| 8 | 99.82 | 99.9 | 99.9 | 100.5 | 100.2 | 100.6 | 100.1 | 100.1 | 99.9 | 99.9 | 99.65 | 99.7 |
| 9 | 99.82 | 99.9 | 99.9 | 100.6 | 100.2 | 100.5 | 100.1 | 100.15 | 99.9 | 99.9 | 99.65 | 99.7 |
| 10 | 99.82 | 99.9 | 99.9 | 100.6 | 100.15 | 100.3 | 100.05 | 100.15 | 99.85 | 99.85 | 99.6 | 99.7 |
| 11 | 99.82 | 99.9 | 99.9 | 100.6 | 100.2 | 100.3 | 100.1 | 100.1 | 99.85 | 99.85 | 99.6 | 99.7 |
| 12 | 99.82 | 99.9 | 99.9 | 100.1 | 100.1 | 100.2 | 100.1 | 100.1 | 99.9 | 99.85 | 99.6 | 99.6 |
| 13 | 99.82 | 99.85 | 99.9 | 100.6 | 100.1 | 100.3 | 100.05 | 100.15 | 99.9 | 99.8 | 99.55 | 99.6 |
| 14 | 99.82 | 99.85 | 99.9 | 100.6 | 100.0 | 100.3 | 100.05 | 100.15 | 99.9 | 99.8 | 99.55 | 99.7 |
| 15 | 99.82 | 99.85 | 99.9 | 100.6 | 100.05 | 100.3 | 100.1 | 100.15 | 99.9 | 99.8 | 99.6 | 99.7 |
| 16 | 99.82 | 99.82 | 99.9 | 100.6 | 100.0 | 100.3 | 100.2 | 100.1 | 99.9 | 99.75 | 99.6 | 99.7 |
| 17 | 99.82 | 99.82 | 99.9 | 100.6 | 100.0 | 100.2 | 100.3 | 100.15 | 99.9 | 99.75 | 99.55 | 99.7 |
| 18 | 99.8 | 99.82 | 99.92 | 100.6 | 100.0 | 100.2 | 100.35 | 100.2 | 99.9 | 99.75 | 99.6 | 99.6 |
| 19 | 99.8 | 99.82 | 99.95 | 100.6 | 100.0 | 100.2 | 100.35 | 100.2 | 99.9 | 99.7 | 99.6 | 99.6 |
| 20 | 99.8 | 99.85 | 100.0 | 100.6 | 100.0 | 100.25 | 100.4 | 100.15 | 99.9 | 99.7 | 99.6 | 99.6 |
| 21 | 99.82 | 99.85 | 100.0 | 100.6 | 100.05 | 100.25 | 100.4 | 100.15 | 99.85 | 99.7 | 99.6 | 99.6 |
| 22 | 99.82 | 99.88 | 99.98 | 100.6 | 100.05 | 100.2 | 100.5 | 100.1 | 99.9 | 99.75 | 99.65 | 99.6 |
| 23 | 99.82 | 99.88 | 99.95 | 100.6 | 100.05 | 100.2 | 100.5 | 100.1 | 99.9 | 99.8 | 99.65 | 99.6 |
| 24 | 99.9 | 99.9 | 99.95 | 100.6 | 100.0 | 100.25 | 100.4 | 100.15 | 99.9 | 99.75 | 99.65 | 99.6 |
| 25 | 99.9 | 99.9 | 99.95 | 100.6 | 100.1 | 100.25 | 100.4 | 100.15 | 100.0 | 99.75 | 99.6 | 99.7 |
| 26 | 99.88 | 99.9 | 99.95 | 100.6 | 100.1 | 100.2 | 100.4 | 100.1 | 100.0 | 99.7 | 99.6 | 99.7 |
| 27 | 99.88 | 99.9 | 99.95 | 100.55 | 100.3 | 100.2 | 100.35 | 100.1 | 99.95 | 99.7 | 99.6 | 99.7 |
| 28 | 99.85 | 99.9 | 99.95 | 100.5 | 100.3 | 100.2 | 100.3 | 100.1 | 99.95 | 99.7 | 99.6 | 99.6 |
| 29 | 99.85 | 99.9 | 99.95 | 100.4 | ----- | 100.25 | 100.3 | 100.05 | 100.0 | 99.7 | 99.6 | 99.6 |
| 30 | 99.85 | 99.9 | 99.95 | 100.3 | ----- | 100.25 | 100.3 | 100.05 | 100.0 | 99.7 | 99.6 | 99.6 |
| 31 | 99.85 | ----- | 99.95 | 100.2 | ----- | 100.2 | ----- | 100.0 | ----- | 99.65 | 99.6 | ----- |

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, 1929.

EXTREMES.—Maximum discharge during year, 280 second-feet Jan. 7 (gage height, 2.71 feet); no flow during several periods.

1919-1929: Maximum discharge, about 600 second-feet Apr. 7, 1924 (gage height, 3.72 feet); no flow at times when 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. Water-stage recorder operated by North Jersey District Water Supply Commission.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | 5.3 | 1.9 | 18 | 24 | 24 | 103 | 40 | 97 | 47 | 38 | 0 | 0 |
| 2..... | 2.9 | 1.7 | 20 | 41 | 23 | 110 | 44 | 91 | 36 | 34 | 0 | 0 |
| 3..... | 2.1 | 1.7 | 24 | 42 | 20 | 116 | 38 | 80 | 26 | 24 | 0 | 0 |
| 4..... | 2.6 | 5.3 | 28 | 39 | 18 | 116 | 37 | 75 | 20 | 13 | .2 | 0 |
| 5..... | 2.9 | 9.8 | 29 | 36 | 16 | 150 | 44 | 75 | 15 | 13 | 0 | 0 |
| 6..... | 2.9 | 9.3 | 26 | 196 | 15 | 261 | 50 | 80 | 22 | 16 | 0 | 0 |
| 7..... | 7.0 | 10 | 20 | 261 | 54 | 261 | 50 | 97 | 20 | 14 | 0 | 0 |
| 8..... | 6.8 | 10 | 17 | 224 | 97 | 215 | 50 | 86 | 19 | 13 | 0 | 0 |
| 9..... | 2.6 | 14 | 14 | 173 | 97 | 166 | 50 | 75 | 18 | 12 | 0 | 0 |
| 10..... | 2.1 | 9.5 | 12 | 150 | 91 | 136 | 54 | 66 | 16 | 11 | 0 | 0 |
| 11..... | 1.4 | 9.5 | 11 | 136 | 80 | 110 | 50 | 54 | 13 | 7.7 | 0 | .4 |
| 12..... | .5 | 8.4 | 12 | 116 | 70 | 97 | 70 | 54 | 11 | 5.3 | 0 | 0 |
| 13..... | .6 | 9.8 | 12 | 91 | 58 | 103 | 116 | 70 | 11 | 3.3 | 0 | 0 |
| 14..... | .8 | 6.6 | 12 | 75 | 50 | 150 | 116 | 66 | 9.8 | 4.5 | 0 | 0 |
| 15..... | 0 | 14 | 12 | 66 | 44 | 206 | 110 | 70 | 11 | 1.9 | 0 | 0 |
| 16..... | 0 | 7.3 | 12 | 58 | 40 | 215 | 150 | 70 | 11 | .8 | 0 | 0 |
| 17..... | 0 | 3.9 | 11 | 50 | 34 | 189 | 198 | 58 | 9.5 | .2 | 0 | 0 |
| 18..... | .4 | 6.4 | 28 | 47 | 33 | 158 | 206 | 50 | 8.2 | 1.1 | 0 | .8 |
| 19..... | 2.3 | 12 | 28 | 54 | 34 | 129 | 181 | 62 | 8.4 | 8.2 | 0 | .1 |
| 20..... | 2.0 | 8 | 28 | 58 | 35 | 116 | 150 | 80 | 10 | 5.3 | 0 | .2 |
| 21..... | .2 | 7 | 26 | 54 | 41 | 91 | 150 | 86 | 9.3 | 2.3 | 0 | .2 |
| 22..... | 0 | 7 | 24 | 47 | 41 | 86 | 150 | 86 | 7.4 | 1.4 | 0 | 0 |
| 23..... | 0 | 7 | 24 | 47 | 38 | 80 | 143 | 75 | 5.9 | 1.2 | 0 | 0 |
| 24..... | 6.6 | 6.8 | 22 | 43 | 35 | 75 | 122 | 66 | 12 | 1.2 | 0 | 0 |
| 25..... | 9.3 | 9.0 | 20 | 47 | 31 | 62 | 116 | 66 | 40 | .5 | 0 | 0 |
| 26..... | 10 | 6.6 | 18 | 50 | 41 | 62 | 143 | 58 | 50 | .3 | 0 | 0 |
| 27..... | 7.4 | 6.2 | 16 | 44 | 66 | 58 | 143 | 54 | 41 | 0 | 0 | 0 |
| 28..... | 6.4 | 2.6 | 22 | 39 | 103 | 54 | 129 | 50 | 41 | 0 | 0 | 0 |
| 29..... | 6.8 | 2.9 | 22 | 35 | ----- | 46 | 129 | 54 | 58 | 0 | 0 | 0 |
| 30..... | 4.5 | 5.9 | 22 | 29 | ----- | 39 | 116 | 58 | 45 | 0 | 0 | 0 |
| 31..... | 2.1 | ----- | 20 | 26 | ----- | 40 | ----- | 50 | ----- | 0 | 0 | ----- |

| Month | Maximum | Minimum | Mean | Month | Maximum | Minimum | Mean |
|---------------|---------|---------|------|----------------|---------|---------|------|
| October..... | 10 | 0 | 3.18 | May..... | 97 | 50 | 69.6 |
| November..... | 14 | 1.7 | 7.34 | June..... | 58 | 5.9 | 21.7 |
| December..... | 29 | 11 | 19.7 | July..... | 38 | 0 | 7.52 |
| January..... | 261 | 24 | 77.4 | August..... | .2 | 0 | 0 |
| February..... | 103 | 15 | 47.5 | September..... | .8 | 0 | .06 |
| March..... | 261 | 39 | 123 | | | | |
| April..... | 206 | 37 | 105 | The year..... | 261 | 0 | 40.1 |

WANAQUE RIVER AT WANAQUE, N. J.

LOCATION.—Water-stage recorder 100 feet below Erie Railroad bridge and 400 feet below highway bridge in Wanaque, Passaic County.

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, 1929.

EXTREMES.—Maximum discharge during year, 1,040 second-feet Mar. 6 (gage height, 3.78 feet); minimum, 6 second-feet Sept. 12 (gage height, 0.35 foot). 1903-1905, 1912-1915, 1919-1929: Maximum gage height, 8.35 feet, from high-water marks, July 22 or 23, 1919 (discharge not determined); minimum discharge, 1 second-foot Apr. 5, 1928 (gage height, 0.16 foot).

REMARKS.—Records good. Discharge estimated Feb. 21, 22, Mar. 10, 18, 29-31, Apr. 1, and 2. Flow regulated by storage in Wanaque Reservoir, 500 feet upstream and in Greenwood Lake, 11 miles upstream. Water-stage recorder operated by North Jersey District Water Supply Commission.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | 28 | 29 | 28 | 30 | 25 | 29 | 120 | 329 | 121 | 76 | 91 | 95 |
| 2..... | 28 | 29 | 28 | 30 | 25 | 29 | 90 | 305 | 78 | 46 | 91 | 95 |
| 3..... | 28 | 29 | 28 | 30 | 25 | 29 | 36 | 292 | 78 | 39 | 88 | 93 |
| 4..... | 28 | 30 | 28 | 30 | 25 | 44 | 36 | 266 | 72 | 39 | 93 | 93 |
| 5..... | 28 | 30 | 28 | 30 | 25 | 354 | 36 | 252 | 58 | 38 | 95 | 93 |
| 6..... | 28 | 30 | 28 | 31 | 25 | 945 | 36 | 266 | 66 | 33 | 93 | 93 |
| 7..... | 28 | 30 | 28 | 31 | 29 | 855 | 36 | 329 | 72 | 35 | 91 | 98 |
| 8..... | 28 | 30 | 28 | 31 | 27 | 580 | 36 | 292 | 76 | 36 | 93 | 104 |
| 9..... | 29 | 30 | 28 | 31 | 27 | 478 | 35 | 252 | 78 | 36 | 93 | 63 |
| 10..... | 29 | 29 | 28 | 31 | 27 | 378 | 35 | 224 | 70 | 36 | 80 | 31 |
| 11..... | 29 | 29 | 28 | 31 | 27 | 305 | 35 | 210 | 56 | 40 | 80 | 31 |
| 12..... | 29 | 29 | 28 | 31 | 26 | 510 | 36 | 210 | 52 | 40 | 80 | 30 |
| 13..... | 29 | 29 | 28 | 31 | 26 | 650 | 36 | 252 | 51 | 39 | 88 | 38 |
| 14..... | 29 | 29 | 28 | 31 | 26 | 690 | 37 | 238 | 50 | 40 | 91 | 44 |
| 15..... | 29 | 29 | 28 | 31 | 26 | 730 | 37 | 252 | 51 | 48 | 91 | 45 |
| 16..... | 29 | 29 | 28 | 31 | 26 | 730 | 37 | 266 | 50 | 54 | 91 | 54 |
| 17..... | 30 | 29 | 28 | 31 | 26 | 730 | 37 | 181 | 48 | 88 | 91 | 74 |
| 18..... | 30 | 29 | 28 | 31 | 26 | 730 | 36 | 167 | 50 | 74 | 93 | 74 |
| 19..... | 30 | 29 | 28 | 31 | 26 | 770 | 36 | 210 | 58 | 63 | 93 | 74 |
| 20..... | 30 | 28 | 28 | 31 | 26 | 770 | 35 | 279 | 52 | 59 | 95 | 74 |
| 21..... | 30 | 28 | 28 | 31 | 26 | 770 | 35 | 292 | 50 | 58 | 95 | 74 |
| 22..... | 30 | 28 | 28 | 31 | 28 | 770 | 35 | 292 | 38 | 58 | 95 | 72 |
| 23..... | 30 | 28 | 28 | 28 | 28 | 770 | 35 | 266 | 36 | 56 | 82 | 72 |
| 24..... | 30 | 28 | 28 | 25 | 28 | 770 | 35 | 238 | 36 | 56 | 72 | 72 |
| 25..... | 30 | 28 | 28 | 25 | 28 | 770 | 37 | 238 | 37 | 56 | 72 | 72 |
| 26..... | 29 | 28 | 28 | 25 | 29 | 730 | 42 | 210 | 54 | 56 | 74 | 72 |
| 27..... | 29 | 28 | 29 | 25 | 29 | 730 | 72 | 187 | 46 | 56 | 76 | 72 |
| 28..... | 29 | 28 | 29 | 25 | 29 | 730 | 252 | 173 | 58 | 72 | 82 | 72 |
| 29..... | 29 | 28 | 29 | 25 | ----- | 730 | 412 | 173 | 78 | 74 | 84 | 72 |
| 30..... | 29 | 28 | 29 | 25 | ----- | 730 | 354 | 173 | 70 | 82 | 86 | 70 |
| 31..... | 29 | ----- | 29 | 25 | ----- | 730 | ----- | 167 | ----- | 88 | 93 | ----- |

| Month | Maxi- mum | Mini- mum | Mean | Month | Maxi- mum | Mini- mum | Mean |
|---------------|--------------|--------------|------|----------------|--------------|--------------|------|
| October..... | 30 | 28 | 29.0 | May..... | 329 | 167 | 241 |
| November..... | 30 | 28 | 28.8 | June..... | 121 | 36 | 59.8 |
| December..... | 29 | 28 | 28.2 | July..... | 88 | 33 | 53.9 |
| January..... | 31 | 25 | 29.2 | August..... | 95 | 72 | 87.5 |
| February..... | 29 | 25 | 26.6 | September..... | 104 | 30 | 70.5 |
| March..... | 945 | 29 | 599 | The year..... | 945 | 25 | 112 |
| April..... | 412 | 35 | 72.2 | | | | |

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, 1929.

REMARKS.—Table of daily discharge indicates flow over intake dam. Water diverted at intake dam. Flow regulated by several reservoirs. Station operated and base data furnished by bureau of water, city of Newark.

Daily and monthly discharge, in second-feet, 1923-29

| Day | Jan. | Feb. | Mar. | Apr. | May | June | July |
|---------|------|------|-------|------|-------|-------|------|
| 1..... | 0 | 0 | 0 | 35 | 144 | 29 | 22 |
| 2..... | 0 | 0 | 4.5 | 49 | 128 | 11 | 11 |
| 3..... | 0 | 0 | 12 | 28 | 128 | 0 | 4 |
| 4..... | 0 | 0 | 30 | 26 | 114 | 0 | 0 |
| 5..... | 0 | 0 | 109 | 82 | 95 | 0 | 0 |
| 6..... | 108 | 0 | 155 | 124 | 90 | 0 | 0 |
| 7..... | 124 | 46 | 108 | 90 | 149 | 0 | 0 |
| 8..... | 35 | 55 | 46 | 61 | 131 | 0 | 0 |
| 9..... | 12 | 5.6 | 16 | 38 | 86 | 0 | 0 |
| 10..... | 14 | 0 | 0 | 49 | 61 | 0 | 0 |
| 11..... | 20 | 0 | 0 | 65 | 38 | 0 | 0 |
| 12..... | .9 | 0 | 0 | 171 | 35 | 0 | 0 |
| 13..... | 0 | 0 | 32 | 290 | 61 | 0 | 0 |
| 14..... | 0 | 0 | 77 | 243 | 65 | 0 | 0 |
| 15..... | 0 | 0 | 77 | 189 | 73 | 0 | 0 |
| 16..... | 0 | 0 | 69 | 287 | 61 | 0 | 0 |
| 17..... | 0 | 0 | 56 | 489 | 28 | 0 | 0 |
| 18..... | 0 | 0 | 56 | 456 | 13 | 0 | 0 |
| 19..... | .6 | 0 | 86 | 277 | 72 | 0 | 0 |
| 20..... | 0 | 0 | 128 | 200 | 133 | 0 | 0 |
| 21..... | 0 | 0 | 128 | 218 | 128 | 0 | 0 |
| 22..... | 0 | 0 | 128 | 243 | 114 | 0 | 0 |
| 23..... | 0 | 0 | 128 | 206 | 73 | 0 | 0 |
| 24..... | 0 | 0 | 124 | 165 | 56 | 0 | 0 |
| 25..... | 0 | 0 | 97 | 194 | 56 | 0 | 0 |
| 26..... | 0 | 0 | 81 | 305 | 38 | 0 | 0 |
| 27..... | 0 | 69 | 61 | 263 | 19 | 0 | 0 |
| 28..... | 0 | 49 | 49 | 212 | 46 | 0 | 0 |
| 29..... | 0 | 42 | 231 | 196 | 0 | 0 | 0 |
| 30..... | 0 | 32 | 182 | 155 | 0 | 0 | 0 |
| 31..... | 0 | 28 | ----- | 69 | ----- | ----- | 0 |

| Month | Observed | | | Corrected for storage and diversion | | Run-off in inches |
|----------------|----------|---------|------|-------------------------------------|-----------------|-------------------|
| | Maximum | Minimum | Mean | Mean | Per square mile | |
| October..... | 0 | 0 | 0 | 29.3 | 0.460 | 0.53 |
| November..... | 0 | 0 | 0 | 33.4 | .603 | .67 |
| December..... | 0 | 0 | 0 | 51.4 | .867 | .93 |
| January..... | 124 | 0 | 10.1 | 147 | 2.31 | 2.66 |
| February..... | 69 | 0 | 8.02 | 113 | 1.77 | 1.84 |
| March..... | 155 | 0 | 63.2 | 254 | 3.95 | 4.60 |
| April..... | 489 | 26 | 182 | 272 | 4.27 | 4.76 |
| May..... | 196 | 13 | 85.6 | 178 | 2.75 | 3.22 |
| June..... | 29 | 0 | 1.33 | 85.5 | 1.34 | 1.50 |
| July..... | 22 | 0 | 1.19 | 34.7 | .545 | .63 |
| August..... | 0 | 0 | 0 | 9.57 | .150 | .17 |
| September..... | 0 | 0 | 0 | 23.5 | .360 | .41 |
| The year..... | 489 | 0 | 28.3 | 103 | 1.62 | 21.92 |

NOTE.—No flow during months for which no discharge is given.

SADDLE RIVER AT LODI, N. J.

LOCATION.—Water-stage recorder at highway bridge, 1 mile above Lodi, Bergen County, and 2¼ miles above mouth of river.

DRAINAGE AREA.—55 square miles.

RECORDS AVAILABLE.—September, 1923, to September, 1929.

EXTREMES.—Maximum discharge during year, about 1,300 second-feet Feb. 8 (gage height, 6.00 feet); minimum not determined.

1923-1929: Maximum discharge, about 1,630 second-feet Sept. 2, 1927 (gage height, 6.82 feet); minimum, 5.3 second-feet Nov. 22, 1923 (gage height, 1.49 feet).

REMARKS.—Records good. Stage-discharge relation affected by ice Dec. 21, Jan. 14-16, 30, 31, Feb. 1-5, and 14. Discharge estimated Dec. 22-26, Feb. 22-25, and July 16 to Aug. 31.

Daily and monthly discharge, in second-feet, of 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1 | 77 | 44 | 115 | 50 | 36 | 254 | 101 | 178 | 65 | 47 | 18 | 15 |
| 2 | 69 | 44 | 134 | 93 | 34 | 178 | 104 | 166 | 60 | 45 | 19 | 17 |
| 3 | 64 | 42 | 80 | 84 | 32 | 268 | 101 | 155 | 59 | 41 | 19 | 17 |
| 4 | 61 | 56 | 68 | 59 | 30 | 282 | 95 | 166 | 57 | 36 | 22 | 18 |
| 5 | 60 | 87 | 64 | 48 | 28 | 241 | 101 | 144 | 57 | 38 | 22 | 10 |
| 6 | 65 | 78 | 65 | 134 | 38 | 418 | 124 | 134 | 64 | 41 | 19 | 20 |
| 7 | 62 | 61 | 59 | 296 | 248 | 370 | 134 | 202 | 65 | 40 | 19 | 16 |
| 8 | 56 | 54 | 51 | 155 | 688 | 215 | 103 | 254 | 64 | 34 | 17 | 69 |
| 9 | 56 | 62 | 57 | 117 | 292 | 166 | 90 | 134 | 86 | 33 | 16 | 119 |
| 10 | 54 | 56 | 46 | 101 | 134 | 119 | 90 | 108 | 69 | 32 | 19 | 95 |
| 11 | 51 | 53 | 48 | 144 | 106 | 124 | 120 | 103 | 59 | 36 | 21 | 37 |
| 12 | 51 | 48 | 45 | 111 | 87 | 119 | 134 | 100 | 50 | 32 | 21 | 27 |
| 13 | 51 | 49 | 47 | 77 | 72 | 119 | 282 | 134 | 47 | 32 | 21 | 20 |
| 14 | 51 | 48 | 44 | 60 | 70 | 155 | 215 | 134 | 45 | 27 | 18 | 27 |
| 15 | 51 | 47 | 48 | 55 | 68 | 264 | 124 | 124 | 45 | 25 | 30 | 49 |
| 16 | 46 | 45 | 48 | 55 | 67 | 241 | 144 | 115 | 46 | 27 | 28 | 37 |
| 17 | 47 | 45 | 49 | 53 | 64 | 190 | 355 | 93 | 41 | 24 | 24 | 37 |
| 18 | 55 | 45 | 64 | 55 | 64 | 144 | 310 | 84 | 44 | 22 | 22 | 96 |
| 19 | 68 | 46 | 72 | 78 | 64 | 122 | 178 | 95 | 41 | 26 | 27 | 92 |
| 20 | 65 | 53 | 56 | 90 | 62 | 117 | 124 | 178 | 50 | 32 | 32 | 44 |
| 21 | 55 | 55 | 38 | 68 | 86 | 117 | 124 | 215 | 6 | 29 | 24 | 36 |
| 22 | 50 | 46 | 32 | 61 | 190 | 115 | 178 | 215 | 59 | 27 | 21 | 32 |
| 23 | 53 | 47 | 30 | 57 | 90 | 119 | 215 | 144 | 47 | 24 | 20 | 28 |
| 24 | 54 | 49 | 34 | 56 | 60 | 134 | 144 | 104 | 48 | 20 | 19 | 27 |
| 25 | 51 | 40 | 40 | 55 | 60 | 117 | 124 | 134 | 50 | 19 | 18 | 26 |
| 26 | 47 | 40 | 38 | 57 | 134 | 111 | 340 | 111 | 10 | 21 | 17 | 25 |
| 27 | 48 | 40 | 37 | 59 | 340 | 110 | 418 | 90 | 117 | 19 | 22 | 23 |
| 28 | 41 | 39 | 44 | 53 | 355 | 106 | 228 | 81 | 5 | 22 | 24 | 23 |
| 29 | 44 | 40 | 49 | 50 | ----- | 101 | 268 | 77 | 72 | 23 | 22 | 27 |
| 30 | 40 | 46 | 48 | 40 | ----- | 96 | 282 | 74 | 5 | 21 | 20 | 28 |
| 31 | 41 | ----- | 40 | 38 | ----- | 98 | ----- | 71 | ----- | 17 | 18 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 77 | 40 | 543 | 0.987 | 1.14 |
| November | 87 | 39 | 50.2 | .913 | 1.02 |
| December | 134 | 30 | 54.5 | .991 | 1.14 |
| January | 296 | 38 | 80.9 | 1.47 | 1.70 |
| February | 688 | 28 | 129 | 2.35 | 2.45 |
| March | 418 | 96 | 172 | 3.13 | 3.61 |
| April | 418 | 90 | 178 | 3.24 | 3.62 |
| May | 254 | 71 | 133 | 2.42 | 2.79 |
| June | 117 | 41 | 59.8 | 1.09 | 1.22 |
| July | 47 | 17 | 29.4 | .535 | .62 |
| August | 52 | 16 | 21.3 | .387 | .45 |
| September | 119 | 10 | 37.9 | .689 | .77 |
| The year | 688 | 10 | 82.9 | 1.51 | 20.53 |

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, 1929.

EXTREMES.—Maximum discharge during year, about 1,360 second-feet Feb. 7 (gage height, 8.31 feet).

1921-1929: Maximum discharge, about 2,640 second-feet Sept. 1, 1927 (gage height, 9.71 feet).

REMARKS.—Records good. Discharge estimated Nov. 14-19, Jan. 19-21, and June 12-28. About 8 second-feet diverted above station by Elizabethtown Water Co.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1----- | 10 | 5 | 54 | 57 | 4 | 39 | 16 | 14 | 22 | 5 | 24 | 3 |
| 2----- | 7 | 6 | 7 | 20 | 3 | 37 | 12 | 28 | 21 | 5 | 9 | 3 |
| 3----- | 8 | 11 | 6 | 10 | 3 | 48 | 13 | 40 | 22 | 5 | 14 | 3 |
| 4----- | 8 | 28 | 7 | 8 | 4 | 47 | 20 | 34 | 21 | 5 | 6 | 3 |
| 5----- | 7 | 9 | 16 | 8 | 4 | 152 | 19 | 37 | 20 | 81 | 4 | 4 |
| 6----- | 10 | 6 | 6 | 154 | 5 | 187 | 83 | 44 | 21 | 31 | 4 | 43 |
| 7----- | 6 | 6 | 4 | 16 | 282 | 57 | 18 | 83 | 19 | 5 | 4 | 99 |
| 8----- | 8 | 13 | 5 | 9 | 22 | 34 | 17 | 40 | 28 | 5 | 4 | 156 |
| 9----- | 10 | 9 | 6 | 8 | 19 | 32 | 13 | 39 | 20 | 6 | 4 | 179 |
| 10----- | 10 | 4 | 5 | 71 | 22 | 26 | 66 | 32 | 18 | 5 | 6 | 28 |
| 11----- | 10 | 6 | 5 | 16 | 13 | 24 | 15 | 23 | 18 | 5 | 9 | 14 |
| 12----- | 10 | 6 | 4 | 11 | 10 | 26 | 110 | 30 | 17 | 5 | 5 | 9 |
| 13----- | 9 | 8 | 4 | 9 | 10 | 24 | 54 | 37 | 16 | 8 | 5 | 9 |
| 14----- | 16 | 7 | 4 | 7 | 9 | 55 | 13 | 25 | 16 | 6 | 6 | 14 |
| 15----- | 10 | 6 | 4 | 7 | 9 | 19 | 8 | 25 | 15 | 5 | 6 | 6 |
| 16----- | 10 | 6 | 6 | 6 | 8 | 28 | 112 | 25 | 16 | 5 | 4 | 5 |
| 17----- | 10 | 7 | 11 | 9 | 8 | 20 | 133 | 20 | 16 | 5 | 4 | 22 |
| 18----- | 20 | 7 | 45 | 12 | 8 | 20 | 60 | 14 | 15 | 5 | 4 | 9 |
| 19----- | 49 | 6 | 5 | 8 | 8 | 18 | 38 | 27 | 13 | 15 | 93 | 3 |
| 20----- | 11 | 5 | 7 | 16 | 8 | 16 | 29 | 35 | 24 | 5 | 7 | 2 |
| 21----- | 8 | 3 | 7 | 12 | 8 | 17 | 40 | 34 | 16 | 5 | 5 | 2 |
| 22----- | 7 | 5 | 8 | 7 | 7 | 17 | 38 | 28 | 13 | 5 | 4 | 2 |
| 23----- | 6 | 4 | 6 | 14 | 6 | 109 | 39 | 27 | 12 | 5 | 4 | 2 |
| 24----- | 6 | 3 | 5 | 10 | 6 | 32 | 30 | 24 | 12 | 5 | 4 | 2 |
| 25----- | 6 | 4 | 5 | 13 | 12 | 19 | 28 | 31 | 12 | 5 | 4 | 2 |
| 26----- | 6 | 3 | 6 | 15 | 310 | 20 | 89 | 23 | 19 | 5 | 4 | 3 |
| 27----- | 6 | 4 | 6 | 9 | 120 | 17 | 30 | 23 | 12 | 5 | 4 | 3 |
| 28----- | 8 | 10 | 24 | 8 | 65 | 16 | 85 | 22 | 38 | 5 | 7 | 2 |
| 29----- | 6 | 1 | 12 | 6 | ----- | 15 | 92 | 57 | 6 | 5 | 3 | 2 |
| 30----- | 6 | 60 | 11 | 5 | ----- | 18 | 18 | 33 | 5 | 7 | 5 | 50 |
| 31----- | 5 | ----- | 11 | 4 | ----- | 13 | ----- | 24 | ----- | 5 | 8 | ----- |

| Month | Observed | | Mean | Corrected for diversion | | Run-off in inches |
|----------------|----------|---------|------|-------------------------|------------------|-------------------|
| | Maximum | Minimum | | Mean | Per square mile | |
| October----- | 49 | 5 | 9.97 | 20.6 | 1.0 ³ | 1.19 |
| November----- | 60 | 1 | 8.60 | 19.4 | .970 | 1.08 |
| December----- | 54 | 4 | 10.1 | 20.3 | 1.02 | 1.18 |
| January----- | 154 | 4 | 18.2 | 29.7 | 1.4 ³ | 1.71 |
| February----- | 310 | 3 | 35.5 | 47.4 | 2.37 | 2.47 |
| March----- | 187 | 13 | 40.4 | 50.4 | 2.52 | 2.90 |
| April----- | 133 | 8 | 44.6 | 48.9 | 2.44 | 2.72 |
| May----- | 83 | 14 | 31.5 | 35.8 | 1.79 | 2.06 |
| June----- | 38 | 5 | 1.74 | 23.1 | 1.16 | 1.29 |
| July----- | 81 | 5 | 8.84 | 15.0 | .75 ⁹ | .86 |
| August----- | 93 | 3 | 8.84 | 15.0 | .75 ⁹ | .86 |
| September----- | 179 | 2 | 22.8 | 28.6 | 1.43 | 1.60 |
| The year----- | 310 | 1 | 21.3 | 29.4 | 1.47 | 19.92 |

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, 1929.

EXTREMES.—Maximum discharge during year, about 755 second-feet Feb. 27 (gage height, 3.48 feet); minimum, 4 second-feet July 27 (gage height, 0.42 foot).

1908-1915, 1921-1929: Maximum discharge, about 1,740 second-feet Aug. 2, 1927 (gage height, 6.0 feet); minimum gage height, 0.00 foot Dec. 1, 1912 (discharge not determined).

Remarks.—Records good. Diversions aggregating about 17 second-feet made above station.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | 28 | 25 | 133 | 29 | 20 | 124 | 40 | 70 | 37 | 16 | 17 | 9 |
| 2..... | 22 | 10 | 33 | 71 | 18 | 97 | 29 | 65 | 30 | 19 | 24 | 6 |
| 3..... | 22 | 16 | 26 | 32 | 16 | 206 | 25 | 58 | 26 | 14 | 9 | 7 |
| 4..... | 15 | 25 | 20 | 24 | 17 | 101 | 30 | 44 | 23 | 12 | 14 | 5 |
| 5..... | 19 | 29 | 22 | 19 | 16 | 282 | 39 | 44 | 22 | 14 | 7 | 5 |
| 6..... | 18 | 19 | 22 | 296 | 18 | 466 | 162 | 39 | 24 | 58 | 8 | 12 |
| 7..... | 18 | 17 | 18 | 97 | 325 | 218 | 64 | 162 | 19 | 16 | 10 | 15 |
| 8..... | 13 | 16 | 16 | 76 | 282 | 85 | 44 | 55 | 31 | 16 | 8 | 121 |
| 9..... | 17 | 21 | 16 | 30 | 67 | 67 | 33 | 39 | 23 | 14 | 5 | 218 |
| 10..... | 17 | 19 | 14 | 107 | 62 | 51 | 33 | 34 | 19 | 9 | 5 | 54 |
| 11..... | 16 | 16 | 13 | 83 | 44 | 47 | 46 | 30 | 18 | 6 | 23 | 20 |
| 12..... | 16 | 14 | 13 | 51 | 32 | 44 | 172 | 33 | 19 | 10 | 11 | 16 |
| 13..... | 16 | 16 | 14 | 37 | 28 | 47 | 206 | 89 | 18 | 7 | 10 | 10 |
| 14..... | 14 | 20 | 14 | 58 | 26 | 77 | 67 | 50 | 17 | 8 | 9 | 12 |
| 15..... | 16 | 17 | 16 | 24 | 24 | 97 | 50 | 57 | 18 | 12 | 11 | 11 |
| 16..... | 12 | 16 | 15 | 24 | 23 | 74 | 242 | 40 | 18 | 8 | 10 | 10 |
| 17..... | 19 | 17 | 16 | 22 | 23 | 57 | 466 | 32 | 16 | 8 | 6 | 7 |
| 18..... | 17 | 17 | 68 | 26 | 23 | 43 | 172 | 33 | 16 | 8 | 7 | 25 |
| 19..... | 83 | 16 | 24 | 37 | 23 | 39 | 76 | 96 | 14 | 9 | 48 | 9 |
| 20..... | 26 | 22 | 21 | 34 | 23 | 38 | 58 | 152 | 20 | 10 | 21 | 6 |
| 21..... | 18 | 19 | 18 | 28 | 24 | 34 | 60 | 97 | 22 | 10 | 15 | 7 |
| 22..... | 18 | 17 | 16 | 25 | 23 | 34 | 124 | 80 | 18 | 11 | 12 | 6 |
| 23..... | 23 | 19 | 15 | 28 | 24 | 34 | 85 | 54 | 21 | 10 | 9 | 8 |
| 24..... | 22 | 17 | 16 | 30 | 21 | 142 | 57 | 38 | 18 | 8 | 7 | 6 |
| 25..... | 16 | 16 | 15 | 29 | 23 | 61 | 47 | 110 | 15 | 7 | 7 | 5 |
| 26..... | 15 | 14 | 16 | 37 | 162 | 54 | 218 | 43 | 22 | 5 | 7 | 5 |
| 27..... | 15 | 15 | 16 | 32 | 680 | 47 | 142 | 34 | 14 | 4 | 7 | 5 |
| 28..... | 15 | 16 | 31 | 26 | 296 | 40 | 64 | 37 | 18 | 5 | 11 | 7 |
| 29..... | 15 | 13 | 23 | 21 | ----- | 32 | 296 | 35 | 23 | 7 | 5 | 6 |
| 30..... | 15 | 19 | 19 | 17 | ----- | 33 | 107 | 65 | 15 | 8 | 9 | 10 |
| 31..... | 14 | ----- | 17 | 22 | ----- | 38 | ----- | 51 | ----- | 5 | 9 | ----- |

| Month | Observed | | | Corrected for diversion | | Run-off in inches |
|----------------|----------|---------|------|-------------------------|-----------------|-------------------|
| | Maximum | Minimum | Mean | Mean | Per square mile | |
| October..... | 83 | 14 | 19.7 | 38.9 | 0.949 | 1.09 |
| November..... | 29 | 10 | 17.8 | 35.6 | .868 | .97 |
| December..... | 133 | 13 | 23.7 | 41.8 | 1.02 | 1.18 |
| January..... | 296 | 17 | 47.5 | 66.4 | 1.62 | 1.87 |
| February..... | 680 | 16 | 84.4 | 103 | 2.51 | 2.61 |
| March..... | 466 | 32 | 90.6 | 110 | 2.68 | 3.09 |
| April..... | 466 | 25 | 108 | 127 | 3.10 | 3.46 |
| May..... | 152 | 30 | 59.9 | 77.4 | 1.89 | 2.18 |
| June..... | 87 | 14 | 21.5 | 40.0 | .976 | 1.09 |
| July..... | 58 | 4 | 11.4 | 31.2 | .761 | .88 |
| August..... | 48 | 5 | 11.6 | 30.5 | .744 | .86 |
| September..... | 218 | 5 | 21.4 | 40.1 | .978 | 1.09 |
| The year..... | 680 | 4 | 42.8 | 61.5 | 1.50 | 20.37 |

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, 1929.

EXTREMES.—Maximum discharge during year, 1,230 second-feet Feb. 7 (gage height, 8.75 feet); minimum, 11 second-feet Sept. 3 (gage height, 4.69 feet). 1919-1929: Maximum discharge, about 3,600 second-feet Feb. 2, 1922 (gage height, 10.97 feet); minimum, 9 second-feet Oct. 3, 1921.

REMARKS.—Records good. Stage-discharge relation affected by ice Dec. 22-26, Jan. 15-20, 30, 31, Feb. 1-5, and 21-25. Equipment furnished and operated by Taylor-Wharton Iron & Steel Co.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | 101 | 66 | 222 | 86 | 75 | 214 | 110 | 214 | 92 | 66 | 38 | 32 |
| 2..... | 95 | 65 | 110 | 203 | 70 | 226 | 110 | 202 | 88 | 65 | 35 | 30 |
| 3..... | 92 | 66 | 85 | 97 | 70 | 239 | 98 | 226 | 82 | 60 | 37 | 28 |
| 4..... | 90 | 90 | 76 | 80 | 70 | 239 | 96 | 191 | 82 | 57 | 38 | 33 |
| 5..... | 88 | 118 | 75 | 85 | 70 | 475 | 118 | 180 | 80 | 54 | 38 | 38 |
| 6..... | 94 | 80 | 78 | 720 | 252 | 452 | 247 | 214 | 88 | 54 | 40 | 49 |
| 7..... | 83 | 72 | 67 | 244 | 785 | 266 | 148 | 316 | 80 | 47 | 38 | 78 |
| 8..... | 85 | 70 | 68 | 149 | 258 | 164 | 118 | 191 | 89 | 58 | 38 | 122 |
| 9..... | 78 | 76 | 62 | 180 | 158 | 169 | 110 | 169 | 94 | 48 | 38 | 113 |
| 10..... | 79 | 68 | 67 | 266 | 137 | 135 | 118 | 158 | 78 | 47 | 37 | 52 |
| 11..... | 76 | 66 | 66 | 223 | 101 | 137 | 128 | 148 | 72 | 51 | 40 | 48 |
| 12..... | 75 | 65 | 64 | 148 | 94 | 137 | 364 | 148 | 71 | 48 | 34 | 38 |
| 13..... | 71 | 68 | 62 | 118 | 89 | 148 | 254 | 228 | 67 | 47 | 31 | 43 |
| 14..... | 71 | 67 | 61 | 98 | 98 | 252 | 180 | 191 | 65 | 44 | 39 | 59 |
| 15..... | 72 | 64 | 59 | 95 | 79 | 226 | 158 | 202 | 72 | 42 | 48 | 58 |
| 16..... | 71 | 64 | 59 | 95 | 78 | 214 | 286 | 158 | 71 | 43 | 40 | 48 |
| 17..... | 72 | 66 | 64 | 90 | 73 | 180 | 340 | 137 | 65 | 41 | 40 | 70 |
| 18..... | 75 | 60 | 130 | 90 | 79 | 148 | 214 | 128 | 65 | 41 | 35 | 110 |
| 19..... | 86 | 72 | 95 | 95 | 80 | 137 | 180 | 169 | 64 | 68 | 40 | 54 |
| 20..... | 76 | 82 | 78 | 95 | 72 | 137 | 169 | 191 | 87 | 54 | 46 | 49 |
| 21..... | 68 | 72 | 66 | 95 | 70 | 128 | 191 | 191 | 94 | 45 | 35 | 39 |
| 22..... | 72 | 70 | 60 | 95 | 100 | 137 | 280 | 169 | 75 | 44 | 33 | 39 |
| 23..... | 72 | 72 | 60 | 96 | 95 | 158 | 202 | 137 | 79 | 45 | 38 | 40 |
| 24..... | 82 | 65 | 60 | 90 | 80 | 148 | 169 | 128 | 82 | 43 | 36 | 39 |
| 25..... | 76 | 64 | 55 | 92 | 90 | 128 | 208 | 148 | 137 | 43 | 30 | 38 |
| 26..... | 72 | 60 | 55 | 98 | 382 | 128 | 652 | 128 | 153 | 42 | 30 | 38 |
| 27..... | 68 | 61 | 58 | 104 | 667 | 118 | 295 | 110 | 82 | 40 | 34 | 36 |
| 28..... | 66 | 58 | 64 | 101 | 410 | 110 | 252 | 110 | 78 | 38 | 42 | 35 |
| 29..... | 70 | 59 | 67 | 87 | ----- | 100 | 353 | 101 | 88 | 38 | 31 | 38 |
| 30..... | 66 | 78 | 54 | 85 | ----- | 101 | 226 | 101 | 68 | 40 | 38 | 34 |
| 31..... | 66 | ----- | 61 | 80 | ----- | 110 | ----- | 98 | ----- | 35 | 26 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 101 | 65 | 77.6 | 1.19 | 1.37 |
| November..... | 118 | 58 | 70.1 | 1.08 | 1.20 |
| December..... | 222 | 54 | 74.5 | 1.15 | 1.33 |
| January..... | 720 | 80 | 138 | 2.12 | 2.44 |
| February..... | 785 | 70 | 167 | 2.57 | 2.68 |
| March..... | 475 | 100 | 183 | 2.82 | 3.25 |
| April..... | 652 | 96 | 212 | 3.26 | 3.64 |
| May..... | 316 | 98 | 167 | 2.57 | 2.96 |
| June..... | 153 | 64 | 82.9 | 1.28 | 1.43 |
| July..... | 68 | 35 | 47.8 | .735 | .85 |
| August..... | 48 | 26 | 36.9 | .568 | .65 |
| September..... | 122 | 28 | 50.9 | .783 | .87 |
| The year..... | 785 | 26 | 109 | 1.68 | 22.67 |

SOUTH BRANCH OF RARITAN RIVER AT STANTON, N. J.

LOCATION.—Water-stage recorder at highway bridge near railroad station in Stanton, Hunterdon County, and half a mile above mouth of Prescott Brook.

DRAINAGE AREA.—147 square miles.

RECORDS AVAILABLE.—July, 1903, to December, 1906; July, 1919, to September, 1929.

EXTREMES.—Maximum discharge during year, about 4,920 second-feet Feb. 7 (gage height, 9.34 feet); minimum, 24 second-feet Aug. 8 (gage height, 1.84 feet).

1903-1906, 1919-1929: Maximum discharge not determined; maximum gage height, 10.5 feet Oct. 9, 1903; minimum discharge, about 21 second-feet Oct. 1, 1925 (gage height, 1.76 feet).

REMARKS.—Records good. Slight diurnal fluctuation due to small water-power plants upstream.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | Jun? | July | Aug. | Sept. |
|---------|------|-------|------------------|------------------|------------------|--------------------|-------|-----|-----------------|------|------|-------|
| 1..... | 158 | 104 | 404 | ^b 240 | ^a 110 | ^b 500 | 208 | 423 | 167 | 137 | 62 | 44 |
| 2..... | 142 | 104 | 181 | ^b 360 | ^a 110 | ^b 550 | 202 | 404 | 153 | 132 | 50 | 51 |
| 3..... | 142 | 97 | 132 | 172 | ^a 100 | ^b 550 | 184 | 443 | 159 | 115 | 51 | 50 |
| 4..... | 137 | 153 | 117 | 161 | ^a 100 | ^b 550 | 187 | 364 | 147 | 108 | 68 | 45 |
| 5..... | 132 | 202 | 120 | 144 | ^a 100 | ^b 1,200 | 247 | 364 | 147 | 101 | 66 | 53 |
| 6..... | 137 | 137 | 124 | 1,410 | ^a 100 | 1,140 | 503 | 404 | 158 | 101 | 62 | 99 |
| 7..... | 130 | 115 | 106 | 463 | 2,470 | 620 | 307 | 670 | 144 | 101 | 46 | 271 |
| 8..... | 127 | 110 | 104 | 264 | 548 | 404 | 244 | 384 | 164 | 93 | 49 | 595 |
| 9..... | 124 | 113 | 101 | 289 | 271 | 384 | 211 | 345 | 169 | 91 | 53 | 1,140 |
| 10..... | 115 | 104 | 108 | ^b 460 | 244 | 307 | 240 | 307 | 140 | 89 | 54 | 221 |
| 11..... | 115 | 104 | 117 | ^b 380 | 187 | 307 | 251 | 289 | 139 | 87 | 55 | 144 |
| 12..... | 115 | 99 | 95 | ^b 260 | 184 | 289 | 795 | 289 | 124 | 87 | 66 | 115 |
| 13..... | 104 | 142 | 99 | ^b 190 | 169 | 289 | 595 | 384 | 117 | 74 | 47 | 97 |
| 14..... | 108 | 120 | 95 | ^b 170 | ^a 160 | 483 | 404 | 845 | 113 | 77 | 76 | 150 |
| 15..... | 110 | 97 | 93 | ^b 160 | 147 | 483 | 345 | 364 | 132 | 79 | 137 | 158 |
| 16..... | 108 | 95 | 95 | ^b 180 | 134 | 423 | 645 | 307 | 137 | 77 | 68 | 124 |
| 17..... | 110 | 91 | 95 | ^a 160 | 132 | 384 | 745 | 254 | 113 | 74 | 58 | 190 |
| 18..... | 115 | 69 | 199 | ^a 160 | 132 | 307 | 483 | 231 | 108 | 69 | 51 | 307 |
| 19..... | 155 | 76 | 169 | ^a 160 | 130 | 289 | 404 | 404 | 10 ^a | 127 | 85 | 137 |
| 20..... | 115 | 142 | 122 | ^a 160 | 124 | 289 | 364 | 404 | 175 | 104 | 63 | 120 |
| 21..... | 108 | 120 | 110 | 161 | 115 | 264 | 384 | 364 | 244 | 77 | 59 | 95 |
| 22..... | 110 | 113 | 99 | 158 | 161 | 264 | 548 | 364 | 153 | 81 | 49 | 97 |
| 23..... | 104 | 115 | ^a 95 | 164 | 164 | 289 | 423 | 271 | 137 | 87 | 54 | 101 |
| 24..... | 122 | 106 | ^a 95 | 153 | 147 | 289 | 345 | 251 | 181 | 77 | 54 | 91 |
| 25..... | 117 | 101 | ^a 95 | 180 | 164 | 254 | 384 | 271 | 526 | 74 | 51 | 91 |
| 26..... | 110 | 95 | ^a 100 | 164 | 1,830 | 244 | 1,620 | 231 | 503 | 66 | 40 | 81 |
| 27..... | 104 | 93 | ^b 100 | 158 | 1,690 | 227 | 620 | 211 | 18 ^a | 63 | 54 | 71 |
| 28..... | 108 | 91 | ^b 110 | 164 | 960 | 215 | 548 | 202 | 18 ^a | 68 | 113 | 76 |
| 29..... | 113 | 93 | ^b 110 | 130 | ----- | 199 | 695 | 193 | 244 | 65 | 50 | 73 |
| 30..... | 106 | 110 | ^a 120 | ----- | ----- | 193 | 463 | 190 | 170 | 51 | 54 | 83 |
| 31..... | 99 | ----- | ^b 120 | ^a 120 | ----- | 211 | ----- | 181 | ----- | 62 | 53 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 158 | 99 | 119 | 0.810 | 0.93 |
| November..... | 202 | 69 | 110 | .748 | .83 |
| December..... | 404 | 93 | 123 | .837 | .96 |
| January..... | 1,410 | 120 | 244 | 1.66 | 1.91 |
| February..... | 2,470 | 100 | 389 | 2.65 | 2.76 |
| March..... | 1,200 | 193 | 400 | 2.72 | 3.14 |
| April..... | 1,620 | 184 | 453 | 3.08 | 3.44 |
| May..... | 670 | 181 | 326 | 2.22 | 2.56 |
| June..... | 528 | 106 | 177 | 1.20 | 1.34 |
| July..... | 137 | 51 | 86.9 | .591 | .68 |
| August..... | 137 | 40 | 61.2 | .416 | .48 |
| September..... | 1,140 | 44 | 166 | 1.13 | 1.26 |
| The year..... | 2,470 | 40 | 220 | 1.50 | 20.29 |

^a Stage-discharge relation affected by ice.

^b Estimated.

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, 1908, to April, 1915; August, 1921, to September, 1929.

EXTREMES.—Maximum discharge during year, about 15,400 second-feet Feb. 27 (gage height, 13.34 feet); minimum, about 46 second-feet Aug. 27 (gage height, 3.21 feet).

1903-1907, 1921-1929: Maximum discharge, about 25,000 second-feet Oct. 10, 1903 (gage height, 15.9 feet); minimum, about 36 second-feet Sept. 19, 1923.

REMARKS.—Records fair. Discharge estimated Oct. 13-15. Stage-discharge relation affected by ice Dec. 23-28, Jan. 15-17, 28, 30, 31, and Feb. 1-5. About 2 second-feet diverted above station and not included in records.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 448 | 225 | 960 | 221 | 300 | 1,990 | 542 | 1,360 | 448 | 269 | 112 | 117 |
| 2..... | 880 | 225 | 620 | 1,480 | 280 | 2,120 | 515 | 1,300 | 402 | 315 | 114 | 129 |
| 3..... | 352 | 229 | 394 | 660 | 280 | 2,370 | 440 | 1,300 | 380 | 254 | 119 | 89 |
| 4..... | 340 | 254 | 346 | 524 | 260 | 1,730 | 424 | 1,130 | 359 | 229 | 117 | 124 |
| 5..... | 333 | 416 | 346 | 387 | 280 | 3,700 | 560 | 1,020 | 346 | 229 | 144 | 107 |
| 6..... | 366 | 327 | 359 | 3,620 | 259 | 5,490 | 1,600 | 1,080 | 380 | 315 | 114 | 192 |
| 7..... | 352 | 274 | 310 | 2,120 | 5,970 | 2,680 | 1,020 | 2,480 | 366 | 217 | 112 | 515 |
| 8..... | 321 | 254 | 299 | 860 | 1,920 | 1,300 | 736 | 1,300 | 359 | 196 | 117 | 3,180 |
| 9..... | 304 | 254 | 279 | 800 | 860 | 1,240 | 630 | 1,080 | 416 | 199 | 114 | 3,700 |
| 10..... | 299 | 250 | 250 | 1,990 | 1,020 | 860 | 660 | 960 | 359 | 196 | 107 | 1,020 |
| 11..... | 289 | 233 | 289 | 1,800 | 590 | 910 | 767 | 860 | 315 | 167 | 112 | 489 |
| 12..... | 284 | 225 | 254 | 1,020 | 424 | 778 | 3,290 | 800 | 294 | 171 | 114 | 315 |
| 13..... | 280 | 250 | 259 | 746 | 402 | 746 | 2,590 | 1,080 | 274 | 171 | 129 | 269 |
| 14..... | 260 | 259 | 241 | 432 | 440 | 1,300 | 1,600 | 960 | 269 | 157 | 132 | 299 |
| 15..... | 260 | 233 | 245 | 380 | 394 | 1,860 | 1,240 | 1,080 | 269 | 173 | 860 | 416 |
| 16..... | 259 | 217 | 237 | 360 | 333 | 1,480 | 3,550 | 910 | 304 | 164 | 179 | 289 |
| 17..... | 250 | 217 | 241 | 360 | 315 | 1,180 | 3,620 | 725 | 279 | 167 | 139 | 269 |
| 18..... | 264 | 213 | 380 | 464 | 315 | 910 | 2,120 | 630 | 254 | 150 | 129 | 860 |
| 19..... | 424 | 203 | 515 | 725 | 321 | 789 | 1,480 | 1,240 | 241 | 192 | 221 | 394 |
| 20..... | 340 | 237 | 352 | 650 | 299 | 746 | 1,180 | 1,800 | 241 | 247 | 196 | 279 |
| 21..... | 274 | 387 | 310 | 440 | 221 | 681 | 1,180 | 1,420 | 506 | 182 | 132 | 245 |
| 22..... | 259 | 269 | 254 | 387 | 333 | 630 | 2,250 | 1,420 | 352 | 153 | 129 | 217 |
| 23..... | 254 | 241 | 240 | 464 | 432 | 1,420 | 1,600 | 1,020 | 327 | 167 | 119 | 213 |
| 24..... | 264 | 233 | 240 | 440 | 346 | 1,540 | 1,180 | 860 | 373 | 147 | 112 | 192 |
| 25..... | 264 | 221 | 240 | 424 | 340 | 910 | 1,080 | 960 | 506 | 150 | 124 | 176 |
| 26..... | 250 | 206 | 220 | 432 | 3,620 | 800 | 4,680 | 778 | 1,240 | 144 | 129 | 170 |
| 27..... | 233 | 199 | 240 | 416 | 9,190 | 746 | 2,250 | 660 | 472 | 139 | 99 | 167 |
| 28..... | 221 | 196 | 260 | 380 | 3,620 | 630 | 1,800 | 600 | 333 | 134 | 107 | 153 |
| 29..... | 233 | 199 | 274 | 340 | ----- | 542 | 2,760 | 610 | 524 | 137 | 147 | 161 |
| 30..... | 225 | 225 | 225 | 320 | ----- | 515 | 1,660 | 590 | 366 | 134 | 124 | 164 |
| 31..... | 221 | ----- | 210 | 300 | ----- | 570 | ----- | 506 | ----- | 132 | 122 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 448 | 221 | 294 | 0.670 | 0.67 |
| November..... | 416 | 196 | 246 | .572 | .56 |
| December..... | 960 | 210 | 319 | .671 | .75 |
| January..... | 3,620 | 221 | 774 | 1.57 | 1.82 |
| February..... | 9,190 | 221 | 1,190 | 2.43 | 2.53 |
| March..... | 5,490 | 515 | 1,390 | 2.87 | 3.27 |
| April..... | 4,680 | 424 | 1,630 | 3.33 | 3.72 |
| May..... | 2,480 | 506 | 1,050 | 2.14 | 2.47 |
| June..... | 1,240 | 241 | 385 | .779 | .88 |
| July..... | 315 | 132 | 188 | .374 | .44 |
| August..... | 860 | 99 | 152 | .370 | .36 |
| September..... | 3,700 | 89 | 497 | 1.07 | 1.13 |
| The year..... | 9,190 | 89 | 672 | 1.37 | 18.60 |

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, 1929.

EXTREMES.—Maximum discharge during year, about 1,040 second-feet Feb. 7 (gage height, 3.80 feet); minimum, 5.4 second-feet Sept. 4 (gage height, 1.82 feet).

1922-1929: Maximum gage height (estimated), 5.1 feet Mar. 7, 1922 (discharge not determined); minimum discharge, 4 second-feet Aug. 27, 1923 (gage height, 1.79 feet).

REMARKS.—Records excellent. Discharge estimated Nov. 20 to Dec. 4 and Sept. 27-29. About 2 second-feet diverted by small turbine at dam included in discharge tables.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1 | 41 | 24 | 170 | 43 | 24 | 75 | 47 | 131 | 38 | 23 | 7.6 | 6.7 |
| 2 | 40 | 24 | 75 | 70 | 21 | 104 | 41 | 122 | 34 | 22 | 8.0 | 6.7 |
| 3 | 38 | 24 | 40 | 27 | 21 | 104 | 45 | 131 | 32 | 19 | 8.5 | 6.3 |
| 4 | 38 | 42 | 24 | 27 | 23 | 83 | 49 | 102 | 34 | 18 | 12 | 5.8 |
| 5 | 38 | 43 | 32 | 21 | 23 | 195 | 75 | 106 | 34 | 17 | 10 | 6.3 |
| 6 | 41 | 29 | 30 | 253 | 24 | 191 | 128 | 114 | 38 | 18 | 9.5 | 11 |
| 7 | 36 | 27 | 25 | 62 | 420 | 102 | 65 | 198 | 32 | 16 | 10 | 14 |
| 8 | 30 | 27 | 24 | 36 | 74 | 71 | 55 | 97 | 40 | 16 | 8.9 | 52 |
| 9 | 30 | 28 | 24 | 41 | 49 | 68 | 52 | 81 | 36 | 16 | 8.5 | 30 |
| 10 | 29 | 24 | 21 | 109 | 49 | 52 | 62 | 68 | 30 | 14 | 8.5 | 21 |
| 11 | 28 | 24 | 24 | 65 | 38 | 52 | 62 | 65 | 28 | 13 | 8.9 | 13 |
| 12 | 28 | 22 | 23 | 47 | 28 | 52 | 203 | 74 | 28 | 13 | 9.5 | 9.5 |
| 13 | 27 | 24 | 21 | 38 | 26 | 55 | 106 | 98 | 27 | 13 | 8.5 | 8.9 |
| 14 | 26 | 23 | 20 | 27 | 29 | 114 | 81 | 78 | 26 | 13 | 9.5 | 16 |
| 15 | 27 | 21 | 19 | 36 | 28 | 102 | 68 | 81 | 28 | 12 | 16 | 19 |
| 16 | 27 | 21 | 19 | 30 | 28 | 85 | 170 | 65 | 28 | 11 | 11 | 13 |
| 17 | 28 | 21 | 20 | 34 | 27 | 68 | 162 | 55 | 27 | 11 | 8.5 | 20 |
| 18 | 28 | 21 | 42 | 38 | 27 | 65 | 102 | 49 | 36 | 11 | 8.5 | 42 |
| 19 | 47 | 22 | 28 | 47 | 28 | 68 | 89 | 100 | 25 | 20 | 17 | 18 |
| 20 | 32 | 26 | 23 | 40 | 26 | 71 | 81 | 80 | 28 | 17 | 14 | 13 |
| 21 | 28 | 20 | 21 | 32 | 19 | 71 | 93 | 94 | 40 | 13 | 11 | 11 |
| 22 | 27 | 24 | 16 | 29 | 27 | 81 | 131 | 71 | 28 | 13 | 8.9 | 9.5 |
| 23 | 28 | 26 | 17 | 34 | 27 | 97 | 93 | 59 | 25 | 13 | 8.5 | 8.9 |
| 24 | 29 | 24 | 17 | 30 | 24 | 62 | 75 | 59 | 24 | 13 | 8.9 | 9.5 |
| 25 | 26 | 24 | 18 | 32 | 29 | 52 | 129 | 71 | 67 | 12 | 8.0 | 8.9 |
| 26 | 25 | 24 | 18 | 28 | 368 | 49 | 408 | 52 | 70 | 11 | 7.6 | 8.9 |
| 27 | 24 | 22 | 18 | 24 | 308 | 47 | 172 | 47 | 28 | 11 | 7.6 | 9 |
| 28 | 24 | 22 | 24 | 28 | 133 | 41 | 195 | 47 | 27 | 11 | 8.9 | 9 |
| 29 | 24 | 22 | 23 | 21 | ----- | 45 | 202 | 47 | 30 | 11 | 8.0 | 9 |
| 30 | 24 | 24 | 19 | 21 | ----- | 45 | 136 | 45 | 24 | 10 | 7.1 | 8.9 |
| 31 | 24 | ----- | 16 | 23 | ----- | 47 | ----- | 41 | ----- | 8.5 | 7.1 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|--------------------|----------------------|
| October | 47 | 24 | 30.4 | 1.17 | 1.35 |
| November | 43 | 20 | 25.0 | .962 | 1.07 |
| December | 170 | 16 | 29.4 | 1.13 | 1.30 |
| January | 253 | 21 | 44.9 | 1.73 | 1.99 |
| February | 420 | 19 | 69.6 | 2.68 | 2.79 |
| March | 195 | 41 | 77.9 | 3.00 | 3.46 |
| April | 408 | 41 | 113 | 4.35 | 4.85 |
| May | 198 | 41 | 81.5 | 3.13 | 3.61 |
| June | 70 | 24 | 33.1 | 1.27 | 1.42 |
| July | 23 | 8.5 | 14.2 | .546 | .63 |
| August | 17 | 7.1 | 9.50 | .365 | .42 |
| September | 52 | 5.8 | 14.2 | .546 | .61 |
| The year | 420 | 5.8 | 45.0 | 1.73 | 23.50 |

NORTH BRANCH OF RARITAN RIVER AT MILLTOWN, N. J.

LOCATION.—Staff gage at Milltown, Somerset County, 1½ miles upstream from junction of North and South Branches of Raritan River.

DRAINAGE AREA.—190 square miles.

RECORDS AVAILABLE.—June, 1923, to September, 1929.

EXTREMES.—Maximum gage height during year, about 9.4 feet Feb. 7 (discharge not determined); minimum discharge, 20 second-feet Sept. 4 and 5 (gage height, 1.94 feet).

1922-1929: Maximum gage height, about 10.0 feet Nov. 3, 1927 (discharge not determined); minimum discharge, that of Sept. 4 and 5, 1929.

REMARKS.—Records excellent. Stage-discharge relation affected by ice Jan. 30, 31, Feb. 1-4, 13, and 14. Discharge estimated Feb. 21, Mar. 12, and 13. Slight diurnal fluctuation caused by small water-power plants.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|-------|-------|-------|-------|-----|-------|------|------|-------|
| 1..... | 200 | 104 | 400 | 124 | 65 | 525 | 209 | 525 | 169 | 137 | 42 | 29 |
| 2..... | 169 | 107 | 155 | 455 | 65 | 560 | 200 | 490 | 144 | 233 | 42 | 26 |
| 3..... | 164 | 110 | 127 | 137 | 65 | 490 | 164 | 525 | 164 | 191 | 42 | 24 |
| 4..... | 151 | 117 | 124 | 205 | 70 | 455 | 164 | 388 | 137 | 83 | 52 | 23 |
| 5..... | 144 | 177 | 131 | 131 | 78 | 1,290 | 205 | 355 | 131 | 78 | 52 | 23 |
| 6..... | 151 | 124 | 144 | 2,580 | 349 | 1,140 | 845 | 368 | 164 | 87 | 37 | 102 |
| 7..... | 144 | 112 | 127 | 455 | 6,010 | 670 | 337 | 940 | 164 | 87 | 38 | 61 |
| 8..... | 127 | 117 | 120 | 302 | 490 | 362 | 243 | 455 | 144 | 74 | 38 | 1,040 |
| 9..... | 124 | 114 | 110 | 209 | 291 | 420 | 233 | 455 | 164 | 67 | 35 | 381 |
| 10..... | 124 | 112 | 117 | 1,090 | 374 | 308 | 270 | 374 | 131 | 65 | 37 | 177 |
| 11..... | 131 | 110 | 92 | 455 | 200 | 314 | 270 | 314 | 124 | 65 | 35 | 110 |
| 12..... | 124 | 107 | 112 | 314 | 182 | 300 | 2,280 | 291 | 114 | 65 | 37 | 78 |
| 13..... | 124 | 112 | 92 | 302 | 160 | 300 | 710 | 388 | 104 | 56 | 37 | 69 |
| 14..... | 117 | 107 | 92 | 173 | 150 | 710 | 490 | 362 | 94 | 56 | 37 | 97 |
| 15..... | 117 | 102 | 100 | 186 | 141 | 710 | 455 | 362 | 302 | 56 | 137 | 112 |
| 16..... | 117 | 100 | 97 | 191 | 164 | 595 | 2,000 | 291 | 124 | 52 | 52 | 97 |
| 17..... | 117 | 94 | 97 | 110 | 107 | 414 | 1,090 | 259 | 102 | 54 | 44 | 87 |
| 18..... | 117 | 102 | 209 | 117 | 141 | 314 | 560 | 238 | 238 | 52 | 44 | 291 |
| 19..... | 229 | 97 | 141 | 302 | 117 | 308 | 490 | 368 | 97 | 92 | 97 | 107 |
| 20..... | 137 | 131 | 117 | 214 | 92 | 291 | 420 | 560 | 100 | 78 | 65 | 107 |
| 21..... | 120 | 200 | 102 | 104 | 130 | 259 | 414 | 490 | 186 | 71 | 40 | 97 |
| 22..... | 114 | 117 | 100 | 229 | 164 | 248 | 630 | 455 | 248 | 61 | 38 | 92 |
| 23..... | 114 | 120 | 92 | 182 | 164 | 394 | 525 | 337 | 144 | 67 | 37 | 65 |
| 24..... | 187 | 112 | 100 | 219 | 124 | 362 | 414 | 302 | 144 | 61 | 44 | 56 |
| 25..... | 120 | 107 | 97 | 209 | 124 | 275 | 800 | 400 | 219 | 56 | 44 | 52 |
| 26..... | 117 | 87 | 92 | 219 | 2,740 | 270 | 3,940 | 280 | 314 | 50 | 27 | 52 |
| 27..... | 114 | 78 | 87 | 160 | 2,000 | 248 | 755 | 238 | 131 | 61 | 29 | 48 |
| 28..... | 112 | 76 | 117 | 117 | 1,090 | 248 | 670 | 229 | 124 | 48 | 42 | 48 |
| 29..... | 110 | 74 | 107 | 67 | ----- | 200 | 890 | 214 | 155 | 48 | 40 | 46 |
| 30..... | 102 | 83 | 29 | 60 | ----- | 205 | 595 | 205 | 224 | 48 | 33 | 48 |
| 31..... | 107 | ----- | 74 | 60 | ----- | 173 | ----- | 182 | ----- | 44 | 31 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 229 | 102 | 132 | 0.695 | 0.80 |
| November..... | 200 | 74 | 110 | .579 | .65 |
| December..... | 400 | 29 | 119 | .626 | .72 |
| January..... | 2,580 | 60 | 312 | 1.64 | 1.89 |
| February..... | 6,010 | 65 | 566 | 2.98 | 3.10 |
| March..... | 1,290 | 173 | 431 | 2.27 | 2.62 |
| April..... | 3,940 | 164 | 709 | 3.73 | 4.16 |
| May..... | 940 | 182 | 375 | 1.97 | 2.27 |
| June..... | 314 | 94 | 160 | .842 | .94 |
| July..... | 233 | 44 | 75.6 | .398 | .46 |
| August..... | 137 | 27 | 45.3 | .238 | .27 |
| September..... | 1,040 | 23 | 122 | .642 | .74 |
| The year..... | 6,010 | 23 | 261 | 1.37 | 18.62 |

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, 1929. November, 1921, to June, 1922, at Pottersville, 1 mile downstream.

EXTREMES.—Maximum discharge during year, about 590 second-feet Feb. 26 (gage height, 3.28 feet); minimum, 4.2 second-feet Sept. 4 and 5 (gage height, 0.84 foot).

1921-1929: Maximum discharge, about 1,600 second-feet Nov. 17, 1927 (gage height, 4.75 feet); minimum, 4 second-feet Aug. 4, 1924 (gage height, 0.79 foot).

REMARKS.—Records good. Discharge estimated Nov. 8-13, Dec. 10, 20-26, 31, Jan. 1-5, 14-22, 25-31, Feb. 1-9, 13, 14, 23, 24, and Mar. 9. Slight diurnal fluctuation caused by operation of small power plants upstream.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | 54 | 35 | 76 | 27 | 20 | 170 | 51 | 110 | 43 | 30 | 8.2 | 5.2 |
| 2..... | 49 | 35 | 51 | 62 | 19 | 158 | 51 | 103 | 42 | 25 | 7.8 | 5.0 |
| 3..... | 48 | 35 | 49 | 54 | 19 | 137 | 48 | 98 | 39 | 21 | 8.5 | 5.0 |
| 4..... | 47 | 48 | 52 | 42 | 19 | 125 | 49 | 87 | 37 | 19 | 8.2 | 4.4 |
| 5..... | 47 | 47 | 54 | 67 | 19 | 170 | 53 | 86 | 35 | 18 | 7.4 | 4.7 |
| 6..... | 47 | 43 | 49 | 170 | 20 | 170 | 92 | 92 | 37 | 17 | 7.1 | 14 |
| 7..... | 46 | 42 | 43 | 98 | 125 | 146 | 73 | 125 | 35 | 15 | 7.1 | 28 |
| 8..... | 45 | 44 | 35 | 125 | 170 | 100 | 73 | 101 | 42 | 14 | 6.8 | 42 |
| 9..... | 44 | 44 | 32 | 158 | 146 | 92 | 70 | 96 | 33 | 13 | 6.8 | 40 |
| 10..... | 43 | 42 | 30 | 125 | 121 | 89 | 66 | 87 | 32 | 11 | 6.4 | 24 |
| 11..... | 42 | 38 | 26 | 98 | 92 | 81 | 60 | 79 | 33 | 10 | 5.7 | 17 |
| 12..... | 40 | 34 | 26 | 73 | 84 | 76 | 130 | 86 | 33 | 10 | 5.7 | 13 |
| 13..... | 38 | 32 | 25 | 58 | 70 | 72 | 116 | 92 | 22 | 9.7 | 5.7 | 9.2 |
| 14..... | 37 | 32 | 25 | 46 | 55 | 99 | 101 | 87 | 23 | 11 | 6.0 | 14 |
| 15..... | 37 | 32 | 25 | 36 | 46 | 103 | 99 | 91 | 22 | 10 | 8.5 | 16 |
| 16..... | 37 | 31 | 25 | 32 | 36 | 99 | 123 | 86 | 27 | 9.7 | 7.1 | 16 |
| 17..... | 37 | 31 | 26 | 30 | 33 | 94 | 136 | 78 | 22 | 9.7 | 6.8 | 27 |
| 18..... | 43 | 31 | 39 | 32 | 32 | 89 | 112 | 73 | 25 | 11 | 6.0 | 31 |
| 19..... | 48 | 32 | 36 | 38 | 32 | 81 | 108 | 94 | 23 | 19 | 11 | 23 |
| 20..... | 45 | 34 | 32 | 49 | 32 | 75 | 101 | 98 | 52 | 14 | 6.8 | 23 |
| 21..... | 42 | 32 | 30 | 46 | 34 | 67 | 96 | 98 | 63 | 12 | 6.4 | 20 |
| 22..... | 42 | 32 | 26 | 40 | 34 | 65 | 106 | 98 | 53 | 12 | 6.4 | 14 |
| 23..... | 44 | 33 | 22 | 37 | 32 | 67 | 94 | 87 | 42 | 12 | 5.7 | 9.2 |
| 24..... | 46 | 33 | 19 | 35 | 26 | 66 | 84 | 84 | 31 | 12 | 5.4 | 7.8 |
| 25..... | 44 | 33 | 19 | 34 | 37 | 66 | 104 | 83 | 49 | 12 | 6.0 | 7.4 |
| 26..... | 42 | 32 | 19 | 32 | 201 | 65 | 196 | 69 | 67 | 11 | 5.7 | 7.1 |
| 27..... | 39 | 30 | 19 | 29 | 243 | 63 | 146 | 67 | 47 | 11 | 6.4 | 6.8 |
| 28..... | 38 | 28 | 21 | 26 | 196 | 58 | 146 | 62 | 45 | 11 | 6.4 | 6.4 |
| 29..... | 37 | 28 | 21 | 24 | ----- | 54 | 146 | 58 | 44 | 11 | 5.7 | 6.4 |
| 30..... | 36 | 52 | 20 | 21 | ----- | 53 | 121 | 54 | 31 | 10 | 5.7 | 6.4 |
| 31..... | 36 | ----- | 19 | 20 | ----- | 51 | ----- | 49 | ----- | 8.5 | 5.4 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 54 | 36 | 42.6 | 1.29 | 1.49 |
| November..... | 52 | 28 | 35.8 | 1.08 | 1.20 |
| December..... | 76 | 19 | 32.0 | .970 | 1.12 |
| January..... | 170 | 20 | 56.9 | 1.72 | 1.98 |
| February..... | 243 | 19 | 71.2 | 2.16 | 2.25 |
| March..... | 170 | 51 | 93.6 | 2.84 | 3.27 |
| April..... | 196 | 48 | 98.4 | 2.98 | 3.32 |
| May..... | 125 | 49 | 85.7 | 2.60 | 3.00 |
| June..... | 69 | 25 | 38.9 | 1.18 | 1.32 |
| July..... | 30 | 8.5 | 13.5 | .404 | .37 |
| August..... | 11 | 5.4 | 6.74 | .204 | .24 |
| September..... | 40 | 4.4 | 15.1 | .458 | .51 |
| The year..... | 243 | 4.4 | 49.0 | 1.48 | 20.07 |

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, 1929. June, 1903, to December, 1904, at Millstone, 1¼ miles downstream.

EXTREMES.—Maximum discharge during year, about 4,000 second-feet Feb. 27 (gage height, 8.22 feet); minimum, about 23 second-feet July 16 (gage height, 0.02 foot).

1921-1929: Maximum discharge, about 7,000 second-feet Oct. 18, 1927; maximum gage height, about 11.0 feet Apr. 7, 1924, and Sept. 7, 1926; minimum discharge, about 5 second-feet Sept. 16, 1923 (gage height, 0.00 foot).

REMARKS.—Records good. Stage-discharge relation affected by ice Jan. 14, 15, and 27-30. Discharge estimated Nov. 11-19. Delaware & Raritan Canal parallels river for some distance; canal loses water to river by leakage, seepage, and flow over spillways.

Daily and monthly discharge, in second-feet, 1923-29.

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1----- | 288 | 140 | 388 | 233 | 223 | 1,550 | 251 | 550 | 191 | 133 | 53 | 44 |
| 2----- | 251 | 140 | 326 | 550 | 216 | 1,200 | 216 | 479 | 170 | 120 | 53 | 44 |
| 3----- | 233 | 152 | 251 | 388 | 157 | 1,340 | 213 | 434 | 167 | 102 | 51 | 46 |
| 4----- | 207 | 191 | 213 | 269 | 154 | 985 | 207 | 346 | 165 | 95 | 55 | 43 |
| 5----- | 194 | 226 | 208 | 200 | 126 | 1,990 | 251 | 346 | 162 | 89 | 55 | 47 |
| 6----- | 269 | 207 | 207 | 1,220 | 129 | 2,970 | 388 | 346 | 152 | 105 | 53 | 86 |
| 7----- | 233 | 188 | 185 | 1,010 | 1,180 | 1,910 | 306 | 479 | 157 | 92 | 52 | 81 |
| 8----- | 191 | 185 | 179 | 650 | 675 | 1,030 | 269 | 388 | 157 | 86 | 53 | 675 |
| 9----- | 188 | 165 | 165 | 575 | 550 | 775 | 233 | 346 | 157 | 131 | 52 | 1,020 |
| 10----- | 167 | 157 | 157 | 675 | 650 | 479 | 251 | 306 | 152 | 269 | 52 | 434 |
| 11----- | 160 | 150 | 160 | 775 | 502 | 456 | 268 | 269 | 157 | 99 | 50 | 411 |
| 12----- | 149 | 150 | 160 | 525 | 411 | 434 | 903 | 233 | 149 | 40 | 52 | 326 |
| 13----- | 147 | 150 | 162 | 411 | 367 | 434 | 1,000 | 230 | 140 | 28 | 48 | 216 |
| 14----- | 131 | 150 | 165 | 320 | 306 | 525 | 600 | 251 | 135 | 25 | 55 | 191 |
| 15----- | 137 | 150 | 167 | 260 | 233 | 550 | 479 | 269 | 131 | 24 | 69 | 160 |
| 16----- | 140 | 150 | 167 | 210 | 167 | 550 | 1,560 | 251 | 131 | 25 | 64 | 140 |
| 17----- | 144 | 140 | 170 | 185 | 170 | 456 | 2,730 | 207 | 131 | 28 | 58 | 137 |
| 18----- | 152 | 140 | 456 | 251 | 176 | 388 | 1,690 | 203 | 124 | 58 | 54 | 111 |
| 19----- | 306 | 140 | 411 | 367 | 188 | 346 | 1,040 | 1,360 | 118 | 63 | 57 | 96 |
| 20----- | 388 | 140 | 306 | 388 | 129 | 326 | 675 | 1,260 | 129 | 54 | 54 | 92 |
| 21----- | 306 | 144 | 251 | 306 | 126 | 306 | 614 | 985 | 251 | 49 | 51 | 85 |
| 22----- | 306 | 157 | 220 | 251 | 194 | 269 | 1,610 | 775 | 197 | 55 | 50 | 79 |
| 23----- | 233 | 149 | 213 | 388 | 142 | 397 | 1,210 | 502 | 142 | 62 | 51 | 82 |
| 24----- | 197 | 147 | 207 | 456 | 114 | 521 | 830 | 388 | 124 | 63 | 49 | 81 |
| 25----- | 476 | 129 | 251 | 434 | 176 | 326 | 625 | 306 | 120 | 59 | 45 | 78 |
| 26----- | 170 | 126 | 226 | 456 | 1,400 | 306 | 980 | 269 | 223 | 56 | 47 | 78 |
| 27----- | 167 | 120 | 223 | 440 | 3,660 | 306 | 650 | 233 | 226 | 58 | 47 | 74 |
| 28----- | 154 | 120 | 306 | 360 | 2,450 | 269 | 557 | 223 | 188 | 63 | 47 | 72 |
| 29----- | 149 | 118 | 326 | 320 | ----- | 251 | 1,020 | 251 | 173 | 58 | 53 | 74 |
| 30----- | 147 | 126 | 233 | 280 | ----- | 233 | 675 | 326 | 144 | 60 | 49 | 84 |
| 31----- | 147 | ----- | 182 | 269 | ----- | 233 | ----- | 233 | ----- | 55 | 46 | ----- |

| Month | Maximum | Minimum | Mean | Month | Maximum | Minimum | Mean |
|---------------|---------|---------|------|----------------|---------|---------|------|
| October----- | 388 | 131 | 201 | May----- | 1,360 | 203 | 421 |
| November----- | 226 | 118 | 152 | June----- | 251 | 118 | 159 |
| December----- | 456 | 167 | 233 | July----- | 269 | 24 | 74.3 |
| January----- | 1,220 | 185 | 433 | August----- | 69 | 45 | 52.4 |
| February----- | 3,660 | 114 | 535 | September----- | 1,020 | 43 | 173 |
| March----- | 2,970 | 233 | 713 | | | | |
| April----- | 2,730 | 207 | 744 | The year----- | 3,660 | 24 | 323 |

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 September, 1929.

REMARKS.—Monthly records poor; daily discharge not sufficiently accurate for publication. Discharge estimated Oct. 19, Dec. 1, 2, Jan. 6, 7, 10, 11, Feb. 4-11, 26-28, Mar. 3-6, Apr. 12, 13, 16, 17, May 7, and 19-21. Flow regulated by water-power plants upstream. Diversions by pumping from well fields above station. Plainfield sewage empties into brook 3 miles above station.

Monthly discharge, in second-feet, 1928-29

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 100 | 35 | 45.5 | 0.929 | 1.07 |
| November..... | 45 | 32 | 38.8 | .792 | .88 |
| December..... | 160 | 35 | 45.9 | .937 | 1.08 |
| January..... | 360 | 42 | 71.4 | 1.46 | 1.68 |
| February..... | 800 | 38 | 112 | 2.29 | 2.38 |
| March..... | 550 | 67 | 115 | 2.35 | 2.71 |
| April..... | 550 | 59 | 126 | 2.57 | 2.87 |
| May..... | 180 | 56 | 87.3 | 1.78 | 2.05 |
| June..... | 56 | 20 | 37.8 | .771 | .86 |
| July..... | 38 | 13 | 29.2 | .596 | .69 |
| August..... | 35 | 8 | 20.0 | .408 | .47 |
| September..... | 83 | 12 | 41.3 | .843 | .94 |
| The year..... | 880 | 8 | 63.9 | 1.30 | 17.68 |

NOTE.—No correction made for Plainfield sewage nor for water diverted through the various well fields in the basin.

LAWRENCE BROOK AT FARRINGTON DAM, N. J.

LOCATION.—Water-stage recorder at Farrington Dam, half a mile southwest of Milltown, Middlesex County, and 4¼ miles above mouth.

DRAINAGE AREA.—34 square miles.

RECORDS AVAILABLE.—May, 1927, to September, 1929. June, 1922, to December, 1926, at Patricks Corner, 2¼ miles upstream.

EXTREMES.—Maximum discharge during year, 705 second-feet Apr. 16 (gage height, 1.18 feet); minimum, 5.0 second-feet Aug. 7-9.

1927-1929: Maximum discharge, about 1,900 second-feet July 6, 1928 (gage height, 1.84 feet); minimum, that of Aug. 7-9, 1929.

REMARKS.—Records fair. Discharge estimated Dec. 22 to Jan. 18, Mar. 17, Apr. 27-30, May 23, and 24. Sluice gate in dam open Aug. 24 to Sept. 11; discharge included in table of daily discharge. Shelter for recorder and inspection service furnished by city engineer of New Brunswick.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 56 | 25 | 94 | | 25 | 125 | 19 | 51 | 29 | 19 | 6.2 | 14 |
| 2 | 36 | 25 | 62 | | 25 | 125 | 16 | 46 | 19 | 22 | 6.2 | 14 |
| 3 | 32 | 29 | 46 | | 22 | 109 | 19 | 36 | 16 | 14 | 6.2 | 14 |
| 4 | 29 | 51 | 41 | | 19 | 80 | 19 | 32 | 16 | 11 | 6.2 | 14 |
| 5 | 29 | 62 | 41 | | 16 | 296 | 25 | 32 | 14 | 11 | 5.7 | 14 |
| 6 | 51 | 46 | 36 | | 22 | 355 | 62 | 36 | 14 | 19 | 5.2 | 14 |
| 7 | 32 | 36 | 32 | | 62 | 200 | 46 | 62 | 14 | 12 | 5.0 | 14 |
| 8 | 29 | 36 | 32 | | 102 | 109 | 32 | 41 | 16 | 8.0 | 5.0 | 14 |
| 9 | 29 | 32 | 32 | | 80 | 80 | 29 | 36 | 19 | 11 | 5.0 | 16 |
| 10 | 22 | 29 | 32 | 38 | 68 | 68 | 32 | 32 | 16 | 9 | 5.2 | 21 |
| 11 | 22 | 25 | 32 | | 56 | 46 | 32 | 29 | 14 | 8.0 | 5.2 | 12 |
| 12 | 22 | 29 | 32 | | 46 | 56 | 118 | 25 | 12 | 7.5 | 5.4 | 7.0 |
| 13 | 19 | 29 | 29 | | 36 | 68 | 87 | 29 | 11 | 7.2 | 5.9 | 7.5 |
| 14 | 19 | 29 | 29 | | 29 | 56 | 51 | 32 | 11 | 7.7 | 7.5 | 19 |
| 15 | 19 | 25 | 29 | | 25 | 51 | 36 | 36 | 11 | 11 | 14 | 22 |
| 16 | 19 | 22 | 29 | | 22 | 46 | 380 | 32 | 12 | 9 | 8.0 | 14 |
| 17 | 19 | 25 | 32 | | 22 | 36 | 315 | 25 | 11 | 7.7 | 7.2 | 12 |
| 18 | 19 | 25 | 80 | | 22 | 32 | 117 | 25 | 9 | 7.2 | 7.0 | 11 |
| 19 | 74 | 25 | 56 | 46 | 25 | 29 | 74 | 287 | 9 | 7.5 | 7.0 | 8.0 |
| 20 | 109 | 25 | 41 | 46 | 25 | 32 | 51 | 151 | 12 | 7.5 | 6.7 | 7.2 |
| 21 | 68 | 25 | 32 | 36 | 22 | 32 | 56 | 117 | 19 | 7.5 | 6.4 | 6.7 |
| 22 | 51 | 25 | | 22 | 29 | 32 | 190 | 80 | 14 | 7.2 | 6.2 | 6.4 |
| 23 | 41 | 25 | | 22 | 29 | 36 | 102 | 55 | 14 | 7.5 | 5.9 | 6.4 |
| 24 | 36 | 22 | | 46 | 25 | 36 | 62 | 40 | 19 | 7.5 | 13 | 6.7 |
| 25 | 32 | 22 | | 56 | 25 | 36 | 51 | 36 | 25 | 7.2 | 14 | 6.7 |
| 26 | 29 | 22 | 34 | 46 | 262 | 36 | 109 | 36 | 46 | 7.0 | 8 | 6.7 |
| 27 | 29 | 22 | | 36 | 308 | 32 | 80 | 29 | 36 | 7.0 | 16 | 6.7 |
| 28 | 29 | 22 | | 22 | 200 | 25 | 55 | 25 | 29 | 6.7 | 15 | 6.7 |
| 29 | 25 | 22 | | 22 | | 22 | 120 | 47 | 36 | 6.4 | 14 | 6.7 |
| 30 | 25 | 32 | | 22 | | 22 | 60 | 134 | 25 | 6.7 | 14 | 7.2 |
| 1 | 25 | | | 25 | | 22 | | 46 | | 6.4 | 14 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 109 | 19 | 34.7 | 1.02 | 1.18 |
| November | 62 | 22 | 29.0 | .853 | .95 |
| December | 94 | 29 | 39.0 | 1.15 | 1.33 |
| January | 56 | 22 | 36.5 | 1.07 | 1.23 |
| February | 308 | 16 | 58.9 | 1.73 | 1.80 |
| March | 355 | 22 | 75.2 | 2.21 | 2.55 |
| April | 380 | 16 | 81.5 | 2.40 | 2.68 |
| May | 287 | 25 | 55.5 | 1.63 | 1.88 |
| June | 46 | 9 | 18.3 | .538 | .60 |
| July | 22 | 6.4 | 9.46 | .278 | .32 |
| August | 16 | 5.0 | 8.27 | .243 | .28 |
| September | 22 | 6.4 | 11.2 | .329 | .37 |
| The year | 380 | 5.0 | 38.0 | 1.12 | 15.17 |

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, 1929.

EXTREMES.—Maximum discharge over spillway during year, about 1,320 second-feet Apr. 16 (gage height, 4.34 feet).

1922-1929: Maximum discharge over spillway, about 2,590 second-feet Feb. 25, 1926 (gage height, 3.42 feet; crest of dam raised 18 inches in October, 1926).

REMARKS.—Records good. Discharge over spillway estimated Feb. 11-15, June 6, 7, 19-21, July 5-10, and Aug. 14-16. Table of daily discharge includes diversion for municipal uses. Shelter for recorder, inspection service, and record of diversion furnished by Monmouth Consolidated Water Co.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | 103 | 49 | 91 | 60 | 54 | 174 | 80 | 118 | 67 | 44 | 32 | 27 |
| 2..... | 77 | 48 | 69 | 95 | 46 | 139 | 75 | 119 | 58 | 45 | 30 | 26 |
| 3..... | 70 | 60 | 54 | 54 | 51 | 189 | 69 | 115 | 57 | 41 | 28 | 25 |
| 4..... | 66 | 79 | 51 | 43 | 49 | 135 | 73 | 99 | 57 | 36 | 36 | 23 |
| 5..... | 62 | 73 | 54 | 41 | 46 | 273 | 78 | 98 | 57 | 36 | 31 | 20 |
| 6..... | 69 | 57 | 60 | 155 | 57 | 366 | 125 | 103 | 58 | 111 | 28 | 55 |
| 7..... | 59 | 53 | 50 | 163 | 339 | 185 | 99 | 176 | 60 | 57 | 29 | 42 |
| 8..... | 57 | 51 | 50 | 58 | 184 | 121 | 83 | 119 | 61 | 43 | 27 | 81 |
| 9..... | 55 | 51 | 53 | 64 | 99 | 121 | 73 | 107 | 68 | 52 | 29 | 113 |
| 10..... | 51 | 48 | 51 | 84 | 127 | 96 | 86 | 103 | 60 | 39 | 29 | 70 |
| 11..... | 51 | 48 | 50 | 124 | 110 | 112 | 86 | 95 | 54 | 35 | 34 | 40 |
| 12..... | 50 | 48 | 51 | 80 | 90 | 108 | 171 | 88 | 49 | 33 | 38 | 32 |
| 13..... | 49 | 49 | 50 | 66 | 75 | 108 | 220 | 88 | 46 | 33 | 31 | 31 |
| 14..... | 48 | 46 | 54 | 40 | 63 | 115 | 122 | 90 | 45 | 35 | 34 | 43 |
| 15..... | 50 | 49 | 62 | 54 | 64 | 112 | 94 | 96 | 45 | 55 | 41 | 56 |
| 16..... | 49 | 49 | 72 | 54 | 66 | 111 | 620 | 88 | 51 | 42 | 30 | 40 |
| 17..... | 50 | 49 | 66 | 63 | 62 | 99 | 586 | 78 | 46 | 35 | 24 | 35 |
| 18..... | 49 | 48 | 83 | 95 | 63 | 89 | 249 | 74 | 42 | 35 | 27 | 37 |
| 19..... | 73 | 49 | 63 | 94 | 63 | 86 | 170 | 155 | 43 | 45 | 28 | 34 |
| 20..... | 70 | 63 | 57 | 83 | 60 | 84 | 145 | 167 | 49 | 47 | 28 | 32 |
| 21..... | 52 | 54 | 54 | 56 | 48 | 81 | 143 | 127 | 54 | 38 | 26 | 31 |
| 22..... | 54 | 51 | 44 | 57 | 63 | 81 | 258 | 123 | 44 | 38 | 26 | 32 |
| 23..... | 52 | 49 | 44 | 73 | 73 | 89 | 189 | 95 | 40 | 38 | 25 | 30 |
| 24..... | 58 | 45 | 45 | 77 | 57 | 95 | 143 | 88 | 41 | 35 | 26 | 30 |
| 25..... | 50 | 45 | 45 | 93 | 71 | 85 | 131 | 88 | 50 | 35 | 25 | 29 |
| 26..... | 49 | 45 | 46 | 175 | 282 | 89 | 135 | 88 | 98 | 35 | 26 | 29 |
| 27..... | 50 | 43 | 48 | 80 | 521 | 92 | 118 | 81 | 52 | 30 | 23 | 30 |
| 28..... | 50 | 45 | 68 | 77 | 225 | 80 | 119 | 75 | 48 | 30 | 24 | 28 |
| 29..... | 50 | 46 | 62 | 52 | ----- | 78 | 187 | 71 | 78 | 31 | 23 | 30 |
| 30..... | 46 | 51 | 50 | 54 | ----- | 73 | 127 | 71 | 56 | 42 | 21 | 36 |
| 31..... | 49 | ----- | 46 | 55 | ----- | 80 | ----- | 72 | ----- | 32 | 22 | ----- |

| Month | Observed | | | Corrected for storage | | Run-off in inches |
|----------------|----------|---------|------|-----------------------|-----------------|-------------------|
| | Maximum | Minimum | Mean | Mean | Per square mile | |
| October..... | 103 | 46 | 57.0 | 56.6 | 1.19 | 1.37 |
| November..... | 79 | 43 | 51.3 | 51.5 | 1.07 | 1.19 |
| December..... | 91 | 44 | 56.2 | 56.1 | 1.17 | 1.35 |
| January..... | 175 | 40 | 78.4 | 78.4 | 1.63 | 1.88 |
| February..... | 521 | 46 | 111 | 112 | 2.33 | 2.43 |
| March..... | 366 | 73 | 121 | 120 | 2.50 | 2.88 |
| April..... | 620 | 69 | 162 | 162 | 3.37 | 3.76 |
| May..... | 176 | 71 | 102 | 102 | 2.12 | 2.41 |
| June..... | 98 | 40 | 54.5 | 54.3 | 1.13 | 1.23 |
| July..... | 111 | 30 | 41.4 | 41.2 | .858 | .99 |
| August..... | 41 | 21 | 28.5 | 28.5 | .594 | .68 |
| September..... | 113 | 20 | 38.9 | 39.1 | .815 | .91 |
| The year..... | 620 | 20 | 74.8 | 74.8 | 1.56 | 21.14 |

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, 1929.

EXTREMES.—Maximum discharge during period, 851 second-feet Apr. 18 (gauge height, 8.95 feet); minimum, 79 second-feet Sept. 5 (gauge height, 3.24 feet).

REMARKS.—Records excellent. Discharge estimated Jan. 17–19 and Apr. 27–29.

Daily and monthly discharge, in second-feet, 1928–29

| Day | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | | 157 | 190 | 528 | 202 | 388 | 190 | 179 | 89 | 99 |
| 2..... | | 168 | 179 | 514 | 202 | 375 | 179 | 157 | 94 | 89 |
| 3..... | | 168 | 179 | 457 | 190 | 362 | 157 | 152 | 89 | 84 |
| 4..... | | 168 | 168 | 415 | 190 | 324 | 157 | 130 | 104 | 84 |
| 5..... | | 157 | 157 | 401 | 179 | 298 | 157 | 135 | 114 | 84 |
| 6..... | | 202 | 168 | 485 | 190 | 285 | 179 | 157 | 89 | 146 |
| 7..... | | 237 | 213 | 602 | 202 | 285 | 179 | 157 | 89 | 157 |
| 8..... | | 261 | 249 | 602 | 202 | 298 | 168 | 140 | 104 | 202 |
| 9..... | | 261 | 285 | 514 | 190 | 311 | 179 | 119 | 89 | 225 |
| 10..... | | 249 | 336 | 429 | 190 | 298 | 190 | 124 | 89 | 225 |
| 11..... | | 261 | 336 | 349 | 190 | 273 | 179 | 114 | 104 | 261 |
| 12..... | | 261 | 324 | 324 | 221 | 261 | 168 | 104 | 104 | 249 |
| 13..... | | 249 | 273 | 298 | 249 | 249 | 157 | 109 | 104 | 179 |
| 14..... | | 213 | 249 | 285 | 273 | 249 | 152 | 104 | 104 | 157 |
| 15..... | | 202 | 225 | 285 | 298 | 273 | 152 | 119 | 104 | 146 |
| 16..... | | 190 | 213 | 285 | 396 | 285 | 157 | 114 | 104 | 130 |
| 17..... | | 180 | 202 | 273 | 558 | 285 | 146 | 104 | 104 | 119 |
| 18..... | | 220 | 190 | 261 | 803 | 273 | 135 | 104 | 94 | 130 |
| 19..... | | 240 | 190 | 249 | 724 | 261 | 124 | 119 | 99 | 130 |
| 20..... | | 225 | 190 | 237 | 572 | 285 | 124 | 152 | 99 | 114 |
| 21..... | | 225 | 190 | 225 | 457 | 311 | 152 | 140 | 89 | 109 |
| 22..... | | 202 | 190 | 225 | 415 | 298 | 157 | 119 | 94 | 114 |
| 23..... | | 202 | 202 | 225 | 401 | 298 | 140 | 109 | 89 | 104 |
| 24..... | | 202 | 190 | 225 | 401 | 261 | 135 | 109 | 89 | 99 |
| 25..... | | 213 | 190 | 225 | 388 | 249 | 140 | 109 | 99 | 99 |
| 26..... | | 249 | 237 | 225 | 349 | 225 | 190 | 119 | 89 | 94 |
| 27..... | | 261 | 311 | 225 | 340 | 202 | 190 | 104 | 84 | 94 |
| 28..... | 157 | 285 | 388 | 225 | 320 | 202 | 168 | 104 | 84 | 94 |
| 29..... | 168 | 261 | ----- | 225 | 340 | 202 | 179 | 99 | 84 | 94 |
| 30..... | 168 | 225 | ----- | 213 | 349 | 190 | 190 | 99 | 89 | 99 |
| 31..... | 157 | 202 | ----- | 213 | ----- | 179 | ----- | 94 | 94 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| January..... | 285 | 157 | 219 | 1.77 | 2.04 |
| February..... | 388 | 157 | 229 | 1.85 | 1.93 |
| March..... | 602 | 213 | 330 | 2.66 | 3.07 |
| April..... | 803 | 179 | 333 | 2.69 | 3.00 |
| May..... | 388 | 179 | 275 | 2.22 | 2.56 |
| June..... | 190 | 124 | 162 | 1.31 | 1.46 |
| July..... | 179 | 94 | 123 | .992 | 1.14 |
| August..... | 135 | 84 | 101 | .815 | .94 |
| September..... | 261 | 84 | 134 | 1.08 | 1.20 |

MULLICA RIVER BASIN

BATSTO RIVER AT BATSTO, N. J.

LOCATION.—Water-stage recorder 300 feet downstream from highway bridge in Batsto, Burlington County, and 1 mile upstream from confluence with Mullica River.

DRAINAGE AREA.—70 square miles.

RECORDS AVAILABLE.—October, 1927, to September, 1929.

REMARKS.—Records good. Discharge estimated Dec. 23-27. Records of discharge include water diverted around station by old gristmill. Flow slightly regulated 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, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1 | 136 | 81 | 98 | 80 | 98 | 405 | 104 | 206 | 104 | 88 | 60 | 53 |
| 2 | 136 | 84 | 98 | 83 | 98 | 367 | 99 | 233 | 99 | 40 | 62 | 53 |
| 3 | 125 | 93 | 98 | 84 | 103 | 264 | 104 | 219 | 88 | 32 | 56 | 52 |
| 4 | 119 | 98 | 98 | 87 | 114 | 245 | 104 | 182 | 80 | 61 | 60 | 51 |
| 5 | 109 | 103 | 98 | 87 | 103 | 274 | 99 | 167 | 77 | 64 | 56 | 55 |
| 6 | 114 | 103 | 93 | 119 | 87 | 259 | 104 | 144 | 82 | 64 | 51 | 68 |
| 7 | 103 | 98 | 93 | 119 | 124 | 422 | 104 | 149 | 90 | 66 | 54 | 72 |
| 8 | 93 | 98 | 93 | 125 | 129 | 382 | 104 | 143 | 110 | 64 | 57 | 75 |
| 9 | 93 | 93 | 93 | 142 | 158 | 317 | 99 | 166 | 110 | 63 | 52 | 72 |
| 10 | 93 | 93 | 87 | 157 | 179 | 330 | 99 | 167 | 104 | 60 | 51 | 71 |
| 11 | 87 | 93 | 87 | 154 | 192 | 218 | 99 | 176 | 94 | 64 | 75 | 63 |
| 12 | 87 | 93 | 87 | 160 | 192 | 171 | 104 | 206 | 85 | 57 | 74 | 64 |
| 13 | 86 | 93 | 87 | 169 | 179 | 166 | 130 | 185 | 77 | 57 | 68 | 65 |
| 14 | 87 | 93 | 93 | 140 | 144 | 166 | 161 | 193 | 82 | 57 | 68 | 64 |
| 15 | 84 | 87 | 103 | 115 | 131 | 160 | 167 | 166 | 84 | 56 | 82 | 62 |
| 16 | 83 | 86 | 109 | 109 | 125 | 166 | 312 | 172 | 80 | 56 | 94 | 61 |
| 17 | 83 | 87 | 103 | 103 | 117 | 166 | 334 | 155 | 71 | 56 | 78 | 61 |
| 18 | 84 | 84 | 98 | 96 | 114 | 154 | 378 | 149 | 71 | 54 | 69 | 65 |
| 19 | 103 | 85 | 93 | 106 | 109 | 148 | 315 | 149 | 74 | 57 | 60 | 62 |
| 20 | 114 | 98 | 93 | 119 | 109 | 142 | 238 | 167 | 149 | 56 | 58 | 60 |
| 21 | 103 | 98 | 93 | 119 | 109 | 129 | 216 | 193 | 100 | 54 | 56 | 57 |
| 22 | 98 | 103 | 93 | 116 | 109 | 136 | 224 | 193 | 39 | 56 | 54 | 58 |
| 23 | 93 | 98 | 95 | 120 | 114 | 142 | 219 | 193 | 82 | 57 | 53 | 58 |
| 24 | 93 | 93 | 95 | 120 | 114 | 128 | 199 | 193 | 78 | 57 | 51 | 57 |
| 25 | 93 | 93 | 85 | 128 | 118 | 109 | 206 | 180 | 163 | 57 | 53 | 53 |
| 26 | 93 | 87 | 85 | 123 | 166 | 109 | 206 | 155 | 94 | 58 | 53 | 53 |
| 27 | 87 | 83 | 85 | 129 | 301 | 109 | 177 | 143 | 85 | 60 | 53 | 54 |
| 28 | 87 | 83 | 87 | 142 | 441 | 103 | 176 | 131 | 85 | 56 | 53 | 54 |
| 29 | 87 | 81 | 86 | 142 | ----- | 105 | 180 | 114 | 94 | 57 | 53 | 53 |
| 30 | 86 | 87 | 83 | 127 | ----- | 103 | 193 | 120 | 99 | 73 | 54 | 58 |
| 31 | 83 | ----- | 80 | 105 | ----- | 103 | ----- | 101 | ----- | 50 | 54 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 136 | 83 | 97.5 | 1.39 | 1.60 |
| November | 103 | 81 | 91.6 | 1.31 | 1.46 |
| December | 109 | 80 | 92.5 | 1.32 | 1.52 |
| January | 169 | 80 | 120 | 1.71 | 1.97 |
| February | 441 | 87 | 146 | 2.09 | 2.18 |
| March | 422 | 103 | 200 | 2.86 | 3.30 |
| April | 378 | 99 | 175 | 2.50 | 2.79 |
| May | 233 | 101 | 168 | 2.40 | 2.77 |
| June | 163 | 39 | 91.0 | 1.30 | 1.45 |
| July | 88 | 32 | 58.3 | .833 | .96 |
| August | 94 | 51 | 60.4 | .863 | .99 |
| September | 75 | 51 | 60.1 | .859 | .96 |
| The year | 441 | 32 | 113 | 1.61 | 21.95 |

ABSECON CREEK BASIN

ABSECON CREEK AT ABSECON, N. J.

LOCATION.—Weir and water-stage recorders at dam of Atlantic City Water Department, 1 mile west of Absecon, Atlantic County, and 3 miles above mouth.

DRAINAGE AREA.—16.6 square miles.

RECORDS AVAILABLE.—December, 1923, to April, 1929; discontinued.

REMARKS.—Records fair. Discharge partly estimated Jan. 6-12, 14-17, 29-31, Feb. 1-6, 23-25, Mar. 9-14, 20-22, 29, 30, Apr. 13, 16, 17, and 24-28. Table of daily discharge includes diversions to Atlantic City waterworks and to duck farm. Shelter for recorders and inspection service furnished by Atlantic City Water Department.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. |
|-----|------|-------|------|------|-------|------|-------|
| 1 | 37 | 24 | 29 | 21 | 26 | 41 | 20 |
| 2 | 34 | 24 | 29 | 22 | 27 | 47 | 20 |
| 3 | 32 | 25 | 30 | 19 | 27 | 48 | 20 |
| 4 | 32 | 26 | 30 | 17 | 27 | 48 | 20 |
| 5 | 30 | 26 | 30 | 28 | 27 | 48 | 21 |
| 6 | 32 | 25 | 28 | 33 | 29 | 51 | 40 |
| 7 | 30 | 25 | 29 | 34 | 31 | 47 | 44 |
| 8 | 29 | 28 | 25 | 34 | 32 | 37 | 31 |
| 9 | 28 | 25 | 25 | 37 | 34 | 45 | 25 |
| 10 | 28 | 33 | 24 | 43 | 33 | 47 | 27 |
| 11 | 27 | 50 | 25 | 45 | 32 | 47 | 24 |
| 12 | 26 | 60 | 25 | 48 | 32 | 47 | 25 |
| 13 | 26 | 44 | 26 | 44 | 26 | 45 | 23 |
| 14 | 27 | 42 | 26 | 29 | 28 | 44 | 23 |
| 15 | 26 | 50 | 28 | 34 | 27 | 44 | 24 |
| 16 | 25 | 46 | 28 | 34 | 23 | 42 | 25 |
| 17 | 25 | 39 | 28 | 34 | 31 | 40 | 41 |
| 18 | 26 | 37 | 28 | 27 | 32 | 38 | 61 |
| 19 | 27 | 37 | 29 | 24 | 31 | 35 | 57 |
| 20 | 29 | 34 | 29 | 23 | 31 | 31 | 63 |
| 21 | 25 | 32 | 31 | 24 | 32 | 33 | 48 |
| 22 | 25 | 32 | 38 | 24 | 34 | 33 | 49 |
| 23 | 26 | 31 | 41 | 24 | 32 | 35 | 68 |
| 24 | 30 | 28 | 37 | 24 | 31 | 39 | 77 |
| 25 | 27 | 26 | 24 | 29 | 31 | 38 | 73 |
| 26 | 27 | 26 | 27 | 30 | 32 | 29 | 67 |
| 27 | 24 | 28 | 29 | 26 | 35 | 19 | 49 |
| 28 | 24 | 25 | 31 | 27 | 37 | 19 | 36 |
| 29 | 25 | 23 | 37 | 27 | ----- | 20 | 37 |
| 30 | 24 | 24 | 28 | 22 | ----- | 20 | 40 |
| 31 | 24 | ----- | 21 | 24 | ----- | 20 | ----- |

| Month | Observed | | | Corrected for storage | | Run-off in inches |
|----------|----------|---------|------|-----------------------|-----------------|-------------------|
| | Maximum | Minimum | Mean | Mean | Per square mile | |
| October | 37 | 24 | 27.6 | 26.9 | 1.62 | 1.87 |
| November | 60 | 23 | 32.5 | 22.7 | 1.37 | 1.53 |
| December | 41 | 21 | 28.9 | 28.5 | 1.72 | 1.98 |
| January | 48 | 17 | 29.4 | 30.7 | 1.85 | 2.13 |
| February | 37 | 23 | 30.5 | 33.6 | 2.02 | 2.10 |
| March | 51 | 18 | 38.0 | 36.6 | 2.20 | 2.54 |
| April | 77 | 20 | 39.3 | 40.5 | 2.44 | 2.72 |

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, 1929.

EXTREMES.—Maximum discharge during year, 229 second-feet Apr. 19 and 20 (gage height, 5.28 feet); minimum, 30 second-feet Aug. 10 and 11 (gage height, 2.58 feet).

1925-1929: Maximum discharge, that of Apr. 19 and 20, 1929; minimum, 26 second-feet Aug. 14, 1926.

REMARKS.—Records good. Discharge estimated Oct. 7-9, Nov. 11-13, Mar. 3-8, May 30, 31, June 1, and 2.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May. | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|------|-------|------|------|-------|
| 1..... | 95 | 52 | 70 | 67 | 80 | 206 | 80 | 160 | 55 | 107 | 34 | 36 |
| 2..... | 101 | 54 | 80 | 70 | 74 | 206 | 80 | 160 | 48 | 107 | 34 | 36 |
| 3..... | 101 | 62 | 80 | 72 | 72 | 199 | 74 | 153 | 44 | 72 | 32 | 34 |
| 4..... | 89 | 67 | 77 | 70 | 70 | 181 | 74 | 146 | 50 | 60 | 36 | 34 |
| 5..... | 77 | 72 | 72 | 64 | 67 | 181 | 72 | 133 | 42 | 54 | 34 | 34 |
| 6..... | 72 | 74 | 70 | 74 | 67 | 181 | 77 | 127 | 47 | 52 | 44 | 47 |
| 7..... | 70 | 72 | 67 | 95 | 89 | 199 | 80 | 114 | 60 | 50 | 34 | 44 |
| 8..... | 65 | 67 | 64 | 107 | 107 | 199 | 83 | 107 | 54 | 47 | 32 | 42 |
| 9..... | 65 | 64 | 64 | 101 | 120 | 199 | 80 | 101 | 67 | 44 | 32 | 42 |
| 10..... | 62 | 60 | 64 | 107 | 133 | 181 | 77 | 101 | 72 | 42 | 30 | 44 |
| 11..... | 60 | 60 | 62 | 120 | 140 | 167 | 77 | 95 | 72 | 40 | 34 | 44 |
| 12..... | 57 | 55 | 62 | 120 | 140 | 153 | 83 | 89 | 64 | 40 | 60 | 42 |
| 13..... | 57 | 55 | 62 | 120 | 127 | 140 | 101 | 89 | 57 | 40 | 47 | 40 |
| 14..... | 54 | 57 | 67 | 107 | 114 | 127 | 127 | 89 | 54 | 40 | 44 | 38 |
| 15..... | 54 | 57 | 83 | 74 | 101 | 127 | 146 | 95 | 52 | 40 | 83 | 40 |
| 16..... | 52 | 57 | 95 | 77 | 89 | 127 | 167 | 95 | 52 | 40 | 114 | 40 |
| 17..... | 52 | 64 | 101 | 74 | 89 | 127 | 206 | 95 | 52 | 38 | 140 | 38 |
| 18..... | 52 | 54 | 107 | 83 | 83 | 127 | 221 | 80 | 50 | 38 | 140 | 44 |
| 19..... | 64 | 57 | 101 | 89 | 83 | 114 | 229 | 83 | 47 | 40 | 114 | 42 |
| 20..... | 67 | 67 | 95 | 95 | 80 | 107 | 221 | 89 | 52 | 40 | 67 | 40 |
| 21..... | 64 | 72 | 89 | 101 | 80 | 101 | 214 | 95 | 70 | 40 | 52 | 38 |
| 22..... | 64 | 74 | 80 | 95 | 80 | 95 | 206 | 95 | 62 | 38 | 47 | 36 |
| 23..... | 62 | 72 | 74 | 83 | 80 | 95 | 199 | 95 | 57 | 38 | 44 | 36 |
| 24..... | 62 | 67 | 67 | 83 | 80 | 95 | 199 | 77 | 52 | 38 | 44 | 36 |
| 25..... | 60 | 64 | 64 | 89 | 80 | 95 | 181 | 80 | 52 | 38 | 42 | 34 |
| 26..... | 57 | 62 | 60 | 101 | 95 | 95 | 181 | 89 | 54 | 40 | 40 | 34 |
| 27..... | 57 | 60 | 60 | 114 | 146 | 89 | 174 | 80 | 54 | 38 | 38 | 34 |
| 28..... | 54 | 57 | 64 | 120 | 181 | 89 | 167 | 74 | 54 | 36 | 38 | 32 |
| 29..... | 54 | 57 | 70 | 120 | ----- | 83 | 160 | 67 | 85 | 36 | 38 | 32 |
| 30..... | 54 | 60 | 72 | 101 | ----- | 80 | 160 | 60 | 101 | 36 | 38 | 34 |
| 31..... | 52 | ----- | 70 | 89 | ----- | 77 | ----- | 60 | ----- | 36 | 38 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 101 | 52 | 64.7 | 1.16 | 1.34 |
| November..... | 74 | 52 | 62.1 | 1.11 | 1.24 |
| December..... | 107 | 60 | 74.6 | 1.33 | 1.53 |
| January..... | 120 | 64 | 93.0 | 1.66 | 1.91 |
| February..... | 181 | 67 | 98.1 | 1.75 | 1.82 |
| March..... | 206 | 77 | 137 | 2.45 | 2.82 |
| April..... | 229 | 72 | 140 | 2.50 | 2.79 |
| May..... | 160 | 60 | 99.1 | 1.77 | 2.04 |
| June..... | 101 | 42 | 57.7 | 1.03 | 1.15 |
| July..... | 107 | 36 | 46.6 | .832 | .96 |
| August..... | 140 | 30 | 53.0 | .946 | 1.09 |
| September..... | 47 | 32 | 38.2 | .682 | .76 |
| The year..... | 229 | 30 | 80.2 | 1.43 | 19.45 |

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, $4\frac{1}{2}$ miles downstream from mouth of Beaver Kill. Zero of gage is 950.835 feet above mean sea level.

DRAINAGE AREA.—785 square miles.

RECORDS AVAILABLE.—November, 1912, to September, 1929.

EXTREMES.—Maximum discharge during year, 24,200 second-feet Mar. 14 (gage height, 14.1 feet); minimum, 110 second-feet Sept. 4 and 5 (gage height, 1.78 feet).

1912-1929: Maximum discharge about 45,000 second-feet Sept. 30, 1924 (gage height, from floodmarks, 19.0 feet); minimum discharge, 97 second-feet Oct. 12, 14, and 15, 1914, and Nov. 18, 1924; minimum gage height, 1.64 feet Oct. 12, 14, and 15, 1914.

REMARKS.—Records good except for periods of ice effect (Jan. 6-19 and Jan. 28 to Mar. 13) and for estimated periods, which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|-------|-------|-------|--------|--------|--------|-------|------|------|-------|
| 1----- | 341 | 263 | 1,170 | 481 | 600 | 2,800 | 2,090 | 3,920 | 1,660 | 890 | 176 | 132 |
| 2----- | 323 | 263 | 1,380 | 765 | 550 | 1,800 | 2,040 | 3,260 | 1,420 | 890 | 161 | 127 |
| 3----- | 323 | 263 | 1,090 | 580 | 550 | 1,400 | 1,760 | 5,530 | 1,260 | 705 | *164 | 118 |
| 4----- | 323 | 269 | 1,020 | 438 | 550 | 1,300 | 1,790 | *4,400 | 1,120 | 585 | 213 | 110 |
| 5----- | 326 | 269 | 955 | 399 | 550 | 1,400 | 2,980 | *4,000 | 1,020 | 525 | 219 | 118 |
| 6----- | 403 | 260 | 922 | 1,100 | 550 | 3,000 | 6,060 | *3,600 | 988 | 495 | 188 | 141 |
| 7----- | 371 | 243 | 765 | 900 | 1,200 | 2,200 | 4,940 | *3,400 | 890 | 452 | 169 | 139 |
| 8----- | 313 | 241 | 765 | 800 | 2,200 | 1,900 | 3,840 | *3,000 | 825 | 395 | *160 | 216 |
| 9----- | 284 | 243 | 674 | 800 | 1,900 | 1,600 | 3,260 | *2,800 | 694 | 359 | *150 | 293 |
| 10----- | 278 | *249 | 490 | 900 | 1,600 | 1,300 | 3,260 | *2,400 | 617 | 337 | *140 | 249 |
| 11----- | 260 | *240 | 675 | 850 | 1,300 | 1,200 | 3,330 | *2,040 | 580 | 333 | *135 | 222 |
| 12----- | 263 | | 639 | 750 | 1,200 | 1,400 | 8,040 | 1,840 | 540 | 313 | *130 | 196 |
| 13----- | 257 | | 595 | 700 | 1,100 | 2,000 | 11,500 | 1,760 | 495 | 284 | *125 | 178 |
| 14----- | 257 | | 580 | 650 | 950 | 14,400 | 7,500 | 1,620 | 466 | 263 | 304 | 714 |
| 15----- | 243 | | 555 | 650 | 800 | 22,100 | 5,510 | 2,260 | 447 | 249 | 639 | 825 |
| 16----- | 238 | *241 | 535 | 600 | 800 | 19,200 | 4,940 | 2,090 | 434 | 235 | 403 | 525 |
| 17----- | 249 | | 540 | 600 | 750 | 12,900 | 4,580 | 1,840 | 387 | 224 | 269 | 456 |
| 18----- | 252 | | 938 | 800 | 750 | 6,780 | 3,920 | 1,620 | 352 | 222 | 219 | 741 |
| 19----- | 281 | | 1,200 | 6,000 | 700 | 4,760 | 3,400 | 2,160 | 326 | 287 | 188 | 540 |
| 20----- | 275 | | 401 | 955 | 2,610 | 4,000 | 4,320 | 3,190 | 438 | 290 | 171 | 412 |
| 21----- | 252 | 452 | 792 | 1,680 | 600 | 3,400 | 15,100 | 3,300 | 700 | 238 | 159 | 344 |
| 22----- | 232 | 421 | 517 | 1,500 | 600 | 3,470 | 13,800 | 3,920 | 452 | 211 | *150 | 306 |
| 23----- | 241 | 407 | 576 | 1,340 | 600 | 4,940 | 9,500 | 3,190 | 367 | 200 | *160 | 300 |
| 24----- | 281 | 395 | 705 | 1,160 | 600 | 4,940 | 7,500 | 2,860 | 399 | 186 | 263 | 260 |
| 25----- | 300 | 387 | 741 | 988 | 600 | 3,920 | 7,400 | 3,330 | 485 | 208 | 208 | 238 |
| 26----- | 310 | 337 | 765 | 890 | 750 | 4,760 | 15,700 | 2,540 | 661 | 219 | 159 | 224 |
| 27----- | 293 | 330 | 672 | 765 | 2,400 | 4,240 | 9,660 | 2,140 | 540 | 216 | 152 | 206 |
| 28----- | 290 | 348 | 678 | 700 | 3,400 | 3,540 | 6,550 | 1,990 | 585 | 193 | 143 | 196 |
| 29----- | 306 | 371 | 622 | 650 | ----- | 3,050 | 7,010 | 2,170 | 1,460 | 243 | 132 | 188 |
| 30----- | 303 | 432 | 490 | 650 | ----- | 2,540 | 4,940 | 3,050 | 1,020 | 246 | 136 | 193 |
| 31----- | 275 | ----- | 399 | 600 | ----- | 2,310 | ----- | 2,040 | ----- | 203 | 136 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October----- | 403 | 232 | 289 | 0.368 | 0.42 |
| November----- | 452 | ----- | 301 | .383 | .43 |
| December----- | 1,380 | 399 | 755 | .962 | 1.11 |
| January----- | 6,000 | 399 | 1,040 | 1.32 | 1.52 |
| February----- | 3,400 | 550 | 1,030 | 1.31 | 1.36 |
| March----- | 22,100 | 1,200 | 4,790 | 6.10 | 7.03 |
| April----- | 15,700 | 1,760 | 6,210 | 7.91 | 8.82 |
| May----- | 5,530 | 1,620 | 2,810 | 3.58 | 4.13 |
| June----- | 1,660 | 326 | 721 | .918 | 1.02 |
| July----- | 890 | 186 | 345 | .439 | .51 |
| August----- | 639 | 125 | 197 | .251 | .29 |
| September----- | 825 | 110 | 297 | .378 | .42 |
| The year----- | 22,100 | 110 | 1,570 | 2.00 | 27.06 |

* Estimated.

DELAWARE RIVER AT PORT JERVIS, N. Y.

LOCATION.—Water-stage recorder near highway bridge at Port Jervis, Orange County, $1\frac{1}{2}$ miles upstream from mouth of Neversink River. Zero of gage is 415.605 feet above mean sea level.

DRAINAGE AREA.—3,070 square miles.

RECORDS AVAILABLE.—October, 1904, to September, 1929.

EXTREMES.—Maximum discharge during year, 59,700 second-feet Mar. 15 (gage height, 11.9 feet); minimum, 484 second-feet Sept. 2 (gage height, 1.12 feet). 1904-1929: Maximum discharge, 92,700 second-feet Mar. 28, 1914 (gage height, 16.0 feet); minimum, 175 second-feet Sept. 22 and 23, 1908 (gage height, 0.60 foot).

Maximum discharge known, about 155,000 second-feet Oct. 10 and 11, 1903 (gage height, 23.3 feet).

REMARKS.—Records good. Slight backwater effect from ice Jan. 3, 4, Jan. 28 to Feb. 6, Feb. 11, 12, and 20-23. Considerable diurnal fluctuation due to operation of power plants on tributary streams.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
| 1..... | 1,940 | 1,390 | 2,680 | 1,690 | 1,700 | 10,900 | 7,280 | 11,800 | 5,340 | 3,600 | 1,210 | 728 |
| 2..... | 2,330 | 1,340 | 5,020 | 1,920 | 2,000 | 8,060 | 6,900 | 10,200 | 4,420 | 3,340 | 922 | 623 |
| 3..... | 2,230 | 1,390 | 4,370 | 2,000 | 2,000 | 5,660 | 6,360 | 12,900 | 4,280 | 3,340 | 890 | 594 |
| 4..... | 2,230 | 1,260 | 3,730 | 2,000 | 2,000 | 5,830 | 5,830 | 18,900 | 3,730 | 2,600 | 879 | 835 |
| 5..... | 2,310 | 1,180 | 3,340 | 2,170 | 2,000 | 6,540 | 7,180 | 13,600 | 3,340 | 2,200 | 697 | 734 |
| 6..... | 2,160 | 1,360 | 2,980 | 3,220 | 2,200 | 12,400 | 12,900 | 12,600 | 3,220 | 2,020 | 963 | 850 |
| 7..... | 1,670 | 1,200 | 2,750 | 4,940 | 2,980 | 13,100 | 16,500 | 12,800 | 3,100 | 2,000 | 917 | 907 |
| 8..... | 1,720 | 1,420 | 2,400 | 4,870 | 4,220 | 9,090 | 12,600 | 12,100 | 2,860 | 2,180 | 963 | 882 |
| 9..... | 2,250 | 1,390 | 2,020 | 3,730 | 5,660 | 6,540 | 10,200 | 9,960 | 2,550 | 1,970 | 900 | 720 |
| 10..... | 2,020 | 1,460 | 1,900 | 2,980 | 5,180 | 5,340 | 9,520 | 8,260 | 2,530 | 1,560 | 878 | 990 |
| 11..... | 1,720 | 1,360 | 2,060 | 2,860 | 4,600 | 5,500 | 11,800 | 7,470 | 2,310 | 1,550 | 676 | 1,200 |
| 12..... | 1,860 | 1,340 | 1,900 | 3,100 | 4,000 | 5,180 | 15,900 | 6,360 | 2,120 | 1,440 | 682 | 1,120 |
| 13..... | 1,900 | 1,220 | 2,350 | 2,860 | 3,470 | 8,260 | 31,300 | 6,540 | 2,100 | 1,460 | 1,280 | 1,110 |
| 14..... | 1,520 | 1,490 | 2,380 | 2,200 | 3,340 | 27,600 | 24,200 | 7,470 | 1,770 | 1,110 | 1,580 | 1,250 |
| 15..... | 1,340 | 1,420 | 2,120 | 2,310 | 2,980 | 56,500 | 18,300 | 7,860 | 1,720 | 1,070 | 1,750 | 1,480 |
| 16..... | 1,860 | 1,260 | 1,770 | 1,860 | 2,750 | 52,500 | 15,900 | 8,060 | 1,550 | 1,330 | 1,890 | 2,100 |
| 17..... | 1,700 | 1,180 | 1,900 | 2,100 | 2,530 | 41,300 | 20,100 | 7,090 | 1,620 | 1,180 | 1,980 | 2,110 |
| 18..... | 1,400 | 1,020 | 2,100 | 2,330 | 2,710 | 25,100 | 18,300 | 6,180 | 1,700 | 1,290 | 1,440 | 1,740 |
| 19..... | 1,460 | 1,160 | 2,330 | 6,900 | 2,750 | 17,100 | 14,100 | 5,500 | 1,620 | 1,640 | 1,090 | 1,740 |
| 20..... | 1,430 | 1,490 | 3,220 | 11,300 | 2,600 | 13,600 | 13,800 | 8,270 | 1,710 | 1,570 | 1,220 | 1,810 |
| 21..... | 1,290 | 1,810 | 2,530 | 6,480 | 2,400 | 11,800 | 30,500 | 9,740 | 1,660 | 1,260 | 1,150 | 1,490 |
| 22..... | 1,200 | 1,900 | 1,980 | 4,420 | 2,400 | 10,600 | 44,500 | 12,400 | 2,000 | 1,130 | 1,040 | 1,250 |
| 23..... | 1,390 | 1,860 | 1,360 | 4,000 | 2,400 | 11,600 | 31,600 | 11,100 | 1,690 | 1,260 | 1,090 | 1,010 |
| 24..... | 1,430 | 1,860 | 1,260 | 3,600 | 1,990 | 13,600 | 22,800 | 9,090 | 1,430 | 1,240 | 1,110 | 1,200 |
| 25..... | 1,370 | 1,430 | 1,570 | 3,340 | 2,650 | 12,600 | 18,300 | 9,300 | 2,090 | 1,220 | 996 | 1,140 |
| 26..... | 1,550 | 1,500 | 2,120 | 2,860 | 3,000 | 11,800 | 25,800 | 8,880 | 2,780 | 1,210 | 931 | 999 |
| 27..... | 1,570 | 1,520 | 2,140 | 2,340 | 4,980 | 14,400 | 26,000 | 7,660 | 2,770 | 1,220 | 1,290 | 1,080 |
| 28..... | 1,540 | 1,440 | 2,270 | 2,200 | 12,400 | 11,600 | 17,700 | 6,720 | 2,530 | 922 | 1,050 | 934 |
| 29..... | 1,500 | 1,360 | 2,020 | 2,200 | ----- | 9,740 | 17,100 | 7,860 | 3,220 | 933 | 1,040 | 898 |
| 30..... | 1,880 | 1,520 | 2,040 | 2,000 | ----- | 8,460 | 15,300 | 6,900 | 3,720 | 1,200 | 1,060 | 779 |
| 31..... | 1,620 | ----- | 2,140 | 1,900 | ----- | 7,470 | ----- | 6,900 | ----- | 1,340 | 981 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|--------|-----------------|-------------------|
| October..... | 2,330 | 1,200 | 1,720 | 0.560 | 0.65 |
| November..... | 1,900 | 1,020 | 1,420 | .463 | .52 |
| December..... | 5,020 | 1,260 | 2,430 | .792 | .91 |
| January..... | 11,300 | 1,690 | 3,310 | 1.08 | 1.24 |
| February..... | 12,400 | 1,700 | 3,350 | 1.09 | 1.14 |
| March..... | 56,500 | 5,180 | 14,800 | 4.82 | 5.56 |
| April..... | 44,500 | 5,830 | 17,600 | 5.73 | 6.39 |
| May..... | 18,900 | 5,500 | 9,370 | 3.05 | 3.52 |
| June..... | 5,340 | 1,430 | 2,580 | .840 | .94 |
| July..... | 3,600 | 922 | 1,660 | .541 | .62 |
| August..... | 1,980 | 676 | 1,110 | .362 | .42 |
| September..... | 2,110 | 594 | 1,140 | .371 | .41 |
| The year..... | 56,500 | 594 | 5,050 | 1.64 | 22.32 |

DELAWARE RIVER AT BELVIDERE, N. J.

LOCATION.—Water-stage recorder at Belvidere, Warren County, just below mouth of Pequest River. Prior to Jan. 1, 1929, staff gage 200 feet upstream was used.

DRAINAGE AREA.—4,540 square miles.

RECORDS AVAILABLE.—October, 1922, to September, 1929.

EXTREMES.—Maximum discharge during year, about 79,000 second-feet Mar. 15 (gage height, 15.90 feet); minimum, 1,010 second-feet Sept. 5 (gage height, 2.61 feet).

1922-1929: Maximum discharge, about 118,000 second-feet Oct. 1, 1924 (gage height, 19.3 feet, from high-water mark); minimum, 895 second-feet in July and August, 1923 (gage height, 2.45 feet).

REMARKS.—Records excellent. Discharge estimated Jan. 1-8. Stage-discharge relation affected by ice Jan. 15, 29-31, Feb. 1 and 2.

Daily and monthly discharge, in second-feet, 1923-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
| 1..... | 3,370 | 2,360 | 3,600 | 2,800 | 3,200 | 16,900 | 10,200 | 17,900 | 8,680 | 5,120 | 1,780 | 1,430 |
| 2..... | 3,370 | 2,180 | 5,120 | 3,800 | 3,400 | 14,100 | 10,200 | 15,500 | 7,270 | 4,580 | 1,930 | 1,200 |
| 3..... | 3,600 | 2,180 | 6,620 | 3,000 | 3,600 | 10,600 | 9,430 | 15,500 | 6,300 | 4,580 | 1,630 | 1,100 |
| 4..... | 3,370 | 2,270 | 5,990 | 2,800 | 3,600 | 9,810 | 8,680 | 23,600 | 5,990 | 4,070 | 1,560 | 1,100 |
| 5..... | 3,370 | 2,360 | 5,120 | 3,000 | 3,150 | 12,300 | 8,680 | 21,000 | 5,400 | 3,370 | 1,560 | 1,200 |
| 6..... | 3,600 | 2,180 | 4,580 | 6,500 | 3,150 | 19,900 | 12,800 | 16,900 | 5,120 | 3,150 | 1,500 | 1,310 |
| 7..... | 3,370 | 2,360 | 4,070 | 10,000 | 6,020 | 23,300 | 20,500 | 17,400 | 5,120 | 2,940 | 1,500 | 1,430 |
| 8..... | 2,940 | 2,100 | 3,830 | 8,500 | 7,610 | 17,400 | 17,900 | 17,400 | 4,850 | 2,740 | 1,560 | 1,700 |
| 9..... | 2,940 | 2,180 | 3,150 | 6,620 | 7,610 | 12,800 | 14,600 | 15,000 | 4,580 | 2,940 | 1,560 | 2,180 |
| 10..... | 3,370 | 2,180 | 2,940 | 6,300 | 8,320 | 9,810 | 13,200 | 12,800 | 4,070 | 2,740 | 1,500 | 1,850 |
| 11..... | 2,940 | 2,180 | 2,740 | 6,620 | 7,610 | 9,050 | 14,100 | 11,000 | 4,070 | 2,360 | 1,430 | 1,850 |
| 12..... | 2,740 | 2,180 | 2,740 | 5,690 | 6,940 | 9,430 | 17,400 | 10,200 | 3,600 | 2,180 | 1,560 | 2,010 |
| 13..... | 2,740 | 2,180 | 2,940 | 4,850 | 5,690 | 11,000 | 35,300 | 9,810 | 3,370 | 2,180 | 1,430 | 1,930 |
| 14..... | 2,740 | 2,010 | 3,370 | 3,600 | 5,120 | 21,000 | 37,600 | 10,200 | 3,370 | 2,100 | 1,780 | 1,850 |
| 15..... | 2,360 | 2,180 | 3,150 | 3,600 | 4,580 | 64,100 | 26,900 | 11,000 | 3,150 | 1,780 | 3,370 | 2,270 |
| 16..... | 2,180 | 2,180 | 2,940 | 3,600 | 4,580 | 74,000 | 22,700 | 11,900 | 3,370 | 1,630 | 2,740 | 2,740 |
| 17..... | 2,740 | 2,100 | 2,740 | 3,600 | 4,320 | 61,500 | 26,200 | 11,000 | 2,940 | 1,930 | 2,740 | 3,150 |
| 18..... | 2,550 | 1,850 | 3,370 | 3,370 | 4,070 | 38,800 | 26,900 | 9,810 | 2,940 | 1,780 | 2,550 | 3,370 |
| 19..... | 2,460 | 1,850 | 3,150 | 4,850 | 4,070 | 25,000 | 22,700 | 9,050 | 2,940 | 2,740 | 2,180 | 2,740 |
| 20..... | 2,460 | 2,460 | 3,830 | 11,900 | 4,070 | 19,900 | 18,400 | 9,810 | 2,940 | 3,150 | 1,630 | 2,270 |
| 21..... | 2,360 | 2,940 | 3,830 | 10,600 | 3,370 | 17,400 | 22,900 | 13,200 | 3,150 | 2,740 | 1,780 | 2,460 |
| 22..... | 2,180 | 2,940 | 2,550 | 6,940 | 3,150 | 15,000 | 53,100 | 15,000 | 3,150 | 2,270 | 1,700 | 2,180 |
| 23..... | 2,100 | 2,940 | 2,010 | 5,990 | 3,600 | 15,000 | 45,700 | 15,900 | 3,370 | 2,010 | 1,560 | 2,010 |
| 24..... | 2,270 | 2,940 | 1,850 | 5,400 | 3,370 | 17,900 | 31,900 | 13,200 | 2,940 | 2,010 | 1,630 | 1,700 |
| 25..... | 2,360 | 2,740 | 1,560 | 4,580 | 3,370 | 17,400 | 25,000 | 12,300 | 3,150 | 2,010 | 1,630 | 1,850 |
| 26..... | 2,360 | 2,360 | 2,100 | 4,320 | 4,580 | 15,500 | 26,400 | 12,800 | 4,070 | 1,930 | 1,500 | 1,850 |
| 27..... | 2,460 | 2,360 | 2,740 | 4,070 | 9,050 | 16,900 | 36,000 | 11,000 | 4,580 | 1,930 | 1,370 | 1,700 |
| 28..... | 2,360 | 2,180 | 3,150 | 3,830 | 12,800 | 15,900 | 25,800 | 9,810 | 4,070 | 1,930 | 1,850 | 1,700 |
| 29..... | 2,460 | 2,270 | 2,940 | 3,200 | ----- | 13,700 | 22,700 | 9,810 | 4,320 | 1,630 | 1,630 | 1,630 |
| 30..... | 2,360 | 2,800 | 2,360 | 3,000 | ----- | 11,900 | 22,700 | 10,600 | 4,850 | 1,560 | 1,500 | 1,630 |
| 31..... | 2,740 | ----- | 2,270 | 3,000 | ----- | 10,600 | ----- | 9,810 | ----- | 1,850 | 1,500 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|--------|-----------------|-------------------|
| October..... | 3,600 | 2,100 | 2,750 | 0.606 | 0.70 |
| November..... | 2,940 | 1,850 | 2,330 | .513 | .57 |
| December..... | 6,620 | 1,660 | 3,330 | .733 | .85 |
| January..... | 11,900 | 2,800 | 5,160 | 1.14 | 1.31 |
| February..... | 12,800 | 3,150 | 5,140 | 1.13 | 1.18 |
| March..... | 74,000 | 9,050 | 20,900 | 4.60 | 5.30 |
| April..... | 53,100 | 8,680 | 22,900 | 5.04 | 5.62 |
| May..... | 23,600 | 9,050 | 13,200 | 2.91 | 3.36 |
| June..... | 8,680 | 2,940 | 4,260 | .938 | 1.05 |
| July..... | 5,120 | 1,660 | 2,580 | .568 | .65 |
| August..... | 3,370 | 1,370 | 1,780 | .392 | .45 |
| September..... | 3,370 | 1,100 | 1,910 | .421 | .47 |
| The year..... | 74,000 | 1,100 | 7,200 | 1.59 | 21.51 |

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, 1929.

EXTREMES.—Maximum discharge during year, 83,100 second-feet Mar. 16 (gage-height, 18.30 feet); minimum, not including flow in Pennsylvania Canal, 1,280 second-feet Sept. 5 (gage height, 1.98 feet).

1906–1929: 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 stage known, 35.9 feet, from high-water marks, Oct. 10 and 11, 1903 (discharge, about 275,000 second-feet).

REMARKS.—Records excellent. Discharge estimated Nov. 21 to Dec. 2. Delaware Division of Pennsylvania Canal diverted about 230 second-feet above station Oct. 1 to Nov. 23 and Apr. 1 to Sept. 30.

Daily and monthly discharge, in second-feet, 1928–29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 1..... | 4,960 | 3,150 | 5,000 | 3,610 | 4,120 | 22,600 | 12,000 | 24,000 | 11,107 | 6,170 | 2,040 | 1,760 |
| 2..... | 4,480 | 3,150 | 6,500 | 4,960 | 3,860 | 19,900 | 11,000 | 20,400 | 9,390 | 5,860 | 2,130 | 1,590 |
| 3..... | 4,680 | 2,980 | 8,080 | 3,610 | 3,860 | 15,300 | 11,000 | 21,700 | 8,089 | 5,260 | 1,850 | 1,430 |
| 4..... | 4,680 | 3,150 | 7,440 | 3,610 | 4,120 | 14,100 | 10,800 | 29,400 | 7,760 | 4,960 | 1,940 | 1,360 |
| 5..... | 4,400 | 3,610 | 6,170 | 3,860 | 3,860 | 18,400 | 10,800 | 28,900 | 7,127 | 4,400 | 1,940 | 1,430 |
| 6..... | 4,680 | 3,150 | 5,560 | 9,250 | 4,120 | 33,500 | 15,300 | 23,600 | 6,807 | 3,860 | 1,940 | 1,590 |
| 7..... | 4,680 | 3,380 | 4,960 | 13,300 | 15,000 | 33,000 | 24,500 | 23,600 | 6,489 | 3,610 | 1,850 | 1,940 |
| 8..... | 4,120 | 2,930 | 4,680 | 9,390 | 13,300 | 24,500 | 23,100 | 22,600 | 6,489 | 3,610 | 2,040 | 3,150 |
| 9..... | 3,860 | 3,040 | 4,400 | 8,740 | 10,400 | 19,400 | 19,000 | 10,900 | 6,170 | 3,610 | 2,040 | 3,860 |
| 0..... | 4,120 | 2,980 | 3,610 | 9,390 | 10,000 | 14,100 | 16,500 | 17,300 | 5,560 | 3,610 | 1,940 | 2,930 |
| 11..... | 4,120 | 2,930 | 3,610 | 10,400 | 9,070 | 12,900 | 17,300 | 14,900 | 5,260 | 3,040 | 1,940 | 2,620 |
| 12..... | 3,610 | 2,930 | 3,860 | 8,410 | 7,760 | 12,900 | 22,200 | 13,700 | 4,960 | 2,820 | 2,420 | 2,720 |
| 13..... | 3,610 | 2,720 | 3,610 | 7,440 | 6,480 | 14,100 | 38,400 | 12,900 | 4,400 | 2,720 | 2,220 | 2,520 |
| 14..... | 3,610 | 2,820 | 4,120 | 4,960 | 5,860 | 22,900 | 44,500 | 13,300 | 4,400 | 2,620 | 2,320 | 2,520 |
| 15..... | 3,610 | 2,980 | 4,120 | 4,960 | 5,860 | 61,600 | 33,000 | 14,500 | 4,400 | 2,520 | 8,020 | 3,860 |
| 16..... | 3,150 | 2,930 | 4,120 | 5,260 | 5,560 | 80,200 | 29,400 | 14,900 | 4,400 | 2,220 | 5,560 | 3,860 |
| 17..... | 3,380 | 2,820 | 3,610 | 4,960 | 5,260 | 70,100 | 36,200 | 13,700 | 4,120 | 2,320 | 3,860 | 4,120 |
| 18..... | 3,610 | 2,620 | 3,860 | 4,680 | 5,260 | 49,900 | 35,700 | 12,200 | 3,610 | 2,320 | 3,610 | 5,260 |
| 19..... | 3,610 | 2,620 | 4,400 | 6,480 | 4,960 | 33,500 | 30,400 | 11,800 | 3,860 | 3,380 | 3,150 | 4,120 |
| 20..... | 3,380 | 3,380 | 4,680 | 11,300 | 4,960 | 25,900 | 25,400 | 12,500 | 3,860 | 4,400 | 2,620 | 3,610 |
| 21..... | 3,150 | 3,800 | 4,960 | 12,900 | 4,400 | 22,600 | 27,400 | 15,700 | 4,400 | 3,610 | 2,420 | 3,380 |
| 22..... | 3,150 | 4,200 | 4,120 | 8,740 | 3,610 | 19,900 | 56,100 | 17,700 | 4,400 | 2,930 | 2,320 | 2,930 |
| 23..... | 2,820 | 4,400 | 3,150 | 7,760 | 4,400 | 19,000 | 54,200 | 19,000 | 4,120 | 2,520 | 2,130 | 2,720 |
| 24..... | 3,150 | 4,200 | 2,930 | 7,120 | 4,120 | 21,200 | 39,500 | 16,500 | 4,120 | 2,420 | 2,130 | 2,320 |
| 25..... | 3,150 | 4,200 | 2,620 | 6,480 | 4,120 | 21,700 | 31,900 | 14,900 | 4,600 | 2,320 | 2,130 | 2,320 |
| 26..... | 3,040 | 3,800 | 2,930 | 5,260 | 10,500 | 19,000 | 35,700 | 15,300 | 5,560 | 2,220 | 1,940 | 2,130 |
| 27..... | 3,150 | 3,400 | 3,150 | 4,960 | 22,600 | 19,400 | 43,900 | 13,300 | 5,860 | 2,220 | 1,850 | 1,940 |
| 28..... | 3,150 | 3,200 | 3,610 | 4,680 | 23,600 | 19,900 | 34,500 | 12,200 | 5,260 | 2,130 | 2,420 | 1,940 |
| 29..... | 3,380 | 3,400 | 3,860 | 4,120 | ----- | 16,500 | 29,400 | 11,800 | 5,860 | 1,940 | 2,040 | 1,850 |
| 30..... | 3,040 | 4,000 | 3,610 | 4,120 | ----- | 14,500 | 28,900 | 12,500 | 6,170 | 1,850 | 1,940 | 1,760 |
| 31..... | 3,380 | ----- | 3,150 | 4,120 | ----- | 13,300 | ----- | 12,200 | ----- | 2,040 | 1,850 | ----- |

| Month | Observed | | | Corrected for diversion | | Run-off in inches |
|----------------|----------|---------|--------|-------------------------|-----------------|-------------------|
| | Maximum | Minimum | Mean | Mean | Per square mile | |
| October..... | 4,960 | 2,820 | 3,700 | 3,930 | 0.635 | 0.73 |
| November..... | 4,400 | 2,620 | 3,290 | 3,470 | .561 | .63 |
| December..... | 8,080 | 2,620 | 4,340 | 4,340 | .701 | .81 |
| January..... | 13,300 | 3,610 | 6,740 | 6,740 | 1.09 | 1.26 |
| February..... | 23,600 | 3,610 | 7,540 | 7,540 | 1.22 | 1.27 |
| March..... | 80,200 | 12,900 | 26,000 | 26,000 | 4.20 | 4.84 |
| April..... | 56,100 | 10,800 | 28,300 | 28,500 | 4.60 | 5.13 |
| May..... | 29,400 | 11,800 | 17,000 | 17,200 | 2.78 | 3.20 |
| June..... | 11,100 | 3,610 | 5,620 | 5,850 | .945 | 1.05 |
| July..... | 6,170 | 1,850 | 3,210 | 3,440 | .556 | .64 |
| August..... | 8,020 | 1,850 | 2,540 | 2,770 | .447 | .52 |
| September..... | 5,260 | 1,360 | 2,650 | 2,880 | .465 | .52 |
| The year..... | 80,200 | 1,360 | 9,250 | 9,400 | 1.52 | 20.61 |

DELAWARE RIVER AT TRENTON, N. J.

LOCATION.—Water-stage recorder 200 feet above Calhoun Street Bridge in Trenton, Mercer County, half a mile above mouth of Assumpink Creek. Chain gage on bridge used prior to Oct. 2, 1928.

DRAINAGE AREA.—6,800 square miles.

RECORDS AVAILABLE.—February, 1913, to September, 1929.

EXTREMES.—Maximum discharge during year, 84,800 second-feet Mar. 16 (gage height, 8.9 feet); minimum, 1,680 second-feet Sept. 5 (gage height, -0.19 foot). Flow in canals not included.

1913-1929: Maximum discharge, about 160,000 second-feet Mar. 28 and 29, 1913 (gage height, 13.3 feet); minimum, 1,240 second-feet several times in October and November, 1914 (gage height, -0.40 foot). Flow in canals not included.

REMARKS.—Records good. Stage-discharge relation affected by ice Jan. 15-19, and Jan. 29 to Feb. 7. Diversions for navigation and power canals above station.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 1..... | 5,280 | 3,710 | 4,570 | 3,710 | 4,900 | 23,800 | 13,600 | 26,500 | 12,200 | 6,380 | 2,350 | 2,230 |
| 2..... | 5,280 | 3,540 | 6,010 | 5,640 | 4,900 | 22,900 | 13,600 | 22,100 | 10,200 | 6,760 | 2,350 | 2,230 |
| 3..... | 5,280 | 3,380 | 7,160 | 5,280 | 5,500 | 18,900 | 12,900 | 22,100 | 9,040 | 6,010 | 2,480 | 2,000 |
| 4..... | 5,280 | 3,540 | 8,030 | 4,570 | 5,500 | 16,500 | 12,200 | 28,000 | 8,030 | 5,640 | 2,230 | 1,890 |
| 5..... | 4,920 | 3,710 | 7,160 | 4,570 | 5,500 | 20,500 | 11,500 | 31,400 | 7,580 | 5,280 | 2,110 | 1,780 |
| 6..... | 5,280 | 3,880 | 6,380 | 7,720 | 4,900 | 36,600 | 14,300 | 25,600 | 7,160 | 4,570 | 2,230 | 1,890 |
| 7..... | 5,280 | 3,880 | 6,010 | 16,500 | 14,000 | 34,400 | 22,900 | 25,600 | 6,760 | 4,220 | 2,110 | 2,110 |
| 8..... | 4,920 | 3,540 | 5,280 | 11,500 | 18,100 | 27,400 | 25,600 | 24,700 | 6,760 | 4,050 | 2,000 | 5,960 |
| 9..... | 4,570 | 3,210 | 4,920 | 9,040 | 11,500 | 21,300 | 21,300 | 22,100 | 6,760 | 4,050 | 2,230 | 7,160 |
| 10..... | 4,570 | 3,380 | 4,570 | 10,800 | 11,500 | 16,500 | 18,100 | 18,900 | 6,010 | 4,050 | 2,110 | 4,920 |
| 11..... | 4,920 | 3,380 | 4,050 | 12,200 | 10,200 | 13,600 | 18,100 | 16,500 | 5,640 | 3,710 | 2,110 | 3,710 |
| 12..... | 4,570 | 3,380 | 4,050 | 10,200 | 8,520 | 13,600 | 24,700 | 15,000 | 5,640 | 3,380 | 2,350 | 3,210 |
| 13..... | 4,220 | 3,380 | 4,220 | 8,520 | 8,030 | 13,600 | 35,200 | 14,300 | 5,280 | 3,210 | 2,610 | 3,210 |
| 14..... | 4,220 | 3,210 | 4,220 | 7,580 | 7,580 | 20,200 | 46,900 | 13,600 | 4,920 | 3,060 | 2,480 | 3,210 |
| 15..... | 4,220 | 3,210 | 4,570 | 7,500 | 6,380 | 52,800 | 36,500 | 15,000 | 4,920 | 3,060 | 6,800 | 3,880 |
| 16..... | 4,050 | 3,210 | 4,570 | 8,000 | 6,010 | 81,800 | 35,400 | 15,700 | 4,920 | 2,760 | 7,900 | 4,920 |
| 17..... | 3,880 | 3,380 | 4,570 | 7,500 | 6,010 | 74,800 | 38,700 | 15,000 | 4,920 | 2,480 | 5,280 | 4,570 |
| 18..... | 4,220 | 3,210 | 4,570 | 7,500 | 5,640 | 55,800 | 38,700 | 13,600 | 4,220 | 2,610 | 4,570 | 6,380 |
| 19..... | 4,570 | 3,060 | 4,920 | 7,500 | 5,640 | 36,500 | 33,400 | 14,300 | 4,220 | 2,900 | 4,220 | 6,010 |
| 20..... | 4,050 | 3,210 | 5,280 | 9,790 | 5,640 | 27,400 | 27,400 | 15,000 | 4,220 | 4,570 | 3,710 | 4,570 |
| 21..... | 3,880 | 4,050 | 5,280 | 15,000 | 5,280 | 23,800 | 27,400 | 16,500 | 4,920 | 4,570 | 2,900 | 4,220 |
| 22..... | 3,710 | 4,570 | 5,280 | 11,500 | 4,570 | 21,300 | 50,700 | 18,900 | 4,920 | 4,050 | 2,760 | 3,880 |
| 23..... | 3,710 | 4,220 | 4,220 | 8,520 | 4,570 | 20,500 | 59,700 | 20,500 | 4,570 | 3,380 | 2,760 | 3,540 |
| 24..... | 3,380 | 4,220 | 3,540 | 7,580 | 4,920 | 21,300 | 43,300 | 18,900 | 4,570 | 2,900 | 2,480 | 3,210 |
| 25..... | 3,540 | 4,220 | 3,380 | 7,160 | 4,570 | 22,900 | 33,400 | 16,500 | 4,920 | 2,900 | 2,480 | 2,760 |
| 26..... | 3,540 | 4,050 | 2,900 | 6,380 | 11,200 | 21,300 | 36,500 | 15,700 | 6,380 | 2,760 | 2,350 | 2,760 |
| 27..... | 3,380 | 3,540 | 3,210 | 5,640 | 30,400 | 19,700 | 43,300 | 15,000 | 6,010 | 2,760 | 2,350 | 2,760 |
| 28..... | 3,710 | 3,380 | 3,880 | 5,640 | 27,400 | 21,300 | 37,600 | 13,600 | 6,010 | 2,610 | 2,760 | 2,480 |
| 29..... | 3,540 | 3,540 | 4,220 | 5,500 | ----- | 18,900 | 31,400 | 12,200 | 6,380 | 2,610 | 2,900 | 2,480 |
| 30..... | 3,710 | 3,710 | 4,570 | 5,500 | ----- | 16,500 | 30,400 | 13,600 | 6,380 | 2,350 | 2,480 | 2,480 |
| 31..... | 3,380 | ----- | 3,880 | 4,900 | ----- | 15,000 | ----- | 12,900 | ----- | 2,230 | 2,230 | ----- |

| Month | Observed | | | Corrected for diversion | | Run-off in inches |
|----------------|----------|---------|--------|-------------------------|-----------------|-------------------|
| | Maximum | Minimum | Mean | Mean | Per square mile | |
| October..... | 5,280 | 3,380 | 4,290 | 4,620 | 0.679 | 0.78 |
| November..... | 4,570 | 3,060 | 3,600 | 3,920 | .576 | .64 |
| December..... | 8,030 | 2,900 | 4,820 | 5,130 | .754 | .87 |
| January..... | 16,500 | 3,710 | 8,030 | 8,210 | 1.21 | 1.40 |
| February..... | 30,400 | 4,570 | 8,890 | 9,070 | 1.33 | 1.38 |
| March..... | 81,800 | 13,600 | 27,600 | 27,700 | 4.07 | 4.69 |
| April..... | 59,700 | 11,500 | 29,800 | 30,100 | 4.43 | 4.94 |
| May..... | 31,400 | 12,200 | 18,400 | 18,700 | 2.75 | 3.17 |
| June..... | 12,200 | 4,220 | 6,150 | 6,450 | .949 | 1.06 |
| July..... | 6,760 | 2,230 | 3,740 | 4,040 | .594 | .68 |
| August..... | 7,900 | 2,000 | 2,990 | 3,290 | .484 | .56 |
| September..... | 6,380 | 1,780 | 3,550 | 3,850 | .566 | .63 |
| The year..... | 81,800 | 1,780 | 10,100 | 10,400 | 1.53 | 20.80 |

BEAVER KILL AT COOKS FALLS, N. Y.

LOCATION.—Staff gage at highway bridge in Cooks Falls, Delaware County.

DRAINAGE AREA.—241 square miles.

RECORDS AVAILABLE.—July, 1913, to September, 1929.

EXTREMES.—Maximum discharge during year, 6,340 second-feet Mar. 15 (gage height, 10.2 feet); minimum, 43 second-feet Sept. 4 (gage height, 0.88 foot).

1913-1929: 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 periods of ice effect (Jan. 15-17, 22, 23, and Jan. 28 to Feb. 26) and for estimated periods, which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1----- | 147 | 102 | 1,000 | 234 | 220 | 470 | 700 | 1,420 | 655 | 398 | 63 | 55 |
| 2----- | 138 | 102 | 511 | 322 | 190 | 398 | } 440 | 1,060 | 570 | 322 | 63 | 50 |
| 3----- | 130 | 97 | 351 | 246 | 180 | 366 | | 1,940 | 490 | 234 | 63 | 47 |
| 4----- | 130 | 99 | 336 | 202 | 170 | 295 | } 440 | 1,540 | 432 | 164 | 112 | 43 |
| 5----- | 122 | 96 | 415 | 212 | 160 | 700 | | 1,300 | 382 | 156 | 91 | 45 |
| 6----- | 164 | 96 | 295 | 610 | 220 | 700 | 3,010 | 1,180 | 398 | 147 | 83 | 58 |
| 7----- | 147 | 94 | 258 | 432 | 550 | 490 | 1,730 | 940 | 336 | 138 | 74 | 48 |
| 8----- | 122 | } 95 | 234 | 322 | 650 | 450 | 1,360 | 890 | 308 | 122 | 65 | 76 |
| 9----- | 122 | | 192 | 308 | 600 | 432 | 1,120 | 745 | 258 | 122 | 61 | 86 |
| 10----- | 122 | | 147 | 322 | 440 | 366 | 1,240 | 610 | 234 | 110 | 61 | 64 |
| 11----- | 115 | | 164 | 308 | 380 | 322 | 1,060 | 610 | 223 | 122 | 60 | 58 |
| 12----- | 108 | 96 | 202 | 295 | 360 | 470 | 2,450 | 700 | 223 | 112 | 56 | 51 |
| 13----- | 102 | 99 | 212 | 234 | 320 | 655 | 3,460 | 610 | 202 | 99 | 54 | 45 |
| 14----- | 99 | 91 | 202 | 192 | 300 | 2,840 | 1,660 | 570 | 192 | 96 | 147 | 174 |
| 15----- | 99 | 94 | 202 | 190 | 280 | 5,860 | 1,060 | 940 | 192 | 94 | 130 | 183 |
| 16----- | 97 | 96 | 212 | 180 | 280 | 4,630 | 1,540 | 840 | 192 | 86 | 122 | 122 |
| 17----- | 102 | 96 | 202 | 180 | 260 | 2,690 | 1,480 | 655 | 174 | 83 | 100 | 174 |
| 18----- | 97 | 96 | 470 | 445 | 240 | 2,010 | 1,240 | 610 | 156 | 74 | 72 | 223 |
| 19----- | 115 | 130 | 432 | 2,290 | 220 | 1,600 | 1,060 | 1,420 | 138 | 147 | 65 | 138 |
| 20----- | 109 | 223 | 336 | 1,060 | 190 | 1,420 | 1,170 | 1,800 | 156 | 104 | 63 | 108 |
| 21----- | 100 | 183 | 246 | 450 | 160 | 1,300 | 3,250 | 1,730 | 138 | 92 | 57 | 94 |
| 22----- | 94 | 164 | 183 | 400 | 170 | 1,480 | 2,850 | 1,600 | 138 | 83 | 55 | 85 |
| 23----- | 99 | 147 | 174 | 360 | 170 | 2,150 | 2,370 | 1,540 | 134 | 81 | 59 | 74 |
| 24----- | 108 | 156 | 192 | 322 | 160 | 1,940 | 2,010 | 1,360 | 130 | 76 | 85 | 74 |
| 25----- | 114 | 156 | 234 | 295 | 220 | 2,080 | 1,870 | 890 | 138 | 86 | 79 | 67 |
| 26----- | 115 | 147 | 234 | 282 | 280 | 2,370 | 3,930 | 610 | 156 | 88 | 61 | 63 |
| 27----- | 130 | 147 | 223 | 270 | 1,120 | 1,540 | 2,610 | 610 | 147 | 79 | 54 | 60 |
| 28----- | 130 | 147 | 234 | 260 | 570 | 1,180 | 2,290 | 610 | 183 | 74 | 52 | 55 |
| 29----- | 122 | 147 | 234 | 240 | ----- | 745 | 2,530 | 530 | 700 | 86 | 52 | 57 |
| 30----- | 114 | 216 | 234 | 240 | ----- | 840 | 1,940 | 1,300 | 610 | 79 | 56 | 70 |
| 31----- | 104 | ----- | 223 | 240 | ----- | 655 | ----- | 790 | ----- | 74 | 56 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October----- | 164 | 94 | 117 | 0.485 | 0.56 |
| November----- | 223 | 91 | 123 | .510 | .57 |
| December----- | 1,000 | 147 | 283 | 1.17 | 1.35 |
| January----- | 2,290 | 180 | 385 | 1.60 | 1.84 |
| February----- | 1,120 | 160 | 324 | 1.34 | 1.40 |
| March----- | 5,860 | 295 | 1,400 | 5.81 | 6.70 |
| April----- | 3,930 | ----- | 1,790 | 7.43 | 8.29 |
| May----- | 1,940 | 530 | 1,030 | 4.27 | 4.92 |
| June----- | 700 | 130 | 280 | 1.16 | 1.29 |
| July----- | 398 | 74 | 123 | .510 | .59 |
| August----- | 147 | 52 | 73.3 | .304 | .35 |
| September----- | 223 | 43 | 84.9 | .352 | .39 |
| The year----- | 5,860 | 43 | 502 | 2.08 | 28.25 |

• Estimated.

LITTLE BEAVER KILL NEAR LIVINGSTON MANOR, N. Y.

LOCATION.—Staff gage at farm bridge three-fourths of a mile upstream from Morsston and 2½ miles southeast of Livingston Manor, Sullivan County.

DRAINAGE AREA.—19.8 square miles.

RECORDS AVAILABLE.—July, 1924, to September, 1929.

EXTREMES.—Maximum discharge during year, 930 second-feet Mar. 14 (gage height, 4.5 feet); minimum, 2.6 second-feet Sept. 4 (gage height, 0.87 foot).

1924-1929: Maximum discharge, 3,420 second-feet Aug. 26, 1928 (gage height, from flood marks, 8.7 feet); minimum, that of Sept. 4, 1929.

REMARKS.—Records fair. Stage-discharge relation affected by ice Dec. 8-12, 21-24, Dec. 30 to Jan. 18, Jan. 21 to Feb. 26, and Mar. 6-13. Diversion from Lily Pond for Liberty water supply.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | 10 | 7.0 | 93 | 11 | 17 | 38 | 63 | 73 | 25 | 21 | 3.6 | 3.6 |
| 2..... | 9.1 | 7.6 | 36 | 16 | 16 | 27 | 45 | 56 | 23 | 46 | 2.9 | 3.2 |
| 3..... | 8.8 | 8.2 | 30 | 14 | 15 | 28 | 36 | 186 | 20 | 29 | 4.9 | 3.1 |
| 4..... | 9.1 | 9.4 | 25 | 11 | 14 | 23 | 69 | 99 | 19 | 17 | 8.5 | 2.9 |
| 5..... | 9.1 | 8.8 | 25 | 13 | 14 | 62 | 90 | 93 | 22 | 13 | 5.1 | 3.2 |
| 6..... | 10 | 7.6 | 16 | 65 | 19 | 60 | 390 | 81 | 20 | 12 | 4.0 | 3.4 |
| 7..... | 8.2 | 7.6 | 13 | 40 | 60 | 40 | 133 | 113 | 18 | 11 | 3.6 | 5.1 |
| 8..... | 7.0 | 7.9 | 13 | 28 | 70 | 38 | 84 | 73 | 17 | 8.8 | 3.4 | 5.5 |
| 9..... | 8.2 | 7.6 | 12 | 26 | 48 | 36 | 60 | 58 | 16 | 9.1 | 3.6 | 4.4 |
| 10..... | 8.2 | 7.0 | 12 | 26 | 42 | 30 | 107 | 46 | 13 | 10 | 3.4 | 4.0 |
| 11..... | 8.2 | 7.0 | 12 | 24 | 32 | 26 | 99 | 40 | 12 | 9.4 | 4.2 | 3.4 |
| 12..... | 7.0 | 6.7 | 12 | 22 | 28 | 40 | 374 | 37 | 11 | 7.9 | 3.7 | 3.2 |
| 13..... | 7.6 | 7.0 | 12 | 20 | 26 | 120 | 232 | 34 | 11 | 6.4 | 8.2 | 3.4 |
| 14..... | 7.9 | 7.0 | 13 | 18 | 24 | 696 | 153 | 48 | 10 | 7.0 | 30 | 39 |
| 15..... | 7.0 | 7.6 | 11 | 17 | 22 | 590 | 113 | 83 | 13 | 6.4 | 28 | 14 |
| 16..... | 7.9 | 7.0 | 15 | 15 | 22 | 590 | 123 | 57 | 12 | 6.0 | 10 | 7.6 |
| 17..... | 7.6 | 7.0 | 16 | 16 | 24 | 195 | 103 | 40 | 9.1 | 5.5 | 7.0 | 16 |
| 18..... | 8.2 | 7.6 | 50 | 38 | 24 | 123 | 90 | 35 | 8.8 | 9.1 | 5.7 | 13 |
| 19..... | 8.8 | 9.4 | 28 | 258 | 20 | 90 | 123 | 166 | 8.2 | 15 | 7.6 | 8.2 |
| 20..... | 8.2 | 24 | 21 | 109 | 16 | 91 | 203 | 103 | 11 | 5.7 | 5.1 | 5.1 |
| 21..... | 7.0 | 14 | 16 | 40 | 15 | 95 | 530 | 121 | 8.8 | 4.2 | 4.6 | 5.7 |
| 22..... | 7.0 | 11 | 14 | 32 | 14 | 109 | 245 | 103 | 7.9 | 3.7 | 4.6 | 3.9 |
| 23..... | 7.6 | 10 | 13 | 30 | 14 | 163 | 153 | 69 | 7.0 | 3.6 | 4.6 | 5.1 |
| 24..... | 9.4 | 9.4 | 13 | 28 | 13 | 123 | 95 | 62 | 8.8 | 4.0 | 7.9 | 4.6 |
| 25..... | 8.8 | 9.1 | 14 | 26 | 19 | 73 | 103 | 60 | 21 | 4.6 | 5.1 | 4.6 |
| 26..... | 8.2 | 7.9 | 12 | 24 | 24 | 184 | 133 | 45 | 19 | 5.1 | 4.4 | 4.4 |
| 27..... | 8.2 | 7.9 | 12 | 22 | 80 | 84 | 109 | 36 | 11 | 4.6 | 3.9 | 3.9 |
| 28..... | 10 | 8.2 | 12 | 22 | 65 | 69 | 81 | 40 | 39 | 4.6 | 3.9 | 4.4 |
| 29..... | 11 | 9.1 | 12 | 20 | ----- | 54 | 173 | 45 | 60 | 3.9 | 3.6 | 4.4 |
| 30..... | 8.2 | 14 | 11 | 19 | ----- | 51 | 95 | 45 | 23 | 3.9 | 3.6 | 4.9 |
| 31..... | 7.0 | ----- | 11 | 18 | ----- | 42 | ----- | 31 | ----- | 3.9 | 3.6 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 11 | 7.0 | 8.34 | 0.421 | 0.49 |
| November..... | 24 | 6.7 | 8.99 | .454 | .51 |
| December..... | 93 | 11 | 19.5 | .985 | 1.14 |
| January..... | 258 | 11 | 34.5 | 1.74 | 2.01 |
| February..... | 80 | 13 | 28.5 | 1.44 | 1.60 |
| March..... | 696 | 23 | 129 | 6.52 | 7.52 |
| April..... | 530 | 36 | 148 | 7.47 | 8.33 |
| May..... | 186 | 31 | 70.3 | 3.55 | 4.09 |
| June..... | 60 | 7.0 | 16.8 | .848 | .95 |
| July..... | 46 | 3.6 | 9.72 | .491 | .57 |
| August..... | 30 | 2.9 | 6.53 | .330 | .38 |
| September..... | 39 | 2.9 | 6.57 | .332 | .37 |
| The year..... | 696 | 2.9 | 40.5 | 2.05 | 27.86 |

WEST BRANCH OF DELAWARE RIVER AT HALE EDDY, N. Y.

LOCATION.—Water-stage recorder at highway in Hale Eddy, Delaware County, 9 miles upstream from confluence of East and West Branches near Hancock.

DRAINAGE AREA.—603 square miles.

RECORDS AVAILABLE.—November, 1912, to September, 1929.

EXTREMES.—Maximum discharge during year, 17,800 second-feet Mar. 15 (gage height, 12.9 feet); minimum, 66 second-feet Sept. 6 (gage height, 1.37 feet).

1912-1929: 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 excellent except those for periods of ice effect (Jan. 12-17, 29, Feb. 6-27, and Mar. 9) and for estimated period (Jan. 30 to Feb. 5), which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|-------|-------|-------|--------|--------|-------|-------|-------|------|-------|
| 1 | 159 | 167 | 1,700 | 341 | 380 | 2,050 | 1,330 | 2,160 | 888 | 1,020 | 131 | 87 |
| 2 | 151 | 156 | 1,310 | 428 | | 1,370 | 1,150 | 1,880 | 766 | 1,020 | 117 | 82 |
| 3 | 141 | 159 | 930 | 416 | | 1,120 | 1,020 | 5,020 | 682 | 783 | 110 | 77 |
| 4 | 136 | 159 | 806 | 348 | | 1,080 | 1,010 | 3,870 | 618 | 629 | 122 | 72 |
| 5 | 141 | 154 | 749 | 360 | | 1,430 | 1,700 | 3,000 | 562 | 567 | 120 | 70 |
| 6 | 136 | 144 | 698 | 918 | 360 | 2,210 | 4,530 | 2,780 | 567 | 543 | 117 | 69 |
| 7 | 129 | 131 | 543 | 960 | 500 | 1,660 | 3,470 | 2,780 | 529 | 491 | 110 | 70 |
| 8 | 122 | 131 | 510 | 582 | 950 | 1,020 | 2,510 | 2,260 | 469 | 400 | 104 | 95 |
| 9 | 126 | 131 | 473 | 644 | 750 | 850 | 2,160 | 1,880 | 416 | 348 | 93 | 124 |
| 10 | 110 | 131 | 348 | 766 | 600 | 732 | 2,470 | 1,610 | 371 | 337 | 87 | 198 |
| 11 | 108 | 131 | 408 | 800 | 550 | 817 | 2,410 | 1,370 | 341 | 408 | 84 | 198 |
| 12 | 108 | 129 | 455 | 650 | 500 | 1,030 | 4,190 | 1,180 | 311 | 356 | 75 | 180 |
| 13 | 104 | 131 | 383 | 550 | 500 | 2,320 | 6,520 | 1,080 | 260 | 294 | 75 | 151 |
| 14 | 102 | 131 | 368 | 500 | 500 | 11,000 | 4,710 | 1,050 | 273 | 250 | 171 | 203 |
| 15 | 106 | 134 | 352 | 460 | 500 | 17,200 | 3,480 | 1,410 | 266 | 228 | 567 | 340 |
| 16 | 102 | 136 | 337 | 420 | 500 | 13,000 | 4,060 | 1,330 | 269 | 206 | 375 | 304 |
| 17 | 106 | 131 | 344 | 460 | 500 | 7,900 | 3,870 | 1,260 | 233 | 186 | 237 | 286 |
| 18 | 108 | 129 | 497 | 768 | 600 | 4,280 | 3,360 | 1,050 | 209 | 186 | 178 | 364 |
| 19 | 136 | 144 | 693 | 4,080 | 550 | 3,120 | 2,930 | 1,320 | 203 | 215 | 146 | 315 |
| 20 | 146 | 276 | 487 | 1,440 | 480 | 2,670 | 4,160 | 1,990 | 278 | 221 | 129 | 246 |
| 21 | 144 | 276 | 369 | 788 | 460 | 2,260 | 13,600 | 2,320 | 338 | 192 | 117 | 203 |
| 22 | 151 | 269 | 250 | 698 | 460 | 2,160 | 12,200 | 3,120 | 260 | 164 | 108 | 180 |
| 23 | 133 | 246 | 285 | 623 | 420 | 2,460 | 7,440 | 2,360 | 221 | 151 | 122 | 161 |
| 24 | 228 | 228 | 412 | 529 | 420 | 2,510 | 5,490 | 2,110 | 332 | 138 | 156 | 148 |
| 25 | 209 | 221 | 442 | 529 | 480 | 2,160 | 4,710 | 2,410 | 831 | 151 | 172 | 138 |
| 26 | 224 | 198 | 433 | 482 | 550 | 2,850 | 6,170 | 1,740 | 660 | 159 | 136 | 136 |
| 27 | 206 | 195 | 450 | 496 | 1,800 | 2,680 | 4,420 | 1,450 | 538 | 161 | 113 | 131 |
| 28 | 200 | 209 | 391 | 469 | 3,640 | 2,160 | 3,360 | 1,480 | 572 | 151 | 100 | 117 |
| 29 | 221 | 231 | 356 | 440 | ----- | 1,920 | 3,610 | 1,530 | 1,390 | 240 | 91 | 110 |
| 30 | 195 | 292 | 311 | 420 | ----- | 1,610 | 2,670 | 1,220 | 1,060 | 218 | 87 | 178 |
| 31 | 170 | ----- | 304 | 400 | ----- | 1,490 | ----- | 1,020 | ----- | 159 | 87 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 228 | 102 | 147 | 0.244 | 0.28 |
| November | 292 | 129 | 177 | .294 | .33 |
| December | 1,700 | 250 | 529 | .877 | 1.01 |
| January | 4,080 | 341 | 702 | 1.16 | 1.34 |
| February | 3,640 | 360 | 660 | 1.09 | 1.14 |
| March | 17,200 | 732 | 3,260 | 5.41 | 6.24 |
| April | 13,600 | 1,010 | 4,160 | 6.90 | 7.70 |
| May | 5,020 | 1,020 | 1,970 | 3.27 | 3.77 |
| June | 1,390 | 203 | 494 | .819 | .91 |
| July | 1,020 | 138 | 341 | .566 | .65 |
| August | 567 | 75 | 143 | .237 | .27 |
| September | 364 | 69 | 168 | .279 | .31 |
| The year | 17,200 | 69 | 1,060 | 1.76 | 23.95 |

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, 1929.

REMARKS.—Records good. Flow computed from output of generators. No discharge over spillway. Daily discharge not corrected for storage. Records of power plant operation, and water-surface elevations in reservoir and tailrace furnished by Pennsylvania Power & Light Co.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|------|-------|-------|-------|------|------|-------|
| 1 | 586 | 238 | 356 | 254 | 243 | 266 | 15 | 388 | 26 | 284 | 159 | 99 |
| 2 | 641 | 337 | 208 | 178 | 216 | 313 | 291 | 358 | 126 | 239 | 171 | 0 |
| 3 | 598 | 317 | 377 | 295 | 92 | 224 | 276 | 548 | 348 | 181 | 46 | 320 |
| 4 | 741 | 98 | 336 | 426 | 254 | 228 | 330 | 373 | 116 | 0 | 0 | 244 |
| 5 | 726 | 335 | 340 | 379 | 302 | 216 | 238 | 231 | 231 | 44 | 273 | 361 |
| 6 | 532 | 183 | 202 | 199 | 333 | 297 | 126 | 955 | 251 | 210 | 206 | 376 |
| 7 | 103 | 379 | 317 | 425 | 334 | 452 | 27 | 956 | 263 | 326 | 316 | 234 |
| 8 | 678 | 388 | 86 | 237 | 211 | 382 | 246 | 1,020 | 243 | 368 | 303 | 41 |
| 9 | 572 | 412 | 97 | 329 | 268 | 240 | 146 | 543 | 103 | 269 | 253 | 177 |
| 10 | 320 | 316 | 402 | 409 | 107 | 193 | 389 | 518 | 303 | 199 | 144 | 282 |
| 11 | 454 | 197 | 387 | 400 | 279 | 312 | 126 | 477 | 252 | 194 | 102 | 254 |
| 12 | 502 | 190 | 272 | 184 | 309 | 210 | 256 | 131 | 402 | 173 | 597 | 258 |
| 13 | 391 | 400 | 344 | 71 | 273 | 314 | 245 | 1,020 | 260 | 4 | 446 | 307 |
| 14 | 0 | 436 | 417 | 286 | 349 | 352 | 78 | 1,360 | 37 | 0 | 351 | 70 |
| 15 | 494 | 411 | 220 | 298 | 262 | 496 | 160 | 535 | 225 | 321 | 186 | 43 |
| 16 | 437 | 262 | 87 | 269 | 234 | 184 | 158 | 308 | 95 | 296 | 302 | 333 |
| 17 | 346 | 169 | 371 | 349 | 153 | 248 | 209 | 323 | 287 | 337 | 250 | 168 |
| 18 | 454 | 116 | 235 | 245 | 284 | 349 | 357 | 37 | 360 | 393 | 0 | 244 |
| 19 | 440 | 319 | 157 | 188 | 242 | 224 | 324 | 54 | 390 | 189 | 351 | 228 |
| 20 | 424 | 431 | 361 | 187 | 272 | 359 | 117 | 486 | 288 | 0 | 366 | 227 |
| 21 | 167 | 402 | 232 | 190 | 271 | 155 | 102 | 1,000 | 408 | 43 | 306 | 262 |
| 22 | 413 | 362 | 240 | 271 | 197 | 119 | 222 | 431 | 94 | 244 | 391 | 0 |
| 23 | 529 | 417 | 175 | 207 | 163 | 106 | 486 | 412 | 9 | 328 | 430 | 303 |
| 24 | 336 | 320 | 172 | 269 | 105 | 17 | 467 | 301 | 264 | 379 | 366 | 266 |
| 25 | 353 | 143 | 181 | 252 | 204 | 207 | 58 | 131 | 372 | 417 | 95 | 162 |
| 26 | 347 | 422 | 28 | 227 | 329 | 220 | 58 | 68 | 417 | 384 | 446 | 300 |
| 27 | 474 | 327 | 326 | 82 | 176 | 207 | 167 | 406 | 378 | 108 | 309 | 221 |
| 28 | 188 | 428 | 246 | 319 | 305 | 177 | 136 | 820 | 641 | 68 | 352 | 174 |
| 29 | 655 | 148 | 106 | 237 | ----- | 0 | 358 | 327 | 203 | 411 | 404 | 27 |
| 30 | 413 | 529 | 248 | 294 | ----- | 39 | 302 | 21 | 59 | 362 | 384 | 398 |
| 31 | 371 | ----- | 251 | 243 | ----- | 260 | ----- | 84 | ----- | 376 | 238 | ----- |

| Month | Discharge in second-feet | | | | | Run-off in inches |
|-----------|--------------------------|---------|------|-----------------------|-----------------|-------------------|
| | Observed | | | Corrected for storage | | |
| | Maximum | Minimum | Mean | Mean | Per square mile | |
| October | 741 | 0 | 441 | 17.5 | 0.077 | 0.09 |
| November | 529 | 98 | 314 | 60.1 | .265 | .30 |
| December | 417 | 28 | 251 | 77.8 | .343 | .40 |
| January | 426 | 71 | 264 | 237 | 1.04 | 1.20 |
| February | 349 | 92 | 242 | 247 | 1.09 | 1.14 |
| March | 496 | 0 | 238 | 837 | 3.69 | 4.25 |
| April | 486 | 15 | 216 | 902 | 3.97 | 4.43 |
| May | 1,360 | 21 | 472 | 586 | 2.58 | 2.97 |
| June | 541 | 9 | 245 | 117 | .515 | .57 |
| July | 417 | 0 | 227 | -4.10 | -.018 | -.02 |
| August | 597 | 0 | 276 | -62.1 | -.274 | -.32 |
| September | 376 | 0 | 213 | 62.9 | .277 | .31 |
| The year | 1,360 | 0 | 284 | 256 | 1.13 | 15.32 |

NOTE.—No correction made for evaporation.

NEVERSINK RIVER AT OAKLAND VALLEY, N. Y.

LOCATION.—Water-stage recorder 250 feet downstream from highway bridge known as Paradise Bridge, Orange County, and three-fourths of a mile south of Oakland Valley, Sullivan County. Prior to Nov. 8, 1928, a temporary staff gage was used.

DRAINAGE AREA.—221 square miles.

RECORDS AVAILABLE.—July, 1928, to September, 1929.

EXTREMES.—Maximum discharge during period of record, 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 good except those for periods of ice effect (Dec. 8–11 and Dec. 21 to Feb. 27), which are fair. Discharge estimated July 29, Nov. 8, 10–14, 16, and 17, 1928.

Daily discharge, in second-feet, 1928–29

| Day | July | Aug. | Sept. | Day | July | Aug. | Sept. | Day | July | Aug. | Sept. |
|------|------|------|-------|------|------|-------|-------|------|------|-------|-------|
| 1928 | | | | 1928 | | | | 1928 | | | |
| 1 | | 308 | 686 | 11 | | 340 | 384 | 21 | | 292 | 411 |
| 2 | | 349 | 564 | 12 | | 285 | 370 | 22 | | 292 | 300 |
| 3 | | 304 | 2,160 | 13 | | 245 | 345 | 23 | | 430 | 245 |
| 4 | | 278 | 1,950 | 14 | | 216 | 324 | 24 | | 328 | 320 |
| 5 | | 252 | 990 | 15 | | 206 | 300 | 25 | | 292 | 345 |
| 6 | | 289 | 744 | 16 | | 191 | 292 | 26 | | 266 | 3,770 |
| 7 | | 547 | 666 | 17 | | 256 | 285 | 27 | | 419 | 5,110 |
| 8 | | 445 | 604 | 18 | | 1,250 | 270 | 28 | | 1,570 | 2,280 |
| 9 | | 353 | 510 | 19 | | 533 | 266 | 29 | | 616 | 1,670 |
| 10 | | 304 | 435 | 20 | | 345 | 394 | 30 | | 393 | 950 |
| | | | | | | | | 31 | | 332 | 950 |

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|------|------|-------|-------|-------|-------|-------|------|------|------|-------|
| 1928-29 | | | | | | | | | | | | |
| 1 | 186 | 127 | 429 | 190 | 150 | 604 | 622 | 950 | 402 | 213 | 74 | 53 |
| 2 | 183 | 127 | 358 | 300 | 140 | 440 | 646 | 840 | 355 | 392 | 70 | 51 |
| 3 | 174 | 123 | 259 | 260 | 140 | 379 | 536 | 1,440 | 328 | 245 | 72 | 49 |
| 4 | 164 | 132 | 219 | 220 | 140 | 358 | 540 | 1,280 | 304 | 186 | 80 | 44 |
| 5 | 156 | 141 | 206 | 240 | 130 | 651 | 901 | 950 | 286 | 164 | 93 | 45 |
| 6 | 154 | 141 | 194 | 1,200 | 130 | 1,380 | 2,040 | 840 | 308 | 154 | 85 | 49 |
| 7 | 166 | 130 | 172 | 850 | 400 | 840 | 1,280 | 1,070 | 278 | 139 | 75 | 54 |
| 8 | 146 | 120 | 160 | 550 | 800 | 536 | 950 | 833 | 245 | 127 | 69 | 75 |
| 9 | 141 | 120 | 150 | 400 | 550 | 480 | 777 | 646 | 232 | 120 | 66 | 63 |
| 10 | 141 | 118 | 140 | 440 | 460 | 416 | 870 | 640 | 216 | 120 | 64 | 61 |
| 11 | 136 | 116 | 170 | 360 | 360 | 375 | 950 | 592 | 208 | 127 | 70 | 67 |
| 12 | 134 | 118 | 193 | 320 | 300 | 404 | 2,530 | 542 | 191 | 114 | 91 | 64 |
| 13 | 132 | 116 | 166 | 260 | 240 | 901 | 2,620 | 525 | 180 | 106 | 91 | 60 |
| 14 | 127 | 114 | 156 | 220 | 220 | 3,460 | 1,560 | 524 | 174 | 98 | 89 | 112 |
| 15 | 136 | 114 | 151 | 180 | 200 | 4,600 | 1,280 | 812 | 174 | 94 | 139 | 231 |
| 16 | 132 | 112 | 148 | 170 | 190 | 3,900 | 1,200 | 660 | 165 | 89 | 120 | 144 |
| 17 | 136 | 110 | 146 | 180 | 180 | 2,690 | 1,380 | 515 | 158 | 82 | 104 | 125 |
| 18 | 134 | 110 | 239 | 300 | 180 | 1,420 | 1,150 | 450 | 144 | 91 | 85 | 123 |
| 19 | 139 | 130 | 358 | 1,000 | 180 | 1,110 | 910 | 598 | 136 | 299 | 80 | 116 |
| 20 | 141 | 191 | 245 | 650 | 170 | 1,070 | 910 | 929 | 170 | 177 | 75 | 94 |
| 21 | 132 | 200 | 190 | 360 | 150 | 990 | 2,690 | 955 | 200 | 139 | 69 | 84 |
| 22 | 132 | 183 | 160 | 280 | 150 | 1,070 | 2,230 | 1,070 | 161 | 114 | 64 | 77 |
| 23 | 127 | 164 | 150 | 240 | 140 | 1,720 | 1,510 | 738 | 141 | 100 | 64 | 72 |
| 24 | 120 | 151 | 160 | 220 | 150 | 1,720 | 1,240 | 640 | 136 | 96 | 63 | 69 |
| 25 | 139 | 146 | 160 | 220 | 200 | 1,200 | 1,280 | 750 | 187 | 96 | 64 | 66 |
| 26 | 136 | 141 | 160 | 200 | 320 | 1,350 | 3,320 | 598 | 274 | 98 | 64 | 63 |
| 27 | 132 | 148 | 170 | 200 | 650 | 1,150 | 1,770 | 510 | 197 | 93 | 63 | 60 |
| 28 | 130 | 139 | 170 | 200 | 1,110 | 875 | 1,280 | 470 | 174 | 89 | 60 | 56 |
| 29 | 136 | 132 | 170 | 190 | | 757 | 2,070 | 666 | 483 | 82 | 56 | 54 |
| 30 | 144 | 148 | 170 | 170 | | 646 | 1,240 | 653 | 292 | 80 | 54 | 56 |
| 31 | 132 | | 170 | 160 | | 622 | | 475 | | 77 | 53 | |

*Monthly discharge in second-feet, of Neversink River at Oakland Valley, N. Y.,
1928-29*

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------------|---------|---------|-------|--------------------|----------------------|
| 1928 | | | | | |
| July 24-31..... | 1,570 | 266 | 527 | 2.38 | 0.71 |
| August..... | 5,110 | 191 | 764 | 3.46 | 3.99 |
| September..... | 2,160 | 191 | 498 | 2.25 | 2.51 |
| 1928-29 | | | | | |
| October..... | 186 | 120 | 143 | .647 | .75 |
| November..... | 200 | 110 | 135 | .611 | .68 |
| December..... | 429 | 140 | 196 | .887 | 1.02 |
| January..... | 1,200 | 160 | 346 | 1.57 | 1.81 |
| February..... | 1,110 | 130 | 290 | 1.31 | 1.36 |
| March..... | 4,600 | 358 | 1,230 | 5.57 | 6.42 |
| April..... | 3,320 | 536 | 1,410 | 6.38 | 7.12 |
| May..... | 1,440 | 450 | 747 | 3.38 | 3.90 |
| June..... | 483 | 136 | 230 | 1.04 | 1.16 |
| July..... | 392 | 77 | 136 | .615 | .71 |
| August..... | 139 | 53 | 76.3 | .345 | .40 |
| September..... | 231 | 44 | 77.9 | .352 | .39 |
| The year..... | 4,600 | 44 | 419 | 1.90 | 25.72 |

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, 1929.

EXTREMES.—Maximum discharge during year, 787 second-feet Apr. 13 (gage height, 3.93 feet); minimum, 11 second-feet Dec. 22, Aug. 15, and Sept. 22. 1923-1929: Maximum discharge, about 2,350 second-feet Apr. 7, 1924, and Feb. 11, 1925 (gage height, 7.1 feet, from high-water marks); minimum, 4 second-feet Sept. 6 and 7, 1923 (gage height, 1.35 feet).

REMARKS.—Records good. Discharge estimated Dec. 23, 30, 31, Jan. 1, 14-16, 21, 22, 24, 29, 30, Feb. 2-5, 21, and 22, because of ice, and Aug. 20-23. Slight regulation by operation of water-power plants upstream.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1----- | 53 | 34 | 96 | 46 | 38 | 167 | 100 | 184 | 91 | 49 | 21 | 14 |
| 2----- | 52 | 34 | 76 | 74 | 32 | 148 | 107 | 169 | 78 | 46 | 21 | 14 |
| 3----- | 50 | 34 | 56 | 156 | 26 | 140 | 93 | 304 | 73 | 41 | 20 | 13 |
| 4----- | 47 | 42 | 48 | 93 | 26 | 133 | 89 | 286 | 70 | 39 | 25 | 13 |
| 5----- | 48 | 53 | 48 | 89 | 24 | 344 | 104 | 216 | 68 | 38 | 23 | 14 |
| 6----- | 56 | 46 | 48 | 186 | 25 | 620 | 145 | 199 | 76 | 49 | 19 | 20 |
| 7----- | 47 | 38 | 38 | 151 | 235 | 403 | 128 | 232 | 68 | 42 | 19 | 19 |
| 8----- | 41 | 37 | 42 | 113 | 235 | 235 | 107 | 190 | 63 | 36 | 18 | 24 |
| 9----- | 41 | 41 | 42 | 102 | 135 | 189 | 98 | 161 | 62 | 34 | 17 | 66 |
| 10----- | 40 | 38 | 38 | 98 | 109 | 143 | 104 | 147 | 57 | 32 | 17 | 34 |
| 11----- | 37 | 36 | 33 | 107 | 89 | 148 | 128 | 134 | 53 | 34 | 17 | 47 |
| 12----- | 34 | 34 | 33 | 85 | 91 | 156 | 365 | 134 | 49 | 31 | 17 | 29 |
| 13----- | 36 | 34 | 33 | 70 | 78 | 235 | 597 | 184 | 46 | 28 | 19 | 24 |
| 14----- | 37 | 36 | 32 | 65 | 68 | 466 | 342 | 166 | 44 | 26 | 28 | 28 |
| 15----- | 36 | 34 | 32 | 65 | 76 | 575 | 267 | 199 | 56 | 25 | 149 | 53 |
| 16----- | 38 | 33 | 32 | 70 | 70 | 424 | 304 | 163 | 63 | 24 | 74 | 36 |
| 17----- | 38 | 32 | 33 | 62 | 62 | 324 | 444 | 147 | 50 | 23 | 36 | 32 |
| 18----- | 40 | 32 | 50 | 55 | 53 | 235 | 342 | 128 | 44 | 28 | 26 | 33 |
| 19----- | 42 | 52 | 55 | 81 | 53 | 204 | 267 | 181 | 45 | 214 | 23 | 27 |
| 20----- | 41 | 116 | 42 | 76 | 50 | 183 | 216 | 286 | 65 | 80 | 19 | 24 |
| 21----- | 40 | 68 | 36 | 65 | 34 | 167 | 250 | 232 | 97 | 49 | 18 | 21 |
| 22----- | 38 | 56 | 34 | 55 | 48 | 156 | 286 | 267 | 60 | 39 | 17 | 20 |
| 23----- | 38 | 46 | 32 | 50 | 76 | 153 | 250 | 193 | 49 | 34 | 17 | 19 |
| 24----- | 38 | 40 | 31 | 42 | 93 | 148 | 199 | 169 | 56 | 31 | 16 | 19 |
| 25----- | 37 | 36 | 30 | 42 | 48 | 130 | 196 | 163 | 87 | 28 | 16 | 19 |
| 26----- | 37 | 32 | 30 | 76 | 68 | 123 | 323 | 141 | 95 | 28 | 15 | 18 |
| 27----- | 37 | 32 | 28 | 80 | 324 | 118 | 250 | 124 | 65 | 25 | 15 | 18 |
| 28----- | 38 | 30 | 32 | 62 | 286 | 111 | 216 | 110 | 57 | 23 | 15 | 17 |
| 29----- | 38 | 28 | 34 | 55 | ----- | 102 | 267 | 106 | 63 | 24 | 15 | 16 |
| 30----- | 37 | 32 | 36 | 55 | ----- | 98 | 216 | 101 | 54 | 22 | 15 | 19 |
| 31----- | 34 | ----- | 34 | 53 | ----- | 102 | ----- | 101 | ----- | 21 | 14 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October----- | 56 | 34 | 40.8 | 0.628 | 0.724 |
| November----- | 116 | 28 | 21.2 | .634 | .707 |
| December----- | 96 | 28 | 40.8 | .628 | .724 |
| January----- | 186 | 42 | 80.0 | 1.23 | 1.42 |
| February----- | 324 | 25 | 92.2 | 1.42 | 1.48 |
| March----- | 620 | 98 | 222 | 3.42 | 3.94 |
| April----- | 597 | 89 | 229 | 3.49 | 3.89 |
| May----- | 804 | 101 | 178 | 2.74 | 3.16 |
| June----- | 97 | 44 | 63.5 | .977 | 1.09 |
| July----- | 214 | 21 | 40.1 | .617 | .71 |
| August----- | 149 | 14 | 25.2 | .388 | .45 |
| September----- | 66 | 13 | 25.0 | .385 | .43 |
| The year----- | 620 | 13 | 896 | 1.38 | 18.72 |

PAULINS KILL AT BLAIRSTOWN, N. J.

LOCATION.—Water-stage recorder at highway bridge in Blairstown, Warren County, 200 feet above mouth of Blairs Creek, and 9 miles above mouth of river.

DRAINAGE AREA.—128 square miles.

RECORDS AVAILABLE.—October, 1921, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,310 second-feet Mar. 6 (gage height, 6.4 feet); minimum, 9 second-feet Aug. 9 (gage height, 1.45 feet).

1921-1929: Maximum discharge, about 1,800 second-feet Mar. 8, 1922, and 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. Discharge estimated Oct. 6-11, Aug. 14-17, 22-24, and 27-29. Flow regulated by storage in Swartswood Lake and by operation of power plants above station.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|-------|-------|-----|-------|------|------|-------|
| 1..... | 100 | 61 | 180 | 73 | 75 | 524 | 163 | 312 | 114 | 120 | 33 | 24 |
| 2..... | 96 | 61 | 156 | 132 | 122 | 422 | 200 | 287 | 103 | 106 | 27 | 25 |
| 3..... | 92 | 63 | 120 | 95 | 73 | 345 | 174 | 426 | 95 | 61 | 28 | 36 |
| 4..... | 86 | 83 | 104 | 86 | 71 | 402 | 159 | 399 | 80 | 80 | 30 | 29 |
| 5..... | 87 | 100 | 95 | 70 | 66 | 809 | 137 | 332 | 80 | 74 | 35 | 34 |
| 6..... | 85 | 92 | 93 | 245 | 60 | 1,260 | 310 | 312 | 106 | 88 | 30 | 58 |
| 7..... | 85 | 79 | 84 | 247 | 715 | 890 | 296 | 391 | 95 | 77 | 26 | 51 |
| 8..... | 85 | 78 | 80 | 159 | 732 | 524 | 235 | 335 | 98 | 72 | 32 | 64 |
| 9..... | 80 | 73 | 79 | 157 | 482 | 430 | 204 | 275 | 98 | 66 | 17 | 108 |
| 10..... | 80 | 75 | 72 | 153 | 273 | 310 | 201 | 243 | 89 | 59 | 29 | 88 |
| 11..... | 78 | 72 | 75 | 210 | 193 | 296 | 223 | 214 | 81 | 58 | 25 | 76 |
| 12..... | 77 | 68 | 73 | 161 | 158 | 278 | 526 | 206 | 80 | 58 | 43 | 65 |
| 13..... | 76 | 73 | 72 | 129 | 159 | 313 | 825 | 252 | 73 | 45 | 44 | 50 |
| 14..... | 77 | 67 | 73 | 133 | 152 | 460 | 618 | 249 | 70 | 44 | 50 | 71 |
| 15..... | 73 | 67 | 73 | 107 | 139 | 593 | 503 | 299 | 115 | 51 | 100 | 121 |
| 16..... | 70 | 66 | 75 | 110 | 125 | 524 | 524 | 251 | 122 | 49 | 85 | 111 |
| 17..... | 72 | 66 | 75 | 92 | 100 | 460 | 644 | 214 | 96 | 30 | 70 | 87 |
| 18..... | 74 | 68 | 99 | 91 | 97 | 344 | 569 | 184 | 90 | 41 | 53 | 100 |
| 19..... | 84 | 85 | 104 | 150 | 98 | 312 | 482 | 211 | 92 | 192 | 54 | 87 |
| 20..... | 85 | 129 | 92 | 158 | 91 | 287 | 404 | 309 | 120 | 175 | 47 | 70 |
| 21..... | 75 | 108 | 77 | 109 | 84 | 264 | 414 | 275 | 109 | 102 | 43 | 59 |
| 22..... | 69 | 98 | 72 | 100 | 104 | 261 | 493 | 304 | 96 | 77 | 40 | 52 |
| 23..... | 69 | 95 | 72 | 102 | 110 | 271 | 466 | 238 | 83 | 65 | 40 | 51 |
| 24..... | 67 | 89 | 75 | 90 | 100 | 268 | 368 | 205 | 81 | 57 | 35 | 44 |
| 25..... | 63 | 86 | 70 | 92 | 98 | 239 | 342 | 199 | 311 | 52 | 31 | 42 |
| 26..... | 69 | 82 | 58 | 106 | 223 | 221 | 524 | 176 | 294 | 49 | 28 | 43 |
| 27..... | 64 | 77 | 55 | 117 | 766 | 205 | 480 | 158 | 191 | 46 | 30 | 40 |
| 28..... | 65 | 74 | 61 | 92 | 825 | 187 | 377 | 149 | 155 | 44 | 30 | 40 |
| 29..... | 67 | 77 | 63 | 97 | ----- | 173 | 441 | 138 | 178 | 45 | 30 | 39 |
| 30..... | 62 | 84 | 59 | 115 | ----- | 162 | 366 | 133 | 144 | 38 | 35 | 50 |
| 31..... | 63 | ----- | 56 | 95 | ----- | 163 | ----- | 126 | ----- | 29 | 17 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 100 | 62 | 76.8 | 0.600 | 0.69 |
| November..... | 129 | 61 | 79.9 | .624 | .70 |
| December..... | 180 | 55 | 83.6 | .653 | .75 |
| January..... | 247 | 70 | 125 | .977 | 1.13 |
| February..... | 825 | 60 | 225 | 1.76 | 1.83 |
| March..... | 1,260 | 162 | 393 | 3.07 | 3.54 |
| April..... | 825 | 159 | 390 | 3.05 | 3.40 |
| May..... | 426 | 126 | 252 | 1.97 | 2.27 |
| June..... | 311 | 70 | 118 | .922 | 1.03 |
| July..... | 192 | 29 | 70.3 | .549 | .63 |
| August..... | 100 | 17 | 39.3 | .307 | .35 |
| September..... | 121 | 24 | 60.5 | .473 | .53 |
| The year..... | 1,260 | 17 | 159 | 1.24 | 16.85 |

PEQUEST RIVER AT PEQUEST, N. J.

LOCATION.—Water-stage recorder at Pequest, Warren County, 100 feet above Lehigh & Hudson River Railroad bridge and 300 feet below Furnace Brook.

DRAINAGE AREA—108 square miles.

RECORDS AVAILABLE.—November, 1921, to September, 1929.

EXTREMES.—Maximum discharge during year, 605 second-feet Feb. 27 (gauge height, 2.69 feet); minimum, 30 second-feet Sept. 2 (gauge height, 0.49 foot).

1921-1929: Maximum discharge, 753 second-feet Aug. 27, 1928 (gauge height, 3.04 feet); minimum, 16 second-feet Sept. 20 and 21, 1924, and Aug. 7, 1926 (gauge height, 0.31 foot).

REMARKS.—Records excellent. Discharge estimated Jan. 9-13, Aug. 12-19, and Sept. 12-30. Slight regulation caused by operation of small water-power plant.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1 | 119 | 69 | 140 | 77 | 62 | 470 | 149 | 280 | 128 | 128 | 40 | 34 |
| 2 | 119 | 68 | 119 | 150 | 58 | 510 | 149 | 250 | 117 | 117 | 38 | 32 |
| 3 | 109 | 65 | 100 | 91 | 55 | 470 | 138 | 312 | 198 | 98 | 37 | 36 |
| 4 | 100 | 84 | 89 | 84 | 56 | 470 | 128 | 280 | 174 | 89 | 41 | 33 |
| 5 | 100 | 109 | 82 | 62 | 54 | 510 | 149 | 250 | 172 | 82 | 39 | 37 |
| 6 | 100 | 100 | 77 | 262 | 56 | 550 | 235 | 250 | 198 | 80 | 37 | 59 |
| 7 | 100 | 87 | 71 | 248 | 433 | 510 | 210 | 330 | 174 | 77 | 36 | 56 |
| 8 | 91 | 80 | 68 | 129 | 360 | 470 | 172 | 280 | 174 | 72 | 36 | 74 |
| 9 | 91 | 77 | 66 | 130 | 343 | 510 | 160 | 235 | 179 | 69 | 36 | 91 |
| 10 | 89 | 76 | 60 | 120 | 378 | 435 | 149 | 222 | 170 | 67 | 35 | 98 |
| 11 | 84 | 71 | 64 | 200 | 213 | 382 | 160 | 198 | 91 | 64 | 36 | 74 |
| 12 | 84 | 71 | 61 | 170 | 129 | 295 | 302 | 198 | 84 | 60 | 37 | 65 |
| 13 | 82 | 71 | 62 | 150 | 100 | 265 | 400 | 222 | 78 | 58 | 40 | 60 |
| 14 | 80 | 71 | 62 | 76 | 109 | 295 | 382 | 222 | 77 | 55 | 40 | 70 |
| 15 | 80 | 69 | 62 | 84 | 100 | 348 | 312 | 235 | 98 | 52 | 80 | 110 |
| 16 | 80 | 66 | 64 | 91 | 100 | 348 | 330 | 210 | 170 | 50 | 65 | 95 |
| 17 | 80 | 65 | 62 | 89 | 91 | 330 | 418 | 185 | 87 | 49 | 46 | 80 |
| 18 | 79 | 66 | 91 | 91 | 87 | 280 | 400 | 172 | 84 | 50 | 40 | 100 |
| 19 | 79 | 69 | 91 | 129 | 91 | 235 | 365 | 185 | 82 | 91 | 47 | 90 |
| 20 | 80 | 91 | 77 | 129 | 80 | 222 | 312 | 235 | 115 | 93 | 54 | 70 |
| 21 | 79 | 89 | 64 | 100 | 54 | 210 | 295 | 235 | 117 | 72 | 48 | 65 |
| 22 | 76 | 86 | 49 | 91 | 76 | 210 | 330 | 235 | 111 | 60 | 43 | 65 |
| 23 | 74 | 80 | 59 | 100 | 100 | 210 | 330 | 210 | 172 | 56 | 42 | 55 |
| 24 | 76 | 72 | 54 | 91 | 82 | 210 | 295 | 185 | 174 | 54 | 41 | 50 |
| 25 | 77 | 69 | 54 | 82 | 82 | 198 | 288 | 185 | 222 | 51 | 37 | 50 |
| 26 | 76 | 64 | 50 | 68 | 203 | 198 | 510 | 172 | 235 | 49 | 36 | 50 |
| 27 | 72 | 62 | 52 | 82 | 489 | 185 | 418 | 160 | 149 | 48 | 39 | 48 |
| 28 | 72 | 60 | 56 | 79 | 489 | 172 | 348 | 149 | 198 | 46 | 46 | 48 |
| 29 | 71 | 61 | 60 | 59 | ----- | 160 | 365 | 138 | 210 | 43 | 38 | 49 |
| 30 | 68 | 74 | 55 | 65 | ----- | 160 | 312 | 138 | 190 | 42 | 36 | 50 |
| 31 | 68 | ----- | 50 | 64 | ----- | 160 | ----- | 128 | ----- | 41 | 37 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 119 | 68 | 85.0 | 0.787 | 0.91 |
| November | 109 | 60 | 74.7 | .692 | .77 |
| December | 140 | 49 | 70.0 | .648 | .75 |
| January | 262 | 59 | 111 | 1.03 | 1.19 |
| February | 489 | 54 | 162 | 1.50 | 1.56 |
| March | 550 | 160 | 322 | 2.98 | 3.44 |
| April | 510 | 128 | 284 | 2.63 | 2.93 |
| May | 330 | 128 | 216 | 2.00 | 2.31 |
| June | 235 | 77 | 118 | 1.09 | 1.22 |
| July | 128 | 41 | 66.5 | .616 | .71 |
| August | 80 | 35 | 42.0 | .389 | .45 |
| September | 110 | 32 | 63.1 | .584 | .65 |
| The year | 550 | 32 | 134 | 1.24 | 16.89 |

BEAVER BROOK NEAR BELVIDERE, N. J.

LOCATION.—Water-stage recorder 500 feet above mouth of brook in Pequest River and 2 miles east of Belvidere, Warren County.

DRAINAGE AREA.—36 square miles.

RECORDS AVAILABLE.—May, 1922, to September, 1929.

EXTREMES.—Maximum discharge during year, 395 second-feet Feb. 7 (gage height, 3.27 feet); minimum, 4.8 second-feet Sept. 4 and 5 (gage height, 1.31 feet).

1922-1929: Maximum discharge, about 826 second-feet July 15, 1928 (gage height, 3.92 feet); minimum, 3.1 second-feet Sept. 4, 5, and Oct. 18, 1923 (gage height, 1.21 feet).

REMARKS.—Records good. Discharge estimated because of ice Dec. 21-28, 31, Jan. 1, 8, 9, 14-17, 29-31, Feb. 2-5, 13, 21, 22, and 24.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | 32 | 14 | 44 | 20 | 19 | 174 | 52 | 93 | 38 | 29 | 6.7 | 5.9 |
| 2..... | 29 | 14 | 34 | 49 | 17 | 166 | 50 | 88 | 34 | 26 | 7.0 | 5.6 |
| 3..... | 29 | 16 | 27 | 48 | 16 | 141 | 45 | 122 | 32 | 20 | 6.2 | 5.4 |
| 4..... | 27 | 23 | 23 | 34 | 14 | 152 | 43 | 123 | 26 | 18 | 8.0 | 5.0 |
| 5..... | 26 | 27 | 21 | 46 | 13 | 231 | 52 | 112 | 26 | 17 | 7.3 | 5.6 |
| 6..... | 26 | 22 | 20 | 73 | 11 | 368 | 86 | 102 | 30 | 16 | 7.0 | 7.3 |
| 7..... | 25 | 19 | 18 | 61 | 298 | 295 | 67 | 119 | 27 | 15 | 6.2 | 7.7 |
| 8..... | 23 | 18 | 16 | 46 | 218 | 175 | 52 | 98 | 28 | 14 | 5.9 | 16 |
| 9..... | 23 | 18 | 16 | 40 | 134 | 162 | 52 | 91 | 29 | 15 | 5.6 | 17 |
| 10..... | 21 | 16 | 16 | 61 | 98 | 111 | 57 | 82 | 25 | 14 | 5.4 | 16 |
| 11..... | 20 | 17 | 15 | 65 | 74 | 102 | 64 | 75 | 23 | 13 | 6.4 | 13 |
| 12..... | 19 | 17 | 15 | 50 | 64 | 86 | 115 | 72 | 22 | 12 | 9.1 | 9.1 |
| 13..... | 19 | 17 | 14 | 46 | 34 | 86 | 192 | 80 | 19 | 12 | 9.1 | 8.0 |
| 14..... | 19 | 16 | 15 | 28 | 48 | 97 | 160 | 80 | 19 | 11 | 11 | 11 |
| 15..... | 18 | 15 | 15 | 28 | 32 | 106 | 132 | 84 | 37 | 9.5 | 28 | 19 |
| 16..... | 18 | 15 | 15 | 34 | 30 | 106 | 141 | 75 | 39 | 9.5 | 18 | 15 |
| 17..... | 18 | 14 | 15 | 30 | 29 | 104 | 177 | 65 | 27 | 9.1 | 10 | 20 |
| 18..... | 18 | 14 | 23 | 30 | 29 | 97 | 154 | 60 | 23 | 9.2 | 8.4 | 26 |
| 19..... | 19 | 16 | 23 | 45 | 28 | 89 | 141 | 61 | 24 | 32 | 10 | 17 |
| 20..... | 22 | 25 | 20 | 40 | 27 | 84 | 121 | 64 | 20 | 20 | 14 | 12 |
| 21..... | 19 | 21 | 14 | 37 | 20 | 78 | 117 | 65 | 19 | 13 | 9.5 | 10 |
| 22..... | 18 | 18 | 13 | 39 | 26 | 78 | 123 | 64 | 18 | 12 | 7.7 | 7.7 |
| 23..... | 18 | 18 | 13 | 29 | 32 | 78 | 110 | 55 | 17 | 13 | 7.0 | 10 |
| 24..... | 17 | 15 | 12 | 26 | 30 | 75 | 100 | 50 | 29 | 12 | 6.4 | 8.4 |
| 25..... | 17 | 15 | 10 | 25 | 29 | 70 | 100 | 54 | 125 | 11 | 5.9 | 7.7 |
| 26..... | 16 | 14 | 10 | 33 | 97 | 62 | 141 | 49 | 40 | 10 | 5.4 | 7.7 |
| 27..... | 15 | 13 | 10 | 38 | 251 | 54 | 112 | 46 | 26 | 9.1 | 11 | 7.0 |
| 28..... | 15 | 14 | 12 | 26 | 269 | 55 | 104 | 44 | 33 | 8.7 | 13 | 7.0 |
| 29..... | 15 | 12 | 13 | 24 | ----- | 54 | 121 | 43 | 56 | 8.7 | 8.4 | 7.0 |
| 30..... | 14 | 17 | 13 | 20 | ----- | 53 | 100 | 40 | 34 | 8.0 | 7.3 | 7.3 |
| 31..... | 14 | ----- | 10 | 20 | ----- | 54 | ----- | 39 | ----- | 7.3 | 6.4 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 32 | 14 | 20.3 | 0.564 | 0.65 |
| November..... | 27 | 12 | 17.0 | .472 | .53 |
| December..... | 44 | 10 | 17.3 | .481 | .55 |
| January..... | 73 | 20 | 38.4 | 1.07 | 1.23 |
| February..... | 298 | 11 | 71.0 | 1.97 | 2.05 |
| March..... | 368 | 53 | 118 | 3.28 | 3.78 |
| April..... | 192 | 43 | 103 | 2.86 | 3.19 |
| May..... | 123 | 39 | 74.0 | 2.06 | 2.38 |
| June..... | 125 | 17 | 31.5 | .875 | .98 |
| July..... | 32 | 7.3 | 14.0 | .389 | .45 |
| August..... | 28 | 5.4 | 8.95 | .249 | .29 |
| September..... | 26 | 5.0 | 10.7 | .297 | .33 |
| The year..... | 368 | 5.0 | 43.4 | 1.21 | 16.41 |

LEHIGH RIVER AT TANNERY, PA.

LOCATION.—Water-stage recorder 600 feet above highway bridge in Tannery, Carbon County.

DRAINAGE AREA.—322 square miles (revised).

RECORDS AVAILABLE.—October, 1919, to September, 1921; October, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, about 4,340 second-feet Mar. 15 (gage height, 6.28 feet); minimum, about 67 second-feet Aug. 22 (gage height, 1.55 feet).

1919-1921, 1928-29: Maximum discharge, 6,930 second-feet Mar. 12, 1920 (gage height, 8.10 feet, chain-gage datum); minimum, that of Aug. 22, 1929.

REMARKS.—Records good. Discharge estimated because of ice Jan. 2-4, 13-17, 20-22, 24-31, Feb. 1-5, and 21-24. Slight diurnal fluctuation caused by operation of power plants.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|-------|------|-------|-------|-------|------|------|------|-------|
| 1 | | 163 | 695 | 189 | 320 | 800 | 730 | 870 | 405 | 286 | 112 | 99 |
| 2 | | 163 | 590 | 200 | 320 | 695 | 765 | 835 | 378 | 259 | 108 | 97 |
| 3 | | 163 | 465 | 220 | 320 | 695 | 695 | 1,820 | 335 | 226 | 108 | 96 |
| 4 | | 157 | 378 | 260 | 320 | 660 | 660 | 1,700 | 305 | 192 | 116 | 94 |
| 5 | | 230 | 345 | 350 | 400 | 1,030 | 870 | 1,500 | 315 | 182 | 116 | 94 |
| 6 | | 230 | 300 | 1,280 | 590 | 1,500 | 2,010 | 1,300 | 350 | 182 | 112 | 104 |
| 7 | | 210 | 242 | 1,400 | 695 | 1,300 | 1,700 | 1,400 | 335 | 185 | 110 | 112 |
| 8 | | 196 | 259 | 1,210 | 730 | 1,030 | 1,400 | 1,210 | 325 | 192 | 101 | 126 |
| 9 | | 192 | 282 | 1,300 | 625 | 870 | 1,210 | 1,030 | 320 | 166 | 97 | 382 |
| 10 | | 189 | 282 | 765 | 590 | 695 | 1,210 | 910 | 295 | 154 | 101 | 277 |
| 11 | | 175 | 254 | 558 | 495 | 695 | 1,300 | 800 | 263 | 146 | 112 | 246 |
| 12 | | 185 | 234 | 495 | 405 | 765 | 1,500 | 730 | 246 | 185 | 122 | 210 |
| 13 | | 178 | 218 | 440 | 345 | 1,120 | 1,700 | 910 | 238 | 214 | 136 | 182 |
| 14 | | 175 | 218 | 400 | 378 | 2,960 | 1,500 | 870 | 222 | 129 | 347 | 686 |
| 15 | | 178 | 222 | 400 | 345 | 3,760 | 1,210 | 910 | 226 | 151 | 765 | 590 |
| 16 | | 178 | 218 | 400 | 330 | 3,350 | 1,400 | 835 | 230 | 136 | 465 | 378 |
| 17 | | 178 | 230 | 440 | 320 | 2,590 | 1,500 | 765 | 222 | 120 | 291 | 435 |
| 18 | | 151 | 345 | 525 | 340 | 1,700 | 1,400 | 660 | 230 | 118 | 200 | 495 |
| 19 | | 169 | 214 | 330 | 660 | 1,400 | 1,300 | 730 | 214 | 402 | 163 | 340 |
| 20 | | 192 | 378 | 286 | 650 | 350 | 1,120 | 835 | 291 | 320 | 151 | 254 |
| 21 | | 189 | 330 | 230 | 550 | 340 | 1,030 | 2,020 | 870 | 405 | 226 | 203 |
| 22 | | 189 | 291 | 263 | 460 | 340 | 1,030 | 2,240 | 950 | 277 | 182 | 178 |
| 23 | | 175 | 263 | 242 | 435 | 340 | 1,120 | 1,910 | 800 | 218 | 160 | 124 |
| 24 | | 185 | 238 | 254 | 400 | 380 | 1,120 | 1,500 | 730 | 405 | 136 | 114 |
| 25 | | 189 | 230 | 214 | 380 | 558 | 1,030 | 1,400 | 695 | 378 | 129 | 114 |
| 26 | | 185 | 203 | 210 | 380 | 695 | 950 | 1,500 | 525 | 378 | 129 | 112 |
| 27 | | 185 | 214 | 185 | 360 | 1,030 | 870 | 1,300 | 495 | 310 | 124 | 108 |
| 28 | | 166 | 203 | 192 | 340 | 1,030 | 800 | 1,120 | 495 | 345 | 120 | 102 |
| 29 | | 192 | 200 | 185 | 340 | 730 | 1,120 | 558 | 495 | 118 | 101 | 134 |
| 30 | | 185 | 250 | 222 | 320 | 695 | 1,030 | 558 | 350 | 116 | 102 | 134 |
| 31 | | 172 | 272 | 320 | 320 | 730 | 730 | 465 | | 114 | 101 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|---------------|---------|---------|-------|-----------------|-------------------|
| October 18-31 | 192 | 151 | 180 | 0.559 | 0.29 |
| November | 378 | 157 | 211 | .655 | .73 |
| December | 695 | 185 | 286 | .888 | 1.02 |
| January | 1,400 | 189 | 530 | 1.65 | 1.90 |
| February | 1,030 | 320 | 474 | 1.47 | 1.53 |
| March | 3,760 | 660 | 1,250 | 3.88 | 4.47 |
| April | 2,240 | 660 | 1,360 | 4.22 | 4.71 |
| May | 1,820 | 465 | 896 | 2.78 | 3.20 |
| June | 495 | 214 | 310 | .963 | 1.07 |
| July | 402 | 114 | 177 | .550 | .63 |
| August | 765 | 97 | 164 | .509 | .59 |
| September | 686 | 94 | 227 | .705 | .79 |

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, 1929. September, 1902, to February, 1905; April, 1909, to December, 1913; and October, 1918, to September, 1921, at New Street Bridge, 800 feet above mouth of Monocacy Creek.

EXTREMES.—Maximum discharge during year, 18,400 second-feet Mar. 6 (gauge height, 7.80 feet); minimum, 416 second-feet Aug. 10 (gauge height, 1.78 feet). Flow in canal not included.

REMARKS.—Records good. Discharge estimated Jan. 6-9 and July 24-29. Lehigh Canal diverts above station; flow included in discharge records.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|-------|-------|--------|--------|-------|-------|-------|-------|-------|-------|
| 1 | | 794 | 1,350 | 910 | 1,040 | 4,320 | 2,330 | 3,620 | 1,940 | 1,310 | 580 | 544 |
| 2 | | 797 | 1,060 | 1,400 | 910 | 3,570 | 2,520 | 3,400 | 1,850 | 1,160 | 555 | 557 |
| 3 | | 802 | 1,490 | 975 | 910 | 2,910 | 2,350 | 5,680 | 1,780 | 1,090 | 551 | 574 |
| 4 | | 905 | 1,250 | 975 | 1,040 | 2,930 | 2,160 | 6,060 | 1,680 | 967 | 597 | 558 |
| 5 | | 1,030 | 1,180 | 850 | 975 | 6,220 | 2,380 | 5,190 | 1,600 | 966 | 622 | 557 |
| 6 | | 961 | 1,110 | 3,800 | 975 | 12,700 | 4,120 | 4,640 | 1,600 | 904 | 580 | 579 |
| 7 | | 837 | 1,040 | 4,000 | 4,980 | 6,970 | 4,370 | 4,640 | 1,600 | 903 | 583 | 652 |
| 8 | | 846 | 975 | 3,600 | 3,500 | 4,340 | 3,620 | 4,120 | 1,530 | 898 | 553 | 824 |
| 9 | | 847 | 975 | 3,800 | 2,150 | 3,810 | 3,390 | 3,630 | 1,520 | 841 | 549 | 624 |
| 10 | | 791 | 790 | 2,710 | 1,720 | 2,910 | 3,160 | 3,180 | 1,450 | 780 | 539 | 1,090 |
| 11 | | 789 | 1,040 | 3,120 | 1,470 | 2,710 | 3,620 | 2,960 | 1,370 | 728 | 577 | 956 |
| 12 | | 729 | 910 | 2,330 | 1,180 | 2,910 | 4,370 | 2,760 | 1,300 | 723 | 784 | 784 |
| 13 | | 739 | 910 | 1,800 | 1,110 | 3,570 | 4,900 | 2,970 | 1,230 | 691 | 717 | 784 |
| 14 | | 739 | 910 | 1,400 | 1,110 | 5,820 | 4,630 | 2,970 | 1,230 | 779 | 1,000 | 1,030 |
| 15 | | 741 | 910 | 1,550 | 1,180 | 7,610 | 3,860 | 2,970 | 1,310 | 775 | 5,510 | 1,930 |
| 16 | | 788 | 910 | 1,470 | 1,110 | 4,900 | 4,900 | 2,770 | 1,300 | 692 | 2,380 | 1,370 |
| 17 | | 783 | 910 | 1,470 | 1,040 | 6,630 | 8,340 | 2,380 | 1,230 | 690 | 1,530 | 1,370 |
| 18 | | 781 | 1,040 | 1,630 | 1,040 | 5,130 | 7,000 | 2,390 | 1,090 | 718 | 1,170 | 1,930 |
| 19 | | 893 | 1,180 | 2,330 | 1,110 | 4,320 | 5,750 | 2,570 | 1,090 | 1,440 | 1,100 | 1,450 |
| 20 | | 1,160 | 1,110 | 2,330 | 910 | 3,810 | 5,180 | 2,970 | 1,240 | 1,350 | 958 | 1,160 |
| 21 | | 1,230 | 1,040 | 1,800 | 850 | 3,570 | 5,460 | 2,780 | 1,460 | 990 | 820 | 964 |
| 22 | | 1,090 | 735 | 1,550 | 850 | 3,340 | 6,350 | 2,970 | 1,370 | 865 | 771 | 904 |
| 23 | | 1,010 | 680 | 1,630 | 1,040 | 3,340 | 5,740 | 2,770 | 1,220 | 823 | 743 | 841 |
| 24 | | 998 | 680 | 1,470 | 910 | 3,340 | 4,910 | 2,390 | 1,450 | 750 | 717 | 790 |
| 25 | 899 | 934 | 735 | 1,400 | 1,040 | 3,120 | 4,650 | 2,580 | 1,770 | 700 | 665 | 726 |
| 26 | 838 | 871 | 790 | 1,250 | 5,000 | 2,910 | 6,690 | 2,390 | 1,530 | 700 | 673 | 713 |
| 27 | 838 | 871 | 790 | 1,180 | 10,200 | 2,910 | 5,180 | 2,120 | 1,370 | 650 | 677 | 681 |
| 28 | 835 | 933 | 850 | 1,250 | 7,340 | 2,710 | 4,630 | 2,030 | 1,310 | 650 | 663 | 653 |
| 29 | 878 | 818 | 850 | 1,040 | ----- | 2,520 | 4,640 | 2,390 | 1,770 | 650 | 632 | 665 |
| 30 | 753 | 937 | 790 | 975 | ----- | 2,330 | 4,110 | 2,380 | 1,520 | 611 | 618 | 703 |
| 31 | 795 | ----- | 735 | 1,040 | ----- | 2,330 | ----- | 2,210 | ----- | 592 | 583 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|---------------|---------|---------|-------|-----------------|-------------------|
| October 25-31 | 899 | 753 | 834 | 0.652 | 0.17 |
| November | 1,230 | 729 | 881 | .688 | .77 |
| December | 1,660 | 680 | 978 | .764 | .88 |
| January | 4,000 | 850 | 1,840 | 1.44 | 1.66 |
| February | 10,200 | 850 | 2,020 | 1.58 | 1.64 |
| March | 12,700 | 2,330 | 4,290 | 3.35 | 3.86 |
| April | 8,340 | 2,160 | 4,510 | 3.52 | 3.93 |
| May | 6,060 | 2,030 | 3,190 | 2.49 | 2.87 |
| June | 1,940 | 1,090 | 1,460 | 1.14 | 1.27 |
| July | 1,440 | 592 | 851 | .665 | .77 |
| August | 5,510 | 539 | 935 | .730 | .84 |
| September | 1,930 | 544 | 897 | .701 | .78 |

MUSCONETCONG RIVER AT OUTLET OF LAKE HOPATCONG, N. J.

LOCATION.—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, 1929.

EXTREMES.—Maximum discharge during year, 234 second-feet Apr. 16 (gage height, 2.18 feet); minimum, 11.2 second-feet Mar. 18-31, Apr. 1, 4, and 5 (gage height, 0.60 foot).

1928-29: Maximum discharge, 344 second-feet Aug. 27, 1928 (gage height, 2.61 feet); minimum, that of Mar. 18-31, Apr. 1, 4, and 5, 1929.

REMARKS.—Records excellent. Flow regulated by storage in Lake Hopatcong. Station built and maintained by Morris Canal & Banking Co.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1 | 29 | 27 | 25 | 24 | 36 | 27 | 11.2 | 147 | 25 | 27 | 12 | 11.6 |
| 2 | 29 | 27 | 25 | 24 | 31 | 42 | 11.6 | 147 | 22 | 26 | 12 | 11.6 |
| 3 | 29 | 28 | 25 | 24 | 27 | 58 | 11.6 | 127 | 18.2 | 21 | 17 | 26 |
| 4 | 29 | 28 | 24 | 24 | 27 | 60 | 11.2 | 102 | 16.1 | 16.4 | 19.7 | 31 |
| 5 | 29 | 28 | 24 | 24 | 27 | 68 | 11.2 | 100 | 15.5 | 16.4 | 19.7 | 31 |
| 6 | 29 | 27 | 23 | 24 | 27 | 86 | 11.6 | 102 | 17.8 | 16.9 | 18 | 31 |
| 7 | 29 | 27 | 23 | 42 | 27 | 80 | 12 | 108 | 16.4 | 16 | 12 | 31 |
| 8 | 29 | 27 | 28 | 51 | 27 | 46 | 13.3 | 102 | 20 | 15.5 | 12 | 31 |
| 9 | 28 | 27 | 31 | 55 | 27 | 29 | 16 | 86 | 21 | 15.5 | 12 | 31 |
| 10 | 28 | 27 | 31 | 57 | 27 | 29 | 24 | 60 | 20 | 14.6 | 12 | 31 |
| 11 | 28 | 27 | 31 | 57 | 27 | 29 | 27 | 50 | 16.9 | 14.2 | 12 | 31 |
| 12 | 28 | 27 | 31 | 57 | 27 | 28 | 75 | 34 | 15.5 | 12.9 | 12 | 30 |
| 13 | 28 | 27 | 31 | 58 | 27 | 28 | 119 | 42 | 14.6 | 12.5 | 12 | 30 |
| 14 | 28 | 26 | 37 | 58 | 27 | 28 | 127 | 74 | 14.2 | 12.5 | 12 | 30 |
| 15 | 28 | 26 | 41 | 60 | 27 | 29 | 127 | 82 | 15.5 | 12.5 | 12 | 30 |
| 16 | 28 | 26 | 41 | 60 | 27 | 29 | 178 | 78 | 16.9 | 11.6 | 11.6 | 30 |
| 17 | 24 | 26 | 41 | 58 | 27 | 18 | 188 | 70 | 16.9 | 11.6 | 11.6 | 30 |
| 18 | 28 | 26 | 41 | 58 | 27 | 11.2 | 178 | 63 | 18.2 | 11.6 | 11.6 | 30 |
| 19 | 28 | 25 | 41 | 58 | 27 | 11.2 | 167 | 70 | 19.2 | 12 | 12 | 30 |
| 20 | 28 | 24 | 46 | 58 | 27 | 11.2 | 118 | 80 | 21 | 12.5 | 12 | 30 |
| 21 | 28 | 24 | 44 | 58 | 27 | 11.2 | 127 | 84 | 19.7 | 12 | 12 | 30 |
| 22 | 28 | 24 | 42 | 58 | 27 | 11.2 | 147 | 80 | 19.2 | 12 | 11.6 | 30 |
| 23 | 28 | 24 | 42 | 58 | 27 | 11.2 | 137 | 74 | 17.8 | 12 | 11.6 | 30 |
| 24 | 28 | 25 | 42 | 58 | 27 | 11.2 | 108 | 68 | 16.9 | 12 | 11.6 | 30 |
| 25 | 28 | 25 | 42 | 58 | 27 | 11.2 | 102 | 71 | 21 | 12 | 11.6 | 30 |
| 26 | 28 | 25 | 42 | 57 | 27 | 11.2 | 167 | 66 | 31 | 12 | 11.6 | 30 |
| 27 | 28 | 24 | 42 | 57 | 27 | 11.2 | 167 | 61 | 28 | 12 | 11.6 | 30 |
| 28 | 27 | 24 | 42 | 44 | 27 | 11.2 | 167 | 58 | 29 | 11.6 | 11.6 | 30 |
| 29 | 27 | 24 | 42 | 36 | ----- | 11.2 | 167 | 57 | 36 | 12 | 11.6 | 30 |
| 30 | 27 | 24 | 32 | 36 | ----- | 11.2 | 157 | 29 | 28 | 12 | 11.6 | 30 |
| 31 | 27 | ----- | 24 | 36 | ----- | 11.2 | ----- | 26 | ----- | 12 | 11.6 | ----- |

| Month | Maximum | Minimum | Mean | Month | Maximum | Minimum | Mean |
|----------|---------|---------|------|-----------|---------|---------|------|
| October | 29 | 24 | 28 | May | 147 | 26 | 77.4 |
| November | 28 | 24 | 25.9 | June | 36 | 14.2 | 20.3 |
| December | 46 | 23 | 34.7 | July | 27 | 11.6 | 14.2 |
| January | 60 | 24 | 48 | August | 19.7 | 11.6 | 12.7 |
| February | 36 | 27 | 27.5 | September | 31 | 11.6 | 28.9 |
| March | 86 | 11.2 | 28.1 | The year | 188 | 11.2 | 36.8 |
| April | 188 | 11.2 | 96.1 | | | | |

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, 1929.

EXTREMES.—Maximum discharge during year, 520 second-feet Apr. 26 (gage height, 3.91 feet); minimum, 16 second-feet Sept. 3 (gage height, 1.29 feet). 1921-1929: 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.—Records good.. Discharge estimated Feb. 16-27 and Apr. 9-12. Flow regulated by operation of sluice gates at Lake Hopatcong.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1 | 71 | 48 | 93 | 61 | 65 | 214 | 78 | 346 | 86 | 86 | 22 | 18 |
| 2 | 67 | 48 | 79 | 108 | 61 | 192 | 79 | 333 | 71 | 71 | 22 | 18 |
| 3 | 65 | 49 | 66 | 79 | 56 | 214 | 75 | 320 | 61 | 58 | 20 | 17 |
| 4 | 64 | 66 | 59 | 66 | 52 | 225 | 70 | 295 | 59 | 48 | 24 | 23 |
| 5 | 61 | 86 | 54 | 64 | 50 | 308 | 86 | 271 | 58 | 41 | 28 | 38 |
| 6 | 61 | 70 | 54 | 252 | 52 | 401 | 125 | 283 | 65 | 39 | 38 | 54 |
| 7 | 60 | 61 | 51 | 212 | 230 | 360 | 108 | 320 | 64 | 39 | 26 | 56 |
| 8 | 58 | 60 | 48 | 157 | 192 | 272 | 100 | 295 | 64 | 38 | 22 | 71 |
| 9 | 55 | 61 | 48 | 172 | 152 | 225 | 85 | 260 | 71 | 36 | 20 | 70 |
| 10 | 56 | 58 | 49 | 182 | 125 | 182 | 90 | 214 | 67 | 55 | 19 | 55 |
| 11 | 55 | 54 | 49 | 172 | 100 | 162 | 110 | 172 | 59 | 33 | 20 | 50 |
| 12 | 54 | 53 | 50 | 172 | 86 | 152 | 220 | 172 | 51 | 31 | 20 | 46 |
| 13 | 53 | 52 | 50 | 152 | 79 | 162 | 320 | 192 | 45 | 27 | 20 | 43 |
| 14 | 53 | 52 | 51 | 125 | 70 | 203 | 295 | 206 | 42 | 27 | 24 | 61 |
| 15 | 50 | 50 | 55 | 134 | 66 | 225 | 271 | 225 | 45 | 26 | 53 | 75 |
| 16 | 50 | 49 | 60 | 108 | 65 | 214 | 346 | 214 | 48 | 25 | 40 | 62 |
| 17 | 50 | 48 | 62 | 125 | 65 | 192 | 430 | 192 | 49 | 23 | 32 | 64 |
| 18 | 50 | 48 | 93 | 125 | 65 | 162 | 401 | 172 | 79 | 24 | 26 | 86 |
| 19 | 54 | 52 | 93 | 143 | 70 | 134 | 360 | 182 | 66 | 50 | 32 | 62 |
| 20 | 54 | 61 | 79 | 152 | 65 | 125 | 320 | 236 | 100 | 50 | 32 | 52 |
| 21 | 52 | 56 | 74 | 134 | 70 | 116 | 295 | 248 | 86 | 38 | 26 | 48 |
| 22 | 50 | 52 | 64 | 125 | 75 | 116 | 320 | 260 | 69 | 31 | 23 | 47 |
| 23 | 52 | 52 | 61 | 116 | 70 | 116 | 320 | 225 | 55 | 29 | 23 | 46 |
| 24 | 56 | 48 | 60 | 116 | 65 | 116 | 295 | 203 | 50 | 26 | 23 | 43 |
| 25 | 54 | 47 | 59 | 125 | 65 | 108 | 260 | 203 | 64 | 26 | 22 | 43 |
| 26 | 51 | 46 | 59 | 108 | 300 | 100 | 490 | 182 | 108 | 26 | 21 | 44 |
| 27 | 49 | 45 | 60 | 100 | 400 | 93 | 460 | 162 | 93 | 26 | 22 | 45 |
| 28 | 49 | 44 | 66 | 100 | 260 | 86 | 401 | 152 | 86 | 24 | 20 | 45 |
| 29 | 49 | 44 | 66 | 76 | ----- | 79 | 430 | 143 | 116 | 23 | 18 | 44 |
| 30 | 49 | 51 | 65 | 69 | ----- | 75 | 387 | 134 | 100 | 23 | 19 | 45 |
| 31 | 49 | ----- | 55 | 66 | ----- | 76 | ----- | 108 | ----- | 22 | 18 | ----- |

| Month | Discharge in second-feet | | | | | Run-off in inches |
|----------------|--------------------------|---------|------|-----------------------|-----------------|-------------------|
| | Observed | | | Corrected for storage | | |
| | Maximum | Minimum | Mean | Mean | Per square mile | |
| October..... | 71 | 49 | 54.9 | 24.0 | 0.343 | 0.40 |
| November..... | 86 | 44 | 53.7 | 41.0 | .586 | .65 |
| December..... | 93 | 48 | 62.3 | 42.9 | .613 | .71 |
| January..... | 252 | 61 | 126 | 137 | 1.96 | 2.26 |
| February..... | 400 | 50 | 110 | 123 | 1.76 | 1.83 |
| March..... | 401 | 75 | 174 | 237 | 3.39 | 3.91 |
| April..... | 490 | 70 | 254 | 276 | 3.94 | 4.40 |
| May..... | 346 | 108 | 223 | 217 | 3.10 | 3.57 |
| June..... | 116 | 42 | 69.2 | 70.1 | 1.00 | 1.12 |
| July..... | 86 | 22 | 35.5 | 17.4 | .249 | .29 |
| August..... | 53 | 18 | 24.7 | 4.52 | .065 | .08 |
| September..... | 86 | 17 | 49 | 19.8 | .283 | .32 |
| The year..... | 490 | 17 | 103 | 101 | 1.44 | 19.54 |

MUSCONETCONG RIVER NEAR BLOOMSBURY, N. J.

LOCATION.—Water-stage recorder at highway bridge $1\frac{1}{2}$ 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, 1929.

EXTREMES.—Maximum discharge during year, about 2,100 second-feet Feb. 7 (gage height, 6.05 feet); minimum, 29 second-feet Aug. 10 (gage height, 0.76 foot).

1903-1907, 1921-1929: Maximum stage, 8.0 feet (old datum) Oct. 10 or 11, 1903 (discharge not determined); minimum discharge, 21 second-feet Nov. 19, 1921.

REMARKS.—Records excellent. Flow regulated by several small water-power plants above station and by operation of sluice gates at Lake Hopateong.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1 | 201 | 138 | 224 | 148 | 136 | 390 | 178 | 522 | 194 | 201 | 69 | 60 |
| 2 | 194 | 139 | 184 | 244 | 130 | 412 | 172 | 485 | 170 | 181 | 67 | 60 |
| 3 | 192 | 138 | 160 | 177 | 127 | 471 | 170 | 483 | 168 | 159 | 59 | 64 |
| 4 | 191 | 179 | 144 | 153 | 124 | 420 | 163 | 440 | 153 | 136 | 72 | 68 |
| 5 | 185 | 207 | 137 | 129 | 117 | 649 | 179 | 422 | 153 | 140 | 78 | 63 |
| 6 | 189 | 180 | 130 | 523 | 118 | 717 | 267 | 438 | 162 | 111 | 74 | 94 |
| 7 | 169 | 156 | 127 | 492 | 1,310 | 607 | 231 | 527 | 158 | 105 | 71 | 262 |
| 8 | 173 | 152 | 117 | 334 | 394 | 478 | 211 | 450 | 164 | 114 | 74 | 209 |
| 9 | 171 | 157 | 120 | 329 | 276 | 407 | 186 | 406 | 163 | 101 | 72 | 238 |
| 10 | 168 | 144 | 127 | 422 | 239 | 321 | 189 | 373 | 161 | 98 | 56 | 126 |
| 11 | 168 | 144 | 130 | 375 | 203 | 298 | 205 | 309 | 147 | 92 | 78 | 103 |
| 12 | 162 | 149 | 124 | 316 | 172 | 287 | 382 | 305 | 136 | 92 | 82 | 101 |
| 13 | 162 | 141 | 133 | 278 | 156 | 289 | 467 | 354 | 129 | 84 | 76 | 97 |
| 14 | 167 | 141 | 128 | 230 | 151 | 357 | 438 | 350 | 127 | 80 | 83 | 101 |
| 15 | 153 | 140 | 121 | 253 | 141 | 386 | 406 | 367 | 130 | 98 | 125 | 134 |
| 16 | 160 | 137 | 130 | 221 | 134 | 374 | 488 | 355 | 127 | 80 | 104 | 118 |
| 17 | 159 | 123 | 140 | 220 | 135 | 332 | 605 | 321 | 134 | 82 | 77 | 151 |
| 18 | 158 | 129 | 177 | 225 | 136 | 294 | 585 | 297 | 135 | 81 | 71 | 182 |
| 19 | 166 | 142 | 181 | 250 | 141 | 258 | 531 | 329 | 150 | 118 | 80 | 129 |
| 20 | 159 | 156 | 161 | 248 | 135 | 240 | 483 | 364 | 227 | 105 | 83 | 114 |
| 21 | 149 | 149 | 148 | 228 | 115 | 230 | 434 | 405 | 227 | 96 | 76 | 92 |
| 22 | 150 | 147 | 127 | 206 | 155 | 223 | 490 | 406 | 172 | 96 | 70 | 93 |
| 23 | 158 | 142 | 129 | 209 | 148 | 231 | 466 | 360 | 162 | 92 | 69 | 100 |
| 24 | 161 | 129 | 131 | 199 | 135 | 229 | 428 | 329 | 206 | 78 | 70 | 99 |
| 25 | 150 | 128 | 129 | 197 | 114 | 223 | 421 | 322 | 411 | 82 | 64 | 92 |
| 26 | 146 | 128 | 135 | 198 | 678 | 211 | 870 | 302 | 273 | 76 | 71 | 99 |
| 27 | 142 | 125 | 133 | 180 | 859 | 207 | 723 | 281 | 226 | 75 | 95 | 92 |
| 28 | 142 | 134 | 139 | 185 | 543 | 186 | 633 | 266 | 204 | 69 | 82 | 76 |
| 29 | 146 | 114 | 138 | 162 | ----- | 176 | 651 | 249 | 242 | 84 | 68 | 86 |
| 30 | 139 | 138 | 131 | 144 | ----- | 173 | 581 | 236 | 213 | 79 | 65 | 102 |
| 31 | 142 | ----- | 131 | 142 | ----- | 173 | ----- | 220 | ----- | 70 | 60 | ----- |

| Month | Observed | | | Corrected for storage | | Run-off in inches |
|-----------|----------|---------|------|-----------------------|-----------------|-------------------|
| | Maximum | Minimum | Mean | Mean | Per square mile | |
| October | 201 | 139 | 164 | 133 | 0.980 | 1.07 |
| November | 207 | 114 | 144 | 131 | .916 | 1.06 |
| December | 224 | 117 | 141 | 121 | .846 | .98 |
| January | 523 | 129 | 246 | 258 | 1.80 | 2.08 |
| February | 1,310 | 115 | 259 | 272 | 1.90 | 1.98 |
| March | 717 | 173 | 331 | 393 | 2.75 | 3.17 |
| April | 870 | 163 | 408 | 430 | 3.01 | 3.36 |
| May | 527 | 220 | 364 | 357 | 2.50 | 2.88 |
| June | 411 | 121 | 180 | 181 | 1.27 | 1.42 |
| July | 201 | 69 | 102 | 83.6 | .585 | .67 |
| August | 125 | 56 | 75.5 | 55.4 | .387 | .45 |
| September | 262 | 60 | 114 | 84.2 | .589 | .66 |
| The year | 1,310 | 56 | 210 | 208 | 1.45 | 19.78 |

ASSUNPINK CREEK AT TRENTON, N. J.

LOCATION.—Water-stage recorder at Chambers Street Bridge in Trenton, Mercer County, $1\frac{1}{2}$ miles above mouth.

DRAINAGE AREA.—89 square miles.

RECORDS AVAILABLE.—July, 1923, to September, 1929.

EXTREMES.—Maximum discharge during year, 930 second-feet Feb. 27 (gage height, 5.33 feet); minimum, 2 second-feet July 21 and 22.

1923-1929: Maximum discharge, 2,400 second-feet Apr. 7, 1924 (gage height, 7.85 feet); minimum, 2 second-feet June 30, 1927, and July 21 and 22, 1929.

REMARKS.—Records fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-------|------|------|-------|
| 1..... | 106 | 57 | 110 | 85 | 72 | 465 | 102 | 197 | 56 | 80 | 19 | 6 |
| 2..... | 93 | 56 | 103 | 139 | 51 | 370 | 106 | 173 | 41 | 55 | 23 | 4 |
| 3..... | 93 | 45 | 103 | 108 | 50 | 367 | 78 | 152 | 80 | 47 | 11 | 5 |
| 4..... | 85 | 83 | 96 | 106 | 71 | 293 | 90 | 117 | 64 | 15 | 9 | 6 |
| 5..... | 83 | 105 | 95 | 93 | 55 | 528 | 80 | 127 | 43 | 47 | 31 | 11 |
| 6..... | 55 | 78 | 85 | 218 | 50 | 665 | 79 | 131 | 39 | 21 | 24 | 39 |
| 7..... | 63 | 102 | 84 | 180 | 182 | 450 | 93 | 159 | 45 | 15 | 9 | 26 |
| 8..... | 78 | 74 | 64 | 133 | 186 | 308 | 103 | 139 | 48 | 56 | 4 | 242 |
| 9..... | 72 | 78 | 64 | 134 | 191 | 251 | 101 | 131 | 28 | 48 | 32 | 218 |
| 10..... | 58 | 64 | 83 | 168 | 224 | 146 | 78 | 133 | 58 | 50 | 16 | 165 |
| 11..... | 48 | 56 | 69 | 163 | 169 | 158 | 96 | 89 | 60 | 45 | 11 | 180 |
| 12..... | 57 | 80 | 65 | 138 | 133 | 145 | 153 | 95 | 38 | 36 | 26 | 180 |
| 13..... | 40 | 78 | 66 | 126 | 106 | 140 | 186 | 117 | 46 | 28 | 11 | 128 |
| 14..... | 37 | 55 | 65 | 90 | 90 | 157 | 173 | 102 | 31 | 24 | 33 | 112 |
| 15..... | 71 | 53 | 57 | 82 | 83 | 167 | 169 | 92 | 24 | 46 | 45 | 97 |
| 16..... | 48 | 56 | 62 | 75 | 73 | 145 | 338 | 102 | 39 | 39 | 38 | 93 |
| 17..... | 47 | 40 | 83 | 71 | 69 | 117 | 525 | 92 | 60 | 27 | 19 | 73 |
| 18..... | 64 | 48 | 108 | 80 | 81 | 120 | 435 | 74 | 47 | 19 | 12 | 68 |
| 19..... | 95 | 82 | 108 | 114 | 77 | 116 | 334 | 435 | 45 | 18 | 33 | 67 |
| 20..... | 139 | 62 | 90 | 129 | 74 | 108 | 209 | 315 | 48 | 20 | 39 | 67 |
| 21..... | 139 | 70 | 84 | 115 | 73 | 100 | 179 | 270 | 21 | 4 | 18 | 47 |
| 22..... | 141 | 76 | 74 | 102 | 69 | 95 | 385 | 192 | 107 | 7 | 15 | 36 |
| 23..... | 109 | 76 | 63 | 102 | 62 | 93 | 379 | 145 | 99 | 13 | 13 | 54 |
| 24..... | 108 | 64 | 57 | 104 | 65 | 95 | 300 | 116 | 61 | 11 | 18 | 61 |
| 25..... | 70 | 60 | 55 | 140 | 88 | 102 | 229 | 91 | 51 | 26 | 13 | 56 |
| 26..... | 73 | 76 | 76 | 186 | 408 | 108 | 243 | 87 | 91 | 33 | 30 | 45 |
| 27..... | 52 | 61 | 64 | 150 | 809 | 112 | 202 | 89 | 101 | 16 | 24 | 60 |
| 28..... | 54 | 59 | 68 | 147 | 660 | 104 | 191 | 80 | 50 | 8 | 12 | 61 |
| 29..... | 94 | 29 | 72 | 122 | ----- | 101 | 258 | 72 | 32 | 24 | 10 | 52 |
| 30..... | 58 | 83 | 78 | 96 | ----- | 82 | 226 | 25 | 46 | 11 | 21 | 70 |
| 31..... | 57 | ----- | 91 | 83 | ----- | 81 | ----- | 75 | ----- | 9 | 17 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 141 | 37 | 77.0 | 0.865 | 1.00 |
| November..... | 105 | 29 | 66.5 | .747 | .83 |
| December..... | 110 | 55 | 78.8 | .885 | 1.02 |
| January..... | 218 | 71 | 122 | 1.37 | 1.58 |
| February..... | 809 | 50 | 155 | 1.74 | 1.81 |
| March..... | 665 | 81 | 203 | 2.28 | 2.63 |
| April..... | 525 | 78 | 204 | 2.29 | 2.56 |
| May..... | 435 | 25 | 136 | 1.53 | 1.76 |
| June..... | 107 | 21 | 53.3 | .599 | .67 |
| July..... | 80 | 4 | 29.0 | .326 | .38 |
| August..... | 45 | 4 | 20.5 | .230 | .27 |
| September..... | 242 | 4 | 77.6 | .872 | .97 |
| The year..... | 809 | 4 | 101 | 1.13 | 15.48 |

NORTH BRANCH OF RANCOCAS CREEK AT PEMBERTON, N. J.

LOCATION.—Water-stage recorder 600 feet below highway bridge at Pemberton, Burlington County, 11 miles above confluence with South Branch.

DRAINAGE AREA.—111 square miles.

RECORDS AVAILABLE.—September, 1921, to September, 1929.

REMARKS.—Records fair. Discharge estimated Jan. 9–13, Mar. 9, 10, 12, 13, July 19, 20, Aug. 9, and 10.

Daily and monthly discharge, in second-feet, 1928–29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|------|-------|-----|-----------------|------|------|-------|
| 1..... | 199 | 102 | 143 | 127 | 152 | 477 | 127 | 288 | 9 ^c | 143 | 46 | 46 |
| 2..... | 112 | 91 | 161 | 120 | 152 | 451 | 120 | 300 | 112 | 152 | 49 | 52 |
| 3..... | 143 | 105 | 105 | 127 | 143 | 451 | 112 | 264 | 9 ^c | 105 | 70 | 46 |
| 4..... | 112 | 135 | 112 | 120 | 135 | 425 | 91 | 209 | 8 ^c | 94 | 84 | 40 |
| 5..... | 120 | 152 | 98 | 105 | 135 | 518 | 102 | 230 | 8 ^c | 98 | 58 | 46 |
| 6..... | 127 | 152 | 112 | 179 | 135 | 675 | 112 | 209 | 16 ^c | 94 | 64 | 112 |
| 7..... | 143 | 135 | 91 | 230 | 348 | 690 | 112 | 209 | 112 | 88 | 52 | 161 |
| 8..... | 179 | 127 | 94 | 209 | 336 | 532 | 112 | 252 | 120 | 84 | 55 | 288 |
| 9..... | 143 | 127 | 112 | 220 | 312 | 460 | 112 | 230 | 143 | 77 | 60 | 348 |
| 10..... | 105 | 120 | 94 | 260 | 312 | 400 | 135 | 219 | 12 ^c | 64 | 65 | 300 |
| 11..... | 98 | 120 | 94 | 260 | 300 | 336 | 105 | 300 | 135 | 64 | 67 | 230 |
| 12..... | 91 | 112 | 102 | 260 | 276 | 320 | 161 | 288 | 105 | 77 | 170 | 209 |
| 13..... | 91 | 105 | 102 | 240 | 209 | 300 | 209 | 252 | 9 ^c | 61 | 127 | 179 |
| 14..... | 98 | 94 | 120 | 189 | 209 | 276 | 189 | 199 | 80 | 49 | 127 | 152 |
| 15..... | 120 | 120 | 120 | 179 | 189 | 252 | 209 | 241 | 88 | 55 | 94 | 135 |
| 16..... | 94 | 102 | 120 | 161 | 179 | 219 | 412 | 230 | 105 | 61 | 80 | 120 |
| 17..... | 105 | 105 | 112 | 161 | 179 | 209 | 602 | 219 | 120 | 55 | 74 | 120 |
| 18..... | 127 | 105 | 135 | 179 | 170 | 189 | 720 | 189 | 91 | 58 | 67 | 112 |
| 19..... | 170 | 102 | 135 | 209 | 170 | 189 | 412 | 170 | 80 | 60 | 74 | 98 |
| 20..... | 143 | 127 | 135 | 209 | 161 | 170 | 425 | 120 | 94 | 60 | 52 | 98 |
| 21..... | 135 | 152 | 127 | 189 | 161 | 170 | 373 | 179 | 18 ^c | 58 | 49 | 91 |
| 22..... | 120 | 120 | 105 | 179 | 170 | 161 | 412 | 179 | 17 ^c | 58 | 49 | 105 |
| 23..... | 105 | 120 | 105 | 179 | 152 | 127 | 425 | 189 | 12 ^c | 52 | 52 | 105 |
| 24..... | 120 | 105 | 94 | 170 | 170 | 135 | 324 | 170 | 105 | 64 | 49 | 84 |
| 25..... | 143 | 112 | 98 | 230 | 161 | 143 | 324 | 189 | 112 | 61 | 46 | 74 |
| 26..... | 135 | 98 | 98 | 264 | 373 | 143 | 300 | 170 | 105 | 94 | 43 | 70 |
| 27..... | 105 | 102 | 94 | 264 | 451 | 143 | 219 | 219 | 112 | 84 | 38 | 67 |
| 28..... | 112 | 98 | 135 | 209 | 602 | 135 | 189 | 209 | 13 ^c | 67 | 30 | 64 |
| 29..... | 102 | 88 | 127 | 199 | ----- | 127 | 276 | 152 | 17 ^c | 67 | 46 | 67 |
| 30..... | 102 | 105 | 135 | 189 | ----- | 120 | 312 | 112 | 161 | 46 | 43 | 74 |
| 31..... | 84 | ----- | 94 | 161 | ----- | 112 | ----- | 102 | ----- | 49 | 40 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 199 | 84 | 122 | 1.10 | 1.27 |
| November..... | 152 | 88 | 115 | 1.04 | 1.16 |
| December..... | 161 | 91 | 113 | 1.02 | 1.18 |
| January..... | 264 | 105 | 193 | 1.74 | 2.01 |
| February..... | 602 | 135 | 230 | 2.07 | 2.16 |
| March..... | 690 | 112 | 292 | 2.63 | 3.03 |
| April..... | 720 | 91 | 258 | 2.32 | 2.59 |
| May..... | 300 | 102 | 209 | 1.88 | 2.17 |
| June..... | 189 | 80 | 117 | 1.05 | 1.17 |
| July..... | 152 | 46 | 74.2 | .668 | .77 |
| August..... | 170 | 30 | 65.2 | .587 | .68 |
| September..... | 348 | 40 | 123 | 1.11 | 1.24 |
| The year..... | 720 | 30 | 159 | 1.43 | 1.43 |

SUSQUEHANNA RIVER BASIN

SUSQUEHANNA RIVER AT COLLIERSVILLE, N. Y.

LOCATION.—Water-stage recorder a quarter of a mile downstream from 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, 1929.

EXTREMES.—Maximum discharge during year, 5,190 second-feet Mar. 16 (gage height, 7.1 feet); minimum, 22 second-feet Oct. 15 (gage height, 1.32 feet).
1924-1929: Maximum discharge, that of Mar. 16, 1929; minimum, about 8 second-feet Aug. 21, 1926 (gage-height, 1.09 feet).

REMARKS.—Records good. Daily flow ordinarily completely regulated by operation of power plant, but on account of limited storage such regulation can extend only over short periods of time.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 115 | 135 | 1,040 | 132 | 241 | 563 | 1,380 | 1,580 | 503 | 259 | 67 | 37 |
| 2..... | 146 | 195 | 766 | 300 | 284 | 289 | 1,380 | 1,470 | 215 | 145 | 92 | 36 |
| 3..... | 89 | 279 | 511 | 211 | 189 | 509 | 1,060 | 1,630 | 509 | 110 | 151 | 59 |
| 4..... | 96 | 31 | 571 | 244 | 270 | 512 | 1,270 | 1,840 | 247 | 68 | 44 | 50 |
| 5..... | 107 | 304 | 556 | 256 | 244 | 381 | 1,330 | 1,650 | 318 | 241 | 70 | 59 |
| 6..... | 112 | 180 | 566 | 318 | 240 | 525 | 1,990 | 1,650 | 304 | 107 | 51 | 42 |
| 7..... | 25 | 178 | 396 | 305 | 356 | 493 | 2,980 | 1,600 | 343 | 130 | 57 | 37 |
| 8..... | 108 | 220 | 523 | 201 | 199 | 458 | 2,430 | 1,520 | 339 | 131 | 72 | 36 |
| 9..... | 172 | 150 | 128 | 192 | 333 | 480 | 1,980 | 1,300 | 212 | 159 | 68 | 43 |
| 10..... | 139 | 172 | 336 | 301 | 58 | 198 | 1,760 | 1,210 | 266 | 148 | 77 | 38 |
| 11..... | 96 | 28 | 311 | 167 | 318 | 600 | 1,640 | 1,070 | 185 | 115 | 46 | 41 |
| 12..... | 88 | 161 | 343 | 301 | 224 | 585 | 2,080 | 822 | 238 | 138 | 82 | 41 |
| 13..... | 107 | 130 | 288 | 112 | 210 | 660 | 2,710 | 1,140 | 250 | 142 | 116 | 58 |
| 14..... | 23 | 202 | 381 | 274 | 227 | 2,040 | 2,440 | 846 | 201 | 51 | 103 | 86 |
| 15..... | 151 | 134 | 305 | 152 | 171 | 4,250 | 2,200 | 1,000 | 205 | 176 | 60 | 37 |
| 16..... | 235 | 116 | 312 | 146 | 242 | 4,930 | 1,980 | 929 | 192 | 114 | 85 | 64 |
| 17..... | 130 | 273 | 396 | 176 | 64 | 4,210 | 2,110 | 1,040 | 136 | 79 | 76 | 190 |
| 18..... | 160 | 28 | 318 | 760 | 288 | 2,870 | 2,040 | 880 | 167 | 132 | 44 | 106 |
| 19..... | 170 | 340 | 450 | 1,650 | 236 | 2,270 | 1,820 | 849 | 180 | 169 | 79 | 63 |
| 20..... | 126 | 169 | 362 | 716 | 230 | 2,120 | 2,300 | 1,400 | 219 | 112 | 124 | 66 |
| 21..... | 141 | 248 | 233 | 296 | 199 | 1,940 | 3,560 | 1,160 | 162 | 49 | 81 | 51 |
| 22..... | 200 | 277 | 220 | 335 | 145 | 1,950 | 4,420 | 1,110 | 106 | 107 | 85 | 83 |
| 23..... | 236 | 176 | 181 | 357 | 193 | 2,230 | 3,990 | 864 | 90 | 113 | 122 | 50 |
| 24..... | 154 | 243 | 303 | 400 | 84 | 2,340 | 3,580 | 920 | 186 | 104 | 79 | 71 |
| 25..... | 177 | 28 | 168 | 388 | 278 | 2,110 | 3,190 | 943 | 218 | 111 | 52 | 49 |
| 26..... | 184 | 256 | 286 | 329 | 515 | 2,190 | 3,320 | 579 | 151 | 123 | 80 | 77 |
| 27..... | 269 | 182 | 269 | 220 | 692 | 2,140 | 2,950 | 778 | 199 | 134 | 102 | 44 |
| 28..... | 47 | 212 | 308 | 323 | 482 | 1,780 | 2,370 | 614 | 194 | 46 | 85 | 44 |
| 29..... | 305 | 53 | 224 | 272 | ----- | 1,730 | 2,200 | 627 | 195 | 125 | 90 | 120 |
| 30..... | 148 | 460 | 134 | 242 | ----- | 1,560 | 1,980 | 501 | 169 | 129 | 51 | 58 |
| 31..... | 142 | ----- | 310 | 277 | ----- | 1,460 | ----- | 410 | ----- | 100 | 52 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 305 | 23 | 142 | 0.402 | 0.46 |
| November..... | 460 | 28 | 185 | .524 | .58 |
| December..... | 1,040 | 128 | 371 | 1.05 | 1.21 |
| January..... | 1,650 | 112 | 334 | .946 | 1.09 |
| February..... | 692 | 58 | 258 | .731 | .76 |
| March..... | 4,930 | 198 | 1,620 | 4.59 | 5.29 |
| April..... | 4,420 | 1,060 | 2,350 | 6.66 | 7.43 |
| May..... | 1,840 | 410 | 1,090 | 3.09 | 3.56 |
| June..... | 569 | 90 | 232 | .657 | .73 |
| July..... | 259 | 46 | 125 | .354 | .41 |
| August..... | 151 | 44 | 78.8 | .223 | .26 |
| September..... | 190 | 36 | 61.2 | .173 | .19 |
| The year..... | 4,930 | 23 | 572 | 1.62 | 21.97 |

SUSQUEHANNA RIVER AT CONKLIN, N. Y.

LOCATION.—Water-stage recorder at highway bridge just downstream from Conklin, Broome County.

DRAINAGE AREA.—2,350 square miles.

RECORDS AVAILABLE.—November, 1912, to September, 1929.

EXTREMES.—Maximum discharge during year, 47,000 second-feet Mar. 17 (gage height, 17.6 feet); minimum, 252 second-feet several times Aug. 29 to Sept. 14 (gage height, 1.84 feet).

1912-1929: 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 ice effect (Dec. 9, 10, Dec. 30 to Jan. 17, and Jan. 25 to Mar. 13) and for estimated periods, which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|---------|---------|-------|--------|--------|--------|-------|-------|-------|-------|
| 1----- | 559 | * 850 | 4,090 | * 950 | 1,100 | 4,400 | 5,720 | 8,220 | 2,750 | 1,570 | * 443 | 369 |
| 2----- | 526 | | 7,270 | * 1,100 | 1,100 | 4,000 | 5,510 | 6,810 | 2,320 | 1,680 | * 414 | 267 |
| 3----- | 504 | | 5,200 | * 900 | 1,000 | 3,400 | 5,300 | 15,000 | 2,120 | 1,520 | * 396 | 321 |
| 4----- | 494 | | 3,740 | 850 | 1,000 | 2,800 | 4,790 | 15,900 | 1,860 | 1,130 | | 256 |
| 5----- | 526 | 874 | 3,300 | 850 | 950 | 3,200 | 6,280 | 13,000 | 1,920 | 924 | | 286 |
| 6----- | 526 | 850 | 3,140 | 1,300 | 950 | 4,600 | 12,600 | 11,300 | 1,740 | 882 | | 256 |
| 7----- | 510 | 890 | 2,680 | 1,400 | 1,300 | 5,000 | 13,800 | 11,300 | 1,800 | 842 | | 263 |
| 8----- | 484 | 803 | 2,250 | 1,500 | 1,400 | 4,200 | 14,400 | 10,000 | 1,800 | 826 | | 252 |
| 9----- | 463 | 746 | 2,000 | 1,300 | 1,500 | 3,600 | 11,000 | 8,220 | 1,620 | 810 | * 510 | 270 |
| 10----- | 398 | 753 | 1,700 | 1,300 | 1,600 | 2,800 | 10,000 | 6,810 | 1,460 | 739 | | 265 |
| 11----- | 368 | 789 | 1,460 | 1,400 | 1,400 | 2,600 | 10,000 | 5,930 | 1,260 | 782 | | 299 |
| 12----- | | 760 | 1,680 | 1,400 | 1,300 | 2,800 | 10,300 | 4,990 | 1,200 | 858 | | 292 |
| 13----- | | 732 | 1,520 | 1,200 | 1,200 | 5,500 | 18,600 | 4,690 | 1,060 | 842 | | 263 |
| 14----- | | 661 | 1,460 | 1,100 | 1,100 | 20,100 | 18,300 | 4,690 | 1,030 | 739 | | 351 |
| 15----- | | 706 | 1,350 | 950 | 1,000 | 39,500 | 13,500 | 5,300 | 1,000 | 611 | 958 | 499 |
| 16----- | | 746 | 1,400 | 900 | 950 | 44,000 | 15,200 | 6,590 | 950 | * 661 | 620 | 537 |
| 17----- | | 732 | 1,320 | 900 | 900 | 44,000 | 16,900 | 6,150 | 1,010 | * 504 | * 419 | 537 |
| 18----- | | 686 | 1,460 | 1,080 | 900 | 30,100 | 15,000 | 5,200 | 907 | * 494 | | 542 |
| 19----- | | 753 | 1,800 | 4,750 | 900 | 14,200 | 13,000 | 5,090 | 874 | 594 | | 510 |
| 20----- | | 924 | 1,920 | 8,180 | 850 | 10,500 | 15,300 | 6,810 | 842 | * 537 | | 515 |
| 21----- | * 700 | 1,330 | 1,570 | 5,530 | 800 | 9,480 | 33,000 | 8,460 | 850 | * 458 | * 320 | 510 |
| 22----- | | 1,350 | 1,410 | 3,360 | 800 | 8,460 | 40,500 | 9,740 | 950 | * 414 | | 504 |
| 23----- | | 1,270 | 1,040 | 2,390 | 800 | 9,480 | 36,300 | 7,500 | 826 | * 386 | | 489 |
| 24----- | | 1,200 | 1,080 | 2,030 | 800 | 10,800 | 25,600 | 6,150 | 767 | * 373 | | 484 |
| 25----- | | 1,110 | 1,050 | 1,800 | 950 | 10,500 | 18,600 | 6,150 | 796 | 414 | * 474 | 484 |
| 26----- | | 1,100 | 1,080 | 1,700 | 1,300 | 10,300 | 18,600 | 5,930 | 842 | 484 | * 515 | 484 |
| 27----- | | 966 | 984 | 1,600 | 3,800 | 11,600 | 17,200 | 4,790 | 975 | 448 | * 391 | 484 |
| 28----- | | 966 | 1,020 | 1,500 | 5,000 | 9,480 | 13,300 | 4,110 | 1,060 | * 463 | 303 | 479 |
| 29----- | | 932 | * 1,000 | 1,400 | ----- | 7,980 | 11,300 | 4,200 | 1,210 | * 526 | 277 | 479 |
| 30----- | | 1,080 | * 1,000 | 1,300 | ----- | 7,040 | 10,000 | 3,650 | 1,570 | * 648 | 351 | 479 |
| 31----- | | ----- | * 950 | 1,200 | ----- | 6,150 | ----- | 3,140 | ----- | * 479 | 280 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|--------|-----------------|-------------------|
| October----- | ----- | 368 | 624 | 0.266 | 0.31 |
| November----- | 1,350 | 661 | 904 | .385 | .43 |
| December----- | 7,270 | 950 | 2,030 | .864 | 1.00 |
| January----- | 8,180 | 850 | 1,840 | .783 | .90 |
| February----- | 5,000 | 800 | 1,310 | .657 | .68 |
| March----- | 44,000 | 2,600 | 11,400 | 4.85 | 5.59 |
| April----- | 40,500 | 4,790 | 15,300 | 6.51 | 7.25 |
| May----- | 15,900 | 3,140 | 7,280 | 3.10 | 3.57 |
| June----- | 2,750 | 767 | 1,310 | .657 | .62 |
| July----- | 1,680 | 373 | 730 | .311 | .36 |
| August----- | 958 | 277 | 442 | .188 | .22 |
| September----- | 642 | 252 | 401 | .171 | .19 |
| The year----- | 44,000 | 252 | 3,640 | 1.55 | 21.03 |

* Estimated.

SUSQUEHANNA RIVER AT HARRISBURG, PA.

LOCATION.—Water-stage recorder 500 feet above sanitary dam in Harrisburg, Dauphin County. Chain gage at Walnut Street Bridge 3,800 feet upstream, used prior to Oct. 1, 1928. Zero of gages is 289.4 feet above mean sea level.

DRAINAGE AREA.—24,100 square miles.

RECORDS AVAILABLE.—January, 1891, to September, 1929. 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, Washington, D. C., and also at the Department of Forests and Waters, Water Resources Service, Harrisburg, Pa.

EXTREMES.—Maximum discharge during year, 230,000 second-feet Mar. 17 (gage height, 12.57 feet); minimum, 3,160 second-feet Sept. 5 (gage height, 2.96 feet).

1891-1929: Maximum discharge, about 613,000 second-feet May 22, 1894 (gage height, 25.7 feet); minimum, about 2,300 second-feet, including about 360 second-feet in Pennsylvania Canal, Sept. 28 and 29, 1900.

REMARKS.—Records good. Discharge estimated Jan. 4-16, 20, 21, 28-31, Feb. 1-6, and 10-25 because of ice.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|--------|--------|--------|---------|---------|---------|---------|--------|--------------------|-------|-------|
| 1----- | 6,330 | 6,980 | 10,200 | 9,350 | 12,000 | 120,000 | 44,100 | 79,400 | 46,900 | 14,80 ^a | 5,320 | 3,880 |
| 2----- | 6,460 | 6,980 | 10,400 | 8,900 | 11,000 | 99,000 | 41,400 | 71,600 | 38,700 | 13,90 ^a | 5,100 | 3,720 |
| 3----- | 6,330 | 6,850 | 17,600 | 11,100 | 11,000 | 74,200 | 38,700 | 116,000 | 31,000 | 13,00 ^a | 5,100 | 3,480 |
| 4----- | 6,330 | 7,110 | 41,400 | 7,500 | 11,000 | 63,500 | 36,100 | 163,000 | 27,400 | 12,10 ^a | 5,320 | 3,400 |
| 5----- | 5,980 | 6,980 | 36,100 | 8,000 | 11,000 | 60,800 | 36,100 | 147,000 | 23,900 | 11,80 ^a | 5,010 | 3,340 |
| 6----- | 6,200 | 6,980 | 29,800 | 13,000 | 12,000 | 91,700 | 44,100 | 116,000 | 21,700 | 11,10 ^a | 4,650 | 3,280 |
| 7----- | 6,200 | 6,980 | 25,000 | 18,000 | 14,800 | 101,000 | 76,500 | 104,000 | 20,600 | 10,60 ^a | 4,650 | 3,280 |
| 8----- | 5,980 | 6,980 | 21,700 | 22,000 | 19,600 | 91,700 | 106,000 | 96,500 | 19,600 | 9,80 ^a | 4,470 | 3,960 |
| 9----- | 5,760 | 6,720 | 19,600 | 26,000 | 23,900 | 76,800 | 89,300 | 89,300 | 17,600 | 9,350 | 4,200 | 4,650 |
| 10----- | 5,430 | 6,850 | 17,600 | 28,000 | 23,900 | 58,100 | 76,800 | 79,400 | 16,600 | 8,90 ^a | 4,200 | 4,380 |
| 11----- | 5,210 | 6,980 | 15,700 | 34,000 | 20,000 | 46,900 | 68,900 | 68,900 | 15,700 | 8,90 ^a | 4,380 | 4,200 |
| 12----- | 5,100 | 6,720 | 13,900 | 28,000 | 19,000 | 41,400 | 76,800 | 58,100 | 13,900 | 9,350 | 4,290 | 4,470 |
| 13----- | 5,010 | 6,720 | 13,000 | 20,000 | 15,000 | 41,400 | 94,100 | 52,500 | 13,900 | 9,90 ^a | 4,380 | 4,200 |
| 14----- | 4,920 | 6,460 | 11,800 | 10,000 | 14,000 | 55,300 | 101,000 | 46,900 | 13,000 | 10,90 ^a | 4,120 | 5,100 |
| 15----- | 4,740 | 6,460 | 11,800 | 10,000 | 14,000 | 137,000 | 98,900 | 44,100 | 13,000 | 10,60 ^a | 4,290 | 7,110 |
| 16----- | 4,650 | 6,460 | 11,600 | 9,500 | 13,000 | 218,000 | 99,500 | 46,900 | 11,900 | 9,80 ^a | 5,210 | 6,980 |
| 17----- | 4,650 | 6,330 | 12,100 | 9,200 | 13,000 | 227,000 | 163,000 | 52,500 | 10,700 | 8,90 ^a | 4,920 | 6,330 |
| 18----- | 4,650 | 6,200 | 11,900 | 10,200 | 14,000 | 210,000 | 188,000 | 58,100 | 10,100 | 8,20 ^a | 4,560 | 5,870 |
| 19----- | 4,740 | 6,980 | 11,600 | 15,700 | 14,000 | 167,000 | 155,000 | 55,300 | 9,650 | 8,60 ^a | 4,290 | 5,650 |
| 20----- | 4,560 | 6,980 | 11,800 | 18,000 | 13,000 | 120,000 | 125,000 | 52,500 | 10,100 | 7,50 ^a | 4,040 | 5,210 |
| 21----- | 4,740 | 7,370 | 11,900 | 36,000 | 11,000 | 86,900 | 123,000 | 52,500 | 10,600 | 7,370 | 3,800 | 4,920 |
| 22----- | 4,740 | 8,200 | 13,000 | 49,700 | 10,000 | 68,900 | 165,000 | 58,100 | 11,900 | 6,720 | 3,800 | 4,740 |
| 23----- | 6,200 | 9,950 | 11,900 | 41,400 | 10,000 | 60,800 | 212,000 | 63,500 | 11,200 | 6,330 | 3,880 | 4,650 |
| 24----- | 6,090 | 13,900 | 10,400 | 31,000 | 9,500 | 58,100 | 198,000 | 66,200 | 13,000 | 6,00 ^a | 3,800 | 4,470 |
| 25----- | 6,980 | 15,700 | 9,500 | 25,000 | 10,000 | 63,500 | 147,000 | 60,800 | 15,700 | 5,870 | 3,640 | 4,290 |
| 26----- | 7,240 | 13,900 | 9,200 | 19,600 | 16,600 | 66,200 | 118,000 | 52,500 | 17,600 | 6,20 ^a | 3,560 | 4,120 |
| 27----- | 7,110 | 12,100 | 9,200 | 16,600 | 89,500 | 63,500 | 116,000 | 46,900 | 17,600 | 6,80 ^a | 3,640 | 4,040 |
| 28----- | 6,980 | 11,400 | 9,800 | 16,000 | 120,000 | 66,200 | 109,000 | 44,100 | 14,800 | 5,70 ^a | 3,480 | 3,800 |
| 29----- | 6,460 | 10,400 | 9,800 | 13,000 | ----- | 68,900 | 96,500 | 44,100 | 13,000 | 5,540 | 3,400 | 3,800 |
| 30----- | 6,590 | 10,400 | 10,100 | 12,000 | ----- | 58,100 | 86,900 | 46,900 | 13,900 | 5,21 ^a | 3,400 | 4,380 |
| 31----- | 6,980 | ----- | 9,350 | 12,000 | ----- | 49,700 | ----- | 49,700 | ----- | 5,21 ^a | 3,560 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|---------|-----------------|-------------------|
| October----- | 7,240 | 4,560 | 5,790 | 0.240 | 0.28 |
| November----- | 15,700 | 6,200 | 8,300 | .344 | .38 |
| December----- | 41,400 | 9,200 | 15,100 | .627 | .72 |
| January----- | 49,700 | 7,500 | 19,100 | .793 | .91 |
| February----- | 120,000 | 9,500 | 20,600 | .855 | .89 |
| March----- | 227,000 | 41,400 | 90,700 | 3.76 | 4.34 |
| April----- | 212,000 | 36,100 | 104,000 | 4.32 | 4.82 |
| May----- | 163,000 | 44,100 | 70,400 | 2.92 | 3.37 |
| June----- | 46,900 | 9,650 | 17,500 | .728 | .81 |
| July----- | 14,800 | 5,210 | 8,880 | .368 | .42 |
| August----- | 5,320 | 3,400 | 4,280 | .178 | .20 |
| September----- | 7,110 | 3,280 | 4,520 | .188 | .21 |
| The year----- | 227,000 | 3,280 | 30,800 | 1.28 | 17.35 |

UNADILLA RIVER NEAR NEW BERLIN, N. Y.

LOCATION.—Staff gage at highway bridge, a quarter of a mile downstream from mouth of Shawler Brook and $1\frac{1}{2}$ miles north of New Berlin, Chenango County.

DRAINAGE AREA.—192 square miles.

RECORDS AVAILABLE.—July, 1924, to September, 1929.

EXTREMES.—Maximum discharge during year, 5,590 second-feet Mar. 15 (gage height, 8.8 feet); minimum, 10 second-feet Sept. 5 (gage height, 1.06 feet).
1924-1929: Maximum and minimum discharge, same as given above.

REMARKS.—Records good except those for periods of ice effect (Jan. 14-17, Jan. 25 to Feb. 5, and Feb. 11-26) and for periods of backwater effect from aquatic growth (Oct. 1-18 and July 15 to Aug. 18), which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 60 | 107 | 968 | 80 | 110 | 244 | 535 | 535 | 207 | 98 | 42 | 21 |
| 2..... | 38 | 115 | 770 | 119 | 110 | 183 | 570 | 552 | 183 | 90 | 44 | 17 |
| 3..... | 19 | 148 | 535 | 104 | 100 | 172 | 500 | 2,030 | 183 | 69 | 46 | 14 |
| 4..... | 19 | 219 | 535 | 104 | 100 | 160 | 500 | 1,850 | 172 | 67 | 44 | 13 |
| 5..... | 22 | 183 | 500 | 98 | 95 | 244 | 690 | 1,540 | 168 | 74 | 34 | 10 |
| 6..... | 24 | 133 | 399 | 295 | 96 | 338 | 2,180 | 1,450 | 219 | 78 | 30 | 20 |
| 7..... | 19 | 115 | 324 | 399 | 102 | 324 | 2,250 | 1,300 | 195 | 65 | 50 | 22 |
| 8..... | 14 | 122 | 282 | 256 | 126 | 219 | 1,300 | 1,050 | 160 | 76 | 44 | 20 |
| 9..... | 13 | 160 | 207 | 160 | 111 | 219 | 950 | 815 | 142 | 76 | 60 | 31 |
| 10..... | 15 | 183 | 207 | 172 | 100 | 195 | 770 | 690 | 139 | 94 | 60 | 37 |
| 11..... | 22 | 151 | 183 | 183 | 90 | 183 | 798 | 570 | 128 | 78 | 44 | 31 |
| 12..... | 30 | 137 | 183 | 172 | 80 | 183 | 1,350 | 500 | 115 | 67 | 46 | 31 |
| 13..... | 41 | 153 | 195 | 137 | 80 | 417 | 1,300 | 570 | 111 | 56 | 50 | 25 |
| 14..... | 32 | 130 | 195 | 120 | 80 | 2,140 | 1,100 | 535 | 107 | 44 | 48 | 60 |
| 15..... | 19 | 107 | 183 | 90 | 75 | 5,100 | 905 | 730 | 98 | 46 | 46 | 84 |
| 16..... | 18 | 107 | 172 | 75 | 75 | 4,260 | 1,050 | 690 | 98 | 55 | 44 | 82 |
| 17..... | 28 | 128 | 207 | 90 | 75 | 2,730 | 1,000 | 690 | 82 | 32 | 48 | 65 |
| 18..... | 300 | 126 | 324 | 645 | 75 | 1,420 | 1,050 | 535 | 78 | 38 | 36 | 56 |
| 19..... | 466 | 126 | 269 | 1,210 | 70 | 1,200 | 1,100 | 610 | 63 | 46 | 25 | 48 |
| 20..... | 256 | 252 | 207 | 770 | 65 | 1,100 | 1,560 | 815 | 61 | 42 | 24 | 38 |
| 21..... | 151 | 219 | 155 | 384 | 60 | 905 | 3,560 | 570 | 67 | 34 | 31 | 46 |
| 22..... | 122 | 195 | 142 | 269 | 60 | 1,200 | 3,240 | 500 | 74 | 22 | 27 | 26 |
| 23..... | 98 | 183 | 111 | 195 | 60 | 1,420 | 2,030 | 432 | 54 | 24 | 29 | 22 |
| 24..... | 107 | 183 | 119 | 172 | 60 | 1,540 | 1,360 | 465 | 58 | 30 | 32 | 22 |
| 25..... | 122 | 172 | 109 | 160 | 60 | 1,050 | 1,150 | 535 | 60 | 30 | 40 | 36 |
| 26..... | 126 | 151 | 107 | 150 | 70 | 1,100 | 1,250 | 416 | 65 | 46 | 27 | 24 |
| 27..... | 100 | 128 | 111 | 140 | 195 | 860 | 950 | 353 | 78 | 40 | 24 | 20 |
| 28..... | 109 | 151 | 109 | 130 | 282 | 770 | 770 | 324 | 74 | 34 | 36 | 20 |
| 29..... | 124 | 160 | 107 | 120 | ----- | 690 | 815 | 282 | 86 | 30 | 28 | 24 |
| 30..... | 115 | 201 | 88 | 120 | ----- | 570 | 650 | 256 | 98 | 44 | 29 | 22 |
| 31..... | 107 | ----- | 104 | 120 | ----- | 500 | ----- | 231 | ----- | 44 | 33 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 466 | 13 | 88.4 | 0.460 | 0.53 |
| November..... | 252 | 107 | 155 | .807 | .90 |
| December..... | 968 | 88 | 262 | 1.36 | 1.57 |
| January..... | 1,210 | 75 | 234 | 1.22 | 1.41 |
| February..... | 282 | 60 | 95.1 | .495 | .52 |
| March..... | 5,100 | 160 | 1,020 | 5.31 | 6.12 |
| April..... | 3,560 | 500 | 1,240 | 6.46 | 7.21 |
| May..... | 2,030 | 231 | 723 | 3.77 | 4.35 |
| June..... | 219 | 54 | 114 | .594 | .66 |
| July..... | 98 | 22 | 53.8 | .280 | .32 |
| August..... | 60 | 24 | 38.7 | .202 | .23 |
| September..... | 84 | 10 | 32.9 | .171 | .19 |
| The year..... | 5,100 | 10 | 340 | 1.77 | 24.01 |

CHENANGO RIVER NEAR CHENANGO FORKS, N. Y.

LOCATION.—Water-stage recorder $1\frac{1}{2}$ miles downstream from Chenango Forks, Broome County, and confluence with Tioughnioga River.

DRAINAGE AREA.—1,490 square miles.

RECORDS AVAILABLE.—November, 1912, to September, 1929.

EXTREMES.—Maximum discharge during year, 32,800 second-feet Mar. 15 (gage height, 13.2 feet); minimum, 253 second-feet Sept. 8 (gage height, 2.53 feet).

1912-1929: 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 excellent except those for periods of ice effect (Dec. 11-16, 21-26, Jan. 4, 5, 12-18, and Jan. 26 to Feb. 28) and for estimated periods, which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
| 1..... | 340 | 800 | 9,740 | 811 | 800 | 2,890 | 3,780 | 4,200 | 1,830 | 779 | 446 | 360 |
| 2..... | 334 | 822 | 8,800 | *910 | 800 | 2,360 | 4,090 | 3,880 | 1,670 | 779 | 395 | 328 |
| 3..... | 340 | 822 | 5,440 | 748 | 750 | 1,940 | 3,370 | 14,600 | 1,620 | 648 | 374 | 314 |
| 4..... | 321 | 1,330 | 4,530 | 700 | 750 | 1,310 | 3,150 | 12,100 | 1,420 | 555 | 381 | 321 |
| 5..... | 321 | 1,280 | 3,880 | *700 | *700 | 2,830 | 7,140 | 9,760 | 1,320 | 519 | 360 | 295 |
| 6..... | 314 | 1,070 | 3,470 | 1,270 | *700 | 3,370 | 11,700 | 10,100 | 1,480 | 638 | 360 | 289 |
| 7..... | 314 | 934 | 2,710 | 2,140 | *900 | *2,620 | 11,400 | 9,760 | 1,450 | 628 | 328 | 271 |
| 8..... | 308 | 855 | 2,360 | 1,060 | *1,200 | *1,940 | 8,440 | 7,880 | 1,320 | 555 | 308 | 271 |
| 9..... | 302 | 910 | 1,560 | 1,100 | 1,100 | *1,940 | 6,180 | 6,050 | 1,220 | 502 | 314 | 314 |
| 10..... | 289 | 994 | 1,560 | 1,250 | 1,000 | 1,680 | 5,800 | 4,980 | 1,140 | 1,730 | 308 | 402 |
| 11..... | 295 | 877 | 1,400 | 1,320 | 900 | 1,720 | 6,180 | 4,090 | 1,110 | 1,530 | 334 | 430 |
| 12..... | 295 | 833 | 1,300 | 1,300 | 850 | 1,800 | 7,710 | 3,670 | 1,070 | 922 | 321 | 381 |
| 13..... | 289 | 833 | 1,300 | 1,100 | 800 | 3,960 | 9,440 | 3,570 | 1,030 | 676 | 328 | 360 |
| 14..... | 289 | 833 | 1,300 | *900 | 750 | 15,700 | 7,580 | 3,370 | 994 | 582 | 340 | 518 |
| 15..... | 283 | 833 | 1,300 | *700 | 700 | 30,100 | 5,920 | 6,200 | 958 | 502 | 450 | 573 |
| 16..... | 295 | 811 | 1,300 | *650 | *650 | 31,000 | 8,460 | 5,320 | 899 | 446 | 666 | 519 |
| 17..... | 308 | 800 | 1,330 | *700 | *650 | 22,200 | 9,760 | 5,100 | 844 | 416 | 510 | 462 |
| 18..... | 469 | 877 | 1,760 | *4,600 | *650 | 11,400 | 9,440 | 3,880 | 811 | 402 | 423 | 478 |
| 19..... | 1,700 | 888 | 2,020 | 7,280 | *650 | 8,180 | 7,880 | 3,960 | 758 | 494 | 367 | 528 |
| 20..... | 1,420 | 2,440 | 1,560 | 4,530 | *600 | 7,280 | 11,400 | 5,320 | 716 | 555 | 347 | 446 |
| 21..... | 982 | 2,360 | 1,200 | 2,100 | *550 | 6,440 | 23,600 | 4,980 | 666 | 454 | 308 | 416 |
| 22..... | 748 | 1,860 | 950 | 1,780 | 550 | 7,880 | 23,300 | 5,320 | 619 | 402 | 302 | 367 |
| 23..... | 657 | 1,720 | 900 | 1,350 | 550 | 9,440 | 15,200 | 3,880 | 564 | 381 | 302 | 347 |
| 24..... | 638 | 1,610 | 900 | 1,330 | 550 | 10,100 | 10,400 | 3,370 | 537 | 354 | 1,080 | 328 |
| 25..... | 779 | 1,560 | 850 | 1,150 | 700 | 7,580 | 8,180 | 4,750 | 555 | 367 | 1,440 | 321 |
| 26..... | 833 | 1,480 | 850 | 1,100 | 1,200 | 8,800 | 9,760 | 3,670 | 610 | 528 | 784 | 321 |
| 27..... | 866 | 1,400 | 833 | 1,000 | 3,000 | 7,280 | 7,140 | 2,980 | 619 | 519 | 591 | 314 |
| 28..... | 822 | 1,330 | 822 | 950 | 3,600 | 5,660 | 5,440 | 3,270 | 680 | 446 | 502 | 302 |
| 29..... | 866 | 1,360 | 768 | 950 | ----- | 4,980 | 5,800 | 2,800 | 1,160 | 416 | 438 | 302 |
| 30..... | 888 | 1,860 | 748 | 900 | ----- | 4,200 | 4,980 | 2,620 | 1,040 | 555 | 416 | 277 |
| 31..... | 822 | ----- | 779 | 850 | ----- | 3,980 | ----- | 2,190 | ----- | 537 | 381 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 1,700 | 283 | 572 | 0.384 | 0.44 |
| November..... | 2,440 | 800 | 1,210 | .812 | .91 |
| December..... | 9,740 | 748 | 2,210 | 1.48 | 1.71 |
| January..... | 7,280 | 650 | 1,520 | 1.02 | 1.18 |
| February..... | 3,600 | 550 | 950 | .638 | .66 |
| March..... | 31,000 | 1,680 | 7,510 | 5.04 | 5.81 |
| April..... | 23,600 | 3,150 | 8,760 | 5.88 | 6.66 |
| May..... | 14,600 | 2,190 | 5,410 | 3.63 | 4.18 |
| June..... | 1,830 | 537 | 1,020 | .685 | .76 |
| July..... | 1,730 | 354 | 607 | .407 | .47 |
| August..... | 1,440 | 302 | 458 | .307 | .35 |
| September..... | 573 | 271 | 372 | .250 | .28 |
| The year..... | 31,000 | 271 | 2,560 | 1.72 | 23.31 |

* Estimated.

TIOGA RIVER NEAR ERWINS, N. Y.

LOCATION.—Chain gage at highway bridge half a mile downstream from Erwins, Steuben County, and the mouth of Canisteo River.

DRAINAGE AREA.—1,320 square miles.

RECORDS AVAILABLE.—July, 1918, to September, 1929.

EXTREMES.—Maximum discharge during year, 43,400 second-feet Apr. 21 (gage height, 15.8 feet); minimum, 28 second-feet Sept. 4 (gage height, 0.60 foot).

1918-1929: Maximum discharge, about 46,700 second-feet May 22, 1919 (gage height, 16.4 feet); minimum, that of Sept. 4, 1929.

REMARKS.—Records good except those for periods of ice effect (Nov. 28, Dec. 10-17, Dec. 22 to Jan. 20, and Feb. 9-24) and for estimated periods, which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|-------|---------|--------|---------|--------|-------|-------|-------|------|-------|
| 1 | 102 | 204 | 4,570 | 200 | * 260 | 2,610 | 1,870 | 2,110 | 1,150 | 319 | 134 | 31 |
| 2 | 92 | 186 | 2,350 | 200 | * 240 | 3,020 | 2,110 | 2,110 | 970 | 660 | 105 | * 36 |
| 3 | 102 | 225 | 1,540 | 200 | * 240 | 1,540 | 1,650 | 6,850 | 890 | 401 | 100 | 41 |
| 4 | 92 | 293 | 1,240 | 200 | * 220 | 2,790 | 1,390 | 3,790 | 730 | 345 | 100 | 29 |
| 5 | 100 | 265 | 1,200 | 220 | * 240 | 4,750 | 2,480 | 3,170 | 695 | 345 | 105 | 36 |
| 6 | 95 | 346 | 1,100 | 300 | 242 | 3,630 | 11,500 | 4,130 | 660 | 225 | 100 | 39 |
| 7 | 85 | 208 | 970 | * 650 | 246 | * 2,740 | 5,610 | 6,220 | 625 | 204 | 92 | 31 |
| 8 | 102 | 204 | * 525 | * 400 | 270 | 1,870 | 3,320 | 3,630 | 558 | 225 | 90 | 45 |
| 9 | 82 | 189 | 431 | * 300 | 260 | 1,990 | 2,740 | 2,880 | 461 | 212 | 111 | 100 |
| 10 | 76 | 186 | 380 | * 340 | 240 | 1,760 | 3,630 | 2,230 | 401 | 238 | 100 | 229 |
| 11 | 72 | 197 | 360 | * 550 | 220 | 1,650 | 5,820 | 1,870 | 373 | 970 | 85 | 204 |
| 12 | 72 | 208 | 340 | * 440 | * 220 | 2,610 | 10,500 | 1,870 | 345 | 461 | 80 | 134 |
| 13 | 80 | 251 | 340 | * 340 | 200 | 6,880 | 5,810 | 1,870 | 319 | 319 | 72 | 120 |
| 14 | 80 | 319 | 360 | * 300 | 200 | 17,200 | 4,130 | 1,870 | 345 | 270 | 63 | 100 |
| 15 | 76 | 319 | 380 | * 260 | 200 | 17,200 | 2,880 | 5,170 | 293 | 212 | 59 | 92 |
| 16 | 78 | 274 | 400 | * 260 | 220 | 14,000 | 5,410 | 4,300 | 270 | 197 | 72 | 85 |
| 17 | 82 | 242 | 440 | 280 | 240 | 7,530 | 7,300 | 3,630 | 251 | 174 | 49 | 92 |
| 18 | 154 | 225 | 493 | 340 | 240 | 3,960 | 6,430 | 2,230 | 225 | 150 | 45 | 90 |
| 19 | 229 | 246 | 1,410 | 6,500 | 220 | 3,020 | 6,010 | 2,230 | 208 | 274 | 61 | 76 |
| 20 | 288 | 2,060 | 590 | * 3,000 | 220 | 2,610 | 15,800 | 4,660 | 204 | 238 | 63 | * 80 |
| 21 | 255 | 1,200 | 401 | 1,340 | 220 | 2,480 | 36,400 | 3,170 | 189 | * 190 | 61 | * 80 |
| 22 | 200 | 890 | * 300 | 860 | * 200 | 2,610 | 19,400 | 3,320 | 197 | 147 | 52 | 85 |
| 23 | 186 | 730 | * 260 | * 650 | 200 | 4,840 | 8,470 | 2,230 | 200 | 131 | 63 | 78 |
| 24 | 154 | 660 | 240 | * 500 | 220 | 5,610 | 5,220 | 1,870 | 293 | 117 | 41 | 78 |
| 25 | 160 | 590 | * 240 | * 440 | 251 | 5,680 | 4,660 | 2,230 | 319 | 128 | 63 | 67 |
| 26 | 238 | 493 | 260 | * 380 | 401 | 11,300 | 6,010 | 1,650 | 229 | 137 | 50 | 63 |
| 27 | 147 | 461 | 280 | * 340 | 10,800 | 6,010 | 3,470 | 1,440 | 265 | 154 | 41 | 76 |
| 28 | 246 | 440 | 300 | * 320 | 6,640 | 3,630 | 2,610 | 5,570 | 225 | 150 | 36 | 78 |
| 29 | 238 | 525 | 280 | * 300 | ----- | 2,740 | 4,300 | 3,020 | * 500 | 141 | 31 | 76 |
| 30 | 238 | 753 | 260 | * 280 | ----- | 2,350 | 2,610 | 2,230 | 345 | 147 | 36 | 80 |
| 31 | 225 | ----- | 220 | * 260 | ----- | 1,990 | ----- | 1,540 | ----- | 154 | 36 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 288 | 72 | 143 | 0.108 | 0.12 |
| November | 2,060 | 186 | 443 | .336 | .37 |
| December | 4,570 | 220 | 725 | .549 | .63 |
| January | 6,500 | 200 | 677 | .513 | .59 |
| February | 10,800 | 200 | 842 | .638 | .66 |
| March | 17,200 | 1,540 | 4,920 | 3.73 | 4.30 |
| April | 36,400 | 1,390 | 6,650 | 5.04 | 5.62 |
| May | 6,850 | 1,440 | 3,070 | 2.33 | 2.69 |
| June | 1,150 | 189 | 424 | .321 | .36 |
| July | 970 | 117 | 259 | .196 | .23 |
| August | 134 | 31 | 70.8 | .054 | .06 |
| September | 229 | 29 | 81.7 | .062 | .07 |
| The year | 36,400 | 29 | 1,530 | 1.16 | 15.70 |

* Estimated.

CHEMUNG RIVER AT CHEMUNG, N. Y.

LOCATION.—Chain gage at highway bridge three-fourths of a mile southwest of Chemung, Chemung County.

DRAINAGE AREA.—2,440 square miles.

RECORDS AVAILABLE.—September, 1903, to September, 1929.

EXTREMES.—Maximum discharge during year, 57,400 second-feet Apr. 21 (gage height, 17.1 feet); minimum, 120 second-feet Sept. 7 and 8 (gage height, 1.65 feet).

1903-1929: 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 (Dec. 13-14, Dec. 24 to Jan. 18, and Jan. 25 to Feb. 26) and for period of backwater from weeds (Aug. 12 to Sept. 30), which are fair.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|-------|-------|--------|--------|--------|--------|-------|-------|------|-------|
| 1----- | 212 | 360 | 6,830 | 460 | 480 | 6,940 | 3,600 | 4,340 | 2,630 | 855 | 468 | 150 |
| 2----- | 221 | 332 | 5,890 | 460 | 460 | 5,890 | 4,150 | 3,960 | 2,190 | 1,000 | 404 | 140 |
| 3----- | 221 | 332 | 3,550 | 460 | 440 | 4,130 | 3,260 | 10,000 | 1,920 | 1,100 | 374 | 140 |
| 4----- | 221 | 332 | 2,600 | 440 | 440 | 4,330 | 2,780 | 8,680 | 1,790 | 768 | 435 | 140 |
| 5----- | 212 | 360 | 2,370 | 460 | 460 | 6,890 | 4,150 | 6,770 | 1,660 | 685 | 374 | 130 |
| 6----- | 202 | 455 | 1,930 | 550 | 500 | 9,430 | 17,900 | 8,440 | 1,540 | 608 | 344 | 130 |
| 7----- | 202 | 390 | 1,670 | 1,200 | 550 | 6,890 | 12,500 | 9,240 | 1,420 | 608 | 297 | 120 |
| 8----- | 198 | 360 | 1,320 | 800 | 550 | 4,750 | 7,080 | 8,490 | 1,310 | 570 | 280 | 130 |
| 9----- | 216 | 360 | 1,100 | 600 | 500 | 3,740 | 5,380 | 6,080 | 1,550 | 500 | 308 | 180 |
| 10----- | 178 | 360 | 1,050 | 750 | 500 | 2,530 | 5,840 | 4,740 | 1,100 | 645 | 308 | 280 |
| 11----- | 170 | 420 | 950 | 1,000 | 460 | 2,530 | 9,620 | 3,960 | 1,000 | 1,200 | 344 | 420 |
| 12----- | 170 | 390 | 810 | 850 | 460 | 3,370 | 15,900 | 3,430 | 900 | 1,050 | 260 | 340 |
| 13----- | 186 | 390 | 750 | 700 | 440 | 14,700 | 13,000 | 3,260 | 855 | 768 | 240 | 260 |
| 14----- | 178 | 390 | 750 | 600 | 440 | 27,400 | 8,160 | 3,260 | 1,000 | 645 | 240 | 240 |
| 15----- | 162 | 525 | 765 | 550 | 440 | 33,900 | 6,080 | 7,860 | 855 | 570 | 220 | 200 |
| 16----- | 186 | 490 | 810 | 550 | 460 | 25,200 | 10,200 | 9,020 | 768 | 500 | 200 | 180 |
| 17----- | 178 | 420 | 855 | 550 | 460 | 17,500 | 13,000 | 7,880 | 725 | 468 | 240 | 200 |
| 18----- | 261 | 420 | 950 | 700 | 480 | 8,730 | 13,300 | 4,950 | 685 | 435 | 200 | 200 |
| 19----- | 332 | 455 | 1,550 | 8,280 | 480 | 6,570 | 12,700 | 5,960 | 685 | 950 | 200 | 190 |
| 20----- | 720 | 720 | 1,260 | 6,890 | 460 | 5,380 | 25,900 | 9,620 | 645 | 768 | 190 | 280 |
| 21----- | 490 | 2,430 | 855 | 3,020 | 440 | 4,740 | 49,700 | 6,550 | 645 | 570 | 170 | 260 |
| 22----- | 390 | 1,550 | 680 | 1,800 | 420 | 4,740 | 47,200 | 7,080 | 608 | 468 | 170 | 240 |
| 23----- | 332 | 1,320 | 560 | 1,430 | 440 | 7,610 | 22,600 | 4,740 | 685 | 435 | 170 | 220 |
| 24----- | 305 | 1,260 | 500 | 1,100 | 460 | 9,320 | 13,300 | 3,960 | 645 | 404 | 180 | 220 |
| 25----- | 283 | 1,100 | 550 | 900 | 500 | 6,320 | 9,920 | 4,540 | 725 | 468 | 170 | 220 |
| 26----- | 305 | 1,050 | 550 | 750 | 2,000 | 12,600 | 11,900 | 3,600 | 645 | 435 | 160 | 200 |
| 27----- | 300 | 900 | 550 | 650 | 17,000 | 13,400 | 8,440 | 2,940 | 608 | 435 | 160 | 220 |
| 28----- | 420 | 855 | 600 | 600 | 17,300 | 7,340 | 6,080 | 6,840 | 645 | 435 | 140 | 190 |
| 29----- | 390 | 900 | 550 | 550 | ----- | 5,610 | 6,570 | 8,550 | 810 | 685 | 140 | 200 |
| 30----- | 360 | 1,050 | 500 | 500 | ----- | 4,540 | 5,380 | 4,740 | 1,050 | 608 | 140 | 180 |
| 31----- | 360 | ----- | 440 | 500 | ----- | 3,960 | ----- | 3,430 | ----- | 500 | 140 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|--------|-----------------|-------------------|
| October----- | 720 | 162 | 276 | 0.113 | 0.13 |
| November----- | 2,430 | 332 | 689 | .282 | .31 |
| December----- | 6,830 | 440 | 1,430 | .596 | .68 |
| January----- | 8,280 | 440 | 1,250 | .512 | .59 |
| February----- | 17,300 | 420 | 1,720 | .705 | .73 |
| March----- | 33,900 | 2,530 | 9,060 | 3.71 | 4.28 |
| April----- | 49,700 | 2,780 | 12,500 | 5.12 | 5.71 |
| May----- | 10,000 | 2,940 | 6,030 | 2.47 | 2.85 |
| June----- | 2,630 | 608 | 1,060 | .434 | .48 |
| July----- | 1,200 | 404 | 650 | .266 | .31 |
| August----- | 468 | 140 | 248 | .102 | .12 |
| September----- | 420 | 120 | 207 | .085 | .09 |
| The year----- | 49,700 | 120 | 2,930 | 1.20 | 16.28 |

CANACADEA CREEK AT HORNELL, N. Y.

LOCATION.—Staff gage at Seneca Street Bridge in Hornell, Steuben County, half a mile upstream from confluence with Canisteo River.

DRAINAGE AREA.—59 square miles.

RECORDS AVAILABLE.—October, 1924, to September, 1929; discontinued.

EXTREMES.—Maximum mean daily discharge during year (estimated), 1,500 second-feet Apr. 21; minimum discharge, 3.0 second-feet Sept. 7 (gage height, 0.63 foot).

1924-1929: Maximum discharge, 4,610 second-feet Nov. 30, 1927 (gage height, 10.2 feet); minimum, about 2.7 second-feet Nov. 4, 1924.

REMARKS.—Records fair except those for period of ice effect (Feb. 18-26) and for estimated periods, which are poor.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|--------|--------|--------|--------|-------|------|---------|--------|--------|-------|-------|
| 1 | 8.3 | 13 | } | } | } • 18 | 130 | 74 | 56 | 54 | } • 18 | 8.9 | 4.8 |
| 2 | 7.3 | 18 | | | | 88 | 45 | 52 | 45 | | 6.8 | 4.8 |
| 3 | 7.3 | 27 | | | | 103 | 35 | 172 | 34 | | 8.3 | 4.8 |
| 4 | 8.3 | 22 | | | | 160 | 37 | 119 | 20 | | 11 | 4.1 |
| 5 | 7.3 | 17 | | | | 395 | 196 | 174 | 18 | | 8.3 | 4.1 |
| 6 | 7.3 | } • 22 | } • 38 | } • 32 | } • 17 | 138 | 358 | 174 | } • 17 | } • 18 | 7.3 | 3.5 |
| 7 | 10 | | | | | • 115 | 119 | 162 | | | 6.4 | 3.0 |
| 8 | 8.3 | | | | | • 95 | 74 | 78 | | | 5.5 | 3.8 |
| 9 | 7.3 | | | | | • 78 | • 60 | • 60 | | | 6.0 | 7.3 |
| 10 | 6.8 | | | | | 66 | • 65 | • 65 | | | 7.3 | • 20 |
| 11 | 7.3 | } • 42 | } • 38 | } • 32 | } • 17 | 50 | 214 | 49 | } • 17 | } • 12 | 6.8 | • 15 |
| 12 | 6.8 | | | | | 228 | 334 | 45 | | | 6.0 | • 12 |
| 13 | 8.9 | | | | | 470 | 162 | 41 | | | 6.0 | • 10 |
| 14 | 11 | | | | | 610 | 97 | 138 | | | 6.8 | • 8.0 |
| 15 | 9.6 | | | | | 335 | 86 | 518 | | | 6.0 | 7.3 |
| 16 | 8.3 | } • 42 | } • 38 | } • 32 | } • 17 | 290 | 174 | 226 | } • 17 | } • 12 | 5.5 | 8.3 |
| 17 | 8.9 | | | | | 18 | 85 | 162 | | | 5.5 | 14 |
| 18 | 34 | | | | | 16 | 39 | 151 | | | 6.0 | 12 |
| 19 | 30 | | | | | 16 | 35 | 204 | | | 6.0 | 11 |
| 20 | 13 | | | | | 14 | 60 | 994 | | | 6.0 | 11 |
| 21 | 11 | } • 42 | } • 38 | } • 32 | } • 17 | 14 | 39 | • 1,500 | 111 | } • 17 | 6.0 | 10 |
| 22 | 9.6 | | | | | 14 | 292 | • 418 | • 105 | | 9.6 | 9.6 |
| 23 | 7.8 | | | | | 13 | 140 | 151 | • 95 | | 5.2 | 8.3 |
| 24 | 8.9 | | | | | 11 | 101 | 99 | 86 | | 8.3 | 8.3 |
| 25 | 28 | | | | | 14 | 74 | 94 | 64 | | 9.6 | 3.8 |
| 26 | 39 | } • 42 | } • 38 | } • 32 | } • 17 | 100 | 445 | • 90 | 54 | } • 17 | 5.5 | 6.4 |
| 27 | 32 | | | | | 448 | 130 | 83 | • 50 | | • 5.5 | 7.3 |
| 28 | 30 | | | | | 162 | 83 | 71 | • 65 | | 8.9 | 8.3 |
| 29 | 22 | | | | | 71 | 99 | 60 | 60 | | 15 | 5.5 |
| 30 | 18 | | | | | 49 | 69 | 58 | 58 | | 11 | 6.0 |
| 31 | 14 | | | | | 37 | | 52 | | | 8.9 | 4.8 |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 39 | 6.8 | 14.1 | 0.239 | 0.28 |
| November | | 13 | 28.9 | .490 | .55 |
| December | | | 38.0 | .644 | .74 |
| January | | | 32.0 | .542 | .62 |
| February | 448 | 11 | 39.9 | .676 | .70 |
| March | 610 | 35 | 162 | 2.75 | 3.17 |
| April | 1,500 | 35 | 212 | 3.59 | 4.00 |
| May | 518 | 41 | 113 | 1.92 | 2.21 |
| June | 54 | | 19.9 | .337 | .38 |
| July | | 7.8 | 13.9 | .236 | .27 |
| August | 11 | 3.8 | 6.24 | .106 | .12 |
| September | 20 | 3.0 | 8.25 | .140 | .16 |
| The year | 1,500 | 3.0 | 57.4 | .973 | 13.20 |

• Estimated.

COHOCTON RIVER NEAR CAMPBELL, N. Y.

LOCATION.—Chain gage at highway bridge 2 miles northwest of Campbell, Steuben County.

DRAINAGE AREA.—478 square miles.

RECORDS AVAILABLE.—July, 1918, to September, 1929.

EXTREMES.—Maximum discharge during year, 9,950 second-feet Apr. 21 (gage height, 7.8 feet); minimum, 30 second-feet Sept. 5 and 6 (gage height, 0.52 foot).

1918-1929: Maximum discharge, 12,900 second-feet Dec. 1, 1927 (gage height, 8.9 feet); minimum, 13 second-feet Oct. 7, 1921.

REMARKS.—Records good except those for periods of ice effect (Dec. 21 to Jan. 18, and Jan. 24 to Mar. 2) and for periods of backwater from weeds (Oct. 1 to Nov. 19, and July 1 to Sept. 30), which are fair. Discharge estimated Sept. 22-30.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 46 | 95 | 1,730 | 190 | 130 | 1,600 | 845 | 1,000 | 570 | 190 | 100 | 42 |
| 2..... | 44 | 90 | 1,260 | 180 | 120 | 1,200 | 770 | 882 | 510 | 240 | 85 | 40 |
| 3..... | 42 | 95 | 960 | 170 | 110 | 920 | 668 | 1,650 | 482 | 190 | 95 | 40 |
| 4..... | 46 | 120 | 770 | 160 | 110 | 1,080 | 735 | 1,450 | 455 | 180 | 95 | 36 |
| 5..... | 46 | 120 | 668 | 160 | 120 | 1,350 | 2,900 | 1,980 | 390 | 170 | 85 | 32 |
| 6..... | 60 | 120 | 540 | 190 | 180 | 1,350 | 2,340 | 2,340 | 375 | 170 | 75 | 30 |
| 7..... | 55 | 110 | 482 | 260 | 190 | 1,080 | 1,450 | 1,870 | 345 | 150 | 70 | 36 |
| 8..... | 50 | 110 | 395 | 200 | 190 | 770 | 1,170 | 1,650 | 322 | 140 | 65 | 50 |
| 9..... | 44 | 140 | 317 | 160 | 180 | 602 | 960 | 1,350 | 303 | 130 | 75 | 100 |
| 10..... | 46 | 150 | 308 | 170 | 160 | 510 | 1,040 | 1,700 | 285 | 180 | 70 | 140 |
| 11..... | 48 | 140 | 303 | 220 | 150 | 540 | 1,080 | 1,000 | 263 | 190 | 65 | 140 |
| 12..... | 55 | 120 | 299 | 220 | 140 | 808 | 1,650 | 882 | 222 | 180 | 65 | 75 |
| 13..... | 50 | 130 | 290 | 180 | 130 | 1,760 | 1,650 | 845 | 210 | 160 | 60 | 55 |
| 14..... | 50 | 140 | 277 | 160 | 120 | 4,280 | 1,280 | 920 | 203 | 150 | 60 | 50 |
| 15..... | 46 | 140 | 277 | 140 | 110 | 4,040 | 1,080 | 1,550 | 199 | 110 | 60 | 50 |
| 16..... | 44 | 120 | 263 | 140 | 120 | 4,320 | 1,450 | 1,350 | 199 | 100 | 60 | 50 |
| 17..... | 44 | 110 | 263 | 140 | 120 | 2,470 | 1,550 | 1,260 | 188 | 95 | 55 | 60 |
| 18..... | 130 | 95 | 255 | 200 | 130 | 1,760 | 1,760 | 1,350 | 188 | 90 | 50 | 90 |
| 19..... | 170 | 90 | 263 | 2,150 | 130 | 1,350 | 1,980 | 1,760 | 180 | 240 | 50 | 75 |
| 20..... | 160 | 652 | 277 | 1,170 | 120 | 1,080 | 5,300 | 1,550 | 176 | 140 | 50 | 60 |
| 21..... | 130 | 482 | 260 | 700 | 110 | 1,000 | 9,480 | 1,260 | 166 | 95 | 50 | 50 |
| 22..... | 110 | 428 | 240 | 570 | 110 | 1,040 | 7,000 | 1,040 | 159 | 85 | 46 | 50 |
| 23..... | 100 | 395 | 220 | 400 | 110 | 1,170 | 4,360 | 960 | 152 | 85 | 46 | 50 |
| 24..... | 95 | 355 | 200 | 320 | 120 | 1,170 | 3,000 | 920 | 166 | 80 | 46 | 48 |
| 25..... | 95 | 341 | 200 | 260 | 130 | 1,260 | 2,470 | 845 | 184 | 75 | 50 | 48 |
| 26..... | 110 | 322 | 200 | 220 | 500 | 2,860 | 2,340 | 668 | 176 | 140 | 50 | 46 |
| 27..... | 110 | 303 | 220 | 200 | 3,800 | 1,760 | 1,760 | 668 | 159 | 110 | 44 | 46 |
| 28..... | 110 | 294 | 240 | 180 | 3,600 | 1,450 | 1,450 | 735 | 238 | 95 | 42 | 50 |
| 29..... | 100 | 281 | 200 | 160 | ----- | 1,000 | 1,260 | 570 | 277 | 150 | 40 | 50 |
| 30..... | 110 | 345 | 200 | 150 | ----- | 1,040 | 1,080 | 735 | 199 | 130 | 42 | 50 |
| 31..... | 100 | ----- | 180 | 140 | ----- | 1,040 | ----- | 635 | ----- | 110 | 42 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 170 | 42 | 78.9 | 0.165 | 0.19 |
| November..... | 652 | 90 | 214 | .448 | .50 |
| December..... | 1,730 | 180 | 405 | .847 | .98 |
| January..... | 2,150 | 140 | 318 | .665 | .77 |
| February..... | 3,800 | 110 | 401 | .839 | .87 |
| March..... | 4,840 | 510 | 1,560 | 3.26 | 3.76 |
| April..... | 9,840 | 668 | 2,190 | 4.58 | 5.11 |
| May..... | 2,340 | 570 | 1,190 | 2.49 | 2.87 |
| June..... | 570 | 152 | 265 | .554 | .62 |
| July..... | 240 | 75 | 140 | .283 | .34 |
| August..... | 100 | 40 | 60.9 | .127 | .15 |
| September..... | 140 | 30 | 58.0 | .121 | .14 |
| The year..... | 9,480 | 30 | 574 | 1.20 | 16.30 |

CONEWAGO CREEK NEAR MANCHESTER, PA.

LOCATION.—Water-stage recorder 500 feet above Manchester-Yorkhaven highway bridge and $1\frac{1}{2}$ miles north of Manchester, York County.

DRAINAGE AREA.—511 square miles.

RECORDS AVAILABLE.—October, 1928, to September, 1929.

EXTREMES.—Maximum discharge during period, about 20,300 second-feet Apr. 17 (gage height, 15.31 feet); minimum, 31 second-feet Sept. 5 (gage height, 1.40 feet).

REMARKS.—Records excellent except those for Oct. 26, 27, Jan. 19–31, Feb. 1–5, 7, and 8, which were estimated.

Daily and monthly discharge, in second-feet, 1928–29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|-------|-------|--------|--------|--------|-------|------|------|-------|
| 1..... | | 116 | 184 | 174 | 110 | 2,460 | 282 | 500 | 304 | 378 | 89 | 49 |
| 2..... | | 111 | 479 | 898 | 110 | 1,530 | 260 | 532 | 239 | 358 | 85 | 52 |
| 3..... | | 113 | 246 | 521 | 110 | 1,530 | 225 | 11,200 | 204 | 319 | 69 | 45 |
| 4..... | | 129 | 191 | 315 | 110 | 2,430 | 218 | 2,940 | 191 | 250 | 77 | 36 |
| 5..... | | 390 | 165 | 228 | 120 | 5,570 | 694 | 1,450 | 191 | 500 | 61 | 36 |
| 6..... | | 319 | 146 | 1,690 | 132 | 10,400 | 2,200 | 1,080 | 162 | 588 | 66 | 45 |
| 7..... | | 194 | 135 | 1,380 | 1,800 | 3,280 | 688 | 1,060 | 162 | 458 | 71 | 49 |
| 8..... | | 155 | 121 | 438 | 2,500 | 1,350 | 500 | 830 | 171 | 378 | 61 | 214 |
| 9..... | | 138 | 116 | 398 | 1,530 | 1,080 | 418 | 635 | 208 | 319 | 55 | 345 |
| 10..... | | 135 | 101 | 565 | 830 | 830 | 458 | 565 | 239 | 242 | 56 | 204 |
| 11..... | | 126 | 111 | 1,370 | 565 | 688 | 635 | 500 | 191 | 187 | 61 | 135 |
| 12..... | | 108 | 112 | 588 | 438 | 660 | 1,540 | 479 | 162 | 162 | 59 | 92 |
| 13..... | | 116 | 113 | 418 | 319 | 688 | 1,220 | 565 | 146 | 140 | 64 | 77 |
| 14..... | | 126 | 113 | 319 | 282 | 1,450 | 715 | 521 | 132 | 146 | 66 | 257 |
| 15..... | | 121 | 300 | 319 | 278 | 1,780 | 610 | 500 | 135 | 113 | 66 | 140 |
| 16..... | | 108 | 543 | 275 | 358 | 1,220 | 9,200 | 438 | 140 | 118 | 69 | 158 |
| 17..... | | 116 | 338 | 264 | 358 | 890 | 14,100 | 378 | 187 | 121 | 64 | 126 |
| 18..... | | 113 | 300 | 239 | 418 | 635 | 3,380 | 338 | 149 | 108 | 58 | 129 |
| 19..... | | 113 | 358 | 240 | 500 | 565 | 1,780 | 844 | 129 | 280 | 58 | 129 |
| 20..... | | 165 | 253 | 280 | 378 | 521 | 1,290 | 1,050 | 121 | 211 | 53 | 108 |
| 21..... | | 225 | 204 | 260 | 194 | 479 | 1,080 | 543 | 432 | 118 | 59 | 85 |
| 22..... | | 177 | 146 | 200 | 201 | 438 | 1,150 | 500 | 3,100 | 85 | 59 | 85 |
| 23..... | 132 | 143 | 126 | 170 | 297 | 438 | 1,010 | 398 | 1,070 | 87 | 58 | 73 |
| 24..... | 129 | 129 | 116 | 160 | 275 | 418 | 715 | 338 | 2,310 | 101 | 50 | 59 |
| 25..... | 124 | 121 | 132 | 190 | 268 | 398 | 660 | 438 | 4,430 | 96 | 48 | 58 |
| 26..... | 120 | 104 | 118 | 220 | 1,640 | 358 | 1,920 | 398 | 5,000 | 106 | 58 | 56 |
| 27..... | 120 | 118 | 132 | 170 | 4,800 | 358 | 950 | 304 | 986 | 92 | 53 | 58 |
| 28..... | 118 | 116 | 129 | 150 | 5,890 | 319 | 688 | 275 | 769 | 83 | 52 | 56 |
| 29..... | 106 | 108 | 135 | 140 | ----- | 293 | 688 | 623 | 1,560 | 94 | 56 | 58 |
| 30..... | 118 | 118 | 111 | 120 | ----- | 271 | 610 | 645 | 565 | 112 | 62 | 71 |
| 31..... | 124 | ----- | 106 | 120 | ----- | 268 | ----- | 398 | ----- | 94 | 58 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|--------------------|---------|---------|-------|-----------------|-------------------|
| October 23–31..... | 132 | 106 | 121 | 0.237 | 0.08 |
| November..... | 390 | 104 | 146 | .286 | .32 |
| December..... | 543 | 101 | 190 | .372 | .43 |
| January..... | 1,690 | 120 | 413 | .808 | .93 |
| February..... | 5,890 | 110 | 886 | 1.73 | 1.80 |
| March..... | 10,400 | 268 | 1,410 | 2.76 | 3.18 |
| April..... | 14,100 | 218 | 1,660 | 3.25 | 3.63 |
| May..... | 11,200 | 275 | 1,010 | 1.98 | 2.28 |
| June..... | 5,000 | 121 | 793 | 1.55 | 1.73 |
| July..... | 588 | 83 | 208 | .407 | .47 |
| August..... | 89 | 48 | 62 | .121 | .14 |
| September..... | 345 | 36 | 102 | .202 | .23 |

CONESTOGA CREEK AT LANCASTER, PA.

LOCATION.—Water-stage recorder above diversion dam of city waterworks, three-fourths mile west of Lancaster, Lancaster County.

DRAINAGE AREA.—322 square miles.

RECORDS AVAILABLE.—September, 1928, to September, 1929.

EXTREMES.—Maximum discharge during period of record, about 9,400 second-feet Feb. 28 (gage height, 6.57 feet); minimum, 47 second-feet Sept. 6, 1929 (gage height, 0.22 foot).

REMARKS.—Records excellent except those for estimated periods (Jan. 29 to Feb. 1, and Sept. 5), which are good. Records, except part of table of monthly discharge, do not include diversion for Lancaster water supply. Station built and maintained by city of Lancaster.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Sept. | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|------|-------|------|------|-------|-------|-------|-----|-------|------|------|-------|
| 1 | | 225 | 109 | 260 | 152 | 110 | 832 | 322 | 530 | 342 | 254 | 135 | 94 |
| 2 | | 182 | 113 | 202 | 622 | 109 | 652 | 297 | 530 | 316 | 243 | 130 | 83 |
| 3 | | 162 | 113 | 157 | 231 | 105 | 570 | 272 | 695 | 316 | 214 | 135 | 98 |
| 4 | | 152 | 126 | 135 | 172 | 102 | 652 | 272 | 785 | 303 | 202 | 118 | 98 |
| 5 | | 152 | 187 | 130 | 139 | 122 | 2,240 | 322 | 570 | 303 | 172 | 126 | 120 |
| 6 | | 152 | 157 | 105 | 261 | 109 | 3,900 | 451 | 570 | 303 | 348 | 135 | 47 |
| 7 | | 172 | 130 | 105 | 322 | 1,730 | 1,520 | 335 | 610 | 297 | 214 | 135 | 63 |
| 8 | | 152 | 113 | 109 | 182 | 762 | 880 | 297 | 610 | 297 | 192 | 109 | 225 |
| 9 | | 148 | 118 | 87 | 172 | 362 | 832 | 272 | 530 | 316 | 192 | 118 | 291 |
| 10 | | 143 | 109 | 98 | 280 | 272 | 652 | 303 | 494 | 316 | 172 | 126 | 192 |
| 11 | | 130 | 98 | 118 | 531 | 243 | 610 | 402 | 458 | 285 | 162 | 126 | 130 |
| 12 | | 130 | 98 | 102 | 254 | 197 | 570 | 494 | 437 | 272 | 162 | 135 | 118 |
| 13 | | 130 | 130 | 94 | 177 | 177 | 570 | 570 | 494 | 254 | 152 | 148 | 102 |
| 14 | 202 | 118 | 118 | 105 | 211 | 162 | 695 | 409 | 494 | 254 | 118 | 143 | 90 |
| 15 | 202 | 130 | 109 | 157 | 187 | 152 | 740 | 395 | 494 | 279 | 122 | 167 | 143 |
| 16 | 172 | 135 | 109 | 162 | 167 | 157 | 652 | 1,050 | 444 | 310 | 139 | 162 | 157 |
| 17 | 187 | 130 | 102 | 148 | 148 | 143 | 570 | 3,020 | 416 | 272 | 122 | 143 | 148 |
| 18 | 182 | 130 | 94 | 148 | 157 | 167 | 494 | 1,290 | 388 | 248 | 126 | 118 | 266 |
| 19 | 177 | 157 | 105 | 148 | 197 | 162 | 458 | 980 | 494 | 219 | 260 | 118 | 143 |
| 20 | 202 | 162 | 148 | 135 | 219 | 157 | 444 | 832 | 652 | 279 | 208 | 118 | 118 |
| 21 | 243 | 130 | 162 | 118 | 182 | 152 | 423 | 832 | 530 | 423 | 139 | 122 | 105 |
| 22 | 202 | 130 | 130 | 109 | 157 | 143 | 402 | 930 | 530 | 453 | 139 | 109 | 87 |
| 23 | 152 | 135 | 118 | 90 | 157 | 152 | 409 | 880 | 453 | 368 | 162 | 102 | 94 |
| 24 | 177 | 130 | 118 | 90 | 172 | 139 | 416 | 695 | 423 | 303 | 148 | 109 | 105 |
| 25 | 172 | 130 | 94 | 90 | 187 | 157 | 388 | 610 | 423 | 335 | 143 | 113 | 94 |
| 26 | 157 | 130 | 102 | 98 | 148 | 1,990 | 362 | 880 | 416 | 570 | 187 | 109 | 87 |
| 27 | 167 | 130 | 130 | 113 | 143 | 4,950 | 368 | 785 | 409 | 388 | 214 | 105 | 83 |
| 28 | 152 | 109 | 109 | 102 | 157 | 1,460 | 322 | 652 | 395 | 291 | 152 | 109 | 83 |
| 29 | 162 | 118 | 105 | 105 | 140 | ----- | 291 | 695 | 388 | 342 | 130 | 102 | 76 |
| 30 | 182 | 139 | 102 | 87 | 120 | ----- | 297 | 610 | 375 | 279 | 148 | 102 | 98 |
| 31 | ----- | 126 | ----- | 90 | 110 | ----- | 316 | ----- | 362 | ----- | 152 | 98 | ----- |

| Month | Observed | | | Corrected for diversion | | Run-off in inches |
|-----------------|----------|---------|------|-------------------------|-----------------|-------------------|
| | Maximum | Minimum | Mean | Mean | Per square mile | |
| 1928 | | | | | | |
| September 14-30 | 243 | 152 | 182 | 198 | 0.615 | 0.39 |
| 1928-29 | | | | | | |
| October | 225 | 109 | 142 | 157 | .488 | .56 |
| November | 187 | 94 | 119 | 133 | .413 | .46 |
| December | 260 | 87 | 122 | 136 | .422 | .49 |
| January | 622 | 110 | 208 | 222 | .689 | .79 |
| February | 4,950 | 102 | 523 | 536 | 1.66 | 1.73 |
| March | 3,900 | 291 | 727 | 740 | 2.30 | 2.65 |
| April | 3,020 | 272 | 672 | 685 | 2.13 | 2.38 |
| May | 785 | 362 | 497 | 510 | 1.58 | 1.82 |
| June | 570 | 219 | 318 | 333 | 1.03 | 1.15 |
| July | 348 | 118 | 177 | 192 | .596 | .69 |
| August | 167 | 98 | 123 | 138 | .429 | .49 |
| September | 291 | 47 | 121 | 136 | .422 | .47 |
| The year | 4,950 | 47 | 311 | 325 | 1.01 | 13.68 |

DEER CREEK AT ROCKS, MD.

LOCATION.—Water-stage recorder one-fourth mile below Maryland & Pennsylvania Railroad bridge and 1 mile below Rocks, Hartford County.

DRAINAGE AREA.—94.8 square miles.

RECORDS AVAILABLE.—October, 1926, to September, 1929.

EXTREMES.—Maximum discharge during year, about 2,610 second-feet Feb. 26 (gage height, 7.05 feet); minimum, 39 second-feet Sept. 5 (gage height, 1.60 feet).

1926-1929: Maximum stage, 15.53 feet Nov. 16, 1926 (discharge not determined); minimum discharge, 35 second-feet Oct. 1, 1927 (gage height, 1.55 feet).

REMARKS.—Records good. Discharge estimated because of ice Dec. 22-31, Jan. 3, 4, 8, 9, 13-18, 26-31, Feb. 1-6, and 12-25.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|------|------|------|-------|-------|-------|-----|------|------|------|-------|
| 1..... | 155 | 111 | 181 | 165 | 75 | 250 | 97 | 155 | 140 | 89 | 56 | 49 |
| 2..... | 148 | 111 | 113 | 160 | | 224 | 89 | 160 | 113 | 94 | 58 | 53 |
| 3..... | 142 | 113 | 109 | 100 | | 204 | 89 | 176 | 113 | 86 | 65 | 51 |
| 4..... | 138 | 209 | 103 | 95 | | 332 | 94 | 150 | 109 | 81 | 68 | 50 |
| 5..... | 142 | 148 | 103 | 116 | | 1,400 | 231 | 145 | 107 | 83 | 60 | 60 |
| 6..... | 184 | 119 | 94 | 400 | 882 | 599 | 148 | 155 | 107 | 81 | 58 | 78 |
| 7..... | 140 | 115 | 92 | 152 | | 311 | 115 | 184 | 105 | 80 | 59 | 93 |
| 8..... | 138 | 113 | 92 | 110 | | 218 | 109 | 140 | 138 | | 57 | 143 |
| 9..... | 138 | 107 | 92 | 115 | | 195 | 107 | 138 | 126 | | 58 | 388 |
| 10..... | 135 | 105 | 92 | 372 | | 111 | 165 | 115 | 133 | 111 | 56 | 160 |
| 11..... | 131 | 103 | 95 | 165 | 94 | 162 | 111 | 128 | 105 | | 68 | 99 |
| 12..... | 131 | 107 | 91 | 133 | | 155 | 138 | 128 | 97 | | 91 | 68 |
| 13..... | 128 | 105 | 89 | | | 160 | 119 | 145 | 94 | | 60 | 64 |
| 14..... | 126 | 99 | 117 | | | 201 | 126 | 140 | 92 | 135 | 86 | 131 |
| 15..... | 126 | 101 | 165 | | | 178 | 122 | 135 | 145 | | 117 | 123 |
| 16..... | 128 | 101 | 111 | 90 | 80 | 165 | 1,320 | 126 | 109 | | 61 | 72 |
| 17..... | 128 | 99 | 107 | | | 135 | 636 | 122 | 95 | | 59 | 102 |
| 18..... | 128 | 97 | 107 | | | 124 | 346 | 119 | 89 | | 60 | 87 |
| 19..... | 140 | 103 | 101 | 124 | | 122 | 268 | 376 | 86 | | 60 | 68 |
| 20..... | 124 | 131 | 101 | 107 | | 115 | 236 | 215 | 124 | 65 | 57 | 65 |
| 21..... | 122 | 103 | | 101 | | 107 | 233 | 189 | 124 | | 53 | 61 |
| 22..... | 119 | 101 | 97 | 95 | | 105 | 277 | 160 | 656 | | 49 | 60 |
| 23..... | 122 | 97 | | 103 | | 109 | 215 | 140 | 117 | | 86 | 61 |
| 24..... | 122 | 95 | | 99 | | 105 | 192 | 142 | 126 | | 59 | 58 |
| 25..... | 117 | 95 | | 162 | | 99 | 195 | 192 | 107 | 68 | 54 | 58 |
| 26..... | 113 | 95 | 90 | | 964 | 103 | 195 | 128 | 105 | 71 | 56 | 56 |
| 27..... | 113 | 94 | | | 1,050 | 103 | 168 | 124 | 95 | 65 | 57 | 57 |
| 28..... | 115 | 94 | | | 792 | 99 | 165 | 122 | 143 | 60 | 67 | 56 |
| 29..... | 113 | 95 | | 85 | | 91 | 170 | 222 | 113 | 60 | 55 | 58 |
| 30..... | 113 | 122 | | | | 92 | 158 | 198 | 92 | 60 | 57 | 87 |
| 31..... | 109 | | | | | 92 | | 180 | | 58 | 54 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 184 | 109 | 130 | 1.37 | 1.58 |
| November..... | 209 | 94 | 110 | 1.16 | 1.29 |
| December..... | 181 | | 102 | 1.08 | 1.24 |
| January..... | 400 | | 127 | 1.34 | 1.54 |
| February..... | 1,050 | | 205 | 2.16 | 2.25 |
| March..... | 1,400 | 91 | 210 | 2.22 | 2.56 |
| April..... | 1,320 | 89 | 219 | 2.31 | 2.58 |
| May..... | 376 | 119 | 160 | 1.69 | 1.95 |
| June..... | 656 | 86 | 129 | 1.36 | 1.52 |
| July..... | | | 77.5 | .818 | .94 |
| August..... | 117 | 49 | 63.3 | .668 | .77 |
| September..... | 388 | 49 | 87.2 | .920 | 1.03 |
| The year..... | 1,400 | 49 | 134 | 1.41 | 19.25 |

GUNPOWDER RIVER BASIN

LITTLE GUNPOWDER FALLS AT LAUREL BROOK, MD.

LOCATION.—Water-stage recorder half a mile southwest of Laurel Brook, Harford County, and 1 mile below Maryland & Pennsylvania Railroad bridge. Laurel Brook enters 700 feet below gage.

DRAINAGE AREA.—35.7 square miles.

RECORDS AVAILABLE.—December, 1927, to September, 1929.

EXTREMES.—Maximum discharge during year, about 762 second-feet Feb. 26 (gage height, 4.66 feet); minimum, 13 second-feet Aug. 3 (gage height, 1.01 feet).

1926-1929: Maximum stage, 9.64 feet June 14, 1928 (discharge not determined); minimum discharge, 12 second-feet Sept. 28, and Oct. 1, 1927 (gage height, 0.85 foot).

REMARKS.—Records good. Discharge estimated because of ice effect during greater part of winter.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | |
|-----|------|------|------|------|------|------|------|------|------|------|------|-------|----|
| 1 | 66 | 43 | 86 | • 40 | • 27 | 78 | 38 | • 60 | 38 | 28 | 15 | 19 | |
| 2 | 58 | 43 | 47 | | | 94 | 34 | | 34 | 27 | 14 | 17 | |
| 3 | 56 | 46 | 43 | | | 119 | 34 | | 34 | 24 | 22 | 17 | |
| 4 | 53 | 88 | 41 | | | 169 | 38 | | 34 | 24 | 26 | 17 | |
| 5 | 57 | 58 | 43 | | | 382 | 102 | | 33 | 23 | 16 | 28 | |
| 6 | 66 | 47 | 38 | 209 | • 42 | 184 | 57 | • 60 | 32 | 24 | 15 | 31 | |
| 7 | 53 | 44 | 38 | 311 | | 88 | 43 | | 31 | 23 | 16 | 24 | |
| 8 | 51 | 44 | 38 | 49 | | 38 | 41 | | 23 | 14 | 28 | | |
| 9 | 52 | 43 | 38 | 43 | | 38 | 38 | | 23 | 14 | 82 | | |
| 10 | 50 | 42 | 38 | 176 | | 43 | 44 | | 34 | 21 | 14 | 30 | |
| 11 | 49 | 43 | 37 | 62 | 36 | • 53 | 41 | • 60 | 31 | 22 | 16 | 34 | |
| 12 | 48 | 44 | 36 | 47 | 33 | | 52 | | 58 | 31 | 21 | 56 | 23 |
| 13 | 48 | 43 | 37 | • 35 | • 30 | | 58 | | 44 | 29 | 22 | 18 | 22 |
| 14 | 46 | 42 | 67 | | | | 76 | | 47 | 28 | 77 | 99 | 38 |
| 15 | 46 | 42 | 81 | | | | 64 | | 44 | 44 | 31 | 72 | 32 |
| 16 | 48 | 43 | 48 | | | 60 | 450 | 36 | 22 | 29 | 24 | | |
| 17 | 47 | 43 | 46 | 49 | • 30 | 202 | • 90 | 29 | 20 | 25 | 31 | | |
| 18 | 62 | 42 | 51 | 45 | | 28 | | 19 | 24 | 32 | | | |
| 19 | 67 | 47 | 39 | 52 | | 45 | | 26 | 19 | 22 | 24 | | |
| 20 | 50 | 61 | 38 | 43 | | 44 | | 49 | 35 | 17 | 20 | 24 | |
| 21 | 46 | 44 | 35 | 38 | | 42 | | 61 | 30 | 17 | 19 | 21 | |
| 22 | 46 | 41 | 35 | 35 | 42 | 48 | 62 | • 90 | • 30 | 20 | 21 | | |
| 23 | 47 | 40 | 40 | 40 | 44 | 43 | 31 | | • 23 | 40 | 21 | | |
| 24 | 47 | 39 | 40 | 40 | 44 | 42 | 31 | | • 19 | 25 | 21 | | |
| 25 | 45 | 39 | 89 | 89 | 41 | 41 | 32 | | 19 | 21 | 19 | | |
| 26 | 43 | 38 | • 30 | • 35 | 352 | 43 | 39 | | 34 | 19 | 19 | 19 | |
| 27 | 44 | 38 | | | 282 | 42 | 38 | 28 | 17 | 20 | 19 | | |
| 28 | 46 | 38 | | | 253 | 38 | 38 | 63 | 17 | 20 | 19 | | |
| 29 | 44 | 38 | | | 37 | 37 | 39 | 38 | 17 | 20 | 22 | | |
| 30 | 43 | 66 | | | 38 | 38 | 39 | 28 | 21 | 20 | 53 | | |
| 31 | 43 | | | | | 39 | | 37 | | 16 | 19 | | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 67 | 43 | 50.5 | 1.41 | 1.63 |
| November | 88 | 38 | 45.6 | 1.28 | 1.43 |
| December | 86 | --- | 40.8 | 1.14 | 1.31 |
| January | 209 | --- | 50.9 | 1.43 | 1.65 |
| February | 352 | --- | 69.8 | 1.96 | 2.04 |
| March | 382 | 37 | 73.2 | 2.05 | 2.36 |
| April | 450 | 34 | 84.1 | 2.36 | 2.63 |
| May | --- | 37 | 53.4 | 1.50 | 1.73 |
| June | 63 | 26 | 34.8 | .975 | 1.09 |
| July | 77 | 16 | 23.4 | .655 | .76 |
| August | 99 | 14 | 25.5 | .714 | .82 |
| September | 82 | 17 | 27.1 | .759 | .85 |
| The year | 450 | 14 | 48.1 | 1.35 | 18.30 |

• Estimated.

PATAPSCO RIVER BASIN

NORTH BRANCH OF PATAPSCO RIVER NEAR REISTERSTOWN, MD.

LOCATION.—Water-stage recorder at highway bridge between Louisville and Delight, 600 feet above mouth of Cook Branch, and $3\frac{1}{2}$ miles southwest of Reisterstown, Baltimore County.

DRAINAGE AREA.—91 square miles.

RECORDS AVAILABLE.—June, 1927, to September, 1929.

EXTREMES.—Maximum discharge during year, 2,230 second-feet June 22 (gage height, 7.00 feet); minimum, about 35 second-feet during the first few days in September.

1927-1929: Maximum discharge, that of June 22, 1929; minimum, 33 second-feet Sept. 16 and 17, 1927 (gage height, 1.33 feet).

REMARKS.—Records good except those for periods of ice effect (Dec. 22-30, Jan. 3-5, 8, 9, 13-16, 29-31, and Feb. 1-6, 11-17, 21-25 and those for estimated period (Aug. 24 to Sept. 30), which are fair. Power plant at Finksburg, 7 miles upstream, may affect flow at times.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1..... | 95 | 68 | 135 | 120 | 65 | 242 | 95 | 127 | 110 | 91 | 47 | 60 |
| 2..... | 91 | 68 | 79 | 120 | | 229 | 93 | 125 | 90 | 91 | 58 | |
| 3..... | 87 | 68 | 68 | | | 269 | 90 | 331 | 87 | 87 | 49 | |
| 4..... | 82 | 120 | 65 | 70 | | 323 | 88 | 154 | 83 | 82 | 66 | |
| 5..... | 83 | 104 | 64 | | | 607 | 156 | 140 | 80 | 79 | 49 | |
| 6..... | 104 | 77 | 61 | 304 | 87 | 474 | 142 | 147 | 79 | 79 | 47 | 60 |
| 7..... | 82 | 71 | 56 | 116 | | 292 | 99 | 174 | 77 | 77 | 48 | |
| 8..... | 77 | 68 | 57 | 85 | | 199 | 90 | 140 | 95 | 74 | 46 | |
| 9..... | 76 | 65 | 57 | 110 | | 184 | 87 | 125 | 95 | 71 | 44 | |
| 10..... | 74 | 62 | 57 | 306 | | 151 | 90 | 120 | 82 | 70 | 45 | |
| 11..... | 72 | 61 | 65 | 135 | 60 | 144 | 90 | 112 | 77 | 68 | 44 | 60 |
| 12..... | 72 | 61 | 59 | 104 | | 144 | 102 | 104 | 72 | 66 | 43 | |
| 13..... | 71 | 59 | 57 | | | 151 | 108 | 104 | 71 | 66 | 43 | |
| 14..... | 70 | 59 | 71 | | | 202 | 99 | 104 | 68 | 136 | 75 | |
| 15..... | 68 | 59 | 168 | 70 | | 168 | 93 | 104 | 76 | 94 | 111 | |
| 16..... | 68 | 59 | 87 | | 66 | 156 | 849 | 102 | 77 | 71 | 48 | 60 |
| 17..... | 68 | 61 | 79 | 127 | | 138 | 748 | 97 | 70 | 68 | 46 | |
| 18..... | 70 | 61 | 91 | 95 | | 125 | 329 | 93 | 65 | 64 | 44 | |
| 19..... | 83 | 64 | 79 | 99 | | 122 | 237 | 274 | 64 | 65 | 42 | |
| 20..... | 79 | 74 | 74 | 90 | | 118 | 202 | 175 | 735 | 64 | 42 | |
| 21..... | 76 | 64 | 70 | 80 | 65 | 114 | 189 | 161 | 158 | 59 | 40 | 60 |
| 22..... | 72 | 61 | | 72 | | 112 | 212 | 131 | 776 | 59 | 38 | |
| 23..... | 71 | 59 | | 77 | | 112 | 168 | 116 | 129 | 64 | 112 | |
| 24..... | 71 | 59 | | 82 | | 110 | 154 | 108 | 304 | 64 | 44 | |
| 25..... | 71 | 59 | | 116 | | 106 | 151 | 102 | 246 | 61 | | |
| 26..... | 70 | 58 | 55 | 140 | 780 | 102 | 151 | 99 | 181 | 57 | | 60 |
| 27..... | 70 | 58 | | 106 | 806 | 106 | 147 | 99 | 114 | 53 | | |
| 28..... | 68 | 58 | | 83 | 732 | 102 | 133 | 99 | 223 | 52 | 40 | |
| 29..... | 70 | 58 | | | | 97 | 133 | 99 | 135 | 49 | | |
| 30..... | 70 | 78 | | 65 | | 95 | 133 | 101 | 101 | 61 | | |
| 31..... | 70 | | 59 | | | 95 | | 104 | | 52 | | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 104 | 68 | 75.8 | 0.833 | 0.96 |
| November..... | 120 | 58 | 66.7 | .733 | .82 |
| December..... | 168 | | 69.5 | .764 | .88 |
| January..... | 306 | | 105 | 1.15 | 1.33 |
| February..... | 806 | | 158 | 1.74 | 1.81 |
| March..... | 607 | 95 | 180 | 1.98 | 2.28 |
| April..... | 849 | 87 | 182 | 2.00 | 2.23 |
| May..... | 331 | 93 | 131 | 1.44 | 1.66 |
| June..... | 776 | 64 | 154 | 1.69 | 1.89 |
| July..... | 136 | 49 | 70.8 | .778 | .90 |
| August..... | 112 | | 50.0 | .549 | .63 |
| September..... | | | 60 | .659 | .74 |
| The year..... | 849 | | 108 | 1.19 | 16.13 |

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, 1929.

EXTREMES.—Maximum discharge during year, 2,060 second-feet June 22 (gage height, 9.28 feet); minimum, 23 second-feet Sept. 3-5 (gage height, 1.90 feet).

1911-1929; Maximum discharge, about 4,500 second-feet Sept. 5, 1926, and June 19, 1928 (gage height, 15.3 feet); minimum, 6 second-feet Aug. 25, 1911 (gage height, 0.18 foot).

REMARKS.—Records good. Discharge estimated because of ice during greater part of December, January, and February.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | |
|-----|------|-------|------|------|------|------|-------|-----|-------|------|-------|-------|----|
| 1 | 115 | 83 | 167 | 94 | 70 | 303 | 131 | 163 | 101 | 75 | 38 | 25 | |
| 2 | 101 | 83 | 107 | 133 | | 335 | 126 | 165 | 90 | 73 | | 24 | |
| 3 | 96 | 86 | 100 | 85 | | 283 | 120 | 243 | 90 | 68 | | 24 | |
| 4 | 95 | 125 | 94 | | | 250 | 126 | 178 | 88 | 60 | | 23 | |
| 5 | 94 | 131 | 89 | | | 612 | 177 | 168 | 86 | 59 | | 33 | |
| 6 | 142 | 96 | 85 | 273 | 126 | 643 | 173 | 163 | 104 | 59 | 38 | 35 | |
| 7 | 98 | 88 | 83 | 140 | | 340 | 134 | 206 | 90 | 58 | | 29 | |
| 8 | 90 | 86 | 83 | 90 | | 187 | 232 | 130 | 158 | 120 | | 54 | 41 |
| 9 | 89 | 85 | 82 | 100 | | 149 | 223 | 128 | 161 | 119 | | 73 | 30 |
| 10 | 89 | 83 | 79 | 267 | | 139 | 194 | 152 | 153 | 97 | | 59 | 32 |
| 11 | 86 | 83 | 78 | 171 | 90 | 185 | 141 | 142 | 88 | 59 | 38 | 30 | |
| 12 | 86 | 83 | 77 | 131 | | 182 | 163 | 134 | 83 | 56 | | 29 | |
| 13 | 85 | 85 | 76 | 94 | | 185 | 144 | 133 | 80 | 56 | | 26 | |
| 14 | 82 | 82 | 94 | | | 250 | 133 | 139 | 73 | 51 | | 43 | |
| 15 | 83 | 82 | 228 | | | 204 | 137 | 137 | 110 | 52 | | 37 | |
| 16 | 86 | 83 | 128 | 106 | 90 | 188 | 1,100 | 125 | 123 | 48 | 32 | 30 | |
| 17 | 86 | 82 | 111 | | | 172 | 873 | 118 | 86 | 48 | 30 | 34 | |
| 18 | 90 | 82 | 119 | | | 157 | 316 | 118 | 83 | 46 | 30 | 40 | |
| 19 | 96 | 106 | 104 | | | 127 | 152 | 232 | 120 | 87 | 46 | 29 | 32 |
| 20 | 88 | 98 | 100 | | | 114 | 150 | 211 | 147 | 100 | 43 | 29 | 30 |
| 21 | 83 | 85 | 94 | 100 | 120 | 144 | 266 | 158 | 87 | 40 | 27 | 29 | |
| 22 | 83 | 83 | 82 | 96 | | 142 | 426 | 136 | 397 | 41 | 27 | 29 | |
| 23 | 85 | 82 | | 95 | | 152 | 232 | 119 | 82 | 51 | 31 | 29 | |
| 24 | 89 | 82 | | 80 | | 145 | 199 | 114 | 79 | 47 | 30 | 29 | |
| 25 | 85 | 80 | | | | 136 | 194 | 118 | 98 | 43 | 27 | 29 | |
| 26 | 83 | 76 | 82 | 120 | 538 | 139 | 241 | 112 | 119 | 40 | 26 | 29 | |
| 27 | 83 | 78 | | | 856 | 139 | 187 | 106 | 83 | 38 | 29 | 28 | |
| 28 | 89 | 80 | | | 758 | 131 | 180 | 102 | 233 | 36 | 29 | 28 | |
| 29 | 88 | 85 | | | 82 | 128 | 187 | 104 | 162 | 33 | 25 | 31 | |
| 30 | 83 | 166 | | | | 133 | 163 | 104 | 85 | 32 | 26 | 82 | |
| 31 | 83 | ----- | | | | 82 | ----- | 144 | ----- | 104 | ----- | 31 | 26 |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 142 | 82 | 90.7 | 0.714 | 0.82 |
| November | 166 | 76 | 90.3 | .711 | .79 |
| December | 228 | | 96.1 | .757 | .87 |
| January | 273 | | 118 | .929 | 1.07 |
| February | 856 | | 179 | 1.41 | 1.47 |
| March | 643 | 128 | 218 | 1.72 | 1.98 |
| April | 1,100 | 120 | 237 | 1.87 | 2.09 |
| May | 243 | 102 | 140 | 1.10 | 1.27 |
| June | 397 | 73 | 111 | .874 | .98 |
| July | 75 | 31 | 50.8 | .400 | .46 |
| August | | 25 | 33.0 | .260 | .30 |
| September | 82 | 23 | 32.3 | .254 | .28 |
| The year | 1,100 | 23 | 116 | .913 | 12.38 |

POTOMAC RIVER BASIN

NORTH BRANCH OF POTOMAC RIVER AT BLOOMINGTON, Ist D.

LOCATION.—Water-stage recorder at Bloomington, Garrett County, 2 miles above Piedmont, W. Va. Savage River enters 600 feet below bridge.

DRAINAGE AREA.—287 square miles.

RECORDS AVAILABLE.—October, 1924, to September, 1927; July to September, 1929.

EXTREMES.—Maximum discharge during period of July to September, 1929, 676 second-feet July 12 (gage height, 4.4 feet); minimum not determined.

1924-1927, 1929: Maximum discharge, 5,250 second-feet Aug. 19, 1926 (gage height, 8.85 feet); minimum not determined.

Maximum stage known, 20.3 feet Mar. 29, 1924.

REMARKS.—Records fair. Low-water flow affected by storage reservoir on Stony River; capacity, 204,000,000 cubic feet.

Daily and monthly discharge, in second-feet, 1929

| Day | July | Aug. | Sept. | Day | July | Aug. | Sept. | Day | July | Aug. | Sept. |
|----------------|------|------|-------|---------|------|---------|-------|---------|------|-----------------|-------------------|
| 1..... | 155 | 61 | 38 | 11..... | 61 | 60 | 77 | 21..... | 54 | 50 | 40 |
| 2..... | | 57 | 37 | 12..... | 89 | 84 | 59 | 22..... | 50 | 50 | 31 |
| 3..... | | 60 | 35 | 13..... | 368 | 76 | 51 | 23..... | 50 | 54 | 27 |
| 4..... | | 86 | 35 | 14..... | 155 | 65 | 47 | 24..... | 50 | 155 | |
| 5..... | | 124 | 35 | 15..... | 139 | 59 | 39 | 25..... | 66 | 99 | |
| 6..... | 147 | 74 | 35 | 16..... | 111 | 56 | 39 | 26..... | 66 | 64 | 22 |
| 7..... | 103 | 70 | 36 | 17..... | 83 | 53 | 45 | 27..... | 83 | 50 | |
| 8..... | 104 | 66 | 48 | 18..... | 73 | 53 | 149 | 28..... | 70 | 46 | |
| 9..... | 73 | 60 | 269 | 19..... | 68 | 59 | 94 | 29..... | 66 | 42 | |
| 10..... | 62 | 59 | 134 | 20..... | 59 | 51 | 57 | 30..... | 68 | 42 | |
| | | | | | | | | 31..... | 74 | 39 | |
| Month | | | | Maximum | | Minimum | | Mean | | Per square mile | Run-off in inches |
| July 6-31..... | | | | 368 | | 50 | | 92.0 | | 0.321 | 0.31 |
| August..... | | | | 155 | | 39 | | 65.3 | | .228 | .26 |
| September..... | | | | 269 | | | | 53.7 | | .187 | .21 |

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. Prior to June 18, 1929, a chain gage was used.

DRAINAGE AREA.—877 square miles.

RECORDS AVAILABLE.—May to September, 1929.

EXTREMES.—Maximum discharge during period, about 6,040 second-feet June 23-24 (gage height, 8.5 feet); minimum, 39 second-feet Sept. 27 and 28 (gage height, 2.66 feet).

Maximum stage known, 28.4 feet Mar. 29, 1924.

REMARKS.—Records good below 2,000 second-feet and fair above. Chesapeake & Ohio Canal diverts from river at canal head gates 2 miles above station. Cumberland water supply, diverted from Evitts Creek, wastes into canal. Mean flow in canal was about 45 second-feet during summer of 1929; not included in discharge records.

Daily and monthly discharge, in second-feet, 1929

| Day | May | June | July | Aug. | Sept. | Day | May | June | July | Aug. | Sept. |
|-----|-----|-------|------|------|-------|-----|-------|-------|------|------|-------|
| 1 | | 2,080 | 611 | 106 | 72 | 16 | | 345 | 194 | 101 | 90 |
| 2 | | 1,520 | 512 | 99 | 70 | 17 | | 320 | 186 | 94 | 220 |
| 3 | | 1,220 | 406 | 116 | 59 | 18 | | 300 | 158 | 85 | |
| 4 | | 989 | 340 | 169 | 52 | 19 | | 271 | 141 | 92 | 131 |
| 5 | | 842 | 305 | 276 | 54 | 20 | | 252 | 126 | 99 | |
| 6 | | 695 | 285 | 211 | 54 | 21 | | 242 | 123 | 88 | 94 |
| 7 | | 646 | 325 | 141 | 85 | 22 | | 216 | 113 | 85 | 79 |
| 8 | | 917 | 266 | 123 | 118 | 23 | | 994 | 101 | | 62 |
| 9 | | 1,470 | 229 | 113 | | 24 | 1,740 | 2,680 | 101 | | 55 |
| 10 | | 935 | 202 | 106 | | 25 | 1,520 | 1,170 | 103 | 180 | 48 |
| 11 | | 709 | 177 | 118 | 260 | 26 | 1,220 | 890 | 108 | | 42 |
| 12 | | 611 | 198 | 120 | | 27 | 1,020 | 754 | 128 | | 41 |
| 13 | | 518 | 240 | 154 | | 28 | 980 | 802 | 128 | 90 | 42 |
| 14 | | 442 | 384 | 135 | 108 | 29 | 2,730 | 1,070 | 118 | 83 | 47 |
| 15 | | 400 | 247 | 110 | 94 | 30 | 5,010 | 842 | 103 | 75 | 54 |
| | | | | | | 31 | 2,920 | | 103 | 73 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| May 24-31 | 5,010 | 980 | 2,140 | 2.44 | 0.73 |
| June | 2,680 | 216 | 838 | .956 | 1.07 |
| July | 611 | 101 | 218 | .249 | .29 |
| August | 276 | 73 | 128 | .146 | .17 |
| September | | 41 | 117 | .133 | .15 |

POTOMAC RIVER AT SHEPHERDSTOWN, W. VA.

LOCATION.—Water-stage recorder at highway bridge at Shepherdstown, Jefferson County. Antietam Creek enters 3.3 miles below station. Zero of gage is 281.00 feet above mean sea level.

DRAINAGE AREA.—5,970 square miles.

RECORDS AVAILABLE.—August, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, 124,000 second-feet Apr. 17 (gage height, 25.53 feet); minimum, 520 second-feet Aug. 20 and Sept. 26 (gage height, 1.51 feet).

1928-29: Maximum and minimum discharge same as given above.

Maximum stage known, 39.2 feet May 31 or June 1, 1889.

REMARKS.—Records good. Discharge estimated because of ice Jan. 25 to Feb. 6. Dams above station cause fluctuations during low water.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|--------|--------|---------|--------|--------|-------|-------|-------|
| 1..... | 1,770 | 1,160 | 1,680 | 1,900 | 2,700 | 42,800 | 3,900 | 10,400 | 11,400 | 2,950 | 881 | 855 |
| 2..... | 1,810 | 1,070 | 2,670 | 2,070 | | 34,500 | 4,020 | 9,300 | 8,620 | 2,650 | 830 | 661 |
| 3..... | 1,790 | 1,160 | 7,060 | 2,010 | | 30,400 | 3,780 | 13,400 | 6,620 | 2,280 | 792 | 780 |
| 4..... | 1,720 | 1,200 | 5,540 | 1,940 | | 26,300 | 3,540 | 22,000 | 5,280 | 2,030 | 1,010 | 707 |
| 5..... | 1,680 | 1,190 | 4,260 | 2,090 | | 21,200 | 3,540 | 18,800 | 4,520 | 1,760 | 842 | 718 |
| 6..... | 1,790 | 1,130 | 3,420 | 1,920 | 2,400 | 19,900 | 6,500 | 14,700 | 3,900 | 1,860 | 855 | 707 |
| 7..... | 2,240 | 1,180 | 2,800 | 2,860 | | 50,300 | 11,800 | 12,100 | 3,540 | 1,740 | 881 | 661 |
| 8..... | 1,970 | 1,180 | 2,420 | 3,180 | | 4,890 | 36,500 | 10,000 | 11,000 | 3,800 | 1,670 | 855 |
| 9..... | 1,770 | 1,180 | 2,120 | 2,540 | | 5,670 | 22,200 | 7,820 | 9,650 | 3,300 | 1,600 | 972 |
| 10..... | 1,650 | 1,220 | 1,950 | 1,990 | | 5,280 | 15,800 | 6,920 | 7,820 | 3,900 | 1,580 | 972 |
| 11..... | 1,620 | 1,070 | 1,770 | 3,780 | 2,710 | 11,800 | 13,000 | 6,920 | 4,020 | 1,600 | 946 | 1,070 |
| 12..... | 1,580 | 1,130 | 1,620 | 4,140 | | 9,650 | 20,300 | 6,200 | 3,660 | 1,650 | 946 | 1,010 |
| 13..... | 1,560 | 1,080 | 1,500 | 5,800 | | 3,420 | 8,620 | 15,100 | 5,670 | 3,060 | 1,480 | 984 |
| 14..... | 1,290 | 1,030 | 1,580 | 4,260 | | 8,620 | 11,800 | 5,410 | 2,820 | 1,450 | 815 | 996 |
| 15..... | 1,460 | 1,090 | 1,920 | 3,780 | | 10,700 | 9,650 | 5,280 | 2,770 | 1,500 | 1,120 | 1,280 |
| 16..... | 1,350 | 1,030 | 2,910 | 3,540 | 2,710 | 12,800 | 24,900 | 5,410 | 2,560 | 1,500 | 1,090 | 1,120 |
| 17..... | 1,150 | 1,080 | 4,640 | 2,730 | | 12,500 | 108,000 | 5,020 | 2,600 | 1,550 | 1,080 | 1,150 |
| 18..... | 1,080 | 1,180 | 4,760 | 2,710 | | 11,000 | 88,900 | 4,640 | 2,520 | 1,460 | 1,070 | 1,310 |
| 19..... | 1,040 | 1,230 | 4,020 | 3,300 | | 9,300 | 36,200 | 4,520 | 2,360 | 1,420 | 933 | 1,530 |
| 20..... | 985 | 1,350 | 3,540 | 3,540 | | 7,660 | 24,600 | 4,390 | 1,970 | 1,280 | 707 | 1,120 |
| 21..... | 1,080 | 1,400 | 3,420 | 4,640 | 2,950 | 3,180 | 19,900 | 5,020 | 1,790 | 1,350 | 780 | 1,050 |
| 22..... | 1,090 | 1,840 | 2,880 | 4,640 | | 3,060 | 6,060 | 18,200 | 8,020 | 1,700 | 1,150 | 959 |
| 23..... | 1,080 | 2,180 | 2,400 | 3,780 | | 3,900 | 5,670 | 20,900 | 15,000 | 1,580 | 881 | 780 |
| 24..... | 1,090 | 2,070 | 1,990 | 3,540 | | 3,180 | 5,540 | 19,000 | 10,700 | 1,740 | 933 | 855 |
| 25..... | 1,160 | 1,920 | 1,830 | | | 2,950 | 5,540 | 14,400 | 7,970 | 3,390 | 1,050 | 830 |
| 26..... | 1,230 | 1,810 | 1,810 | 3,000 | 2,950 | 5,410 | 13,900 | 6,620 | 5,280 | 972 | 815 | 672 |
| 27..... | 1,200 | 1,700 | 1,920 | | 6,330 | 5,020 | 13,900 | 5,670 | 3,780 | 805 | 742 | 672 |
| 28..... | 1,190 | 1,600 | 2,010 | | 32,400 | 4,760 | 12,500 | 5,150 | 3,180 | 1,050 | 755 | 672 |
| 29..... | 1,150 | 1,530 | 2,010 | | | 4,520 | 11,800 | 5,150 | 2,930 | 792 | 780 | 684 |
| 30..... | 1,120 | 1,580 | 1,940 | | | 4,260 | 11,400 | 6,180 | 2,860 | 742 | 1,030 | 868 |
| 31..... | 1,190 | | 1,840 | | | 4,020 | | 11,200 | | 920 | 755 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|--------|-----------------|-------------------|
| October..... | 2,240 | 985 | 1,420 | 0.238 | 0.27 |
| November..... | 2,180 | 1,030 | 1,350 | .226 | .25 |
| December..... | 7,060 | 1,500 | 2,780 | .466 | .54 |
| January..... | 5,800 | 1,900 | 3,150 | .528 | .61 |
| February..... | 32,400 | | 4,440 | .744 | .77 |
| March..... | 50,300 | 4,020 | 14,800 | 2.48 | 2.86 |
| April..... | 108,000 | 3,540 | 19,000 | 3.18 | 3.55 |
| May..... | 22,000 | 4,390 | 8,690 | 1.46 | 1.68 |
| June..... | 11,400 | 1,580 | 3,700 | .620 | .69 |
| July..... | 2,950 | 742 | 1,470 | .246 | .28 |
| August..... | 1,120 | 707 | 879 | .147 | .17 |
| September..... | 1,530 | 573 | 896 | .150 | .17 |
| The year..... | 108,000 | 573 | 5,210 | .873 | 11.84 |

POTOMAC RIVER AT POINT OF ROCKS, MD.

LOCATION.—Chain gage at highway bridge at Point of Rocks, Frederick County, one-third mile below Catoctin Creek and 6 miles above Monocacy River.

DRAINAGE AREA.—9,650 square miles.

RECORDS AVAILABLE.—February, 1895, to September, 1929.

EXTREMES.—Maximum discharge during year, 180,000 second-feet Apr. 18 (gage height, 24.94 feet); minimum, 1,000 second-feet Aug. 29 to Sept. 4 (gage height, 0.70 foot).

1895-1929: 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 in 1889 (discharge, about 320,000 second-feet).

REMARKS.—Records good. The Chesapeake & Ohio Canal parallels the river on the Maryland side; flow not included in discharge records.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|-------|--------|--------|---------|--------|--------|-------|-------|-------|
| 1 | 3,960 | 2,150 | 1,650 | 2,550 | 4,480 | 62,800 | 6,760 | 12,400 | 16,900 | 5,590 | 2,020 | 1,130 |
| 2 | 3,630 | 1,900 | 1,900 | 2,420 | 4,130 | 55,900 | 6,760 | 11,500 | 13,400 | 4,840 | 1,900 | 1,130 |
| 3 | 3,630 | 1,650 | 9,640 | 2,280 | 4,300 | 47,700 | 6,370 | 23,800 | 11,500 | 4,480 | 1,770 | 1,130 |
| 4 | 3,790 | 1,650 | 8,790 | 2,280 | 4,480 | 38,100 | 6,370 | 43,500 | 10,500 | 4,130 | 1,770 | 1,130 |
| 5 | 3,630 | 1,650 | 7,970 | 2,020 | 4,480 | 32,900 | 5,980 | 31,700 | 9,640 | 3,790 | 1,770 | 1,210 |
| 6 | 3,310 | 1,560 | 7,160 | 6,370 | 4,840 | 65,200 | 5,590 | 24,400 | 9,210 | 3,470 | 1,770 | 1,240 |
| 7 | 3,470 | 1,560 | 4,660 | 4,840 | 5,210 | 81,400 | 10,100 | 21,100 | 8,790 | 3,790 | 1,770 | 1,320 |
| 8 | 3,630 | 1,420 | 3,960 | 4,480 | 7,560 | 49,200 | 14,800 | 18,400 | 8,380 | 4,300 | 1,720 | 1,240 |
| 9 | 3,630 | 1,420 | 3,630 | 4,130 | 9,210 | 34,200 | 11,900 | 15,800 | 7,970 | 3,790 | 1,670 | 1,240 |
| 10 | 3,470 | 1,340 | 3,310 | 5,980 | 8,790 | 26,000 | 9,640 | 13,800 | 7,560 | 3,470 | 1,670 | 1,320 |
| 11 | 3,310 | 1,650 | 2,700 | 5,980 | 8,380 | 18,400 | 10,500 | 12,400 | 7,160 | 3,790 | 1,720 | 1,530 |
| 12 | 3,000 | 2,150 | 2,420 | 7,560 | 7,970 | 17,900 | 24,400 | 11,000 | 6,760 | 3,790 | 1,720 | 1,900 |
| 13 | 2,700 | 2,150 | 2,150 | 6,370 | 6,760 | 17,400 | 19,000 | 10,100 | 6,370 | 7,560 | 1,770 | 1,530 |
| 14 | 2,700 | 1,900 | 2,150 | 5,210 | 5,980 | 17,400 | 18,400 | 9,210 | 5,980 | 7,160 | 1,670 | 1,530 |
| 15 | 2,700 | 1,650 | 4,130 | 4,480 | 5,590 | 16,900 | 19,000 | 9,210 | 4,840 | 6,760 | 1,530 | 1,770 |
| 16 | 2,700 | 1,650 | 4,840 | 4,130 | 4,840 | 19,500 | 20,600 | 8,790 | 4,840 | 6,370 | 1,450 | 1,900 |
| 17 | 2,550 | 1,420 | 8,790 | 3,470 | 4,480 | 18,400 | 146,000 | 8,380 | 5,210 | 5,980 | 1,320 | 1,900 |
| 18 | 2,420 | 1,650 | 10,100 | 3,150 | 4,300 | 16,900 | 158,000 | 7,970 | 4,480 | 4,840 | 1,320 | 2,020 |
| 19 | 2,420 | 1,900 | 6,760 | 2,840 | 4,130 | 13,400 | 55,200 | 7,560 | 4,660 | 3,790 | 1,320 | 2,280 |
| 20 | 2,150 | 2,150 | 5,980 | 4,840 | 4,300 | 12,900 | 36,100 | 7,160 | 4,480 | 3,470 | 1,320 | 2,020 |
| 21 | 2,150 | 2,420 | 5,590 | 5,590 | 4,480 | 11,500 | 29,400 | 7,560 | 4,130 | 3,150 | 1,320 | 1,770 |
| 22 | 2,150 | 2,700 | 4,840 | 7,160 | 4,660 | 10,500 | 29,400 | 11,500 | 3,790 | 2,840 | 1,320 | 1,530 |
| 23 | 2,150 | 2,700 | 3,790 | 5,980 | 4,480 | 10,100 | 31,700 | 25,500 | 3,470 | 2,700 | 1,320 | 1,530 |
| 24 | 2,020 | 3,000 | 3,470 | 5,590 | 4,480 | 10,100 | 26,600 | 18,400 | 3,150 | 2,550 | 1,280 | 1,530 |
| 25 | 2,020 | 2,840 | 3,310 | 5,210 | 4,840 | 9,640 | 22,700 | 13,400 | 3,150 | 2,420 | 1,210 | 1,450 |
| 26 | 1,900 | 2,700 | 3,150 | 4,840 | 6,370 | 9,210 | 21,100 | 11,500 | 5,980 | 2,280 | 1,210 | 1,320 |
| 27 | 1,900 | 2,550 | 2,840 | 4,840 | 20,000 | 8,790 | 20,600 | 10,380 | 8,380 | 2,020 | 1,210 | 1,320 |
| 28 | 1,900 | 2,150 | 3,150 | 4,480 | 61,300 | 8,380 | 20,000 | 10,100 | 7,560 | 1,770 | 1,170 | 1,320 |
| 29 | 2,020 | 1,900 | 3,630 | 4,840 | ----- | 7,970 | 17,400 | 9,640 | 7,160 | 1,770 | 1,130 | 1,320 |
| 30 | 2,020 | 1,900 | 3,150 | 4,840 | ----- | 7,560 | 13,400 | 11,000 | 6,370 | 1,900 | 1,130 | 1,400 |
| 31 | 2,150 | ----- | 2,840 | 4,480 | ----- | 7,160 | ----- | 16,900 | ----- | 1,770 | 1,130 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|--------|-----------------|-------------------|
| October | 3,960 | 1,900 | 2,750 | 0.285 | .33 |
| November | 3,000 | 1,340 | 1,980 | .205 | .23 |
| December | 10,100 | 1,650 | 4,600 | .477 | .55 |
| January | 7,560 | 2,020 | 4,620 | .479 | .55 |
| February | 61,300 | 4,130 | 8,030 | .832 | .87 |
| March | 81,400 | 7,160 | 24,600 | 2.55 | 2.94 |
| April | 156,000 | 5,590 | 27,400 | 2.84 | 3.17 |
| May | 43,500 | 7,160 | 14,700 | 1.52 | 1.75 |
| June | 16,900 | 3,150 | 7,070 | .733 | .82 |
| July | 7,560 | 1,770 | 3,920 | .406 | .47 |
| August | 2,020 | 1,130 | 1,500 | .155 | .18 |
| September | 2,280 | 1,130 | 1,500 | .155 | .17 |
| The year | 156,000 | 1,130 | 8,550 | .886 | 12.03 |

SAVAGE RIVER AT BLOOMINGTON, MD.

LOCATION.—Water-stage recorder at Bloomington, Garrett County, three-fourths mile above mouth, and 2 miles above Piedmont, W. Va. From Aug. 19 to Sept. 7, 1929, a staff gage at same site was used. Prior to Aug. 19, 1929, gage was 2,000 feet downstream.

DRAINAGE AREA.—114 square miles.

RECORDS AVAILABLE.—May, 1905, to July, 1906; October, 1924, to September, 1927; August to September, 1929.

EXTREMES.—Maximum discharge during August and September, 1929, about 650 second-feet Sept. 8 (gage height, 3.73 feet); minimum, 2.8 second-feet Sept. 4 (gage height, 1.04 feet).

1924-1927, 1929: Maximum discharge, 2,730 second-feet Nov. 13, 1925; minimum, 2.4 second-feet Sept. 11, 1924.

REMARKS.—Records good. Discharge estimated Sept. 2, 3, and 6. Some water diverted by cities of Piedmont and Westernport for water supply and by Baltimore & Ohio Railroad.

Daily and monthly discharge, in second-feet, 1929

| Day | Aug. | Sept. | Day | Aug. | Sept. | Day | Aug. | Sept. |
|-----|------|-------|-----|------|-------|-----|------|-------|
| 1 | | 5 | 11 | | 38 | 21 | 7 | 12 |
| 2 | | 5 | 12 | | 25 | 22 | 6 | 16 |
| 3 | | 4 | 13 | | 18 | 23 | 6 | 9 |
| 4 | | 3 | 14 | | 27 | 24 | 22 | 9 |
| 5 | | 4 | 15 | | 22 | 25 | 13 | 8 |
| 6 | | 4 | 16 | | 16 | 26 | 8 | 8 |
| 7 | | 3 | 17 | | 20 | 27 | 7 | 7 |
| 8 | | 49 | 18 | | 25 | 28 | 6 | 7 |
| 9 | | 179 | 19 | 11 | 16 | 29 | 5 | 7 |
| 10 | | 64 | 20 | 11 | 13 | 30 | 5 | 8 |
| | | | | | | 31 | 5 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|--------------|---------|---------|------|-----------------|-------------------|
| August 19-31 | 22 | 5 | 8.6 | 0.075 | 0.04 |
| September | 179 | 3 | 20.8 | .182 | .20 |

EVITTS CREEK NEAR CUMBERLAND, MD.

LOCATION.—Chain gage 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 to September, 1929.

EXTREMES.—Maximum discharge during period, 36 second-feet Sept. 9 (gage height, 1.90 feet); minimum, 3.2 second-feet Aug. 31 (gage height, 1.30 feet).

REMARKS.—Records good. Slight regulation caused by gate changes at Lake Gordon, 8 miles upstream. Diversion for Cumberland water supply above station.

Daily and monthly discharge, in second-feet, 1929

| Day | Aug. | Sept. | Day | Aug. | Sept. | Day | Aug. | Sept. |
|---------|------|-------|---------|------|-------|---------|------|-------|
| 1..... | | 5 | 11..... | 8 | 9 | 21..... | 5 | 6 |
| 2..... | | 5 | 12..... | 7 | 8 | 22..... | 5 | 6 |
| 3..... | | 5 | 13..... | 5 | 9 | 23..... | 11 | 8 |
| 4..... | 12 | 7 | 14..... | 5 | 29 | 24..... | 8 | 13 |
| 5..... | | 8 | 15..... | 7 | 15 | 25..... | 5 | 7 |
| 6..... | | 8 | 16..... | 5 | 8 | 26..... | 5 | 8 |
| 7..... | | 7 | 17..... | 9 | 12 | 27..... | 5 | 8 |
| 8..... | 11 | 31 | 18..... | 6 | 11 | 28..... | 5 | 15 |
| 9..... | 7 | 33 | 19..... | 6 | 11 | 29..... | 5 | 7 |
| 10..... | 6 | 20 | 20..... | 5 | 13 | 30..... | 6 | 8 |
| | | | | | | 31..... | 4 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|------------------|---------|---------|------|-----------------|-------------------|
| August 8-31..... | 11 | 4 | 6.3 | 0.066 | 0.02 |
| September..... | 33 | 5 | 11.3 | .118 | .13 |

SOUTH BRANCH OF POTOMAC RIVER NEAR PETERSBURG, W. VA.

LOCATION.—Water-stage recorder 1.2 miles below 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. Staff gage 100 feet downstream was used prior to Dec. 4, 1928.

DRAINAGE AREA.—642 square miles.

RECORDS AVAILABLE.—June, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, about 7,460 second-feet Feb. 28 (gage height, 8.73 feet); minimum, 53 second-feet Aug. 22 (gage height, 1.47 feet).

1928-29: Maximum and minimum discharge, same as given above.

REMARKS.—Records fair prior to Dec. 3 and good thereafter. Discharge estimated because of ice Jan. 5-9, 13-18, 30, 31, and Feb. 1-13. Regulation caused by operation of power plant 800 feet above station.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1 | 262 | 158 | 2,910 | 309 | | 3,820 | 610 | 1,090 | 1,700 | 301 | 123 | 66 |
| 2 | 206 | 153 | 1,470 | 378 | | 2,400 | 578 | 1,060 | 1,310 | 255 | 115 | 81 |
| 3 | 184 | 147 | 985 | 317 | | 1,740 | 540 | 2,190 | 1,060 | 285 | 106 | 73 |
| 4 | 169 | 164 | 770 | 270 | | 1,520 | 525 | 2,180 | 890 | 240 | 115 | 66 |
| 5 | 161 | 194 | 632 | | | 3,410 | 893 | 1,780 | 750 | 213 | 144 | 70 |
| 6 | 155 | 200 | 535 | | | 5,010 | 1,090 | 1,430 | 660 | 220 | 128 | 79 |
| 7 | 161 | 175 | 455 | 250 | 220 | 3,400 | 890 | 1,230 | 580 | 258 | 125 | 77 |
| 8 | 153 | 167 | 410 | | | 1,930 | 788 | 1,020 | 578 | 216 | 110 | 79 |
| 9 | 142 | 167 | 360 | | | 1,650 | 726 | 890 | 1,020 | 190 | 106 | 98 |
| 10 | 139 | 169 | 390 | 962 | | 1,200 | 742 | 788 | 812 | 175 | 103 | 128 |
| 11 | 136 | 169 | 301 | 1,480 | | 1,060 | 748 | 710 | 649 | 169 | 96 | 128 |
| 12 | 134 | 169 | 305 | 985 | | 890 | 710 | 649 | 550 | 181 | 96 | 86 |
| 13 | 128 | 184 | 297 | | | 878 | 660 | 616 | 495 | 190 | 101 | 103 |
| 14 | 123 | 172 | 301 | | 266 | 1,120 | 610 | 649 | 720 | 200 | 96 | 90 |
| 15 | 123 | 200 | 722 | | 277 | 1,600 | 654 | 638 | 654 | 190 | 92 | 79 |
| 16 | 123 | 226 | 732 | 450 | 277 | 1,430 | 3,720 | 588 | 570 | 190 | 96 | 96 |
| 17 | 128 | 220 | 666 | | 262 | 1,230 | 3,990 | 561 | 495 | 161 | 88 | 90 |
| 18 | 131 | 206 | 742 | | 255 | 1,060 | 2,730 | 530 | 460 | 155 | 92 | 81 |
| 19 | 142 | 213 | 764 | 1,120 | 309 | 920 | 2,340 | 556 | 465 | 184 | 86 | 90 |
| 20 | 169 | 360 | 693 | 1,090 | 455 | 836 | 2,620 | 799 | 410 | 169 | 86 | 90 |
| 21 | 147 | 446 | 600 | 890 | 405 | 764 | 2,450 | 4,590 | 378 | 147 | 77 | 90 |
| 22 | 136 | 423 | 480 | 770 | 364 | 715 | 2,500 | 2,860 | 347 | 142 | 64 | 75 |
| 23 | 136 | 387 | 460 | 732 | 313 | 726 | 1,930 | 1,830 | 382 | 134 | 81 | 83 |
| 24 | 172 | 351 | 432 | 688 | 281 | 794 | 1,560 | 1,390 | 420 | 134 | 86 | 71 |
| 25 | 206 | 343 | 400 | 851 | 343 | 764 | 1,310 | 1,160 | 561 | 125 | 92 | 81 |
| 26 | 194 | 351 | 364 | 1,390 | 2,910 | 742 | 1,270 | 1,120 | 485 | 123 | 115 | 81 |
| 27 | 178 | 301 | 347 | 1,120 | 4,230 | 742 | 1,160 | 1,160 | 460 | 125 | 92 | 64 |
| 28 | 169 | 309 | 343 | 950 | 5,250 | 682 | 1,020 | 1,140 | 350 | 142 | 81 | 71 |
| 29 | 172 | 293 | 347 | 742 | | 632 | 1,230 | 2,430 | 382 | 158 | 81 | 77 |
| 30 | 172 | 525 | 360 | 400 | | 622 | 1,200 | 2,970 | 384 | 134 | 77 | 62 |
| 31 | 164 | | 313 | 300 | | 654 | | 2,130 | | 125 | 79 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 262 | 123 | 159 | 0.248 | 0.29 |
| November | 525 | 147 | 251 | .391 | .44 |
| December | 2,910 | 297 | 607 | .945 | 1.09 |
| January | 1,480 | | 635 | .989 | 1.14 |
| February | 5,250 | | 681 | 1.06 | 1.10 |
| March | 5,010 | 622 | 1,450 | 2.26 | 2.61 |
| April | 3,990 | 525 | 1,390 | 2.17 | 2.42 |
| May | 4,590 | 530 | 1,380 | 2.15 | 2.48 |
| June | 1,700 | 334 | 629 | .980 | 1.09 |
| July | 301 | 123 | 182 | .283 | .33 |
| August | 144 | 64 | 97.7 | .152 | .18 |
| September | 128 | 62 | 83.5 | .130 | .14 |
| The year | 5,250 | 62 | 629 | .980 | 13.31 |

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, 1929.

EXTREMES.—Maximum discharge during year, about 21,100 second-feet Apr. 17 (gage height, 19.13 feet); minimum, 98 second-feet Sept. 3 (gage height, 0.97 foot).

1928-29: Maximum and minimum discharge, same as given above.

REMARKS.—Records good. Discharge estimated because of ice Jan. 6-10, 14-18, 30, 31, and Feb. 1-14.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|-------|-------|--------|--------|-------|-------|------|------|-------|
| 1 | 325 | 249 | 1,510 | 462 | | 11,500 | 989 | 2,100 | 3,540 | 524 | 161 | 110 |
| 2 | 366 | 243 | 3,210 | 454 | | 7,080 | 922 | 2,000 | 2,620 | 454 | 152 | 106 |
| 3 | 366 | 232 | 1,950 | 508 | | 6,070 | 847 | 3,070 | 2,000 | 417 | 171 | 103 |
| 4 | 319 | 238 | 1,350 | 439 | | 4,310 | 847 | 4,640 | 1,600 | 395 | 161 | 103 |
| 5 | 299 | 243 | 1,050 | 417 | | 5,080 | 1,350 | 3,760 | 1,350 | 380 | 157 | 103 |
| 6 | 286 | 255 | 847 | | | 13,100 | 2,000 | 3,100 | 1,120 | 359 | 161 | 100 |
| 7 | 262 | 280 | 746 | | | 9,360 | 1,850 | 2,520 | 970 | 339 | 180 | 103 |
| 8 | 249 | 262 | 649 | 400 | 400 | 6,290 | 1,600 | 2,050 | 894 | 402 | 175 | 110 |
| 9 | 243 | 249 | 581 | | | 4,420 | 1,350 | 1,700 | 922 | 359 | 166 | 128 |
| 10 | 238 | 243 | 516 | | | 3,210 | 1,450 | 1,450 | 1,450 | 319 | 152 | 139 |
| 11 | 238 | 243 | 446 | 2,360 | | 2,410 | 1,750 | 1,300 | 1,170 | 293 | 152 | 152 |
| 12 | 232 | 249 | 439 | 1,800 | | 2,050 | 1,550 | 1,170 | 913 | 325 | 148 | 161 |
| 13 | 221 | 249 | 446 | 1,260 | | 1,800 | 1,400 | 1,100 | 791 | 573 | 139 | 166 |
| 14 | 216 | 255 | 462 | | | 1,800 | 1,210 | 1,070 | 719 | 395 | 132 | 180 |
| 15 | 211 | 268 | 581 | | 469 | 2,410 | 1,260 | 1,110 | 1,100 | 353 | 143 | 171 |
| 16 | 205 | 274 | 1,060 | 650 | 477 | 2,780 | 9,800 | 1,050 | 1,010 | 339 | 136 | 139 |
| 17 | 205 | 266 | 1,060 | | 446 | 2,570 | 16,700 | 970 | 856 | 339 | 132 | 139 |
| 18 | 211 | 305 | 970 | | 446 | 2,200 | 8,880 | 922 | 737 | 299 | 139 | 136 |
| 19 | 216 | 305 | 1,040 | 1,150 | 431 | 1,850 | 6,400 | 913 | 675 | 268 | 157 | 132 |
| 20 | 221 | 312 | 1,060 | 1,650 | 469 | 1,600 | 5,630 | 1,010 | 606 | 262 | 128 | 132 |
| 21 | 243 | 380 | 960 | 1,400 | 658 | 1,450 | 5,410 | 4,780 | 590 | 268 | 121 | 132 |
| 22 | 249 | 540 | 847 | 1,180 | 632 | 1,300 | 6,510 | 7,560 | 573 | 243 | 117 | 132 |
| 23 | 243 | 532 | 675 | 1,040 | 549 | 1,220 | 5,740 | 4,640 | 590 | 216 | 124 | 136 |
| 24 | 243 | 508 | 640 | 1,040 | 501 | 1,220 | 4,200 | 3,210 | 737 | 205 | 132 | 132 |
| 25 | 243 | 462 | 632 | 1,130 | 485 | 1,240 | 3,320 | 2,410 | 710 | 205 | 136 | 128 |
| 26 | 274 | 446 | 590 | 2,100 | 1,350 | 1,180 | 2,880 | 2,100 | 810 | 200 | 136 | 121 |
| 27 | 305 | 454 | 532 | 2,150 | 9,680 | 1,120 | 2,680 | 2,050 | 764 | 189 | 132 | 124 |
| 28 | 298 | 417 | 508 | 1,750 | 9,480 | 1,090 | 2,310 | 2,150 | 658 | 180 | 139 | 121 |
| 29 | 262 | 395 | 485 | 1,350 | | 1,010 | 2,260 | 3,430 | 606 | 171 | 139 | 117 |
| 30 | 255 | 410 | 501 | 900 | | 980 | 2,310 | 4,970 | 557 | 189 | 121 | 124 |
| 31 | 255 | | 508 | 700 | | 989 | | 4,640 | | 184 | 117 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 366 | 205 | 258 | 0.176 | .20 |
| November | 540 | 232 | 326 | .222 | .25 |
| December | 3,210 | | 866 | .689 | .68 |
| January | 2,360 | | 984 | .669 | .77 |
| February | 9,680 | | 1,130 | .769 | .80 |
| March | 13,100 | 980 | 3,380 | 2.30 | 2.65 |
| April | 16,700 | 847 | 3,510 | 2.39 | 2.67 |
| May | 7,560 | 913 | 2,550 | 1.73 | 1.99 |
| June | 3,540 | 557 | 1,050 | .714 | .80 |
| July | 573 | 171 | 311 | .212 | .24 |
| August | 180 | 117 | 144 | .098 | .11 |
| September | 180 | 100 | 129 | .088 | .10 |
| The year | 16,700 | 100 | 1,220 | .830 | 11.28 |

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. Stoney Creek enters 2 miles downstream from station.

DRAINAGE AREA.—271 square miles.

RECORDS AVAILABLE.—June, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, about 5,700 second-feet Apr. 16 (gage height, 7.65 feet); minimum, 10 second-feet Sept. 2, 3, and 5 (gage height, 1.98 feet).

1928-29: Maximum and minimum discharge, same as given above.

REMARKS.—Records good below 300 second-feet and fair above. Discharge estimated because of ice Dec. 9-11, 23, 24, Jan. 3-9, 14-17, 30, 31, and Feb. 1-15.

Daily and monthly discharge, in second-feet, of 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|------|------|------|-------|-------|-------|-------|------|------|------|-------|
| 1..... | 80 | 36 | 63 | 69 | | 1,910 | 141 | 353 | 279 | 94 | 26 | 16 |
| 2..... | 78 | 33 | 198 | 67 | | 1,250 | 128 | 332 | 265 | 85 | 26 | 11 |
| 3..... | 67 | 33 | 176 | | | 1,100 | 122 | 625 | 214 | 76 | 28 | 11 |
| 4..... | 60 | 39 | 141 | | | 780 | 125 | 700 | 194 | 71 | 30 | 12 |
| 5..... | 56 | 36 | 128 | | | 1,790 | 154 | 522 | 176 | 67 | 28 | 10 |
| 6..... | 52 | 36 | 111 | 60 | | 3,340 | 176 | 408 | 154 | 71 | 28 | 12 |
| 7..... | 49 | 36 | 100 | | | 1,570 | 172 | 343 | 138 | 100 | 24 | 14 |
| 8..... | 44 | 36 | 89 | | 80 | 955 | 158 | 298 | 135 | 76 | 22 | 23 |
| 9..... | 42 | 35 | | | | 740 | 158 | 256 | 138 | 65 | 23 | 30 |
| 10..... | 38 | 36 | | 151 | | 460 | 161 | 230 | 210 | 58 | 23 | 28 |
| 11..... | 35 | 35 | | 279 | | 374 | 151 | 206 | 176 | 52 | 23 | 26 |
| 12..... | 33 | 36 | 62 | 256 | | 332 | 144 | 190 | 151 | 71 | 23 | 28 |
| 13..... | 33 | 36 | 63 | 230 | | 279 | 135 | 176 | 135 | 56 | 46 | 26 |
| 14..... | 31 | 36 | 67 | | | 261 | 125 | 176 | 206 | 54 | 31 | 28 |
| 15..... | 31 | 33 | 82 | | | 308 | 128 | 168 | 252 | 69 | 26 | 21 |
| 16..... | | | | 120 | | | | | | | | |
| 17..... | 28 | 32 | 119 | | 76 | 358 | 3,270 | 154 | 206 | 89 | 22 | 21 |
| 18..... | 27 | 31 | 122 | | 85 | 327 | 3,320 | 138 | 176 | 69 | 23 | 23 |
| 19..... | 28 | 31 | 128 | 125 | 71 | 293 | 1,680 | 132 | 151 | 67 | 21 | 21 |
| 20..... | 28 | 35 | 132 | 125 | 78 | 265 | 1,300 | 135 | 132 | 58 | 18 | 19 |
| 21..... | 32 | 36 | 141 | 128 | 97 | 226 | 1,200 | 176 | 119 | 56 | 15 | 20 |
| 22..... | 38 | 35 | 135 | 122 | 97 | 210 | 1,060 | 2,270 | 111 | 78 | 14 | 21 |
| 23..... | 33 | 42 | 125 | 116 | 94 | 190 | 1,150 | 97 | 46 | 15 | 19 | 19 |
| 24..... | 33 | 39 | 95 | 111 | 94 | 179 | 919 | 700 | 122 | 42 | 20 | 19 |
| 25..... | 35 | 39 | 90 | 105 | 80 | 172 | 662 | 522 | 122 | 39 | 23 | 21 |
| 26..... | 46 | 39 | 85 | 116 | 94 | 168 | 460 | 364 | 122 | 33 | 21 | 19 |
| 27..... | 49 | 38 | 87 | 179 | 522 | 161 | 522 | 364 | 128 | 36 | 21 | 18 |
| 28..... | 46 | 38 | 82 | 248 | 2,270 | 161 | 522 | 522 | 138 | 33 | 22 | 19 |
| 29..... | 39 | 36 | 82 | 234 | 3,060 | 154 | 460 | 338 | 132 | 31 | 20 | 18 |
| 30..... | 39 | 36 | 76 | 222 | | 148 | 430 | 312 | 122 | 31 | 16 | 16 |
| 31..... | 36 | 44 | 76 | 135 | | 151 | 385 | 322 | 111 | 28 | 16 | 19 |
| 31..... | 35 | | 71 | 110 | | 141 | | 308 | | 28 | 14 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 80 | 27 | 42.0 | 0.155 | 0.18 |
| November..... | 44 | 31 | 36.1 | .133 | .15 |
| December..... | 198 | | 101 | .373 | .43 |
| January..... | 279 | | 130 | .480 | .55 |
| February..... | 3,060 | | 283 | 1.04 | 1.06 |
| March..... | 3,340 | 141 | 605 | 2.23 | 2.57 |
| April..... | 3,320 | 122 | 657 | 2.42 | 2.70 |
| May..... | 2,270 | 132 | 416 | 1.54 | 1.78 |
| June..... | 279 | 97 | 160 | .590 | .66 |
| July..... | 100 | 28 | 59.0 | .218 | .26 |
| August..... | 46 | 14 | 22.8 | .084 | .10 |
| September..... | 30 | 10 | 19.6 | .072 | .06 |
| The year..... | 3,340 | 10 | 210 | .775 | 10.53 |

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, 1929.

EXTREMES.—Maximum discharge during year, about 4,020 second-feet Apr. 16 (gage height, 11.30 feet); minimum, 2 second-feet Aug. 3 and Sept. 5 (gage height, 1.64 feet).

1928-29: Maximum discharge, about 4,930 second-feet July 14, 1928 (gage height, 12.56 feet); minimum, that of Aug. 3 and Sept. 5, 1929.

REMARKS.—Records fair. Discharge estimated because of ice Dec. 11-14, and Dec. 22 to Feb. 25.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 27 | 16 | 96 | 20 | 25 | 995 | 70 | 285 | 191 | 42 | 4 | 4 |
| 2..... | 27 | 15 | 124 | | | 615 | 67 | 260 | 120 | 42 | 3 | 3 |
| 3..... | 27 | 10 | 87 | | | 580 | 54 | 1,250 | 96 | 36 | 2 | 2 |
| 4..... | 16 | 16 | 81 | | | 545 | 59 | 650 | 78 | 16 | 14 | 3 |
| 5..... | 27 | 23 | 54 | | | 545 | 285 | 440 | 67 | 16 | 10 | 2 |
| 6..... | 27 | 16 | 54 | 20 | 25 | 1,860 | 356 | 312 | 64 | 19 | 12 | 3 |
| 7..... | 64 | 12 | 42 | | | 1,080 | 213 | 356 | 54 | 99 | 9 | 4 |
| 8..... | 38 | 19 | 42 | | | 580 | 170 | 236 | 81 | 54 | 9 | 7 |
| 9..... | 36 | 14 | 36 | | | 440 | 150 | 213 | 139 | 40 | 7 | 10 |
| 10..... | 27 | 12 | 17 | | | 248 | 580 | 170 | 81 | 27 | 4 | 32 |
| 11..... | 32 | 16 | 20 | 20 | 25 | 248 | 1,040 | 150 | 54 | 19 | 10 | 38 |
| 12..... | 23 | 12 | | | | 213 | 685 | 131 | 54 | 23 | 6 | 19 |
| 13..... | 23 | 14 | | | | 191 | 510 | 120 | 42 | 14 | 10 | 10 |
| 14..... | 16 | 11 | | | | 341 | 372 | 139 | 42 | 27 | 16 | 10 |
| 15..... | 10 | 6 | | | | 142 | 388 | 312 | 131 | 42 | 14 | 10 |
| 16..... | 12 | 5 | 131 | 20 | 25 | 341 | 3,510 | 96 | 32 | 6 | 8 | 19 |
| 17..... | 16 | 4 | 113 | | | 272 | 2,730 | 90 | 32 | 5 | 6 | 15 |
| 18..... | 14 | 3 | 73 | | | 213 | 1,160 | 87 | 23 | 3 | 7 | 15 |
| 19..... | 23 | 10 | 81 | | | 191 | 650 | 81 | 23 | 10 | 8 | 14 |
| 20..... | 16 | 96 | 67 | | | 170 | 475 | 142 | 16 | 10 | 6 | 10 |
| 21..... | 22 | 67 | 67 | 15 | 20 | 131 | 372 | 139 | 12 | 10 | 5 | 10 |
| 22..... | 10 | 96 | 10 | | | 131 | 356 | 170 | 23 | 10 | 3 | 8 |
| 23..... | 10 | 67 | | | | 191 | 272 | 113 | 32 | 10 | 6 | 8 |
| 24..... | 19 | 32 | | | | 150 | 224 | 96 | 96 | 10 | 12 | 6 |
| 25..... | 42 | 42 | | | | 131 | 191 | 96 | 59 | 10 | 16 | 4 |
| 26..... | 32 | 32 | 10 | 10 | 20 | 341 | 120 | 650 | 81 | 52 | 10 | 4 |
| 27..... | 30 | 23 | 2,310 | | | 96 | 440 | 67 | 42 | 10 | 6 | 6 |
| 28..... | 23 | 34 | 1,300 | | | 87 | 372 | 67 | 32 | 10 | 5 | 6 |
| 29..... | 15 | 32 | 87 | | | 545 | 388 | 180 | 10 | 6 | 6 | |
| 30..... | 10 | 32 | 84 | | | 372 | 260 | 54 | 9 | 5 | 6 | |
| 31..... | 14 | ----- | ----- | ----- | ----- | 81 | ----- | 191 | ----- | 6 | 4 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 64 | 10 | 23.5 | 0.173 | 0.20 |
| November..... | 96 | 3 | 26.2 | .193 | .22 |
| December..... | 142 | ----- | 48.0 | .353 | .41 |
| January..... | ----- | ----- | 17.4 | .128 | .15 |
| February..... | 2,310 | ----- | 180 | 1.32 | 1.33 |
| March..... | 1,860 | 81 | 366 | 2.69 | 3.10 |
| April..... | 3,510 | 54 | 575 | 4.23 | 4.72 |
| May..... | 1,250 | 67 | 226 | 1.66 | 1.91 |
| June..... | 191 | 12 | 63.8 | .469 | .53 |
| July..... | 99 | 3 | 20.2 | .149 | .17 |
| August..... | 16 | 2 | 7.7 | .067 | .07 |
| September..... | 38 | 2 | 10.2 | .075 | .09 |
| The year..... | 3,510 | 2 | 129 | .949 | 12.94 |

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, 1929.

EXTREMES.—Maximum discharge during year, about 31,500 second-feet Apr. 17 (gage height, 18.48 feet); minimum, 55 second-feet Aug. 2ⁿ (gage height, 0.50 foot).

1922-1929: Maximum discharge, about 34,000 second-feet May 12, 1924 (gage height, 19.32 feet); minimum, 40 second-feet July 28, 1923, Sept. 25, 1925, and Oct. 1, 1927 (gage height, 0.38 foot).

REMARKS.—Records fair. Discharge estimated because of ice Jan. 20 to Feb. 7.

Daily and monthly discharge, in second-feet, 1928-2ⁿ

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|-------|--------|-------|-------|------|------|-------|
| 1 | 378 | 115 | 152 | 324 | 130 | 6,170 | 359 | 950 | 670 | 219 | 73 | 77 |
| 2 | 276 | 110 | 260 | 324 | | 3,150 | 324 | 1,010 | 458 | 143 | 68 | 71 |
| 3 | 342 | 107 | 342 | 219 | | 3,860 | 291 | 1,570 | 378 | 124 | 71 | 67 |
| 4 | 194 | 118 | 291 | 183 | | 2,720 | 276 | 2,330 | 324 | 112 | 84 | 60 |
| 5 | 183 | 123 | 276 | 152 | | 5,010 | 397 | 1,650 | 291 | 107 | 89 | 65 |
| 6 | 194 | 126 | 219 | 183 | 130 | 8,330 | 1,010 | 1,200 | 246 | 107 | 87 | 60 |
| 7 | 172 | 143 | 206 | 134 | | 5,870 | 890 | 1,070 | 232 | 120 | 82 | 65 |
| 8 | 194 | 162 | 183 | 134 | | 3,740 | 780 | 950 | 232 | 134 | 73 | 67 |
| 9 | 152 | 152 | 162 | 126 | | 2,330 | 670 | 725 | 246 | 126 | 73 | 73 |
| 10 | 172 | 143 | 134 | 183 | | 1,650 | 618 | 618 | 246 | 107 | 68 | 84 |
| 11 | 232 | 124 | 126 | 276 | 546 | 1,200 | 725 | 546 | 232 | 107 | 68 | 73 |
| 12 | 134 | 120 | 126 | 594 | 501 | 1,070 | 670 | 501 | 183 | 98 | 72 | 87 |
| 13 | 123 | 116 | 126 | 618 | 458 | 950 | 618 | 458 | 246 | 110 | 74 | 88 |
| 14 | 118 | 110 | 123 | 569 | 437 | 950 | 546 | 437 | 183 | 162 | 89 | 118 |
| 15 | 110 | 107 | 152 | 324 | 523 | 1,070 | 546 | 479 | 183 | 308 | 77 | 108 |
| 16 | 108 | 110 | 291 | 437 | 324 | 1,010 | 8,150 | 458 | 183 | 232 | 71 | 88 |
| 17 | 107 | 116 | 594 | 378 | 246 | 618 | 24,600 | 397 | 172 | 219 | 72 | 88 |
| 18 | 108 | 116 | 546 | 342 | 194 | 780 | 6,170 | 342 | 152 | 162 | 71 | 85 |
| 19 | 110 | 118 | 501 | 276 | 183 | 725 | 3,740 | 359 | 143 | 134 | 78 | 72 |
| 20 | 113 | 126 | 378 | 140 | 260 | 618 | 2,720 | 437 | 134 | 120 | 68 | 68 |
| 21 | 116 | 126 | 324 | | 276 | 594 | 2,330 | 569 | 126 | 112 | 60 | 74 |
| 22 | 120 | 134 | 276 | | 260 | 546 | 2,330 | 1,810 | 126 | 96 | 55 | 67 |
| 23 | 123 | 143 | 276 | | 219 | 501 | 3,380 | 1,340 | 143 | 95 | 65 | 65 |
| 24 | 126 | 134 | 219 | | 194 | 479 | 2,240 | 725 | 134 | 92 | 74 | 63 |
| 25 | 126 | 134 | 206 | 140 | 232 | 458 | 1,730 | 725 | 124 | 91 | 68 | 62 |
| 26 | 134 | 126 | 172 | | 359 | 417 | 1,570 | 670 | 194 | 85 | 68 | 68 |
| 27 | 134 | 123 | 152 | | 4,740 | 397 | 1,340 | 546 | 152 | 81 | 68 | 74 |
| 28 | 134 | 121 | 152 | | 4,350 | 378 | 1,070 | 479 | 152 | 78 | 67 | 77 |
| 29 | 126 | 120 | 172 | | ----- | 342 | 1,200 | 458 | 479 | 78 | 65 | 68 |
| 30 | 121 | 126 | 232 | 140 | ----- | 324 | 1,070 | 725 | 437 | 77 | 63 | 66 |
| 31 | 118 | ----- | 260 | | ----- | 324 | ----- | 835 | ----- | 74 | 65 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 378 | 107 | 158 | 0.236 | 0.27 |
| November | 162 | 107 | 125 | .187 | .21 |
| December | 594 | 123 | 246 | .367 | .42 |
| January | 618 | ----- | 247 | .369 | .43 |
| February | 4,740 | ----- | 614 | .916 | .96 |
| March | 8,330 | 324 | 1,830 | 2.73 | 3.15 |
| April | 24,600 | 276 | 2,410 | 3.60 | 4.02 |
| May | 2,330 | 342 | 618 | 1.22 | 1.41 |
| June | 670 | 124 | 240 | .358 | .40 |
| July | 308 | 74 | 126 | .188 | .22 |
| August | 89 | 55 | 71.8 | .107 | .12 |
| September | 118 | 60 | 74.9 | .112 | .12 |
| The year | 24,600 | 55 | 578 | .863 | 11.72 |

BACK CREEK NEAR HEDGESVILLE, W. VA

LOCATION.—Staff gage at highway 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, 1929.

EXTREMES.—Maximum discharge during year, about 8,750 second-feet Apr. 17 (gage height, 13.50 feet); minimum, 9 second-feet Sept. 2 and 4-6 (gage height, 1.30 feet).

1928-29: Maximum and minimum discharge, same as given above.

REMARKS.—Records fair prior to Apr. 17 and good thereafter. Discharge estimated because of ice Dec. 21 to Jan. 10, and Jan. 24 to Feb. 7.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|------|------|------|-------|-------|-------|-----|------|------|------|-------|
| 1..... | 54 | 24 | 60 | 60 | 30 | 1,620 | 69 | 314 | 54 | 24 | 18 | 10 |
| 2..... | 83 | 23 | 78 | | | 1,300 | 58 | 314 | 49 | 22 | 14 | 9 |
| 3..... | 62 | 27 | 83 | | | 1,820 | 53 | 530 | 40 | 19 | 13 | 10 |
| 4..... | 54 | 34 | 67 | | | 920 | 60 | 480 | 37 | 18 | 14 | 9 |
| 5..... | 85 | 37 | 56 | | | 1,170 | 96 | 359 | 34 | 17 | 18 | 9 |
| 6..... | 120 | 36 | 47 | 60 | 480 | 3,680 | 246 | 292 | 30 | 16 | 17 | 9 |
| 7..... | 88 | 39 | 40 | | | 1,300 | 184 | 263 | 32 | 22 | 16 | 10 |
| 8..... | 67 | 37 | 36 | | | 920 | 156 | 222 | 35 | 24 | 14 | 11 |
| 9..... | 53 | 26 | 31 | | | 336 | 580 | 129 | 184 | 42 | 19 | 13 |
| 10..... | 44 | 28 | 26 | | | 359 | 406 | 142 | 159 | 45 | 19 | 14 |
| 11..... | 42 | 25 | 24 | 430 | 314 | 314 | 156 | 136 | 37 | 17 | 14 | 12 |
| 12..... | 37 | 24 | 27 | 382 | 263 | 267 | 163 | 129 | 32 | 16 | 13 | 14 |
| 13..... | 32 | 26 | 28 | 314 | 180 | 250 | 163 | 129 | 28 | 16 | 12 | 15 |
| 14..... | 30 | 28 | 30 | 230 | 126 | 267 | 149 | 133 | 26 | 18 | 13 | 14 |
| 15..... | 28 | 28 | 279 | 230 | 104 | 314 | 288 | 113 | 34 | 21 | 14 | 13 |
| 16..... | 27 | 26 | 314 | 117 | 91 | 288 | 4,060 | 123 | 56 | 26 | 16 | 14 |
| 17..... | 31 | 25 | 336 | 96 | 91 | 254 | 6,760 | 126 | 36 | 22 | 17 | 15 |
| 18..... | 34 | 24 | 173 | 85 | 120 | 206 | 1,620 | 104 | 32 | 17 | 14 | 16 |
| 19..... | 36 | 28 | 104 | 102 | 96 | 184 | 1,100 | 102 | 30 | 15 | 13 | 14 |
| 20..... | 35 | 34 | 85 | 123 | 91 | 159 | 718 | 102 | 26 | 14 | 12 | 13 |
| 21..... | 35 | 40 | 40 | 96 | 139 | 142 | 480 | 142 | 23 | 13 | 11 | 14 |
| 22..... | 30 | 44 | | 78 | 91 | 126 | 800 | 180 | 22 | 12 | 11 | 13 |
| 23..... | 32 | 42 | | 73 | 177 | 117 | 390 | 120 | 22 | 12 | 11 | 12 |
| 24..... | 37 | 36 | | 73 | 96 | 110 | 580 | 94 | 21 | 13 | 12 | 12 |
| 25..... | 44 | 34 | | | 85 | 102 | 480 | 78 | 22 | 13 | 13 | 12 |
| 26..... | 40 | 32 | 40 | 35 | 336 | 94 | 430 | 69 | 22 | 12 | 13 | 13 |
| 27..... | 30 | 27 | | | 1,890 | 88 | 430 | 62 | 22 | 12 | 12 | 11 |
| 28..... | 30 | 32 | | | 2,730 | 80 | 292 | 67 | 31 | 12 | 11 | 10 |
| 29..... | 31 | 40 | | | 16 | 76 | 455 | 71 | 28 | 14 | 11 | 10 |
| 30..... | 28 | 51 | | | | 60 | 359 | 67 | 22 | 16 | 11 | 12 |
| 31..... | 26 | | | | | 69 | | 62 | | 18 | 10 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 120 | 26 | 45.3 | 0.180 | 0.21 |
| November..... | 51 | 23 | 31.9 | .127 | .14 |
| December..... | 336 | | 76.3 | .303 | .35 |
| January..... | 430 | | 104 | .413 | .48 |
| February..... | 2,730 | | 300 | 1.19 | 1.24 |
| March..... | 3,680 | 60 | 558 | 2.21 | 2.55 |
| April..... | 6,760 | 53 | 712 | 2.83 | 3.16 |
| May..... | 530 | 62 | 172 | .683 | .79 |
| June..... | 56 | 21 | 32.3 | .128 | .14 |
| July..... | 26 | 12 | 17.1 | .068 | .08 |
| August..... | 18 | 10 | 13.4 | .053 | .06 |
| September..... | 16 | 9 | 11.9 | .047 | .05 |
| The year..... | 6,760 | 9 | 172 | .683 | 9.25 |

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, 1929.

EXTREMES.—Maximum discharge during year, 7,480 second-feet Apr. 16 (gage height, 11.03 feet); minimum, 54 second-feet Sept. 3 (gage height, 1.75 feet).
1928-29: Maximum discharge, 7,580 second-feet June 26, 1928 (gage height, 11.10 feet); minimum, that of Sept. 3, 1929.

REMARKS.—Records good. Discharge estimated because of ice Dec. 9-13, 22-31, Jan. 1, 13-18, 24-31, and Feb. 1-7.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | |
|-----|------|------|------|------|-------|-------|-------|-------|-------|------|------|-------|-----|
| 1. | 343 | 204 | 353 | 180 | 150 | 2,380 | 469 | 956 | 415 | 343 | 117 | 92 | |
| 2. | 308 | 187 | 285 | 442 | | 2,380 | 442 | 956 | 363 | 343 | 117 | 79 | |
| 3. | 257 | 221 | 271 | 318 | | 1,980 | 415 | 3,150 | 363 | 318 | 124 | 72 | |
| 4. | 244 | 230 | 221 | 308 | | 1,820 | 415 | 2,700 | 338 | 266 | 132 | 86 | |
| 5. | 262 | 213 | 213 | 328 | | 2,380 | 890 | 1,820 | 333 | 294 | 102 | 86 | |
| 6. | 701 | 244 | 192 | 732 | 1,230 | 4,590 | 1,820 | 1,520 | 323 | 313 | 124 | 76 | |
| 7. | 442 | 187 | 196 | 671 | | 2,880 | 1,020 | 1,230 | 313 | 271 | 117 | 69 | |
| 8. | 333 | 187 | 179 | 363 | | 1,900 | 826 | 1,090 | 338 | 257 | 124 | 226 | |
| 9. | 313 | 163 | 170 | 389 | | 1,160 | 1,600 | 732 | 956 | 415 | 230 | 117 | |
| 10. | 290 | 147 | | 582 | | 763 | 1,230 | 956 | 858 | 333 | 221 | 109 | 389 |
| 11. | 285 | 163 | | 170 | 732 | 582 | 1,090 | 1,230 | 826 | 304 | 208 | 120 | 200 |
| 12. | 266 | 171 | | 167 | 469 | 469 | 923 | 1,300 | 794 | 275 | 196 | 139 | 143 |
| 13. | 257 | 171 | | | 415 | 1,020 | 1,230 | 794 | 275 | 196 | 179 | 113 | 118 |
| 14. | 257 | 163 | 389 | | 1,370 | 1,090 | 763 | 353 | 213 | 890 | 217 | 175 | |
| 15. | 213 | 179 | 353 | | 240 | 348 | 1,600 | 1,020 | 701 | 389 | 171 | 257 | 239 |
| 16. | 248 | 155 | 343 | | 328 | 469 | 1,370 | 5,850 | 641 | 333 | 163 | 175 | 208 |
| 17. | 221 | 143 | 323 | 442 | | 1,160 | 6,120 | 612 | 280 | 163 | 139 | 582 | |
| 18. | 239 | 132 | 280 | 497 | | 1,020 | 3,510 | 582 | 257 | 163 | 106 | 497 | |
| 19. | 257 | 175 | 266 | 582 | | 923 | 2,380 | 612 | 248 | 163 | 151 | 271 | |
| 20. | 248 | 257 | 248 | 338 | | 442 | 826 | 1,820 | 641 | 248 | 163 | 128 | 230 |
| 21. | 226 | 262 | 221 | 290 | 389 | 763 | 1,600 | 582 | 248 | 124 | 113 | 175 | |
| 22. | 226 | 230 | 160 | 271 | 415 | 732 | 1,520 | 582 | 217 | 147 | 106 | 163 | |
| 23. | 226 | 196 | | 221 | 363 | 732 | 1,230 | 525 | 248 | 155 | 106 | 151 | |
| 24. | 248 | 208 | | 130 | 318 | 671 | 1,020 | 469 | 469 | 147 | 109 | 143 | |
| 25. | 257 | 163 | | | 328 | 641 | 1,020 | 469 | 1,440 | 155 | 92 | 120 | |
| 26. | 230 | 167 | | | 956 | 582 | 2,140 | 469 | 858 | 151 | 92 | 120 | |
| 27. | 230 | 204 | | | 3,960 | 554 | 1,370 | 442 | 525 | 155 | 113 | 109 | |
| 28. | 204 | 155 | 179 | | 4,050 | 525 | 1,230 | 469 | 497 | 132 | 525 | 109 | |
| 29. | 213 | 163 | | | 497 | 1,300 | 641 | 612 | 132 | 151 | 109 | | |
| 30. | 213 | 179 | | | 469 | 1,090 | 554 | 415 | 135 | 102 | 147 | | |
| 31. | 196 | | | | 497 | | 469 | | 120 | 92 | | | |

| Month | Maximum | Minimum | Mean | For square mile | Run-off in inches |
|-----------|---------|---------|-------|-----------------|-------------------|
| October | 701 | 196 | 273 | 0.544 | 0.63 |
| November | 262 | 132 | 187 | .373 | .42 |
| December | 353 | ----- | 212 | .422 | .49 |
| January | 732 | ----- | 305 | .608 | .70 |
| February | 4,050 | ----- | 701 | 1.40 | 1.46 |
| March | 4,590 | 469 | 1,330 | 2.65 | 3.06 |
| April | 6,120 | 415 | 1,570 | 3.13 | 3.49 |
| May | 3,150 | 442 | 899 | 1.79 | 2.06 |
| June | 1,440 | 217 | 401 | .799 | .89 |
| July | 343 | 120 | 200 | .398 | .46 |
| August | 890 | 92 | 163 | .325 | .37 |
| September | 582 | 69 | 180 | .359 | .40 |
| The year | 6,120 | 69 | 533 | 1.06 | 14.43 |

ANTIETAM CREEK NEAR SHARPSBURG, MD.

LOCATION.—Staff gage at Burnside Bridge, 1 mile southeast of Sharpsburg, Washington County. Sharpmans Branch enters $4\frac{1}{4}$ miles below station. Zero of gage is 311.00 feet above mean sea level.

DRAINAGE AREA.—280 square miles.

RECORDS AVAILABLE.—August, 1928, to September, 1929. June, 1897, to August, 1905, at Middle Bridge on Boonsboro pike, 1 mile above present site.

EXTREMES.—Maximum discharge during year, about 3,490 second-feet May 3 (gage height, 8.80 feet); minimum, 70 second-feet Sept. 13 (gage height, 1.34 feet).

1928-29; Maximum and minimum discharge, same as given above.

Maximum stage known, 11.9 feet in July, 1928.

REMARKS.—Records good. Discharge estimated because of ice Jan. 4 to Feb. 6. Regulation due to operation of power plant above station.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | |
|---------|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|----|
| 1..... | 208 | 148 | 164 | 156 | 120 | 620 | 324 | 421 | 310 | 185 | 88 | 87 | |
| 2..... | 196 | 148 | 168 | 232 | | 775 | 310 | 503 | 283 | 185 | 104 | 81 | |
| 3..... | 183 | 144 | 140 | 179 | | 735 | 310 | 3,210 | 283 | 208 | 156 | 84 | |
| 4..... | 185 | 156 | 142 | 160 | | 655 | 317 | 1,490 | 283 | 208 | 177 | 83 | |
| 5..... | 179 | 168 | 136 | | | 895 | 351 | 1,020 | 270 | 183 | 120 | 83 | |
| 6..... | 238 | 158 | 129 | | 160 | 1,490 | 430 | 895 | 257 | 232 | 91 | 80 | |
| 7..... | 202 | 146 | 133 | | | 310 | 1,160 | 324 | 815 | 257 | 220 | 127 | 78 |
| 8..... | 183 | 142 | 134 | | | 244 | 895 | 296 | 620 | 337 | 190 | 90 | 80 |
| 9..... | 181 | 138 | 131 | 244 | | 775 | 324 | 585 | 296 | 183 | 114 | 268 | |
| 10..... | 179 | 144 | 129 | 220 | | 655 | 337 | 550 | 257 | 208 | 81 | 85 | |
| 11..... | 172 | 134 | 136 | 140 | 208 | 620 | 337 | 515 | 257 | 208 | 146 | 87 | |
| 12..... | 168 | 134 | 129 | | 185 | 585 | 337 | 515 | 232 | 174 | 181 | 84 | |
| 13..... | 166 | 142 | 134 | | 183 | 585 | 337 | 515 | 244 | 183 | 156 | 75 | |
| 14..... | 168 | 144 | 138 | | 177 | 620 | 310 | 480 | 393 | 196 | 156 | 78 | |
| 15..... | 154 | 133 | 250 | | 185 | 620 | 324 | 450 | 393 | 181 | 174 | 97 | |
| 16..... | 164 | 142 | 196 | 140 | 183 | 585 | 1,200 | 450 | 270 | 166 | 140 | 87 | |
| 17..... | 156 | 146 | 166 | | 179 | 515 | 1,440 | 421 | 232 | 144 | 140 | 90 | |
| 18..... | 162 | 144 | 166 | | 177 | 480 | 935 | 421 | 232 | 144 | 126 | 99 | |
| 19..... | 138 | 160 | 160 | | 172 | 450 | 735 | 480 | 278 | 168 | 87 | 85 | |
| 20..... | 170 | 168 | 154 | | 181 | 450 | 655 | 436 | 290 | 164 | 88 | 80 | |
| 21..... | 158 | 156 | 142 | 140 | 196 | 421 | 585 | 421 | 251 | 164 | 83 | 77 | |
| 22..... | 140 | 146 | 140 | | 183 | 421 | 655 | 407 | 232 | 150 | 84 | 73 | |
| 23..... | 160 | 146 | 136 | | 174 | 421 | 585 | 379 | 208 | 154 | 85 | 88 | |
| 24..... | 162 | 140 | 144 | | 166 | 393 | 480 | 365 | 185 | 134 | 84 | 96 | |
| 25..... | 148 | 146 | 142 | | 168 | 379 | 480 | 351 | 220 | 133 | 85 | 91 | |
| 26..... | 154 | 136 | 146 | 140 | 638 | 393 | 515 | 337 | 232 | 140 | 84 | 90 | |
| 27..... | 156 | 129 | 148 | | 775 | 379 | 450 | 337 | 232 | 142 | 81 | 90 | |
| 28..... | 158 | 136 | 146 | | 935 | 365 | 450 | 324 | 232 | 144 | 88 | 91 | |
| 29..... | 156 | 136 | 144 | | ----- | 337 | 480 | 310 | 257 | 133 | 81 | 97 | |
| 30..... | 148 | 150 | 142 | | ----- | 337 | 436 | 310 | 208 | 146 | 87 | 131 | |
| 31..... | 140 | ----- | 138 | ----- | ----- | 337 | ----- | 365 | ----- | 136 | 93 | ----- | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 238 | 138 | 169 | 0.604 | 0.70 |
| November..... | 163 | 129 | 145 | .518 | .58 |
| December..... | 250 | 129 | 148 | .529 | .61 |
| January..... | ----- | ----- | 152 | .543 | .63 |
| February..... | 935 | ----- | 243 | .868 | .90 |
| March..... | 1,490 | 337 | 592 | 2.11 | 2.43 |
| April..... | 1,440 | 266 | 502 | 1.79 | 2.00 |
| May..... | 3,210 | 310 | 603 | 2.15 | 2.48 |
| June..... | 393 | 185 | 264 | .943 | 1.05 |
| July..... | 232 | 133 | 171 | .611 | .70 |
| August..... | 181 | 81 | 112 | .400 | .46 |
| September..... | 263 | 73 | 93.2 | .333 | .37 |
| The year..... | 3,210 | 73 | 267 | .954 | 12.91 |

NORTH RIVER NEAR BURKETOWN, VA.

LOCATION.—Staff gage 2 miles northwest of Burkettown, Augusta County, and 7 miles above confluence with Middle River.

DRAINAGE AREA.—381 square miles.

RECORDS AVAILABLE.—June, 1926, to September, 1929.

EXTREMES.—Maximum discharge during year, 6,490 second-feet Apr. 16 (gage height, 9.20 feet); minimum, 41 second-feet Sept. 22 and 29 (gage height, 1.31 feet).

1926-1929: Maximum discharge, 7,370 second-feet Nov. 16, 1926 (gage height, 10.17 feet); minimum, that of Sept. 22 and 29, 1929.

REMARKS.—Records good. Low-water flow regulated by operation of mills above station.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 246 | 120 | 140 | 181 | 334 | 2,680 | 328 | 606 | 643 | 257 | 120 | 62 |
| 2..... | 223 | 120 | 145 | 181 | 263 | 2,330 | 304 | 569 | 496 | 246 | 110 | 56 |
| 3..... | 212 | 140 | 223 | 181 | 240 | 1,650 | 292 | 1,480 | 440 | 212 | 110 | 62 |
| 4..... | 202 | 120 | 202 | 191 | 234 | 1,310 | 274 | 1,230 | 386 | 191 | 93 | 56 |
| 5..... | 186 | 140 | 165 | 181 | 234 | 2,510 | 292 | 951 | 341 | 181 | 120 | 53 |
| 6..... | 202 | 130 | 181 | 341 | 234 | 3,280 | 229 | 795 | 292 | 160 | 102 | 62 |
| 7..... | 170 | 140 | 191 | 532 | 263 | 2,250 | 280 | 680 | 268 | 274 | 97 | 170 |
| 8..... | 181 | 110 | 181 | 532 | 280 | 1,480 | 280 | 532 | 268 | 186 | 97 | 76 |
| 9..... | 155 | 130 | 176 | 460 | 263 | 1,150 | 274 | 496 | 304 | 170 | 110 | 76 |
| 10..... | 160 | 130 | 170 | 496 | 274 | 873 | 286 | 426 | 304 | 202 | 97 | 85 |
| 11..... | 160 | 110 | 160 | 460 | 268 | 718 | 268 | 373 | 257 | 257 | 76 | 76 |
| 12..... | 160 | 120 | 160 | 446 | 262 | 643 | 274 | 341 | 246 | 334 | 93 | 62 |
| 13..... | 150 | 125 | 160 | 406 | 246 | 606 | 257 | 328 | 234 | 347 | 93 | 56 |
| 14..... | 130 | 110 | 155 | 366 | 234 | 680 | 246 | 341 | 257 | 223 | 89 | 68 |
| 15..... | 170 | 120 | 280 | 347 | 246 | 834 | 268 | 298 | 328 | 234 | 93 | 56 |
| 16..... | 150 | 120 | 292 | 316 | 234 | 873 | 4,050 | 292 | 304 | 191 | 85 | 59 |
| 17..... | 145 | 102 | 341 | 310 | 212 | 795 | 4,400 | 274 | 280 | 181 | 76 | 68 |
| 18..... | 145 | 102 | 328 | 280 | 223 | 680 | 1,990 | 257 | 286 | 170 | 68 | 62 |
| 19..... | 150 | 140 | 298 | 257 | 218 | 606 | 1,480 | 268 | 240 | 160 | 85 | 62 |
| 20..... | 140 | 110 | 304 | 246 | 202 | 569 | 1,310 | 298 | 223 | 140 | 81 | 65 |
| 21..... | 120 | 115 | 280 | 234 | 212 | 496 | 1,230 | 1,990 | 229 | 130 | 76 | 56 |
| 22..... | 130 | 115 | 257 | 240 | 202 | 460 | 1,230 | 1,650 | 202 | 110 | 76 | 53 |
| 23..... | 150 | 102 | 234 | 240 | 191 | 446 | 990 | 1,070 | 1,230 | 130 | 76 | 56 |
| 24..... | 160 | 120 | 229 | 223 | 181 | 412 | 834 | 756 | 718 | 120 | 93 | 62 |
| 25..... | 140 | 97 | 207 | 262 | 202 | 392 | 756 | 680 | 569 | 120 | 65 | 65 |
| 26..... | 145 | 135 | 202 | 366 | 426 | 379 | 718 | 643 | 532 | 125 | 81 | 59 |
| 27..... | 140 | 102 | 170 | 440 | 1,820 | 373 | 680 | 569 | 460 | 110 | 85 | 62 |
| 28..... | 120 | 115 | 191 | 496 | 3,020 | 360 | 643 | 532 | 399 | 97 | 72 | 56 |
| 29..... | 130 | 120 | 181 | 433 | ----- | 341 | 643 | 496 | 334 | 140 | 62 | 50 |
| 30..... | 140 | 140 | 170 | 392 | ----- | 354 | 606 | 532 | 280 | 191 | 62 | 62 |
| 31..... | 135 | ----- | 170 | 341 | ----- | 334 | ----- | 569 | ----- | 120 | 81 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October | 246 | 120 | 160 | 0.420 | 0.48 |
| November..... | 140 | 97 | 120 | .315 | .35 |
| December..... | 341 | 140 | 211 | .554 | .64 |
| January..... | 532 | 181 | 335 | .879 | 1.01 |
| February..... | 3,020 | 181 | 401 | 1.05 | 1.09 |
| March..... | 3,280 | 334 | 996 | 2.61 | 3.01 |
| April..... | 4,400 | 246 | 859 | 2.25 | 2.51 |
| May..... | 1,990 | 257 | 656 | 1.72 | 1.98 |
| June..... | 1,230 | 202 | 378 | .992 | 1.11 |
| July..... | 347 | 97 | 184 | .483 | .56 |
| August..... | 120 | 62 | 87.9 | .231 | .27 |
| September..... | 170 | 50 | 65.8 | .173 | .19 |
| The year | 4,400 | 50 | 371 | .974 | 13.20 |

SOUTH FORK OF SHENANDOAH RIVER NEAR LURAY, VA.

LOCATION.—Chain gage at highway bridge 4 miles southwest of Luray, Page County. Stony Run enters 2 miles above and Hawksbill Creek 10 miles below gage.

DRAINAGE AREA.—1,380 square miles.

RECORDS AVAILABLE.—April, 1925, to September, 1929.

EXTREMES.—Maximum discharge during year, 20,300 second-feet Apr. 17 (gage height, 13.20 feet); minimum, 178 second-feet Aug. 21 (gage height, 2.18 feet). 1925–1929: Maximum discharge, that of Apr. 17, 1929; minimum, 74 second-feet Sept. 28, 1925 (gage height, 1.78 feet).

REMARKS.—Records good for medium and high stages, and fair for low stages. Stage-discharge relation affected by ice Feb. 2–5. Low-water flow regulated by low dam three-fourths mile above station.

Daily and monthly discharge, in second-feet, 1928–29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|---------|---------|---------|---------|--------|-------|-------|-------|------|-------|
| 1..... | 1,280 | 530 | 562 | 820 | 780 | 8,720 | 1,180 | 1,910 | 2,140 | 1,000 | 665 | 310 |
| 2..... | 1,180 | 562 | * 560 | 780 | 760 | 5,660 | 1,180 | 1,800 | 1,800 | 820 | 630 | 310 |
| 3..... | 1,040 | * 560 | 595 | 550 | 750 | 5,850 | 1,090 | 1,400 | 1,580 | 1,800 | 470 | 335 |
| 4..... | 955 | 562 | 595 | 955 | 750 | 4,090 | 1,040 | 6,810 | 1,380 | 1,090 | 565 | 442 |
| 5..... | 910 | 740 | 415 | 360 | 760 | 5,470 | 1,040 | 3,940 | 1,280 | 955 | 595 | 335 |
| 6..... | 910 | 530 | 500 | 1,480 | 780 | 10,300 | 1,090 | 3,200 | 1,140 | 955 | 630 | 310 |
| 7..... | 910 | 530 | 442 | 2,520 | 910 | 7,420 | 1,040 | 2,520 | 1,000 | 955 | 470 | 390 |
| 8..... | 780 | 470 | 442 | 1,910 | 1,140 | 4,570 | 1,090 | 2,140 | 910 | 1,000 | 442 | 530 |
| 9..... | 740 | 500 | 296 | 1,480 | 1,480 | 3,640 | 1,000 | 1,910 | 1,000 | 630 | 415 | 740 |
| 10..... | 740 | 500 | * 300 | 1,480 | * 1,300 | 2,780 | 955 | 1,690 | 1,040 | 740 | 442 | 665 |
| 11..... | 740 | 247 | 310 | 1,000 | 1,230 | 2,260 | 1,000 | 1,580 | 1,000 | 1,230 | 470 | 360 |
| 12..... | 665 | 530 | 630 | 1,480 | 1,180 | 2,140 | 1,000 | 1,480 | 910 | 1,800 | 442 | 335 |
| 13..... | 665 | 562 | 595 | 1,280 | 1,090 | 1,910 | 910 | 1,380 | 910 | 2,390 | 470 | 335 |
| 14..... | 595 | 360 | 310 | 1,140 | 1,040 | 1,910 | 780 | 1,280 | 1,000 | 1,690 | 442 | 335 |
| 15..... | 630 | 239 | * 1,000 | 955 | 1,000 | * 2,000 | 865 | 1,280 | 1,380 | 1,490 | 415 | 310 |
| 16..... | 665 | 442 | 1,000 | 1,090 | 955 | 2,140 | 6,230 | 1,180 | 1,230 | 1,230 | 470 | 335 |
| 17..... | 630 | 360 | 1,090 | 1,480 | * 950 | 2,260 | 17,800 | 1,090 | 1,180 | 780 | 310 | 415 |
| 18..... | 595 | * 440 | 955 | 1,000 | 955 | 2,020 | 7,630 | 1,040 | 910 | 665 | 310 | 415 |
| 19..... | 630 | 530 | 955 | 910 | 820 | 1,910 | 4,910 | 1,040 | 1,090 | 630 | 442 | 310 |
| 20..... | 562 | 530 | 865 | 820 | 665 | 1,690 | 3,790 | 1,090 | 955 | 360 | 360 | 442 |
| 21..... | 562 | 595 | 740 | 865 | 665 | 1,580 | 3,490 | 1,910 | 955 | 500 | 310 | 335 |
| 22..... | 500 | 415 | 865 | 780 | 2,390 | 1,480 | 3,340 | 3,640 | 780 | 630 | 360 | 388 |
| 23..... | 530 | 388 | * 760 | 740 | * 1,580 | 1,480 | 3,060 | 2,920 | 780 | 665 | 335 | 360 |
| 24..... | 665 | 415 | 665 | 665 | 780 | 1,690 | 2,650 | 2,020 | 2,020 | 702 | 296 | 335 |
| 25..... | 702 | 184 | * 720 | 740 | 702 | 1,480 | 2,260 | 1,690 | 1,910 | 562 | 470 | 296 |
| 26..... | 630 | 442 | 780 | 702 | 1,040 | 1,380 | 2,140 | 1,580 | 2,140 | 702 | 388 | 335 |
| 27..... | 530 | 470 | 335 | * 1,300 | 2,920 | 1,280 | 2,020 | 1,800 | 1,800 | 442 | 388 | 310 |
| 28..... | 595 | 415 | 310 | 1,180 | 4,740 | 1,230 | 1,910 | 1,910 | 1,380 | 530 | 335 | 305 |
| 29..... | 562 | 226 | 239 | 1,230 | 1,180 | 1,180 | 1,910 | 2,020 | 1,180 | 530 | 335 | 273 |
| 30..... | 530 | 630 | 214 | 1,140 | 1,180 | 1,180 | 1,910 | 2,390 | 1,000 | 388 | 415 | 360 |
| 31..... | 470 | ----- | 500 | 1,000 | ----- | 1,180 | ----- | 2,020 | ----- | 500 | 360 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 1,280 | 470 | 713 | 0.517 | 0.60 |
| November..... | 740 | 184 | 463 | .336 | .37 |
| December..... | 1,090 | 214 | 598 | .435 | .50 |
| January..... | 2,520 | 360 | 1,120 | .812 | .94 |
| February..... | 4,740 | 665 | 1,220 | .884 | .92 |
| March..... | 10,300 | 1,180 | 3,030 | 2.20 | 2.64 |
| April..... | 17,800 | 780 | 2,670 | 1.94 | 2.16 |
| May..... | 11,400 | 1,040 | 2,380 | 1.72 | 1.98 |
| June..... | 2,140 | 780 | 1,260 | .915 | 1.02 |
| July..... | 2,390 | 360 | 915 | .665 | .76 |
| August..... | 665 | 296 | 435 | .315 | .36 |
| September..... | 740 | 273 | 374 | .271 | .30 |
| The year..... | 17,800 | 184 | 1,260 | .915 | 12.45 |

* Estimated.

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. Zero of gage is 293.00 feet above mean sea level.

DRAINAGE AREA.—3,040 square miles.

RECORDS AVAILABLE.—August, 1928, to September, 1929. April, 1895, to March, 1909, at site three-fourths mile downstream.

EXTREMES.—Maximum discharge during year, 39,900 second-feet Apr. 17 (gage height, 13.70 feet); minimum, 248 second-feet Aug. 28 (gage height, 0.93 foot). 1928-29: Maximum and minimum discharge, same as given above.

REMARKS.—Records good. Some regulation caused by operation of hydro-electric plants upstream.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|--------|--------|--------|-------|-------|-------|-------|
| 1..... | 1,880 | 968 | 928 | 1,010 | 1,990 | 13,300 | 2,030 | 3,820 | 3,780 | 1,200 | 1,120 | 811 |
| 2..... | 1,860 | 1,040 | 894 | 1,120 | 1,770 | 14,000 | 2,140 | 4,180 | 3,450 | | 959 | 588 |
| 3..... | 1,830 | 973 | 1,080 | 1,110 | 1,530 | 14,000 | 2,090 | 11,800 | 3,540 | | 1,110 | 732 |
| 4..... | 1,780 | 1,040 | 967 | 1,070 | 1,550 | 11,900 | 2,050 | 15,800 | 3,010 | | 1,200 | 632 |
| 5..... | 1,630 | 1,160 | 900 | 1,020 | 1,560 | 9,840 | 2,150 | 10,800 | 2,630 | | 1,090 | 621 |
| 6..... | 1,560 | 1,030 | 1,020 | 1,240 | 1,290 | 16,400 | 2,180 | 7,730 | 2,390 | 1,950 | 917 | 633 |
| 7..... | 1,490 | 1,130 | 1,060 | 1,530 | 1,950 | 18,000 | 2,110 | 6,070 | 2,270 | 2,630 | 819 | 587 |
| 8..... | 1,440 | 1,090 | 960 | 2,790 | 2,800 | 12,200 | 2,060 | 5,070 | 2,050 | 2,080 | 960 | 600 |
| 9..... | 1,400 | 978 | 993 | 3,120 | 2,480 | 9,010 | 2,010 | 4,310 | 2,280 | 1,900 | 1,000 | 613 |
| 10..... | 1,380 | 964 | 924 | 2,670 | 2,910 | 6,990 | 2,010 | 3,830 | 2,030 | 2,170 | 892 | 853 |
| 11..... | 1,360 | 970 | 918 | 2,780 | 2,890 | 5,630 | 1,930 | 3,400 | 1,790 | 2,590 | 904 | 1,190 |
| 12..... | 1,250 | 955 | 862 | 2,760 | 2,510 | 5,020 | 1,950 | 3,140 | 2,040 | 2,840 | 893 | 734 |
| 13..... | 1,220 | 964 | 874 | 2,700 | 2,230 | 4,450 | 1,970 | 2,900 | 1,890 | 3,610 | 862 | 817 |
| 14..... | 1,120 | 907 | 966 | 2,270 | 1,980 | 4,140 | 1,910 | 2,820 | 1,820 | 5,280 | 794 | 717 |
| 15..... | 1,160 | 960 | 1,470 | 2,090 | 1,880 | 3,900 | 1,760 | 2,760 | 1,980 | 3,800 | 1,080 | 636 |
| 16..... | 1,070 | 947 | 1,640 | 2,370 | 1,680 | 3,990 | 6,920 | 2,620 | 2,000 | 3,540 | 990 | 597 |
| 17..... | 1,150 | 915 | 1,940 | 1,830 | 1,720 | 4,130 | 31,600 | 2,400 | 2,250 | 2,640 | 955 | 575 |
| 18..... | 1,170 | 907 | 1,930 | 1,990 | 1,630 | 3,960 | 29,600 | 2,240 | 2,340 | 2,210 | 900 | 625 |
| 19..... | 1,100 | 891 | 1,810 | 1,820 | 1,660 | 3,650 | 14,400 | 2,180 | 2,020 | 2,000 | 847 | 622 |
| 20..... | 1,150 | 855 | 1,640 | 1,700 | 1,610 | 3,400 | 10,100 | 2,320 | 2,010 | 1,590 | 783 | 612 |
| 21..... | 1,090 | 846 | 1,580 | 1,660 | 1,430 | 3,120 | 8,220 | 2,780 | 1,880 | 1,590 | 622 | 626 |
| 22..... | 1,100 | 972 | 1,500 | 1,360 | 1,520 | 2,980 | 9,120 | 5,060 | 1,750 | 1,520 | 620 | 616 |
| 23..... | 974 | 926 | 1,440 | 1,650 | 1,490 | 2,830 | 9,560 | 6,760 | 1,580 | 1,380 | 703 | 699 |
| 24..... | 1,100 | 857 | 1,240 | 1,400 | 1,490 | 2,740 | 7,230 | 5,210 | 1,640 | 1,310 | 703 | 662 |
| 25..... | 1,090 | 864 | 1,230 | 1,460 | 1,520 | 2,640 | 6,070 | 4,110 | 2,400 | 1,400 | 692 | 604 |
| 26..... | 1,070 | 873 | 1,040 | 1,650 | 1,720 | 2,660 | 5,630 | 3,420 | 2,100 | 1,250 | 693 | 623 |
| 27..... | 1,170 | 830 | 1,040 | 1,860 | 3,560 | 2,570 | 4,760 | 3,080 | | 1,220 | 591 | 640 |
| 28..... | 1,130 | 755 | 1,230 | 1,860 | 9,210 | 2,390 | 4,340 | 3,170 | | 1,250 | 338 | 576 |
| 29..... | 1,060 | 695 | 1,180 | 2,060 | ----- | 2,310 | 4,170 | 3,180 | | 954 | 576 | 551 |
| 30..... | 916 | ----- | 1,120 | 2,300 | ----- | 2,260 | 4,040 | 4,520 | | 821 | 711 | 704 |
| 31..... | 1,030 | ----- | 1,090 | 2,120 | ----- | 2,310 | ----- | 4,170 | ----- | 1,200 | 804 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 1,880 | 916 | 1,280 | 0.421 | 0.49 |
| November..... | 1,160 | 695 | 940 | .309 | .34 |
| December..... | 1,940 | 862 | 1,210 | .398 | .46 |
| January..... | 3,120 | 1,010 | 1,880 | .618 | .71 |
| February..... | 9,210 | 1,290 | 2,200 | .724 | .75 |
| March..... | 18,000 | 2,260 | 6,350 | 2.09 | 2.41 |
| April..... | 31,600 | 1,760 | 6,200 | 2.04 | 2.28 |
| May..... | 15,800 | 2,180 | 4,700 | 1.55 | 1.79 |
| June..... | 3,780 | 1,580 | 2,240 | .737 | .82 |
| July..... | 5,280 | 921 | 1,960 | .645 | .74 |
| August..... | 1,200 | 338 | 843 | .277 | .32 |
| September..... | 1,190 | 551 | 670 | .220 | .25 |
| The year..... | 31,600 | 338 | 2,540 | .836 | 11.36 |

CATOCTIN CREEK NEAR JEFFERSON, MD.

LOCATION.—Chain and staff gages at concrete arch highway bridge on Frederick-Harpers Ferry road, 2 miles west of Jefferson, Frederick County.

DRAINAGE AREA.—111 square miles.

RECORDS AVAILABLE.—June, 1928, to September, 1929.

EXTREMES.—Maximum discharge during year, about 2,820 second-feet May 2 (gage height, 8.53 feet); minimum, about 2 second-feet Sept. 7 (gage height, 1.36 feet).

1928-29: Maximum stage, 11.30 feet June 19, 1928 (discharge not determined); minimum discharge, that of Sept. 7, 1929.

REMARKS.—Records fair. Discharge estimated because of ice Dec. 20-27, Jan. 16, 17, 23-31, and Feb. 1-26.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sep |
|-----|------|------|------|------|------|------|------|-------|------|------|------|-----|
| 1 | 58 | 19 | 131 | 48 | 60 | 336 | 150 | 175 | 129 | 40 | 24 | 5 |
| 2 | 60 | 16 | 66 | 107 | | 410 | 144 | 1,080 | 62 | 28 | 45 | 5 |
| 3 | 40 | 14 | 44 | 62 | | 350 | 141 | 790 | 58 | 24 | 51 | 4 |
| 4 | 33 | 81 | 38 | 57 | | 336 | 135 | 440 | 54 | 22 | 57 | 4 |
| 5 | 22 | 80 | 35 | 322 | | 605 | 175 | 350 | 57 | 26 | 35 | 3 |
| 6 | 90 | 37 | 31 | 295 | 60 | 440 | 175 | 295 | 54 | 52 | 20 | 3 |
| 7 | 58 | 31 | 29 | 146 | | 395 | 164 | 269 | 54 | 40 | 17 | 2 |
| 8 | 31 | 26 | 24 | 146 | | 308 | 148 | 232 | 76 | 139 | 16 | 8 |
| 9 | 26 | 22 | 22 | 146 | | 295 | 141 | 208 | 87 | 60 | 24 | 6 |
| 10 | 22 | 17 | 35 | 500 | | 232 | 150 | 186 | 70 | 85 | 22 | 9 |
| 11 | 18 | 16 | 35 | 186 | 65 | 220 | 150 | 175 | 63 | 62 | 19 | 11 |
| 12 | 16 | 17 | 30 | 175 | | 220 | 186 | 164 | 54 | 60 | 16 | 9 |
| 13 | 14 | 18 | 30 | 109 | | 220 | 175 | 154 | 37 | 54 | 14 | 24 |
| 14 | 13 | 15 | 19 | 105 | | 295 | 139 | 154 | 30 | 111 | 11 | 45 |
| 15 | 12 | 12 | 269 | 102 | | 282 | 144 | 150 | 74 | 76 | 16 | 41 |
| 16 | 11 | 22 | 175 | 104 | 65 | 232 | 440 | 139 | 73 | 45 | 16 | 36 |
| 17 | 11 | 18 | 137 | 105 | | 220 | 410 | 133 | 48 | 35 | 10 | 5 |
| 18 | 17 | 15 | 117 | 107 | | 208 | 336 | 127 | 44 | 28 | 9 | 46 |
| 19 | 60 | 22 | 83 | 100 | | 186 | 282 | 139 | 41 | 23 | 16 | 37 |
| 20 | 33 | 19 | | 62 | | 175 | 244 | 141 | 60 | 20 | 12 | 28 |
| 21 | 21 | 16 | | 56 | 50 | 175 | 232 | 135 | 73 | 19 | 11 | 2 |
| 22 | 19 | 14 | | 50 | | 175 | 256 | 121 | 45 | 28 | 10 | 15 |
| 23 | 20 | 11 | 40 | | | 175 | 220 | 105 | 35 | 30 | 9 | 10 |
| 24 | 30 | 10 | | | | 154 | 197 | 100 | 65 | 26 | 8 | 7 |
| 25 | 22 | 38 | | | | 154 | 197 | 90 | 109 | 31 | 7 | 6 |
| 26 | 19 | 33 | | 50 | 500 | 154 | 197 | 89 | 96 | 31 | 6 | 5 |
| 27 | 16 | 29 | | | | 154 | 186 | 85 | 60 | 25 | 6 | 4 |
| 28 | 16 | 23 | 18 | | | 570 | 154 | 208 | 80 | 92 | 19 | 5 |
| 29 | 14 | 18 | 14 | | | | 154 | 208 | 81 | 104 | 31 | 6 |
| 30 | 29 | 68 | 14 | | | | 154 | 186 | 76 | 58 | 36 | 7 |
| 31 | 22 | | 14 | | | | 154 | | 96 | | 6 | 17 |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 90 | 11 | 28.2 | 0.254 | 0.29 |
| November | 81 | 10 | 25.9 | .235 | .26 |
| December | 269 | 14 | 55.8 | .505 | .58 |
| January | 500 | | 114 | 1.03 | 1.19 |
| February | 570 | | 95.9 | .864 | .90 |
| March | 605 | 154 | 249 | 2.24 | 2.58 |
| April | 440 | 135 | 204 | 1.84 | 2.05 |
| May | 1,080 | 76 | 212 | 1.91 | 2.20 |
| June | 129 | 30 | 65.4 | .589 | .66 |
| July | 139 | 19 | 42.9 | .386 | .44 |
| August | 47 | 5 | 17.1 | .154 | .18 |
| September | 54 | 2 | 15.8 | .142 | .16 |
| The year | 1,080 | 2 | 94.0 | .847 | 11.49 |

MIDDLE RIVER NEAR GROTTOS, VA.

LOCATION.—Chain gage at highway bridge at Mount Meridan, 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, 1929.

EXTREMES.—Maximum discharge during year, 4,030 second-feet Apr. 16 (gage height, 12.06 feet); minimum, 38 second-feet Sept. 29 (gage height, 2.18 feet).

1925-1929: Maximum discharge, 4,080 second-feet Aug. 17, 1928 (gage height, 12.20 feet); minimum, 29 second-feet July 3, 1928 (gage height, 2.05 feet).

REMARKS.—Records good.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|-------|-------|-------|-------|-------|------|-------|
| 1..... | 344 | 161 | 152 | 152 | 220 | 1,520 | 290 | 432 | 840 | 200 | 135 | 98 |
| 2..... | 278 | 161 | 152 | 170 | 242 | 1,480 | 266 | 432 | 432 | 1,120 | 135 | 91 |
| 3..... | 278 | 152 | 135 | 180 | 210 | 1,300 | 266 | 1,520 | 330 | 496 | 135 | 98 |
| 4..... | 254 | 170 | 135 | 161 | 200 | 1,000 | 254 | 960 | 278 | 290 | 127 | 92 |
| 5..... | 254 | 180 | 127 | 161 | 210 | 2,020 | 278 | 566 | 254 | 266 | 135 | 88 |
| 6..... | 266 | 152 | 135 | 530 | 210 | 2,060 | 266 | 496 | 231 | 402 | 127 | 105 |
| 7..... | 266 | 152 | 135 | 566 | 278 | 1,210 | 242 | 432 | 231 | 290 | 127 | 242 |
| 8..... | 231 | 152 | 135 | 372 | 496 | 880 | 242 | 372 | 220 | 210 | 135 | 330 |
| 9..... | 220 | 152 | 127 | 358 | 530 | 760 | 231 | 344 | 242 | 200 | 170 | 120 |
| 10..... | 220 | 152 | 120 | 344 | 358 | 602 | 231 | 316 | 220 | 290 | 135 | 105 |
| 11..... | 210 | 135 | 127 | 432 | 316 | 530 | 231 | 290 | 200 | 640 | 127 | 98 |
| 12..... | 210 | 143 | 127 | 358 | 278 | 496 | 231 | 278 | 180 | 566 | 127 | 98 |
| 13..... | 200 | 135 | 127 | 316 | 242 | 432 | 220 | 266 | 210 | 720 | 135 | 91 |
| 14..... | 190 | 135 | 143 | 231 | 231 | 530 | 200 | 266 | 303 | 432 | 127 | 105 |
| 15..... | 200 | 135 | 290 | 254 | 220 | 720 | 210 | 254 | 278 | 464 | 135 | 105 |
| 16..... | 190 | 135 | 278 | 231 | 210 | 640 | 2,480 | 242 | 290 | 303 | 127 | 94 |
| 17..... | 190 | 135 | 242 | 210 | 200 | 566 | 2,830 | 231 | 210 | 266 | 112 | 105 |
| 18..... | 190 | 127 | 231 | 200 | 200 | 496 | 1,160 | 220 | 278 | 254 | 105 | 105 |
| 19..... | 190 | 127 | 231 | 220 | 190 | 432 | 800 | 231 | 231 | 231 | 112 | 105 |
| 20..... | 180 | 135 | 200 | 220 | 180 | 402 | 640 | 266 | 210 | 210 | 112 | 98 |
| 21..... | 170 | 135 | 190 | 190 | 180 | 372 | 530 | 496 | 231 | 190 | 112 | 85 |
| 22..... | 170 | 135 | 170 | 190 | 190 | 344 | 602 | 372 | 190 | 190 | 112 | 98 |
| 23..... | 180 | 135 | 152 | 190 | 190 | 402 | 496 | 303 | 190 | 180 | 105 | 105 |
| 24..... | 200 | 135 | 143 | 190 | 180 | 432 | 432 | 266 | 231 | 170 | 112 | 95 |
| 25..... | 190 | 127 | 135 | 210 | 200 | 358 | 402 | 278 | 316 | 161 | 105 | 88 |
| 26..... | 180 | 127 | 152 | 464 | 530 | 330 | 402 | 432 | 640 | 161 | 112 | 105 |
| 27..... | 170 | 127 | 143 | 358 | 1,440 | 316 | 372 | 344 | 464 | 200 | 112 | 83 |
| 28..... | 161 | 120 | 152 | 330 | 2,110 | 303 | 344 | 330 | 330 | 161 | 83 | 82 |
| 29..... | 161 | 112 | 152 | 290 | ----- | 290 | 432 | 432 | 278 | 152 | 98 | 64 |
| 30..... | 161 | 127 | 143 | 242 | ----- | 290 | 464 | 496 | 231 | 143 | 98 | 105 |
| 31..... | 161 | ----- | 135 | 220 | ----- | 316 | ----- | 372 | ----- | 143 | 105 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 344 | 161 | 209 | 0.581 | 0.67 |
| November..... | 180 | 112 | 140 | .389 | .43 |
| December..... | 290 | 120 | 162 | .450 | .52 |
| January..... | 566 | 152 | 275 | .764 | .88 |
| February..... | 2,110 | 180 | 366 | 1.02 | 1.06 |
| March..... | 2,060 | 290 | 704 | 1.96 | 2.26 |
| April..... | 2,830 | 200 | 535 | 1.49 | 1.66 |
| May..... | 1,520 | 220 | 404 | 1.12 | 1.29 |
| June..... | 840 | 180 | 292 | .811 | .90 |
| July..... | 1,120 | 143 | 313 | .869 | 1.00 |
| August..... | 170 | 83 | 120 | .333 | .38 |
| September..... | 330 | 64 | 109 | .303 | .34 |
| The year..... | 2,830 | 64 | 302 | .839 | 11.39 |

SOUTH RIVER AT WAYNESBORO, VA.

LOCATION.—Water-stage recorder near Du Pont rayon plant in Waynesboro, Augusta County.

DRAINAGE AREA.—144 square miles.

RECORDS AVAILABLE.—July, 1928, to September, 1929.

EXTREMES.—Maximum discharge during period of record, 4,660 second-feet Sept. 19, 1928 (gage height, 11.02 feet); minimum, 38 second-feet Sept. 12, 1929 (gage height, 1.33 feet).

REMARKS.—Records excellent. During the period Aug. 17 to Sept. 30, 1929, about 3 second-feet was diverted around the station by the Du Pont Rayon Co. and is not included in the record.

Daily discharge, in second-feet, 1928-29

| Day | July | Aug. | Sept. | Day | July | Aug. | Sept. | Day | July | Aug. | Sept. |
|------|------|------|-------|-----|------|------|-------|-----|------|------|--------|
| 1928 | | | | | | | | | | | |
| 1 | | 55 | 181 | 11 | | 118 | 190 | 21 | | 165 | 1, 370 |
| 2 | | 56 | 181 | 12 | | 258 | 159 | 22 | | 142 | 748 |
| 3 | | 54 | 185 | 13 | | 176 | 138 | 23 | | 128 | 516 |
| 4 | | 51 | 187 | 14 | | 118 | 124 | 24 | | 116 | 386 |
| 5 | | 71 | 170 | 15 | | 95 | 118 | 25 | | 128 | 320 |
| 6 | | 55 | 538 | 16 | | 556 | 122 | 26 | | 194 | 275 |
| 7 | | 59 | 538 | 17 | | 868 | 106 | 27 | | 241 | 236 |
| 8 | | 64 | 377 | 18 | | 466 | 126 | 28 | | 185 | 216 |
| 9 | | 55 | 289 | 19 | | 297 | 1,600 | 29 | 54 | 150 | 201 |
| 10 | | 90 | 228 | 20 | | 208 | 3,250 | 30 | 51 | 124 | 211 |
| | | | | | | | | 31 | 54 | 172 | |

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|------|------|------|------|------|-------|-------|------|------|------|-------|
| 1928-29 | | | | | | | | | | | | |
| 1 | 213 | 86 | 77 | 74 | 114 | 533 | 157 | 236 | 226 | 227 | 72 | 51 |
| 2 | 187 | 86 | 76 | 79 | 100 | 482 | 148 | 1,160 | 196 | 188 | 71 | 49 |
| 3 | 172 | 86 | 72 | 72 | 100 | 482 | 142 | 1,600 | 192 | 128 | 71 | 47 |
| 4 | 157 | 91 | 71 | 71 | 100 | 402 | 142 | 790 | 179 | 108 | 72 | 47 |
| 5 | 148 | 89 | 70 | 82 | 102 | 576 | 146 | 533 | 161 | 104 | 70 | 47 |
| 6 | 146 | 84 | 71 | 642 | 112 | 694 | 144 | 434 | 150 | 154 | 66 | 46 |
| 7 | 140 | 82 | 71 | 374 | 225 | 516 | 136 | 365 | 140 | 112 | 68 | 49 |
| 8 | 130 | 82 | 71 | 244 | 231 | 402 | 130 | 311 | 140 | 93 | 76 | 54 |
| 9 | 124 | 82 | 71 | 196 | 223 | 350 | 124 | 280 | 159 | 88 | 79 | 49 |
| 10 | 122 | 76 | 66 | 223 | 206 | 303 | 122 | 252 | 152 | 102 | 71 | 46 |
| 11 | 116 | 79 | 65 | 218 | 187 | 269 | 122 | 241 | 136 | 168 | 70 | 46 |
| 12 | 112 | 79 | 66 | 190 | 168 | 250 | 120 | 208 | 124 | 206 | 70 | 45 |
| 13 | 110 | 79 | 65 | 168 | 152 | 236 | 112 | 196 | 132 | 201 | 66 | 46 |
| 14 | 108 | 77 | 74 | 140 | 144 | 275 | 110 | 190 | 157 | 159 | 65 | 50 |
| 15 | 108 | 77 | 124 | 138 | 138 | 306 | 124 | 168 | 190 | 132 | 58 | 52 |
| 16 | 106 | 77 | 112 | 132 | 132 | 280 | 1,640 | 157 | 179 | 118 | 47 | 46 |
| 17 | 104 | 77 | 97 | 126 | 126 | 252 | 1,190 | 157 | 140 | 104 | 47 | 47 |
| 18 | 106 | 77 | 100 | 124 | 120 | 226 | 676 | 148 | 146 | 99 | 49 | 47 |
| 19 | 101 | 77 | 102 | 122 | 118 | 204 | 482 | 150 | 152 | 93 | 49 | 46 |
| 20 | 106 | 81 | 97 | 116 | 116 | 190 | 402 | 196 | 130 | 89 | 49 | 45 |
| 21 | 102 | 79 | 93 | 110 | 116 | 179 | 356 | 314 | 124 | 86 | 49 | 46 |
| 22 | 102 | 77 | 88 | 112 | 114 | 168 | 418 | 275 | 114 | 88 | 49 | 46 |
| 23 | 110 | 76 | 82 | 114 | 110 | 183 | 402 | 216 | 124 | 86 | 49 | 47 |
| 24 | 128 | 74 | 79 | 114 | 108 | 216 | 339 | 190 | 154 | 79 | 50 | 47 |
| 25 | 108 | 72 | 79 | 122 | 118 | 201 | 311 | 218 | 168 | 76 | 50 | 46 |
| 26 | 97 | 71 | 77 | 146 | 183 | 190 | 328 | 303 | 168 | 77 | 47 | 45 |
| 27 | 93 | 70 | 77 | 146 | 255 | 179 | 300 | 353 | 152 | 102 | 47 | 45 |
| 28 | 89 | 70 | 76 | 144 | 518 | 168 | 275 | 297 | 138 | 82 | 47 | 46 |
| 29 | 88 | 71 | 74 | 136 | | 157 | 283 | 289 | 134 | 77 | 47 | 45 |
| 30 | 88 | 72 | 72 | 124 | | 161 | 255 | 286 | 118 | 77 | 49 | 46 |
| 31 | 86 | | 71 | 122 | | 170 | | 252 | | 74 | 50 | |

Monthly discharge, in second-feet, of South River at Waynesboro, Va., 1928-29

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| 1928 | | | | | |
| August..... | 868 | 51 | 177 | 1.23 | 1.42 |
| September..... | 3,250 | 106 | 442 | 3.07 | 3.42 |
| 1928-29 | | | | | |
| October..... | 213 | 86 | 120 | .833 | .96 |
| November..... | 91 | 70 | 78.5 | .545 | .61 |
| December..... | 124 | 65 | 80.2 | .557 | .64 |
| January..... | 642 | 71 | 159 | 1.10 | 1.27 |
| February..... | 518 | 100 | 157 | 1.09 | 1.14 |
| March..... | 694 | 157 | 297 | 2.06 | 2.38 |
| April..... | 1,640 | 110 | 321 | 2.23 | 2.49 |
| May..... | 1,600 | 148 | 347 | 2.41 | 2.78 |
| June..... | 226 | 114 | 152 | 1.06 | 1.18 |
| July..... | 227 | 74 | 115 | .799 | .92 |
| August..... | 79 | 47 | 58.7 | .408 | .47 |
| September..... | 54 | 45 | 47.1 | .327 | .36 |
| The year..... | 1,640 | 45 | 161 | 1.12 | 15.20 |

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, 1929.

EXTREMES.—Maximum discharge during year, 4,240 second-feet Apr. 16 (gage height, 9.73 feet); minimum, 50 second-feet Aug. 29 (gage height, 2.97 feet). 1925-1929: Maximum discharge, 5,990 second-feet Sept. 20, 1928 (gage height, 11.90 feet); minimum, 27 second-feet Aug. 12, 1926 (gage height, 2.83 feet).

REMARKS.—Records good. Low-water flow slightly regulated by operation of mill above station.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 338 | 121 | 98 | 116 | 172 | 910 | 242 | 338 | 383 | 128 | 91 | 65 |
| 2..... | 274 | 108 | 108 | 119 | 166 | 850 | 250 | 316 | 338 | 360 | 75 | 65 |
| 3..... | 266 | 119 | 91 | 119 | 160 | 850 | 198 | 2,970 | 295 | 195 | 81 | 63 |
| 4..... | 246 | 166 | 94 | 98 | 155 | 703 | 192 | 1,220 | 266 | 144 | 75 | 68 |
| 5..... | 216 | 110 | 92 | 91 | 155 | 1,100 | 212 | 860 | 227 | 133 | 81 | 63 |
| 6..... | 227 | 119 | 89 | 1,290 | 144 | 1,290 | 198 | 703 | 205 | 149 | 71 | 72 |
| 7..... | 198 | 108 | 106 | 674 | 430 | 910 | 192 | 560 | 192 | 133 | 75 | 77 |
| 8..... | 209 | 112 | 88 | 430 | 383 | 703 | 192 | 454 | 179 | 133 | 77 | 68 |
| 9..... | 188 | 110 | 88 | 338 | 360 | 588 | 179 | 406 | 209 | 123 | 91 | 74 |
| 10..... | 166 | 102 | 92 | 360 | 360 | 506 | 172 | 360 | 179 | 133 | 81 | 68 |
| 11..... | 155 | 114 | 81 | 338 | 316 | 430 | 179 | 338 | 160 | 183 | 81 | 68 |
| 12..... | 149 | 104 | 81 | 316 | 295 | 406 | 179 | 316 | 149 | 227 | 83 | 68 |
| 13..... | 166 | 106 | 78 | 270 | 246 | 360 | 166 | 274 | 172 | 233 | 68 | 68 |
| 14..... | 133 | 102 | 108 | 205 | 223 | 406 | 176 | 274 | 176 | 195 | 68 | 63 |
| 15..... | 144 | 98 | 155 | 220 | 223 | 454 | 166 | 238 | 234 | 172 | 62 | 80 |
| 16..... | 158 | 91 | 158 | 205 | 209 | 430 | 3,870 | 238 | 216 | 144 | 72 | 71 |
| 17..... | 160 | 94 | 149 | 185 | 205 | 406 | 2,300 | 209 | 192 | 133 | 68 | 74 |
| 18..... | 155 | 98 | 141 | 179 | 198 | 338 | 1,160 | 209 | 160 | 133 | 77 | 65 |
| 19..... | 144 | 100 | 141 | 185 | 192 | 316 | 850 | 216 | 198 | 123 | 63 | 59 |
| 20..... | 149 | 100 | 133 | 192 | 172 | 295 | 645 | 274 | 166 | 110 | 64 | 54 |
| 21..... | 114 | 106 | 110 | 179 | 172 | 270 | 588 | 533 | 155 | 103 | 65 | 63 |
| 22..... | 133 | 98 | 138 | 160 | 172 | 262 | 616 | 430 | 155 | 123 | 60 | 86 |
| 23..... | 144 | 106 | 110 | 166 | 176 | 295 | 588 | 338 | 131 | 110 | 71 | 70 |
| 24..... | 149 | 91 | 114 | 172 | 166 | 338 | 480 | 295 | 169 | 103 | 71 | 68 |
| 25..... | 149 | 98 | 110 | 166 | 185 | 274 | 454 | 262 | 192 | 83 | 81 | 68 |
| 26..... | 124 | 92 | 119 | 205 | 274 | 274 | 454 | 406 | 198 | 83 | 67 | 67 |
| 27..... | 114 | 94 | 110 | 227 | 454 | 274 | 406 | 480 | 179 | 103 | 62 | 68 |
| 28..... | 133 | 88 | 110 | 212 | 970 | 246 | 406 | 406 | 166 | 133 | 56 | 65 |
| 29..... | 119 | 91 | 110 | 212 | ----- | 234 | 383 | 383 | 155 | 83 | 57 | 56 |
| 30..... | 124 | 104 | 114 | 185 | ----- | 238 | 360 | 383 | 152 | 103 | 70 | 83 |
| 31..... | 124 | ----- | 110 | 179 | ----- | 250 | ----- | 360 | ----- | 93 | 70 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 338 | 114 | 170 | 0.766 | 0.88 |
| November..... | 166 | 88 | 105 | .473 | .53 |
| December..... | 158 | 78 | 111 | .500 | .58 |
| January..... | 1,290 | 91 | 258 | 1.13 | 1.34 |
| February..... | 970 | 144 | 262 | 1.13 | 1.23 |
| March..... | 1,290 | 234 | 491 | 2.21 | 2.55 |
| April..... | 3,870 | 166 | 548 | 2.47 | 2.76 |
| May..... | 2,970 | 209 | 485 | 2.13 | 2.51 |
| June..... | 383 | 131 | 198 | .892 | 1.00 |
| July..... | 360 | 83 | 143 | .644 | .74 |
| August..... | 91 | 56 | 72.1 | .325 | .38 |
| September..... | 86 | 54 | 68.2 | .307 | .34 |
| The year..... | 3,870 | 54 | 243 | 1.03 | 14.84 |

NORTH FORK OF SHENANDOAH RIVER AT COOTES STORE, VA.

LOCATION.—Chain gage at highway bridge at Cootes Store, Rockingham County, 1 mile below Brooks Gap and 3½ miles above Linville Creek.

DRAINAGE AREA.—215 square miles.

RECORDS AVAILABLE.—February, 1925, to September, 1929.

EXTREMES.—Maximum discharge during year, 9,280 second-feet Apr. 16 (gage height, 14.98 feet); minimum discharge, 0.5 second-foot Sept. 30 (gage height, 1.97 feet).

1925-1929: Maximum discharge, that of Apr. 16, 1929; minimum, that of Sept. 30, 1929.

REMARKS.—Records good.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|-------|-------|-------|-------|------|------|-------|
| 1..... | 39 | 15 | 18 | 35 | 86 | 1,830 | 74 | 176 | 269 | 72 | 10 | 1.7 |
| 2..... | 37 | 15 | 35 | 33 | 58 | 2,310 | 74 | 176 | 252 | 72 | 9.5 | 1.7 |
| 3..... | 33 | 16 | 33 | 32 | 48 | 1,830 | 79 | 565 | 190 | 69 | 9.0 | 1.6 |
| 4..... | 32 | 24 | 33 | 31 | 44 | 1,830 | 88 | 565 | 141 | 64 | 8.5 | 1.6 |
| 5..... | 31 | 24 | 33 | 33 | 44 | 1,990 | 99 | 520 | 97 | 58 | 8.0 | 2.5 |
| 6..... | 30 | 24 | 32 | 65 | 43 | 2,150 | 94 | 460 | 92 | 51 | 7.0 | 2.8 |
| 7..... | 28 | 24 | 31 | 94 | 44 | 1,690 | 92 | 304 | 85 | 46 | 6.7 | 2.8 |
| 8..... | 26 | 24 | 30 | 134 | 48 | 900 | 90 | 236 | 77 | 205 | 6.4 | 2.5 |
| 9..... | 23 | 24 | 30 | 129 | 65 | 542 | 90 | 170 | 190 | 159 | 6.4 | 2.3 |
| 10..... | 21 | 24 | 30 | 220 | 86 | 400 | 88 | 110 | 119 | 159 | 6.0 | 2.3 |
| 11..... | 20 | 24 | 29 | 252 | 92 | 322 | 88 | 97 | 108 | 205 | 6.0 | 2.1 |
| 12..... | 20 | 24 | 28 | 220 | 79 | 286 | 86 | 85 | 90 | 154 | 5.7 | 2.1 |
| 13..... | 18 | 23 | 27 | 173 | 77 | 236 | 86 | 77 | 103 | 131 | 5.4 | 1.9 |
| 14..... | 17 | 22 | 39 | 139 | 76 | 220 | 86 | 101 | 190 | 108 | 5.4 | 1.9 |
| 15..... | 17 | 22 | 182 | 129 | 72 | 220 | 184 | 90 | 205 | 69 | 5.1 | 1.7 |
| 16..... | 16 | 22 | 168 | 114 | 72 | 220 | 9,280 | 77 | 141 | 56 | 5.1 | 1.7 |
| 17..... | 16 | 22 | 154 | 103 | 72 | 220 | 3,110 | 66 | 103 | 46 | 5.1 | 1.6 |
| 18..... | 16 | 22 | 136 | 99 | 72 | 205 | 2,310 | 59 | 83 | 35 | 4.8 | 1.5 |
| 19..... | 16 | 22 | 108 | 94 | 71 | 182 | 1,340 | 54 | 66 | 31 | 4.4 | 1.5 |
| 20..... | 16 | 22 | 90 | 88 | 69 | 168 | 900 | 54 | 51 | 30 | 4.1 | 1.4 |
| 21..... | 16 | 22 | 83 | 79 | 66 | 162 | 800 | 2,310 | 44 | 28 | 3.6 | 1.4 |
| 22..... | 16 | 22 | 71 | 72 | 64 | 149 | 750 | 1,020 | 39 | 26 | 3.4 | 1.3 |
| 23..... | 16 | 22 | 68 | 69 | 61 | 136 | 655 | 565 | 1,200 | 23 | 3.0 | 1.3 |
| 24..... | 16 | 21 | 65 | 58 | 72 | 131 | 520 | 380 | 565 | 19 | 2.8 | 1.2 |
| 25..... | 16 | 21 | 61 | 90 | 76 | 126 | 360 | 286 | 400 | 17 | 2.5 | 1.2 |
| 26..... | 15 | 20 | 57 | 146 | 1,270 | 122 | 286 | 236 | 322 | 14 | 2.3 | 1.1 |
| 27..... | 15 | 20 | 53 | 162 | 1,690 | 117 | 220 | 220 | 269 | 13 | 2.1 | .9 |
| 28..... | 15 | 19 | 51 | 152 | 2,870 | 110 | 205 | 205 | 157 | 12 | 1.7 | .8 |
| 29..... | 15 | 19 | 46 | 141 | ----- | 94 | 190 | 380 | 94 | 12 | 1.7 | .7 |
| 30..... | 15 | 18 | 40 | 131 | ----- | 77 | 182 | 304 | 79 | 11 | 1.7 | .7 |
| 31..... | 15 | ----- | 37 | 112 | ----- | 76 | ----- | 286 | ----- | 10 | 1.7 | .6 |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 39 | 15 | 20.7 | 0.096 | 0.11 |
| November..... | 24 | 15 | 21.4 | .100 | .11 |
| December..... | 182 | 18 | 61.2 | .285 | .38 |
| January..... | 262 | 31 | 111 | .516 | .59 |
| February..... | 2,870 | 43 | 4267 | 1.24 | 1.29 |
| March..... | 2,310 | 76 | 615 | 2.86 | 3.80 |
| April..... | 9,280 | 74 | 750 | 3.49 | 3.89 |
| May..... | 2,310 | 54 | 330 | 1.58 | 1.76 |
| June..... | 1,200 | 39 | 194 | .902 | 1.01 |
| July..... | 205 | 10 | 64.7 | .301 | .35 |
| August..... | 10 | 1.7 | 5.00 | .023 | .03 |
| September..... | 2.8 | .6 | 1.66 | .008 | .01 |
| The year..... | 9,280 | .6 | 203 | .944 | 12.78 |

NORTH FORK OF SHENANDOAH RIVER NEAR STRASBURG, VA.

LOCATION.—Chain gage at highway bridge 2 miles east of Strasburg, Shenandoah County, and 9 miles above confluence with South Fork.

DRAINAGE AREA.—772 square miles.

RECORDS AVAILABLE.—March, 1925, to September, 1929.

EXTREMES.—Maximum discharge during year, 13,900 second-feet Apr. 17 (gage height, 15.86 feet); minimum, 49 second-feet Sept. 16 (gage height, 1.86 feet).

1925-1929: Maximum discharge, that of Apr. 17, 1929; minimum, 34 second-feet Sept. 21, 1927 (gage height, 1.79 feet).

REMARKS.—Records good.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------------------|-------|------------------|------------------|------------------|--------------------|--------|-------|-------|-------|------|-------|
| 1..... | 152 | 156 | 123 | 140 | 339 | 4,600 | 366 | 770 | 1,170 | 470 | 185 | 180 |
| 2..... | 180 | 152 | 131 | 127 | ^b 310 | 3,800 | 346 | 770 | 930 | 414 | 140 | 99 |
| 3..... | 205 | 131 | 185 | 135 | ^b 280 | 6,100 | 332 | 850 | 616 | 414 | 152 | 119 |
| 4..... | 148 | 127 | 233 | 170 | ^b 270 | 2,420 | 339 | 1,410 | 542 | 359 | 200 | 127 |
| 5..... | 180 | 156 | 175 | 127 | ^b 250 | 2,870 | 359 | 1,170 | 466 | 366 | 180 | 127 |
| 6..... | 190 | 180 | 180 | ^a 151 | ^b 260 | 5,900 | 386 | 970 | 414 | 1,010 | 175 | 127 |
| 7..... | ^a 178 | 144 | 190 | 175 | ^b 300 | 4,400 | 380 | 850 | 380 | 654 | 180 | 102 |
| 8..... | 165 | 140 | 185 | 456 | 470 | 2,690 | 386 | 731 | 393 | 810 | 170 | 93 |
| 9..... | 144 | 156 | 152 | ^a 450 | 616 | 1,730 | 359 | 616 | 386 | 542 | 170 | 148 |
| 10..... | 175 | 185 | 165 | 770 | 400 | ^a 1,410 | 359 | 542 | 373 | 731 | 180 | 166 |
| 11..... | 156 | 135 | 152 | 506 | 332 | 1,090 | 386 | 542 | 442 | 1,250 | 170 | 106 |
| 12..... | 140 | 127 | ^a 150 | ^a 435 | 359 | 970 | 366 | 506 | 359 | 810 | 152 | 72 |
| 13..... | 131 | 119 | ^a 150 | ^a 365 | 319 | 930 | 359 | 435 | 359 | 3,320 | 165 | 96 |
| 14..... | ^a 130 | 109 | 222 | 294 | 281 | 810 | 346 | 456 | 542 | 1,090 | 152 | 106 |
| 15..... | 131 | 119 | 268 | 319 | 245 | 770 | 346 | 442 | 506 | 1,650 | 131 | 112 |
| 16..... | 140 | 175 | 579 | 373 | 233 | 654 | 1,410 | 386 | 470 | 810 | 156 | 86 |
| 17..... | 152 | 152 | 470 | 359 | 227 | 692 | 12,100 | 366 | 470 | 616 | 152 | 116 |
| 18..... | 185 | 144 | 506 | 332 | 195 | 692 | 3,800 | 366 | 373 | 506 | 144 | 116 |
| 19..... | ^a 170 | 127 | 506 | 281 | 233 | 616 | 2,780 | 359 | 407 | 442 | 131 | 89 |
| 20..... | 156 | 127 | 506 | 274 | 170 | 579 | 2,150 | 400 | 332 | 386 | 131 | 109 |
| 21..... | 144 | 144 | 470 | 262 | 268 | 542 | 1,810 | 654 | 306 | 366 | 119 | 96 |
| 22..... | 109 | 160 | 470 | ^a 242 | 346 | 506 | 2,780 | 3,320 | 326 | 326 | 119 | 99 |
| 23..... | 140 | 144 | 428 | 222 | 346 | 506 | 1,890 | 1,490 | 287 | 306 | 119 | 96 |
| 24..... | 160 | 144 | 346 | 233 | ^a 330 | 506 | 1,330 | 1,170 | 1,730 | 313 | 144 | 89 |
| 25..... | 148 | 127 | 294 | 274 | 470 | 449 | 1,250 | 890 | 930 | 281 | 160 | 109 |
| 26..... | 165 | 119 | ^a 270 | 300 | 470 | 442 | 1,090 | 731 | 3,600 | 268 | 148 | 93 |
| 27..... | 160 | 119 | 245 | 339 | 3,320 | 428 | 930 | 616 | 1,410 | 245 | 144 | 83 |
| 28..... | 131 | 119 | 205 | 373 | 3,500 | 407 | 930 | 579 | 850 | 210 | 102 | 78 |
| 29..... | 144 | 116 | 180 | 386 | ----- | 373 | 930 | 1,330 | 692 | 222 | 144 | 96 |
| 30..... | 144 | 123 | 175 | 326 | ----- | 386 | 890 | 1,250 | 616 | 239 | 160 | 135 |
| 31..... | 152 | ----- | 170 | ^a 290 | ----- | 400 | ----- | 930 | ----- | 170 | 152 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 205 | 109 | 155 | 0.201 | 0.23 |
| November..... | 185 | 109 | 139 | .180 | .20 |
| December..... | 579 | 123 | 274 | .365 | .41 |
| January..... | 770 | 127 | 306 | .396 | .46 |
| February..... | 3,500 | 170 | 541 | .701 | .72 |
| March..... | 6,100 | 373 | 1,570 | 2.03 | 2.34 |
| April..... | 12,100 | 332 | 1,380 | 1.79 | 2.00 |
| May..... | 3,320 | 359 | 835 | 1.08 | 1.24 |
| June..... | 3,600 | 287 | 689 | .892 | 1.00 |
| July..... | 3,320 | 170 | 632 | .819 | .94 |
| August..... | 200 | 102 | 152 | .197 | .23 |
| September..... | 180 | 72 | 109 | .141 | .16 |
| The year..... | 12,100 | 72 | 565 | .732 | 9.94 |

^a Estimated.

^b Stage-discharge relation affected by ice.

MONOCACY RIVER NEAR FREDERICK, MD

LOCATION.—Chain gage on Ceresville Bridge, 300 feet below mouth of Tuscarora Creek, and 3 miles northeast of Frederick, Frederick County.

DRAINAGE AREA.—665 square miles.

RECORDS AVAILABLE.—August, 1896, to September, 1929.

EXTREMES.—Maximum discharge during year, about 16,100 second-feet May 3 (gage height, 23.98 feet); minimum, 63 second-feet Sept. 3 (gage height, 3.93 feet).

1896-1929: Maximum discharge, about 20,000 second-feet Nov. 16, 1926 (gage height, about 28 feet); minimum, 15 second-feet several days in October, 1910 (gage height, 3.54 feet).

REMARKS.—Records fair. Discharge estimated because of ice Jan. 26 to Feb. 6.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|-------|-------|-------|--------|--------|--------|-------|------|------|-------|
| 1..... | 490 | 191 | 450 | 450 | 140 | 4,280 | 450 | 665 | 358 | 305 | 117 | 75 |
| 2..... | 642 | 191 | 375 | 1,290 | | 2,850 | 410 | 642 | 322 | 243 | 101 | 70 |
| 3..... | 530 | 204 | 375 | 510 | | 3,490 | 358 | 15,000 | 273 | 216 | 117 | 67 |
| 4..... | 392 | 191 | 157 | 410 | | 5,810 | 340 | 3,650 | 258 | 204 | 146 | 70 |
| 5..... | 375 | 230 | 146 | 375 | | 8,470 | 552 | 2,220 | 243 | 230 | 125 | 89 |
| 6..... | 375 | 273 | 157 | 8,010 | 1,530 | 10,500 | 2,500 | 1,410 | 243 | 216 | 117 | 392 |
| 7..... | 375 | 273 | 161 | 1,830 | | 4,910 | 1,010 | 1,120 | 230 | 230 | 114 | 230 |
| 8..... | 375 | 243 | 216 | 910 | | 2,640 | 552 | 1,010 | 410 | 216 | 110 | 125 |
| 9..... | 375 | 243 | 146 | 575 | | 2,150 | 1,890 | 910 | 358 | 204 | 110 | 289 |
| 10..... | 243 | 230 | 168 | 4,460 | | 1,290 | 1,950 | 430 | 810 | 289 | 180 | 1,180 |
| 11..... | 168 | 216 | 180 | 2,640 | 900 | 1,830 | 410 | 760 | 258 | 180 | 117 | 289 |
| 12..... | 142 | 216 | 204 | 1,770 | 575 | 1,350 | 910 | 790 | 216 | 180 | 121 | 103 |
| 13..... | 125 | 216 | 216 | 1,120 | 410 | 1,010 | 1,060 | 665 | 191 | 168 | 121 | 106 |
| 14..... | 103 | 204 | 216 | 860 | 375 | 1,230 | 810 | 688 | 216 | 180 | 119 | 138 |
| 15..... | 106 | 191 | 1,410 | 620 | 358 | 2,150 | 642 | 642 | 204 | 216 | 114 | 710 |
| 16..... | 146 | 204 | 860 | 510 | 358 | 1,470 | 5,090 | 552 | 191 | 168 | 106 | 860 |
| 17..... | 204 | 204 | 665 | 470 | 340 | 1,120 | 10,900 | 490 | 180 | 168 | 104 | 598 |
| 18..... | 204 | 273 | 530 | 490 | 358 | 960 | 3,010 | 430 | 155 | 166 | 103 | 358 |
| 19..... | 289 | 258 | 450 | 410 | 375 | 860 | 1,950 | 810 | 138 | 159 | 92 | 204 |
| 20..... | 258 | 289 | 410 | 410 | 410 | 760 | 1,830 | 1,830 | 490 | 155 | 86 | 159 |
| 21..... | 243 | 243 | 375 | 410 | 410 | 688 | 1,650 | 810 | 510 | 142 | 75 | 125 |
| 22..... | 243 | 230 | 243 | 410 | 620 | 642 | 2,150 | 710 | 510 | 133 | 84 | 106 |
| 23..... | 230 | 191 | 216 | 760 | 450 | 620 | 1,950 | 598 | 305 | 121 | 92 | 125 |
| 24..... | 216 | 180 | 191 | 510 | 410 | 598 | 1,410 | 470 | 1,830 | 123 | 89 | 112 |
| 25..... | 216 | 157 | 191 | 575 | 375 | 598 | 910 | 410 | 3,250 | 121 | 83 | 106 |
| 26..... | 216 | 157 | 191 | 200 | 1,950 | 552 | 1,010 | 392 | 1,010 | 117 | 86 | 99 |
| 27..... | 191 | 157 | 168 | | 8,470 | 510 | 910 | 375 | 598 | 121 | 96 | 87 |
| 28..... | 191 | 168 | 146 | | 8,930 | 490 | 810 | 375 | 392 | 119 | 92 | 79 |
| 29..... | 216 | 191 | 125 | | ----- | 470 | 910 | 392 | 490 | 112 | 84 | 125 |
| 30..... | 204 | 230 | 89 | | ----- | 450 | 760 | 552 | 375 | 103 | 79 | 125 |
| 31..... | 204 | ----- | 98 | ----- | ----- | 430 | ----- | 470 | ----- | 110 | 76 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 642 | 103 | 267 | 0.402 | 0.46 |
| November..... | 289 | 157 | 215 | .323 | .36 |
| December..... | 1,410 | 89 | 307 | .462 | .53 |
| January..... | 8,010 | ----- | 1,030 | 1.55 | 1.79 |
| February..... | 8,930 | ----- | 1,240 | 1.86 | 1.94 |
| March..... | 10,500 | 430 | 2,120 | 3.19 | 3.68 |
| April..... | 10,900 | 340 | 1,540 | 2.32 | 2.59 |
| May..... | 15,000 | 375 | 1,310 | 1.97 | 2.27 |
| June..... | 3,250 | 138 | 453 | .726 | .81 |
| July..... | 305 | 103 | 171 | .267 | .30 |
| August..... | 146 | 75 | 103 | .155 | .18 |
| September..... | 1,180 | 67 | 240 | .361 | .40 |
| The year..... | 15,000 | 67 | 749 | 1.13 | 15.31 |

GREAT SENECA CREEK NEAR GAITHERSBURG, MD.

LOCATION.—Chain gage on highway bridge on Frederick pike 2 miles northwest of Gaithersburg, Montgomery County. Zero of gage is 305.374 feet above mean sea level.

DRAINAGE AREA.—41.0 square miles.

RECORDS AVAILABLE.—March, 1925, to September, 1929.

EXTREMES.—Maximum discharge during year, about 450 second-feet Apr. 16 (gage height, 6.45 feet); minimum, 4 second-feet Sept. 4-7 (gage height, 1.32 feet).

1925-1929: Maximum discharge, about 800 second-feet, revised, Nov. 16, 1926 (gage height, 8.80 feet); minimum, that of Sept. 4-7, 1927.

REMARKS.—Records good. Discharge estimated because of ice Dec. 27-31, Jan. 14-17, 28-31, Feb. 1-5, 13-15, 21-24, and Mar. 9.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|------|------|-------|-------|------|-------|------|-------|------|-------|
| 1 | 37 | 27 | 47 | 37 | 25 | 91 | 40 | 53 | 30 | 34 | 14 | 8 |
| 2 | 34 | 27 | 33 | 31 | | 126 | 35 | 55 | 27 | 34 | 14 | 5 |
| 3 | 33 | 29 | 31 | 24 | | 80 | 34 | 109 | 27 | 32 | 20 | 5 |
| 4 | 32 | 63 | 29 | 24 | | 81 | 37 | 66 | 27 | 31 | 22 | 4 |
| 5 | 32 | 34 | 29 | 23 | | 162 | 58 | 60 | 27 | 30 | 16 | 4 |
| 6 | 32 | 30 | 28 | 89 | 26 | 153 | 43 | 60 | 27 | 30 | 16 | 4 |
| 7 | 31 | 28 | 27 | 37 | 142 | 98 | 37 | 62 | 29 | 29 | 16 | 5 |
| 8 | 30 | 29 | 26 | 26 | 44 | 72 | 34 | 52 | 47 | 27 | 16 | 5 |
| 9 | 30 | 26 | 24 | 29 | 37 | 68 | 35 | 62 | 32 | 32 | 16 | 13 |
| 10 | 29 | 26 | 20 | 97 | 35 | 65 | 43 | 53 | 27 | 27 | 16 | 12 |
| 11 | 29 | 26 | 20 | 43 | 32 | 61 | 39 | 48 | 26 | 24 | 16 | 11 |
| 12 | 29 | 26 | 24 | 33 | 30 | 61 | 46 | 46 | 26 | 25 | 15 | 11 |
| 13 | 29 | 26 | 24 | 23 | 27 | 63 | 37 | 50 | 24 | 26 | 13 | 10 |
| 14 | 29 | 26 | 30 | 22 | | 84 | 35 | 50 | 23 | 26 | 15 | 15 |
| 15 | 28 | 26 | 60 | | | 66 | 35 | 48 | 29 | 26 | 15 | 11 |
| 16 | 30 | 26 | 38 | | | 61 | 258 | 43 | 26 | 24 | 14 | 10 |
| 17 | 29 | 26 | 34 | | | 55 | 143 | 40 | 23 | 22 | 13 | 20 |
| 18 | 29 | 26 | 34 | 28 | 26 | 51 | 83 | 40 | 23 | 22 | 13 | 15 |
| 19 | 30 | 26 | 29 | 39 | 25 | 51 | 64 | 44 | 24 | 22 | 13 | 12 |
| 20 | 29 | 30 | 28 | 29 | 25 | 48 | 60 | 50 | 22 | 20 | 12 | 12 |
| 21 | 28 | 27 | 27 | 26 | 22 | 47 | 130 | 55 | 20 | 19 | 11 | 12 |
| 22 | 28 | 26 | 24 | 25 | | 46 | 127 | 43 | 26 | 24 | 12 | 12 |
| 23 | 29 | 25 | 20 | 27 | | 49 | 75 | 40 | 20 | 24 | 14 | 12 |
| 24 | 29 | 24 | 20 | 26 | | 45 | 64 | 37 | 22 | 21 | 14 | 12 |
| 25 | 28 | 24 | 20 | 66 | | 42 | 66 | 37 | 36 | 20 | 12 | 11 |
| 26 | 27 | 24 | 21 | 47 | 220 | 44 | 94 | 35 | 34 | 20 | 10 | 10 |
| 27 | 27 | 24 | 20 | 35 | 158 | 41 | 60 | 34 | 24 | 19 | 9 | 10 |
| 28 | 29 | 24 | | 26 | 261 | 38 | 59 | 34 | 184 | 17 | 11 | 10 |
| 29 | 27 | 24 | | | 37 | 57 | 34 | 40 | 16 | 11 | 9 | |
| 30 | 27 | 51 | | | 40 | 52 | 33 | 37 | 16 | 11 | 24 | |
| 31 | 27 | ----- | | | ----- | ----- | 43 | ----- | 31 | ----- | 14 | 10 |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 37 | 27 | 29.6 | 0.722 | 0.83 |
| November | 63 | 24 | 28.5 | .695 | .78 |
| December | 60 | 20 | 27.3 | .666 | .77 |
| January | 97 | 26 | 34.1 | .832 | .96 |
| February | 261 | 26 | 51.0 | 1.24 | 1.29 |
| March | 162 | 37 | 66.7 | 1.63 | 1.88 |
| April | 258 | 34 | 66.0 | 1.61 | 1.80 |
| May | 109 | 31 | 48.5 | 1.18 | 1.36 |
| June | 184 | 20 | 33.0 | .805 | .90 |
| July | 34 | 14 | 24.3 | .593 | .68 |
| August | 22 | 9 | 13.9 | .339 | .39 |
| September | 24 | 4 | 10.5 | .256 | .29 |
| The year | 261 | 4 | 36.0 | .878 | 11.93 |

NORTHWEST BRANCH OF ANACOSTIA RIVER NEAR COLESVILLE, MD.

LOCATION.—Staff gage at bridge $1\frac{1}{2}$ miles southwest of Colesville, Montgomery County, and 3 miles above Burnt Mills. Zero of gage is 2⁵.60 feet above mean sea level.

DRAINAGE AREA.—21.3 square miles.

RECORDS AVAILABLE.—February, 1924, to September, 1929.

EXTREMES.—Maximum discharge during year, 1,020 second-feet during night of June 21-22 (gage height, about 5.8 feet); minimum, about 2 second-feet Sept. 4 and 5 (gage height, 1.40 feet).

1924-1929: Maximum discharge, about 1,600 second-feet Apr. 6, 1924 (gage height, 7.87 feet); minimum, about 2 second-feet July 20, 1925, and Sept. 4 and 5, 1929.

REMARKS.—Records fair. Discharge estimated because of ice January 8, 9, 27-31, Feb. 1-6, and 21-24.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1..... | 12 | 12 | 18 | 13 | 10 | 204 | 15 | 16 | 10 | 11 | 4 | 3 |
| 2..... | 11 | 12 | 13 | 13 | | 212 | 14 | 16 | 10 | 10 | 4 | 3 |
| 3..... | 10 | 12 | 12 | 12 | | 33 | 13 | 18 | 11 | 9 | 6 | 3 |
| 4..... | 10 | 16 | 12 | 12 | | 101 | 15 | 18 | 10 | 8 | 7 | 2 |
| 5..... | 11 | 13 | 12 | 37 | | 185 | 18 | 17 | 10 | 10 | 5 | 3 |
| 6..... | 11 | 12 | 12 | 60 | 15 | 232 | 16 | 16 | 10 | 9 | 5 | 4 |
| 7..... | 11 | 12 | 11 | 18 | 126 | 47 | 15 | 16 | 10 | 9 | 5 | 4 |
| 8..... | 11 | 12 | 11 | 13 | 19 | 22 | 15 | 16 | 18 | 8 | 5 | 3 |
| 9..... | 10 | 11 | 11 | 12 | 16 | 20 | 13 | 16 | 12 | 9 | 5 | 3 |
| 10..... | 10 | 12 | 11 | 85 | 15 | 19 | 15 | 16 | 10 | 9 | 4 | 10 |
| 11..... | 10 | 12 | 11 | 21 | 13 | 18 | 23 | 15 | 10 | 9 | 4 | 4 |
| 12..... | 10 | 13 | 10 | 15 | 12 | 17 | 26 | 15 | 9 | 8 | 4 | 3 |
| 13..... | 9 | 12 | 10 | 13 | 11 | 19 | 18 | 15 | 9 | 8 | 4 | 3 |
| 14..... | 11 | 12 | 20 | 12 | 11 | 23 | 16 | 13 | 9 | 7 | 4 | 6 |
| 15..... | 12 | 12 | 36 | 12 | 11 | 20 | 19 | 13 | 13 | 7 | 5 | 4 |
| 16..... | 12 | 12 | 17 | 12 | 11 | 16 | 352 | 13 | 9 | 7 | 4 | 4 |
| 17..... | 12 | 12 | 16 | 13 | 12 | 15 | 204 | 13 | 9 | 7 | 4 | 5 |
| 18..... | 16 | 11 | 13 | 13 | 11 | 15 | 29 | 12 | 9 | 7 | 3 | 4 |
| 19..... | 12 | 13 | 13 | 21 | 10 | 15 | 23 | 12 | 24 | 6 | 3 | 3 |
| 20..... | 10 | 14 | 13 | 15 | 10 | 15 | 20 | 14 | 19 | 6 | 3 | 3 |
| 21..... | 10 | 13 | 12 | 13 | 11 | 15 | 24 | 15 | 24 | 6 | 3 | 3 |
| 22..... | 10 | 12 | 11 | 13 | | 15 | 88 | 12 | 126 | 7 | 3 | 3 |
| 23..... | 12 | 12 | 11 | 13 | | 21 | 25 | 11 | 9 | 7 | 6 | 3 |
| 24..... | 12 | 12 | 11 | 13 | | 17 | 21 | 10 | 119 | 7 | 3 | 3 |
| 25..... | 12 | 12 | 11 | 60 | | 24 | 16 | 23 | 10 | 334 | 6 | 3 |
| 26..... | 12 | 13 | 11 | 28 | 197 | 15 | 21 | 11 | 22 | 6 | 3 | 3 |
| 27..... | 13 | 13 | 11 | 13 | 81 | 15 | 18 | 11 | 13 | 5 | 5 | 3 |
| 28..... | 12 | 12 | 11 | | 261 | 13 | 19 | 11 | 344 | 5 | 8 | 3 |
| 29..... | 11 | 12 | 11 | | 16 | 13 | 18 | 11 | 17 | 5 | 4 | 11 |
| 30..... | 11 | 28 | 11 | | | 17 | 16 | 10 | 12 | 5 | 3 | 16 |
| 31..... | 11 | 11 | 11 | | | 16 | 10 | 10 | 4 | 3 | 3 | |
| | | | | | | | | | | | | |

| Month | Maximum | Minimum | Mean | Pe- square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October..... | 16 | 9 | 11.2 | 0.526 | 0.61 |
| November..... | 28 | 11 | 12.9 | .606 | .68 |
| December..... | 36 | 10 | 13.0 | .610 | .70 |
| January..... | 85 | ----- | 20.2 | .948 | 1.09 |
| February..... | 261 | ----- | 34.3 | 1.61 | 1.68 |
| March..... | 232 | 13 | 45.8 | 2.15 | 2.48 |
| April..... | 352 | 13 | 38.4 | 1.80 | 2.01 |
| May..... | 18 | 10 | 13.6 | .638 | .74 |
| June..... | 344 | 9 | 41.7 | 1.96 | 2.19 |
| July..... | 11 | 4 | 7.3 | .344 | .40 |
| August..... | 8 | 3 | 4.3 | .200 | .23 |
| September..... | 16 | 2 | 4.3 | .200 | .22 |
| The year..... | 352 | 2 | 20.4 | .958 | 13.03 |

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, 1929.

EXTREMES.—Maximum discharge during year, 12,500 second-feet June 26 (gage height, 15.75 feet); minimum, 37 second-feet Sept. 8 (gage height, 1.88 feet).

1925-1929: Maximum discharge, 15,200 second-feet Nov. 17, 1926 (gage height, 18.00 feet); minimum, 15 second-feet Sept. 9, 1925 (gage height, 1.50 feet).

REMARKS.—Records good.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1..... | 663 | 246 | 402 | 320 | 402 | 2,420 | 498 | 930 | 750 | 518 | 255 | 62 |
| 2..... | 524 | 246 | 300 | 340 | 380 | 2,000 | 472 | 1,300 | 750 | 467 | 182 | 66 |
| 3..... | 448 | 246 | 264 | 282 | 424 | 2,140 | 424 | 8,610 | 663 | 394 | 176 | 68 |
| 4..... | 424 | 380 | 246 | 215 | 498 | 1,720 | 424 | 3,690 | 524 | 518 | 272 | 62 |
| 5..... | 424 | 524 | 228 | 228 | 424 | 2,740 | 498 | 2,280 | 448 | 330 | 222 | 58 |
| 6..... | 402 | 340 | 222 | 2,900 | 424 | 3,420 | 524 | 1,790 | 424 | 896 | 146 | 51 |
| 7..... | 380 | 300 | 202 | 1,860 | 1,440 | 2,350 | 472 | 1,610 | 402 | 394 | 141 | 53 |
| 8..... | 340 | 282 | 193 | 930 | 1,230 | 1,580 | 424 | 1,170 | 692 | 330 | 148 | 56 |
| 9..... | 320 | 264 | 182 | 750 | 930 | 1,440 | 424 | 1,110 | 578 | 272 | 146 | 78 |
| 10..... | 300 | 246 | 199 | 930 | 810 | 1,170 | 524 | 990 | 472 | 826 | 151 | 58 |
| 11..... | 300 | 246 | 218 | 990 | 663 | 1,110 | 578 | 870 | 380 | 1,270 | 134 | 62 |
| 12..... | 282 | 228 | 246 | 750 | 578 | 990 | 578 | 606 | 340 | 518 | 122 | 64 |
| 13..... | 282 | 222 | 262 | 578 | 472 | 930 | 578 | 810 | 360 | 544 | 117 | 60 |
| 14..... | 264 | 202 | 264 | 402 | 472 | 1,110 | 498 | 750 | 524 | 442 | 119 | 87 |
| 15..... | 264 | 222 | 3,150 | 424 | 524 | 1,050 | 578 | 750 | 750 | 418 | 105 | 100 |
| 16..... | 282 | 246 | 1,050 | 551 | 524 | 930 | 6,850 | 692 | 990 | 350 | 78 | 70 |
| 17..... | 282 | 225 | 750 | 498 | 448 | 810 | 8,720 | 606 | 524 | 272 | 85 | 74 |
| 18..... | 246 | 222 | 663 | 498 | 448 | 750 | 3,240 | 551 | 524 | 272 | 89 | 126 |
| 19..... | 340 | 218 | 524 | 524 | 424 | 692 | 2,140 | 524 | 380 | 185 | 89 | 110 |
| 20..... | 300 | 218 | 424 | 472 | 424 | 692 | 1,650 | 1,370 | 634 | 134 | 80 | 87 |
| 21..... | 264 | 225 | 402 | 424 | 340 | 634 | 1,510 | 2,280 | 340 | 191 | 82 | 58 |
| 22..... | 246 | 209 | 360 | 424 | 402 | 606 | 2,740 | 1,230 | 300 | 206 | 74 | 56 |
| 23..... | 246 | 215 | 320 | 402 | 578 | 692 | 1,790 | 990 | 424 | 222 | 85 | 60 |
| 24..... | 320 | 209 | 360 | 402 | 448 | 692 | 1,440 | 810 | 1,300 | 222 | 107 | 60 |
| 25..... | 300 | 212 | 524 | 424 | 692 | 634 | 1,230 | 750 | 1,790 | 200 | 96 | 54 |
| 26..... | 246 | 206 | 380 | 810 | 1,230 | 578 | 1,110 | 692 | 9,490 | 154 | 82 | 56 |
| 27..... | 246 | 202 | 360 | 634 | 2,420 | 578 | 1,050 | 634 | 1,200 | 148 | 76 | 51 |
| 28..... | 246 | 199 | 320 | 578 | 3,690 | 498 | 930 | 634 | 826 | 173 | 89 | 53 |
| 29..... | 264 | 190 | 246 | 472 | ----- | 498 | 1,110 | 810 | 1,270 | 138 | 114 | 58 |
| 30..... | 246 | 264 | 246 | 340 | ----- | 498 | 870 | 810 | 826 | 1,080 | 82 | 131 |
| 31..... | 246 | ----- | 212 | 380 | ----- | 498 | ----- | 692 | ----- | 394 | 62 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|-------|-----------------|-------------------|
| October..... | 663 | 246 | 321 | 0.561 | 0.58 |
| November..... | 524 | 190 | 248 | .387 | .43 |
| December..... | 3,150 | 182 | 443 | .661 | .80 |
| January..... | 2,900 | 215 | 637 | .964 | 1.15 |
| February..... | 3,690 | 340 | 776 | 1.21 | 1.26 |
| March..... | 3,420 | 498 | 1,180 | 1.84 | 2.12 |
| April..... | 8,720 | 424 | 1,460 | 2.28 | 2.54 |
| May..... | 8,610 | 524 | 1,330 | 2.07 | 2.39 |
| June..... | 9,490 | 300 | 962 | 1.50 | 1.67 |
| July..... | 1,270 | 134 | 402 | .627 | .72 |
| August..... | 272 | 62 | 123 | .192 | .22 |
| September..... | 131 | 51 | 69.6 | .100 | .12 |
| The year..... | 9,490 | 51 | 661 | 1.02 | 14.00 |

RAPPAHANNOCK RIVER NEAR FREDERICKSBURG, VA.

LOCATION.—Water-stage recorder $1\frac{1}{2}$ miles above dam of Virginia Electric & Power Co., and $3\frac{1}{2}$ miles above Fredericksburg, Spottsylvania County.

DRAINAGE AREA.—1,590 square miles.

RECORDS AVAILABLE.—September, 1907, to September, 1929.

EXTREMES.—Maximum discharge during year, 22,200 second-feet Apr. 17 (gage height, 8.47 feet); minimum, 163 second-feet Sept. 30 (gage height, 0.68 foot).

1907-1929: Maximum discharge, about 66,000 second-feet May 13, 1924 (gage height, 16.5 feet); minimum, 64 second-feet Sept. 15, 1925 (gage height, 0.28 foot).

REMARKS.—Records excellent. Discharge estimated Oct. 5 and Aug. 23.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|-------|-------|-------|-------|-------|--------|--------|--------|-------|-------|------|-------|
| 1..... | 1,620 | 730 | 878 | 768 | 1,090 | 8,740 | 1,450 | 2,240 | 2,400 | 1,530 | 669 | 241 |
| 2..... | 1,490 | 730 | 1,140 | 878 | 1,200 | 4,800 | 1,350 | 2,660 | 1,940 | 1,490 | 532 | 228 |
| 3..... | 1,240 | 739 | 868 | 964 | 975 | 5,890 | 1,250 | 10,200 | 1,530 | 1,520 | 474 | 224 |
| 4..... | 1,160 | 826 | 739 | 768 | 1,050 | 3,960 | 1,190 | 9,860 | 1,450 | 1,450 | 448 | 215 |
| 5..... | 1,150 | 1,280 | 703 | 748 | 1,100 | 7,100 | 1,240 | 5,060 | 1,350 | 1,010 | 428 | 202 |
| 6..... | 1,130 | 1,160 | 669 | 4,540 | 986 | 10,100 | 1,410 | 3,840 | 1,250 | 1,670 | 510 | 202 |
| 7..... | 1,150 | 899 | 635 | 5,610 | 3,550 | 5,920 | 1,290 | 3,310 | 1,230 | 1,480 | 415 | 233 |
| 8..... | 1,040 | 806 | 644 | 2,740 | 3,740 | 3,960 | 1,190 | 2,840 | 3,310 | 1,060 | 409 | 402 |
| 9..... | 986 | 786 | 694 | 1,880 | 2,400 | 3,210 | 1,230 | 2,490 | 2,320 | 888 | 428 | 314 |
| 10..... | 942 | 768 | 694 | 2,240 | 2,080 | 2,750 | 1,520 | 2,240 | 2,080 | 1,280 | 467 | 280 |
| 11..... | 910 | 730 | 669 | 3,020 | 1,860 | 2,400 | 1,520 | 2,080 | 1,490 | 2,300 | 441 | 241 |
| 12..... | 888 | 720 | 652 | 2,160 | 1,590 | 2,240 | 1,600 | 1,940 | 1,240 | 1,810 | 397 | 237 |
| 13..... | 857 | 703 | 627 | 1,800 | 1,380 | 2,080 | 1,570 | 1,320 | 1,230 | 3,040 | 379 | 250 |
| 14..... | 846 | 694 | 660 | 1,420 | 1,180 | 2,490 | 1,350 | 1,720 | 1,520 | 1,860 | 355 | 260 |
| 15..... | 836 | 669 | 5,620 | 1,190 | 1,190 | 2,660 | 1,270 | 1,760 | 1,860 | 1,590 | 322 | 448 |
| 16..... | 836 | 678 | 3,850 | 1,360 | 1,250 | 2,320 | 12,800 | 1,640 | 4,750 | 1,320 | 300 | 355 |
| 17..... | 846 | 694 | 2,000 | 1,310 | 1,230 | 2,080 | 18,900 | 1,500 | 2,320 | 986 | 285 | 280 |
| 18..... | 846 | 720 | 1,660 | 1,250 | 1,140 | 1,860 | 8,400 | 1,410 | 1,860 | 846 | 270 | 300 |
| 19..... | 846 | 703 | 1,530 | 1,280 | 1,110 | 1,740 | 4,800 | 1,390 | 1,660 | 857 | 260 | 563 |
| 20..... | 888 | 730 | 1,240 | 1,290 | 1,130 | 1,670 | 3,730 | 1,790 | 1,620 | 836 | 306 | 338 |
| 21..... | 815 | 720 | 1,110 | 1,150 | 1,180 | 1,600 | 3,210 | 3,639 | 1,390 | 686 | 290 | 265 |
| 22..... | 758 | 703 | 1,010 | 1,040 | 1,030 | 1,550 | 5,320 | 3,540 | 1,150 | 611 | 241 | 237 |
| 23..... | 768 | 694 | 868 | 997 | 1,310 | 1,740 | 4,360 | 2,320 | 1,720 | 603 | 270 | 228 |
| 24..... | 806 | 694 | 836 | 1,010 | 1,360 | 2,400 | 3,120 | 1,960 | 5,030 | 652 | 297 | 219 |
| 25..... | 953 | 686 | 888 | 1,020 | 1,880 | 1,980 | 2,750 | 1,300 | 6,060 | 603 | 350 | 224 |
| 26..... | 836 | 686 | 1,020 | 1,720 | 3,070 | 1,690 | 2,750 | 1,730 | 8,580 | 532 | 285 | 219 |
| 27..... | 777 | 678 | 942 | 1,640 | 5,470 | 1,620 | 2,580 | 1,640 | 4,040 | 488 | 246 | 202 |
| 28..... | 758 | 669 | 878 | 1,360 | 9,100 | 1,500 | 2,240 | 1,530 | 3,100 | 480 | 250 | 191 |
| 29..... | 758 | 669 | 868 | 1,310 | ----- | 1,380 | 2,580 | 1,720 | 4,570 | 474 | 285 | 173 |
| 30..... | 768 | 739 | 836 | 1,050 | ----- | 1,320 | 2,240 | 2,660 | 2,160 | 1,230 | 344 | 173 |
| 31..... | 739 | ----- | 796 | 986 | ----- | 1,410 | ----- | 2,240 | ----- | 1,510 | 260 | ----- |

| Month | Maximum | Minimum | Mean | Per square m/le | Run-off in inches |
|----------------|---------|---------|-------|--------------------|----------------------|
| October..... | 1,620 | 739 | 943 | 0.593 | 0.68 |
| November..... | 1,280 | 669 | 757 | .476 | .53 |
| December..... | 5,620 | 627 | 1,170 | .736 | .85 |
| January..... | 5,610 | 748 | 1,630 | 1.03 | 1.19 |
| February..... | 9,100 | 975 | 1,990 | 1.25 | 1.30 |
| March..... | 10,100 | 1,320 | 3,100 | 1.95 | 2.25 |
| April..... | 18,900 | 1,190 | 3,340 | 2.10 | 2.34 |
| May..... | 10,200 | 1,390 | 2,790 | 1.75 | 2.02 |
| June..... | 8,580 | 1,150 | 2,540 | 1.60 | 1.78 |
| July..... | 3,040 | 474 | 1,190 | .748 | .86 |
| August..... | 669 | 241 | 362 | .228 | .26 |
| September..... | 563 | 173 | 266 | .167 | .19 |
| The year..... | 18,900 | 173 | 1,670 | 1.05 | 14.25 |

RAPIDAN RIVER AT RAPIDAN, VA.

LOCATION.—Staff gage 1,000 feet below highway bridge in Rapidar, Culpeper County, 2 miles below mouth of Robinson Branch.

DRAINAGE AREA.—446 square miles.

RECORDS AVAILABLE.—February, 1925, to September, 1929.

EXTREMES.—Maximum discharge during year, 6,000 second-feet Apr. 16 (gage height, 9.95 feet); minimum, 18 second-feet Sept. 27 (gage height, 0.48 foot).

1925-1929: Maximum discharge, 12,400 second-feet Nov. 16, 1926 (gage height, 16.66 feet); minimum, 17 second-feet Aug. 29, 1925 (gage height, 0.31 foot).

REMARKS.—Records good. Discharge estimated Apr. 21 to May 2. Low-water flow regulated by small mill above gage.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1 | 486 | 198 | 291 | 242 | 308 | 1,500 | 382 | 720 | 788 | 486 | 198 | 69 |
| 2 | 422 | 184 | 227 | 274 | 291 | 1,210 | 344 | 1,090 | 464 | 692 | 171 | 79 |
| 3 | 352 | 212 | 198 | 212 | 227 | 1,100 | 326 | 3,060 | 402 | 464 | 184 | 63 |
| 4 | 363 | 344 | 184 | 212 | 212 | 1,050 | 326 | 1,320 | 363 | 382 | 212 | 44 |
| 5 | 363 | 308 | 184 | 227 | 326 | 2,300 | 344 | 1,260 | 326 | 422 | 158 | 41 |
| 6 | 402 | 242 | 171 | 2,980 | 291 | 1,950 | 344 | 1,050 | 308 | 598 | 139 | 44 |
| 7 | 344 | 198 | 171 | 1,210 | 992 | 1,380 | 308 | 888 | 363 | 422 | 132 | 32 |
| 8 | 326 | 212 | 171 | 898 | 598 | 1,050 | 291 | 740 | 692 | 308 | 153 | 151 |
| 9 | 291 | 198 | 184 | 644 | 530 | 940 | 326 | 644 | 644 | 308 | 184 | 78 |
| 10 | 274 | 198 | 153 | 1,050 | 508 | 788 | 326 | 598 | 422 | 344 | 158 | 71 |
| 11 | 258 | 198 | 153 | 788 | 443 | 740 | 326 | 530 | 344 | 788 | 134 | 130 |
| 12 | 258 | 184 | 156 | 598 | 402 | 644 | 363 | 486 | 291 | 1,320 | 134 | 61 |
| 13 | 258 | 171 | 158 | 530 | 363 | 598 | 326 | 443 | 644 | 1,100 | 116 | 38 |
| 14 | 242 | 171 | 274 | 422 | 326 | 838 | 291 | 464 | 464 | 598 | 108 | 258 |
| 15 | 242 | 171 | 1,100 | 464 | 344 | 740 | 344 | 422 | 1,560 | 838 | 112 | 110 |
| 16 | 242 | 184 | 598 | 402 | 326 | 692 | 4,790 | 382 | 1,100 | 486 | 96 | 55 |
| 17 | 242 | 184 | 422 | 382 | 308 | 644 | 3,220 | 344 | 644 | 382 | 96 | 43 |
| 18 | 242 | 171 | 443 | 363 | 308 | 575 | 1,690 | 326 | 740 | 326 | 104 | 227 |
| 19 | 258 | 184 | 363 | 382 | 291 | 530 | 1,210 | 344 | 692 | 422 | 158 | 78 |
| 20 | 242 | 184 | 326 | 344 | 291 | 508 | 992 | 486 | 508 | 258 | 88 | 71 |
| 21 | 212 | 184 | 308 | 326 | 274 | 464 | 900 | 992 | 344 | 258 | 85 | 71 |
| 22 | 198 | 171 | 274 | 308 | 326 | 443 | 1,870 | 644 | 344 | 242 | 74 | 64 |
| 23 | 212 | 171 | 242 | 308 | 344 | 740 | 1,260 | 530 | 1,260 | 258 | 227 | 74 |
| 24 | 274 | 171 | 274 | 291 | 326 | 644 | 980 | 464 | 1,100 | 212 | 114 | 69 |
| 25 | 227 | 171 | 291 | 344 | 464 | 508 | 900 | 422 | 3,380 | 198 | 92 | 44 |
| 26 | 212 | 184 | 291 | 443 | 788 | 464 | 820 | 422 | 1,690 | 184 | 74 | 71 |
| 27 | 198 | 171 | 242 | 363 | 1,440 | 443 | 740 | 363 | 1,050 | 198 | 50 | 28 |
| 28 | 212 | 171 | 242 | 363 | 2,680 | 402 | 660 | 344 | 1,160 | 184 | 69 | 28 |
| 29 | 212 | 171 | 242 | 326 | ----- | 382 | 780 | 422 | 888 | 158 | 92 | 43 |
| 30 | 198 | 212 | 227 | 291 | ----- | 382 | 660 | 788 | 644 | 1,050 | 63 | 41 |
| 31 | 198 | ----- | 212 | 308 | ----- | 402 | ----- | 575 | ----- | 258 | 81 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------|---------|---------|------|-----------------|-------------------|
| October | 486 | 198 | 274 | 0.614 | 0.71 |
| November | 344 | 171 | 196 | .439 | .49 |
| December | 1,100 | 158 | 283 | .635 | .73 |
| January | 2,980 | 212 | 524 | 1.17 | 1.35 |
| February | 2,680 | 212 | 512 | 1.15 | 1.20 |
| March | 2,300 | 382 | 808 | 1.81 | 2.09 |
| April | 4,790 | 291 | 877 | 1.97 | 2.20 |
| May | 3,060 | 326 | 712 | 1.60 | 1.84 |
| June | 3,380 | 291 | 787 | 1.76 | 1.96 |
| July | 1,320 | 158 | 456 | 1.02 | 1.18 |
| August | 227 | 50 | 124 | .278 | .32 |
| September | 258 | 28 | 75.9 | .170 | .19 |
| The year | 4,790 | 28 | 469 | 1.05 | 14.26 |

YORK RIVER BASIN

NORTH ANNA RIVER NEAR DOSWELL, VA.

LOCATION.—Staff gage at old Ox Ford half a mile upstream from highway bridge on route U. S. No. 1, and 2 miles north of Doswell, Caroline County.

DRAINAGE AREA.—439 square miles.

RECORDS AVAILABLE.—March to September, 1929.

EXTREMES.—Maximum discharge during period 3,830 second-feet Apr. 17 (gage height, 11.55 feet); minimum, 13 second-feet Sept. 28 (gage height, 0.42 foot).

REMARKS.—Records good.

Daily and monthly discharge, in second-feet, 1929

| Day | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|-------|-------|-------|------|-------|
| 1..... | | 342 | 500 | 211 | 147 | 73 | 40 |
| 2..... | | 286 | 602 | 500 | 147 | 61 | 44 |
| 3..... | | 248 | 674 | 211 | 147 | 69 | 37 |
| 4..... | | 223 | 500 | 168 | 123 | 66 | 59 |
| 5..... | | 248 | 342 | 158 | 115 | 62 | 37 |
| 6..... | | | 273 | 286 | 149 | 123 | 67 |
| 7..... | | | 248 | 273 | 131 | 267 | 66 |
| 8..... | | | 223 | 260 | 131 | 147 | 73 |
| 9..... | | | 211 | 235 | 149 | 115 | 67 |
| 10..... | | | 200 | 235 | 200 | 100 | 72 |
| 11..... | | | 200 | 223 | 168 | 147 | 77 |
| 12..... | | | 235 | 200 | 131 | 168 | 76 |
| 13..... | | | 300 | 189 | 123 | 372 | 66 |
| 14..... | | | 235 | 200 | 123 | 466 | 63 |
| 15..... | | | 223 | 200 | 149 | 168 | 61 |
| 16..... | | | | | | | |
| 17..... | | 434 | 1,670 | 189 | 248 | 149 | 58 |
| 18..... | | 328 | 3,630 | 168 | 189 | 115 | 50 |
| 19..... | | 286 | 1,860 | 158 | 149 | 115 | 48 |
| 20..... | | 273 | 638 | 158 | 131 | 108 | 42 |
| 21..... | | | 466 | 178 | 131 | 107 | 86 |
| 22..... | | | | | | | |
| 23..... | | 260 | 402 | 434 | 131 | 93 | 86 |
| 24..... | | 248 | 1,250 | 534 | 115 | 107 | 68 |
| 25..... | | 372 | 1,330 | 260 | 108 | 93 | 51 |
| 26..... | | 1,370 | 638 | 189 | 211 | 85 | 48 |
| 27..... | | 854 | 466 | 168 | 372 | 93 | 47 |
| 28..... | | | | | | | |
| 29..... | | 500 | 1,480 | 168 | 1,180 | 83 | 44 |
| 30..... | | 434 | 854 | 168 | 328 | 85 | 51 |
| 31..... | | 372 | 602 | 158 | 211 | 115 | 40 |
| 1..... | | 300 | 926 | 149 | 300 | 100 | 46 |
| 2..... | | 286 | 674 | 1,440 | 248 | 77 | 41 |
| 3..... | | 357 | 466 | | | 68 | 46 |
| 4..... | | | | | | | |
| 5..... | | | | | | | |
| 6..... | | | | | | | |
| 7..... | | | | | | | |
| 8..... | | | | | | | |
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| 18..... | | | | | | | |
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| 20..... | | | | | | | |
| 21..... | | | | | | | |
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| 25..... | | | | | | | |
| 26..... | | | | | | | |
| 27..... | | | | | | | |
| 28..... | | | | | | | |
| 29..... | | | | | | | |
| 30..... | | | | | | | |
| 31..... | | | | | | | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|-----------------|---------|---------|------|-----------------|-------------------|
| Mar. 17-31..... | 1,370 | 248 | 445 | 1.01 | 0.56 |
| April..... | 3,630 | 200 | 686 | 1.56 | 1.74 |
| May..... | 1,440 | 149 | 319 | .727 | .84 |
| June..... | 1,180 | 108 | 225 | .513 | .57 |
| July..... | 466 | 68 | 139 | .317 | .37 |
| August..... | 86 | 40 | 60.4 | .138 | .16 |
| September..... | 59 | 20 | 36.9 | .084 | .09 |

SOUTH ANNA RIVER AT VONTAY, VA.

LOCATION.—Chain gage at bridge on Vontay-Montpelier highway, 1,000 feet below Turkey Creek, and 1 mile north of Vontay, Hanover County.

DRAINAGE AREA.—332 square miles.

RECORDS AVAILABLE.—December, 1926, to September, 1929.

EXTREMES.—Maximum discharge during year, 2,170 second-feet Mar. 7 (gage height, 14.50 feet); minimum, 19 second-feet Aug. 20 (gage height, 1.98 feet).

1926-1929: Maximum discharge, 4,150 second-feet Aug. 15, 1928 (gage height, 22.83 feet); minimum, that of Aug. 20, 1929.

REMARKS.—Records good. Discharge estimated Jan. 24, Feb. 2-4, and 12.

Daily and monthly discharge, in second-feet, 1928-29

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------|------|-------|------|------|-------|-------|-------|-------|-------|------|------|-------|
| 1----- | 237 | 117 | 123 | 112 | 129 | 1,760 | 338 | 401 | 233 | 166 | 51 | 30 |
| 2----- | 194 | 117 | 117 | 123 | 120 | 1,820 | 278 | 448 | 192 | 166 | 53 | 33 |
| 3----- | 167 | 117 | 117 | 141 | | 926 | 248 | 562 | 154 | 142 | 61 | 34 |
| 4----- | 148 | 117 | 117 | 129 | | 628 | 205 | 463 | 142 | 120 | 49 | 37 |
| 5----- | 141 | 129 | 117 | 129 | 123 | 1,320 | 219 | 278 | 126 | 120 | 61 | 33 |
| 6----- | 135 | 154 | 117 | 180 | 135 | 1,760 | 233 | 248 | 126 | 148 | 53 | 30 |
| 7----- | 129 | 135 | 117 | 380 | 300 | 2,020 | 219 | 219 | 109 | 192 | 52 | 31 |
| 8----- | 129 | 129 | 117 | 364 | 575 | 748 | 192 | 205 | 104 | 136 | 84 | 219 |
| 9----- | 129 | 129 | 100 | 180 | 428 | 401 | 179 | 205 | 131 | 126 | 104 | 219 |
| 10----- | 123 | 123 | 100 | 154 | 348 | 338 | 166 | 205 | 142 | 120 | 70 | 79 |
| 11----- | 117 | 117 | 100 | 180 | 300 | 293 | 179 | 192 | 148 | 179 | 61 | 61 |
| 12----- | 117 | 117 | 100 | 237 | 233 | 278 | 192 | 166 | 120 | 120 | 66 | 57 |
| 13----- | 112 | 112 | 106 | 167 | 167 | 263 | 248 | 166 | 109 | 142 | 61 | 36 |
| 14----- | 112 | 112 | 106 | 148 | 154 | 369 | 219 | 166 | 657 | 154 | 61 | 45 |
| 15----- | 112 | 112 | 332 | 141 | 154 | 601 | 179 | 192 | 463 | 120 | 48 | 28 |
| 16----- | 112 | 112 | 490 | 135 | 154 | 521 | 717 | 205 | 385 | 104 | 37 | 27 |
| 17----- | 117 | 117 | 237 | 129 | 148 | 417 | 1,430 | 154 | 179 | 94 | 39 | 29 |
| 18----- | 129 | 117 | 194 | 135 | 141 | 308 | 1,380 | 136 | 136 | 114 | 29 | 34 |
| 19----- | 154 | 117 | 160 | 141 | 129 | 248 | 782 | 131 | 104 | 205 | 31 | 30 |
| 20----- | 154 | 123 | 141 | 141 | 135 | 248 | 353 | 154 | 99 | 114 | 33 | 24 |
| 21----- | 123 | 123 | 129 | 135 | 148 | 233 | 293 | 369 | 89 | 89 | 57 | 31 |
| 22----- | 123 | 123 | 123 | 129 | 154 | 219 | 521 | 463 | 131 | 79 | 61 | 30 |
| 23----- | 117 | 117 | 112 | 117 | 208 | 549 | 642 | 248 | 84 | 66 | 52 | 27 |
| 24----- | 129 | 117 | 100 | 115 | 284 | 1,220 | 433 | 179 | 1,060 | 70 | 44 | 34 |
| 25----- | 129 | 106 | 100 | 154 | 380 | 1,060 | 308 | 148 | 717 | 74 | 44 | 28 |
| 26----- | 129 | 106 | 100 | 237 | 628 | 478 | 1,260 | 136 | 800 | 70 | 30 | 33 |
| 27----- | 117 | 106 | 106 | 300 | 1,240 | 448 | 1,180 | 136 | 562 | 70 | 36 | 36 |
| 28----- | 112 | 112 | 106 | 194 | 1,650 | 369 | 521 | 131 | 248 | 61 | 28 | 26 |
| 29----- | 112 | 112 | 112 | 160 | ----- | 278 | 782 | 126 | 353 | 57 | 44 | 23 |
| 30----- | 112 | 117 | 112 | 154 | ----- | 278 | 575 | 1,160 | 293 | 61 | 44 | 21 |
| 31----- | 112 | ----- | 112 | 141 | ----- | 353 | ----- | 521 | ----- | 57 | 38 | ----- |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off in inches |
|----------------|---------|---------|------|-----------------|-------------------|
| October----- | 237 | 112 | 132 | 0.398 | 0.46 |
| November----- | 154 | 106 | 119 | .358 | .40 |
| December----- | 490 | 100 | 139 | .419 | .48 |
| January----- | 380 | 112 | 170 | .512 | .59 |
| February----- | 1,650 | 120 | 314 | .946 | .99 |
| March----- | 2,020 | 219 | 669 | 2.02 | 2.33 |
| April----- | 1,430 | 166 | 482 | 1.45 | 1.62 |
| May----- | 1,160 | 126 | 275 | .828 | .95 |
| June----- | 1,060 | 84 | 273 | .822 | .92 |
| July----- | 205 | 57 | 114 | .343 | .40 |
| August----- | 104 | 28 | 51.0 | .154 | .18 |
| September----- | 219 | 21 | 46.8 | .141 | .16 |
| The year----- | 2,020 | 21 | 232 | .699 | 9.48 |

MISCELLANEOUS DISCHARGE MEASUREMENTS

In addition to the records of flow obtained at the gaging stations and reported in the preceding pages, measurements were made at other points, as shown by the following table:

Miscellaneous discharge measurements in north Atlantic slope drainage basins during the year ending September 30, 1929

| Date | Stream | Tributary to or diverting from— | Locality | Gage height | Dis-charge |
|----------|------------------------------|------------------------------------|---|-------------|-----------------|
| | | | | <i>Feet</i> | <i>Sec.-ft.</i> |
| Sept. 4 | Kennebec River..... | Atlantic Ocean..... | Solon, Me..... | | 2,820 |
| Aug. 4 | do..... | do..... | do..... | | 2,840 |
| Aug. 4 | West Outlet Stream..... | Kennebec River..... | Rockwood, Me..... | | 78.4 |
| July 30 | Sandy River..... | do..... | New Sharon, Me..... | | 102 |
| 30 | do..... | do..... | Madison, Me..... | | 184 |
| Aug. 24 | Farmington River..... | Connecticut River..... | 1,000 feet above highway bridge at Satans Kingdom, Conn. | *1.38 | 77.4 |
| 27 | do..... | do..... | Under highway bridge at Satans Kingdom, Conn. | *1.35 | 66.9 |
| 30 | do..... | do..... | do..... | *1.70 | 149 |
| Oct. 11 | Glens Falls feeder..... | Hudson River..... | Gage 1, Glens Falls, N. Y. | 281.70 | 106 |
| Nov. 21 | do..... | do..... | do..... | 281.11 | 211 |
| May 12 | do..... | do..... | do..... | 279.44 | 129 |
| July 8 | do..... | do..... | do..... | 281.87 | 246 |
| Aug. 6 | do..... | do..... | do..... | 282.03 | 222 |
| Aug. 7 | do..... | do..... | do..... | 281.74 | 124 |
| Oct. 11 | do..... | do..... | Gage 2, Glens Falls, N. Y. | 280.70 | 188 |
| Nov. 21 | do..... | do..... | do..... | 280.32 | 211 |
| May 12 | do..... | do..... | do..... | 279.02 | 127 |
| July 8 | do..... | do..... | do..... | 280.78 | 215 |
| Aug. 6 | do..... | do..... | do..... | 280.82 | 167 |
| Oct. 11 | do..... | do..... | Gage 3, Glens Falls, N. Y. | 279.82 | 196 |
| Nov. 21 | do..... | do..... | do..... | 279.88 | 204 |
| May 12 | do..... | do..... | do..... | 278.86 | 125 |
| July 8 | do..... | do..... | do..... | 279.46 | 182 |
| Aug. 6 | do..... | do..... | do..... | 279.09 | 152 |
| July 8 | do..... | do..... | Dunhams Basin, N. Y. | 146.66 | 132 |
| 31 | Fish Creek..... | do..... | Burgoyne, N. Y. | .645 | 150 |
| Aug. 11 | do..... | do..... | do..... | .57 | 129 |
| 18 | do..... | do..... | do..... | .53 | 132 |
| 24 | do..... | do..... | do..... | .365 | 119 |
| Sept. 1 | do..... | do..... | do..... | .28 | 113 |
| 8 | do..... | do..... | do..... | .18 | 97.2 |
| 15 | do..... | do..... | do..... | .97 | 148 |
| 22 | do..... | do..... | do..... | .83 | 150 |
| 29 | do..... | do..... | do..... | .73 | 156 |
| Oct. 3 | Lackawaxen River..... | Delaware River..... | West Hawley, Pa. | 1.43 | 94 |
| 3 | Bushkill Creek..... | do..... | At former gaging station near Shoemakers, Pa. | 1.67 | 94 |
| June 27 | Schuylkill River..... | do..... | At former gaging station above Fairmount Dam, Philadelphia, Pa. | .50 | 1,780 |
| July 23 | do..... | do..... | do..... | .17 | 539 |
| Sept. 9 | do..... | do..... | do..... | .47 | 1,600 |
| 9 | do..... | do..... | do..... | .57 | 1,920 |
| Sept. 13 | do..... | do..... | do..... | .19 | 688 |
| 18 | do..... | do..... | do..... | .43 | 1,460 |
| Nov. 2 | Perkiomen Creek..... | Schuylkill River..... | Graters Ford, Pa. | 1.39 | 74 |
| July 19 | Chesapeake & Ohio Canal..... | North Branch of Potomac River..... | Opposite gaging station on North Branch of Potomac River near Cumberland, Md. | 8.23 | 46.7 |
| Sept. 26 | do..... | do..... | do..... | 8.00 | 39.2 |

* Temporary staff gage on right bank of river 1,000 feet above highway bridge.

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