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UNITED STATES DEPARTMENT OF THE INTERIOR

SURFACE WATER SUPPLY
of the **UNITED STATES**
1934

PART 6
MISSOURI RIVER BASIN

Prepared in cooperation with the States of
COLORADO, IOWA, KANSAS, MISSOURI, MONTANA, NEBRASKA,
AND WYOMING

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 761

UNITED STATES DEPARTMENT OF THE INTERIOR

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GEOLOGICAL SURVEY

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Water-Supply Paper 761

SURFACE WATER SUPPLY *of the* UNITED STATES 1934

PART 6 MISSOURI RIVER BASIN

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Prepared in cooperation with the States of
COLORADO, IOWA, KANSAS, MISSOURI, MONTANA
NEBRASKA, and WYOMING



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ILLUSTRATION

| | |
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| FIGURE 1. Typical river-measurement station showing concrete well and house for water-stage recorder and staff gages, cable, and car..... | Page |
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SURFACE WATER SUPPLY OF MISSOURI RIVER BASIN, 1934

AUTHORIZATION AND SCOPE OF WORK

This volume is one of a series of 14 reports presenting results of measurements of flow made on streams in the United States during the year ending September 30, 1934.

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, 1895-1934

| | | | | | |
|------------|---------------|------------|----------------|-----------|----------------|
| 1895----- | \$12, 500. 00 | 1911-17--- | \$150, 000. 00 | 1928----- | \$147, 000. 00 |
| 1896----- | 24, 500. 00 | 1918----- | 175, 000. 00 | 1929----- | 270, 500. 00 |
| 1897-99--- | 50, 000. 00 | 1919----- | 148, 244. 10 | 1930----- | 275, 000. 00 |
| 1900----- | 70, 000. 00 | 1920----- | 175, 000. 00 | 1931----- | 565, 000. 00 |
| 1901-2---- | 100, 000. 00 | 1921-23--- | 180, 000. 00 | 1932----- | 711, 000. 00 |
| 1903-6---- | 200, 000. 00 | 1924-25--- | 170, 000. 00 | 1933----- | 600, 000. 00 |
| 1907----- | 150, 000. 00 | 1926----- | 165, 000. 00 | 1934----- | 540, 000. 00 |
| 1908-10--- | 100, 000. 00 | 1927----- | 151, 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 6,900 points in the United States and also at many points in Alaska and the Hawaiian Islands. In July 1934, 2,940 gaging stations were being

¹ Only \$340,000 available for expenditure.

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 natural section or stretch of the channel or artificial structure below the gage, which determines the stage-discharge relation at the gage.

EXPLANATION OF DATA

The data presented in this report cover the year beginning October 1, 1933, and ending September 30, 1934. At the beginning of January in most parts of the United States much of the precipitation in the

preceding 3 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.

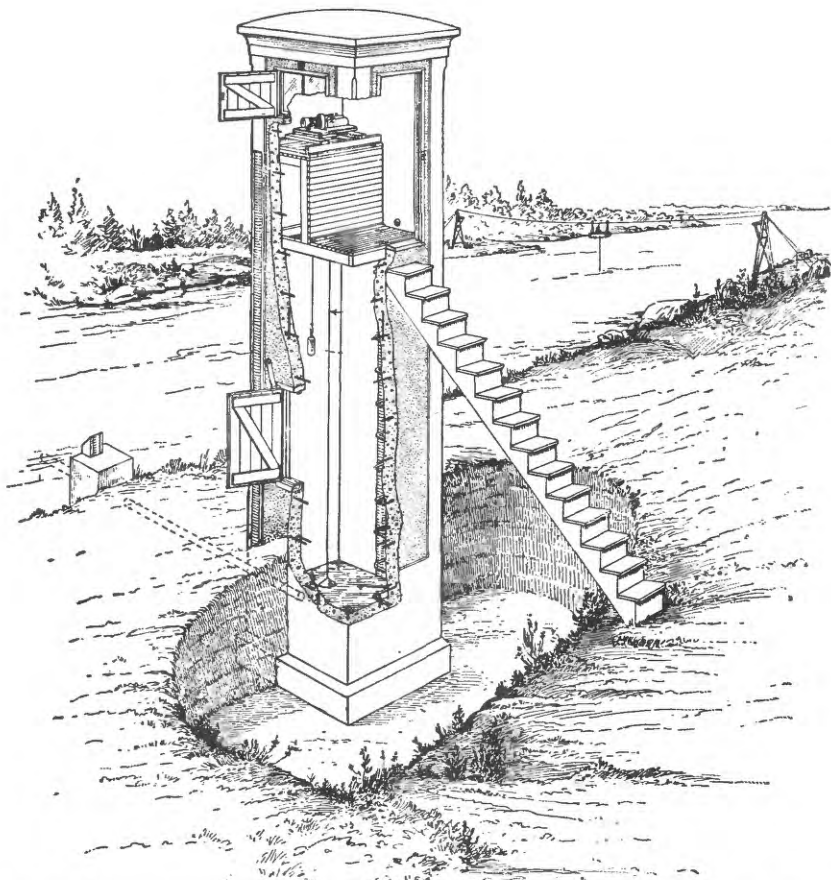


FIGURE 1.—Typical river-measurement station showing concrete well and house for water-stage recorder and staff gages, cable, and car.

The base data collected at gaging stations consist of records of stage, measurements of discharge, and general information used to supplement the gage heights and discharge measurements in determining the daily flow. The records of stage are obtained either from direct readings on a nonrecording gage or from a water-stage recorder that gives a continuous record of the fluctuations. Measurements of discharge are made with a current meter by the general methods outlined

in standard textbooks on the measurement of river discharge. A typical gaging station, equipped with water-stage recorder and measuring cable and car, is shown in figure 1.

Rating tables giving the discharge for any stage are prepared from the discharge measurements. The application of the daily gage height to these rating tables gives the daily discharge from which the monthly and yearly mean discharge is computed.

The data presented for each gaging station in the area covered by this report usually 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 information in regard to the location and type of gage, diversions that decrease the flow at the gage, artificial regulation from pondage or storage, and the accuracy of the records. Under "Average discharge" is given the average discharge for the number of years indicated. It is given only for stations for which there are 10 or more complete years of record. Information under "Extremes" gives the maximum discharge and gage height; the minimum discharge, if there is little or no regulation; the minimum daily discharge, if there is extensive regulation, and also the minimum discharge, if useful; and the minimum gage height except when it is of no importance. Unless otherwise qualified, the maximum discharge corresponds to the crest stage obtained by use of a water-stage recorder or a nonrecording gage read at the time of the crest. Likewise the minimum represents the lowest discharge unless otherwise qualified.

The table of daily discharge gives, for stations equipped with non-recording gages, the discharge in second-feet corresponding to once-daily or the mean of twice-daily readings of the gage. For stations equipped with water-stage recorders the table gives the discharge corresponding to the mean daily gage height except for stations on streams subject to sudden or rapid fluctuation. For stations subject to such fluctuation the mean daily gage height may not indicate the true mean daily discharge, which must be obtained by averaging the discharge for intervals of the day or by using the discharge integrator, an instrument for obtaining the 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.

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, in general, the daily records are accurate within 5 percent; "good", within 10 percent; "fair", within 15 percent; and "poor", within 20 percent 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 run-off 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.

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.

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, and that greater degrees of refinement in computations and records may be warranted with increased data and use of improved equipment.

In order to permit greater refinement in analysis and comparison of records for adjacent stations, the following changes have been made in the computation procedure: (a) Mean monthly discharge above 1,000 second-feet and monthly run-off above 10,000 acre-feet are expressed to four significant figures instead of three significant figures as formerly; (b) monthly run-off in acre-feet is computed from the total second-foot-days for the month and not from the mean discharge for the month; (c) drainage areas above 1,000 square miles, if measured on topographic maps or if otherwise warranted, are expressed to four significant figures instead of three as formerly. Some of the records in the series of reports for 1934 have been computed in accordance with the modified procedure.

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 power, underground waters, and quality of waters. Most of the results of these investigations have been published in the series of water-supply papers, but some have appeared in the bulletins, professional papers, monographs, and annual reports.

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

PART 1. North Atlantic slope basins (St. John River to York River).

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

3. Ohio River Basin.

4. St. Lawrence River Basin.

5. Hudson Bay and upper Mississippi River Basins.

6. Missouri River Basin.

7. Lower Mississippi River Basin.

8. Western Gulf of Mexico basins.

9. Colorado River Basin.

10. The Great Basin.

11. Pacific slope basins in California.

12. 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, Maine, Statehouse.

Boston, Mass., 945 Post Office Building.

Hartford, Conn., 203 Federal Building.

Albany, N. Y., 526 Federal Building.

Trenton, N. J., 228 Federal Building.

Harrisburg, Pa., 490 Education Building.

Charlottesville, Va., University of Virginia.

South Charleston, W. Va., Naval Ordnance Plant.

Asheville, N. C., 220 Post Office Building.
 Columbia, S. C., 801 National Loan & Exchange Bank Building.
 Ocala, Fla., Post Office Building.
 Montgomery, Ala., Post Office Building.
 Chattanooga, Tenn., 217 Post Office Building.
 Columbus, Ohio, Engineering Experiment Station, Ohio State University.
 Indianapolis, Ind., 319 Federal Building.
 Urbana, Ill., 302 University New Agricultural Building.
 Madison, Wis., 337N State Capitol.
 St. Paul, Minn., 808 New Post Office Building.
 Iowa City, Iowa, 402 Hydraulic Laboratory, University of Iowa.
 St. Louis, Mo., 906 Customhouse, 1114 Market Street.
 Rolla, Mo., Missouri Geological Survey Building, Missouri School of
 Mines and Metallurgy.
 Topeka, Kans., 305 Federal Building.
 Fort Smith, Ark., Post Office Building.
 Austin, Tex., State Highway Building.
 Santa Fe, N. Mex., 3 United States Courthouse.
 Tucson, Ariz., 210 Post Office Building.
 Denver, Colo., 403 Post Office Building.
 Salt Lake City, Utah, 303 Federal Building.
 Idaho Falls, Idaho, 228 Federal Building.
 Boise, Idaho, 429 Federal Building.
 Helena, Mont., 421 New Federal Building.
 Tacoma, Wash., 406 Federal Building.
 Portland, Oreg., 606 Post Office Building.
 San Francisco, Calif., 303 Customhouse.
 Los Angeles, Calif., 512 Eighth and Figueroa Building.
 Honolulu, Hawaii, 225 Federal Building.

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

Stream-flow records have been obtained at about 6,900 points in the United States, and the data obtained have been published in the reports tabulated as follows:

Stream-flow data in reports of the United States Geological Survey

[A = Annual report; B = Bulletin; W = Water-supply paper]

| Report | Character of data | Year |
|--------------------|--|------------------------|
| 10th A, pt. 2..... | Descriptive information only..... | |
| 11th A, pt. 2..... | Monthly discharge and descriptive information..... | 1884 to Sept. 1890. |
| 12th A, pt. 2..... | do..... | 1884 to June 30, 1891. |
| 13th A, pt. 3..... | do..... | 1884 to Dec. 31, 1892. |
| 14th A, pt. 2..... | Monthly discharge (long-time records, 1871-93)..... | 1888 to Dec. 31, 1893. |
| B 131..... | Descriptions, measurements, gage heights, and ratings..... | 1893-94. |
| 16th A, pt. 2..... | Descriptive information only..... | |
| B 140..... | Descriptions, measurements, gage heights, ratings, and monthly discharge (also many data covering earlier years). | 1895. |
| W 11..... | Gage heights (also gage heights for earlier years)..... | 1896. |
| 18th A, pt. 4..... | Descriptions, measurements, ratings, and monthly discharge (also similar data for some earlier years)..... | 1895-96. |
| W 15..... | Descriptions, measurements, and gage heights, eastern United States, eastern Mississippi River, and Missouri River above junction with Kansas River. | 1897. |
| W 16..... | Descriptions, measurements, and gage heights, western Mississippi River below junction of Missouri and Platte Rivers, and western United States. | 1897. |

Stream-flow data in reports of the United States Geological Survey—Continued

[A = Annual report; B = Bulletin; W = Water-supply paper]

| Report | Character of data | Year |
|--------------------|--|----------|
| 19th A, pt. 4..... | Descriptions, measurements, ratings, and monthly discharge (also some long-time records). | 1897. |
| W 27..... | Measurements, ratings, and gage heights, eastern United States, eastern Mississippi River, and Missouri River. | 1898. |
| W 28..... | Measurements, ratings, and gage heights, Arkansas River and western United States. | 1898. |
| 20th A, pt. 4..... | Monthly discharge (also for many earlier years)..... | 1898. |
| W 35 to 39..... | Descriptions, measurements, gage heights, and ratings..... | 1899. |
| 21st A, pt. 4..... | Monthly discharge..... | 1899. |
| W 47 to 52..... | Descriptions, measurements, gage heights, and ratings..... | 1900. |
| 22d A, pt. 4..... | Monthly discharge..... | 1900. |
| W 65, 66..... | Descriptions, measurements, gage heights, and ratings..... | 1901. |
| W 75..... | Monthly discharge..... | 1901. |
| W 82 to 85..... | Complete data..... | 1902. |
| W 97 to 100..... | do..... | 1903. |
| W 124 to 135..... | do..... | 1904. |
| W 165 to 178..... | do..... | 1905. |
| W 201 to 214..... | do..... | 1906. |
| W 241 to 252..... | do..... | 1907-8. |
| W 261 to 272..... | do..... | 1909. |
| W 281 to 292..... | do..... | 1910. |
| W 301 to 312..... | do..... | 1911. |
| W 321 to 332..... | do..... | 1912. |
| W 351 to 362..... | do..... | 1913. |
| W 381 to 394..... | do..... | 1914. |
| W 401 to 414..... | do..... | 1915. |
| W 431 to 444..... | do..... | 1916. |
| W 451 to 464..... | do..... | 1917. |
| W 471 to 484..... | do..... | 1918. |
| W 501 to 514..... | do..... | 1919-20. |
| W 521 to 534..... | do..... | 1921. |
| W 541 to 554..... | do..... | 1922. |
| W 561 to 574..... | do..... | 1923. |
| W 581 to 594..... | do..... | 1924. |
| W 601 to 614..... | do..... | 1925. |
| W 621 to 634..... | do..... | 1926. |
| W 641 to 654..... | do..... | 1927. |
| W 661 to 674..... | do..... | 1928. |
| W 681 to 694..... | do..... | 1929. |
| W 696 to 709..... | do..... | 1930. |
| W 711 to 724..... | do..... | 1931. |
| W 726 to 739..... | do..... | 1932. |
| W 741 to 754..... | do..... | 1933. |
| W 756 to 769..... | do..... | 1934. |

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 1934. The data 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 from 1910 to 1920 for any station in the area covered by part 3 are published in Water-Supply Papers 283, 303, 323, 353, 383, 403, 433, 453, 473, and 503, which contain records for the Ohio River Basin for those years.

[For basins included, see p. 6]

| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12-A | 12-B | 12-C |
|-------------------|--------------------|----------|--------|--------|--------|----------|--------|--------|----------|----------|--------|--------|--------|--------|
| 1899 ¹ | 35 | 35, 36 | 36 | 36 | 36 | 36, 37 | 37 | 37 | 37, 38 | 38, 39 | 38, 39 | 38 | 38 | 38 |
| 1900 ¹ | 47, 48 | 48 | 48, 49 | 49 | 49 | 49, 50 | 50 | 50 | 50 | 51 | 51 | 51 | 51 | 51 |
| 1901 | 65, 75 | 65, 75 | 65, 75 | 65, 75 | 65, 75 | 66, 75 | 66, 75 | 66, 75 | 66, 75 | 66, 75 | 66, 75 | 66, 75 | 66, 75 | 66, 75 |
| 1902 | 82 | 82, 83 | 83 | 83 | 83 | 84 | 84 | 84 | 84 | 85 | 85 | 85 | 85 | 85 |
| 1903 | 97 | 97, 98 | 98 | 98 | 98 | 99 | 99 | 99 | 99 | 100 | 100 | 100 | 100 | 100 |
| 1904 | 124, 125, 126, 127 | 126, 127 | 128 | 129 | 129 | 130, 131 | 131 | 132 | 133 | 133, 134 | 134 | 135 | 135 | 135 |
| 1905 | 165, 166, 167 | 167, 168 | 169 | 170 | 170 | 172 | 172 | 174 | 175, 177 | 176, 177 | 177 | 178 | 178 | 178 |
| 1906 | 201, 202, 203 | 203, 204 | 205 | 206 | 207 | 208 | 208 | 210 | 211, 213 | 212, 213 | 213 | 214 | 214 | 214 |
| 1907-8 | 241 | 242 | 243 | 244 | 245 | 246 | 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-A | 332-B | 332-C |
| 1913 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362-A | 362-B | 362-C |
| 1914 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 |
| 1915 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 |
| 1916 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 |
| 1917 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 |
| 1918 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 |
| 1919-20 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 |
| 1921 | 521 | 522 | 523 | 524 | 525 | 526 | 527 | 528 | 529 | 530 | 531 | 532 | 533 | 534 |
| 1922 | 541 | 542 | 543 | 544 | 545 | 546 | 547 | 548 | 549 | 550 | 551 | 552 | 553 | 554 |
| 1923 | 561 | 562 | 563 | 564 | 565 | 566 | 567 | 568 | 569 | 570 | 571 | 572 | 573 | 574 |
| 1924 | 581 | 582 | 583 | 584 | 585 | 586 | 587 | 588 | 589 | 590 | 591 | 592 | 593 | 594 |
| 1925 | 601 | 602 | 603 | 604 | 605 | 606 | 607 | 608 | 609 | 610 | 611 | 612 | 613 | 614 |
| 1926 | 621 | 622 | 623 | 624 | 625 | 626 | 627 | 628 | 629 | 630 | 631 | 632 | 633 | 634 |
| 1927 | 641 | 642 | 643 | 644 | 645 | 646 | 647 | 648 | 649 | 650 | 651 | 652 | 653 | 654 |
| 1928 | 661 | 662 | 663 | 664 | 665 | 666 | 667 | 668 | 669 | 670 | 671 | 672 | 673 | 674 |
| 1929 | 681 | 682 | 683 | 684 | 685 | 686 | 687 | 688 | 689 | 690 | 691 | 692 | 693 | 694 |
| 1930 | 696 | 697 | 698 | 699 | 700 | 701 | 702 | 703 | 704 | 705 | 706 | 707 | 708 | 709 |
| 1931 | 711 | 712 | 713 | 714 | 715 | 716 | 717 | 718 | 719 | 720 | 721 | 722 | 723 | 724 |
| 1932 | 726 | 727 | 728 | 729 | 730 | 731 | 732 | 733 | 734 | 735 | 736 | 737 | 738 | 739 |
| 1933 | 741 | 742 | 743 | 744 | 745 | 746 | 747 | 748 | 749 | 750 | 751 | 752 | 753 | 754 |
| 1934 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 |

¹ Rating tables and index to Water-Supply Papers 35-39 contained in Water-Supply Paper 39. Monthly discharge for 1899 in 21st Annual Report, part 4.

² James River only.

³ Gallatin River.

⁴ Green and Gunnison Rivers and Colorado River above Gunnison River.

⁵ Mojave River only.

⁶ Kings and Kern Rivers and south Pacific slope basins.

⁷ 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.

⁸ Monthly discharge for 1900 in 22d Annual Report, part 4.

⁹ Wissahickon and Schuylkill Rivers to James River.

¹⁰ Scioto River.

¹⁰ Loup, Platte, and Elkhorn Rivers and tributaries below Platte River.

¹¹ Tributaries of Mississippi River from east.

¹² Lake Ontario and tributaries to St. Lawrence River proper.

¹³ Hudson Bay only.

¹⁴ New England rivers only.

¹⁵ Hudson River to Delaware River, inclusive.

¹⁶ Susquehanna River to Yackin River, inclusive.

¹⁷ Platte and Kansas Rivers.

¹⁸ The Great Basin in California, except Truckee and Carson River Basins.

¹⁹ Below junction with Gila River.

²⁰ Rogue, Umpqua, and Siletz Rivers only.

COOPERATION

The work was done under cooperative agreements as follows: In Colorado with the State engineer, M. C. Hinderlider. In Iowa with the Iowa Institute of Hydraulic Research, Prof. F. T. Mavis, associate director; the State board of conservation, M. L. Hutton, chief engineer; the State fish and game department, I. T. Bode, fish and game warden. In Kansas with the water resources division of the State board of agriculture, George S. Knapp, chief engineer. In Missouri with the Missouri Geological Survey, H. A. Buehler, State geologist; the Missouri highway department, T. H. Cutler, chief highway engineer; the Missouri game and fish department, W. C. Buford, commissioner; the city of Maryville water department, J. W. Qualls, superintendent. In Montana with the State engineer, J. S. James. In Nebraska with the department of public works, R. L. Cochran, State engineer, through R. H. Willis, chief, bureau of irrigation, water power, and drainage. In Wyoming with the State engineer, E. W. Burritt. Acknowledgment of financial assistance in collecting records published herein is due also the Corps of Engineers, United States Army, and the United States Department of State.

Full cooperation exists between the United States Geological Survey and the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada. On waters adjacent to the international boundary certain stations are maintained jointly by the United States and Canada under the terms of the Boundary Waters Treaty of 1909, and others are maintained under a subsequent agreement between the two Governments. The records from all these stations are obtained in such a manner as to be equally acceptable and available in either country. These stations are designated "international gaging stations."

Assistance in collecting records in Missouri was also rendered by the Union Electric Light & Power Co., the Gasconade River Power Co., and the Missouri Electric Power Co.

Funds for the rehabilitation of gaging stations and improvement of records were allocated by the Public Works Administration from funds made available by the National Industrial Recovery Act.

DIVISION OF WORK

The work was done under supervision of district engineers as follows: In Colorado, Robert Follansbee, the work being done in collaboration with M. C. Hinderlider, State engineer, and L. T. Burgess, State chief hydrographer; in Iowa, H. C. Beckman and R. G. Kasel; in Kansas, J. B. Spiegel; in Missouri, H. C. Beckman; in Montana, W. A. Lamb; in Nebraska, Robert Follansbee; in North Dakota, H. C. Beckman and W. A. Lamb; in South Dakota and the two stations on Missouri River in Nebraska, H. C. Beckman and Robert Follansbee; and in Yellowstone National Park, T. R. Newell.

MISSOURI RIVER PROPER

Red Rock River below Red Rock Reservoir, near Monida, Mont.

Location.- Staff gage in SW $\frac{1}{4}$ sec. 32, T. 13 S., R. 6 W., just below Red Rock Reservoir and 8 miles northwest of Monida.

Drainage area.- 560 square miles.

Records available.- July 1911 to September 1918, May 1925 to September 1934.

Extremes.- Maximum discharge recorded during year, 203 second-feet Apr. 6, 7, 8 (gage height, 2.30 feet); no flow July 21 to Sept. 30.
1911-18, 1925-34: Maximum discharge, 2,500 second-feet May 15, 1933 (gage height, 5.40 feet); no flow July 21 to Sept. 30, 1934.

Remarks.- Records poor. Discharge estimated for July 19, 20. No records Nov. 5 to Mar. 31. No water stored in reservoir during year owing to repairs being made on dam. Small irrigation diversions from tributaries above.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 17 | 46 | | | | | 118 | 50 | 5.0 | 1.5 | | |
| 2 | 18 | 49 | | | | | 129 | 67 | 5.0 | 1.8 | | |
| 3 | 19 | 49 | | | | | 141 | 67 | 4.3 | 1.8 | | |
| 4 | 19 | 49 | | | | | 153 | 50 | 2.9 | 1.8 | | |
| 5 | 21 | | | | | | 165 | 50 | 5.0 | 4.0 | | |
| 6 | 21 | | | | | | 190 | 50 | 10 | 1.5 | | |
| 7 | 23 | | | | | | 190 | 42 | 10 | 1.8 | | |
| 8 | 23 | | | | | | 190 | 42 | 12 | 1.4 | | |
| 9 | 23 | | | | | | 165 | 35 | 9.5 | 1.0 | | |
| 10 | 25 | | | | | | 153 | 32 | 9.0 | .6 | | |
| 11 | 25 | | | | | | 165 | 28 | 6.5 | .4 | | |
| 12 | 25 | | | | | | 165 | 24 | 5.0 | .3 | | |
| 13 | 25 | | | | | | 147 | 32 | 5.0 | .3 | | |
| 14 | 27 | | | | | | 141 | 35 | 4.3 | .3 | | |
| 15 | 29 | | | | | | 141 | 35 | 3.2 | .3 | | |
| 16 | 30 | | | | | | 97 | 26 | 2.9 | .2 | | |
| 17 | 31 | | | | | | 107 | 24 | 1.8 | .2 | | |
| 18 | 32 | | | | | | 97 | 18 | 1.8 | .2 | | |
| 19 | 33 | | | | | | 97 | 15 | 3.2 | .1 | | |
| 20 | 35 | | | | | | 87 | 15 | 5.0 | .1 | | |
| 21 | 35 | | | | | | 92 | 12 | 5.0 | 0 | | |
| 22 | 35 | | | | | | 87 | 10 | 5.0 | 0 | | |
| 23 | 37 | | | | | | 92 | 7.5 | 4.0 | 0 | | |
| 24 | 37 | | | | | | 97 | 7.5 | 2.2 | 0 | | |
| 25 | 37 | | | | | | 97 | 10 | 1.5 | 0 | | |
| 26 | 37 | | | | | | 112 | 7.5 | 2.2 | 0 | | |
| 27 | 38 | | | | | | 102 | 5.0 | 2.2 | 0 | | |
| 28 | 40 | | | | | | 87 | 3.2 | 1.8 | 0 | | |
| 29 | 40 | | | | | | 72 | 1.5 | 1.8 | 0 | | |
| 30 | 41 | | | | | | 50 | 1.5 | 1.5 | 0 | | |
| 31 | 43 | | | | | | | 3.2 | | 0 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 43 | 17 | 29.7 | 1,830 | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | 190 | 50 | 124 | 7,390 | | |
| May | | | | | | | 67 | 1.5 | 26.2 | 1,610 | | |
| June | | | | | | | 12 | 1.5 | 4.62 | 275 | | |
| July | | | | | | | 4.0 | 0 | .63 | 39 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 0 | 0 | 0 | 0 | | |

Note.- No flow during August and September.

Beaverhead River at Barratts, Mont.

Location.- Chain gage in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 19 (revised), T. 8 S., R. 9 W., 1 mile above Barratts and 10 miles southwest of Dillon.

Drainage area.- 2,850 square miles.

Records available.- August 1907 to September 1934.

Extremes.- Maximum discharge recorded during year, 316 second-feet Mar. 3, 4 and June 8 (gage height, 1.04 feet); minimum, 81 second-feet Sept. 12-17 (gage height, 0.28 foot).

1907-34: Maximum discharge, 3,640 second-feet June 19, 20, 1908 (gage height, 6.0 feet); minimum, that of Sept. 12-17, 1934.

Remarks.- Records poor. No records Oct. 1 to Jan. 14. Numerous diversions above station. Regulation caused by storage and release of flood waters of Red Rock River near Monida (no storage during 1934).

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | | | | | 223 | 223 | 174 | 140 | 140 | 106 | 102 | 96 |
| 2 | | | | | 223 | 230 | 162 | 140 | 140 | 96 | 102 | 96 |
| 3 | | | | | 223 | 316 | 160 | 135 | 140 | 96 | 102 | 92 |
| 4 | | | | | 230 | 316 | 140 | 135 | 140 | 104 | 98 | 88 |
| 5 | | | | | 230 | 274 | 145 | 135 | 130 | 102 | 98 | 88 |
| 6 | | | | | 230 | 274 | 145 | 135 | 130 | 102 | 100 | 84 |
| 7 | | | | | 230 | 253 | 142 | 135 | 190 | 102 | 104 | 84 |
| 8 | | | | | 230 | 253 | 125 | 125 | 316 | 102 | 104 | 84 |
| 9 | | | | | 230 | 253 | 114 | 125 | 294 | 98 | 104 | 84 |
| 10 | | | | | 230 | 253 | 108 | 125 | 249 | 98 | 100 | 84 |
| 11 | | | | | 223 | 253 | 108 | 135 | 171 | 94 | 96 | 84 |
| 12 | | | | | 223 | 245 | 108 | 135 | 142 | 94 | 96 | 81 |
| 13 | | | | | 223 | 245 | 104 | 135 | 138 | 94 | 96 | 81 |
| 14 | | | | | 230 | 245 | 104 | 140 | 148 | 90 | 92 | 81 |
| 15 | | | | 230 | 230 | 245 | 104 | 140 | 148 | 90 | 92 | 81 |
| 16 | | | | 230 | 238 | 245 | 104 | 140 | 145 | 88 | 92 | 81 |
| 17 | | | | 223 | 238 | 253 | 104 | 138 | 145 | 88 | 92 | 81 |
| 18 | | | | 230 | 238 | 253 | 104 | 138 | 125 | 88 | 92 | 84 |
| 19 | | | | 230 | 238 | 230 | 100 | 128 | 121 | 88 | 92 | 84 |
| 20 | | | | 230 | 238 | 215 | 100 | 128 | 132 | 84 | 92 | 84 |
| 21 | | | | 230 | 238 | 215 | 100 | 130 | 114 | 84 | 92 | 84 |
| 22 | | | | 230 | 238 | 201 | 100 | 130 | 110 | 84 | 92 | 85 |
| 23 | | | | 230 | 223 | 180 | 104 | 121 | 114 | 84 | 92 | 88 |
| 24 | | | | 230 | 223 | 180 | 108 | 121 | 114 | 96 | 92 | 88 |
| 25 | | | | 230 | 223 | 180 | 112 | 121 | 112 | 96 | 92 | 88 |
| 26 | | | | 230 | 223 | 180 | 150 | 123 | 112 | 102 | 92 | 96 |
| 27 | | | | 230 | 223 | 180 | 150 | 123 | 108 | 102 | 96 | 100 |
| 28 | | | | 230 | 223 | 180 | 150 | 123 | 104 | 102 | 96 | 104 |
| 29 | | | | 223 | 174 | 140 | 123 | 102 | 102 | 96 | 104 | |
| 30 | | | | 223 | 174 | 140 | 123 | 106 | 102 | 96 | 104 | |
| 31 | | | | 223 | 174 | 174 | | 123 | | 102 | 96 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January 15-31 | | | | | | 230 | 223 | 228 | 7,700 | | | |
| February | | | | | | 316 | 223 | 229 | 12,720 | | | |
| March | | | | | | 238 | 174 | 229 | 14,070 | | | |
| April | | | | | | 174 | 100 | 123 | 7,340 | | | |
| May | | | | | | 140 | 121 | 131 | 8,050 | | | |
| June | | | | | | 316 | 102 | 146 | 8,690 | | | |
| July | | | | | | 106 | 84 | 95.5 | 5,870 | | | |
| August | | | | | | 104 | 92 | 96.1 | 5,910 | | | |
| September | | | | | | 104 | 81 | 88.2 | 5,250 | | | |
| The period | | | | | | | | | 75,580 | | | |

Jefferson River near Silverstar, Mont.

Location.— Cable gage in SE $\frac{1}{4}$ sec. 23, T. 2 S., R. 6 W., at highway bridge 5 miles southwest of Silverstar and 5 miles below junction of Beaverhead and Big Hole Rivers

Drainage area.— 7,840 square miles.

Records available.— August 1910 to September 1918, July 1920 to September 1934.

Extremes.— Maximum discharge during year, 3,420 second-feet May 11 (gage height, 3.98 feet); minimum, 71 second-feet Aug. 23 and 28 (gage height, 0.94 foot).
1910-18, 1920-34: Maximum discharge, 19,800 second-feet June 15, 1927 (gage height, 9.85 feet); minimum, 55 second-feet Sept. 10 and 14, 1931 (gage height, 0.87 foot).

Remarks.— Records good. Discharge estimated for periods of ice effect, Nov. 28 to Dec. 8, Dec. 12-20, 25-31, Jan. 8-22, 27-28, Feb. 21 to Mar. 2. Numerous diversions. Flow partly regulated by operation of two reservoirs.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1 | 448 | 1,120 | 1,290 | 1,490 | 1,060 | 955 | 1,800 | 2,790 | 965 | 476 | 135 | 78 |
| 2 | 448 | 1,230 | 1,290 | 1,490 | 1,060 | 1,010 | 1,800 | 2,600 | 1,140 | 468 | 128 | 84 |
| 3 | 465 | 1,290 | 1,120 | 1,560 | 1,060 | 1,120 | 1,800 | 2,250 | 1,260 | 393 | 128 | 88 |
| 4 | 465 | 1,230 | 1,010 | 1,560 | 1,060 | 1,120 | 1,700 | 2,250 | 1,390 | 330 | 120 | 84 |
| 5 | 484 | 1,170 | 805 | 1,560 | 1,060 | 1,060 | 1,290 | 1,940 | 1,390 | 304 | 118 | 88 |
| 6 | 484 | 1,230 | 655 | 1,560 | 1,060 | 1,120 | 1,290 | 2,090 | 1,320 | 452 | 116 | 86 |
| 7 | 503 | 1,290 | 755 | 1,640 | 1,060 | 1,170 | 1,290 | 2,420 | 1,940 | 452 | 120 | 88 |
| 8 | 414 | 1,290 | 755 | 905 | 1,060 | 1,170 | 1,290 | 2,600 | 2,600 | 437 | 110 | 91 |
| 9 | 406 | 1,290 | 955 | 805 | 1,120 | 1,170 | 1,490 | 2,990 | 2,790 | 422 | 106 | 102 |
| 10 | 414 | 1,290 | 1,120 | 855 | 1,120 | 1,120 | 1,640 | 2,990 | 2,790 | 437 | 102 | 102 |
| 11 | 451 | 1,290 | 1,120 | 805 | 1,060 | 1,060 | 1,720 | 3,420 | 2,600 | 408 | 98 | 110 |
| 12 | 448 | 1,290 | 955 | 855 | 1,010 | 1,120 | 1,890 | 2,790 | 1,650 | 364 | 93 | 108 |
| 13 | 448 | 1,360 | 905 | 855 | 1,060 | 1,120 | 1,940 | 2,420 | 1,460 | 324 | 84 | 102 |
| 14 | 465 | 1,360 | 955 | 905 | 1,060 | 1,170 | 2,250 | 2,250 | 1,460 | 288 | 88 | 104 |
| 15 | 448 | 1,420 | 1,010 | 1,010 | 1,010 | 1,420 | 2,420 | 2,090 | 1,320 | 254 | 91 | 112 |
| 16 | 448 | 1,420 | 755 | 1,010 | 1,010 | 1,720 | 2,250 | 2,090 | 1,260 | 236 | 88 | 116 |
| 17 | 465 | 1,420 | 755 | 955 | 1,010 | 2,070 | 2,250 | 1,940 | 1,080 | 209 | 86 | 116 |
| 18 | 494 | 1,230 | 755 | 905 | 955 | 2,160 | 2,090 | 1,860 | 1,020 | 187 | 81 | 112 |
| 19 | 503 | 1,290 | 1,060 | 955 | 955 | 2,260 | 1,860 | 1,860 | 1,080 | 137 | 78 | 123 |
| 20 | 522 | 1,290 | 1,230 | 1,010 | 955 | 1,490 | 1,790 | 1,790 | 1,080 | 110 | 78 | 114 |
| 21 | 484 | 1,170 | 1,290 | 955 | 955 | 1,560 | 1,790 | 1,720 | 1,080 | 104 | 78 | 123 |
| 22 | 484 | 1,170 | 1,230 | 1,010 | 705 | 1,640 | 2,090 | 1,520 | 810 | 98 | 76 | 137 |
| 23 | 503 | 1,230 | 1,230 | 1,060 | 808 | 1,640 | 2,250 | 1,460 | 760 | 95 | 71 | 142 |
| 24 | 522 | 1,230 | 1,060 | 1,060 | 598 | 1,490 | 2,600 | 1,390 | 665 | 98 | 75 | 166 |
| 25 | 541 | 1,230 | 1,120 | 1,120 | 522 | 1,420 | 2,990 | 1,260 | 620 | 106 | 75 | 194 |
| 26 | 560 | 1,290 | 1,120 | 1,120 | 522 | 1,490 | 3,200 | 1,200 | 594 | 123 | 75 | 218 |
| 27 | 570 | 1,290 | 1,060 | 1,060 | 755 | 1,230 | 2,990 | 1,140 | 576 | 135 | 78 | 245 |
| 28 | 560 | 1,360 | 1,120 | 1,060 | 855 | 1,360 | 2,990 | 1,080 | 585 | 137 | 71 | 254 |
| 29 | 598 | 1,290 | 1,230 | 1,060 | | 1,490 | 2,790 | 1,020 | 550 | 154 | 75 | 276 |
| 30 | 1,010 | 1,290 | 1,420 | 905 | | 1,490 | 2,790 | 965 | 524 | 137 | 78 | 288 |
| 31 | 1,170 | | 1,460 | 1,060 | | 1,560 | | 860 | | 137 | 81 | |

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|-----------|---------|---------|-------|----------------------|
| October | 1,170 | 406 | 523 | 32,140 |
| November | 1,420 | 1,120 | 1,278 | 76,070 |
| December | 1,460 | 655 | 1,061 | 64,650 |
| January | 1,640 | 805 | 1,102 | 67,760 |
| February | 1,120 | 522 | 940 | 52,210 |
| March | 2,260 | 955 | 1,386 | 85,240 |
| April | 3,200 | 1,170 | 2,060 | 122,600 |
| May | 3,420 | 860 | 1,969 | 121,100 |
| June | 2,790 | 524 | 1,279 | 76,060 |
| July | 476 | 95 | 258 | 15,890 |
| August | 135 | 71 | 92.9 | 5,710 |
| September | 288 | 78 | 135 | 8,030 |
| The year | 3,420 | 71 | 1,005 | 727,500 |

Missouri River below Hauser Lake Dam, near Helena, Mont.

Location.- Water-stage recorder in SW $\frac{1}{4}$ sec. 29, T. 12 N., R. 2 W., at Hauser Lake power plant, about 15 miles northeast of Helena.

Drainage area.- 16,600 square miles.

Records available.- December 1922 to September 1934.

Extremes.- Maximum discharge during year, 5,500 second-feet Apr. 20 (gage height, 69.64 feet); minimum, 345 second-feet July 15 (gage height, 65.49 feet).
1922-34: Maximum discharge, 33,300 second-feet June 14, 15, 18, 1927 (gage height, 78.80 feet); minimum, that of July 15, 1934.

Remarks.- Records good. Numerous diversions. Flow partly regulated by operation of reservoirs and power plants above station. Records furnished by Montana Power Co.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|-------|---------|-------|-------|-------|----------------------|-------|-------|-------|-------|-------|
| 1 | 1,330 | 2,030 | 3,070 | 4,320 | 3,220 | 1,240 | 3,220 | 2,650 | 1,020 | 1,590 | 850 | 1,500 |
| 2 | 2,010 | 1,910 | 2,620 | 4,180 | 3,420 | 2,590 | 3,480 | 3,080 | 1,020 | 1,710 | 830 | 1,290 |
| 3 | 2,700 | 2,500 | 1,850 | 3,980 | 3,220 | 4,180 | 3,400 | 3,980 | 1,780 | 1,420 | 850 | 945 |
| 4 | 2,550 | 3,220 | 2,800 | 3,860 | 2,830 | 4,050 | 3,080 | 3,760 | 1,490 | 1,380 | 830 | 1,560 |
| 5 | 2,600 | 3,250 | 2,330 | 3,740 | 3,040 | 3,820 | 3,200 | 3,620 | 1,510 | 1,460 | 585 | 1,620 |
| 6 | 2,800 | 3,510 | 3,050 | 3,480 | 3,240 | 3,350 | 2,990 | 2,650 | 1,450 | 1,670 | 650 | 1,210 |
| 7 | 2,830 | 3,250 | 2,980 | 2,350 | 2,880 | 3,100 | 2,830 | 3,260 | 1,800 | 2,490 | 680 | 1,530 |
| 8 | 2,040 | 3,120 | 3,000 | 2,800 | 2,880 | 2,910 | 2,190 | 2,830 | 2,800 | 1,720 | 645 | 1,560 |
| 9 | 2,280 | 3,120 | 2,870 | 2,460 | 2,930 | 2,880 | 2,710 | 3,120 | 3,170 | 1,860 | 770 | 1,380 |
| 10 | 2,670 | 3,090 | 2,770 | 2,320 | 2,980 | 2,820 | 3,590 | 3,180 | 3,980 | 1,740 | 945 | 1,260 |
| 11 | 2,770 | 3,730 | 2,690 | 2,300 | 3,040 | 2,710 | 5,320 | 3,360 | 3,950 | 1,760 | 975 | 1,450 |
| 12 | 2,350 | 3,400 | 2,650 | 2,300 | 2,990 | 2,860 | 2,030 | 3,520 | 4,340 | 1,660 | 855 | 1,520 |
| 13 | 2,030 | 3,580 | 2,300 | 2,320 | 2,960 | 2,820 | 950 | 3,350 | 3,920 | 1,700 | 1,090 | 1,490 |
| 14 | 1,860 | 2,950 | 2,220 | 1,690 | 2,900 | 2,770 | 960 | 2,990 | 3,570 | 1,240 | 1,250 | 1,480 |
| 15 | 1,060 | 3,030 | 2,610 | 2,460 | 2,860 | 2,740 | 2,590 | 1,610 | 3,280 | 345 | 1,350 | 1,480 |
| 16 | 1,980 | 3,100 | 3,340 | 2,580 | 2,830 | 2,880 | 5,170 | 1,530 | 2,700 | 1,120 | 1,220 | 1,470 |
| 17 | 2,900 | 3,140 | 3,260 | 2,680 | 2,790 | 2,680 | 4,600 | 2,520 | 2,490 | 1,140 | 1,220 | 1,540 |
| 18 | 2,460 | 3,420 | 2,820 | 2,680 | 2,720 | 2,800 | 3,920 | 2,550 | 2,320 | 840 | 1,250 | 1,540 |
| 19 | 2,400 | 3,030 | 1,970 | 2,960 | 2,720 | 2,950 | 4,680 | 2,420 | 2,850 | 765 | 1,020 | 1,970 |
| 20 | 780 | 2,920 | 2,460 | 3,120 | 2,770 | 3,060 | 5,500 | 2,100 | 2,820 | 775 | 910 | 1,570 |
| 21 | 1,420 | 3,120 | 2,400 | 2,430 | 2,960 | 3,200 | 5,420 | 2,060 | 2,800 | 875 | 925 | 1,630 |
| 22 | 1,550 | 3,110 | 3,170 | 3,220 | 2,700 | 3,420 | 4,950 | 2,220 | 2,620 | 610 | 940 | 1,750 |
| 23 | 1,200 | 3,120 | 3,460 | 3,120 | 2,770 | 3,380 | 4,560 | 2,190 | 2,180 | 700 | 960 | 1,400 |
| 24 | 2,590 | 3,280 | 3,150 | 3,060 | 2,860 | 3,260 | 2,700 | 1,750 | 2,170 | 895 | 960 | 1,610 |
| 25 | 1,030 | 3,200 | 3,900 | 3,030 | 2,600 | 3,110 | 1,960 | 1,060 | 2,530 | 950 | 965 | 1,450 |
| 26 | 960 | 2,670 | 3,120 | 2,950 | 1,900 | 3,200 | 2,040 | 840 | 2,540 | 930 | 765 | 895 |
| 27 | 1,120 | 3,180 | 2,610 | 2,650 | 1,400 | 4,050 | 1,800 | 710 | 2,530 | 910 | 975 | 1,270 |
| 28 | 1,910 | 3,060 | 2,530 | 2,360 | 1,080 | 4,020 | 1,760 | 945 | 2,430 | 900 | 1,280 | 1,700 |
| 29 | 2,400 | 3,540 | 2,460 | 3,200 | | 4,260 | 1,780 | 1,060 | 2,040 | 580 | 1,060 | 2,020 |
| 30 | 2,770 | 3,440 | 2,620 | 3,290 | | 4,920 | 1,850 | 1,420 | 1,820 | 685 | 1,150 | 2,150 |
| 31 | 2,760 | | 3,000 | 3,100 | | 4,340 | | 1,700 | | 860 | 1,320 | |
| Month | Maximum | | Minimum | | Mean | | Run-off in acre-feet | | | | | |
| October | 2,900 | | 780 | | 2,065 | | 126,900 | | | | | |
| November | 3,730 | | 1,910 | | 3,093 | | 184,000 | | | | | |
| December | 3,900 | | 1,850 | | 2,777 | | 170,800 | | | | | |
| January | 4,320 | | 1,690 | | 2,956 | | 180,500 | | | | | |
| February | 3,420 | | 1,080 | | 2,746 | | 152,500 | | | | | |
| March | 4,920 | | 1,240 | | 3,237 | | 199,000 | | | | | |
| April | 5,500 | | 950 | | 3,174 | | 188,900 | | | | | |
| May | 3,980 | | 710 | | 2,381 | | 146,400 | | | | | |
| June | 4,540 | | 1,020 | | 2,546 | | 151,500 | | | | | |
| July | 2,490 | | 545 | | 1,208 | | 74,500 | | | | | |
| August | 1,350 | | 585 | | 971 | | 59,710 | | | | | |
| September | 2,150 | | 895 | | 1,495 | | 88,940 | | | | | |
| The year | 5,500 | | 345 | | 2,381 | | 1,723,000 | | | | | |

Missouri River at Fort Benton, Mont.

Location.- Water-stage recorder installed Oct. 10, 1920, in NE $\frac{1}{4}$ sec. 28, T. 24 N., R. 8 E., at highway bridge at Fort Benton.

Drainage area.- 24,600 square miles.

Records available.- July 1881 to September 1934. (1881-89 published in Water-Supply Paper 548).

Extremes.- Maximum discharge recorded during year, 19,600 second-feet June 9 (gage height, 5.4 feet); minimum, 1,160 second-feet Aug. 12 (gage height, 0.25 foot).

1881-1934: Maximum discharge, about 140,000 second-feet (revised) June 7, 1908 (gage height, 18.5 feet, present datum); minimum, 895 second-feet Jan. 16, 1932.

Remarks.- Records good for year ending Sept. 30, 1934, except Dec. 19 to Jan. 13, which were estimated because of ice, and Dec. 11-18, which were determined from readings of staff gage. Numerous diversions from tributaries. Flow partly regulated by storage in reservoirs.

Records in the following table from October 1889 to November 1891 and July 1902 to September 1918 are the same as those published in previous water-supply papers, except that the periods for which records were not formerly published have been completed by the Corps of Engineers, U. S. Army, using for certain periods gage heights collected by that organization and the U. S. Weather Bureau, while for other periods the mean discharge for parts of months (shown by braces) or full months was estimated; also the discharge for June 6, 7, 13-20, 1908, has been revised by the Geological Survey on basis of additional information now available in regard to the flood height and comparison with records for the station at Cascade. Records from December 1891 to June 1902, hitherto unpublished, were prepared by the Corps of Engineers, U. S. Army, using gage heights collected by the Corps of Engineers and rating table prepared by the Geological Survey.

Discharge, in second-feet, 1889-1918, 1933-34

1889-90

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|------|------|------|------|-----|------|--------|-------|-------|
| 1 | 2,980 | 3,600 | 3,860 | | | | | | | *8,500 | 3,860 | 3,600 |
| 2 | 2,980 | 3,730 | 4,130 | | | | | | | *8,500 | 3,860 | 3,600 |
| 3 | 2,980 | 3,730 | 4,130 | | | | | | | *8,500 | 3,860 | 3,480 |
| 4 | 2,980 | 3,730 | 4,410 | | | | | | | *8,500 | 3,860 | 3,600 |
| 5 | 2,980 | 3,860 | 4,410 | | | | | | | *8,500 | 3,600 | 3,600 |
| 6 | 2,980 | 3,860 | 4,560 | | | | | | | *8,500 | 3,600 | 3,600 |
| 7 | 2,980 | 3,730 | 4,700 | | | | | | | *8,500 | 3,600 | 3,600 |
| 8 | 3,100 | 3,730 | 5,000 | | | | | | | 8,800 | 3,600 | 3,730 |
| 9 | 3,100 | 3,600 | 4,700 | | | | | | | 8,410 | 3,800 | 3,600 |
| 10 | 3,100 | 3,730 | 4,700 | | | | | | | 8,410 | 3,600 | 3,730 |
| 11 | 3,100 | 3,860 | 4,130 | | | | | | | 7,660 | 3,360 | 3,860 |
| 12 | 3,100 | 3,860 | 3,100 | | | | | | | 7,300 | 3,360 | 3,860 |
| 13 | 3,100 | 3,730 | 3,100 | | | | | | | 7,300 | 3,360 | 3,860 |
| 14 | 3,100 | 3,730 | 3,600 | | | | | | | 6,950 | 3,360 | 3,860 |
| 15 | 3,100 | 3,600 | 3,600 | | | | | | | 6,600 | 3,360 | 3,730 |
| 16 | 3,100 | 3,480 | 3,350 | | | | | | | 6,260 | 3,860 | 3,730 |
| 17 | 3,100 | 3,730 | 3,860 | | | | | | | 5,930 | 3,730 | 3,730 |
| 18 | 3,100 | 3,730 | 4,130 | | | | | | | 5,610 | 3,730 | 3,600 |
| 19 | 3,100 | 3,730 | 4,130 | | | | | | | 5,610 | 3,730 | 3,600 |
| 20 | 3,100 | 3,730 | 4,130 | | | | | | | 5,300 | 3,730 | 3,600 |
| 21 | 3,100 | 3,860 | 4,130 | | | | | | | 5,300 | 3,730 | 3,480 |
| 22 | 3,220 | 3,860 | 3,600 | | | | | | | 5,300 | 3,730 | 3,480 |
| 23 | 3,350 | 4,410 | 3,600 | | | | | | | 5,000 | 3,730 | 3,480 |
| 24 | 3,350 | 4,700 | 4,130 | | | | | | | 5,000 | 3,730 | 3,600 |
| 25 | 3,350 | 4,130 | 3,600 | | | | | | | 5,000 | 3,600 | 3,480 |
| 26 | 3,350 | 3,860 | 3,350 | | | | | | | 4,700 | 3,600 | 3,480 |
| 27 | 3,480 | 3,600 | 3,100 | | | | | | | 4,410 | 3,600 | 3,480 |
| 28 | 3,600 | 3,600 | 3,100 | | | | | | | 4,410 | 3,480 | 3,480 |
| 29 | 3,480 | 3,600 | 2,980 | | | | | | | 4,410 | 3,480 | 3,480 |
| 30 | 3,480 | 3,860 | 3,600 | | | | | | | 4,410 | 3,480 | 3,480 |
| 31 | 3,480 | | 3,860 | | | | | | | 4,130 | 3,480 | |

*Estimated.

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1889-1918, 1933-34--Continued

1890-91

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|--------|--------|--------|--------|---------|--------|--------|-------|
| 1 | 3,480 | 4,410 | 4,560 | 4,130 | 8,600 | 8,410 | 7,120 | 14,400 | *21,000 | 21,300 | 11,300 | 5,610 |
| 2 | 3,600 | 4,560 | 4,700 | 3,730 | 11,000 | 8,410 | 6,950 | 13,900 | *20,300 | 20,200 | 10,800 | 5,610 |
| 3 | 3,600 | 4,560 | 4,700 | 3,600 | 10,400 | 8,220 | 6,260 | 14,400 | 19,600 | 19,100 | 10,800 | 5,610 |
| 4 | 3,480 | 4,560 | 4,700 | 3,730 | 10,600 | 8,410 | 6,260 | 13,400 | 20,500 | 18,000 | 10,400 | 5,460 |
| 5 | 3,480 | 4,560 | 3,860 | 4,270 | 10,400 | 8,220 | 6,430 | 12,800 | 21,800 | 17,200 | 10,000 | 5,300 |
| 6 | 3,600 | 4,560 | 3,350 | 4,000 | 10,000 | 8,030 | 6,430 | 12,600 | 23,000 | 16,400 | 15,400 | 5,300 |
| 7 | 3,730 | 4,560 | 3,860 | 3,860 | 8,800 | 8,410 | 6,780 | 12,800 | 23,000 | 16,100 | 15,400 | 5,300 |
| 8 | 3,860 | 4,560 | 3,860 | 4,000 | 9,600 | 8,410 | 7,480 | 15,900 | 23,500 | 15,900 | 12,100 | 5,300 |
| 9 | 3,860 | 4,560 | 3,600 | 3,600 | 9,000 | 8,600 | 8,030 | 18,800 | 23,800 | 15,400 | 11,300 | 5,300 |
| 10 | 4,130 | 4,560 | 3,600 | 3,600 | 9,000 | 8,410 | 8,800 | 20,500 | 23,500 | 14,900 | 10,600 | 5,300 |
| 11 | 4,130 | 4,560 | 3,600 | 3,350 | 8,800 | 8,600 | 9,000 | 21,300 | 23,500 | 14,400 | 10,000 | 5,300 |
| 12 | 4,130 | 4,560 | 3,480 | 2,980 | 7,300 | 8,800 | 8,600 | 21,600 | 23,000 | 18,000 | 9,600 | 5,300 |
| 13 | 4,000 | 4,700 | 3,600 | 2,860 | 5,930 | 9,600 | 8,800 | 20,200 | 22,400 | 31,000 | 9,200 | 5,300 |
| 14 | 4,000 | 4,560 | 3,600 | 2,200 | 6,780 | 9,400 | 8,600 | 18,800 | 24,100 | 40,000 | 8,800 | 5,300 |
| 15 | 4,130 | 4,700 | 3,600 | 2,200 | 7,480 | 10,200 | 8,800 | 18,600 | 29,500 | 37,400 | 8,410 | 5,460 |
| 16 | 4,130 | 4,700 | 3,480 | 2,410 | 7,300 | 11,000 | 9,000 | 18,600 | 32,500 | 30,400 | 8,410 | 5,460 |
| 17 | 4,130 | 4,560 | 4,410 | 2,200 | 7,660 | 10,400 | 9,200 | 18,600 | 33,700 | 25,300 | 8,030 | 5,460 |
| 18 | 4,130 | 4,560 | 4,410 | 2,740 | 7,300 | 11,300 | 9,600 | 19,900 | 32,500 | 23,000 | 7,660 | 5,150 |
| 19 | 4,000 | 4,560 | 4,410 | 3,350 | 6,780 | 11,900 | 9,600 | 21,000 | 31,300 | 21,300 | 7,480 | 5,150 |
| 20 | 4,000 | 4,560 | 4,410 | 3,730 | 6,600 | 9,200 | 9,600 | 21,300 | 30,100 | 19,900 | 7,300 | 5,150 |
| 21 | 4,000 | 4,700 | 4,130 | 3,860 | 6,600 | 6,600 | 9,800 | 21,300 | 28,900 | 18,600 | 7,120 | 5,150 |
| 22 | 4,000 | 4,700 | 3,860 | 4,000 | 6,600 | 7,660 | 10,000 | 21,000 | 28,600 | 18,600 | 6,950 | 4,860 |
| 23 | 4,130 | 4,700 | 3,600 | 3,860 | 6,600 | 6,600 | 10,000 | 20,200 | 28,000 | 17,700 | 6,950 | 4,700 |
| 24 | 4,270 | 4,700 | 4,270 | 3,860 | 6,950 | 6,950 | 10,800 | 19,100 | 27,100 | 16,600 | 6,780 | 4,700 |
| 25 | 4,410 | 4,700 | 5,300 | 4,130 | 7,300 | 6,780 | 12,600 | 18,600 | 26,200 | 15,400 | 6,600 | 5,000 |
| 26 | 4,560 | 4,700 | 4,700 | 4,410 | 7,480 | 6,950 | 14,400 | 18,600 | 25,300 | 14,400 | 6,600 | 5,150 |
| 27 | 4,560 | 4,700 | 4,560 | 4,130 | 8,030 | 7,480 | 14,600 | 17,700 | 24,100 | 13,900 | 6,430 | 5,150 |
| 28 | 4,560 | 4,700 | 4,850 | 4,000 | 8,410 | 7,300 | 15,400 | 19,400 | 23,000 | 13,200 | 6,260 | 5,300 |
| 29 | 4,560 | 4,560 | 4,850 | 3,600 | | 7,300 | 14,900 | 21,600 | 22,400 | 12,600 | 6,100 | 5,300 |
| 30 | 4,410 | 4,560 | 4,700 | 4,130 | | 6,950 | 14,400 | 22,400 | 21,800 | 12,100 | 6,100 | 5,300 |
| 31 | 4,410 | | 4,410 | 3,480 | | 7,120 | | 21,700 | | 11,700 | 5,930 | |

*Estimated.

1891-92

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|-------|
| 1 | 5,300 | 6,100 | 8,030 | 4,800 | 6,500 | 6,950 | 5,610 | 6,600 | 28,900 | 40,700 | 10,000 | 6,950 |
| 2 | 5,460 | 6,100 | 7,300 | | | 6,950 | 5,610 | 6,600 | 28,300 | 43,300 | 9,600 | 6,950 |
| 3 | 5,460 | 6,100 | 5,000 | | | 7,660 | 5,610 | 6,600 | 27,100 | 45,400 | 9,600 | 6,600 |
| 4 | 5,300 | 6,100 | 6,600 | | | 7,660 | 5,610 | 6,600 | 25,900 | 45,400 | 9,200 | 6,600 |
| 5 | 5,610 | 5,930 | 5,610 | | | 7,660 | 5,610 | 6,600 | 24,700 | 44,000 | 8,800 | 6,600 |
| 6 | 5,930 | 5,930 | 5,300 | 7,000 | 6,500 | 7,300 | 5,300 | 6,950 | 23,500 | 42,600 | 8,800 | 6,950 |
| 7 | 6,100 | 5,930 | 4,700 | | | 6,950 | 5,300 | 6,600 | 22,400 | 40,000 | 8,410 | 6,950 |
| 8 | 5,930 | 6,100 | 4,410 | | | 6,600 | 5,300 | 6,600 | 23,000 | 36,800 | 8,410 | 6,600 |
| 9 | 6,100 | 6,100 | 3,860 | | | 6,260 | 5,300 | 6,950 | 24,100 | 33,700 | 8,030 | 6,600 |
| 10 | 6,100 | 6,100 | 3,860 | | | 5,930 | 5,300 | 6,600 | 25,900 | 31,900 | 8,030 | 6,600 |
| 11 | 6,100 | 6,100 | 4,130 | 4,500 | 6,500 | 5,930 | 5,300 | 6,600 | 31,900 | 30,100 | 8,030 | 6,260 |
| 12 | 6,260 | 6,600 | 4,410 | | | 5,930 | 5,300 | 6,950 | 46,800 | 27,700 | 7,660 | 6,260 |
| 13 | 6,260 | 5,930 | 4,410 | | | 5,930 | 5,300 | 7,300 | 62,800 | 26,500 | 7,660 | 6,260 |
| 14 | 6,260 | 5,460 | 4,410 | | | 6,260 | 5,300 | 7,660 | 65,500 | 25,900 | 7,660 | 6,260 |
| 15 | 6,260 | 5,300 | 4,700 | | | 6,260 | 5,610 | 8,030 | 58,500 | 24,700 | 7,300 | 6,260 |
| 16 | 6,260 | 4,410 | 5,930 | 6,500 | 6,500 | 6,260 | 5,610 | 8,410 | 52,800 | 24,100 | 6,950 | 6,260 |
| 17 | 6,430 | 3,860 | 6,260 | | | 6,600 | 5,610 | 9,200 | 48,200 | 28,300 | 6,950 | 6,260 |
| 18 | 6,430 | 4,130 | 6,260 | | | 6,260 | 5,610 | 10,400 | 46,800 | 26,500 | 6,950 | 6,260 |
| 19 | 6,430 | 3,860 | 6,260 | | | 6,260 | 5,930 | 11,700 | 48,400 | 19,100 | 6,600 | 6,260 |
| 20 | 6,430 | 3,600 | 6,600 | | | 5,930 | 6,260 | 12,600 | 44,700 | 18,000 | 6,600 | 5,930 |
| 21 | 6,260 | 3,860 | 6,260 | 5,000 | 6,600 | 5,930 | 6,600 | 13,400 | 44,000 | 16,900 | 6,600 | 5,930 |
| 22 | 6,260 | 4,410 | 5,930 | | | 5,930 | 6,600 | 13,900 | 44,000 | 15,900 | 6,600 | 5,930 |
| 23 | 6,260 | 4,410 | 5,000 | | | 5,930 | 6,600 | 15,900 | 44,700 | 15,400 | 6,600 | 5,930 |
| 24 | 6,260 | 4,700 | 4,130 | | | 6,600 | 6,600 | 17,400 | 46,100 | 13,900 | 6,600 | 5,930 |
| 25 | 6,100 | 4,700 | 5,300 | | | 6,260 | 5,930 | 6,260 | 19,600 | 13,400 | 6,600 | 5,930 |
| 26 | 6,100 | 6,600 | 5,000 | 5,500 | 6,950 | 5,930 | 5,930 | 6,260 | 21,300 | 48,200 | 12,600 | 6,600 |
| 27 | 6,260 | 8,030 | | | | 6,600 | 5,930 | 6,260 | 23,500 | 47,500 | 12,100 | 6,600 |
| 28 | 6,260 | 8,410 | | | | 6,600 | 5,930 | 6,600 | 25,900 | 45,400 | 11,700 | 6,600 |
| 29 | 6,260 | 8,410 | | | | 6,950 | 5,930 | 6,950 | 27,100 | 44,000 | 11,300 | 7,300 |
| 30 | 6,260 | 8,410 | | | | 5,610 | 6,600 | 6,600 | 28,300 | 42,000 | 10,800 | 6,950 |
| 31 | 6,260 | | | | | 5,610 | | 29,500 | | 10,400 | 6,950 | 5,300 |

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1889-1918, 1933-34--Continued

1892-93

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|-------|-------|
| 1 | 6,260 | 6,950 | 6,500 | 4,000 | 3,500 | 5,500 | 15,900 | 8,800 | 22,400 | 24,100 | 8,410 | 5,930 |
| 2 | 6,260 | 6,950 | | | | | 14,900 | 8,800 | 23,000 | 23,000 | 8,410 | 5,300 |
| 3 | 6,260 | 7,300 | | | | | 13,000 | 9,200 | 23,500 | 22,400 | 8,030 | 5,610 |
| 4 | 6,260 | 7,300 | | | | | 11,300 | 10,000 | 25,300 | 21,300 | 8,030 | 5,300 |
| 5 | 6,600 | 7,300 | | | | | 10,000 | 11,500 | 25,900 | 20,900 | 7,660 | 5,300 |
| 6 | 6,600 | 6,950 | 6,500 | 4,000 | 3,500 | 5,500 | 9,600 | 11,300 | 26,500 | 20,200 | 7,660 | 5,300 |
| 7 | 6,600 | 7,300 | | | | | 9,600 | 11,300 | 25,900 | 20,200 | 7,300 | 5,300 |
| 8 | 6,600 | 7,300 | | | | | 9,200 | 11,700 | 27,100 | 19,100 | 6,950 | 5,300 |
| 9 | 6,600 | 6,950 | | | | | 9,200 | 12,600 | 28,300 | 18,600 | 6,950 | 5,300 |
| 10 | 6,600 | 7,300 | | | | | 9,200 | 14,400 | 29,500 | 18,000 | 6,600 | 5,610 |
| 11 | 6,260 | 6,950 | 6,500 | 3,500 | 4,000 | 6,600 | 8,800 | 15,900 | 30,700 | 17,400 | 6,600 | 5,610 |
| 12 | 6,260 | 6,950 | | | | 6,950 | 8,410 | 16,400 | 33,100 | 17,400 | 6,600 | 5,930 |
| 13 | 6,600 | 6,950 | | | | 6,600 | 8,030 | 18,600 | 34,300 | 16,400 | 6,260 | 5,930 |
| 14 | 6,950 | 6,950 | | | | 6,600 | 8,030 | 20,200 | 34,900 | 15,900 | 6,260 | 5,930 |
| 15 | 7,300 | 6,950 | | | | 7,300 | 8,030 | 21,300 | 35,500 | 15,400 | 6,260 | 5,930 |
| 16 | 7,300 | 6,950 | 6,500 | 3,500 | 4,000 | 6,950 | 7,660 | 23,000 | 36,200 | 14,900 | 6,260 | 5,930 |
| 17 | 7,300 | 6,950 | | | | 6,600 | 7,660 | 25,300 | 36,200 | 14,400 | 6,260 | 5,930 |
| 18 | 7,300 | 6,600 | | | | 6,260 | 7,660 | 28,900 | 36,200 | 13,900 | 5,930 | 5,930 |
| 19 | 7,300 | 6,600 | | | | 6,260 | 7,300 | 31,800 | 36,500 | 13,400 | 5,930 | 5,930 |
| 20 | 7,300 | 6,260 | | | | 6,260 | 7,300 | 31,300 | 34,300 | 13,000 | 5,930 | 5,930 |
| 21 | 7,300 | 6,600 | 4,500 | 3,500 | 4,500 | 6,600 | 7,300 | 31,900 | 33,700 | 12,600 | 5,930 | 6,260 |
| 22 | 7,300 | 6,600 | | | | 6,600 | 7,300 | 31,300 | 33,100 | 12,100 | 5,930 | 6,600 |
| 23 | 7,300 | 6,950 | | | | 6,600 | 7,300 | 28,900 | 32,500 | 11,700 | 5,610 | 6,600 |
| 24 | 7,300 | 6,950 | | | | 6,600 | 7,300 | 27,700 | 31,300 | 11,300 | 5,930 | 6,600 |
| 25 | 7,300 | | | | | 6,950 | 7,660 | 28,500 | 29,500 | 10,800 | 5,930 | 6,600 |
| 26 | 6,950 | 7,000 | 4,500 | 3,500 | 4,500 | 7,300 | 8,030 | 23,500 | 28,500 | 10,400 | 6,260 | 6,600 |
| 27 | 6,950 | | | | | 8,410 | 8,030 | 21,800 | 27,100 | 10,000 | 6,260 | 6,600 |
| 28 | 6,950 | | | | | 9,200 | 8,410 | 20,800 | 25,900 | 9,600 | 6,260 | 6,600 |
| 29 | 6,950 | | | | | 10,800 | 8,800 | 20,200 | 25,300 | 9,600 | 5,930 | 6,600 |
| 30 | 6,950 | | | | | 11,700 | 8,800 | 20,200 | 25,300 | 9,200 | 5,930 | 6,600 |
| 31 | 6,950 | | | | | 13,000 | | 21,300 | | 8,800 | 5,930 | |

1893-94

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|--------|------|------|------|-------|--------|--------|--------|--------|--------|-------|
| 1 | 6,950 | 8,410 | | | | 4,500 | 13,900 | 25,300 | 47,500 | 27,100 | 10,800 | 6,600 |
| 2 | 6,950 | 8,410 | | | | | 15,900 | 25,500 | 48,200 | 25,900 | 10,400 | 6,600 |
| 3 | 6,950 | 8,410 | | | | | 13,900 | 21,800 | 49,000 | 25,300 | 9,600 | 6,600 |
| 4 | 8,030 | 8,410 | | | | | 12,600 | 20,800 | 50,500 | 24,700 | 9,600 | 6,600 |
| 5 | 8,030 | 8,410 | | | | | 13,000 | 20,200 | 52,000 | 24,700 | 9,200 | 6,600 |
| 6 | 8,030 | 8,030 | | | | 5,500 | 11,700 | 19,100 | 53,600 | 24,700 | 9,200 | 6,600 |
| 7 | 8,030 | 8,030 | | | | | 10,800 | 18,000 | 54,400 | 24,700 | 8,800 | 6,950 |
| 8 | 8,030 | 8,410 | | | | | 10,800 | 17,400 | 55,200 | 24,100 | 9,200 | 7,300 |
| 9 | 8,030 | 8,410 | | | | | 11,700 | 17,400 | 54,400 | 23,500 | 9,200 | 7,300 |
| 10 | 8,030 | 8,410 | | | | | 11,700 | 18,600 | 51,200 | 23,000 | 9,200 | 7,300 |
| 11 | 8,030 | 8,410 | | | | 5,500 | 11,700 | 19,600 | 49,000 | 21,300 | 9,200 | 7,300 |
| 12 | 8,030 | 8,410 | | | | | 11,700 | 20,200 | 46,800 | 20,800 | 9,200 | 7,300 |
| 13 | 8,410 | 8,410 | | | | | 12,100 | 20,800 | 46,400 | 19,600 | 8,800 | 7,300 |
| 14 | 8,410 | 8,410 | | | | | 13,000 | 21,500 | 43,300 | 19,100 | 8,800 | 6,950 |
| 15 | 8,410 | 8,030 | | | | | 13,000 | 25,500 | 40,000 | 19,100 | 8,800 | 6,950 |
| 16 | 8,410 | 8,030 | | | | 5,500 | 12,100 | 26,500 | 37,400 | 19,100 | 8,800 | 6,950 |
| 17 | 8,030 | 8,030 | | | | | 12,600 | 30,100 | 35,500 | 18,000 | 8,410 | 6,950 |
| 18 | 8,030 | 6,950 | | | | | 12,600 | 31,300 | 33,700 | 16,900 | 8,030 | 6,950 |
| 19 | 8,030 | 6,950 | | | | | 12,100 | 31,900 | 32,500 | 16,400 | 8,030 | 6,950 |
| 20 | 8,030 | 6,600 | | | | | 11,700 | 33,100 | 31,300 | 15,900 | 8,030 | 6,950 |
| 21 | 8,030 | 6,260 | | | | 5,500 | 11,300 | 33,700 | 30,700 | 14,900 | 7,660 | 6,950 |
| 22 | 8,030 | 5,610 | | | | | 11,700 | 34,900 | 30,700 | 14,400 | 7,660 | 6,950 |
| 23 | 8,030 | 5,000 | | | | | 13,000 | 36,200 | 30,700 | 13,400 | 7,300 | 6,950 |
| 24 | 8,030 | 4,700 | | | | | 6,950 | 15,400 | 38,800 | 29,500 | 13,000 | 7,300 |
| 25 | 8,030 | 5,300 | | | | | 7,300 | 18,000 | 40,000 | 29,500 | 12,600 | 6,950 |
| 26 | 8,030 | 5,610 | | | | 5,500 | 8,030 | 20,200 | 41,400 | 29,500 | 12,100 | 7,300 |
| 27 | 8,410 | 5,610 | | | | | 7,660 | 23,500 | 42,600 | 28,300 | 11,700 | 6,950 |
| 28 | 8,410 | 5,000 | | | | | 7,300 | 25,900 | 44,000 | 28,300 | 10,800 | 6,950 |
| 29 | 8,410 | *5,000 | | | | | 9,200 | 26,500 | 44,700 | 28,300 | 10,400 | 6,950 |
| 30 | 8,410 | *5,000 | | | | | 10,400 | 28,500 | 45,100 | 28,300 | 10,800 | 6,950 |
| 31 | 8,410 | | | | | | 12,100 | | 46,100 | | 10,800 | 6,600 |

*Estimated.

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1889-1918, 1933-34--Continued

1894-95

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|------|-------|--------|--------|--------|--------|-------|-------|
| 1 | 6,950 | 7,660 | 7,300 | 2,860 | | 3,500 | 10,800 | 16,900 | 17,400 | 17,400 | 5,930 | 4,700 |
| 2 | 7,300 | 7,660 | 7,300 | 2,860 | | | 10,400 | 17,400 | 16,900 | 16,900 | 5,930 | 4,700 |
| 3 | 7,300 | 7,660 | 7,300 | 3,100 | | | 9,600 | 18,000 | 15,900 | 16,400 | 5,930 | 4,700 |
| 4 | 7,300 | 7,660 | 6,600 | | | | 8,800 | 18,000 | 15,400 | 16,400 | 5,930 | 4,410 |
| 5 | 7,300 | 7,660 | 5,930 | | | | 8,800 | 18,000 | 15,400 | 16,400 | 5,930 | 4,410 |
| 6 | 7,300 | 7,660 | 5,300 | | | 4,500 | 8,800 | 18,000 | 15,400 | 15,900 | 5,930 | 4,410 |
| 7 | 7,300 | 7,660 | 5,610 | | | | 8,410 | 18,000 | 16,400 | 14,900 | 5,610 | 4,700 |
| 8 | 7,300 | 7,300 | 5,930 | | | | 8,410 | 17,400 | 18,600 | 14,400 | 5,610 | 4,700 |
| 9 | 7,660 | 7,300 | 5,300 | | | | 8,030 | 16,900 | 18,600 | 15,400 | 5,610 | 4,700 |
| 10 | 7,660 | 7,300 | 5,300 | | | | 8,030 | 16,900 | 19,600 | 13,400 | 5,610 | 4,700 |
| 11 | 7,660 | 7,660 | 5,300 | | | 5,000 | 8,030 | 17,400 | 19,100 | 13,400 | 5,610 | 5,000 |
| 12 | 7,660 | 7,660 | 5,300 | | | | 8,410 | 17,400 | 19,600 | 13,400 | 5,610 | 5,000 |
| 13 | 7,660 | 7,660 | 5,610 | | | | 8,800 | 16,900 | 21,300 | 12,600 | 5,300 | 5,000 |
| 14 | 7,660 | 7,660 | 5,930 | | | | 9,200 | 16,400 | 21,800 | 11,700 | 5,300 | 5,000 |
| 15 | 7,300 | 7,660 | 5,610 | | | | 9,200 | 16,400 | 22,400 | 10,800 | 5,300 | 5,000 |
| 16 | 7,300 | 8,030 | 4,130 | 3,500 | | 5,000 | 9,600 | 16,400 | 21,800 | 10,000 | 5,000 | 5,300 |
| 17 | 7,300 | 7,660 | 5,930 | | | | 5,300 | 10,000 | 16,400 | 21,800 | 9,600 | 4,700 |
| 18 | 7,300 | 7,660 | 6,260 | | | | 5,300 | 10,400 | 16,900 | 21,800 | 9,600 | 4,700 |
| 19 | 7,300 | 7,660 | 5,610 | | | | 5,300 | 10,800 | 16,900 | 20,800 | 9,200 | 4,700 |
| 20 | 7,300 | 7,660 | 5,930 | | | | 5,930 | 10,800 | 16,900 | 19,600 | 8,800 | 4,700 |
| 21 | 7,300 | 7,660 | 5,930 | | | 6,950 | 11,300 | 17,400 | 18,600 | 8,410 | 4,700 | 5,610 |
| 22 | 7,300 | 7,300 | 6,220 | | | | 11,300 | 18,000 | 17,400 | 8,030 | 4,700 | 5,610 |
| 23 | 7,300 | 7,300 | 6,950 | | | | 8,410 | 11,300 | 18,600 | 16,900 | 7,660 | 4,410 |
| 24 | 7,300 | 8,030 | 6,600 | | | | 9,200 | 11,300 | 19,100 | 17,400 | 7,660 | 4,410 |
| 25 | 7,300 | 7,300 | 6,600 | | | | 8,800 | 11,700 | 20,200 | 17,400 | 7,300 | 4,410 |
| 26 | 7,300 | 7,300 | 6,950 | | | 8,800 | 11,700 | 21,300 | 17,400 | 6,950 | 4,410 | 5,930 |
| 27 | 7,300 | 7,300 | 7,300 | | | | 9,200 | 12,600 | 20,200 | 18,000 | 6,950 | 4,410 |
| 28 | 7,660 | 7,300 | 7,300 | | | | 9,200 | 13,900 | 19,100 | 18,000 | 6,260 | 4,410 |
| 29 | 7,660 | 7,660 | 6,260 | | | | 10,000 | 14,900 | 18,600 | 18,600 | 6,260 | 4,700 |
| 30 | 8,030 | 7,660 | 2,630 | | | | 11,300 | 15,900 | 18,600 | 18,000 | 6,260 | 4,700 |
| 31 | 8,030 | | 3,600 | | | | 11,300 | | 18,600 | | 5,930 | 4,700 |

1895-96

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|------|-------|-------|--------|--------|--------|--------|-------|
| 1 | 5,930 | 5,610 | 4,700 | 4,500 | | 5,000 | 7,660 | 7,660 | 24,700 | 27,100 | 8,410 | |
| 2 | 5,930 | 5,610 | 4,700 | | | | 6,950 | 8,410 | 25,300 | 25,900 | 8,410 | |
| 3 | 5,610 | 5,610 | 4,700 | | | | 6,950 | 8,800 | 26,600 | 25,300 | 8,410 | |
| 4 | 5,610 | 5,610 | 4,410 | | | | 6,600 | 8,800 | 28,900 | 24,100 | 8,030 | |
| 5 | 5,610 | 5,610 | 4,410 | | | | 6,600 | 8,800 | 31,300 | 23,000 | 8,030 | |
| 6 | 5,930 | 5,610 | 3,860 | 4,000 | | 5,000 | 6,260 | 9,200 | 31,900 | 22,400 | 8,030 | |
| 7 | 5,930 | 5,610 | 3,600 | | | | 6,260 | 9,600 | 33,100 | 21,300 | 7,660 | |
| 8 | 5,930 | 5,300 | 3,860 | | | | 5,930 | 10,400 | 34,300 | 19,600 | 7,660 | |
| 9 | 5,930 | 5,300 | 3,860 | | | | 6,260 | 11,700 | 34,300 | 18,000 | 7,300 | |
| 10 | 5,930 | 5,300 | 4,410 | | | | 6,260 | 13,000 | 35,600 | 17,400 | 7,300 | |
| 11 | 5,930 | 5,300 | 5,000 | 4,000 | | 5,610 | 6,600 | 13,000 | 35,500 | 16,400 | 7,300 | |
| 12 | 5,930 | 5,610 | 5,930 | | | | 6,600 | 13,400 | 34,900 | 15,400 | 7,300 | |
| 13 | 5,610 | 5,610 | 6,260 | | | | 6,600 | 13,400 | 34,900 | 14,400 | 7,300 | |
| 14 | 5,610 | 5,610 | 5,610 | | | | 6,600 | 13,000 | 36,200 | 13,900 | 6,950 | |
| 15 | 5,610 | 5,610 | 6,950 | | | | 6,600 | 13,000 | 37,400 | 13,400 | 6,600 | |
| 16 | 5,610 | 5,930 | 3,860 | 4,000 | | 4,500 | 6,260 | 6,600 | 12,600 | 38,800 | 14,400 | |
| 17 | 5,610 | 5,930 | 3,600 | | | | 6,260 | 6,600 | 12,600 | 39,400 | 14,900 | |
| 18 | 5,610 | 5,930 | 4,700 | | | | 6,600 | 6,600 | 12,100 | 40,000 | 13,900 | |
| 19 | 5,610 | 6,260 | 4,700 | | | | 6,600 | 6,600 | 11,700 | 40,000 | 13,400 | |
| 20 | 5,610 | 6,260 | 4,410 | | | | 7,660 | 6,600 | 11,700 | 40,700 | 12,600 | |
| 21 | 5,610 | 6,260 | 4,410 | 4,000 | | 4,500 | 8,410 | 6,600 | 12,100 | 40,700 | 12,100 | |
| 22 | 5,610 | 6,260 | 4,410 | | | | 8,410 | 6,600 | 12,100 | 40,700 | 11,700 | |
| 23 | 5,610 | 4,700 | 4,700 | | | | 7,660 | 6,600 | 11,700 | 40,700 | 11,300 | |
| 24 | 5,610 | 3,350 | 4,700 | | | | 8,030 | 6,600 | 11,700 | 40,000 | 10,800 | |
| 25 | 5,610 | 3,600 | 4,410 | | | | 8,410 | 6,600 | 12,100 | 40,000 | 10,400 | |
| 26 | 5,610 | 3,860 | 4,130 | 4,000 | | 4,500 | 8,800 | 6,950 | 13,000 | 38,100 | 10,000 | |
| 27 | 5,610 | 3,600 | 4,000 | | | | 8,800 | 6,950 | 13,000 | 36,200 | 9,600 | |
| 28 | 5,610 | 3,860 | 4,000 | | | | 8,800 | 6,950 | 15,400 | 33,700 | 9,200 | |
| 29 | 5,610 | 3,860 | 4,000 | | | | 8,800 | 7,300 | 15,900 | 30,700 | 8,800 | |
| 30 | 5,610 | 3,860 | 4,000 | | | | 8,030 | 7,300 | 16,900 | 28,300 | 8,800 | |
| 31 | 5,610 | | 4,000 | | | | 8,030 | | 16,600 | | 8,410 | |

*Estimated.

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1889-1918, 1933-54--Continued

1896-97

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|--------|--------|--------|--------|--------|-------|-------|
| 1 | | | | | | | 12,100 | 21,800 | 24,100 | 14,900 | 6,260 | 3,860 |
| 2 | | | | | | | 10,400 | 18,000 | 24,100 | 14,900 | 6,260 | 3,860 |
| 3 | | | | | | | 9,600 | 18,600 | 24,700 | 14,400 | 5,930 | 3,860 |
| 4 | | | | | | | 8,800 | 19,100 | 25,500 | 14,400 | 5,610 | 3,860 |
| 5 | | | | | | | 8,410 | 20,200 | 24,700 | 14,900 | 5,610 | 3,860 |
| 6 | | | | | | 4,000 | 8,030 | 21,300 | 23,500 | 15,900 | 5,610 | 4,130 |
| 7 | | | | | | | 8,030 | 23,000 | 22,400 | 15,900 | 5,300 | 4,130 |
| 8 | | | | | | | 8,410 | 25,300 | 20,800 | 16,400 | 5,300 | 4,130 |
| 9 | | | | | | | 8,030 | 25,300 | 18,600 | 15,900 | 5,000 | 4,130 |
| 10 | | | | | | | 8,030 | 24,700 | 18,000 | 14,900 | 5,000 | 4,410 |
| 11 | | | | | | | 8,410 | 24,700 | 17,400 | 13,900 | 5,300 | 4,410 |
| 12 | | | | | | | 10,000 | 23,500 | 17,400 | 15,000 | 5,300 | 4,410 |
| 13 | | | | | | | 10,400 | 22,400 | 16,900 | 12,100 | 5,000 | 4,410 |
| 14 | | | | | | | 10,800 | 21,800 | 15,900 | 11,300 | 5,000 | 4,700 |
| 15 | | | | | | 4,500 | 11,300 | 20,800 | 15,400 | 10,800 | 5,000 | 4,700 |
| 16 | | | | | | | 12,100 | 21,300 | 16,400 | 10,000 | 5,000 | 4,700 |
| 17 | | | | | | | 12,600 | 22,400 | 19,100 | 10,000 | 4,700 | 4,700 |
| 18 | | | | | | | 13,000 | 24,700 | 18,600 | 9,600 | 4,700 | 4,700 |
| 19 | | | | | | | 13,000 | 25,900 | 18,600 | 9,600 | 4,700 | 4,700 |
| 20 | | | | | | | 15,400 | 27,100 | 17,400 | 9,600 | 4,700 | 4,700 |
| 21 | | | | | | | 16,400 | 27,700 | 17,400 | 9,200 | 4,410 | 4,700 |
| 22 | | | | | | | 18,000 | 28,300 | 19,100 | 8,800 | 4,410 | 4,700 |
| 23 | | | | | | 5,600 | 18,600 | 28,300 | 17,400 | 8,410 | 4,410 | 4,700 |
| 24 | | | | | | | 16,900 | 27,700 | 16,900 | 8,410 | 4,130 | 4,700 |
| 25 | | | | | | | 15,400 | 27,700 | 16,400 | 8,030 | 4,130 | 4,700 |
| 26 | | | | | | 8,800 | 14,900 | 27,100 | 15,900 | 8,030 | 4,130 | 4,700 |
| 27 | | | | | | 10,000 | 15,400 | 26,500 | 15,900 | 7,660 | 4,130 | 4,700 |
| 28 | | | | | | 11,300 | 16,900 | 26,500 | 18,000 | 7,300 | 4,130 | 4,700 |
| 29 | | | | | | 12,600 | 18,000 | 25,900 | 15,900 | 6,950 | 4,130 | 4,700 |
| 30 | | | | | | 18,000 | 18,600 | 25,900 | 15,400 | 6,600 | 3,860 | 4,700 |
| 31 | | | | | | 14,400 | 14,400 | 24,700 | | 6,600 | 3,860 | |

1897-98

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|------|------|-------|-------|--------|--------|--------|--------|-------|-------|
| 1 | 4,700 | 5,930 | | | | 7,300 | 5,610 | 17,400 | 34,900 | 22,400 | 7,660 | 5,300 |
| 2 | 4,700 | 5,930 | | | | 7,660 | 6,950 | 15,900 | 34,900 | 24,100 | 7,660 | 5,610 |
| 3 | 4,700 | 5,930 | | | | 8,410 | 7,660 | 15,400 | 36,200 | 25,500 | 7,300 | 5,610 |
| 4 | 4,700 | 5,930 | | | | 7,660 | 7,300 | 14,900 | 36,200 | 24,100 | 7,300 | 5,610 |
| 5 | 4,700 | 5,930 | | | | 7,300 | 7,300 | 14,400 | 35,600 | 23,500 | 6,950 | 5,610 |
| 6 | 5,000 | 5,930 | | | | 7,300 | 7,300 | 13,900 | 35,600 | 21,300 | 6,600 | 5,610 |
| 7 | 5,000 | 5,930 | | | 5,300 | 7,300 | 7,300 | 13,400 | 35,500 | 20,200 | 6,600 | 5,930 |
| 8 | 5,000 | 5,930 | | | 5,300 | 6,950 | 7,660 | 13,000 | 34,300 | 19,100 | 6,600 | 5,930 |
| 9 | 5,000 | 5,930 | | | 5,300 | 6,600 | 7,300 | 13,400 | 33,700 | 18,600 | 6,260 | 5,930 |
| 10 | 5,300 | 5,930 | | | 4,410 | 6,600 | 8,410 | 13,400 | 33,700 | 18,000 | 6,260 | 5,930 |
| 11 | 5,300 | 5,930 | | | 3,100 | 6,600 | 10,000 | 13,400 | 33,100 | 16,900 | 5,930 | 5,930 |
| 12 | 5,300 | 5,930 | | | 2,630 | 6,600 | 10,800 | 14,400 | 32,500 | 15,900 | 5,930 | 5,930 |
| 13 | 5,300 | 5,930 | | | 3,350 | 6,260 | 11,300 | 16,400 | 32,500 | 15,400 | 5,930 | 5,930 |
| 14 | 5,300 | 5,930 | | | 5,000 | 6,260 | 11,700 | 17,400 | 33,100 | 14,900 | 5,930 | 5,930 |
| 15 | 5,300 | 6,260 | | | 5,930 | 5,930 | 12,100 | 23,500 | 33,100 | 14,400 | 5,610 | 5,610 |
| 16 | 5,610 | 6,260 | | | 7,300 | 5,930 | 13,000 | 27,700 | 33,100 | 14,400 | 5,610 | 5,610 |
| 17 | 5,610 | 6,260 | | | 7,300 | 5,930 | 13,400 | 28,300 | 34,300 | 14,400 | 5,610 | 5,610 |
| 18 | 5,610 | 6,600 | | | 7,300 | 5,930 | 13,400 | 30,100 | 35,500 | 14,900 | 5,300 | 5,610 |
| 19 | 5,610 | 6,600 | | | 5,300 | 5,930 | 13,900 | 32,500 | 35,500 | 13,400 | 5,610 | 5,300 |
| 20 | 5,610 | 6,600 | | | 6,600 | 5,300 | 13,900 | 33,700 | 38,100 | 12,600 | 5,610 | 5,300 |
| 21 | 5,610 | 6,600 | | | 7,600 | 5,300 | 14,400 | 33,100 | 38,100 | 12,100 | 5,610 | 5,300 |
| 22 | 5,930 | 6,600 | | | 6,260 | 3,860 | 14,900 | 31,300 | 37,400 | 12,100 | 5,610 | 5,300 |
| 23 | 5,930 | 4,410 | | | 6,950 | 4,410 | 14,900 | 29,500 | 36,200 | 11,700 | 5,610 | 5,300 |
| 24 | 5,930 | 4,410 | | | 6,260 | 4,410 | 14,400 | 28,900 | 33,700 | 11,700 | 5,610 | 5,000 |
| 25 | 5,930 | 3,860 | | | 6,950 | 3,600 | 14,400 | 28,900 | 31,900 | 10,800 | 5,300 | 5,000 |
| 26 | 5,930 | | | | 6,950 | 3,100 | 14,400 | 28,300 | 28,900 | 10,400 | 5,300 | 5,000 |
| 27 | 5,930 | | | | 7,300 | 3,350 | 15,400 | 28,300 | 27,700 | 10,300 | 5,000 | 4,700 |
| 28 | 5,930 | | | | 7,300 | 3,100 | 16,900 | 30,700 | 25,900 | 9,200 | 5,000 | 4,700 |
| 29 | 5,930 | | | | | 2,630 | 16,900 | 34,300 | 24,700 | 8,800 | 5,000 | 4,700 |
| 30 | 5,930 | | | | | 6,950 | 17,400 | 36,800 | 22,400 | 8,410 | 5,300 | 4,700 |
| 31 | 5,930 | | | | | 5,000 | | 35,500 | | 7,660 | 5,300 | |

MISSOURI RIVER PROPER

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1889-1918, 1933-34--Continued

1898-99

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|------|------|------|--------|--------|--------|--------|--------|-------|
| 1 | 5,000 | 6,600 | 5,300 | | | | 8,000 | 15,400 | 30,100 | 40,700 | 11,700 | 7,660 |
| 2 | 5,300 | 6,600 | 5,300 | | | | | 15,400 | 30,100 | 39,400 | 11,700 | 7,300 |
| 3 | 5,610 | 6,600 | 5,300 | | | | | 12,600 | 31,300 | 38,100 | 11,300 | 7,300 |
| 4 | 5,610 | 6,600 | 5,300 | | | | | 12,100 | 34,300 | 36,800 | 11,300 | 7,300 |
| 5 | 5,610 | 6,950 | 5,300 | | | | 8,410 | 12,600 | 35,500 | 36,800 | 10,400 | 6,950 |
| 6 | 5,610 | 6,950 | 5,300 | | | | 10,800 | 12,100 | 35,500 | 36,200 | 10,400 | 6,950 |
| 7 | 5,610 | 6,600 | 5,300 | | | | 12,600 | 12,600 | 35,500 | 33,700 | 10,000 | 6,950 |
| 8 | 5,610 | 6,600 | 5,610 | | | | 14,400 | 15,000 | 34,900 | 32,500 | 10,000 | 6,950 |
| 9 | 5,610 | 6,600 | 6,600 | | | | 15,900 | 14,900 | 34,300 | 30,700 | 9,600 | 6,950 |
| 10 | 5,930 | 6,600 | | | | | 17,400 | 17,400 | 33,700 | 29,500 | 10,000 | 6,950 |
| 11 | 5,930 | 6,600 | | | | | 17,400 | 20,200 | 33,100 | 27,700 | 10,000 | 6,600 |
| 12 | 5,930 | 6,260 | | | | | 18,000 | 21,800 | 32,500 | 27,100 | 10,400 | 6,600 |
| 13 | 5,930 | 6,260 | | | | | 18,000 | 23,000 | 31,900 | 25,900 | 10,800 | 6,600 |
| 14 | 5,930 | 6,260 | | | | | 18,000 | 23,500 | 33,100 | 24,700 | 10,800 | 6,600 |
| 15 | 6,260 | 6,260 | | | | | 17,400 | 23,000 | 33,100 | 24,100 | 10,400 | 6,600 |
| 16 | 6,260 | 6,260 | | | | | 15,400 | 23,000 | 33,700 | 23,000 | 10,000 | 6,600 |
| 17 | 6,260 | 6,260 | | | | | 14,400 | 22,400 | 35,500 | 21,800 | 10,000 | 6,600 |
| 18 | 6,260 | 6,260 | | | | | 13,400 | 21,300 | 37,400 | 20,800 | 9,200 | 6,600 |
| 19 | 6,260 | 6,260 | | | | | 13,400 | 20,800 | 38,800 | 19,600 | 9,200 | 6,950 |
| 20 | 6,260 | 4,410 | | | | | 10,000 | 21,300 | 39,400 | 18,600 | 8,800 | 6,950 |
| 21 | 6,600 | 3,600 | | | | | 11,300 | 21,800 | 40,000 | 18,000 | 8,800 | 6,950 |
| 22 | 6,600 | 3,350 | | | | | 12,100 | 22,400 | 40,000 | 16,900 | 8,800 | 6,950 |
| 23 | 6,600 | 3,350 | | | | | 13,000 | 22,400 | 39,400 | 16,400 | 8,410 | 6,950 |
| 24 | 6,600 | 4,130 | | | | | 13,000 | 22,400 | 40,000 | 15,400 | 8,410 | 6,600 |
| 25 | 6,600 | 4,410 | | | | | 13,400 | 23,500 | 41,400 | 14,900 | 8,030 | 6,260 |
| 26 | 6,950 | 4,410 | | | | | 13,400 | 25,900 | 44,000 | 14,400 | 8,030 | 6,260 |
| 27 | 6,950 | 4,130 | | | | | 14,400 | 29,500 | 46,100 | 13,900 | 8,030 | 6,260 |
| 28 | 6,950 | 3,860 | | | | | 14,900 | 30,100 | 45,400 | 13,400 | 8,030 | 6,260 |
| 29 | 6,600 | 4,130 | | | | | 14,900 | 30,100 | 43,300 | 17,400 | 8,030 | 6,260 |
| 30 | 6,600 | 6,600 | | | | | 14,400 | 30,700 | 42,000 | 16,900 | 8,030 | 6,260 |
| 31 | 6,950 | | | | | | | 30,700 | | 16,400 | 7,660 | |

1899-1900

[illegible]

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1889-1918, 1933-34--Continued

1900-1901

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|-------|--------|--------|--------|--------|-------|-------|
| 1 | | | | | | | 5,930 | 15,900 | 27,100 | 12,100 | 3,860 | 3,100 |
| 2 | | | | | | | 5,610 | 14,400 | 27,100 | 11,300 | 4,130 | 3,100 |
| 3 | | | | | | | 5,610 | 16,400 | 25,900 | 10,800 | 3,860 | 4,130 |
| 4 | | | | | | | 5,610 | 25,900 | 24,700 | 10,400 | 3,600 | 3,860 |
| 5 | | | | | | | 5,610 | 29,500 | 23,500 | 10,000 | 3,600 | 3,600 |
| 6 | | | | | | 4,500 | 5,610 | 28,900 | 22,400 | 9,600 | 3,600 | 3,600 |
| 7 | | | | | | | 5,610 | 27,700 | 21,300 | 8,800 | 3,600 | 3,600 |
| 8 | | | | | | | 5,610 | 25,900 | 19,600 | 8,800 | 3,600 | 3,600 |
| 9 | | | | | | | 5,930 | 24,100 | 18,000 | 9,600 | 3,600 | 3,600 |
| 10 | | | | | | | 5,610 | 23,500 | 18,000 | 8,800 | 3,600 | 3,600 |
| 11 | | | | | | 5,000 | 5,610 | 21,800 | 17,400 | 8,410 | 3,600 | 3,600 |
| 12 | | | | | | | 5,930 | 20,800 | 16,900 | 8,030 | 3,600 | 3,600 |
| 13 | | | | | | | 5,930 | 21,300 | 16,400 | 7,660 | 3,350 | 3,600 |
| 14 | | | | | | | 5,930 | 22,800 | 15,900 | 7,300 | 3,350 | 3,600 |
| 15 | | | | | | | 6,260 | 22,400 | 15,400 | 7,300 | 3,350 | 3,600 |
| 16 | | | | | | 5,000 | 6,260 | 23,000 | 15,400 | 6,950 | 3,100 | 3,600 |
| 17 | | | | | | | 6,600 | 24,100 | 14,900 | 6,600 | 3,100 | 3,600 |
| 18 | | | | | | | 6,600 | 27,100 | 14,400 | 6,600 | 3,100 | 3,860 |
| 19 | | | | | | | 6,600 | 29,500 | 14,400 | 6,260 | 3,100 | 3,860 |
| 20 | | | | | | | 6,600 | 30,700 | 13,900 | 5,610 | 3,100 | 3,860 |
| 21 | | | | | | 5,500 | 7,300 | 30,700 | 13,400 | 5,300 | 3,100 | 3,860 |
| 22 | | | | | | | 8,030 | 30,700 | 13,000 | 5,300 | 3,100 | 3,860 |
| 23 | | | | | | | 8,800 | 31,300 | 13,000 | 5,000 | 3,100 | 4,130 |
| 24 | | | | | | | 10,000 | 31,300 | 12,600 | 4,700 | 3,100 | 4,130 |
| 25 | | | | | | | 10,400 | 30,700 | 12,100 | 4,410 | 3,100 | 4,130 |
| 26 | | | | | | 5,500 | 11,300 | 30,100 | 12,600 | 4,700 | 3,100 | 4,410 |
| 27 | | | | | | | 12,100 | 28,900 | 12,600 | 4,410 | 3,100 | 4,410 |
| 28 | | | | | | | 12,100 | 28,300 | 12,600 | 4,130 | 3,100 | 4,700 |
| 29 | | | | | | | 12,600 | 27,700 | 12,100 | 4,130 | 3,100 | 4,700 |
| 30 | | | | | | | 13,000 | 27,700 | 12,100 | 3,860 | 3,100 | 4,700 |
| 31 | | | | | | | | 27,700 | | 3,860 | 3,100 | |

1901-2

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|------|------|-------|-------|--------|--------|--------|-------|-------|
| 1 | 4,700 | 4,700 | 5,300 | | | | 4,700 | 8,030 | 28,300 | 13,000 | 6,600 | 4,130 |
| 2 | 4,700 | 4,700 | 5,300 | | | | 4,700 | 8,410 | 30,700 | 13,000 | 6,260 | 4,130 |
| 3 | 4,700 | 4,700 | 5,300 | | | | 4,700 | 8,410 | 31,300 | 16,900 | 5,930 | 4,130 |
| 4 | 4,700 | 4,700 | 5,300 | | | | 4,410 | 8,410 | 30,100 | 16,400 | 5,610 | 3,860 |
| 5 | 4,700 | 5,000 | 5,300 | | | | 4,410 | 8,800 | 28,300 | 16,900 | 5,300 | 3,860 |
| 6 | 4,700 | 5,000 | 5,300 | | | 3,500 | 4,410 | 8,800 | 27,700 | 15,900 | 5,000 | 4,130 |
| 7 | 4,700 | 5,000 | 5,300 | | | | 4,700 | 8,800 | 24,700 | 15,900 | 5,000 | 4,130 |
| 8 | 4,700 | 5,000 | 5,300 | | | | 4,700 | 9,200 | 23,000 | 15,900 | 4,700 | 4,130 |
| 9 | 4,700 | 5,000 | 5,000 | | | | 4,700 | 9,200 | 21,300 | 15,900 | 4,700 | 4,130 |
| 10 | 4,700 | 5,000 | 4,700 | | | | 4,700 | 9,600 | 21,300 | 15,900 | 4,410 | 3,860 |
| 11 | 4,700 | 5,000 | 3,860 | | | 4,000 | 5,000 | 9,600 | 21,300 | 14,900 | 4,130 | 3,860 |
| 12 | 4,700 | 5,000 | 3,860 | | | | 5,000 | 10,400 | 21,300 | 13,900 | 4,130 | 3,860 |
| 13 | 4,700 | 5,000 | 3,600 | | | | 5,300 | 10,800 | 21,300 | 13,000 | 4,130 | 3,860 |
| 14 | 4,700 | 5,000 | 3,600 | | | | 5,000 | 11,700 | 21,800 | 12,600 | 4,130 | 3,600 |
| 15 | 4,700 | 5,000 | 3,350 | | | | 5,000 | 14,400 | 21,800 | 12,100 | 4,130 | 3,600 |
| 16 | 4,700 | 5,000 | 3,350 | | | 4,000 | 4,700 | 19,100 | 21,300 | 11,700 | 4,130 | 3,350 |
| 17 | 4,700 | 5,000 | 3,350 | | | | 4,700 | 21,300 | 21,300 | 11,300 | 4,130 | 3,350 |
| 18 | 4,700 | 5,000 | 3,600 | | | | 4,700 | 22,400 | 20,800 | 10,800 | 3,860 | 3,600 |
| 19 | 4,700 | 5,000 | 3,600 | | | | 4,700 | 23,500 | 19,600 | 10,800 | 3,600 | 3,600 |
| 20 | 4,700 | 5,000 | 3,600 | | | | 5,000 | 24,100 | 19,100 | 10,400 | 3,600 | 3,860 |
| 21 | 4,700 | 5,300 | 3,600 | | | 4,000 | 5,300 | 27,100 | 16,900 | 10,000 | 3,600 | 4,130 |
| 22 | 4,700 | 5,000 | 3,600 | | | | 5,300 | 32,500 | 15,900 | 9,600 | 3,860 | 4,130 |
| 23 | 4,700 | 5,000 | 3,500 | | | | 5,610 | 30,700 | 14,900 | 9,200 | 3,860 | 4,130 |
| 24 | 4,700 | 5,000 | 3,500 | | | | 6,260 | 27,700 | 13,900 | 9,200 | 3,860 | 3,860 |
| 25 | 4,700 | 5,000 | 3,500 | | | | 7,300 | 25,900 | 13,900 | 8,800 | 4,130 | 3,860 |
| 26 | 4,700 | 5,300 | 3,500 | | | 4,000 | 8,030 | 23,500 | 13,900 | 8,410 | 4,130 | 3,860 |
| 27 | 4,700 | 5,300 | 3,500 | | | | 8,030 | 23,000 | 13,900 | 8,030 | 4,410 | 3,860 |
| 28 | 4,700 | 5,300 | 3,500 | | | | 8,030 | 23,500 | 13,400 | 8,030 | 4,410 | 3,860 |
| 29 | 4,700 | 5,300 | 3,500 | | | | 8,030 | 24,700 | 13,000 | 7,660 | 4,700 | 3,600 |
| 30 | 4,700 | 5,000 | 3,500 | | | | 8,030 | 26,500 | 13,000 | 7,300 | 4,410 | 3,600 |
| 31 | 4,700 | | 3,500 | | | | | 27,700 | | 6,950 | 4,410 | |

*Estimated.

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1889-1918, 1933-34--Continued

1902-3

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|------|------|------|------|--------|--------|--------|--------|--------|-------|-------|
| 1 | 3,860 | | | | | | 10,800 | 11,700 | 19,100 | 15,900 | 6,950 | 4,130 |
| 2 | 4,130 | | | | | | 11,300 | 11,700 | 21,800 | 15,900 | 7,300 | 3,860 |
| 3 | 4,410 | | | | | | 11,300 | 11,300 | 24,100 | 16,900 | 6,950 | 3,600 |
| 4 | 4,700 | | | | | | 10,400 | 10,400 | 25,300 | 18,000 | 6,600 | 3,600 |
| 5 | 4,700 | | | | | | 9,200 | 10,400 | 27,700 | 19,100 | 6,600 | 3,600 |
| 6 | 4,700 | | | | | | 8,410 | 10,400 | 28,900 | 18,000 | 6,600 | 3,860 |
| 7 | 5,000 | | | | | | 7,600 | 10,400 | 29,500 | 17,400 | 6,260 | 3,860 |
| 8 | 4,700 | | | | | | 7,300 | 10,800 | 30,700 | 16,900 | 5,610 | 3,600 |
| 9 | 4,700 | | | | | | 6,950 | 11,700 | 31,300 | 16,400 | 5,610 | 4,130 |
| 10 | 4,700 | | | | | 3,500 | 6,950 | 11,300 | 31,300 | 15,400 | 5,610 | 4,130 |
| 11 | 5,000 | | | | | | 6,950 | 11,700 | 30,100 | 14,900 | 5,610 | 4,130 |
| 12 | 5,000 | | | | | | 7,300 | 11,700 | 29,500 | 14,400 | 5,000 | 4,700 |
| 13 | 5,000 | | | | | | 7,660 | 11,700 | 29,500 | 13,900 | 5,000 | 4,700 |
| 14 | 5,000 | | | | | | 7,660 | 11,700 | 29,500 | 13,000 | 4,700 | 4,700 |
| 15 | 5,000 | | | | | | 8,030 | 12,600 | 29,500 | 12,100 | 4,410 | 5,000 |
| 16 | 5,000 | | | | | | 7,660 | 13,400 | 28,300 | 11,700 | 4,700 | 4,700 |
| 17 | 5,000 | | | | | | 7,660 | 14,400 | 27,700 | 11,300 | 4,700 | 4,700 |
| 18 | 5,000 | | | | | | 7,660 | 15,900 | 27,700 | 10,400 | 4,410 | 4,700 |
| 19 | 5,000 | | | | | 8,030 | 7,660 | 16,900 | 27,100 | 9,600 | 4,410 | 4,700 |
| 20 | 5,000 | | | | | 8,800 | 7,660 | 16,400 | 26,500 | 9,200 | 4,130 | 4,410 |
| 21 | 5,000 | | | | | | 7,660 | 7,660 | 16,400 | 25,300 | 9,200 | 4,130 |
| 22 | 5,000 | | | | | | 7,300 | 8,030 | 16,400 | 24,700 | 9,200 | 4,130 |
| 23 | 5,000 | | | | | | 7,660 | 8,410 | 16,400 | 25,000 | 9,200 | 4,410 |
| 24 | 5,000 | | | | | | 7,300 | 8,800 | 15,900 | 21,800 | 8,800 | 4,410 |
| 25 | 5,000 | | | | | | 7,300 | 9,200 | 15,400 | 20,800 | 8,410 | 4,700 |
| 26 | 5,000 | | | | | 8,030 | 9,600 | 14,900 | 20,200 | 8,030 | 4,410 | 4,700 |
| 27 | 5,000 | | | | | 7,660 | 10,000 | 15,400 | 19,600 | 7,300 | 4,700 | 4,700 |
| 28 | 5,000 | | | | | 7,660 | 10,400 | 16,400 | 19,100 | 6,600 | 4,700 | 5,000 |
| 29 | 5,000 | | | | | 10,400 | 11,300 | 16,900 | 18,000 | 6,260 | 4,700 | 5,000 |
| 30 | 5,300 | | | | | 11,700 | 11,700 | 17,400 | 16,900 | 5,930 | 4,410 | 4,700 |
| 31 | 5,300 | | | | | 10,800 | | 18,000 | | 7,300 | 4,410 | |

1903-4

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|------|------|------|-------|--------|--------|--------|--------|-------|-------|
| 1 | 5,000 | | | | | | 7,330 | 16,900 | 24,100 | 13,900 | 5,610 | 3,860 |
| 2 | 5,000 | | | | | | 7,300 | 17,400 | 23,500 | 13,900 | 5,300 | 3,860 |
| 3 | 5,300 | | | | | | 7,330 | 17,400 | 24,100 | 13,400 | 4,700 | 3,860 |
| 4 | 5,300 | | | | | | 8,800 | 17,400 | 24,700 | 13,400 | 5,000 | 3,860 |
| 5 | 5,610 | | | | | | 10,400 | 16,900 | 25,300 | 12,600 | 5,000 | 3,860 |
| 6 | 5,610 | | | | | | 9,600 | 16,900 | 25,900 | 12,600 | 5,000 | 3,600 |
| 7 | 5,610 | | | | | | 8,410 | 17,400 | 25,900 | 12,100 | 5,000 | 3,350 |
| 8 | 5,610 | | | | | | 8,030 | 18,000 | 25,300 | 10,800 | 4,700 | 3,350 |
| 9 | 5,610 | | | | | | 8,030 | 18,000 | 24,700 | 10,400 | 4,700 | 2,860 |
| 10 | 5,610 | 6,400 | | | | 6,500 | 7,660 | 17,400 | 24,100 | 10,000 | 4,700 | 2,860 |
| 11 | 5,930 | | | | | | 7,660 | 16,900 | 23,500 | 10,400 | 4,700 | 2,860 |
| 12 | 5,930 | | | | | | 9,200 | 16,400 | 23,500 | 10,400 | 5,000 | 2,860 |
| 13 | 5,930 | | | | | | 10,000 | 16,900 | 23,000 | 10,800 | 5,000 | 3,100 |
| 14 | 6,260 | | | | | | 10,400 | 15,900 | 22,400 | 10,400 | 4,700 | 3,100 |
| 15 | 6,260 | | | | | | 11,300 | 15,900 | 21,800 | 9,600 | 4,410 | 3,100 |
| 16 | 5,930 | | | | | | 13,000 | 15,400 | 21,300 | 9,200 | 4,410 | 3,100 |
| 17 | 6,260 | | | | | | 13,400 | 15,400 | 20,200 | 9,600 | 4,130 | 3,350 |
| 18 | 6,260 | | | | | | 12,700 | 15,900 | 20,200 | 9,600 | 4,130 | 3,350 |
| 19 | 6,260 | | | | | 9,600 | 12,100 | 16,900 | 20,200 | 9,200 | 3,860 | 3,350 |
| 20 | 5,930 | | | | | 7,660 | 12,100 | 17,400 | 20,200 | 8,800 | 3,600 | 3,350 |
| 21 | 5,930 | | | | | | 7,660 | 12,100 | 18,600 | 20,200 | 8,410 | 3,600 |
| 22 | 5,930 | | | | | 6,950 | 13,000 | 19,600 | 20,200 | 7,660 | 3,350 | 3,350 |
| 23 | 5,930 | | | | | 6,950 | 13,900 | 21,800 | 20,200 | 6,600 | 3,600 | 3,350 |
| 24 | 5,930 | 6,000 | | | | 6,000 | 14,900 | 24,700 | 19,600 | 6,260 | 3,600 | 3,350 |
| 25 | 5,930 | | | | | 6,000 | 14,900 | 25,900 | 19,600 | 5,930 | 3,600 | 3,350 |
| 26 | 5,930 | | | | | 6,000 | 14,900 | 25,300 | 18,000 | 5,610 | 3,600 | 3,350 |
| 27 | 5,930 | | | | | 6,000 | 15,400 | 25,900 | 16,900 | 5,610 | 3,600 | 3,350 |
| 28 | 5,930 | | | | | 6,000 | 16,400 | 25,900 | 16,400 | 6,950 | 3,600 | 3,350 |
| 29 | 5,610 | | | | | 6,000 | 15,900 | 25,900 | 15,400 | 6,950 | 3,600 | 3,350 |
| 30 | 5,610 | | | | | 6,950 | 16,400 | 25,300 | 14,400 | 6,260 | 3,600 | 3,350 |
| 31 | 5,930 | | | | | 7,660 | | 25,300 | | 5,610 | 3,860 | |

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1889-1913, 1933-34--Continued

1904-5

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|------|------|------|------|-------|-------|-------|--------|--------|-------|-------|
| 1 | 3,350 | | | | | | 5,300 | 6,950 | 8,030 | 13,900 | 4,410 | 2,860 |
| 2 | 3,600 | | | | | | 5,300 | 6,950 | 8,800 | 13,900 | 4,410 | 2,860 |
| 3 | 3,600 | | | | | | 5,300 | 6,950 | 9,600 | 13,400 | 5,610 | 2,860 |
| 4 | 3,860 | | | | | | 5,300 | 6,950 | 10,400 | 13,400 | 5,610 | 2,860 |
| 5 | 3,860 | | | | | | 5,300 | 6,950 | 10,800 | 13,000 | 5,300 | 2,860 |
| 6 | 3,860 | | | | | | 5,300 | 6,950 | 10,800 | 11,300 | 5,300 | 2,860 |
| 7 | 3,860 | | | | | | 5,300 | 6,950 | 11,700 | 10,800 | 5,300 | 2,860 |
| 8 | 3,860 | | | | | | 5,300 | 6,950 | 13,400 | 10,400 | 3,860 | 2,860 |
| 9 | 3,860 | | | | | | 5,300 | 6,600 | 14,900 | 10,000 | 3,860 | 2,630 |
| 10 | 3,860 | | | | | | 5,300 | 6,600 | 15,900 | 9,600 | 3,860 | 2,630 |
| 11 | 3,860 | | | | | | 5,300 | 6,600 | 16,900 | 9,600 | 3,600 | 2,630 |
| 12 | 3,860 | | | | | | 5,300 | 6,950 | 16,400 | 7,660 | 3,100 | 2,630 |
| 13 | 3,860 | | | | | | 5,300 | 6,950 | 16,400 | 7,300 | 3,350 | 2,630 |
| 14 | 3,860 | | | | | | 5,300 | 6,950 | 15,900 | 6,950 | 3,350 | 2,630 |
| 15 | 3,860 | | | | | | 5,930 | 6,950 | 14,900 | 6,260 | 3,350 | 2,630 |
| 16 | 3,860 | | | | | 5,930 | 5,930 | 6,950 | 14,900 | 5,930 | 3,350 | 2,630 |
| 17 | 3,860 | | | | | 6,600 | 6,600 | 5,930 | 14,400 | 5,930 | 3,350 | 2,630 |
| 18 | 3,860 | | | | | 6,260 | 5,930 | 6,600 | 14,400 | 5,610 | 3,350 | 2,630 |
| 19 | 3,860 | | | | | 6,260 | 5,930 | 6,600 | 14,400 | 5,610 | 3,350 | 2,630 |
| 20 | 3,860 | | | | | 6,260 | 5,930 | 7,300 | 14,400 | 5,610 | 3,350 | 2,630 |
| 21 | 3,860 | | | | | 6,260 | 6,600 | 7,300 | 12,800 | 5,300 | 3,100 | 2,630 |
| 22 | 3,860 | | | | | 6,260 | 6,600 | 7,660 | 12,600 | 5,000 | 2,860 | 2,630 |
| 23 | 3,860 | | | | | 6,260 | 6,600 | 8,030 | 11,700 | 5,000 | 2,860 | 2,630 |
| 24 | 3,860 | | | | | 6,260 | 6,600 | 8,030 | 11,300 | 4,700 | 2,860 | 2,630 |
| 25 | 4,410 | | | | | 6,260 | 6,600 | 7,660 | 11,300 | 5,000 | 2,860 | 2,630 |
| 26 | 4,410 | | | | | 6,260 | 6,600 | 7,660 | 11,300 | 5,300 | 2,860 | 2,630 |
| 27 | 4,700 | | | | | 6,260 | 6,600 | 7,660 | 10,400 | 4,700 | 2,860 | 2,630 |
| 28 | 4,700 | | | | | 5,930 | 6,600 | 7,660 | 10,800 | 4,700 | 2,860 | 2,630 |
| 29 | 4,700 | | | | | 5,300 | 6,600 | 7,660 | 13,900 | 4,700 | 2,860 | 2,630 |
| 30 | 4,700 | | | | | 5,300 | 6,600 | 7,660 | 13,900 | 4,700 | 2,860 | 2,630 |
| 31 | 4,700 | | | | | 5,300 | | 7,660 | | 4,700 | 2,860 | |

1905-6

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|------|------|------|------|--------|-------|--------|--------|--------|-------|-------|
| 1 | 2,630 | | | | | | 7,660 | 9,600 | 18,600 | 12,600 | 4,410 | 3,100 |
| 2 | 2,630 | | | | | | 7,660 | 9,600 | 17,400 | 10,400 | 4,410 | 2,860 |
| 3 | 2,630 | | | | | | 7,660 | 9,600 | 17,400 | 9,600 | 4,130 | 2,860 |
| 4 | 2,630 | | | | | | 7,660 | 9,600 | 17,400 | 8,800 | 3,860 | 3,350 |
| 5 | 2,630 | | | | | | 7,660 | 9,600 | 16,900 | 8,030 | 3,600 | 3,350 |
| 6 | 2,630 | | | | | | 7,660 | 10,000 | 17,400 | 7,300 | 3,350 | 3,350 |
| 7 | 2,630 | | | | | | 7,300 | 10,400 | 17,400 | 7,300 | 3,350 | 3,350 |
| 8 | 2,630 | | | | | | 7,300 | 10,400 | 18,000 | 7,300 | 3,350 | 3,350 |
| 9 | 2,630 | | | | | | 7,300 | 10,800 | 18,600 | 7,300 | 3,350 | 3,350 |
| 10 | 2,860 | | | | | | 7,300 | 10,800 | 18,000 | 7,300 | 3,350 | 3,350 |
| 11 | 2,860 | | | | | | 7,300 | 10,800 | 18,600 | 7,300 | 3,100 | 3,350 |
| 12 | 2,860 | | | | | | 7,300 | 10,800 | 18,600 | 7,300 | 2,860 | 3,350 |
| 13 | 2,860 | | | | | | 7,300 | 11,700 | 18,600 | 7,300 | 2,860 | 3,350 |
| 14 | 2,860 | | | | | | 7,300 | 12,100 | 18,600 | 7,300 | 2,860 | 3,350 |
| 15 | 2,860 | | | | | | 7,300 | 12,100 | 18,000 | 7,300 | 2,860 | 3,350 |
| 16 | 2,860 | | | | | 10,800 | 6,950 | 12,100 | 18,600 | 7,300 | 2,860 | 3,350 |
| 17 | 2,860 | | | | | 10,800 | 6,950 | 13,000 | 19,600 | 7,300 | 2,860 | 3,350 |
| 18 | 2,860 | | | | | 10,800 | 6,600 | 13,000 | 19,600 | 6,950 | 2,630 | 3,350 |
| 19 | 2,860 | | | | | 10,800 | 6,260 | 13,000 | 19,100 | 6,950 | 2,630 | 3,350 |
| 20 | 2,860 | | | | | 10,800 | 5,930 | 13,000 | 19,600 | 6,950 | 2,630 | 3,350 |
| 21 | 2,860 | | | | | 10,800 | 6,600 | 13,000 | 19,600 | 6,950 | 2,630 | 3,350 |
| 22 | 2,860 | | | | | 10,800 | 7,660 | 13,000 | 19,600 | 6,950 | 3,350 | 3,350 |
| 23 | 2,860 | | | | | 10,800 | 8,030 | 12,600 | 18,000 | 6,950 | 3,350 | 3,600 |
| 24 | 5,930 | | | | | 10,800 | 8,410 | 12,100 | 18,000 | 6,950 | 3,600 | 3,600 |
| 25 | 4,130 | | | | | 10,800 | 8,800 | 11,700 | 18,000 | 6,950 | 3,600 | 3,600 |
| 26 | 4,130 | | | | | 11,300 | 9,200 | 11,700 | 14,900 | 6,600 | 3,600 | 3,600 |
| 27 | 4,130 | | | | | 9,600 | 9,600 | 12,100 | 14,400 | 6,600 | 3,600 | 3,600 |
| 28 | 4,130 | | | | | 8,410 | 9,600 | 13,000 | 13,000 | 6,260 | 3,600 | 3,350 |
| 29 | 4,130 | | | | | 8,030 | 9,600 | 14,400 | 13,400 | 5,930 | 3,600 | 3,350 |
| 30 | 4,130 | | | | | 7,300 | 9,600 | 16,400 | 13,000 | 5,610 | 3,350 | 3,350 |
| 31 | 4,130 | | | | | 7,660 | | 18,600 | | 5,300 | 3,100 | |

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1889-1918, 1933-34--Continued

1906-7

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|------|------|------|------|--------|--------|--------|--------|--------|--------|--------|
| 1 | 3,350 | | | | | 10,000 | 12,100 | 24,100 | 50,500 | 18,600 | 9,600 | |
| 2 | 3,350 | | | | | 10,000 | 12,100 | 24,100 | 49,800 | 18,000 | 9,600 | |
| 3 | 3,350 | | | | | 10,400 | 12,100 | 24,700 | 45,400 | 18,000 | 9,600 | |
| 4 | 3,350 | | | | | 10,400 | 11,300 | 33,100 | 44,700 | 15,900 | 9,600 | |
| 5 | 3,350 | | | | | 10,400 | 10,800 | 33,700 | 43,300 | 15,400 | 9,600 | |
| 6 | 3,350 | | | | | | 10,800 | 10,800 | 33,700 | 42,600 | 14,900 | 10,000 |
| 7 | 3,350 | | | | | | 10,800 | 10,400 | 34,300 | 40,700 | 14,900 | 10,000 |
| 8 | 3,350 | | | | | 8,250 | 10,800 | 10,400 | 34,900 | 40,700 | 13,000 | 9,600 |
| 9 | 3,350 | | | | | | 10,800 | 10,400 | 36,800 | 40,700 | 11,700 | 9,600 |
| 10 | 3,350 | | | | | | 10,800 | 11,700 | 36,800 | 40,700 | 10,500 | 9,600 |
| 11 | 3,350 | | | | | | 10,800 | 12,100 | 36,200 | 39,400 | 12,100 | 9,600 |
| 12 | 3,350 | | | | | | 10,800 | 13,000 | 36,200 | 33,700 | 12,100 | 9,600 |
| 13 | 3,350 | | | | | | 10,800 | 13,900 | 36,800 | 28,900 | 11,700 | 9,600 |
| 14 | 3,350 | | | | | | 11,300 | 13,900 | 37,400 | 26,500 | 11,700 | 9,600 |
| 15 | 3,350 | | | | | | 11,300 | 13,900 | 37,400 | 26,500 | 11,700 | 10,000 |
| 16 | 3,350 | | | | | 8,030 | 12,100 | 15,400 | 36,800 | 26,500 | 11,700 | 10,000 |
| 17 | 3,350 | | | | | 8,030 | 12,100 | 16,400 | 36,800 | 26,500 | 11,700 | 9,600 |
| 18 | 3,350 | | | | | 8,030 | 13,000 | 12,600 | 33,500 | 23,500 | 11,700 | 9,200 |
| 19 | 3,350 | | | | | 8,800 | 13,900 | 19,600 | 34,900 | 29,500 | 11,500 | 9,200 |
| 20 | 3,350 | | | | | 8,030 | 13,900 | 19,600 | 34,900 | 28,300 | 10,000 | 9,200 |
| 21 | 3,350 | | | | | 8,800 | 14,400 | 20,800 | 34,300 | 30,100 | 10,000 | 8,800 |
| 22 | 3,350 | | | | | 9,200 | 14,400 | 22,400 | 34,300 | 31,300 | 7,660 | 8,800 |
| 23 | 3,350 | | | | | 10,800 | 14,400 | 24,700 | 41,400 | 27,700 | 6,950 | 8,800 |
| 24 | 3,350 | | | | | 12,100 | 13,000 | 24,700 | 52,800 | 24,700 | 8,800 | 8,410 |
| 25 | 3,350 | | | | | 13,000 | 13,000 | 25,300 | 53,600 | 23,000 | 6,950 | 8,030 |
| 26 | 3,350 | | | | | 13,000 | 13,000 | 25,300 | 53,600 | 21,800 | 6,950 | 8,030 |
| 27 | 3,350 | | | | | 12,100 | 13,000 | 25,300 | 52,800 | 18,000 | 6,950 | 8,030 |
| 28 | 3,350 | | | | | 11,700 | 13,000 | 25,300 | 52,000 | 18,000 | 6,950 | 8,030 |
| 29 | 3,350 | | | | | 10,800 | 13,000 | 24,700 | 52,000 | 19,600 | 6,950 | 8,030 |
| 30 | 3,350 | | | | | 10,000 | 12,100 | 24,100 | 51,200 | 19,600 | 6,950 | 8,030 |
| 31 | 3,350 | | | | | 10,000 | | 24,100 | | 19,100 | 6,950 | |

1907-8

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|------|------|------|------|--------|--------|--------|---------|--------|--------|-------|
| 1 | 8,030 | | | | | | 12,100 | 10,000 | 37,400 | 36,800 | 15,400 | 5,930 |
| 2 | 8,030 | | | | | | 12,100 | 9,200 | 43,300 | 38,800 | 14,400 | 5,930 |
| 3 | 8,030 | | | | | | 13,000 | 9,200 | 47,500 | 36,800 | 13,900 | 5,930 |
| 4 | 8,030 | | | | | | 13,000 | 9,200 | 49,000 | 36,200 | 13,000 | 6,260 |
| 5 | 8,030 | | | | | | 13,000 | 9,600 | 58,500 | 34,900 | 12,600 | 6,260 |
| 6 | 8,030 | | | | | | 11,700 | 12,600 | 100,000 | 34,300 | 12,600 | 6,260 |
| 7 | 8,410 | | | | | | 10,800 | 12,600 | 104,000 | 33,700 | 12,600 | 6,260 |
| 8 | 8,410 | | | | | | 10,800 | 13,000 | 84,500 | 33,100 | 12,600 | 6,260 |
| 9 | 8,410 | | | | | | 10,800 | 14,400 | 71,200 | 33,100 | 12,600 | 6,260 |
| 10 | 8,410 | | | | | | 10,800 | 14,900 | 60,200 | 31,300 | 12,100 | 5,930 |
| 11 | 8,410 | | | | | | 10,800 | 14,900 | 48,200 | 29,500 | 10,800 | 5,930 |
| 12 | 8,410 | | | | | | 10,800 | 16,400 | 46,800 | 27,700 | 9,600 | 5,930 |
| 13 | 8,410 | | | | | | 10,800 | 18,600 | 46,500 | 26,500 | 8,030 | 5,930 |
| 14 | 8,410 | | | | | | 10,800 | 20,200 | 46,100 | 24,700 | 8,030 | 5,930 |
| 15 | 8,030 | | | | | | 11,300 | 20,200 | 45,700 | 24,700 | 7,300 | 5,930 |
| 16 | 8,030 | | | | | 13,000 | 31,900 | 18,000 | 45,200 | 24,100 | 7,300 | 5,930 |
| 17 | 8,030 | | | | | 13,000 | 27,700 | 17,400 | 44,900 | 23,000 | 7,300 | 5,610 |
| 18 | 8,030 | | | | | 14,400 | 15,900 | 17,400 | 44,700 | 23,500 | 6,950 | 5,610 |
| 19 | 8,030 | | | | | 13,400 | 14,400 | 15,900 | 44,200 | 23,500 | 6,260 | 6,600 |
| 20 | 8,030 | | | | | 13,400 | 13,900 | 15,900 | 43,800 | 23,000 | 6,260 | 6,950 |
| 21 | 8,030 | | | | | 13,400 | 13,900 | 15,900 | 43,300 | 22,400 | 5,930 | 6,950 |
| 22 | 8,030 | | | | | 13,900 | 13,900 | 15,900 | 52,000 | 21,300 | 5,930 | 7,300 |
| 23 | 8,410 | | | | | 13,900 | 14,400 | 15,900 | 52,800 | 19,600 | 5,300 | 7,300 |
| 24 | 10,000 | | | | | 12,100 | 14,400 | 16,400 | 51,200 | 19,100 | 5,300 | 7,660 |
| 25 | 10,400 | | | | | 12,100 | 13,000 | 16,400 | 49,000 | 19,100 | 5,610 | 7,660 |
| 26 | 8,800 | | | | | 11,300 | 13,000 | 16,400 | 47,500 | 18,600 | 5,610 | 8,030 |
| 27 | 8,410 | | | | | 11,300 | 11,300 | 18,000 | 45,400 | 18,000 | 5,300 | 7,660 |
| 28 | 7,660 | | | | | 11,300 | 10,400 | 30,700 | 43,300 | 16,900 | 5,300 | 7,660 |
| 29 | 6,600 | | | | | 11,300 | 10,400 | 34,900 | 41,400 | 16,400 | 5,300 | 7,660 |
| 30 | 5,300 | | | | | 12,100 | 10,400 | 33,700 | 40,000 | 16,400 | 5,300 | 7,660 |
| 31 | 4,410 | | | | | 12,100 | | 34,300 | | 15,900 | 5,300 | |

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1889-1918, 1933-54--Continued

1908-9

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|------|------|------|------|--------|--------|--------|--------|--------|--------|-------|
| 1 | 6,950 | | | | | | 9,200 | 11,300 | 38,100 | 29,500 | 15,900 | 4,700 |
| 2 | 6,950 | | | | | | 9,200 | 11,300 | 39,400 | 27,700 | 16,400 | 4,700 |
| 3 | 8,030 | | | | | | 9,200 | 11,300 | 39,400 | 25,500 | 14,400 | 4,700 |
| 4 | 8,410 | | | | | | 9,200 | 11,300 | 40,700 | 27,100 | 14,400 | 5,000 |
| 5 | 8,800 | | | | | | 9,200 | 11,700 | 41,400 | 26,500 | 14,400 | 8,800 |
| 6 | 8,800 | | | | | | 9,200 | 13,000 | 42,000 | 27,700 | 13,400 | 9,600 |
| 7 | 8,800 | | | | | | 9,200 | 13,000 | 42,600 | 34,300 | 13,400 | 8,800 |
| 8 | 8,800 | | | | | 8,500 | 9,200 | 13,000 | 42,600 | 30,100 | 13,000 | 8,030 |
| 9 | 9,200 | | | | | | 9,200 | 14,900 | 43,500 | 27,700 | 12,600 | 7,660 |
| 10 | 9,600 | | | | | | 9,200 | 14,900 | 48,200 | 28,300 | 12,100 | 7,300 |
| 11 | 9,600 | | | | | | 9,200 | 13,900 | 53,600 | 24,100 | 11,300 | 7,300 |
| 12 | 9,600 | | | | | | 9,600 | 13,900 | 54,400 | 22,400 | 10,800 | 7,660 |
| 13 | 9,200 | | | | | | 9,600 | 13,900 | 50,500 | 20,800 | 10,400 | 8,030 |
| 14 | 8,800 | | | | | | 9,600 | 13,900 | 47,500 | 19,600 | 9,600 | 8,410 |
| 15 | 8,800 | | | | | | 9,600 | 13,900 | 46,100 | 18,000 | 9,200 | 8,410 |
| 16 | 8,800 | | | | | 8,800 | 10,000 | 13,900 | 44,000 | 18,000 | 8,800 | 8,410 |
| 17 | 9,600 | | | | | 8,800 | 10,000 | 21,300 | 42,600 | 12,600 | 8,410 | 8,410 |
| 18 | 9,600 | | | | | 11,300 | 10,000 | 21,300 | 41,400 | 16,400 | 8,410 | 8,030 |
| 19 | 9,600 | | | | | 11,300 | 10,000 | 21,300 | 41,400 | 15,400 | 8,030 | 8,030 |
| 20 | 10,000 | | | | | 10,400 | 10,000 | 21,800 | 41,400 | 14,400 | 7,300 | 7,300 |
| 21 | 10,800 | | | | | 10,400 | 10,400 | 21,800 | 43,300 | 13,900 | 6,950 | 7,300 |
| 22 | 13,000 | | | | | 10,000 | 10,400 | 23,400 | 46,100 | 14,400 | 6,600 | 8,030 |
| 23 | 13,000 | | | | | 10,000 | 10,800 | 23,000 | 45,400 | 14,400 | 6,260 | 8,030 |
| 24 | 13,000 | | | | | 9,200 | 10,800 | 26,500 | 45,400 | 14,400 | 5,930 | 8,030 |
| 25 | 13,000 | | | | | 8,800 | 10,800 | 26,500 | 45,400 | 13,900 | 5,930 | 7,660 |
| 26 | 12,600 | | | | | 8,800 | 10,800 | 31,300 | 44,700 | 13,400 | 5,610 | 7,660 |
| 27 | 12,600 | | | | | 8,800 | 10,800 | 34,300 | 37,400 | 13,400 | 5,610 | 7,300 |
| 28 | 12,600 | | | | | 8,800 | 10,800 | 36,800 | 29,500 | 15,700 | 5,300 | 6,950 |
| 29 | 13,000 | | | | | 8,800 | 10,800 | 37,400 | 27,700 | 20,600 | 5,300 | 6,600 |
| 30 | 13,000 | | | | | 8,800 | 10,800 | 39,400 | 31,300 | 18,600 | 4,700 | 5,930 |
| 31 | 13,000 | | | | | 8,800 | | 38,800 | | 16,400 | 4,700 | |

1939-40

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|------|------|------|------|--------|--------|--------|--------|-------|-------|-------|
| 1 | 5,930 | | | | | | 13,000 | 19,600 | 19,100 | 6,950 | 2,630 | 3,160 |
| 2 | 5,930 | | | | | | 13,000 | 21,300 | 19,100 | 6,950 | 2,630 | 3,160 |
| 3 | 5,930 | | | | | | 13,000 | 22,400 | 18,600 | 6,600 | 2,630 | 3,370 |
| 4 | 5,930 | | | | | | 13,000 | 23,500 | 18,600 | 6,600 | 2,630 | 3,260 |
| 5 | 5,610 | | | | | | 12,600 | 22,400 | 18,000 | 6,600 | 2,630 | 2,910 |
| 6 | 5,610 | | | | | | 12,600 | 20,800 | 18,000 | 5,930 | 2,630 | 3,010 |
| 7 | 5,610 | | | | | 9,500 | 11,300 | 20,800 | 17,400 | 5,610 | 2,410 | 2,780 |
| 8 | 5,610 | | | | | | 11,300 | 19,600 | 17,400 | 5,300 | 2,410 | 3,080 |
| 9 | 6,260 | | | | | | 11,700 | 18,600 | 17,400 | 5,300 | 2,410 | 3,800 |
| 10 | 6,260 | | | | | | 12,100 | 18,600 | 17,400 | 5,300 | 2,410 | 4,070 |
| 11 | 6,600 | | | | | | 12,600 | 19,600 | 16,400 | 5,000 | 2,630 | 4,260 |
| 12 | 6,600 | | | | | | 13,000 | 19,600 | 15,400 | 5,000 | 2,630 | 4,380 |
| 13 | 6,950 | | | | | | 13,400 | 20,200 | 15,400 | 5,000 | 2,630 | 4,570 |
| 14 | 6,950 | | | | | | 14,400 | 21,800 | 14,400 | 5,000 | 2,630 | 4,510 |
| 15 | 6,950 | | | | | 9,200 | 14,400 | 23,500 | 13,900 | 4,700 | 2,630 | 4,540 |
| 16 | 6,950 | | | | | 9,200 | 14,400 | 23,500 | 12,100 | 4,130 | 2,630 | 4,540 |
| 17 | 7,300 | | | | | 9,200 | 13,400 | 22,400 | 12,600 | 4,130 | 2,520 | 4,440 |
| 18 | 7,300 | | | | | 9,200 | 13,400 | 22,400 | 12,100 | 4,410 | 2,620 | 4,510 |
| 19 | 7,300 | | | | | 9,200 | 13,400 | 22,400 | 11,700 | 4,410 | 2,590 | 4,700 |
| 20 | 7,300 | | | | | 9,200 | 13,400 | 22,400 | 10,800 | 2,860 | 2,710 | 5,400 |
| 21 | 7,300 | | | | | 10,400 | 13,400 | 21,800 | 9,600 | 3,600 | 2,520 | 5,030 |
| 22 | 7,300 | | | | | 10,400 | 14,400 | 20,800 | 9,600 | 3,600 | 2,710 | 4,830 |
| 23 | 7,300 | | | | | 10,400 | 14,900 | 19,600 | 9,600 | 3,350 | 2,650 | 5,170 |
| 24 | 7,300 | | | | | 11,300 | 14,900 | 19,600 | 9,600 | 3,350 | 2,780 | 5,200 |
| 25 | 7,300 | | | | | 11,300 | 15,400 | 19,100 | 9,200 | 3,350 | 2,820 | 5,110 |
| 26 | 7,300 | | | | | 12,100 | 15,900 | 19,100 | 8,030 | 2,860 | 2,730 | 5,340 |
| 27 | 7,300 | | | | | 12,100 | 16,400 | 19,100 | 8,030 | 2,860 | 2,670 | 5,340 |
| 28 | 7,660 | | | | | 12,100 | 16,900 | 19,100 | 8,030 | 2,860 | 2,840 | 4,830 |
| 29 | 7,660 | | | | | 13,000 | 16,000 | 19,100 | 7,660 | 2,860 | 2,890 | 4,130 |
| 30 | 7,660 | | | | | 13,000 | 16,600 | 19,100 | 7,660 | 2,860 | 2,890 | 4,070 |
| 31 | 7,660 | | | | | 13,090 | | 19,100 | | 2,860 | 3,110 | |

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1889-1918, 1933-34--Continued

1910-11

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|-------|--------|------|------|-------|--------|--------|--------|--------|-------|-------|
| 1 | 3,830 | 5,400 | *5,490 | | | | 6,950 | 7,660 | 15,900 | 18,000 | 4,410 | 3,600 |
| 2 | 4,250 | 4,770 | 5,340 | | | | 6,950 | 7,660 | 16,400 | 19,100 | 4,410 | 3,600 |
| 3 | 4,770 | 4,830 | 5,370 | | | | 6,950 | 8,030 | 16,400 | 15,900 | 4,410 | 3,600 |
| 4 | *4,800 | 4,900 | 5,370 | | | | 7,300 | 8,030 | 16,900 | 15,400 | 4,130 | 3,600 |
| 5 | *4,800 | 5,270 | 5,300 | | | | 7,300 | 8,030 | 21,300 | 14,400 | 4,130 | 3,600 |
| 6 | *4,800 | 5,000 | 5,300 | | | | 7,300 | 8,030 | 23,500 | 13,400 | 3,350 | 5,000 |
| 7 | *4,900 | 5,440 | 4,380 | | | | 7,300 | 8,800 | 24,100 | 14,400 | 5,950 | 5,610 |
| 8 | *4,900 | 5,440 | 5,370 | | | | 7,300 | 8,800 | 25,300 | 14,400 | 5,300 | 6,260 |
| 9 | *4,950 | 5,820 | 5,370 | | | | 7,300 | 8,800 | 27,100 | 13,000 | 5,300 | 6,260 |
| 10 | 5,030 | 5,740 | 5,370 | | | | 7,300 | 10,000 | 28,900 | 12,600 | 5,300 | 4,410 |
| 11 | 5,030 | | 5,710 | | | 6,400 | 7,300 | 12,600 | 29,500 | 11,700 | 5,610 | 4,410 |
| 12 | 4,770 | | 5,710 | | | | 7,300 | 13,000 | 29,500 | 10,800 | 5,950 | 4,410 |
| 13 | 4,900 | | 5,370 | | | | 7,300 | 13,000 | 30,100 | 10,400 | 5,950 | 4,410 |
| 14 | 4,830 | | 5,370 | | | | 6,950 | 12,600 | 30,100 | 10,000 | 5,950 | 4,700 |
| 15 | 4,770 | | 5,030 | | | | 6,950 | 12,600 | 31,300 | 9,600 | 6,950 | 4,700 |
| 16 | 4,900 | | 4,860 | | | | 6,600 | 12,600 | 31,300 | 9,200 | 6,260 | 5,610 |
| 17 | 5,000 | | 4,700 | | | | 6,600 | 14,400 | 31,300 | 7,660 | 6,260 | 5,610 |
| 18 | 5,050 | | 4,700 | | | | 6,600 | 15,400 | 31,300 | 6,260 | 6,260 | 5,610 |
| 19 | 5,400 | | 4,700 | | | | 6,600 | 13,400 | 31,300 | 5,610 | 6,260 | 6,260 |
| 20 | 5,850 | | 4,580 | | | | 6,600 | 13,400 | 31,900 | 5,300 | 6,260 | 6,260 |
| 21 | 5,780 | 5,560 | 4,580 | | | | 6,600 | 5,300 | 31,300 | 5,000 | 6,600 | 6,260 |
| 22 | 5,680 | | 4,380 | | | | 6,600 | 5,300 | 30,100 | 5,000 | 6,600 | 6,260 |
| 23 | 4,770 | | 4,070 | | | 7,660 | 6,950 | 2,410 | 28,300 | 4,700 | 5,930 | 6,260 |
| 24 | 5,240 | | 4,070 | | | 7,300 | 6,950 | 9,600 | 28,300 | 4,410 | 5,610 | 6,260 |
| 25 | 5,850 | | 4,070 | | | 7,300 | 6,950 | 13,000 | 27,100 | 4,130 | 5,300 | 6,260 |
| 26 | 5,920 | | 3,770 | | | 7,300 | 7,300 | 13,400 | 28,500 | 4,410 | 4,700 | 6,260 |
| 27 | 5,920 | | 3,770 | | | 7,300 | 7,300 | 13,400 | 25,300 | 4,410 | 4,700 | 5,950 |
| 28 | 6,100 | | 3,210 | | | 7,300 | 7,660 | 13,400 | 24,700 | 4,410 | 4,700 | 5,300 |
| 29 | 6,300 | | 3,210 | | | 6,950 | 7,660 | 16,400 | 21,300 | 4,130 | 4,130 | 5,000 |
| 30 | 6,380 | | 3,480 | | | 6,950 | 7,660 | 15,900 | 20,800 | 4,410 | 3,860 | 5,000 |
| 31 | 6,270 | | 3,480 | | | 6,950 | 15,900 | 15,900 | | 4,410 | 3,600 | |

*Estimated

1911-12

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|-------|------|------|------|--------|---------|--------|---------|--------|-------|-------|
| 1 | 5,900 | 5,900 | | | | | 8,000 | 10,400 | 27,500 | 21,200 | 7,300 | |
| 2 | 5,900 | 5,900 | | | | | 8,000 | 10,400 | 28,100 | 20,100 | 5,600 | |
| 3 | 5,900 | 5,900 | | | | | 7,650 | 10,400 | 28,100 | 19,600 | 4,410 | |
| 4 | 6,250 | 6,250 | | | | | *7,770 | 10,400 | 28,100 | 19,100 | 4,410 | 6,200 |
| 5 | 5,900 | 6,250 | | | | | *7,900 | 10,800 | 28,700 | 18,600 | 4,410 | |
| 6 | 5,900 | 5,900 | | | | | 8,000 | 10,800 | 28,700 | 17,100 | 5,950 | |
| 7 | 5,900 | 5,900 | | | | | 8,400 | 10,800 | 28,700 | 16,200 | 6,260 | |
| 8 | 5,900 | 5,900 | | | | | 8,400 | 11,200 | *29,100 | 15,500 | 6,950 | 6,950 |
| 9 | 5,900 | | | | | 4,000 | 9,200 | 11,700 | *29,500 | 14,800 | 6,950 | 6,600 |
| 10 | 5,900 | | | | | | 9,200 | 13,000 | *29,900 | 13,000 | 6,950 | 6,600 |
| 11 | 5,900 | | | | | | 9,600 | 14,800 | *30,300 | 10,000 | 6,950 | 6,600 |
| 12 | 5,900 | | | | | | *9,700 | 15,300 | *30,700 | 9,600 | 6,600 | 6,950 |
| 13 | 6,250 | | | | | | *9,800 | 15,800 | *31,100 | 9,600 | 6,600 | 6,600 |
| 14 | 6,250 | | | | | | *9,900 | 15,800 | *31,500 | *8,950 | 6,600 | 6,600 |
| 15 | 6,250 | | | | | | 10,000 | 16,200 | *31,900 | *8,500 | 7,300 | |
| 16 | 6,250 | | | | | | *9,900 | 17,600 | 31,900 | 7,650 | 6,950 | |
| 17 | *6,250 | | | | | 5,300 | *9,700 | 19,600 | *31,900 | 6,250 | 6,950 | |
| 18 | *6,250 | | | | | 5,000 | 9,600 | 20,600 | *31,900 | 6,250 | 6,950 | |
| 19 | *5,900 | | | | | 5,900 | 9,600 | 20,100 | *31,900 | 6,250 | 6,600 | |
| 20 | *5,900 | 5,140 | | | | 6,950 | *9,600 | 20,600 | 31,900 | 5,600 | 6,600 | |
| 21 | *5,900 | | | | | 6,600 | *9,600 | 21,800 | 30,600 | 5,600 | 7,660 | |
| 22 | 5,900 | | | | | 5,600 | *9,600 | 25,100 | 28,700 | 5,600 | 7,660 | 6,500 |
| 23 | 5,900 | | | | | 5,300 | *9,600 | 28,700 | 26,200 | *6,800 | 7,660 | |
| 24 | 5,900 | | | | | 5,300 | *9,800 | 30,000 | 25,100 | *6,500 | 7,660 | |
| 25 | 5,900 | | | | | 6,250 | *9,800 | 30,000 | 24,000 | *6,800 | 7,660 | |
| 26 | 5,900 | | | | | 7,300 | *10,000 | 30,000 | 23,400 | *7,700 | 6,950 | |
| 27 | 5,900 | | | | | 8,000 | *10,400 | 30,000 | 22,800 | *7,400 | 6,280 | |
| 28 | 5,900 | | | | | 9,200 | 10,400 | 29,300 | 22,800 | *7,400 | 5,610 | |
| 29 | 5,900 | | | | | 10,800 | 10,400 | 28,100 | 22,800 | *6,800 | 5,610 | |
| 30 | 5,900 | | | | | 9,600 | 10,400 | 27,500 | 21,200 | 6,500 | 5,300 | |
| 31 | 5,900 | | | | | 8,400 | | 27,500 | | *6,600 | 5,300 | |

*Estimated

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1889-1918, 1933-34--Continued

1912-13

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|------|-------|------|------|-------|---------|--------|---------|--------|-------|-------|
| 1 | 8,410 | | | | | | 10,000 | | | | 5,650 | 6,350 |
| 2 | 8,410 | | | | | | 11,600 | | | | 5,650 | 6,350 |
| 3 | 8,410 | | | | | | 12,100 | | | | 5,650 | 5,650 |
| 4 | 8,030 | | | | | | 10,000 | | 45,000 | | 5,650 | 5,500 |
| 5 | 8,030 | | | | | | 11,200 | | | 23,000 | 7,400 | 5,000 |
| 6 | 8,030 | | | | | | 10,400 | 15,000 | | | 7,750 | 4,750 |
| 7 | 8,800 | | | | | | 10,400 | | 43,900 | | 8,800 | 4,500 |
| 8 | 8,410 | | | | | 7,300 | 11,200 | | *42,400 | 21,800 | 8,450 | 4,250 |
| 9 | 8,410 | | | | | | 12,100 | | *42,000 | 21,800 | 8,450 | 3,750 |
| 10 | 8,410 | | 7,500 | | | | 13,000 | | 41,100 | 19,600 | 8,100 | 3,750 |
| 11 | 8,410 | | | | | | 13,000 | | | 18,000 | 7,750 | 3,750 |
| 12 | 8,410 | | | | | | 12,100 | | | 17,000 | 7,050 | 3,750 |
| 13 | 8,410 | | | | | | 11,400 | 20,000 | | 15,000 | 7,050 | 3,750 |
| 14 | 8,410 | | | | | | 12,100 | | | 12,100 | 7,050 | 4,000 |
| 15 | 8,410 | | | | | | 14,000 | 22,900 | | 11,200 | 7,050 | 4,250 |
| 16 | 8,410 | | | | | 5,300 | 14,500 | | | 10,400 | 7,050 | 4,250 |
| 17 | 8,410 | | | | | 5,000 | 15,000 | | | 8,800 | 7,050 | 4,500 |
| 18 | 8,410 | | | | | 5,000 | 15,000 | | | 7,400 | 7,050 | 4,500 |
| 19 | 8,410 | | | | | 5,000 | 15,500 | | | 6,350 | 7,050 | 4,750 |
| 20 | 8,410 | | | | | 5,300 | 15,500 | | | 5,650 | 6,700 | 4,750 |
| 21 | 8,410 | | | | | 5,300 | 18,000 | 21,000 | | 5,300 | 6,700 | 5,000 |
| 22 | 8,410 | | | | | 5,300 | 18,000 | | | 5,300 | 6,700 | 5,300 |
| 23 | 8,410 | | | | | 5,300 | 18,000 | | 25,000 | 5,650 | 6,700 | 5,650 |
| 24 | 8,410 | | | | | 5,000 | 18,000 | | | 5,650 | 6,700 | 6,000 |
| 25 | 8,410 | | 4,400 | | | 4,500 | 17,000 | | | 5,650 | 6,700 | 5,650 |
| 26 | 8,030 | | | | | 5,650 | 16,500 | | 19,000 | 5,650 | 7,050 | 5,650 |
| 27 | 8,030 | | | | | 5,650 | *15,800 | | 20,600 | 6,000 | 7,050 | 5,650 |
| 28 | 8,030 | | | | | 5,650 | 15,000 | | 21,800 | 6,700 | 7,050 | 5,300 |
| 29 | 8,030 | | | | | 6,000 | *15,000 | 30,000 | 23,500 | 6,700 | 6,700 | 5,000 |
| 30 | 8,030 | | | | | 6,700 | *15,000 | | 24,700 | 6,000 | 6,700 | 4,750 |
| 31 | 8,030 | | | | | 8,450 | | | | 5,650 | 6,700 | |

*Estimated.

1913-14

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|-------|-------|------|------|-------|--------|--------|--------|--------|-------|-------|
| 1 | 5,000 | 8,100 | 6,700 | | | | 5,650 | 12,000 | 25,300 | 13,500 | 3,000 | 2,750 |
| 2 | 5,000 | 8,100 | 6,700 | | | | 6,000 | 12,000 | 25,300 | 13,000 | 3,000 | 3,000 |
| 3 | 5,000 | 8,450 | 6,700 | | | | 6,350 | 12,000 | 25,300 | 12,000 | 3,000 | 2,750 |
| 4 | 5,300 | 8,450 | 6,350 | | | | 6,350 | 12,000 | 25,300 | 11,200 | 2,750 | 2,750 |
| 5 | 5,650 | 8,100 | 6,350 | | | | 6,700 | 13,000 | 25,300 | 10,400 | 2,750 | 4,250 |
| 6 | 5,650 | 8,100 | 5,000 | | | | 7,400 | 13,500 | 25,900 | 9,200 | 2,750 | 4,000 |
| 7 | 6,000 | 8,100 | 4,500 | | | | 7,750 | 14,000 | 25,900 | 8,100 | 2,750 | 3,500 |
| 8 | 6,350 | 8,450 | 4,750 | | | 6,660 | 8,100 | 14,500 | 25,900 | 8,100 | 2,750 | 2,500 |
| 9 | 6,700 | 8,450 | 5,000 | | | | 8,450 | 15,000 | 25,900 | 7,400 | 2,750 | 2,500 |
| 10 | 7,050 | 8,450 | 5,650 | | | | 8,450 | 16,000 | 25,900 | 7,050 | 2,500 | 2,250 |
| 11 | 7,400 | 8,450 | 4,750 | | | | 8,450 | 16,500 | 25,900 | 6,700 | 2,750 | 2,500 |
| 12 | 7,750 | 8,100 | 5,000 | | | | 8,800 | 17,500 | 26,500 | 6,350 | 2,750 | 3,000 |
| 13 | 7,750 | 8,100 | 5,000 | | | | 9,200 | 18,500 | 27,100 | 6,000 | 2,750 | 3,000 |
| 14 | 8,100 | 8,100 | 5,300 | | | | 9,600 | 19,200 | 28,300 | 5,650 | 2,750 | 3,000 |
| 15 | 8,450 | 7,750 | 5,650 | | | | 10,400 | 19,600 | 28,900 | 5,650 | 2,750 | 2,750 |
| 16 | 9,200 | 7,750 | 5,650 | | | 6,660 | 10,800 | 20,600 | 28,900 | 5,300 | 2,750 | 3,000 |
| 17 | 9,600 | 7,750 | 5,650 | | | 6,660 | 11,200 | 21,200 | 29,300 | 7,400 | 2,750 | 3,250 |
| 18 | 10,400 | 7,750 | 5,300 | | | 6,660 | 11,600 | 22,300 | 27,100 | 6,700 | 2,750 | 4,250 |
| 19 | 9,600 | 7,750 | 5,000 | | | 6,660 | 12,000 | 22,900 | 26,900 | 6,000 | 2,500 | 4,250 |
| 20 | 9,600 | 7,050 | 5,000 | | | 6,660 | 12,500 | 24,100 | 24,700 | 5,000 | 2,500 | 3,500 |
| 21 | 9,600 | 6,000 | 4,750 | | | 6,660 | 13,000 | 25,300 | 23,500 | 5,300 | 3,000 | 3,750 |
| 22 | 9,200 | 5,650 | 4,500 | | | 6,350 | 12,500 | 26,300 | 22,300 | 5,000 | 3,250 | 3,750 |
| 23 | 9,200 | 5,650 | 4,500 | | | 6,700 | 12,500 | 26,600 | 21,200 | 5,000 | 3,250 | 3,750 |
| 24 | 8,800 | 6,000 | 4,250 | | | 6,700 | 12,500 | 27,100 | 20,100 | 5,000 | 3,250 | 3,750 |
| 25 | 8,800 | 6,000 | 4,250 | | | 6,700 | 12,500 | 27,700 | 19,000 | 5,000 | 2,750 | 3,750 |
| 26 | 8,450 | 6,000 | 4,250 | | | 6,700 | 12,500 | 27,700 | 17,500 | 4,000 | 2,750 | 4,000 |
| 27 | 8,450 | 6,350 | 4,500 | | | 6,700 | 12,500 | 28,300 | 17,000 | 4,000 | 2,750 | 4,250 |
| 28 | 8,450 | 6,700 | 4,500 | | | 6,700 | 12,500 | 27,700 | 16,000 | 4,000 | 2,750 | 4,500 |
| 29 | 8,100 | 6,700 | 4,500 | | | 6,350 | 12,000 | 27,100 | 15,000 | 4,000 | 2,750 | 5,000 |
| 30 | 8,100 | 6,700 | 4,500 | | | 6,000 | 12,000 | 26,500 | 14,000 | 4,000 | 2,750 | 4,250 |
| 31 | 7,750 | | 4,500 | | | 5,650 | | 25,900 | | 3,750 | 2,500 | |

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1889-1918, 1933-34--Continued

1914-15

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|------|------|------|-------|--------|--------|--------|--------|-------|-------|
| 1 | 5,000 | 7,720 | | | | | 6,600 | 10,800 | 23,500 | 13,900 | 8,410 | 4,500 |
| 2 | 5,000 | 8,100 | | | | | 6,600 | 10,400 | 23,500 | 13,400 | 8,410 | 5,000 |
| 3 | 5,000 | 8,100 | | | | | 6,600 | 9,200 | 19,600 | 13,000 | 8,410 | 5,650 |
| 4 | 5,000 | 8,490 | | | | | 6,600 | 5,610 | 19,600 | 13,000 | 8,030 | 6,000 |
| 5 | 5,610 | 8,490 | | | | | 6,600 | 9,200 | 20,800 | 12,100 | 8,030 | 6,300 |
| 6 | 5,610 | 8,100 | | | | | 6,600 | 10,000 | 23,000 | 12,100 | 8,030 | 6,300 |
| 7 | 5,610 | 8,100 | | | | | 7,300 | 10,000 | 25,300 | 12,100 | 8,030 | 6,300 |
| 8 | 6,260 | 7,720 | | | | 6,600 | 7,300 | 11,300 | 26,500 | 12,100 | 8,030 | 4,500 |
| 9 | 6,600 | 7,350 | | | | | 8,030 | 10,400 | 26,500 | 11,300 | 8,030 | 4,500 |
| 10 | 6,950 | 7,350 | | | | | 8,030 | 10,400 | 26,500 | 10,800 | 8,030 | 7,400 |
| 11 | 6,950 | 6,970 | | | | | 8,410 | 11,300 | 23,500 | 10,400 | 8,030 | 7,400 |
| 12 | 6,950 | 7,350 | | | | | 8,410 | 10,000 | 22,400 | 10,000 | 8,100 | 7,750 |
| 13 | 6,950 | 7,720 | | | | | 8,410 | 13,000 | 20,800 | 9,600 | 7,650 | 7,400 |
| 14 | 6,950 | 6,260 | | | | | 8,410 | 14,400 | 20,800 | 9,200 | 6,000 | 6,700 |
| 15 | 8,410 | 5,580 | | | | | 8,800 | 15,400 | 25,300 | 9,200 | 5,650 | 6,700 |
| 16 | 8,800 | 4,300 | | | | 6,600 | 8,800 | 15,400 | 25,300 | 8,800 | 6,350 | 7,050 |
| 17 | 8,800 | 4,300 | | | | 6,600 | 8,800 | 15,400 | 24,100 | 11,300 | 5,300 | 7,050 |
| 18 | 8,800 | 5,610 | | | | 6,600 | 10,400 | 18,600 | 23,000 | 10,400 | 6,700 | 7,400 |
| 19 | 8,800 | 6,610 | | | | 6,600 | 11,700 | 18,600 | 23,000 | 9,600 | 6,350 | 7,400 |
| 20 | 8,410 | 5,250 | | | | 6,600 | 13,000 | 19,600 | 20,800 | 8,800 | 6,000 | 7,400 |
| 21 | 8,410 | 4,610 | | | | 6,600 | 14,400 | 20,800 | 19,100 | 8,800 | 6,700 | 7,750 |
| 22 | 8,410 | 3,150 | | | | 6,600 | 14,900 | 21,800 | 18,000 | 9,410 | 6,350 | 7,050 |
| 23 | 8,410 | 4,610 | | | | 6,600 | 15,400 | 21,800 | 18,000 | 8,410 | 6,700 | 7,050 |
| 24 | 8,410 | 5,250 | | | | 6,600 | 14,900 | 21,800 | 16,900 | 8,410 | 6,350 | 7,050 |
| 25 | 8,410 | 5,910 | | | | 6,600 | 14,900 | 23,000 | 16,900 | 8,410 | 6,000 | 6,350 |
| 26 | 8,410 | 6,260 | | | | 6,600 | 14,900 | 23,500 | 16,900 | 8,410 | 5,650 | 6,700 |
| 27 | 8,410 | 6,610 | | | | 6,600 | 14,900 | 23,000 | 16,900 | 6,950 | 6,350 | 6,700 |
| 28 | 8,410 | 5,910 | | | | 6,600 | 14,900 | 22,400 | 16,900 | 6,950 | 6,000 | 6,000 |
| 29 | 8,410 | 6,610 | | | | 6,600 | 14,900 | 21,300 | 14,400 | 6,950 | 6,550 | 6,350 |
| 30 | 8,410 | 6,260 | | | | 6,600 | 14,900 | 21,300 | 13,400 | 6,950 | 5,300 | 6,350 |
| 31 | 8,410 | | | | | 6,600 | | 21,300 | | 6,950 | 5,000 | |

*Estimated.

1915-16

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|-------|-------|--------|--------|--------|--------|--------|-------|-------|
| 1 | 7,400 | *5,700 | 6,700 | 4,500 | } | 7,000 | 6,700 | 14,000 | 22,300 | 39,400 | 9,600 | 6,000 |
| 2 | 8,800 | *5,900 | 5,650 | 4,750 | | | 6,700 | 15,000 | 22,300 | 39,400 | 8,800 | 6,000 |
| 3 | 8,800 | *6,100 | 6,000 | 5,000 | | | 7,050 | 15,500 | 22,900 | 35,500 | 8,800 | 6,000 |
| 4 | 9,600 | *6,300 | *5,800 | | | | 7,050 | 16,000 | 22,900 | 33,700 | 8,450 | 5,650 |
| 5 | 10,000 | *6,500 | *5,600 | | | | 7,400 | 17,000 | 22,900 | 33,700 | 8,100 | 6,000 |
| 6 | 9,600 | 6,700 | *5,400 | | | | 8,450 | 18,500 | 24,100 | 33,700 | 8,100 | 6,000 |
| 7 | 8,800 | 6,700 | *5,200 | | | | 8,450 | 18,000 | 23,500 | 30,700 | 8,100 | 6,000 |
| 8 | 8,100 | 6,700 | 5,000 | | | | 8,450 | 18,500 | 22,900 | 25,900 | 7,750 | 6,000 |
| 9 | 8,100 | 6,000 | 5,300 | | | 8,450 | 8,450 | 18,500 | 22,900 | 21,200 | 7,400 | 6,000 |
| 10 | 8,800 | 6,000 | 5,650 | | | 9,600 | 8,450 | 20,600 | 23,500 | 19,600 | 7,400 | 6,000 |
| 11 | 8,100 | 6,350 | 5,650 | | | 9,600 | 8,800 | 21,200 | 23,500 | 19,000 | 7,050 | 6,000 |
| 12 | 7,400 | 6,700 | 5,300 | | | 17,000 | 8,800 | 20,100 | 23,500 | 18,000 | 7,050 | 6,000 |
| 13 | 7,400 | 6,350 | 5,300 | | | 20,100 | 9,200 | 19,000 | 23,500 | 17,000 | 7,050 | 6,000 |
| 14 | 7,400 | 6,000 | 4,500 | | | 17,000 | 9,600 | 17,000 | 24,100 | 16,000 | 7,050 | 6,000 |
| 15 | 7,400 | 6,000 | 4,250 | | | 16,500 | 10,400 | 17,000 | 26,300 | 16,500 | 7,050 | 6,000 |
| 16 | 7,050 | 6,700 | 5,300 | } | 4,000 | 16,000 | 10,400 | 17,000 | 27,100 | 16,000 | 7,400 | 6,000 |
| 17 | 6,700 | 7,050 | 5,300 | | | 15,500 | 11,300 | 16,500 | 30,100 | 15,500 | 7,400 | 6,000 |
| 18 | 6,700 | 7,050 | 4,750 | | | 15,000 | 12,100 | 15,500 | 35,600 | 14,500 | 7,050 | 6,000 |
| 19 | 6,350 | 7,400 | 4,750 | | | 15,000 | 12,100 | 14,500 | 35,600 | 14,000 | 7,050 | 6,000 |
| 20 | 6,000 | 7,750 | 4,250 | | | 13,500 | 11,700 | 14,000 | 35,600 | 13,500 | 7,050 | 6,000 |
| 21 | 6,350 | *7,580 | 5,300 | | | 12,500 | 11,700 | 14,000 | 36,800 | 13,500 | 7,050 | 6,000 |
| 22 | 6,000 | 7,400 | 6,350 | | | 12,500 | 11,200 | 14,000 | 43,300 | 13,000 | 6,700 | 6,000 |
| 23 | 5,650 | 6,700 | 6,000 | | | 12,500 | 11,200 | 14,500 | 48,900 | 12,500 | 6,700 | 6,000 |
| 24 | 5,300 | 6,700 | 5,650 | | | 12,000 | 11,200 | 13,500 | 45,400 | 11,600 | 6,350 | 5,950 |
| 25 | 5,300 | 6,350 | 5,000 | | | 10,000 | 10,400 | 15,500 | 44,700 | 11,800 | 6,350 | 8,050 |
| 26 | 4,750 | 7,050 | 4,500 | | | 10,400 | 10,400 | 17,500 | 44,000 | 10,400 | 6,350 | 6,600 |
| 27 | 4,750 | 7,050 | 5,300 | | | 10,400 | 10,400 | 19,000 | 43,300 | 9,600 | 6,350 | 6,600 |
| 28 | 5,300 | 5,650 | 4,750 | | | 10,000 | 11,600 | 21,200 | 41,400 | 8,800 | 6,350 | 6,600 |
| 29 | 5,650 | 6,700 | 4,750 | | | 10,000 | 13,500 | 21,200 | 40,000 | 8,800 | 6,000 | 6,600 |
| 30 | 5,300 | 5,300 | 5,000 | | | 9,200 | 14,000 | 21,800 | 39,400 | 10,800 | 6,000 | 6,500 |
| 31 | *5,500 | | 4,750 | | | 7,400 | | 21,800 | | 10,800 | 6,000 | |

*Estimated.

Discharge, in second-feet. of Missouri River at Fort Benton, Mont., 1889-1918, 1933-34--Continued

1916-17

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|------|------|--------|--------|--------|--------|---------|-------|-------|
| 1 | 6,280 | 6,700 | 4,750 | | | | 15,500 | 17,500 | 51,000 | *40,700 | 6,000 | 3,750 |
| 2 | 6,260 | 6,700 | 4,750 | | | | 15,000 | 17,000 | 50,300 | *39,400 | 6,000 | 3,750 |
| 3 | 6,260 | 6,350 | 4,750 | | | | 15,000 | 17,000 | 51,000 | *37,400 | 6,000 | 3,750 |
| 4 | 6,260 | 6,350 | 4,750 | | | | 15,000 | 16,000 | 50,300 | *36,200 | 6,000 | 3,750 |
| 5 | 6,260 | 6,350 | 4,750 | | | | 15,000 | 14,000 | 49,600 | *34,300 | 5,650 | 3,750 |
| 6 | 6,260 | 6,350 | 4,750 | | | | 16,500 | 14,000 | 46,800 | *32,500 | 6,000 | 4,000 |
| 7 | 6,260 | 6,000 | 5,000 | | | | 19,000 | 14,000 | 46,100 | *31,300 | 6,000 | 4,000 |
| 8 | 6,260 | 5,300 | 5,000 | | | | 19,600 | 19,000 | 42,600 | *29,500 | 5,650 | 4,000 |
| 9 | 6,260 | 5,300 | 5,300 | | | | 19,600 | 24,700 | 44,700 | *28,300 | 5,650 | 4,000 |
| 10 | 6,260 | 5,000 | 5,300 | | | | 19,000 | 25,900 | 45,400 | *26,500 | 5,650 | 4,000 |
| 11 | 5,610 | 4,750 | 5,550 | | | 6,000 | 19,500 | 26,500 | 46,100 | *24,700 | 5,650 | 4,000 |
| 12 | 5,610 | 4,250 | 6,000 | | | | 18,000 | 27,100 | 46,800 | *23,500 | 5,650 | 4,000 |
| 13 | 6,000 | 4,250 | | | | | 17,500 | 28,900 | 47,500 | *21,200 | 5,650 | 4,000 |
| 14 | 6,000 | 4,250 | | | | | 14,500 | 31,300 | 51,000 | *20,100 | 5,300 | 4,000 |
| 15 | 6,000 | 4,250 | | | | | 14,000 | 36,200 | 51,000 | *18,000 | 5,000 | 4,000 |
| 16 | 5,650 | 4,250 | | | | | 14,500 | 42,000 | 50,300 | *16,500 | 5,000 | 4,000 |
| 17 | 5,650 | 4,250 | | | | | 14,000 | 39,400 | 51,000 | *15,000 | 4,750 | 4,500 |
| 18 | 5,650 | 4,250 | | | | | 14,000 | 39,400 | 48,900 | *13,500 | 4,750 | 4,750 |
| 19 | 5,650 | 4,250 | | | | | 13,500 | 40,700 | 48,900 | *12,000 | 3,750 | 5,000 |
| 20 | 6,000 | 4,500 | | | | | 12,000 | 41,400 | 48,900 | 10,400 | 3,750 | 5,000 |
| 21 | 6,000 | 4,500 | 4,000 | | | 13,500 | 9,600 | 41,400 | 48,900 | 10,000 | 3,750 | 5,300 |
| 22 | 6,000 | 4,500 | | | | 12,500 | 12,500 | 42,000 | 48,200 | 9,200 | 3,750 | 5,300 |
| 23 | 6,000 | 4,500 | | | | 12,500 | 18,500 | 42,000 | 47,500 | 9,200 | 3,750 | 5,300 |
| 24 | 6,000 | 4,500 | | | | 12,500 | 19,000 | 41,400 | 44,700 | 8,800 | 3,750 | 5,650 |
| 25 | 6,000 | 4,500 | | | | 11,200 | 20,100 | 39,400 | 44,700 | 8,450 | 3,750 | 6,000 |
| 26 | 6,350 | 4,500 | | | | 10,800 | 19,000 | 54,500 | 43,300 | 7,750 | 3,750 | 6,000 |
| 27 | 6,350 | 4,500 | | | | 11,600 | 19,000 | 55,200 | 42,600 | 7,400 | 3,750 | 6,350 |
| 28 | 6,700 | 4,500 | | | | 15,000 | 18,000 | 55,100 | 42,000 | 7,050 | 3,750 | 6,350 |
| 29 | 6,700 | 4,500 | | | | 14,500 | 18,000 | 55,100 | 42,000 | 6,000 | 3,750 | 6,700 |
| 30 | 6,700 | 4,750 | | | | 15,500 | 18,000 | 52,400 | 42,000 | 6,000 | 3,750 | 7,050 |
| 31 | 6,700 | | | | | 18,000 | | 52,400 | | 6,000 | 3,750 | |

*Estimated

*1917-18

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

*Discharge Jan. 1 to Sept. 30, 1918, determined from Volta power plant records furnished by Montana Power Co.

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1889-1918, 1933-54--Continued

1933-54

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | |
|----------------|-------|-------|-------|-------|-------|-------|---------|---------|---------|----------------------|-------|-------|-------|
| 1 | 3,170 | 2,910 | 4,860 | 2,500 | 5,300 | 5,600 | 10,200 | 10,600 | 6,230 | 4,310 | 1,580 | 1,640 | |
| 2 | 2,400 | 2,570 | 5,450 | | 4,440 | 6,070 | 10,600 | 9,640 | 5,450 | 3,420 | 1,600 | 1,660 | |
| 3 | 2,950 | 3,920 | 5,760 | | 4,440 | 5,600 | 9,640 | 9,260 | 4,180 | 3,420 | 1,620 | 1,660 | |
| 4 | 3,170 | 4,440 | 5,760 | | 5,150 | 3,670 | 8,700 | 8,140 | 4,580 | 3,170 | 1,660 | 1,660 | |
| 5 | 3,150 | 4,860 | 5,910 | | 4,710 | 3,920 | 8,140 | 8,330 | 4,050 | 2,450 | 1,660 | 1,600 | |
| 6 | 3,120 | 5,300 | 4,710 | 9,000 | 4,860 | 3,920 | 8,140 | 8,140 | 4,050 | 2,590 | 1,660 | 1,710 | |
| 7 | 3,300 | 5,300 | 5,760 | | 4,860 | 3,920 | 8,700 | 9,070 | 4,440 | 3,170 | 1,640 | 1,680 | |
| 8 | 2,690 | 4,860 | 5,300 | | 5,000 | 4,440 | 8,330 | 11,000 | 7,050 | 2,980 | 1,560 | 1,900 | |
| 9 | 2,690 | 5,000 | 6,070 | | 5,150 | 4,860 | 8,700 | 11,800 | 16,200 | 2,520 | 1,430 | 1,790 | |
| 10 | 3,370 | 5,600 | 5,300 | | 5,450 | 4,310 | 8,140 | 11,800 | 14,900 | 2,550 | 1,350 | 1,680 | |
| 11 | 3,170 | 4,860 | 5,300 | 4,750 | 5,000 | 4,580 | 7,600 | 10,200 | 12,700 | 2,000 | 1,200 | 1,380 | |
| 12 | 3,800 | 4,440 | 3,920 | | 4,710 | 5,000 | 8,700 | 8,880 | 11,400 | 2,230 | 1,190 | 1,730 | |
| 13 | 3,120 | 5,150 | 3,670 | | 5,000 | 4,710 | 9,640 | 8,330 | 11,400 | 2,610 | 1,190 | 1,680 | |
| 14 | 3,030 | 5,910 | 3,420 | | 4,580 | 4,860 | 4,310 | 9,830 | 9,070 | 10,200 | 2,400 | 1,440 | 2,070 |
| 15 | 3,070 | 5,910 | 4,180 | | 5,910 | 5,300 | 5,300 | 9,260 | 7,600 | 10,200 | 3,420 | 2,310 | 1,690 |
| 16 | 3,300 | 4,710 | 3,920 | 4,710 | 4,440 | 4,180 | 9,640 | 9,070 | 10,200 | 4,050 | 1,300 | 1,770 | |
| 17 | 3,170 | 4,860 | 3,800 | 4,440 | 4,580 | 5,150 | 8,520 | 10,600 | 8,290 | 3,050 | 1,380 | 1,330 | |
| 18 | 3,420 | 4,580 | 2,760 | 4,710 | 4,310 | 4,180 | 9,260 | 10,600 | 8,330 | 2,610 | 1,410 | 1,600 | |
| 19 | 3,300 | 5,450 | | 4,580 | 4,580 | 5,150 | 9,830 | 9,070 | 7,250 | 2,790 | 1,460 | 2,230 | |
| 20 | 3,540 | 4,580 | | 5,000 | 4,860 | 5,150 | 11,000 | 8,890 | 5,600 | 2,740 | 1,660 | 2,050 | |
| 21 | 3,420 | 5,150 | 4,800 | 5,150 | 4,580 | 5,150 | 11,000 | 8,700 | 4,710 | 2,100 | 1,680 | 1,900 | |
| 22 | 3,540 | 5,600 | | 4,440 | 4,580 | 4,050 | 11,400 | 7,960 | 3,800 | 1,410 | 1,660 | 2,070 | |
| 23 | 3,670 | 5,760 | | 5,450 | 3,920 | 5,450 | 13,100 | 6,730 | 4,050 | 1,980 | 1,620 | 2,450 | |
| 24 | 3,050 | 4,710 | | 5,300 | 3,540 | 5,000 | 14,000 | 6,230 | 4,710 | 2,620 | 1,710 | 2,190 | |
| 25 | 3,120 | 4,580 | | 5,450 | 2,520 | 4,580 | 12,700 | 6,230 | 4,580 | 2,620 | 1,730 | 2,430 | |
| 26 | 3,420 | 4,710 | 4,850 | 3,920 | 3,540 | 5,450 | 12,200 | 6,730 | 4,860 | 2,790 | 1,710 | 1,980 | |
| 27 | 3,670 | 4,310 | | 4,710 | 4,580 | 5,300 | 11,800 | 6,900 | 4,710 | 2,710 | 1,730 | 2,330 | |
| 28 | 3,800 | 4,710 | | 5,760 | 5,150 | 4,860 | 11,400 | 7,420 | 4,860 | 2,500 | 1,770 | 2,190 | |
| 29 | 3,300 | 4,580 | | 6,070 | 5,910 | 5,910 | 11,000 | 6,230 | 5,600 | 2,120 | 1,660 | 2,260 | |
| 30 | 3,000 | 4,310 | | 5,600 | 7,960 | 7,960 | 11,000 | 6,230 | 4,860 | 1,620 | 1,660 | 2,190 | |
| 31 | 3,540 | | 4,710 | 6,900 | 6,900 | | | 6,560 | | 1,730 | 1,640 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| 1889-90 | | | | | | | | | | | | | |
| October..... | | | | | | | 3,600 | 2,980 | 3,170 | 195,000 | | | |
| November..... | | | | | | | 4,700 | 3,480 | 3,800 | 226,000 | | | |
| December..... | | | | | | | 5,000 | 2,980 | 3,900 | 240,000 | | | |
| January..... | | | | | | | | | *3,800 | 234,000 | | | |
| February..... | | | | | | | | | *3,800 | 211,000 | | | |
| March..... | | | | | | | | | *3,800 | 224,000 | | | |
| April..... | | | | | | | | | *8,160 | 486,000 | | | |
| May..... | | | | | | | | | *18,300 | 1,130,000 | | | |
| June..... | | | | | | | | | *17,600 | 1,050,000 | | | |
| July..... | | | | | | | 8,800 | 4,130 | 6,610 | 400,000 | | | |
| August..... | | | | | | | 3,860 | 3,350 | 3,620 | 223,000 | | | |
| September..... | | | | | | | 3,880 | 3,490 | 3,620 | 215,000 | | | |
| The year..... | | | | | | | | | 6,680 | 4,840,000 | | | |
| 1890-91 | | | | | | | | | | | | | |
| October..... | | | | | | | 4,560 | 3,480 | 4,050 | 249,000 | | | |
| November..... | | | | | | | 4,700 | 4,410 | 4,610 | 274,000 | | | |
| December..... | | | | | | | 5,300 | 3,350 | 4,160 | 256,000 | | | |
| January..... | | | | | | | 4,410 | 2,200 | 3,550 | 219,000 | | | |
| February..... | | | | | | | 11,000 | 5,930 | 8,220 | 451,000 | | | |
| March..... | | | | | | | 11,900 | 6,600 | 8,440 | 519,000 | | | |
| April..... | | | | | | | 15,400 | 6,260 | 9,610 | 572,000 | | | |
| May..... | | | | | | | 22,400 | 12,600 | 18,400 | 1,130,000 | | | |
| June..... | | | | | | | 33,700 | 19,600 | 25,300 | 1,510,000 | | | |
| July..... | | | | | | | 40,000 | 11,700 | 19,400 | 1,190,000 | | | |
| August..... | | | | | | | 15,400 | 5,930 | 8,860 | 545,000 | | | |
| September..... | | | | | | | 5,610 | 4,700 | 5,260 | 313,000 | | | |
| The year..... | | | | | | | 40,000 | 2,200 | 9,980 | 7,230,000 | | | |
| 1891-92 | | | | | | | | | | | | | |
| October..... | | | | | | | 6,430 | 5,300 | 6,100 | 375,000 | | | |
| November..... | | | | | | | 8,410 | 3,600 | 5,720 | 340,000 | | | |
| December..... | | | | | | | 8,030 | 3,860 | †5,310 | 326,000 | | | |
| January..... | | | | | | | | | *4,840 | 261,000 | | | |
| February..... | | | | | | | | | †6,640 | 382,000 | | | |
| March..... | | | | | | | 7,660 | 5,610 | 6,530 | 389,000 | | | |
| April..... | | | | | | | 6,950 | 5,300 | 5,860 | 349,000 | | | |
| May..... | | | | | | | 29,500 | 6,600 | 12,600 | 775,000 | | | |
| June..... | | | | | | | 65,500 | 22,400 | 40,400 | 2,400,000 | | | |
| July..... | | | | | | | 45,400 | 10,400 | 25,800 | 1,590,000 | | | |
| August..... | | | | | | | 10,000 | 6,600 | 7,590 | 467,000 | | | |
| September..... | | | | | | | 6,950 | 5,300 | 6,300 | 375,000 | | | |
| The year..... | | | | | | | 65,500 | | 11,100 | 8,030,000 | | | |

*Estimated.

†Partially estimated.

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1889-1918, 1933-34--Continued

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|----------------|---------|---------|--------|-------------------------|
| 1892-93 | | | | |
| October..... | 7,300 | 6,260 | 6,660 | 422,000 |
| November..... | 7,300 | 6,260 | †6,960 | 414,000 |
| December..... | | | *5,470 | 536,000 |
| January..... | | | *3,660 | 225,000 |
| February..... | | | *3,960 | 220,000 |
| March..... | 13,000 | | †6,940 | 427,000 |
| April..... | 15,900 | 7,300 | 8,990 | 535,000 |
| May..... | 31,900 | 8,800 | 19,800 | 1,220,000 |
| June..... | 36,200 | 22,400 | 29,900 | 1,780,000 |
| July..... | 24,100 | 8,800 | 15,400 | 947,000 |
| August..... | 8,410 | 5,610 | 6,590 | 405,000 |
| September..... | 6,600 | 5,300 | 5,970 | 355,000 |
| The year..... | 36,200 | | 10,100 | 7,290,000 |
| 1893-94 | | | | |
| October..... | 8,410 | 6,950 | 8,040 | 494,000 |
| November..... | 8,410 | 4,700 | 7,160 | 426,000 |
| December..... | | | *6,000 | 507,000 |
| January..... | | | *4,500 | 277,000 |
| February..... | | | *4,000 | 222,000 |
| March..... | 12,100 | | †5,980 | 358,000 |
| April..... | 26,500 | 10,800 | 14,700 | 875,000 |
| May..... | 46,100 | 17,400 | 29,300 | 1,800,000 |
| June..... | 55,200 | 28,300 | 40,200 | 2,390,000 |
| July..... | 27,100 | 10,400 | 18,300 | 1,130,000 |
| August..... | 10,800 | 6,600 | 8,340 | 513,000 |
| September..... | 7,300 | 6,600 | 6,970 | 415,000 |
| The year..... | 55,200 | | 12,700 | 9,220,000 |
| 1894-95 | | | | |
| October..... | 8,030 | 6,950 | 7,430 | 457,000 |
| November..... | 8,030 | 7,300 | 7,580 | 451,000 |
| December..... | 7,300 | 2,630 | 5,930 | 368,000 |
| January..... | | | †5,000 | 222,000 |
| February..... | | | *3,000 | 157,000 |
| March..... | 11,300 | | †5,970 | 387,000 |
| April..... | 15,900 | 8,030 | 10,900 | 619,000 |
| May..... | 21,300 | 16,400 | 17,800 | 1,090,000 |
| June..... | 22,400 | 15,400 | 18,600 | 1,110,000 |
| July..... | 17,400 | 5,930 | 11,100 | 682,000 |
| August..... | 5,930 | 4,410 | 5,130 | 315,000 |
| September..... | 5,930 | 4,410 | 5,210 | 310,000 |
| The year..... | 22,400 | | 8,490 | 6,150,000 |
| 1895-96 | | | | |
| October..... | 5,930 | 5,610 | 5,700 | 350,000 |
| November..... | 6,260 | 3,360 | 5,210 | 310,000 |
| December..... | 6,950 | 3,600 | †4,630 | 279,000 |
| January..... | | | *4,160 | 256,000 |
| February..... | | | *4,160 | 239,000 |
| March..... | | | †6,490 | 399,000 |
| April..... | 7,660 | 5,930 | 6,670 | 397,000 |
| May..... | 18,600 | 7,660 | 12,100 | 744,000 |
| June..... | 40,700 | 24,700 | 36,100 | 2,090,000 |
| July..... | 27,100 | 8,410 | 15,400 | 947,000 |
| August..... | 8,410 | | †7,110 | 437,000 |
| September..... | | | *8,400 | 500,000 |
| The year..... | 40,700 | | 9,570 | 6,950,000 |
| 1896-97 | | | | |
| October..... | | | *7,900 | 486,000 |
| November..... | | | *5,000 | 298,000 |
| December..... | | | *6,000 | 369,000 |
| January..... | | | *5,000 | 307,000 |
| February..... | | | *4,000 | 222,000 |
| March..... | 18,000 | | †6,050 | 372,000 |
| April..... | 18,600 | 8,030 | 12,600 | 744,000 |
| May..... | 28,300 | 19,000 | 24,100 | 1,310,000 |
| June..... | 26,300 | 15,400 | 18,900 | 1,120,000 |
| July..... | 16,400 | 6,600 | 11,200 | 689,000 |
| August..... | 6,260 | 3,860 | 4,870 | 299,000 |
| September..... | 4,700 | 3,860 | 4,450 | 265,000 |
| The year..... | 28,300 | | 9,210 | 6,650,000 |

*Estimated.

†Partially estimated.

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1889-1918, 1933-34--Continued

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|----------------|---------|---------|---------|-------------------------|
| 1897-98 | | | | |
| October..... | 5,930 | 4,700 | 5,430 | 334,000 |
| November..... | 6,600 | 3,860 | †5,560 | 332,000 |
| December..... | | | *5,000 | 307,000 |
| January..... | | | *4,800 | 277,000 |
| February..... | 7,600 | 2,630 | †5,600 | 311,000 |
| March..... | 8,410 | 2,630 | †5,790 | 356,000 |
| April..... | 17,400 | 5,610 | 11,700 | 696,000 |
| May..... | 36,800 | 13,000 | 23,500 | 1,440,000 |
| June..... | 38,100 | 22,400 | 33,300 | 1,980,000 |
| July..... | 25,300 | 7,660 | 18,400 | 947,000 |
| August..... | 7,660 | 5,000 | 5,960 | 366,000 |
| September..... | 5,950 | 4,700 | 5,450 | 324,000 |
| The year..... | 38,100 | | 10,600 | 7,670,000 |
| 1898-99 | | | | |
| October..... | 6,950 | 5,000 | 6,150 | 378,000 |
| November..... | 6,950 | 3,350 | 5,660 | 337,000 |
| December..... | | | †4,500 | 277,000 |
| January..... | | | *5,000 | 307,000 |
| February..... | | | *4,500 | 250,000 |
| March..... | | | *4,500 | 277,000 |
| April..... | 18,000 | | †13,400 | 797,000 |
| May..... | 30,700 | 12,100 | 20,800 | 1,280,000 |
| June..... | 46,100 | 30,100 | 36,800 | 2,190,000 |
| July..... | 40,700 | 13,400 | 24,600 | 1,510,000 |
| August..... | 11,700 | 7,660 | 9,560 | 585,000 |
| September..... | 7,660 | 6,260 | 6,770 | 403,000 |
| The year..... | 46,100 | | 11,900 | 8,590,000 |
| 1899-1900 | | | | |
| October..... | 9,200 | 5,930 | 7,020 | 432,000 |
| November..... | 8,030 | 7,300 | 7,750 | 461,000 |
| December..... | 7,300 | | †5,010 | 306,000 |
| January..... | | | *5,800 | 336,000 |
| February..... | | | *5,000 | 278,000 |
| March..... | | | *6,500 | 400,000 |
| April..... | | | †11,900 | 703,000 |
| May..... | | | †27,400 | 1,630,000 |
| June..... | | | †19,100 | 1,140,000 |
| July..... | | | †4,500 | 285,000 |
| August..... | | | †3,660 | 225,000 |
| September..... | | | †4,300 | 256,000 |
| The year..... | | | 9,090 | 6,580,000 |
| 1900-1901 | | | | |
| October..... | | | *5,000 | 307,000 |
| November..... | | | *5,500 | 327,000 |
| December..... | | | *5,000 | 307,000 |
| January..... | | | *4,500 | 277,000 |
| February..... | | | *4,000 | 222,000 |
| March..... | | | *5,000 | 309,000 |
| April..... | 13,000 | 5,610 | 7,490 | 446,000 |
| May..... | 31,300 | 13,900 | 25,700 | 1,590,000 |
| June..... | 27,100 | 12,100 | 17,000 | 1,010,000 |
| July..... | 12,100 | 3,860 | 7,120 | 438,000 |
| August..... | 4,130 | 3,100 | 3,350 | 206,000 |
| September..... | 4,700 | 3,100 | 3,850 | 229,000 |
| The year..... | 31,300 | | 7,820 | 5,660,000 |
| 1901-2 | | | | |
| October..... | 4,700 | 4,700 | 4,700 | 299,000 |
| November..... | 5,300 | 4,700 | 5,010 | 298,000 |
| December..... | 5,300 | 3,350 | †4,080 | 251,000 |
| January..... | | | *3,200 | 197,000 |
| February..... | | | *3,000 | 167,000 |
| March..... | | | *3,760 | 231,000 |
| April..... | 8,030 | 4,410 | 5,500 | 327,000 |
| May..... | 32,500 | 8,030 | 17,700 | 1,080,000 |
| June..... | 31,300 | 13,000 | 20,600 | 1,230,000 |
| July..... | 16,900 | 6,950 | 11,900 | 732,000 |
| August..... | 6,600 | 3,600 | 4,490 | 276,000 |
| September..... | 4,130 | 3,350 | 3,860 | 230,000 |
| The year..... | 32,500 | | 7,340 | 5,320,000 |

*Estimated.

†Partially estimated.

‡Extended from Townsend.

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1889-1918, 1933-54--Continued

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|----------------|---------|---------|--------|-------------------------|
| 1902-3 | | | | |
| October..... | 5,300 | 3,860 | 4,680 | 300,000 |
| November..... | | | *4,500 | 268,000 |
| December..... | | | *4,000 | 246,000 |
| January..... | | | *4,000 | 246,000 |
| February..... | | | *3,800 | 211,000 |
| March..... | 11,700 | | †5,590 | 344,000 |
| April..... | 11,700 | 6,950 | 8,710 | 518,000 |
| May..... | 16,000 | 10,400 | 15,700 | 842,000 |
| June..... | 31,300 | 16,900 | 25,500 | 1,520,000 |
| July..... | 19,100 | 5,930 | 12,100 | 744,000 |
| August..... | 7,300 | 4,130 | 5,190 | 319,000 |
| September..... | 5,000 | 3,600 | 4,370 | 260,000 |
| The year..... | 31,300 | | 6,040 | 5,820,000 |
| 1903-4 | | | | |
| October..... | 6,260 | 5,000 | 5,800 | 357,000 |
| November..... | | | *6,230 | 371,000 |
| December..... | | | *7,000 | 430,000 |
| January..... | | | *6,000 | 369,000 |
| February..... | | | *5,600 | 316,000 |
| March..... | 9,600 | | †6,660 | 410,000 |
| April..... | 16,400 | 7,330 | 11,400 | 676,000 |
| May..... | 25,900 | 15,400 | 19,400 | 1,190,000 |
| June..... | 25,900 | 14,400 | 21,500 | 1,280,000 |
| July..... | 13,900 | 5,610 | 9,450 | 581,000 |
| August..... | 5,610 | 3,350 | 4,300 | 264,000 |
| September..... | 3,860 | 2,860 | 3,340 | 199,000 |
| The year..... | 25,900 | | 8,880 | 6,440,000 |
| 1904-5 | | | | |
| October..... | 4,700 | 3,350 | 4,000 | 246,000 |
| November..... | | | *4,800 | 286,000 |
| December..... | | | *4,900 | 301,000 |
| January..... | | | *4,000 | 246,000 |
| February..... | | | *4,000 | 222,000 |
| March..... | | | †6,180 | 360,000 |
| April..... | 6,600 | 5,300 | 5,860 | 349,000 |
| May..... | 8,030 | 6,600 | 7,160 | 440,000 |
| June..... | 16,900 | 8,030 | 12,900 | 768,000 |
| July..... | 13,900 | 4,700 | 7,740 | 476,000 |
| August..... | 5,610 | 2,860 | 3,640 | 224,000 |
| September..... | 2,860 | 2,630 | 2,690 | 160,000 |
| The year..... | 16,900 | 2,630 | 5,660 | 4,100,000 |
| 1905-6 | | | | |
| October..... | 5,930 | 2,630 | 3,180 | 196,000 |
| November..... | | | *5,000 | 298,000 |
| December..... | | | *4,500 | 277,000 |
| January..... | | | *6,000 | 369,000 |
| February..... | | | *5,200 | 289,000 |
| March..... | 11,700 | | †7,950 | 499,000 |
| April..... | 9,600 | 5,930 | 7,720 | 459,000 |
| May..... | 18,600 | 9,600 | 12,000 | 736,000 |
| June..... | 19,600 | 13,000 | 17,600 | 1,050,000 |
| July..... | 12,600 | 5,300 | 7,360 | 454,000 |
| August..... | 4,410 | 2,630 | 3,310 | 204,000 |
| September..... | 3,600 | 2,860 | 3,350 | 199,000 |
| The year..... | 19,600 | | 6,930 | 5,020,000 |
| 1906-7 | | | | |
| October..... | 3,350 | 3,350 | 3,350 | 206,000 |
| November..... | | | *3,400 | 202,000 |
| December..... | | | *3,500 | 215,000 |
| January..... | | | *3,300 | 203,000 |
| February..... | | | *4,000 | 222,000 |
| March..... | 13,000 | | †9,230 | 566,000 |
| April..... | 14,400 | 10,000 | 12,400 | 714,000 |
| May..... | 25,300 | 10,400 | 17,300 | 1,060,000 |
| June..... | 53,600 | 24,100 | 36,600 | 2,300,000 |
| July..... | 50,600 | 18,000 | 31,600 | 1,950,000 |
| August..... | 16,600 | 6,950 | 11,300 | 695,000 |
| September..... | 10,000 | 8,030 | 9,180 | 546,000 |
| The year..... | 53,600 | | 12,300 | 8,890,000 |

*Estimated.

†Partly estimated.

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1889-1918, 1933-34--Continued

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|----------------|---------|---------|---------|-------------------------|
| 1907-8 | | | | |
| October..... | 10,400 | 4,410 | 8,050 | 495,000 |
| November..... | | | *5,300 | 315,000 |
| December..... | | | *6,100 | 375,000 |
| January..... | | | *5,300 | 326,000 |
| February..... | | | *5,200 | 299,000 |
| March..... | 14,400 | | †10,400 | 640,000 |
| April..... | 31,900 | 10,400 | 13,400 | 797,000 |
| May..... | 34,900 | 9,200 | 17,400 | 1,070,000 |
| June..... | 120,000 | 37,400 | 53,300 | 3,170,000 |
| July..... | 38,800 | 15,900 | 26,000 | 1,600,000 |
| August..... | 15,400 | 5,300 | 8,700 | 535,000 |
| September..... | 8,030 | 5,610 | 6,570 | 391,000 |
| The year..... | 120,000 | | 13,800 | 10,000,000 |
| 1908-8 | | | | |
| October..... | 13,000 | 6,950 | 10,200 | 627,000 |
| November..... | | | †9,400 | 559,000 |
| December..... | | | *6,400 | 394,000 |
| January..... | | | *4,800 | 295,000 |
| February..... | | | *6,000 | 355,000 |
| March..... | 11,300 | | †9,010 | 554,000 |
| April..... | 10,800 | 9,200 | 9,890 | 588,000 |
| May..... | 39,400 | 11,300 | 20,400 | 1,250,000 |
| June..... | 54,400 | 27,700 | 42,600 | 2,530,000 |
| July..... | 34,300 | 12,600 | 20,300 | 1,250,000 |
| August..... | 15,900 | 4,700 | 9,490 | 584,000 |
| September..... | 9,600 | 4,700 | 7,430 | 442,000 |
| The year..... | 54,400 | | 13,000 | 9,410,000 |
| 1909-10 | | | | |
| October..... | 7,660 | 5,610 | 6,790 | 418,000 |
| November..... | | | *5,800 | 327,000 |
| December..... | | | *3,600 | 221,000 |
| January..... | | | *5,000 | 250,000 |
| February..... | | | *3,800 | 211,000 |
| March..... | 13,000 | | †10,200 | 627,000 |
| April..... | 18,600 | 11,300 | 15,900 | 827,000 |
| May..... | 23,500 | 18,600 | 20,700 | 1,270,000 |
| June..... | 19,100 | 7,660 | 13,400 | 797,000 |
| July..... | 6,950 | 2,860 | 4,520 | 276,000 |
| August..... | 3,110 | 2,410 | 2,660 | 164,000 |
| September..... | 5,400 | 2,780 | 4,250 | 255,000 |
| The year..... | 23,500 | | 7,780 | 5,620,000 |
| 1910-11 | | | | |
| October..... | 6,380 | 3,830 | 5,220 | 321,000 |
| November..... | | | †5,450 | 325,000 |
| December..... | 5,710 | 3,210 | 4,680 | 286,000 |
| January..... | | | *3,500 | 215,000 |
| February..... | | | *4,000 | 222,000 |
| March..... | 7,660 | | †6,640 | 408,000 |
| April..... | 7,660 | 6,600 | 7,080 | 421,000 |
| May..... | 15,900 | 2,410 | 11,000 | 676,000 |
| June..... | 31,900 | 15,900 | 26,200 | 1,560,000 |
| July..... | 19,100 | 4,130 | 9,240 | 568,000 |
| August..... | 6,660 | 3,350 | 5,250 | 323,000 |
| September..... | 6,260 | 3,600 | 5,210 | 310,000 |
| The year..... | 31,900 | | 7,790 | 5,640,000 |
| 1911-12 | | | | |
| October..... | 6,280 | 5,900 | 5,990 | 368,000 |
| November..... | 6,250 | | †5,370 | 320,000 |
| December..... | | | *4,600 | 283,000 |
| January..... | | | *4,000 | 246,000 |
| February..... | | | *4,200 | 242,000 |
| March..... | 10,800 | | †5,470 | 336,000 |
| April..... | 10,400 | 7,650 | 9,330 | 565,000 |
| May..... | 30,000 | 10,400 | 18,200 | 1,100,000 |
| June..... | 31,900 | 21,200 | 26,500 | 1,660,000 |
| July..... | 21,200 | 5,600 | 10,500 | 646,000 |
| August..... | 7,660 | 4,410 | 6,500 | 400,000 |
| September..... | | | †6,480 | 386,000 |
| The year..... | 31,900 | | 9,150 | 6,540,000 |

*Estimated.

†Partly estimated.

‡Extended from Cascade.

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1899-1918, 1933-34--Continued

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|----------------|---------|---------|---------|-------------------------|
| 1912-13 | | | | |
| October..... | 8,800 | 8,030 | 8,310 | 511,000 |
| November..... | | | *8,900 | 530,000 |
| December..... | | | *6,300 | 387,000 |
| January..... | | | *4,200 | 288,000 |
| February..... | | | *8,000 | 278,000 |
| March..... | 8,450 | | †9,410 | 394,000 |
| April..... | 18,000 | 10,000 | 13,900 | 827,000 |
| May..... | | | *20,400 | 1,250,000 |
| June..... | | | †35,800 | 2,130,000 |
| July..... | | 5,300 | †12,900 | 793,000 |
| August..... | 8,800 | 5,650 | 7,000 | 430,000 |
| September..... | 6,550 | 3,750 | 4,860 | 269,000 |
| The year..... | | | 11,200 | 8,080,000 |
| 1913-14 | | | | |
| October..... | 10,400 | 5,000 | 7,760 | 477,000 |
| November..... | 8,450 | 5,650 | 7,440 | 443,000 |
| December..... | 6,700 | 4,250 | 5,130 | 315,000 |
| January..... | | | *4,100 | 269,000 |
| February..... | | | *8,450 | 303,000 |
| March..... | | | †6,590 | 405,000 |
| April..... | 13,000 | 5,650 | 10,000 | 595,000 |
| May..... | 28,300 | 12,000 | 20,400 | 1,250,000 |
| June..... | 28,900 | 14,000 | 23,800 | 1,420,000 |
| July..... | 13,500 | 3,750 | 6,770 | 418,000 |
| August..... | 3,250 | 2,500 | 2,800 | 172,000 |
| September..... | 5,000 | 2,250 | 3,450 | 205,000 |
| The year..... | 26,900 | | 8,690 | 6,290,000 |
| 1914-15 | | | | |
| October..... | 8,800 | 5,000 | 7,390 | 454,000 |
| November..... | 8,490 | 3,150 | 16,520 | 398,000 |
| December..... | | | *4,100 | 269,000 |
| January..... | | | *3,880 | 239,000 |
| February..... | | | *6,800 | 378,000 |
| March..... | | | †6,600 | 406,000 |
| April..... | 15,400 | 6,600 | 10,500 | 625,000 |
| May..... | 23,500 | 5,610 | 15,800 | 972,000 |
| June..... | 25,500 | 13,400 | 21,000 | 1,250,000 |
| July..... | 13,900 | 6,950 | 9,800 | 609,000 |
| August..... | 8,410 | 5,000 | †6,890 | 424,000 |
| September..... | 7,750 | 4,500 | 6,440 | 383,000 |
| The year..... | 26,500 | | 8,810 | 6,370,000 |
| 1915-16 | | | | |
| October..... | 10,000 | 4,750 | 7,040 | 433,000 |
| November..... | 7,750 | 5,300 | 6,550 | 390,000 |
| December..... | 6,700 | 4,250 | 5,260 | 323,000 |
| January..... | | | †4,070 | 250,000 |
| February..... | | | *4,500 | 259,000 |
| March..... | 20,100 | | †11,200 | 689,000 |
| April..... | 14,000 | 6,700 | 9,900 | 589,000 |
| May..... | 21,800 | 13,500 | 17,300 | 1,060,000 |
| June..... | 45,900 | 22,300 | 31,400 | 1,870,000 |
| July..... | 39,400 | 8,800 | 19,200 | 1,180,000 |
| August..... | 9,800 | 6,000 | 7,220 | 444,000 |
| September..... | 8,030 | 5,650 | 6,150 | 366,000 |
| The year..... | 48,900 | | 10,800 | 7,850,000 |
| 1916-17 | | | | |
| October..... | 6,700 | 5,610 | 6,130 | 377,000 |
| November..... | 6,700 | 4,250 | 4,960 | 295,000 |
| December..... | 6,000 | | †4,410 | 271,000 |
| January..... | | | *4,500 | 277,000 |
| February..... | | | *4,500 | 250,000 |
| March..... | 18,000 | | †8,600 | 529,000 |
| April..... | 20,100 | 9,600 | 16,400 | 976,000 |
| May..... | 55,200 | 14,000 | 34,300 | 2,100,000 |
| June..... | 51,000 | 42,000 | 47,100 | 2,800,000 |
| July..... | 40,700 | 6,000 | 19,300 | 1,190,000 |
| August..... | 6,000 | 3,750 | 4,810 | 296,000 |
| September..... | 7,050 | 3,750 | 4,750 | 281,000 |
| The year..... | 55,200 | | 13,300 | 9,640,000 |

*Estimated.

†Partly estimated.

‡Extended from Cascade.

Discharge, in second-feet, of Missouri River at Fort Benton, Mont., 1889-1918, 1933-34--Continued

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|----------------|---------|---------|--------|-------------------------|
| 1917-18 | | | | |
| October..... | 6,840 | 5,860 | 6,200 | 381,000 |
| November..... | 7,920 | 5,440 | 6,560 | 390,000 |
| December..... | 7,750 | | †6,900 | 424,000 |
| January..... | 7,490 | 3,270 | 5,840 | 359,000 |
| February..... | 7,060 | 4,740 | 5,670 | 315,000 |
| March..... | 9,900 | 4,770 | 7,390 | 454,000 |
| April..... | 11,000 | 7,660 | 8,980 | 533,000 |
| May..... | 16,300 | 10,000 | 13,800 | 849,000 |
| June..... | 28,000 | 10,500 | 19,300 | 1,150,000 |
| July..... | 9,670 | 4,460 | 5,730 | 352,000 |
| August..... | 6,250 | 4,140 | 5,170 | 318,000 |
| September..... | 5,150 | 4,030 | 4,500 | 268,000 |
| The year..... | 28,000 | 3,270 | 8,000 | 5,790,000 |
| 1933-34 | | | | |
| October..... | 3,800 | 2,400 | 3,241 | 199,300 |
| November..... | 5,910 | 2,570 | 4,734 | 284,700 |
| December..... | 6,070 | 2,760 | 4,794 | 294,700 |
| January..... | | | 5,234 | 321,800 |
| February..... | 5,450 | 2,520 | 4,622 | 256,700 |
| March..... | 7,960 | 3,670 | 4,988 | 306,700 |
| April..... | 14,000 | 7,600 | 10,070 | 599,500 |
| May..... | 11,800 | 6,230 | 8,581 | 527,600 |
| June..... | 16,200 | 3,800 | 7,115 | 423,400 |
| July..... | 4,310 | 1,410 | 2,664 | 163,800 |
| August..... | 2,310 | 1,190 | 1,576 | 96,950 |
| September..... | 2,450 | 1,330 | 1,890 | 112,500 |
| The year..... | 16,200 | 1,190 | 4,952 | 3,587,000 |

†Partly estimated.

Missouri River at power plant ferry near Zortman, Mont.

Location.- Wire gage in NW $\frac{1}{4}$ sec. 29, T. 23 N., R. 22 E., about 30 miles southwest of Zortman and 80 miles from Malta.

Records available.- February to September 1934.

Extremes.- Maximum discharge during period, 31,900 second-feet June 12 (gage height, 9.37 feet); minimum, 1,400 second-feet Aug. 15 (gage height, 2.18 feet).
Maximum stage recorded, 9.80 feet while ice was breaking Mar. 10.

Remarks.- Records good except those for period of ice effect, Feb. 25 to Mar. 10, which are fair. Numerous diversions from tributaries. Flow partly regulated by storage in reservoirs.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|----------------|------|------|------|------|-------|--------|---------|---------|--------|----------------------|-----------|-------|
| 1 | | | | | | | 9,250 | 15,700 | 9,250 | 8,230 | 2,250 | 2,060 |
| 2 | | | | | | | 11,100 | 15,200 | 8,560 | 7,280 | 2,160 | 2,160 |
| 3 | | | | | | 11,100 | 13,300 | 14,200 | 8,900 | 6,380 | 2,060 | 2,160 |
| 4 | | | | | | | 13,300 | 13,300 | 7,910 | 5,510 | 2,060 | 2,160 |
| 5 | | | | | | | 11,900 | 10,700 | 7,280 | 5,510 | 2,160 | 2,060 |
| 6 | | | | | | | 10,700 | 11,500 | 7,280 | 4,940 | 2,350 | 2,060 |
| 7 | | | | | | | 9,960 | 11,500 | 9,600 | 4,390 | 2,350 | 1,880 |
| 8 | | | | | | 7,520 | 9,600 | 12,400 | 8,230 | 4,390 | 2,250 | 2,250 |
| 9 | | | | | | | 10,700 | 15,700 | 8,560 | 4,660 | 2,250 | 2,450 |
| 10 | | | | | | | 11,500 | 16,800 | 25,500 | 4,390 | 2,250 | 2,450 |
| 11 | | | | | | 7,280 | 10,700 | 16,200 | 30,600 | 3,860 | 2,060 | 2,450 |
| 12 | | | | | | 7,280 | 11,500 | 15,200 | 29,300 | 4,120 | 1,800 | 2,160 |
| 13 | | | | | | 7,280 | 10,700 | 13,300 | 21,300 | 3,130 | 1,630 | 1,970 |
| 14 | | | | | | 6,980 | 11,900 | 12,400 | 19,000 | 3,370 | 1,550 | 2,250 |
| 15 | | | | | | 6,980 | 12,800 | 12,400 | 17,300 | 3,370 | 1,480 | 2,060 |
| 16 | | | | | | | 8,230 | 12,400 | 11,100 | 3,610 | 1,710 | 2,670 |
| 17 | | | | | | | 7,910 | 13,300 | 11,500 | 5,220 | 2,780 | 2,250 |
| 18 | | | | | | | 10,300 | 11,500 | 13,300 | 4,940 | 1,800 | 2,670 |
| 19 | | | | | | | 11,100 | 11,500 | 14,200 | 3,860 | 1,710 | 1,800 |
| 20 | | | | | | | 6,980 | 12,800 | 13,300 | 3,860 | 1,880 | 1,970 |
| 21 | | | | | | 7,280 | 13,700 | 12,400 | 9,600 | 3,610 | 1,800 | 2,900 |
| 22 | | | | | | 7,590 | 13,700 | 11,900 | 8,560 | 3,610 | 1,970 | 3,130 |
| 23 | | | | | | 7,280 | 14,200 | 11,500 | 7,910 | 3,370 | 2,450 | 3,370 |
| 24 | | | | | | 6,980 | 16,200 | 9,960 | 5,560 | 2,560 | 2,060 | 2,900 |
| 25 | | | | | | 7,590 | 18,400 | 8,900 | 7,280 | 2,450 | 2,060 | 3,370 |
| 26 | | | | | 4,720 | 7,590 | 16,800 | 9,250 | 6,980 | 3,610 | 2,160 | 3,130 |
| 27 | | | | | | 7,280 | 16,200 | 8,900 | 7,590 | 3,610 | 2,160 | 3,370 |
| 28 | | | | | | 7,280 | 16,800 | 8,900 | 7,280 | 3,370 | 2,160 | 2,900 |
| 29 | | | | | | 7,280 | 16,200 | 10,300 | 7,280 | 3,130 | 2,560 | 3,130 |
| 30 | | | | | | 6,980 | 16,200 | 8,900 | 8,230 | 3,370 | 2,560 | 2,900 |
| 31 | | | | | | 9,600 | | 9,250 | | 2,900 | 2,060 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February 25-28 | | | | | | | | | | 4,720 | 37,450 | |
| March | | | | | | | | 6,680 | | 2,350 | 507,500 | |
| April | | | | | | | 18,400 | 9,250 | | 12,500 | 763,200 | |
| May | | | | | | | 16,800 | 8,900 | | 12,200 | 753,800 | |
| June | | | | | | | 30,600 | 6,680 | | 12,210 | 726,700 | |
| July | | | | | | | 8,230 | 2,450 | | 4,213 | 259,100 | |
| August | | | | | | | 2,780 | 1,480 | | 2,075 | 127,600 | |
| September | | | | | | | 3,370 | 1,800 | | 2,501 | 148,600 | |
| The period | | | | | | | | | | | 3,330,000 | |

Missouri River below Fort Peck Dam, Mont.

Location.- Water-stage recorder in SE $\frac{1}{4}$ sec. 36, T. 27 N., R. 41 E., 4 miles below Fort Peck Dam and 6 miles south of Nashua.

Records available.- March to September 1934.

Extremes.- Maximum discharge during period, 31,800 second-feet June 14 (gage height, 10.0 feet); minimum, 1,760 second-feet Aug. 18, 19 (gage height, 1.32 feet).

Remarks.- Records good. Discharge interpolated July 2, 4, 17, 25, Aug. 6, 7, 10. Readings from temporary staff gage at same site and datum were used Feb. 25 to Mar. 31 and June 22 to Sept. 1. Numerous diversions from tributaries. Flow partly regulated by storage reservoirs.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|-------|---------|---------|--------|----------------------|-------|-------|
| 1 | | | | | | | 7,980 | 15,400 | 9,940 | 7,180 | 3,420 | 2,160 |
| 2 | | | | | | | 7,440 | 15,400 | 9,370 | 7,180 | 3,420 | 2,160 |
| 3 | | | | | | | 9,370 | 15,400 | 9,370 | 7,180 | 3,170 | 2,160 |
| 4 | | | | | | | 11,500 | 15,400 | 9,370 | 7,180 | 2,630 | 2,160 |
| 5 | | | | | | | 13,500 | 14,500 | 11,200 | 7,180 | 2,560 | 2,160 |
| 6 | | | | | | | 13,200 | 13,200 | 11,800 | 6,920 | 2,490 | 2,100 |
| 7 | | | | | | | 11,800 | 12,500 | 13,200 | 5,890 | 2,420 | 2,100 |
| 8 | | | | | | | 10,800 | 11,500 | 15,400 | 5,540 | 2,350 | 2,100 |
| 9 | | | | | | | 9,650 | 11,500 | 17,900 | 4,990 | 2,350 | 2,100 |
| 10 | | | | | | | 9,370 | 11,200 | 15,000 | 4,660 | 2,350 | 2,040 |
| 11 | | | | | | | 9,650 | 13,500 | 13,200 | 4,460 | 2,350 | 1,920 |
| 12 | | | | | | | 10,500 | 15,800 | 22,800 | 4,560 | 2,280 | 2,100 |
| 13 | | | | | | | 10,800 | 16,200 | 25,500 | 4,560 | 2,280 | 2,220 |
| 14 | | | | | | | 10,800 | 15,600 | 27,700 | 4,260 | 2,280 | 2,280 |
| 15 | | | | | | | 10,800 | 13,900 | 22,800 | 4,060 | 2,160 | 2,220 |
| 16 | | | | | | 8,250 | 10,800 | 12,500 | 19,500 | 3,880 | 2,040 | 2,160 |
| 17 | | | | | | 7,440 | 12,200 | 12,200 | 17,900 | 3,530 | 1,920 | 2,040 |
| 18 | | | | | | 7,710 | 12,200 | 12,200 | 15,600 | 3,780 | 1,760 | 2,040 |
| 19 | | | | | | 8,250 | 12,500 | 11,200 | 15,400 | 3,500 | 1,760 | 2,100 |
| 20 | | | | | | 7,710 | 12,500 | 12,500 | 14,600 | 4,060 | 2,040 | 2,350 |
| 21 | | | | | | 7,180 | 11,200 | 14,200 | 12,800 | 4,880 | 2,490 | 2,280 |
| 22 | | | | | | 7,440 | 11,800 | 13,500 | 11,800 | 4,260 | 1,980 | 2,280 |
| 23 | | | | | | 6,920 | 13,200 | 12,500 | 10,800 | 3,880 | 1,870 | 1,980 |
| 24 | | | | | | 7,180 | 13,900 | 12,200 | 9,370 | 3,790 | 1,980 | 2,100 |
| 25 | | | | | | 7,180 | 14,200 | 11,800 | 8,250 | 3,820 | 1,920 | 2,560 |
| 26 | | | | | | 6,920 | 15,800 | 10,800 | 7,710 | 3,970 | 2,100 | 2,780 |
| 27 | | | | | | 6,530 | 17,500 | 9,940 | 7,710 | 3,170 | 2,040 | 2,780 |
| 28 | | | | | | 7,180 | 17,000 | 9,370 | 7,710 | 2,860 | 2,040 | 2,860 |
| 29 | | | | | | 7,180 | 16,200 | 9,370 | 7,440 | 3,420 | 2,160 | 2,930 |
| 30 | | | | | | 6,920 | 16,200 | 9,090 | 7,710 | 3,540 | 2,100 | 3,090 |
| 31 | | | | | | 7,180 | | 9,090 | | 3,420 | 2,100 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 16-31 | | | | | | | 8,250 | 6,530 | 7,323 | 232,400 | | |
| April | | | | | | | 17,500 | 7,440 | 12,150 | 722,700 | | |
| May | | | | | | | 16,200 | 9,090 | 12,700 | 781,000 | | |
| June | | | | | | | 27,700 | 7,440 | 15,650 | 812,500 | | |
| July | | | | | | | 7,180 | 2,860 | 4,705 | 289,300 | | |
| August | | | | | | | 3,420 | 1,760 | 2,284 | 140,500 | | |
| September | | | | | | | 3,090 | 1,920 | 2,277 | 135,500 | | |
| The period | | | | | | | | | | 3,114,000 | | |

Missouri River near Wolf Point, Mont.

Location.- Water-stage recorder in NW $\frac{1}{4}$ sec. 28, T. 27 N., R. 48 E., at highway bridge 6 miles southeast of Wolf Point.

Drainage area.- 82,400 square miles.

Records available.- April 1930 to September 1934. September 1928 to April 1930, comparable record at ferry crossing at Wolf Point, 6 miles upstream.

Extremes.- Maximum discharge during year, 32,300 second-feet June 15 (gage height, 11.30 feet); minimum (estimated), 1,700 second-feet during ice period Dec. 26-31. 1928-34: Maximum discharge, 41,000 second-feet May 23, 1932; maximum gage height, 17.45 feet Mar. 30, 1930; minimum discharge, 1,700 second-feet Nov. 23, 1931, and Dec. 26-31, 1933.

Remarks.- Records good except those for period of ice effect, Nov. 28 to Mar. 15, which are fair. Numerous diversions from tributaries. Flow partly regulated by storage reservoirs and power plants.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|-------|-------|-------|--------|--------|---------|---------|--------|----------------------|-------|-------|
| 1 | 3,460 | 3,720 | 5,180 | | | | 8,530 | 17,000 | 9,630 | 7,750 | 3,450 | 2,200 |
| 2 | 3,380 | 3,980 | 5,180 | | 11,300 | 8,700 | 8,800 | 16,200 | 9,910 | 7,250 | 3,220 | 2,140 |
| 3 | 3,630 | 4,350 | 4,750 | 2,600 | | | 9,350 | 15,830 | 9,350 | 7,000 | 3,370 | 2,330 |
| 4 | 3,630 | 4,550 | 4,550 | | | | 9,910 | 15,500 | 9,350 | 7,250 | 3,220 | 2,320 |
| 5 | 3,630 | 4,850 | 4,160 | | | | 14,800 | 15,500 | 9,630 | 8,010 | 3,000 | 2,260 |
| 6 | 3,590 | 5,750 | 4,260 | | 13,200 | | 17,000 | 14,400 | 11,100 | 7,250 | 2,780 | 2,200 |
| 7 | 3,980 | 6,170 | 4,160 | | | | 16,200 | 14,100 | 10,500 | 6,530 | 2,580 | 2,100 |
| 8 | 3,630 | 6,170 | 4,160 | 4,650 | | 12,800 | 15,100 | 12,400 | 15,500 | 6,080 | 2,510 | 2,140 |
| 9 | 3,640 | 6,170 | 4,070 | | 10,900 | | 15,400 | 12,100 | 19,400 | 5,970 | 2,440 | 2,140 |
| 10 | 3,800 | 6,380 | 4,160 | | | | 12,700 | 11,800 | 20,200 | 5,660 | 2,380 | 2,140 |
| 11 | 3,890 | 5,800 | 3,800 | | | | 12,100 | 13,400 | 17,400 | 5,070 | 2,440 | 2,080 |
| 12 | 3,890 | 7,240 | 3,380 | | | 8,330 | 12,100 | 14,400 | 16,600 | 4,890 | 2,380 | 2,030 |
| 13 | 3,980 | 7,020 | 3,000 | 5,410 | 12,100 | | 12,400 | 16,200 | 27,400 | 4,890 | 2,320 | 2,080 |
| 14 | 3,890 | 6,580 | 2,780 | | | | 11,500 | 13,100 | 16,600 | 4,890 | 2,320 | 2,140 |
| 15 | 3,460 | 5,590 | 2,570 | | | | 16,600 | 13,100 | 18,200 | 31,800 | 4,710 | 2,320 |
| 16 | 3,460 | 6,800 | 2,430 | | | 11,400 | 13,400 | 15,100 | 24,700 | 4,530 | 2,260 | 2,260 |
| 17 | 3,720 | 6,590 | 2,300 | | | 10,500 | 13,100 | 12,700 | 22,400 | 4,280 | 2,200 | 2,260 |
| 18 | 3,720 | 5,960 | 2,240 | 6,180 | 10,000 | | 10,200 | 14,400 | 12,400 | 21,500 | 4,020 | 2,030 |
| 19 | 3,800 | 6,170 | 2,240 | | | | 9,910 | 14,100 | 12,400 | 20,200 | 3,940 | 1,920 |
| 20 | 3,630 | 7,020 | | | | | 10,500 | 14,100 | 11,100 | 19,000 | 3,650 | 1,920 |
| 21 | 3,460 | 7,020 | | | | | 10,500 | 13,700 | 13,400 | 17,400 | 3,940 | 1,920 |
| 22 | 3,630 | 6,170 | 1,850 | | | | 9,630 | 12,400 | 14,100 | 15,100 | 4,530 | 2,510 |
| 23 | 3,800 | 5,960 | | | 7,920 | | 10,800 | 12,700 | 13,100 | 12,700 | 4,710 | 2,060 |
| 24 | 3,800 | 5,960 | | 5,720 | | | 10,200 | 13,400 | 12,400 | 11,800 | 4,280 | 2,030 |
| 25 | 3,890 | 5,750 | | | | | 9,910 | 14,800 | 12,700 | 9,630 | 4,280 | 1,980 |
| 26 | 3,890 | 5,550 | | | | 8,600 | 9,350 | 14,800 | 11,800 | 8,800 | 4,530 | 1,920 |
| 27 | 3,980 | 5,750 | | | | | 8,800 | 17,400 | 11,400 | 8,270 | 4,360 | 1,920 |
| 28 | 4,070 | 5,750 | 1,700 | | | | 8,270 | 18,600 | 10,200 | 7,750 | 4,020 | 2,320 |
| 29 | 3,980 | 5,750 | | 5,890 | | | 8,530 | 18,200 | 9,350 | 8,270 | 3,530 | 2,200 |
| 30 | 3,980 | 5,350 | | | | | 8,270 | 17,000 | 9,350 | 7,750 | 3,140 | 2,200 |
| 31 | 3,890 | | | | | | 8,010 | | 9,350 | | 3,070 | 2,260 |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 4,070 | 3,380 | 3,754 | 230,800 | | |
| November | | | | | | | 7,240 | 3,720 | 5,929 | 352,800 | | |
| December | | | | | | | 5,150 | | 2,923 | 179,700 | | |
| January | | | | | | | | | 5,219 | 320,600 | | |
| February | | | | | | | | | 10,480 | 582,200 | | |
| March | | | | | | | 18,600 | | 10,240 | 629,500 | | |
| April | | | | | | | 18,600 | 8,530 | 13,690 | 814,600 | | |
| May | | | | | | | 17,000 | 9,350 | 13,300 | 918,100 | | |
| June | | | | | | | 31,800 | 7,750 | 15,440 | 919,000 | | |
| July | | | | | | | 8,010 | 5,070 | 5,100 | 313,600 | | |
| August | | | | | | | 1,820 | 1,450 | 2,397 | 147,400 | | |
| September | | | | | | | 3,140 | 2,030 | 2,300 | 136,900 | | |
| The year | | | | | | | 31,800 | | 7,522 | 5,446,000 | | |

Missouri River near Williston, N. Dak.

Location.- Water-stage recorder in sec. 31, T. 154 N., R. 101 W., at Lewis & Clark Highway bridge 7 miles west of Williston.

Records available.- September 1928 to September 1934.

Extremes.- Maximum discharge during year, 58,900 second-feet Mar. 16 (gage height, 10.28 feet, ice present); minimum, about 2,900 second-feet Dec. 28; minimum gage height, 0.17 foot Aug. 24.

1928-34: Maximum discharge, 231,000 second-feet Apr. 4, 1930 (gage height, 18.0 feet); minimum, that of Dec. 28, 1933.

Maximum stage recorded, 18.6 feet, while ice was breaking Apr. 4, 1930.

Remarks.- Records good except those for periods of ice effect, Dec. 10 to Mar. 19, which are fair. Numerous diversions above station. Several storage reservoirs on tributary streams.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|--------|--------|--------|--------|--------|--------|---------|---------|--------|----------------------|--------|-------|
| 1 | 9,520 | 9,520 | 11,800 | 3,560 | 12,600 | 12,200 | 14,800 | 28,700 | 20,000 | 17,200 | 11,500 | 4,200 |
| 2 | 9,520 | 9,520 | 11,800 | 3,800 | 13,900 | 10,500 | 15,200 | 28,700 | 18,300 | 16,200 | 10,400 | 4,000 |
| 3 | 9,710 | 9,520 | 11,800 | 4,040 | 14,300 | 9,520 | 15,600 | 27,800 | 18,600 | 15,600 | 9,510 | 4,000 |
| 4 | 9,520 | 9,520 | 11,800 | 4,420 | 16,600 | 10,100 | 15,600 | 27,800 | 19,400 | 14,100 | 8,870 | 4,000 |
| 5 | 9,520 | 9,710 | 11,800 | 4,960 | 19,200 | 11,400 | 15,600 | 27,100 | 19,400 | 13,200 | 7,850 | 3,700 |
| 6 | 9,520 | 8,760 | 11,400 | 5,540 | 19,200 | 13,000 | 16,300 | 27,100 | 18,300 | 12,300 | 7,560 | 3,900 |
| 7 | 9,520 | 8,760 | 12,200 | 6,440 | 19,200 | 14,700 | 18,700 | 26,300 | 20,000 | 12,300 | 6,800 | 4,300 |
| 8 | 9,520 | 8,760 | 11,400 | 8,020 | 19,200 | 17,600 | 20,500 | 25,600 | 20,000 | 11,900 | 6,330 | 4,500 |
| 9 | 9,520 | 9,520 | 8,580 | 8,760 | 18,700 | 18,700 | 20,500 | 23,600 | 20,500 | 11,900 | 5,640 | 4,600 |
| 10 | 9,130 | 10,100 | 7,560 | 10,100 | 17,600 | 18,700 | 19,600 | 24,900 | 25,600 | 11,100 | 5,210 | 4,600 |
| 11 | 8,940 | 10,500 | 8,290 | 11,400 | 17,100 | 19,200 | 18,700 | 30,300 | 32,900 | 10,400 | 5,000 | 4,400 |
| 12 | 8,940 | 10,500 | 5,390 | 12,200 | 16,600 | 18,100 | 17,900 | 31,200 | 36,700 | 10,100 | 4,900 | 4,200 |
| 13 | 8,940 | 12,200 | 4,960 | 13,000 | 16,100 | 17,100 | 17,900 | 32,900 | 34,800 | 9,800 | 4,800 | 4,100 |
| 14 | 8,940 | 17,100 | 4,550 | 12,600 | 16,100 | 18,600 | 17,500 | 32,000 | 36,700 | 9,510 | 4,600 | 4,000 |
| 15 | 9,130 | 14,300 | 4,290 | 13,000 | 16,600 | 25,200 | 17,900 | 32,000 | 44,100 | 8,390 | 4,400 | 4,200 |
| 16 | 9,130 | 13,000 | 4,040 | 12,600 | 16,600 | 47,700 | 18,700 | 32,000 | 45,300 | 7,830 | 4,300 | 4,300 |
| 17 | 9,520 | 13,500 | 3,800 | 12,600 | 17,100 | 30,500 | 19,200 | 32,900 | 35,700 | 7,300 | 4,500 | 4,500 |
| 18 | 9,320 | 13,900 | 3,800 | 13,000 | 17,100 | 18,100 | 19,600 | 29,500 | 31,200 | 7,300 | 5,000 | 4,800 |
| 19 | 9,320 | 13,900 | 3,560 | 13,500 | 17,600 | 17,100 | 20,000 | 26,500 | 32,000 | 6,800 | 4,900 | 4,700 |
| 20 | 9,520 | 13,000 | 3,440 | 13,000 | 17,100 | 20,500 | 20,500 | 24,900 | 34,800 | 6,330 | 4,600 | 4,800 |
| 21 | 9,910 | 13,000 | 3,330 | 12,600 | 17,100 | 17,500 | 21,400 | 24,900 | 33,800 | 6,100 | 4,200 | 4,800 |
| 22 | 10,500 | 13,000 | 3,330 | 11,800 | 17,100 | 16,700 | 21,000 | 25,600 | 32,000 | 5,870 | 3,900 | 4,900 |
| 23 | 10,500 | 13,000 | 3,220 | 11,400 | 16,600 | 16,700 | 21,000 | 26,500 | 30,300 | 5,870 | 3,610 | 4,900 |
| 24 | 10,500 | 13,000 | 3,220 | 10,900 | 16,100 | 16,300 | 20,000 | 27,800 | 29,500 | 5,870 | 3,320 | 4,900 |
| 25 | 10,500 | 12,600 | 3,110 | 10,500 | 16,100 | 15,900 | 19,200 | 28,700 | 28,700 | 6,100 | 3,700 | 5,210 |
| 26 | 10,100 | 12,200 | 3,000 | 10,500 | 15,600 | 15,900 | 19,600 | 27,800 | 25,600 | 6,100 | 3,900 | 5,420 |
| 27 | 10,100 | 11,800 | 3,000 | 10,100 | 15,200 | 15,900 | 21,000 | 25,600 | 21,700 | 6,100 | 3,700 | 5,420 |
| 28 | 10,100 | 11,800 | 2,900 | 10,500 | 13,900 | 15,900 | 22,900 | 24,900 | 20,500 | 6,100 | 3,610 | 5,640 |
| 29 | 10,100 | 11,400 | 3,000 | 11,400 | | 15,600 | 24,000 | 24,200 | 18,800 | 6,330 | 3,520 | 5,870 |
| 30 | 9,910 | 11,400 | 3,110 | 11,800 | | 14,800 | 27,200 | 22,900 | 17,200 | 6,330 | 3,610 | 6,800 |
| 31 | 9,710 | | 3,220 | 11,800 | | 14,800 | | 21,100 | | 8,390 | 3,800 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 10,500 | 8,940 | 9,620 | 591,500 | | |
| November | | | | | | | 17,100 | 8,760 | 11,620 | 691,400 | | |
| December | | | | | | | 12,200 | 2,900 | 6,087 | 374,300 | | |
| January | | | | | | | 15,500 | 5,560 | 9,995 | 614,600 | | |
| February | | | | | | | 19,200 | 12,600 | 16,850 | 924,700 | | |
| March | | | | | | | 47,700 | 9,520 | 17,500 | 1,076,000 | | |
| April | | | | | | | 27,200 | 14,800 | 19,250 | 1,146,000 | | |
| May | | | | | | | 32,900 | 21,100 | 27,460 | 1,689,000 | | |
| June | | | | | | | 45,300 | 17,200 | 27,490 | 1,656,000 | | |
| July | | | | | | | 17,200 | 5,870 | 9,314 | 572,700 | | |
| August | | | | | | | 11,500 | 3,320 | 5,397 | 351,800 | | |
| September | | | | | | | 6,800 | 3,700 | 4,555 | 277,000 | | |
| The year | | | | | | | 47,700 | 2,900 | 13,710 | 9,925,000 | | |

Missouri River at Bismarck, N. Dak.

Location.- Water-stage recorder in sec. 31, T. 139 N., R. 80 W., at Bismarck city water plant, 1 mile west of Bismarck and about 4 miles above Heart River. Zero of gage is 1,622.62 feet above mean sea level.

Drainage area.- 186,400 square miles (revised).

Records available.- September 1904 to December 1905, October 1927 to September 1934.

Extremes.- Maximum discharge during year, 79,200 second-feet Mar. 20 (gage height, 7.41 feet); minimum discharge (estimated because of ice effect), 3,300 second-feet Dec. 18, 19; minimum gage height, -2.90 feet Sept. 4, 1904-5, 1928-34: Maximum discharge, 201,000 second-feet Mar. 24, 1928; maximum gage height, 17.8 feet Mar. 27, 1929, during ice gorge: minimum discharge, that of Dec. 18, 19, 1933; minimum gage height, that of Sept. 4, 1934.
Maximum stage known, 26.2 feet Mar. 31, 1881, Mar. 14, 1910, during ice gorges.

Remarks.- Records good except those for period of ice effect Nov. 4 to Mar. 20, which are poor.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|--------|--------|--------|--------|--------|---------|--------|--------|--------|----------------------|-------|
| 1 | 9,420 | 10,600 | 12,000 | 4,200 | 12,400 | 19,600 | 20,800 | 20,800 | 22,700 | 20,200 | 6,380 | 4,060 |
| 2 | 9,420 | 10,600 | 12,000 | 4,400 | 12,700 | 19,000 | 18,500 | 24,100 | 23,400 | 18,500 | 6,380 | 3,980 |
| 3 | 9,420 | 10,600 | 11,800 | 4,800 | 13,200 | 18,500 | 16,900 | 29,800 | 22,000 | 17,400 | 6,380 | 4,140 |
| 4 | 9,420 | 9,820 | 11,300 | 5,400 | 14,000 | 17,400 | 31,700 | 21,400 | 21,400 | 16,500 | 6,840 | 4,060 |
| 5 | 9,420 | 7,940 | 11,000 | 5,800 | 14,500 | 16,900 | 19,600 | 30,800 | 20,200 | 16,000 | 8,320 | 4,140 |
| 6 | 9,420 | 6,380 | 10,300 | 6,150 | 14,600 | 15,600 | 24,100 | 28,900 | 20,200 | 15,600 | 10,000 | 4,230 |
| 7 | 9,420 | 5,500 | 9,700 | 6,150 | 14,100 | 15,100 | 16,500 | 27,200 | 20,200 | 15,100 | 10,000 | 4,230 |
| 8 | 9,420 | 6,150 | 8,800 | 5,930 | 13,500 | 14,300 | 15,800 | 26,400 | 20,200 | 14,300 | 9,420 | 4,230 |
| 9 | 9,420 | 6,610 | 8,100 | 6,610 | 13,400 | 14,300 | 16,900 | 26,400 | 20,200 | 13,500 | 8,660 | 4,320 |
| 10 | 9,420 | 6,610 | 6,600 | 8,060 | 14,300 | 14,700 | 20,800 | 24,800 | 19,600 | 12,700 | 8,320 | 4,230 |
| 11 | 9,420 | 8,590 | 5,800 | 8,590 | 16,000 | 15,100 | 23,400 | 24,100 | 19,000 | 12,400 | 7,810 | 4,230 |
| 12 | 9,420 | 9,420 | 5,100 | 8,590 | 18,000 | 16,500 | 21,400 | 24,100 | 19,600 | 12,400 | 7,560 | 4,400 |
| 13 | 9,420 | 8,320 | 5,000 | 8,320 | 19,600 | 17,400 | 19,600 | 22,700 | 28,900 | 12,000 | 6,840 | 4,570 |
| 14 | 9,420 | 8,060 | 4,700 | 7,800 | 20,200 | 18,000 | 18,500 | 27,200 | 35,600 | 11,500 | 6,610 | 4,750 |
| 15 | 9,420 | 26,600 | 4,200 | 8,100 | 20,100 | 17,900 | 18,000 | 30,800 | 37,600 | 10,600 | 6,150 | 4,750 |
| 16 | 8,860 | 22,700 | 3,800 | 9,000 | 19,800 | 13,100 | 17,400 | 31,700 | 35,600 | 10,300 | 5,930 | 4,750 |
| 17 | 8,590 | 21,400 | 3,400 | 9,100 | 19,400 | 14,300 | 17,400 | 28,900 | 46,200 | 10,000 | 5,710 | 4,570 |
| 18 | 8,590 | 15,600 | 3,300 | 8,800 | 18,400 | 15,100 | 18,000 | 27,200 | 47,400 | 9,420 | 5,500 | 4,570 |
| 19 | 8,860 | 15,600 | 3,300 | 8,600 | 17,300 | 14,700 | 18,500 | 27,200 | 39,600 | 9,140 | 5,300 | 4,570 |
| 20 | 8,860 | 15,600 | 3,400 | 8,700 | 16,000 | 48,500 | 19,000 | 28,100 | 31,700 | 8,590 | 5,120 | 4,570 |
| 21 | 9,140 | 13,500 | 3,500 | 9,400 | 15,300 | 38,600 | 19,600 | 27,200 | 32,600 | 8,320 | 4,940 | 4,570 |
| 22 | 9,140 | 12,700 | 3,600 | 10,100 | 14,300 | 24,100 | 19,600 | 24,800 | 35,600 | 7,560 | 4,760 | 4,570 |
| 23 | 8,860 | 12,700 | 3,600 | 10,700 | 15,400 | 22,000 | 20,200 | 23,400 | 36,600 | 7,320 | 5,120 | 4,750 |
| 24 | 9,140 | 13,100 | 3,700 | 11,500 | 12,600 | 19,600 | 20,800 | 22,700 | 34,600 | 7,060 | 5,120 | 4,930 |
| 25 | 9,140 | 12,700 | 3,800 | 12,700 | 12,600 | 18,000 | 20,800 | 22,000 | 31,700 | 6,610 | 4,760 | 4,930 |
| 26 | 9,420 | 12,700 | 3,800 | 13,500 | 12,600 | 18,000 | 20,200 | 22,700 | 29,800 | 6,380 | 4,760 | 5,110 |
| 27 | 9,420 | 13,500 | 3,800 | 13,500 | 12,800 | 18,000 | 20,200 | 23,400 | 28,100 | 6,380 | 4,400 | 5,110 |
| 28 | 9,710 | 13,100 | 3,900 | 13,400 | 15,000 | 18,500 | 19,600 | 25,600 | 25,600 | 6,380 | 4,220 | 5,110 |
| 29 | 10,000 | 12,400 | 4,000 | 12,900 | | 18,500 | 19,000 | 25,600 | 24,100 | 6,150 | 4,040 | 5,110 |
| 30 | 10,300 | 12,400 | 4,000 | 12,400 | | 18,500 | 19,600 | 24,100 | 21,400 | 6,380 | 4,040 | 5,290 |
| 31 | 10,300 | | 4,100 | 12,200 | | 20,200 | | 22,700 | | 6,380 | 4,130 | |
| Month | Maximum | | | | | | Minimum | | Mean | | Run-off in acre-feet | |
| October | 10,300 | | | | | | 8,590 | | 9,343 | | 574,500 | |
| November | 26,600 | | | | | | 5,500 | | 12,050 | | 717,000 | |
| December | 12,000 | | | | | | 3,300 | | 5,974 | | 367,800 | |
| January | 13,500 | | | | | | 4,200 | | 8,377 | | 545,900 | |
| February | 20,200 | | | | | | 12,400 | | 15,370 | | 853,500 | |
| March | 48,500 | | | | | | 13,100 | | 19,030 | | 1,170,000 | |
| April | 24,100 | | | | | | 15,600 | | 19,260 | | 1,146,000 | |
| May | 31,700 | | | | | | 20,800 | | 26,040 | | 1,601,000 | |
| June | 47,400 | | | | | | 19,000 | | 28,450 | | 1,693,000 | |
| July | 20,200 | | | | | | 6,150 | | 11,000 | | 876,100 | |
| August | 10,000 | | | | | | 4,040 | | 6,243 | | 354,200 | |
| September | 6,290 | | | | | | 3,980 | | 4,561 | | 271,400 | |
| The year | 48,500 | | | | | | 3,300 | | 13,610 | | 10,000,000 | |

Missouri River near Moberidge, S. Dak.

Location.- Water-stage recorder in sec. 7, T. 18 N., R. 30 E., at bridge on State highway 12.3 miles west of Moberidge. Zero of gage is 1,527.19 feet (revised) above mean sea level. Wire gage at same site and datum used prior to Feb. 19, 1934.

Drainage area.- 208,700 square miles.

Records available.- August 1928 to September 1934.

Extremes.- Maximum discharge during year, 71,000 second-feet Mar. 21 (gage height, 9.01 feet); minimum discharge (estimated because of ice effect), 3,600 second-feet Dec. 25, 26; minimum gage height, 1.00 foot Sept. 6, 7.
1928-34: Maximum discharge, 164,000 second-feet Mar. 29, 1929 (gage height, 12.2 feet, present datum); minimum discharge, that of Dec. 25, 26, 1933; minimum gage height, that of Sept. 6, 7, 1934.

Remarks.- Records good except those for period of ice effect, Dec. 1 to Mar. 10, and those estimated for Mar. 29-31, which are poor. U. S. Weather Bureau gage at same site and datum used Sept. 16-30.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|--------|--------|--------|--------|--------|---------|--------|--------|--------|----------------------|-------|
| 1 | 10,000 | 10,800 | 13,800 | 4,100 | 12,600 | 21,700 | 17,800 | 17,100 | 25,600 | 23,000 | 6,610 | 4,220 |
| 2 | 9,930 | 10,900 | 13,400 | 4,300 | 12,000 | 21,000 | 20,000 | 17,800 | 24,000 | 21,900 | 6,610 | 4,410 |
| 3 | 9,870 | 10,900 | 12,800 | 4,400 | 11,300 | 20,000 | 19,200 | 19,200 | 24,000 | 20,000 | 6,610 | 4,410 |
| 4 | 9,540 | 10,800 | 12,800 | 4,400 | 10,800 | 19,000 | 17,100 | 24,000 | 23,200 | 18,500 | 6,610 | 4,280 |
| 5 | 9,570 | 9,300 | 11,500 | 4,600 | 10,600 | 17,200 | 16,000 | 28,200 | 23,200 | 17,800 | 6,340 | 4,170 |
| 6 | 9,570 | 7,130 | 10,800 | 4,600 | 10,700 | 15,600 | 18,500 | 29,100 | 22,400 | 16,500 | 6,880 | 4,160 |
| 7 | 9,540 | 7,050 | 10,400 | 4,800 | 10,900 | 15,200 | 26,400 | 28,200 | 20,800 | 17,100 | 7,620 | 4,160 |
| 8 | 9,570 | 6,350 | 10,000 | 5,000 | 11,100 | 15,000 | 19,200 | 26,400 | 20,800 | 16,000 | 9,000 | 4,170 |
| 9 | 9,600 | 5,920 | 9,200 | 5,200 | 11,500 | 15,000 | 14,600 | 24,000 | 22,400 | 15,600 | 9,900 | 4,280 |
| 10 | 9,540 | 5,270 | 8,300 | 5,600 | 12,200 | 15,200 | 13,600 | 24,000 | 20,800 | 14,600 | 9,700 | 4,410 |
| 11 | 9,420 | 5,220 | 7,100 | 6,200 | 13,100 | 15,600 | 16,500 | 24,000 | 20,800 | 13,700 | 9,400 | 4,300 |
| 12 | 9,480 | 8,130 | 6,500 | 7,600 | 14,900 | 20,000 | 20,800 | 22,400 | 20,000 | 12,600 | 8,800 | 4,300 |
| 13 | 9,300 | 9,270 | 6,100 | 7,900 | 16,200 | 17,800 | 19,200 | 23,200 | 19,200 | 12,600 | 8,240 | 4,300 |
| 14 | 9,420 | 8,240 | 5,800 | 8,200 | 16,200 | 17,800 | 17,800 | 22,400 | 20,800 | 12,200 | 7,960 | 4,420 |
| 15 | 9,390 | 7,730 | 5,600 | 8,500 | 19,200 | 18,500 | 16,500 | 23,200 | 33,700 | 11,600 | 7,420 | 4,540 |
| 16 | 9,270 | 17,900 | 5,300 | 8,900 | 19,600 | 26,400 | 16,000 | 27,300 | 36,700 | 11,200 | 6,880 | 4,660 |
| 17 | 9,150 | 22,600 | 5,000 | 9,100 | 19,900 | 20,000 | 18,000 | 30,900 | 35,700 | 10,900 | 6,440 | 4,780 |
| 18 | 9,150 | 23,400 | 4,800 | 9,200 | 19,200 | 16,500 | 16,000 | 31,800 | 49,400 | 10,200 | 6,300 | 4,830 |
| 19 | 9,180 | 17,200 | 4,500 | 9,000 | 18,300 | 17,800 | 15,500 | 30,000 | 43,700 | 9,900 | 5,900 | 4,930 |
| 20 | 8,440 | 13,600 | 4,300 | 8,600 | 17,200 | 19,200 | 16,000 | 29,100 | 36,700 | 9,300 | 5,530 | 4,830 |
| 21 | 8,440 | 14,000 | 4,100 | 8,400 | 16,200 | 49,400 | 16,500 | 28,200 | 29,100 | 9,300 | 5,400 | 4,830 |
| 22 | 9,850 | 14,600 | 3,900 | 8,500 | 14,700 | 45,000 | 17,100 | 29,100 | 29,100 | 8,720 | 5,120 | 4,860 |
| 23 | 9,090 | 15,000 | 3,800 | 8,500 | 13,700 | 25,600 | 17,800 | 29,100 | 31,800 | 8,440 | 4,990 | 4,860 |
| 24 | 9,390 | 14,800 | 3,800 | 8,700 | 12,700 | 20,000 | 17,800 | 26,400 | 33,700 | 8,160 | 5,060 | 4,860 |
| 25 | 9,050 | 14,600 | 3,600 | 9,000 | 11,700 | 18,500 | 17,800 | 28,400 | 33,700 | 7,620 | 5,190 | 4,900 |
| 26 | 9,360 | 13,400 | 3,600 | 9,600 | 11,000 | 17,100 | 18,500 | 24,000 | 32,700 | 7,620 | 5,190 | 4,900 |
| 27 | 9,480 | 13,200 | 3,800 | 10,600 | 11,700 | 17,100 | 19,200 | 23,200 | 28,200 | 7,350 | 5,320 | 4,900 |
| 28 | 9,150 | 13,700 | 3,800 | 11,400 | 15,000 | 17,800 | 17,800 | 24,000 | 26,200 | 7,080 | 5,190 | 4,900 |
| 29 | 9,630 | 13,800 | 3,800 | 12,200 | | 17,800 | 17,800 | 25,600 | 26,400 | 6,610 | 4,920 | 5,160 |
| 30 | 10,100 | 13,800 | 3,900 | 12,900 | | 17,800 | 17,800 | 25,600 | 25,600 | 6,810 | 4,660 | 5,210 |
| 31 | 10,400 | | 3,900 | 12,900 | | 17,800 | | 26,400 | | 6,540 | 4,220 | |
| Month | Maximum | | | | | | Minimum | | Mean | | Run-off in acre-feet | |
| October | 10,400 | | | | | | 8,440 | | 9,414 | | 578,800 | |
| November | 23,400 | | | | | | 5,220 | | 11,950 | | 710,900 | |
| December | 13,800 | | | | | | 3,600 | | 6,755 | | 415,300 | |
| January | 12,900 | | | | | | 4,100 | | 7,835 | | 481,800 | |
| February | 19,900 | | | | | | 10,600 | | 14,150 | | 785,900 | |
| March | 49,400 | | | | | | 15,000 | | 20,270 | | 1,246,000 | |
| April | 26,400 | | | | | | 13,600 | | 17,690 | | 1,055,000 | |
| May | 31,800 | | | | | | 17,100 | | 25,560 | | 1,572,000 | |
| June | 49,400 | | | | | | 19,200 | | 28,080 | | 1,671,000 | |
| July | 23,000 | | | | | | 6,540 | | 12,240 | | 752,800 | |
| August | 9,900 | | | | | | 4,220 | | 6,581 | | 404,600 | |
| September | 5,210 | | | | | | 4,160 | | 4,598 | | 273,600 | |
| The year | 49,400 | | | | | | 3,600 | | 13,740 | | 9,946,000 | |

Missouri River at Pierre, S. Dak.

Location.— Water-stage recorder in SW $\frac{1}{4}$ sec. 32, T. 111 N., R. 79 W., at Chicago & North Western Railway bridge at Pierre, $\frac{1}{2}$ miles above mouth of Bad River. Zero of gage is 1,414.41 feet (revised) above mean sea level.

Drainage area.— 243,500 square miles (revised).

Records available.— October 1929 to September 1934.

Extremes.— Maximum discharge during year, 50,900 second-feet June 19 (gage height, 8.63 feet); minimum discharge (estimated because of ice effect), 3,800 second-feet Dec. 28 to Jan. 1; minimum gage height, 1.23 feet Sept. 27.
1929-34: Maximum discharge, 121,000 second-feet June 15, 1932 (gage height, 10.96 feet); minimum discharge, that of Dec. 28, 1933 to Jan. 1, 1934; minimum gage height, 0.28 foot (present datum) Nov. 27, 1931.
Maximum stage known, 21.0 feet in March 1881 (relation to present datum not known).

Remarks.— Records good except those for periods of ice effect, Dec. 11 to Feb. 15, Feb. 21-28, which are poor. U. S. Weather Bureau gage at same site used Nov. 9-20, Mar. 1, 2, 6-11, 29-31.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|--------|--------|--------|--------|--------|--------|---------|---------|--------|-----------|-------------------------|-------|
| 1 | 10,800 | 9,880 | 13,400 | 3,800 | 11,200 | 33,400 | 19,500 | 20,000 | 24,500 | 26,200 | 8,550 | 5,050 |
| 2 | 10,900 | 9,920 | 13,500 | 4,200 | 10,800 | 23,700 | 18,400 | 20,000 | 25,500 | 24,500 | 8,150 | 4,800 |
| 3 | 10,700 | 10,500 | 13,400 | 4,500 | 10,600 | 22,400 | 19,500 | 19,500 | 24,500 | 23,700 | 7,850 | 4,600 |
| 4 | 10,500 | 11,000 | 13,000 | 4,600 | 10,600 | 21,200 | 20,000 | 20,000 | 23,700 | 22,400 | 7,530 | 4,500 |
| 5 | 10,300 | 11,000 | 12,500 | 4,600 | 10,600 | 19,000 | 19,500 | 20,600 | 23,700 | 21,800 | 6,950 | 4,600 |
| 6 | 10,000 | 11,100 | 12,200 | 4,800 | 10,600 | 19,500 | 18,400 | 23,000 | 23,000 | 21,200 | 6,950 | 4,500 |
| 7 | 9,880 | 11,000 | 11,900 | 5,000 | 10,700 | 19,500 | 18,400 | 29,700 | 23,000 | 19,500 | 6,900 | 4,400 |
| 8 | 9,800 | 10,300 | 12,800 | 5,200 | 10,700 | 16,100 | 26,200 | 31,500 | 21,800 | 18,400 | 6,900 | 4,400 |
| 9 | 9,680 | 9,150 | 12,000 | 5,300 | 10,800 | 16,100 | 24,500 | 28,800 | 21,200 | 17,500 | 6,800 | 4,400 |
| 10 | 9,680 | 7,220 | 10,000 | 5,400 | 11,700 | 17,500 | 20,000 | 26,200 | 21,800 | 17,000 | 7,050 | 4,400 |
| 11 | 9,720 | 7,040 | 9,400 | 5,700 | 12,500 | 16,100 | 17,500 | 26,200 | 22,400 | 16,500 | 9,250 | 4,400 |
| 12 | 9,680 | 6,380 | 8,000 | 6,000 | 13,000 | 17,500 | 16,100 | 25,300 | 23,000 | 15,600 | 9,950 | 4,500 |
| 13 | 9,840 | 6,110 | 7,400 | 6,300 | 13,600 | 17,000 | 18,400 | 24,500 | 22,400 | 15,200 | 9,950 | 4,500 |
| 14 | 9,680 | 6,520 | 7,000 | 6,700 | 14,300 | 17,500 | 21,200 | 23,000 | 21,200 | 13,600 | 9,250 | 4,500 |
| 15 | 9,640 | 8,860 | 6,600 | 7,000 | 15,800 | 17,900 | 21,200 | 23,000 | 20,600 | 13,400 | 8,900 | 4,600 |
| 16 | 9,640 | 10,700 | 6,400 | 7,400 | 19,300 | 18,400 | 19,500 | 23,000 | 21,200 | 12,900 | 9,250 | 4,600 |
| 17 | 9,600 | 8,720 | 6,100 | 7,700 | 18,300 | 23,000 | 18,400 | 22,400 | 29,700 | 12,500 | 8,900 | 4,700 |
| 18 | 9,640 | 20,800 | 5,900 | 8,000 | 17,800 | 21,200 | 17,500 | 26,200 | 34,400 | 12,100 | 8,250 | 4,900 |
| 19 | 9,680 | 25,500 | 5,600 | 8,200 | 17,900 | 16,500 | 17,000 | 30,600 | 44,600 | 11,700 | 7,350 | 4,900 |
| 20 | 9,680 | 20,900 | 5,400 | 8,300 | 17,000 | 17,500 | 17,000 | 31,500 | 47,600 | 11,200 | 7,050 | 4,900 |
| 21 | 9,330 | 17,100 | 5,100 | 8,500 | 15,000 | 20,600 | 17,000 | 28,800 | 41,800 | 10,800 | 6,500 | 5,000 |
| 22 | 9,260 | 15,400 | 4,900 | 8,600 | 13,800 | 37,700 | 17,000 | 27,000 | 32,400 | 10,800 | 6,250 | 5,100 |
| 23 | 9,450 | 14,500 | 4,700 | 8,800 | 12,800 | 40,400 | 17,900 | 26,200 | 27,900 | 10,000 | 6,000 | 5,100 |
| 24 | 9,220 | 14,400 | 4,500 | 8,900 | 10,600 | 27,900 | 17,900 | 26,200 | 27,900 | 9,620 | 5,950 | 5,000 |
| 25 | 9,370 | 14,600 | 4,200 | 9,100 | 9,600 | 23,000 | 18,400 | 26,200 | 29,700 | 10,000 | 6,050 | 5,000 |
| 26 | 9,410 | 14,700 | 4,000 | 9,300 | 8,700 | 21,800 | 18,400 | 24,500 | 30,600 | 9,620 | 5,700 | 4,900 |
| 27 | 9,520 | 15,100 | 3,900 | 9,900 | 8,600 | 20,600 | 19,000 | 23,700 | 31,500 | 8,890 | 5,700 | 5,000 |
| 28 | 9,760 | 14,600 | 3,800 | 10,200 | 8,700 | 17,900 | 19,500 | 23,000 | 30,600 | 8,890 | 5,500 | 5,000 |
| 29 | 9,560 | 14,000 | 3,800 | 10,600 | | 19,000 | 19,500 | 23,000 | 28,800 | 9,620 | 5,600 | 5,100 |
| 30 | 9,490 | 13,800 | 3,600 | 11,200 | | 17,900 | 20,000 | 23,000 | 27,000 | 10,000 | 5,250 | 5,200 |
| 31 | 9,640 | | 3,800 | 11,300 | | 18,400 | | 23,700 | | 8,890 | 5,250 | |
| Month | | | | | | | Maximum | Minimum | Mean | | Run-off in acre-feet | |
| October | 10,900 | | | | | | 9,220 | 9,776 | | 601,100 | | |
| November | 25,500 | | | | | | 6,110 | 12,560 | | 755,500 | | |
| December | 13,500 | | | | | | 3,800 | 7,710 | | 474,000 | | |
| January | 11,300 | | | | | | 3,800 | 7,268 | | 446,900 | | |
| February | 19,300 | | | | | | 8,600 | 12,700 | | 705,300 | | |
| March | 40,400 | | | | | | 16,100 | 21,170 | | 1,302,000 | | |
| April | 26,200 | | | | | | 16,100 | 19,090 | | 1,136,000 | | |
| May | 31,500 | | | | | | 19,500 | 24,850 | | 1,528,000 | | |
| June | 47,600 | | | | | | 20,600 | 27,590 | | 1,642,000 | | |
| July | 26,200 | | | | | | 8,890 | 14,500 | | 901,000 | | |
| August | 9,950 | | | | | | 5,250 | 7,270 | | 447,000 | | |
| September | 5,200 | | | | | | 4,400 | 4,752 | | 282,700 | | |
| The year | | | | | | | 47,600 | 3,800 | 14,090 | | 10,200,000 | |

Missouri River at Yankton, S. Dak.

Location.- Water-stage recorder on line between sec. 18, T. 93 N., R. 55 W., and sec. 13, T. 93 N., R. 56 W., at Meridian Highway bridge in Yankton, 7 miles above James River. Zero of gage is 1,159.75 feet (revised) above mean sea level. Datum was 0.11 foot lower prior to Aug. 4, 1934.

Drainage area.- 279,500 square miles (revised).

Records available.- November 1930 to September 1934.

Extremes.- Maximum discharge during year, 112,000 second-feet Mar. 3 (gage height, 10.30 feet, present datum); minimum discharge (estimated because of ice effect), 3,800 second-feet Dec. 31 to Jan. 2; minimum gage height, 0.70 foot Sept. 19, 20. 1930-34: Maximum discharge, 124,000 second-feet June 18, 1932; maximum stage, that of Mar. 3, 1934; minimum discharge, that of Dec. 31, 1933 to Jan. 2, 1934; minimum gage height, 0.04 foot Nov. 30, 1931. Maximum stage known, 30.5 feet (present datum) Apr. 5, 1881.

Remarks.- Records good except those for periods of ice effect Dec. 11 to Mar. 3, and those estimated for Mar. 10, 11, which are fair. U. S. Weather Bureau gage at same site and datum used July 2-5, Sept. 21-26.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|----------------------|
| 1 | 12,300 | 11,400 | 15,600 | 3,800 | 11,000 | 10,000 | 18,400 | 19,900 | 24,000 | 30,900 | 11,500 | 7,350 |
| 2 | 12,300 | 11,600 | 16,100 | 3,800 | 11,400 | 25,000 | 19,100 | 19,900 | 24,000 | 30,900 | 10,000 | 7,150 |
| 3 | 12,400 | 11,800 | 16,000 | 3,900 | 11,700 | 70,000 | 19,100 | 20,700 | 24,000 | 29,100 | 9,520 | 7,780 |
| 4 | 12,600 | 11,700 | 15,700 | 4,000 | 11,700 | 39,200 | 19,900 | 22,300 | 24,000 | 28,200 | 9,520 | 8,400 |
| 5 | 12,600 | 11,900 | 15,300 | 4,400 | 11,700 | 29,600 | 20,700 | 24,800 | 25,700 | 28,200 | 9,520 | 7,350 |
| 6 | 12,500 | 12,100 | 15,100 | 4,600 | 11,000 | 27,800 | 20,700 | 25,700 | 28,200 | 26,600 | 9,520 | 6,760 |
| 7 | 12,300 | 12,100 | 14,900 | 4,800 | 10,800 | 26,900 | 21,500 | 22,300 | 29,100 | 25,700 | 9,060 | 6,380 |
| 8 | 12,200 | 12,100 | 14,800 | 5,000 | 11,000 | 25,900 | 22,300 | 20,700 | 34,800 | 24,600 | 8,620 | 6,200 |
| 9 | 12,000 | 12,100 | 14,200 | 5,300 | 12,000 | 24,600 | 21,500 | 22,300 | 35,800 | 24,000 | 9,520 | 5,800 |
| 10 | 11,900 | 11,900 | 13,500 | 5,400 | 12,600 | 22,000 | 20,700 | 21,500 | 27,400 | 24,000 | 8,620 | 5,500 |
| 11 | 11,700 | 11,700 | 12,800 | 5,600 | 13,200 | 20,200 | 22,300 | 29,100 | 24,800 | 21,500 | 8,620 | 5,680 |
| 12 | 11,800 | 11,300 | 11,300 | 5,900 | 14,100 | 19,100 | 27,400 | 32,800 | 24,000 | 20,700 | 8,180 | 6,020 |
| 13 | 11,700 | 11,300 | 9,300 | 6,300 | 15,000 | 20,100 | 24,000 | 30,900 | 22,300 | 19,100 | 8,620 | 6,200 |
| 14 | 11,700 | 10,500 | 8,400 | 6,700 | 16,200 | 20,100 | 20,700 | 29,100 | 24,000 | 18,400 | 8,400 | 6,580 |
| 15 | 11,600 | 10,200 | 7,900 | 7,300 | 18,000 | 19,000 | 19,100 | 28,200 | 26,600 | 17,600 | 8,400 | 6,020 |
| 16 | 11,900 | 10,000 | 7,300 | 8,000 | 19,800 | 18,600 | 18,400 | 27,400 | 25,700 | 16,900 | 9,520 | 6,020 |
| 17 | 11,700 | 9,660 | 6,800 | 8,100 | 19,100 | 19,400 | 19,100 | 26,600 | 26,600 | 16,200 | 10,500 | 5,850 |
| 18 | 11,700 | 9,520 | 6,500 | 8,300 | 17,000 | 18,500 | 22,300 | 25,700 | 25,700 | 15,600 | 11,500 | 5,600 |
| 19 | 11,600 | 9,660 | 6,200 | 8,900 | 14,000 | 17,700 | 24,000 | 25,700 | 24,000 | 15,000 | 10,500 | 5,330 |
| 20 | 11,600 | 10,400 | 6,000 | 9,200 | 11,800 | 21,500 | 23,200 | 24,800 | 24,800 | 15,000 | 10,500 | 5,150 |
| 21 | 11,500 | 10,900 | 5,800 | 9,600 | 10,000 | 24,700 | 20,700 | 24,800 | 34,800 | 14,300 | 9,520 | 5,500 |
| 22 | 11,500 | 20,500 | 5,500 | 9,800 | 7,000 | 22,200 | 19,900 | 26,600 | 52,600 | 13,700 | 9,520 | 5,680 |
| 23 | 11,500 | 23,700 | 5,200 | 9,900 | 5,600 | 19,900 | 19,100 | 30,900 | 48,700 | 13,100 | 9,520 | 5,850 |
| 24 | 11,400 | 21,300 | 5,000 | 10,200 | 4,400 | 27,100 | 17,600 | 33,800 | 42,100 | 12,600 | 9,060 | 6,380 |
| 25 | 11,400 | 18,100 | 4,800 | 10,000 | 4,000 | 39,700 | 19,100 | 31,800 | 37,000 | 12,600 | 8,400 | 14,600 |
| 26 | 11,100 | 17,400 | 4,600 | 9,000 | 4,000 | 35,000 | 19,100 | 29,100 | 32,800 | 12,600 | 7,970 | 12,500 |
| 27 | 11,200 | 15,300 | 4,400 | 9,000 | 4,000 | 31,100 | 18,400 | 28,200 | 30,900 | 12,100 | 7,350 | 6,180 |
| 28 | 11,200 | 15,900 | 4,200 | 9,000 | 4,500 | 26,500 | 19,100 | 27,400 | 30,000 | 11,700 | 7,560 | 6,760 |
| 29 | 11,300 | 15,300 | 4,000 | 9,600 | | 24,900 | 19,100 | 27,400 | 30,900 | 11,700 | 7,150 | 6,380 |
| 30 | 11,100 | 15,300 | 3,900 | 9,900 | | 23,500 | 19,900 | 27,400 | 30,900 | 11,700 | 6,950 | 6,200 |
| 31 | 11,100 | | 3,800 | 10,600 | | 20,500 | | 25,700 | | 11,300 | 6,950 | |
| Month | Maximum | | | | | Minimum | | | | | Mean | Run-off in acre-feet |
| October | 12,600 | | | | | 11,100 | | | | | 11,750 | 722,800 |
| November | 23,700 | | | | | 9,520 | | | | | 13,220 | 766,700 |
| December | 19,100 | | | | | 3,800 | | | | | 9,190 | 565,100 |
| January | 10,600 | | | | | 3,800 | | | | | 7,267 | 448,100 |
| February | 19,800 | | | | | 4,000 | | | | | 11,310 | 628,000 |
| March | 70,000 | | | | | 10,000 | | | | | 25,480 | 1,567,000 |
| April | 27,400 | | | | | 17,600 | | | | | 20,550 | 1,223,000 |
| May | 33,800 | | | | | 19,900 | | | | | 26,190 | 1,610,000 |
| June | 52,600 | | | | | 22,300 | | | | | 29,810 | 1,774,000 |
| July | 30,900 | | | | | 11,300 | | | | | 16,800 | 1,155,000 |
| August | 11,500 | | | | | 6,950 | | | | | 9,035 | 555,500 |
| September | 14,600 | | | | | 5,160 | | | | | 6,818 | 405,700 |
| The year | 70,000 | | | | | 3,800 | | | | | 15,810 | 11,450,000 |

Missouri River at Omaha, Nebr.

Location.- Water-stage recorder in sec. 23, T. 15 N., R. 14 E., half a mile downstream from Douglas Street Bridge, at Omaha. Zero of gage is 958.24 feet (revised by adjustment of 1929) above mean sea level.

Drainage area.- 322,800 square miles.

Records available.- September 1928 to September 1934.

Extremes.- Maximum discharge during year, 125,000 second-feet Mar. 5 (gage height, 15.00 feet); minimum discharge (estimated because of ice effect), 3,500 second-feet Dec. 27-29; minimum gage height, 2.93 feet Dec. 21.
1928-34: Maximum discharge, 198,000 second-feet June 7, 1929; maximum gage height, 15.12 feet June 19, 1932; minimum discharge, that of Dec. 27-29, 1933; minimum gage height, that of Dec. 21, 1933.
Maximum stage known, 24.3 feet Apr. 25, 1881.

Remarks.- Records good except those for periods of ice effect, Dec. 24 to Jan. 21, Jan. 28-31, Feb. 21-26, which are poor. U. S. Weather Bureau gage 1,900 feet upstream, to same datum, used Oct. 24 to Nov. 3, Feb. 14-28.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|--------|--------|--------|--------|--------|--------|---------|---------|--------|----------------------|--------|--------|
| 1 | 14,400 | 11,200 | 14,400 | 4,000 | 10,700 | 7,100 | 21,900 | 17,800 | 24,600 | 28,500 | 11,700 | 8,050 |
| 2 | 14,000 | 10,900 | 14,400 | 4,000 | 11,300 | 7,870 | 21,300 | 18,200 | 25,200 | 30,000 | 11,400 | 7,820 |
| 3 | 13,700 | 11,200 | 14,600 | 4,000 | 12,000 | 12,500 | 20,100 | 18,600 | 24,600 | 30,900 | 11,400 | 7,600 |
| 4 | 13,400 | 11,100 | 14,700 | 4,000 | 12,500 | 30,300 | 20,700 | 19,100 | 23,300 | 34,400 | 11,100 | 7,600 |
| 5 | 13,100 | 11,200 | 14,800 | 4,000 | 12,500 | 85,900 | 22,600 | 20,100 | 23,300 | 34,400 | 10,800 | 7,820 |
| 6 | 12,900 | 11,500 | 14,900 | 4,400 | 12,500 | 43,200 | 22,600 | 19,600 | 25,200 | 32,600 | 10,500 | 7,600 |
| 7 | 12,800 | 11,600 | 15,000 | 4,700 | 12,300 | 28,800 | 21,300 | 20,700 | 26,000 | 31,700 | 10,500 | 7,620 |
| 8 | 12,700 | 11,600 | 15,000 | 5,100 | 12,800 | 27,700 | 21,300 | 21,900 | 33,500 | 29,100 | 10,500 | 8,050 |
| 9 | 12,500 | 11,600 | 15,000 | 5,400 | 11,000 | 26,200 | 21,900 | 24,000 | 55,200 | 34,400 | 10,200 | 7,600 |
| 10 | 12,400 | 11,800 | 15,000 | 5,700 | 11,000 | 25,000 | 22,600 | 22,600 | 53,000 | 37,100 | 9,600 | 7,390 |
| 11 | 12,200 | 11,800 | 14,900 | 5,800 | 12,500 | 23,500 | 22,600 | 20,100 | 42,800 | 32,600 | 9,330 | 7,180 |
| 12 | 12,100 | 12,100 | 13,700 | 6,000 | 14,300 | 21,800 | 22,600 | 19,100 | 35,300 | 29,100 | 9,600 | 6,800 |
| 13 | 12,000 | 12,100 | 10,300 | 6,200 | 14,900 | 20,000 | 20,700 | 18,600 | 30,800 | 25,600 | 9,600 | 6,800 |
| 14 | 12,000 | 11,900 | 8,850 | 6,500 | 16,900 | 18,800 | 27,300 | 24,000 | 30,000 | 24,600 | 9,060 | 6,470 |
| 15 | 11,900 | 11,600 | 7,790 | 6,800 | 23,200 | 18,700 | 27,300 | 26,400 | 29,100 | 23,000 | 9,060 | 6,470 |
| 16 | 11,900 | 11,500 | 6,900 | 7,310 | 31,500 | 19,500 | 22,600 | 24,800 | 26,800 | 21,500 | 9,060 | 6,630 |
| 17 | 11,700 | 11,300 | 6,300 | 8,600 | 18,600 | 19,200 | 20,100 | 22,600 | 27,500 | 20,500 | 9,330 | 6,800 |
| 18 | 11,700 | 10,900 | 6,110 | 9,400 | 17,200 | 18,200 | 19,100 | 23,300 | 30,000 | 18,500 | 9,330 | 6,800 |
| 19 | 11,700 | 10,600 | 5,910 | 9,700 | 16,000 | 17,600 | 18,600 | 22,600 | 26,300 | 18,500 | 9,330 | 6,470 |
| 20 | 11,700 | 10,300 | 5,530 | 9,700 | 16,400 | 17,800 | 19,100 | 22,600 | 26,000 | 18,200 | 10,200 | 6,320 |
| 21 | 11,800 | 9,940 | 5,310 | 10,000 | 15,000 | 17,600 | 21,900 | 21,900 | 24,600 | 16,500 | 11,400 | 6,320 |
| 22 | 11,700 | 9,780 | 5,350 | 9,970 | 13,000 | 17,900 | 22,600 | 22,600 | 23,900 | 16,200 | 11,400 | 6,200 |
| 23 | 11,800 | 10,000 | 5,380 | 10,000 | 10,000 | 22,600 | 21,900 | 21,900 | 25,200 | 15,600 | 10,800 | 6,320 |
| 24 | 11,600 | 11,500 | 5,000 | 10,200 | 8,000 | 22,300 | 20,700 | 21,900 | 42,800 | 15,500 | 10,500 | 6,200 |
| 25 | 11,600 | 17,800 | 4,500 | 10,600 | 6,000 | 19,400 | 19,100 | 22,600 | 47,900 | 14,600 | 10,200 | 6,080 |
| 26 | 12,000 | 19,200 | 4,000 | 10,700 | 5,000 | 28,000 | 18,200 | 24,800 | 43,800 | 13,700 | 10,200 | 6,800 |
| 27 | 11,600 | 17,200 | 3,500 | 11,300 | 4,150 | 36,700 | 17,800 | 30,100 | 38,000 | 13,300 | 9,600 | 7,180 |
| 28 | 11,600 | 16,000 | 3,500 | 9,800 | 5,500 | 29,500 | 17,800 | 29,100 | 32,600 | 13,500 | 9,060 | 8,600 |
| 29 | 11,600 | 15,600 | 3,500 | 9,000 | | 26,100 | 17,800 | 27,300 | 30,900 | 12,700 | 8,540 | 11,700 |
| 30 | 11,300 | 14,800 | 3,500 | 9,600 | | 25,100 | 17,800 | 25,600 | 29,100 | 12,100 | 8,050 | 10,800 |
| 31 | 11,600 | | 3,700 | 10,000 | | 21,800 | | 24,800 | | 11,900 | 8,050 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 14,400 | 11,300 | 12,330 | 751,700 | | |
| November | | | | | | | 19,200 | 9,780 | 12,520 | 733,100 | | |
| December | | | | | | | 15,000 | 3,500 | 9,078 | 558,200 | | |
| January | | | | | | | 11,300 | 4,000 | 7,512 | 461,900 | | |
| February | | | | | | | 31,500 | 4,150 | 13,170 | 731,400 | | |
| March | | | | | | | 85,900 | 7,100 | 24,540 | 1,497,000 | | |
| April | | | | | | | 27,300 | 17,800 | 21,060 | 1,253,000 | | |
| May | | | | | | | 30,100 | 17,800 | 23,560 | 1,387,000 | | |
| June | | | | | | | 55,200 | 23,300 | 31,980 | 1,805,000 | | |
| July | | | | | | | 37,100 | 11,900 | 22,800 | 1,408,000 | | |
| August | | | | | | | 11,700 | 8,050 | 9,981 | 613,700 | | |
| September | | | | | | | 11,700 | 6,080 | 7,350 | 437,300 | | |
| The year | | | | | | | 85,900 | 3,500 | 16,210 | 11,740,000 | | |

Missouri River at Nebraska City, Nebr.

Location.— Water-stage recorder in sec. 10, T. 8 N., R. 14 E., at Waubonsie highway bridge at Nebraska City. Prior to Aug. 1, 1932, water-stage recorder to same datum on Chicago, Burlington & Quincy Railroad bridge 50 feet downstream was used. Zero of gage is 903.94 feet above mean sea level.

Drainage area.— 414,400 square miles.

Records available.— August 1929 to September 1934.

Extremes.— Maximum discharge during year, 138,000 second-feet Mar. 5 (gage height, 12.4 feet); minimum discharge (estimated because of ice effect), 4,000 second-feet Dec. 29; minimum gage height, 4.60 feet Sept. 23, 24.
1929-34: Maximum discharge, 138,000 second-feet June 17-19, 1932, Mar. 5, 1934; maximum gage height, 12.9 feet June 17, 1932; minimum discharge, 5,230 second-feet Dec. 13, 14, 1932; minimum gage height, 4.30 feet Dec. 3, 1929.
Maximum stage known, 18.0 feet in April 1881.

Remarks.— Records good except those for periods of ice effect, Dec. 11-13, Dec. 24 to Jan. 23, Jan. 29, Feb. 21-28, which are poor. U. S. Weather Bureau gage at same site and datum used Dec. 11-15, Feb. 25 to Mar. 1, Apr. 13 to May 16, Sept. 28-30.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|--------|--------|--------|--------|---------|--------|--------|--------|----------------------|--------|--------|
| 1 | 18,600 | 14,900 | 19,400 | 4,300 | 16,500 | 10,500 | 25,000 | 20,000 | 26,800 | 29,800 | 12,500 | 10,400 |
| 2 | 18,600 | 14,900 | 21,000 | 4,900 | 17,000 | 14,000 | 25,700 | 20,600 | 26,800 | 29,800 | 12,500 | 10,400 |
| 3 | 18,900 | 15,300 | 22,900 | 5,600 | 18,200 | 15,000 | 26,000 | 20,600 | 26,800 | 30,800 | 12,100 | 10,400 |
| 4 | 18,000 | 15,300 | 25,000 | 4,900 | 21,600 | 26,100 | 24,700 | 21,200 | 26,100 | 33,000 | 12,100 | 10,400 |
| 5 | 16,500 | 15,600 | 24,700 | 5,200 | 21,600 | 78,000 | 29,000 | 21,900 | 25,400 | 35,400 | 12,100 | 10,400 |
| 6 | 16,000 | 16,000 | 23,900 | 5,500 | 21,500 | 68,000 | 29,800 | 22,600 | 26,100 | 34,400 | 11,300 | 10,400 |
| 7 | 15,600 | 16,200 | 23,700 | 5,840 | 21,300 | 40,700 | 29,000 | 22,600 | 27,500 | 32,800 | 11,300 | 12,000 |
| 8 | 15,600 | 16,200 | 22,800 | 6,180 | 19,700 | 38,500 | 28,200 | 21,900 | 27,500 | 32,000 | 11,700 | 11,200 |
| 9 | 15,600 | 16,700 | 22,100 | 6,520 | 20,600 | 34,500 | 28,200 | 24,000 | 31,800 | 32,100 | 11,700 | 10,800 |
| 10 | 15,600 | 16,200 | 21,400 | 7,200 | 22,000 | 32,400 | 28,200 | 25,400 | 66,000 | 42,700 | 11,600 | 10,400 |
| 11 | 15,600 | 16,200 | 20,600 | 8,280 | 23,400 | 30,800 | 28,000 | 25,400 | 50,200 | 37,700 | 11,300 | 10,400 |
| 12 | 15,600 | 15,400 | 19,400 | 9,380 | 22,600 | 30,000 | 27,200 | 23,300 | 44,400 | 36,400 | 10,900 | 9,600 |
| 13 | 16,000 | 15,800 | 18,400 | 10,100 | 21,200 | 28,400 | 27,200 | 21,900 | 38,400 | 30,200 | 11,000 | 8,900 |
| 14 | 15,600 | 15,800 | 16,700 | 10,100 | 24,000 | 28,800 | 28,200 | 21,200 | 35,400 | 27,200 | 11,000 | 8,900 |
| 15 | 15,600 | 16,000 | 13,700 | 10,500 | 29,000 | 26,200 | 33,600 | 28,200 | 33,600 | 25,100 | 10,600 | 8,860 |
| 16 | 15,600 | 16,400 | 12,300 | 10,900 | 35,400 | 26,200 | 31,400 | 29,800 | 32,200 | 23,000 | 10,500 | 9,400 |
| 17 | 15,600 | 16,000 | 11,000 | 11,700 | 27,800 | 27,000 | 28,200 | 27,500 | 30,600 | 21,600 | 10,700 | 9,200 |
| 18 | 15,200 | 16,000 | 10,900 | 12,500 | 23,100 | 25,500 | 26,800 | 25,400 | 30,600 | 20,200 | 11,900 | 9,200 |
| 19 | 15,200 | 15,600 | 10,500 | 13,500 | 22,400 | 22,700 | 25,400 | 26,100 | 32,200 | 19,600 | 11,100 | 9,250 |
| 20 | 15,600 | 15,200 | 9,760 | 15,500 | 22,300 | 21,300 | 23,900 | 25,400 | 30,600 | 19,000 | 10,800 | 8,900 |
| 21 | 15,200 | 14,900 | 10,100 | 15,500 | 18,200 | 20,600 | 24,400 | 24,700 | 31,400 | 18,300 | 11,300 | 8,900 |
| 22 | 15,600 | 14,900 | 10,100 | 17,300 | 16,000 | 23,300 | 25,800 | 24,700 | 29,800 | 17,100 | 12,400 | 8,390 |
| 23 | 15,600 | 14,600 | 10,600 | 22,000 | 13,000 | 26,100 | 26,200 | 24,700 | 27,500 | 17,000 | 12,900 | 8,220 |
| 24 | 15,200 | 14,500 | 10,000 | 25,100 | 10,500 | 29,000 | 25,300 | 24,000 | 32,700 | 16,500 | 12,400 | 8,220 |
| 25 | 15,200 | 15,600 | 8,600 | 22,600 | 9,000 | 27,500 | 23,200 | 24,700 | 50,700 | 16,000 | 12,100 | 8,390 |
| 26 | 14,900 | 24,700 | 6,300 | 20,600 | 5,560 | 27,500 | 23,300 | 25,400 | 48,600 | 15,500 | 11,700 | 10,000 |
| 27 | 14,900 | 24,700 | 5,200 | 18,400 | 5,560 | 39,500 | 20,400 | 26,200 | 43,100 | 14,500 | 11,300 | 11,200 |
| 28 | 14,900 | 21,900 | 4,300 | 18,400 | 6,640 | 34,600 | 20,400 | 30,200 | 36,300 | 14,000 | 11,300 | 11,600 |
| 29 | 14,900 | 20,600 | 4,000 | 15,800 | 31,600 | 20,200 | 30,800 | 33,800 | 33,800 | 14,000 | 10,700 | 13,700 |
| 30 | 14,900 | 19,400 | 5,200 | 12,100 | 28,300 | 20,200 | 28,200 | 31,400 | 31,400 | 13,500 | 10,500 | 14,700 |
| 31 | 14,900 | | 5,800 | 12,100 | 26,900 | | 26,900 | | 26,900 | 12,500 | 10,100 | |
| Month | Maximum | | | | | Minimum | | Mean | | Run-off in acre-feet | | |
| October | 18,600 | | | | | 14,900 | | 15,700 | | 965,400 | | |
| November | 24,700 | | | | | 14,500 | | 16,720 | | 994,700 | | |
| December | 25,000 | | | | | 4,000 | | 14,550 | | 893,300 | | |
| January | 25,100 | | | | | 4,500 | | 11,880 | | 750,700 | | |
| February | 35,400 | | | | | 5,560 | | 19,180 | | 1,062,000 | | |
| March | 78,000 | | | | | 10,500 | | 30,200 | | 1,857,000 | | |
| April | 33,800 | | | | | 20,200 | | 26,080 | | 1,552,000 | | |
| May | 30,800 | | | | | 20,000 | | 24,690 | | 1,518,000 | | |
| June | 66,000 | | | | | 25,400 | | 35,150 | | 2,092,000 | | |
| July | 42,700 | | | | | 12,500 | | 24,560 | | 1,510,000 | | |
| August | 12,900 | | | | | 10,100 | | 11,460 | | 704,900 | | |
| September | 14,700 | | | | | 8,220 | | 10,090 | | 600,500 | | |
| The year | 78,000 | | | | | 4,000 | | 20,000 | | 14,480,000 | | |

Missouri River at St. Joseph, Mo.

Location.- Water-stage recorder in sec. 17, T. 57 N., R. 35 W., at St. Joseph & Grand Island Railway bridge at St. Joseph. Zero of gage is 788.19 feet above mean sea level. Datum lowered 5.50 feet effective Jan. 1, 1934.

Drainage area.- 424,300 square miles.

Records available.- August 1928 to September 1934.

Extremes.- Maximum discharge during year, 94,700 second-feet Mar. 6 (gage height, 12.9 feet); minimum, 4,260 second-feet Dec. 30 (gage height, 1.0 foot, present datum).
1928-34: Maximum discharge recorded, 196,000 second-feet June 4, 1929 (gage height, 15.6 feet, present datum); minimum discharge, 3,730 second-feet Dec. 15, 1932; minimum gage height, that of Dec. 30, 1933.
Maximum stage known, 27.2 feet, present datum, Apr. 29, 1881.

Remarks.- Records good except those for period of ice effect, Feb. 23 to Mar. 3, which are poor. U. S. Weather Bureau gage at same site and datum used Oct. 1 to Mar. 23, May 12-15, July 29 to Aug. 3.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|--------|--------|--------|--------|--------|--------|---------|---------|--------|--------|----------------------|--------|
| 1 | 19,700 | 15,100 | 20,800 | 6,090 | 11,600 | 9,100 | 27,300 | 19,600 | 26,800 | 32,400 | 13,900 | 12,000 |
| 2 | 19,700 | 15,400 | 20,400 | 5,020 | 15,400 | 10,700 | 26,200 | 19,600 | 26,200 | 31,200 | 13,200 | 13,200 |
| 3 | 18,900 | 15,400 | 21,700 | 5,580 | 15,800 | 11,400 | 26,200 | 19,600 | 25,700 | 30,000 | 12,600 | 12,300 |
| 4 | 18,400 | 15,400 | 22,700 | 5,910 | 17,300 | 14,300 | 26,200 | 20,500 | 26,200 | 30,500 | 12,300 | 12,000 |
| 5 | 18,000 | 15,700 | 24,200 | 5,480 | 21,300 | 31,400 | 25,100 | 21,400 | 26,800 | 31,700 | 12,300 | 11,700 |
| 6 | 16,600 | 15,700 | 25,600 | 5,840 | 21,700 | 75,800 | 26,200 | 21,800 | 26,800 | 34,200 | 12,100 | 10,800 |
| 7 | 16,400 | 16,100 | 25,700 | 6,300 | 21,700 | 66,500 | 30,200 | 21,800 | 25,600 | 35,500 | 11,800 | 10,600 |
| 8 | 15,900 | 16,100 | 24,600 | 6,590 | 22,200 | 37,600 | 30,200 | 21,600 | 27,600 | 34,500 | 11,400 | 10,300 |
| 9 | 16,100 | 16,100 | 25,600 | 6,800 | 19,500 | 35,700 | 28,400 | 23,500 | 32,000 | 32,100 | 11,400 | 10,800 |
| 10 | 16,100 | 16,600 | 22,700 | 7,670 | 19,500 | 32,400 | 28,500 | 23,300 | 57,900 | 30,800 | 11,400 | 10,800 |
| 11 | 16,100 | 16,600 | 21,900 | 8,540 | 19,900 | 31,800 | 28,400 | 24,200 | 76,600 | 35,300 | 11,800 | 10,800 |
| 12 | 16,100 | 16,600 | 21,000 | 9,410 | 21,700 | 30,700 | 28,500 | 25,100 | 57,900 | 41,000 | 11,400 | 11,400 |
| 13 | 15,700 | 15,800 | 19,000 | 10,400 | 23,200 | 30,100 | 27,900 | 26,800 | 45,000 | 38,000 | 11,100 | 10,800 |
| 14 | 16,200 | 15,800 | 19,000 | 10,700 | 20,800 | 29,000 | 27,500 | 35,300 | 41,500 | 34,800 | 10,700 | 10,000 |
| 15 | 16,200 | 16,600 | 18,100 | 11,100 | 20,800 | 27,900 | 26,200 | 24,600 | 35,500 | 30,500 | 12,100 | 9,720 |
| 16 | 16,200 | 16,400 | 15,100 | 10,900 | 25,100 | 26,800 | 29,600 | 22,700 | 33,400 | 28,000 | 12,100 | 9,720 |
| 17 | 16,500 | 16,400 | 15,400 | 11,700 | 35,300 | 26,800 | 32,100 | 27,900 | 32,800 | 25,700 | 10,700 | 9,440 |
| 18 | 16,100 | 16,400 | 12,000 | 12,100 | 34,000 | 27,900 | 29,000 | 29,600 | 31,000 | 24,100 | 10,400 | 9,160 |
| 19 | 16,200 | 16,200 | 11,300 | 12,800 | 28,500 | 27,300 | 26,700 | 27,300 | 30,500 | 22,700 | 10,700 | 9,160 |
| 20 | 15,800 | 16,200 | 11,500 | 15,700 | 25,100 | 25,700 | 25,100 | 26,100 | 31,000 | 20,600 | 11,800 | 9,160 |
| 21 | 15,800 | 15,800 | 9,920 | 15,700 | 24,100 | 23,600 | 23,700 | 25,600 | 31,600 | 20,600 | 11,800 | 9,160 |
| 22 | 15,800 | 15,800 | 10,600 | 16,800 | 22,200 | 22,700 | 23,700 | 25,100 | 31,000 | 19,800 | 11,400 | 9,160 |
| 23 | 15,800 | 15,200 | 10,700 | 18,500 | 17,300 | 22,700 | 24,600 | 25,100 | 31,000 | 18,900 | 11,400 | 8,600 |
| 24 | 15,800 | 15,200 | 11,100 | 23,200 | 13,600 | 23,600 | 26,700 | 24,200 | 27,800 | 18,100 | 12,100 | 8,600 |
| 25 | 15,700 | 15,800 | 10,400 | 26,200 | 11,100 | 30,100 | 26,100 | 24,200 | 27,200 | 17,700 | 12,500 | 8,600 |
| 26 | 15,700 | 15,800 | 9,020 | 24,200 | 8,700 | 29,500 | 24,200 | 24,200 | 36,900 | 17,100 | 12,100 | 9,720 |
| 27 | 15,100 | 17,300 | 6,460 | 21,900 | 7,880 | 29,500 | 22,700 | 23,200 | 45,600 | 16,800 | 11,800 | 16,000 |
| 28 | 15,100 | 26,200 | 5,610 | 20,100 | 8,220 | 38,300 | 21,400 | 24,200 | 42,000 | 16,400 | 11,400 | 17,200 |
| 29 | 15,100 | 24,200 | 4,820 | 18,200 | | 36,300 | 20,500 | 26,700 | 36,900 | 15,700 | 11,100 | 16,000 |
| 30 | 15,100 | 22,300 | 4,490 | 16,700 | | 33,100 | 20,000 | 30,100 | 33,700 | 14,800 | 10,700 | 14,300 |
| 31 | 15,100 | | 5,800 | 15,300 | | 26,900 | | 30,100 | | 14,500 | 10,700 | |
| Month | | | | | | | Maximum | Minimum | Mean | | Run-off in acre-feet | |
| October | | | | | | | 19,700 | 15,100 | 16,350 | | 1,006,000 | |
| November | | | | | | | 26,200 | 15,100 | 16,790 | | 998,900 | |
| December | | | | | | | 25,700 | 4,490 | 15,610 | | 959,600 | |
| January | | | | | | | 26,200 | 5,020 | 12,490 | | 768,300 | |
| February | | | | | | | 35,300 | 7,880 | 19,770 | | 1,098,000 | |
| March | | | | | | | 75,800 | 9,100 | 28,850 | | 1,835,000 | |
| April | | | | | | | 32,100 | 20,000 | 26,290 | | 1,564,000 | |
| May | | | | | | | 33,300 | 19,600 | 24,610 | | 1,513,000 | |
| June | | | | | | | 76,600 | 25,600 | 35,540 | | 2,115,000 | |
| July | | | | | | | 41,000 | 14,500 | 26,250 | | 1,614,000 | |
| August | | | | | | | 13,900 | 10,400 | 11,680 | | 718,400 | |
| September | | | | | | | 17,200 | 8,600 | 11,040 | | 656,900 | |
| The year | | | | | | | 76,600 | 4,490 | 20,510 | | 14,850,000 | |

Missouri River at Kansas City, Mo.

Location.- Water-stage recorder in sec. 31, T. 50 N., R. 33 W., at Chicago, Burlington & Quincy Railroad bridge at Kansas City, 1 mile below Kansas River. Zero of gage is 715.79 feet above mean sea level. Recorder was 200 feet downstream prior to Aug. 24, 1934.

Drainage area.- 489,200 square miles.

Records available.- August 1928 to September 1934.

Extremes.- Maximum discharge during year, 87,100 second-feet Mar. 7 (gage height, 13.45 feet); minimum, 5,980 second-feet Dec. 30 (gage height, 0.76 foot).
1928-34: Maximum discharge, 254,000 second-feet June 5, 1929 (gage height, 23.4 feet); minimum discharge, 5,180 second-feet Dec. 17, 18, 1932; minimum gage height, that of Dec. 30, 1933.
Maximum stage known, 38.0 feet June 16, 1844.

Remarks.- Records good. U. S. Weather Bureau gage at same site and datum used Oct. 1 to Nov. 28, Dec. 25 to Jan. 15, Jan. 18 to Feb. 3, Feb. 22 to Mar. 1, Mar. 12 to Apr. 12.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|--------|--------|--------|--------|--------|---------|--------|--------|--------|----------------------|--------|
| 1 | 29,800 | 16,700 | 24,000 | 7,980 | 15,100 | 11,100 | 30,700 | 21,700 | 30,400 | 38,300 | 15,100 | 11,500 |
| 2 | 26,400 | 16,700 | 23,100 | 7,700 | 12,900 | 11,400 | 28,700 | 21,700 | 28,100 | 35,100 | 14,700 | 13,100 |
| 3 | 24,900 | 17,000 | 22,600 | 7,700 | 15,700 | 12,300 | 28,100 | 21,700 | 27,000 | 35,500 | 14,400 | 15,200 |
| 4 | 23,000 | 17,000 | 23,500 | 7,440 | 17,600 | 14,500 | 31,700 | 22,600 | 25,900 | 34,800 | 14,000 | 14,900 |
| 5 | 21,800 | 16,600 | 23,700 | 7,700 | 19,700 | 19,000 | 28,700 | 24,400 | 26,000 | 33,000 | 13,600 | 14,500 |
| 6 | 21,300 | 17,000 | 25,100 | 7,400 | 22,100 | 37,000 | 27,000 | 24,800 | 26,600 | 33,600 | 13,200 | 13,500 |
| 7 | 20,900 | 17,000 | 27,200 | 7,760 | 23,000 | 37,500 | 28,100 | 23,900 | 26,700 | 36,100 | 13,200 | 11,900 |
| 8 | 20,000 | 17,300 | 27,700 | 7,700 | 23,400 | 32,900 | 31,300 | 23,600 | 25,500 | 37,600 | 12,500 | 11,600 |
| 9 | 19,200 | 17,700 | 26,100 | 6,660 | 23,800 | 42,200 | 32,000 | 22,800 | 28,400 | 35,500 | 12,100 | 11,300 |
| 10 | 18,400 | 17,700 | 25,100 | 7,440 | 22,000 | 36,800 | 29,600 | 22,800 | 40,000 | 33,600 | 11,800 | 12,000 |
| 11 | 18,100 | 18,100 | 24,600 | 8,540 | 21,100 | 36,100 | 29,300 | 22,800 | 35,200 | 33,000 | 11,800 | 12,300 |
| 12 | 18,800 | 18,100 | 23,900 | 9,400 | 21,600 | 34,200 | 29,200 | 24,400 | 31,000 | 36,800 | 12,100 | 12,600 |
| 13 | 18,200 | 18,100 | 22,900 | 10,000 | 22,400 | 34,800 | 30,400 | 25,100 | 30,500 | 42,200 | 11,800 | 14,500 |
| 14 | 17,800 | 17,400 | 22,000 | 11,200 | 23,700 | 33,000 | 29,600 | 32,300 | 49,700 | 38,300 | 11,800 | 13,800 |
| 15 | 18,200 | 17,800 | 21,600 | 12,200 | 22,800 | 31,100 | 28,100 | 36,800 | 43,800 | 34,600 | 11,400 | 12,400 |
| 16 | 18,600 | 17,400 | 20,300 | 12,200 | 21,600 | 29,800 | 27,500 | 31,100 | 38,400 | 30,400 | 13,400 | 11,800 |
| 17 | 18,200 | 17,700 | 17,500 | 12,300 | 26,600 | 29,200 | 30,400 | 27,100 | 34,600 | 28,100 | 13,300 | 11,100 |
| 18 | 18,600 | 18,100 | 15,100 | 12,300 | 39,000 | 28,100 | 33,000 | 30,800 | 34,600 | 25,900 | 11,600 | 11,100 |
| 19 | 18,900 | 18,100 | 14,600 | 13,200 | 34,900 | 28,700 | 30,400 | 34,000 | 35,500 | 24,400 | 11,100 | 10,800 |
| 20 | 18,600 | 17,400 | 13,600 | 13,400 | 28,800 | 28,100 | 27,500 | 31,600 | 31,300 | 23,000 | 11,100 | 10,800 |
| 21 | 18,200 | 17,400 | 13,200 | 14,300 | 25,600 | 27,000 | 25,400 | 28,800 | 35,100 | 21,700 | 11,800 | 11,800 |
| 22 | 17,800 | 17,000 | 12,500 | 16,700 | 23,700 | 24,900 | 24,400 | 27,700 | 34,200 | 20,800 | 12,500 | 12,400 |
| 23 | 17,800 | 16,600 | 12,200 | 17,500 | 22,800 | 23,900 | 24,400 | 26,600 | 33,600 | 20,000 | 11,800 | 11,500 |
| 24 | 17,400 | 16,600 | 12,500 | 19,100 | 20,700 | 24,100 | 24,900 | 26,600 | 36,600 | 18,600 | 11,800 | 10,800 |
| 25 | 17,400 | 16,600 | 12,500 | 23,700 | 15,000 | 25,000 | 27,000 | 25,400 | 37,100 | 18,900 | 12,000 | 10,500 |
| 26 | 17,100 | 17,000 | 11,900 | 27,700 | 10,900 | 32,700 | 27,500 | 24,900 | 36,500 | 18,500 | 12,600 | 10,500 |
| 27 | 17,100 | 17,000 | 10,500 | 25,600 | 10,000 | 31,700 | 26,000 | 24,400 | 46,800 | 18,100 | 12,800 | 11,500 |
| 28 | 17,100 | 20,000 | 8,180 | 23,200 | 10,900 | 32,300 | 24,400 | 24,400 | 53,600 | 17,300 | 12,400 | 18,500 |
| 29 | 16,700 | 27,000 | 7,100 | 21,600 | | 41,000 | 23,000 | 24,400 | 47,800 | 17,000 | 11,900 | 25,900 |
| 30 | 16,700 | 26,600 | 6,220 | 19,100 | | 38,600 | 22,200 | 26,500 | 41,500 | 16,200 | 11,600 | 22,000 |
| 31 | 16,700 | | 6,700 | 18,000 | | 35,100 | | 30,400 | | 15,500 | 11,200 | |
| Month | Maximum | | | | | | Minimum | | Mean | | Run-off in acre-feet | |
| October | 29,800 | | | | | | 16,700 | | 19,340 | | 1,189,000 | |
| November | 27,000 | | | | | | 16,600 | | 18,020 | | 1,072,000 | |
| December | 27,700 | | | | | | 6,220 | | 17,980 | | 1,105,000 | |
| January | 27,700 | | | | | | 6,560 | | 18,440 | | 826,600 | |
| February | 39,000 | | | | | | 10,000 | | 21,340 | | 1,185,000 | |
| March | 67,500 | | | | | | 11,100 | | 31,100 | | 1,912,000 | |
| April | 33,000 | | | | | | 22,200 | | 26,020 | | 1,668,000 | |
| May | 36,800 | | | | | | 21,700 | | 26,420 | | 1,624,000 | |
| June | 71,000 | | | | | | 25,500 | | 38,240 | | 2,275,000 | |
| July | 42,200 | | | | | | 25,200 | | 28,210 | | 1,755,000 | |
| August | 15,100 | | | | | | 11,100 | | 15,460 | | 762,200 | |
| September | 25,900 | | | | | | 10,500 | | 13,200 | | 785,700 | |
| The year | 71,000 | | | | | | 6,220 | | 22,300 | | 16,140,000 | |

Missouri River at Waverly, Mo.

Location.- Water-stage recorder in sec. 14, T. 51 N., R. 24 W., at bridge on State highway 24 at Waverly. Zero of gage is 645.49 feet above mean sea level. Zero of gage was raised 5.00 feet effective Jan. 1. Wire gage at same site and datum used prior to Apr. 5, 1934.

Drainage area.- 491,200 square miles.

Records available.- March 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 82,600 second-feet Mar. 8 (gage height, 13.6 feet); minimum discharge, 5,700 second-feet Dec. 31; minimum gage height, 1.8 feet Jan. 10, 11.

1929-34: Maximum discharge recorded, 283,000 second-feet June 5, 1929 (gage height, 19.9 feet, present datum); minimum discharge, that of Dec. 31, 1933; minimum gage height, 0.4 foot (present datum) Jan. 12, 1930.
Maximum stage known, 20.9 feet, present datum, July 22, 1915.

Remarks.- Records good except those for periods of ice effect, Dec. 27 to Jan. 2, Feb. 25 to Mar. 4, which are poor. Gage-height records furnished by the Corps of Engineers, U. S. Army, Oct. 1 to Apr. 4. U. S. Weather Bureau gage at same site and datum used Apr. 20 to May 9.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|--------|--------|--------|--------|--------|---------|--------|--------|--------|----------------------|--------|
| 1 | 36,800 | 16,800 | 26,900 | 7,600 | 18,000 | 11,200 | 35,200 | 21,900 | 28,300 | 41,300 | 15,400 | 10,800 |
| 2 | 29,800 | 16,800 | 25,800 | 7,900 | 16,100 | 11,900 | 31,100 | 21,900 | 30,300 | 36,200 | 15,300 | 11,600 |
| 3 | 27,100 | 16,800 | 23,700 | 8,160 | 15,600 | 12,900 | 28,300 | 21,900 | 29,200 | 36,200 | 15,000 | 12,400 |
| 4 | 26,000 | 16,600 | 23,200 | 7,820 | 15,300 | 13,600 | 28,300 | 21,400 | 26,700 | 35,400 | 14,600 | 15,100 |
| 5 | 23,900 | 17,300 | 22,900 | 7,560 | 17,600 | 13,600 | 32,300 | 22,600 | 26,100 | 34,300 | 14,300 | 15,900 |
| 6 | 22,200 | 17,300 | 23,400 | 7,760 | 18,400 | 18,200 | 28,800 | 24,500 | 26,100 | 32,700 | 13,600 | 15,100 |
| 7 | 21,300 | 17,300 | 24,700 | 7,760 | 21,400 | 41,700 | 27,100 | 25,000 | 26,700 | 33,300 | 13,600 | 14,200 |
| 8 | 20,900 | 16,900 | 26,100 | 7,760 | 23,400 | 76,400 | 27,700 | 24,000 | 26,700 | 35,000 | 13,200 | 12,900 |
| 9 | 20,000 | 17,300 | 27,800 | 7,760 | 23,400 | 53,700 | 31,400 | 23,500 | 25,600 | 37,200 | 13,200 | 12,000 |
| 10 | 19,600 | 17,300 | 26,500 | 7,100 | 23,900 | 42,500 | 31,400 | 22,900 | 28,800 | 35,400 | 12,500 | 11,600 |
| 11 | 18,000 | 17,700 | 25,400 | 7,480 | 22,400 | 37,800 | 29,700 | 22,900 | 42,700 | 32,700 | 12,200 | 11,600 |
| 12 | 18,400 | 18,100 | 24,600 | 8,440 | 21,500 | 35,600 | 27,700 | 22,900 | 69,000 | 32,100 | 12,200 | 13,300 |
| 13 | 18,500 | 17,900 | 23,600 | 9,640 | 21,500 | 34,300 | 27,700 | 24,500 | 69,000 | 36,800 | 12,100 | 12,900 |
| 14 | 18,400 | 17,900 | 23,100 | 10,300 | 22,400 | 34,700 | 29,700 | 28,300 | 54,200 | 41,600 | 12,100 | 14,200 |
| 15 | 18,400 | 18,000 | 22,400 | 10,900 | 24,000 | 32,500 | 29,700 | 33,400 | 45,600 | 38,600 | 11,800 | 14,600 |
| 16 | 18,400 | 18,000 | 21,500 | 11,900 | 22,900 | 29,300 | 28,200 | 37,000 | 40,100 | 33,900 | 11,400 | 13,300 |
| 17 | 18,500 | 17,600 | 20,400 | 12,600 | 21,500 | 28,700 | 27,700 | 31,100 | 37,000 | 30,400 | 13,000 | 11,600 |
| 18 | 18,400 | 17,800 | 17,400 | 12,600 | 27,700 | 27,000 | 30,400 | 27,200 | 34,600 | 27,700 | 14,000 | 10,800 |
| 19 | 18,800 | 18,200 | 15,200 | 12,600 | 40,500 | 27,500 | 33,200 | 30,500 | 34,000 | 26,100 | 12,800 | 10,800 |
| 20 | 18,800 | 18,200 | 14,800 | 12,900 | 34,400 | 27,600 | 30,300 | 32,800 | 33,400 | 24,500 | 11,600 | 10,400 |
| 21 | 18,800 | 17,700 | 13,600 | 13,600 | 28,700 | 27,000 | 27,600 | 31,100 | 32,300 | 23,200 | 11,200 | 13,300 |
| 22 | 18,400 | 17,300 | 13,400 | 14,300 | 25,500 | 27,000 | 25,400 | 29,100 | 35,800 | 21,900 | 11,800 | 13,300 |
| 23 | 18,000 | 17,300 | 12,700 | 16,100 | 23,400 | 24,900 | 24,400 | 27,700 | 35,800 | 21,000 | 12,600 | 12,000 |
| 24 | 18,000 | 16,900 | 12,300 | 17,200 | 21,500 | 23,900 | 24,500 | 27,100 | 34,600 | 20,100 | 11,900 | 11,600 |
| 25 | 17,600 | 16,600 | 12,600 | 18,000 | 17,800 | 23,900 | 25,000 | 26,500 | 37,000 | 19,500 | 11,900 | 10,800 |
| 26 | 17,600 | 16,600 | 12,300 | 21,900 | 13,900 | 25,000 | 27,200 | 25,500 | 37,000 | 18,700 | 12,000 | 9,980 |
| 27 | 17,200 | 17,000 | 11,800 | 27,700 | 11,600 | 31,700 | 27,700 | 25,000 | 36,400 | 18,400 | 12,300 | 10,400 |
| 28 | 17,200 | 17,000 | 10,200 | 26,100 | 9,960 | 31,100 | 26,100 | 24,400 | 49,000 | 18,000 | 12,600 | 12,400 |
| 29 | 17,200 | 19,300 | 8,200 | 25,500 | | 37,000 | 24,500 | 24,400 | 54,200 | 17,800 | 12,600 | 25,300 |
| 30 | 16,800 | 26,900 | 7,300 | 22,100 | | 43,400 | 22,900 | 24,000 | 47,300 | 16,800 | 12,100 | 28,800 |
| 31 | 16,800 | | 7,000 | 19,600 | | 39,500 | | 25,600 | | 16,100 | 11,800 | |
| Month | Maximum | | | | | | Minimum | | Mean | | Run-off in acre-feet | |
| October | 36,800 | | | | | | 16,800 | | 20,150 | | 1,239,000 | |
| November | 26,900 | | | | | | 16,600 | | 17,750 | | 1,056,000 | |
| December | 27,800 | | | | | | 7,000 | | 18,730 | | 1,151,000 | |
| January | 27,700 | | | | | | 7,100 | | 13,110 | | 806,000 | |
| February | 40,500 | | | | | | 9,960 | | 21,510 | | 1,195,000 | |
| March | 76,400 | | | | | | 11,200 | | 30,490 | | 1,875,000 | |
| April | 35,200 | | | | | | 22,900 | | 28,370 | | 1,688,000 | |
| May | 37,000 | | | | | | 21,400 | | 26,160 | | 1,608,000 | |
| June | 69,000 | | | | | | 25,600 | | 37,780 | | 2,248,000 | |
| July | 41,500 | | | | | | 16,100 | | 28,840 | | 1,773,000 | |
| August | 15,400 | | | | | | 11,200 | | 12,790 | | 786,600 | |
| September | 28,800 | | | | | | 9,980 | | 13,430 | | 799,300 | |
| The year | 76,400 | | | | | | 7,000 | | 22,410 | | 16,220,000 | |

Missouri River at Boonville, Mo.

Location.- Water-stage recorder in sec. 35, T. 49 N., R. 17 W., at Missouri-Kansas-Texas Railroad bridge at Boonville. Zero of gage is 564.95 feet above mean sea level.

Drainage area.- 505,700 square miles.

Records available.- October 1925 to September 1934.

Extremes.- Maximum discharge during year, 77,000 second-feet Mar. 9 (gage height, 12.2 feet); minimum, 8,020 second-feet Dec. 31 (gage height, 0.9 foot).
1925-34: Maximum discharge recorded, 381,000 second-feet Apr. 23, 1927 (gage height, 23.9 feet); minimum discharge, 6,200 second-feet Dec. 18, 1932; minimum gage height, that of Dec. 31, 1933.
Maximum stage known, 32.7 feet June 21, 1844.

Remarks.- Records good. Stage-discharge relation affected by ice Jan. 2. U. S. Weather Bureau gage at same site and datum used Dec. 14 to Jan. 18, Feb. 23 to Mar. 2, Aug. 2-6, 9-13.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|--------|--------|--------|--------|---------|--------|--------|--------|----------------------|--------|--------|
| 1 | 52,000 | 17,600 | 23,600 | 8,680 | 20,800 | 11,400 | 44,700 | 23,600 | 24,800 | 50,700 | 16,600 | 12,600 |
| 2 | 45,000 | 17,100 | 27,400 | 9,000 | 18,100 | 11,500 | 38,500 | 21,900 | 28,000 | 44,200 | 16,100 | 13,000 |
| 3 | 35,000 | 17,600 | 26,800 | 9,160 | 16,600 | 12,400 | 33,900 | 21,300 | 30,500 | 39,500 | 16,100 | 15,200 |
| 4 | 30,500 | 17,600 | 24,900 | 8,720 | 15,300 | 17,700 | 31,400 | 21,300 | 29,900 | 37,400 | 15,600 | 17,400 |
| 5 | 28,000 | 17,100 | 23,600 | 9,160 | 15,400 | 19,100 | 37,700 | 21,600 | 28,500 | 35,000 | 15,200 | 17,600 |
| 6 | 25,500 | 17,600 | 23,600 | 9,160 | 17,200 | 17,100 | 43,200 | 25,500 | 26,600 | 33,800 | 14,700 | 18,900 |
| 7 | 25,600 | 18,100 | 24,000 | 8,900 | 18,600 | 18,600 | 41,700 | 26,000 | 26,000 | 32,400 | 14,700 | 17,600 |
| 8 | 25,000 | 17,700 | 24,800 | 8,900 | 20,100 | 45,000 | 35,700 | 26,200 | 26,000 | 32,800 | 14,300 | 16,200 |
| 9 | 21,900 | 17,200 | 26,700 | 9,160 | 22,800 | 75,000 | 32,500 | 24,600 | 26,500 | 34,000 | 13,600 | 14,800 |
| 10 | 21,900 | 17,700 | 28,000 | 9,160 | 23,500 | 66,000 | 33,900 | 24,000 | 27,700 | 35,700 | 13,800 | 13,400 |
| 11 | 20,800 | 17,700 | 27,000 | 8,900 | 22,900 | 44,400 | 34,000 | 23,200 | 29,600 | 36,300 | 14,000 | 12,600 |
| 12 | 20,800 | 17,900 | 26,500 | 8,680 | 23,500 | 39,700 | 31,700 | 23,600 | 41,400 | 33,700 | 14,000 | 14,800 |
| 13 | 19,700 | 18,400 | 26,200 | 8,680 | 22,900 | 38,500 | 29,100 | 23,600 | 68,000 | 32,400 | 13,600 | 18,500 |
| 14 | 19,700 | 18,400 | 24,600 | 9,160 | 21,800 | 37,000 | 28,400 | 24,800 | 69,000 | 35,000 | 13,200 | 18,500 |
| 15 | 20,200 | 18,400 | 24,000 | 9,940 | 21,600 | 35,000 | 29,000 | 30,500 | 57,400 | 40,000 | 13,400 | 22,700 |
| 16 | 20,200 | 17,900 | 22,700 | 10,500 | 22,400 | 31,800 | 29,000 | 39,400 | 47,400 | 39,400 | 13,800 | 24,600 |
| 17 | 20,200 | 18,400 | 21,500 | 11,600 | 23,000 | 30,400 | 28,400 | 42,000 | 41,000 | 36,300 | 14,700 | 20,900 |
| 18 | 20,800 | 18,400 | 21,000 | 12,700 | 22,900 | 30,200 | 27,700 | 35,400 | 38,000 | 31,800 | 16,600 | 17,000 |
| 19 | 21,500 | 17,900 | 19,300 | 13,000 | 25,500 | 27,600 | 28,400 | 29,200 | 35,400 | 27,900 | 16,600 | 13,700 |
| 20 | 21,500 | 18,400 | 16,600 | 13,000 | 37,000 | 27,600 | 32,200 | 28,600 | 35,400 | 25,400 | 15,600 | 12,500 |
| 21 | 21,500 | 18,600 | 15,600 | 12,700 | 40,000 | 27,200 | 31,500 | 32,800 | 33,400 | 24,300 | 15,200 | 14,800 |
| 22 | 21,500 | 18,300 | 14,600 | 13,000 | 34,200 | 28,200 | 26,400 | 32,100 | 32,200 | 23,000 | 15,200 | 18,500 |
| 23 | 19,700 | 17,800 | 14,200 | 13,400 | 28,700 | 27,500 | 25,800 | 28,900 | 33,400 | 22,500 | 13,800 | 19,300 |
| 24 | 19,600 | 17,800 | 13,200 | 14,700 | 25,000 | 25,700 | 24,700 | 27,600 | 35,700 | 20,800 | 13,800 | 17,700 |
| 25 | 19,100 | 17,300 | 12,800 | 16,600 | 19,600 | 24,500 | 24,100 | 26,900 | 35,600 | 20,200 | 13,400 | 16,200 |
| 26 | 19,100 | 17,300 | 13,000 | 17,100 | 13,700 | 24,800 | 25,200 | 26,200 | 37,500 | 19,700 | 12,700 | 13,400 |
| 27 | 19,100 | 16,800 | 12,700 | 19,700 | 11,600 | 26,100 | 27,500 | 26,200 | 38,800 | 19,700 | 12,500 | 11,900 |
| 28 | 18,600 | 17,100 | 12,000 | 27,400 | 10,700 | 31,200 | 27,700 | 25,500 | 37,500 | 18,600 | 12,600 | 13,400 |
| 29 | 18,600 | 17,100 | 11,200 | 29,200 | 33,900 | 26,000 | 24,800 | 43,500 | 18,600 | 12,600 | 30,900 | |
| 30 | 19,100 | 18,100 | 9,040 | 24,900 | 39,700 | 26,100 | 24,800 | 53,700 | 18,100 | 13,000 | 46,900 | |
| 31 | 18,600 | | 8,020 | 22,500 | 47,700 | | 24,200 | | 17,600 | 12,600 | | |
| Month | Maximum | | | | | Minimum | | Mean | | Run-off in acre-feet | | |
| October | 52,000 | | | | | 18,600 | | 23,340 | | 1,435,000 | | |
| November | 18,500 | | | | | 16,800 | | 17,770 | | 1,058,000 | | |
| December | 28,000 | | | | | 8,020 | | 19,940 | | 1,228,000 | | |
| January | 28,000 | | | | | 8,680 | | 13,140 | | 809,000 | | |
| February | 40,000 | | | | | 10,700 | | 21,980 | | 1,221,000 | | |
| March | 75,000 | | | | | 11,300 | | 30,870 | | 1,898,000 | | |
| April | 44,700 | | | | | 24,100 | | 31,330 | | 1,864,000 | | |
| May | 42,000 | | | | | 21,300 | | 26,950 | | 1,657,000 | | |
| June | 69,000 | | | | | 24,800 | | 37,210 | | 2,214,000 | | |
| July | 50,700 | | | | | 17,600 | | 30,220 | | 1,888,000 | | |
| August | 16,600 | | | | | 12,500 | | 14,360 | | 880,500 | | |
| September | 46,900 | | | | | 11,900 | | 17,610 | | 1,060,000 | | |
| The year | 75,000 | | | | | 8,020 | | 23,730 | | 17,180,000 | | |

Missouri River near Bonnots Mill, Mo.

Location.- Water-stage recorder in SE 1/4 sec. 5, T. 44 N., R. 9 W., 1 1/2 miles east of Bonnots Mill. Zero of gage is 511.25 feet above mean sea level.

Drainage area.- 523,400 square miles.

Records available.- October 1931 to September 1934; at Isbell, 2 miles downstream, December 1928 to September 1931.

Extremes.- Maximum discharge during year, 80,700 second-feet Mar. 10 (gage height, 10.1 feet); minimum discharge, 10,500 second-feet Jan. 9; minimum gage height, -0.1 foot Jan. 2, 9.

1928-34: Maximum discharge recorded, 399,000 second-feet June 8, 1929; minimum discharge, 10,000 second-feet Dec. 20, 1932 (gage height, -1.2 feet).

Remarks.- Records good.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|--------|--------|--------|--------|---------|--------|---------|--------|--------|--------|----------------------|--------|
| 1 | 63,200 | 20,500 | 20,200 | 12,100 | 30,400 | 15,900 | 53,200 | 27,800 | 27,600 | 54,900 | 18,300 | 14,300 |
| 2 | 57,900 | 20,500 | 21,500 | 11,400 | 29,500 | 19,500 | 48,300 | 25,400 | 29,400 | 52,400 | 17,700 | 14,800 |
| 3 | 47,100 | 21,500 | 26,400 | 13,200 | 27,200 | 27,000 | 42,100 | 24,200 | 30,100 | 45,100 | 17,200 | 14,400 |
| 4 | 41,600 | 21,500 | 28,200 | 15,500 | 24,200 | 23,500 | 38,500 | 23,600 | 31,400 | 40,600 | 16,800 | 16,100 |
| 5 | 36,600 | 20,100 | 27,000 | 15,900 | 20,000 | 24,600 | 36,900 | 23,000 | 30,800 | 39,100 | 16,300 | 18,300 |
| 6 | 33,800 | 19,700 | 28,200 | 13,500 | 19,000 | 27,000 | 42,900 | 24,200 | 30,600 | 36,200 | 16,300 | 19,300 |
| 7 | 31,200 | 19,700 | 27,600 | 12,400 | 22,000 | 28,200 | 50,800 | 28,400 | 30,600 | 34,800 | 15,900 | 19,900 |
| 8 | 29,000 | 21,100 | 27,000 | 10,900 | 22,500 | 30,800 | 49,100 | 28,400 | 30,200 | 33,400 | 15,800 | 19,900 |
| 9 | 27,000 | 21,600 | 28,700 | 10,900 | 23,000 | 60,300 | 42,100 | 27,200 | 28,600 | 33,400 | 15,800 | 18,000 |
| 10 | 26,400 | 21,000 | 29,300 | 12,700 | 25,800 | 77,700 | 36,900 | 27,800 | 30,100 | 34,800 | 15,900 | 17,300 |
| 11 | 28,200 | 20,500 | 29,900 | 13,000 | 27,000 | 63,000 | 38,300 | 27,200 | 31,400 | 36,900 | 15,900 | 15,700 |
| 12 | 27,600 | 20,500 | 28,800 | 12,300 | 25,400 | 50,000 | 40,600 | 26,600 | 29,800 | 37,600 | 16,700 | 26,700 |
| 13 | 25,800 | 20,100 | 29,400 | 11,300 | 26,400 | 46,700 | 37,600 | 26,400 | 40,800 | 34,800 | 15,400 | 41,200 |
| 14 | 24,000 | 19,700 | 29,200 | 10,900 | 27,600 | 46,700 | 33,400 | 25,800 | 67,900 | 32,700 | 14,300 | 40,600 |
| 15 | 23,500 | 21,000 | 29,600 | 10,900 | 27,000 | 45,100 | 31,400 | 26,400 | 68,800 | 34,800 | 13,900 | 33,700 |
| 16 | 23,000 | 22,000 | 28,800 | 11,300 | 27,000 | 44,400 | 30,800 | 32,700 | 58,600 | 39,300 | 21,000 | 38,200 |
| 17 | 22,500 | 22,000 | 26,600 | 12,700 | 27,000 | 42,900 | 31,400 | 42,600 | 49,900 | 40,100 | 35,500 | 35,300 |
| 18 | 24,000 | 22,000 | 24,200 | 14,300 | 27,000 | 36,900 | 32,000 | 45,500 | 43,600 | 37,200 | 24,000 | 29,900 |
| 19 | 25,800 | 21,500 | 22,600 | 14,700 | 25,200 | 32,000 | 29,900 | 42,100 | 39,800 | 33,000 | 19,000 | 23,700 |
| 20 | 29,400 | 20,100 | 26,800 | 14,300 | 27,600 | 32,700 | 31,200 | 35,500 | 36,900 | 29,200 | 17,600 | 19,300 |
| 21 | 28,200 | 20,100 | 24,400 | 14,300 | 39,300 | 34,100 | 34,700 | 31,400 | 34,800 | 27,800 | 19,000 | 16,500 |
| 22 | 35,500 | 21,000 | 22,000 | 14,700 | 43,700 | 34,100 | 34,500 | 34,200 | 34,800 | 26,600 | 18,500 | 18,800 |
| 23 | 39,700 | 21,000 | 20,000 | 15,100 | 41,300 | 34,100 | 30,900 | 37,100 | 34,100 | 24,500 | 16,700 | 21,700 |
| 24 | 25,200 | 21,500 | 18,700 | 16,700 | 35,500 | 34,100 | 28,300 | 34,900 | 34,100 | 23,500 | 15,500 | 22,700 |
| 25 | 24,600 | 22,000 | 16,200 | 18,000 | 32,000 | 30,000 | 26,600 | 32,100 | 36,000 | 23,000 | 14,700 | 21,700 |
| 26 | 24,000 | 21,000 | 15,300 | 19,000 | 25,100 | 27,000 | 26,000 | 30,700 | 36,700 | 23,000 | 14,700 | 18,800 |
| 27 | 26,200 | 18,900 | 15,500 | 20,600 | 21,000 | 33,500 | 26,600 | 30,400 | 37,600 | 22,500 | 13,900 | 16,700 |
| 28 | 24,000 | 16,600 | 18,900 | 22,500 | 18,600 | 36,600 | 27,800 | 27,800 | 39,600 | 22,000 | 13,500 | 16,900 |
| 29 | 22,000 | 20,200 | 18,900 | 26,400 | | 40,300 | 28,600 | 27,600 | 39,100 | 20,300 | 13,000 | 40,500 |
| 30 | 20,500 | 20,600 | 16,800 | 30,800 | | 41,400 | 29,100 | 30,100 | 45,100 | 20,300 | 13,900 | 56,600 |
| 31 | 20,100 | | 14,100 | 31,400 | | 46,700 | | 28,800 | | 19,300 | 14,300 | |
| Month | | | | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | |
| October | | | | | 63,200 | | 20,100 | | 29,990 | | 1,844,000 | |
| November | | | | | 22,500 | | 18,600 | | 20,720 | | 1,233,000 | |
| December | | | | | 29,900 | | 14,100 | | 23,900 | | 1,469,000 | |
| January | | | | | 31,400 | | 10,900 | | 15,600 | | 959,200 | |
| February | | | | | 43,700 | | 18,600 | | 27,440 | | 1,524,000 | |
| March | | | | | 77,700 | | 15,900 | | 37,640 | | 2,314,000 | |
| April | | | | | 53,200 | | 26,000 | | 36,680 | | 2,123,000 | |
| May | | | | | 46,500 | | 23,000 | | 30,220 | | 1,858,000 | |
| June | | | | | 68,800 | | 27,600 | | 37,970 | | 2,259,000 | |
| July | | | | | 54,900 | | 19,300 | | 32,680 | | 2,009,000 | |
| August | | | | | 35,500 | | 13,500 | | 17,020 | | 1,046,000 | |
| September | | | | | 56,600 | | 14,300 | | 24,250 | | 1,443,000 | |
| The year | | | | | 77,700 | | 10,900 | | 27,740 | | 20,080,000 | |

Missouri River at Hermann, Mo.

Location.- Water-stage recorder in SW $\frac{1}{4}$ sec. 25, T. 46 N., R. 5 W., at State highway bridge at Hermann. Zero of gage is 481.49 feet above mean sea level.

Drainage area.- 528,200 square miles.

Records available.- August 1928 to September 1934.

Extremes.- Maximum discharge during year, 85,000 second-feet Mar. 10 (gage height, 11.28 feet); minimum recorded, 12,400 second-feet Jan. 9; minimum gage height, 0.4 foot Jan. 2, 14, 15.
1928-34: Maximum discharge recorded, 407,000 second-feet June 8, 1929 (gage height, 24.6 feet); minimum discharge, 10,700 second-feet Dec. 21, 1932; minimum gage height, 0.4 foot Dec. 22, 1932, Jan. 2, 14, 15, 1934.
Maximum stage known, 35.7 feet in June 1844.

Remarks.- Records good. U. S. Weather Bureau gage used Dec. 26 to Jan. 3, Jan. 7-18, Jan. 30 to Feb. 2, Feb. 9-11, Feb. 25 to Mar. 1, June 8-24, June 28 to July 20, Aug. 14, 15, Aug. 17 to Sept. 12, Sept. 20-28.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|--------|--------|--------|--------|--------|---------|---------|--------|----------------------|--------|--------|--------|
| 1 | 63,700 | 21,700 | 20,300 | 13,400 | 32,300 | 17,800 | 55,200 | 30,200 | 29,600 | 51,000 | 19,800 | 15,600 |
| 2 | 61,000 | 22,700 | 21,700 | 12,600 | 31,200 | 18,700 | 54,500 | 28,500 | 29,600 | 53,500 | 19,300 | 16,700 |
| 3 | 52,300 | 22,200 | 24,700 | 13,400 | 29,100 | 28,700 | 48,200 | 26,900 | 30,200 | 47,900 | 18,400 | 16,700 |
| 4 | 44,900 | 23,200 | 26,400 | 15,200 | 26,900 | 30,400 | 43,400 | 25,900 | 31,500 | 42,400 | 17,900 | 15,700 |
| 5 | 39,100 | 22,700 | 26,400 | 16,600 | 23,200 | 28,000 | 40,600 | 25,500 | 31,900 | 39,600 | 17,500 | 17,000 |
| 6 | 35,200 | 21,700 | 27,800 | 15,300 | 19,300 | 30,800 | 42,100 | 26,800 | 31,400 | 37,200 | 17,200 | 19,300 |
| 7 | 32,400 | 21,300 | 28,400 | 13,600 | 22,700 | 32,300 | 48,200 | 29,400 | 30,400 | 35,400 | 16,700 | 20,200 |
| 8 | 30,100 | 22,200 | 27,800 | 12,800 | 23,700 | 32,900 | 53,100 | 30,100 | 30,900 | 34,300 | 16,300 | 20,700 |
| 9 | 28,500 | 23,200 | 28,000 | 12,400 | 23,700 | 43,100 | 48,200 | 29,000 | 29,900 | 33,100 | 15,800 | 20,200 |
| 10 | 27,400 | 23,200 | 29,500 | 13,300 | 26,300 | 42,000 | 42,100 | 28,000 | 31,500 | 33,700 | 15,900 | 19,300 |
| 11 | 28,900 | 22,200 | 30,000 | 14,500 | 27,400 | 72,200 | 40,800 | 28,500 | 34,100 | 35,500 | 16,300 | 18,400 |
| 12 | 29,000 | 22,200 | 29,500 | 14,500 | 27,900 | 57,700 | 42,800 | 27,900 | 31,100 | 37,300 | 16,000 | 23,900 |
| 13 | 26,400 | 21,300 | 29,500 | 13,300 | 26,900 | 50,600 | 42,800 | 27,400 | 33,900 | 36,700 | 16,400 | 56,700 |
| 14 | 25,900 | 20,800 | 30,200 | 12,900 | 28,500 | 49,200 | 38,900 | 26,400 | 54,000 | 34,900 | 15,300 | 61,000 |
| 15 | 24,800 | 21,200 | 30,800 | 12,900 | 27,900 | 48,500 | 35,900 | 27,600 | 72,100 | 34,900 | 14,800 | 53,800 |
| 16 | 24,300 | 22,600 | 30,600 | 13,700 | 27,900 | 46,100 | 34,700 | 31,000 | 64,200 | 37,900 | 25,300 | 50,300 |
| 17 | 23,200 | 23,100 | 29,000 | 14,500 | 27,900 | 45,500 | 34,700 | 38,900 | 54,700 | 41,100 | 50,300 | 45,500 |
| 18 | 24,300 | 22,600 | 27,400 | 15,800 | 28,500 | 42,100 | 35,900 | 47,100 | 46,000 | 39,400 | 35,900 | 38,900 |
| 19 | 25,900 | 22,600 | 25,600 | 16,100 | 27,400 | 37,100 | 36,600 | 46,400 | 43,100 | 35,700 | 23,200 | 33,000 |
| 20 | 26,500 | 21,700 | 26,100 | 16,600 | 27,400 | 34,700 | 36,500 | 38,700 | 39,100 | 32,100 | 19,600 | 25,900 |
| 21 | 30,200 | 21,200 | 29,600 | 16,100 | 34,000 | 37,100 | 38,300 | 34,500 | 35,900 | 29,300 | 19,800 | 21,200 |
| 22 | 37,100 | 21,700 | 26,900 | 16,100 | 43,800 | 37,700 | 39,500 | 34,500 | 35,900 | 28,600 | 21,700 | 20,200 |
| 23 | 38,900 | 22,100 | 24,200 | 16,600 | 42,800 | 36,500 | 35,900 | 38,700 | 35,400 | 26,400 | 18,900 | 22,200 |
| 24 | 30,200 | 22,100 | 22,200 | 16,600 | 37,700 | 37,100 | 32,400 | 37,100 | 36,300 | 24,900 | 17,500 | 24,300 |
| 25 | 26,900 | 22,600 | 19,900 | 17,900 | 34,100 | 35,900 | 30,200 | 35,300 | 35,300 | 24,300 | 16,600 | 23,200 |
| 26 | 25,900 | 22,700 | 18,000 | 19,400 | 27,200 | 32,400 | 29,600 | 34,100 | 37,900 | 25,300 | 16,000 | 21,200 |
| 27 | 25,400 | 21,300 | 17,400 | 20,700 | 22,300 | 42,100 | 29,100 | 32,400 | 33,500 | 25,800 | 15,800 | 18,400 |
| 28 | 26,400 | 19,900 | 18,100 | 21,700 | 19,200 | 48,200 | 30,200 | 30,700 | 39,600 | 23,300 | 16,100 | 18,900 |
| 29 | 24,800 | 20,300 | 20,400 | 24,200 | | 47,500 | 31,300 | 30,100 | 40,400 | 22,200 | 14,700 | 42,600 |
| 30 | 23,200 | 21,300 | 18,100 | 28,800 | | 48,900 | 31,300 | 30,600 | 42,600 | 21,200 | 15,100 | 62,400 |
| 31 | 22,700 | | 15,400 | 32,300 | | 48,900 | | 30,600 | | 20,700 | 15,100 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 63,700 | 22,700 | 31,890 | 1,961,000 | | | |
| November | | | | | | 23,200 | 19,900 | 21,990 | 1,308,000 | | | |
| December | | | | | | 30,800 | 15,400 | 25,290 | 1,555,000 | | | |
| January | | | | | | 32,300 | 12,400 | 16,870 | 1,019,000 | | | |
| February | | | | | | 43,800 | 19,200 | 28,470 | 1,561,000 | | | |
| March | | | | | | 59,000 | 17,800 | 41,310 | 2,540,000 | | | |
| April | | | | | | 58,200 | 29,100 | 39,440 | 2,347,000 | | | |
| May | | | | | | 47,100 | 25,300 | 31,930 | 1,963,000 | | | |
| June | | | | | | 72,100 | 29,600 | 38,770 | 2,307,000 | | | |
| July | | | | | | 53,500 | 20,700 | 33,600 | 2,066,000 | | | |
| August | | | | | | 50,300 | 14,700 | 19,180 | 1,179,000 | | | |
| September | | | | | | 62,400 | 15,600 | 28,790 | 1,713,000 | | | |
| The year | | | | | | 82,000 | 12,400 | 29,750 | 21,540,000 | | | |

Missouri River at Ruegg, Mo.

Location.- Wire gage in T. 47 N., R. 7 E., at highway bridge 50 feet below Chicago, Burlington & Quincy Railroad bridge a quarter of a mile northeast of Ruegg and 8 miles above confluence with Mississippi River. Zero of gage is 399.23 feet above mean sea level (revised), U. S. Coast & Geodetic Survey datum, adjustment of 1929.

Drainage area.- 529,000 square miles.

Records available.- March 1933 to September 1934.

Extremes.- Maximum discharge during year, 77,200 second-feet Mar. 11 (gage height, 10.6 feet); minimum, 12,800 second-feet (discharge measurement) Jan. 16 (gage height, 2.27 feet).
1933-34: Maximum discharge, 187,000 second-feet May 14, 1933; maximum gage height, 20.83 feet May 16, 1933; minimum discharge, that of Jan. 16, 1934.
Maximum stage known, 38.4 feet June 1944.

Remarks.- Records good. Gage-height record furnished by Corps of Engineers, U. S. Army.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|--------|--------|--------|--------|--------|--------|---------|---------|--------|----------------------|--------|--------|
| 1 | 43,500 | 23,200 | 21,200 | 17,300 | 30,600 | 22,500 | 48,000 | 31,800 | 30,900 | 39,600 | 20,800 | 15,600 |
| 2 | 61,200 | 22,200 | 21,700 | 15,500 | 32,400 | 21,600 | 54,000 | 31,200 | 29,800 | 47,200 | 20,400 | 17,300 |
| 3 | 63,400 | 22,700 | 22,000 | 13,800 | 32,400 | 20,500 | 56,000 | 28,800 | 29,300 | 52,600 | 19,400 | 18,200 |
| 4 | 53,000 | 23,200 | 24,000 | 13,400 | 30,000 | 25,300 | 49,000 | 27,700 | 30,400 | 48,000 | 18,900 | 17,800 |
| 5 | 48,300 | 23,300 | 27,700 | 14,700 | 28,300 | 30,000 | 42,600 | 27,100 | 31,500 | 42,600 | 18,500 | 16,400 |
| 6 | 39,600 | 22,800 | 29,300 | 16,900 | 26,100 | 26,800 | 38,600 | 26,100 | 32,100 | 39,400 | 18,000 | 16,400 |
| 7 | 35,200 | 21,800 | 28,800 | 17,300 | 23,000 | 28,800 | 41,000 | 26,600 | 31,400 | 37,800 | 17,100 | 18,800 |
| 8 | 33,200 | 21,300 | 28,800 | 16,500 | 22,000 | 30,000 | 47,100 | 27,600 | 31,400 | 36,400 | 17,100 | 19,300 |
| 9 | 30,800 | 21,900 | 28,500 | 14,300 | 24,000 | 30,000 | 54,000 | 30,400 | 31,000 | 34,300 | 16,900 | 20,200 |
| 10 | 29,000 | 23,200 | 28,500 | 13,800 | 24,600 | 35,000 | 50,000 | 29,900 | 30,700 | 33,600 | 16,000 | 20,500 |
| 11 | 28,000 | 23,200 | 29,000 | 13,800 | 25,700 | 77,200 | 43,400 | 29,300 | 33,700 | 34,100 | 15,500 | 19,400 |
| 12 | 28,000 | 22,700 | 30,100 | 14,700 | 27,400 | 73,600 | 38,100 | 29,300 | 34,200 | 35,500 | 16,000 | 17,800 |
| 13 | 28,600 | 22,700 | 30,100 | 14,700 | 28,400 | 58,000 | 38,100 | 28,300 | 32,500 | 37,600 | 16,000 | 20,100 |
| 14 | 28,000 | 21,700 | 31,300 | 14,300 | 27,400 | 49,000 | 42,800 | 28,300 | 32,300 | 37,600 | 16,900 | 21,000 |
| 15 | 26,300 | 21,700 | 30,100 | 13,400 | 27,400 | 48,100 | 41,000 | 27,100 | 52,000 | 35,000 | 16,400 | 22,300 |
| 16 | 26,100 | 21,700 | 30,700 | 13,000 | 28,400 | 47,600 | 37,800 | 26,600 | 70,900 | 33,600 | 16,400 | 24,500 |
| 17 | 24,600 | 22,700 | 31,300 | 13,000 | 28,400 | 45,300 | 36,400 | 26,200 | 66,000 | 36,400 | 28,600 | 21,000 |
| 18 | 23,500 | 23,200 | 29,500 | 13,400 | 28,400 | 45,300 | 35,000 | 36,600 | 55,000 | 41,000 | 52,000 | 45,300 |
| 19 | 24,000 | 23,200 | 28,500 | 14,700 | 28,400 | 42,600 | 35,000 | 44,800 | 49,000 | 40,200 | 41,500 | 39,600 |
| 20 | 24,500 | 22,700 | 26,300 | 16,000 | 28,600 | 37,800 | 36,400 | 46,600 | 43,500 | 36,400 | 26,300 | 34,400 |
| 21 | 27,800 | 22,200 | 26,300 | 16,900 | 27,200 | 35,000 | 36,400 | 40,800 | 39,200 | 33,600 | 21,500 | 29,400 |
| 22 | 31,800 | 21,800 | 29,000 | 16,900 | 28,800 | 36,400 | 36,400 | 36,600 | 36,600 | 30,600 | 22,000 | 23,400 |
| 23 | 36,400 | 22,200 | 27,200 | 16,900 | 40,200 | 37,800 | 38,100 | 34,400 | 36,100 | 28,800 | 21,500 | 20,900 |
| 24 | 40,200 | 22,200 | 26,100 | 16,900 | 44,400 | 36,400 | 38,100 | 35,300 | 38,100 | 27,200 | 21,000 | 21,000 |
| 25 | 33,600 | 23,200 | 23,500 | 16,400 | 40,200 | 36,400 | 32,600 | 37,900 | 36,600 | 25,600 | 19,100 | 24,000 |
| 26 | 26,800 | 22,700 | 21,000 | 18,200 | 35,700 | 35,900 | 30,900 | 36,800 | 35,700 | 24,500 | 17,700 | 24,500 |
| 27 | 27,200 | 23,200 | 16,800 | 19,100 | 32,300 | 36,100 | 29,700 | 34,900 | 37,600 | 25,000 | 16,400 | 23,000 |
| 28 | 27,800 | 22,000 | 17,600 | 20,600 | 27,400 | 41,900 | 29,000 | 31,700 | 37,600 | 25,000 | 15,900 | 21,000 |
| 29 | 27,800 | 20,800 | 17,600 | 21,500 | | 50,000 | 29,400 | 30,500 | 39,400 | 24,000 | 15,500 | 20,600 |
| 30 | 26,100 | 20,300 | 18,700 | 23,000 | | 50,000 | 31,200 | 30,300 | 39,400 | 22,800 | 15,500 | 38,600 |
| 31 | 24,000 | | 20,600 | 27,200 | | 49,000 | | 29,800 | | 21,800 | 15,600 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 63,400 | 23,500 | 33,090 | 2,054,000 | | |
| November | | | | | | | 23,300 | 20,300 | 22,370 | 1,331,000 | | |
| December | | | | | | | 31,800 | 17,600 | 25,920 | 1,594,000 | | |
| January | | | | | | | 27,800 | 13,000 | 18,360 | 1,006,000 | | |
| February | | | | | | | 44,400 | 22,000 | 29,580 | 1,643,000 | | |
| March | | | | | | | 77,200 | 20,600 | 40,150 | 2,469,000 | | |
| April | | | | | | | 56,000 | 29,000 | 39,870 | 2,372,000 | | |
| May | | | | | | | 46,500 | 26,100 | 31,970 | 1,966,000 | | |
| June | | | | | | | 70,900 | 29,300 | 38,500 | 2,291,000 | | |
| July | | | | | | | 52,600 | 21,800 | 34,450 | 2,118,000 | | |
| August | | | | | | | 52,000 | 16,500 | 20,350 | 1,250,000 | | |
| September | | | | | | | 62,500 | 16,500 | 27,460 | 1,634,000 | | |
| The year | | | | | | | 77,200 | 13,000 | 29,980 | 21,710,000 | | |

Ruby River near Alder, Mont.

Location.- Staff gage in SW $\frac{1}{4}$ sec. 21, T. 6 S., R. 4 W., 1,000 feet below highway bridge $\frac{1}{2}$ miles south of Alder.

Records available.- April 1929 to September 1934. Records obtained April 1911 to June 1914 at Lauterbach ranch, 8 miles south of Alder, not comparable with records for present site because of inflow and diversions between stations.

Extremes.- Maximum discharge recorded during period, 79 second-feet Apr. 25 (gage height, 1.28 feet); minimum discharge, 3.2 second-feet July 23 and Aug. 11 (gage height, 0.36 foot).
1929-34: Maximum discharge, 745 second-feet May 25, 1929 (gage height, 3.53 feet); minimum, that of July 23 and Aug. 11, 1934.

Remarks.- Records good except those for August, which are fair. No records Oct. 1 to Mar. 31. Discharge estimated Aug. 8, 12-15, 20-23, Aug. 29 to Sept. 1. Numerous diversions above station.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------|------|------|------|------|------|---------|---------|------|------|-------------------------|-------|
| 1 | | | | | | | 57 | 46 | 14 | 12 | 5.8 | 7.4 |
| 2 | | | | | | | 55 | 40 | 25 | 11 | 5.8 | 7.0 |
| 3 | | | | | | | 50 | 38 | 23 | 11 | 6.4 | 6.4 |
| 4 | | | | | | | 48 | 36 | 18 | 12 | 7.0 | 7.0 |
| 5 | | | | | | | 50 | 38 | 19 | 14 | 6.4 | 7.9 |
| 6 | | | | | | | | | | | | |
| 7 | | | | | | | 50 | 46 | 28 | 20 | 7.9 | 8.8 |
| 8 | | | | | | | 53 | 40 | 57 | 18 | 7.9 | 26 |
| 9 | | | | | | | 50 | 48 | 30 | 19 | 6.6 | 32 |
| 10 | | | | | | | 53 | 42 | 12 | 19 | 5.2 | 36 |
| | | | | | | | 36 | 34 | 17 | 15 | 3.6 | 38 |
| 11 | | | | | | | 36 | 42 | 23 | 15 | 3.2 | 18 |
| 12 | | | | | | | 34 | 38 | 14 | 13 | 4.1 | 32 |
| 13 | | | | | | | 28 | 40 | 12 | 14 | 5.1 | 30 |
| 14 | | | | | | | 25 | 44 | 23 | 13 | 6.0 | 20 |
| 15 | | | | | | | 7.0 | 36 | 30 | 12 | 7.0 | 26 |
| 16 | | | | | | | 7.9 | 38 | 25 | 12 | 7.9 | 30 |
| 17 | | | | | | | 7.0 | 36 | 25 | 9.7 | 9.7 | 32 |
| 18 | | | | | | | 6.4 | 32 | 30 | 9.7 | 8.8 | 26 |
| 19 | | | | | | | 7.9 | 34 | 28 | 6.4 | 7.9 | 23 |
| 20 | | | | | | | 7.0 | 34 | 23 | 4.0 | 8.1 | 25 |
| 21 | | | | | | | | | | | | |
| 22 | | | | | | | 26 | 32 | 18 | 3.6 | 8.3 | 28 |
| 23 | | | | | | | 46 | 26 | 14 | 3.6 | 8.5 | 32 |
| 24 | | | | | | | 44 | 25 | 13 | 3.2 | 8.7 | 26 |
| 25 | | | | | | | 48 | 26 | 15 | 5.2 | 8.8 | 25 |
| 26 | | | | | | | 79 | 25 | 15 | 3.6 | 8.8 | 22 |
| 27 | | | | | | | | | | | | |
| 28 | | | | | | | 59 | 26 | 21 | 4.0 | 9.7 | 31 |
| 29 | | | | | | | 36 | 23 | 17 | 5.8 | 7.9 | 33 |
| 30 | | | | | | | 34 | 21 | 15 | 4.6 | 8.8 | 34 |
| 31 | | | | | | | 42 | 18 | 14 | 5.2 | 8.4 | 30 |
| | | | | | | | 57 | 15 | 18 | 5.8 | 8.1 | 30 |
| | | | | | | | | 12 | | 6.4 | 7.7 | |
| Month | | | | | | | Maximum | Minimum | Mean | | Run-off in acre-feet | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | 79 | 6.4 | 36.0 | | 2,260 | |
| May | | | | | | | 48 | 12 | 33.3 | | 2,040 | |
| June | | | | | | | 57 | 12 | 21.2 | | 1,260 | |
| July | | | | | | | 20 | 3.2 | 9.96 | | 612 | |
| August | | | | | | | 9.7 | 3.2 | 7.23 | | 444 | |
| September | | | | | | | 38 | 6.4 | 24.3 | | 1,450 | |
| The year | | | | | | | | | | | 8,070 | |

Big Hole River near Melrose, Mont.

Location.- Water-stage recorder in SE $\frac{1}{4}$ sec. 3, T. 4 S., R. 9 W., at highway bridge 8 miles south of Melrose.

Records available.- October 1931 to September 1934. Comparable records $1\frac{1}{2}$ miles upstream March 1924 to September 1931.

Extremes.- Maximum discharge during year, 3,380 second-feet Apr. 25 (gage height, 3.95 feet); minimum, 120 second-feet Aug. 29 (gage height, 1.04 feet).
1924-34: Maximum discharge, 3,230 second-feet May 26, 27, 1928 (gage height, 7.60 feet, old site); minimum, 49 second-feet Aug. 17, 1931 (gage height, 0.70 foot, old site).
Maximum stage, 14.0 feet at old site (from high-water mark) June 10, 1927 (discharge not determined).

Remarks.- Records good. No records Nov. 21 to Jan. 16. Several diversions above station. Flow partly regulated by power plant operation.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|------|------|------|------|------|-------|---------|---------|-------|----------------------|------|-------|
| 1 | 303 | 565 | | | 379 | 402 | 1,490 | 2,670 | 950 | 530 | 276 | 130 |
| 2 | 300 | 565 | | | 421 | 408 | 1,320 | 2,580 | 1,120 | 497 | 266 | 135 |
| 3 | 300 | 529 | | | 452 | 497 | 1,060 | 2,300 | 1,290 | 477 | 261 | 135 |
| 4 | 294 | 501 | | | 439 | 497 | 1,020 | 2,220 | 1,380 | 452 | 256 | 132 |
| 5 | 292 | 383 | | | 446 | 510 | 1,100 | 2,130 | 1,250 | 510 | 266 | 136 |
| 6 | 289 | 433 | | | 427 | 530 | 1,100 | 2,390 | 1,350 | 558 | 242 | 135 |
| 7 | 289 | 456 | | | 439 | 586 | 1,110 | 2,770 | 2,080 | 537 | 221 | 135 |
| 8 | 289 | 474 | | | 452 | 586 | 1,230 | 2,970 | 2,480 | 551 | 213 | 141 |
| 9 | 289 | 474 | | | 452 | 523 | 1,380 | 3,070 | 2,580 | 537 | 200 | 144 |
| 10 | 289 | 468 | | | 396 | 517 | 1,520 | 2,970 | 2,100 | 517 | 189 | 147 |
| 11 | 294 | 450 | | | 379 | 530 | 1,740 | 2,770 | 1,580 | 490 | 186 | 150 |
| 12 | 297 | 445 | | | 408 | 555 | 1,920 | 2,580 | 1,290 | 458 | 182 | 144 |
| 13 | 297 | 453 | | | 408 | 645 | 2,220 | 2,390 | 1,090 | 433 | 178 | 160 |
| 14 | 297 | 411 | | | 396 | 735 | 2,390 | 2,220 | 1,180 | 396 | 164 | 158 |
| 15 | 297 | 392 | | | 379 | 920 | 2,390 | 2,130 | 1,130 | 379 | 164 | 152 |
| 16 | 297 | 373 | | | 379 | 1,390 | 2,390 | 2,070 | 1,040 | 367 | 158 | 150 |
| 17 | 297 | 402 | | 390 | 365 | 1,380 | 2,220 | 2,020 | 970 | 339 | 150 | 150 |
| 18 | 313 | 402 | | 379 | 367 | 1,130 | 2,000 | 1,910 | 893 | 306 | 150 | 150 |
| 19 | 323 | 373 | | 379 | 373 | 1,060 | 1,940 | 1,830 | 864 | 290 | 152 | 150 |
| 20 | 326 | 345 | | 385 | 390 | 1,130 | 1,970 | 1,660 | 857 | 280 | 152 | 155 |
| 21 | 341 | | | 379 | 361 | 1,280 | 2,100 | 1,600 | 798 | 271 | 152 | 156 |
| 22 | 341 | | | 390 | 361 | 1,300 | 2,300 | 1,490 | 720 | 265 | 155 | 164 |
| 23 | 345 | | | 408 | 385 | 1,300 | 2,530 | 1,390 | 645 | 261 | 155 | 178 |
| 24 | 357 | | | 385 | 385 | 1,100 | 2,870 | 1,300 | 608 | 256 | 138 | 182 |
| 25 | 365 | | | 396 | 323 | 990 | 3,180 | 1,200 | 586 | 285 | 138 | 186 |
| 26 | 365 | | | 421 | 312 | 980 | 3,280 | 1,170 | 615 | 290 | 135 | 229 |
| 27 | 365 | | | 402 | 445 | 970 | 3,180 | 1,120 | 638 | 295 | 132 | 238 |
| 28 | 357 | | | 395 | 408 | 1,120 | 3,070 | 1,050 | 636 | 306 | 130 | 252 |
| 29 | 361 | | | 373 | | 1,660 | 2,870 | 1,000 | 615 | 306 | 125 | 256 |
| 30 | 411 | | | 367 | | 1,760 | 2,770 | 970 | 579 | 290 | 130 | 252 |
| 31 | 468 | | | 396 | | 1,680 | | 950 | | 280 | 130 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 468 | 289 | 324 | 19,930 | | |
| November 1-20 | | | | | | | 565 | 345 | 444 | 17,600 | | |
| December | | | | | | | | | | | | |
| January 17-31 | | | | | | | 421 | 367 | 390 | 11,600 | | |
| February | | | | | | | 452 | 312 | 398 | 22,130 | | |
| March | | | | | | | 1,790 | 402 | 925 | 56,690 | | |
| April | | | | | | | 3,280 | 1,020 | 2,057 | 122,400 | | |
| May | | | | | | | 3,070 | 950 | 1,964 | 120,800 | | |
| June | | | | | | | 2,580 | 579 | 1,131 | 67,310 | | |
| July | | | | | | | 552 | 256 | 387 | 23,820 | | |
| August | | | | | | | 276 | 125 | 179 | 11,000 | | |
| September | | | | | | | 256 | 130 | 166 | 9,860 | | |

Boulder River near Boulder, Mont.

Location.- Chain gage in sec. 32, T. 6 N., R. 4 W., at highway bridge 2 miles east of Boulder.

Records available.- April 1929 to September 1931, March to September 1934.

Extremes.- Maximum discharge recorded during year, 468 second-feet Apr. 25 (gage height, 8.06 feet); minimum, 6.0 second-feet Sept. 12-15 (gage height, 5.74 feet).
1929-31, 1934: Maximum discharge, 1,480 second-feet May 25, 1929 (gage height, 9.90 feet); no flow Mar. 5, July 15-17, 21, 1931.

Remarks.- Records fair. Numerous diversions above station.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | | | | | | | 99 | 304 | 27 | 26 | 9.6 | 6.6 |
| 2 | | | | | | | 72 | 290 | 60 | 24 | 9.6 | 6.6 |
| 3 | | | | | | | 59 | 275 | 99 | 21 | 9.6 | 6.6 |
| 4 | | | | | | | 68 | 248 | 106 | 19 | 9.6 | 6.6 |
| 5 | | | | | | | 99 | 248 | 89 | 19 | 9.6 | 6.6 |
| 6 | | | | | | | 113 | 248 | 106 | 19 | 9.6 | 6.6 |
| 7 | | | | | | | 136 | 236 | 370 | 16 | 9.6 | 6.6 |
| 8 | | | | | | | 180 | 223 | 320 | 16 | 9.6 | 7.8 |
| 9 | | | | | | | 223 | 223 | 236 | 16 | 9.6 | 7.8 |
| 10 | | | | | | | 223 | 190 | 170 | 14 | 9.6 | 7.2 |
| 11 | | | | | | | 248 | 161 | 161 | 12 | 9.0 | 7.2 |
| 12 | | | | | | | 290 | 223 | 136 | 11 | 9.0 | 6.0 |
| 13 | | | | | | 52 | 335 | 170 | 128 | 11 | 9.0 | 6.0 |
| 14 | | | | | | 60 | 370 | 161 | 99 | 9.6 | 9.0 | 6.0 |
| 15 | | | | | | 68 | 290 | 136 | 161 | 11 | 9.0 | 6.0 |
| 16 | | | | | | 81 | 290 | 120 | 120 | 11 | 9.0 | 7.2 |
| 17 | | | | | | 44 | 248 | 113 | 91 | 9.6 | 9.0 | 7.2 |
| 18 | | | | | | 53 | 223 | 106 | 85 | 9.6 | 9.0 | 6.6 |
| 19 | | | | | | 61 | 262 | 128 | 99 | 9.6 | 9.0 | 6.6 |
| 20 | | | | | | 82 | 304 | 91 | 91 | 9.6 | 9.0 | 6.6 |
| 21 | | | | | | 81 | 335 | 76 | 76 | 10 | 9.0 | 6.6 |
| 22 | | | | | | 77 | 403 | 73 | 59 | 10 | 9.0 | 6.6 |
| 23 | | | | | | 70 | 428 | 67 | 51 | 10 | 7.2 | 6.6 |
| 24 | | | | | | 43 | 447 | 58 | 46 | 11 | 7.2 | 6.6 |
| 25 | | | | | | 64 | 466 | 53 | 48 | 11 | 7.2 | 6.6 |
| 26 | | | | | | 54 | 428 | 46 | 70 | 11 | 7.2 | 6.0 |
| 27 | | | | | | 70 | 370 | 37 | 76 | 11 | 7.2 | 6.0 |
| 28 | | | | | | 78 | 352 | 39 | 68 | 11 | 7.2 | 6.0 |
| 29 | | | | | | 106 | 335 | 34 | 48 | 10 | 7.2 | 6.0 |
| 30 | | | | | | 120 | 248 | 26 | 39 | 10 | 7.2 | 6.0 |
| 31 | | | | | | 113 | | 24 | | 10 | 7.2 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 13-31 | | | | | | | 120 | 43 | 72.5 | 2,730 | | |
| April | | | | | | | 468 | 59 | 265 | 15,770 | | |
| May | | | | | | | 304 | 24 | 143 | 6,780 | | |
| June | | | | | | | 370 | 27 | 111 | 6,630 | | |
| July | | | | | | | 26 | 9.6 | 13.5 | 619 | | |
| August | | | | | | | 9.6 | 7.2 | 8.67 | 533 | | |
| September | | | | | | | 7.8 | 6.0 | 6.58 | 392 | | |
| The period | | | | | | | | | | 35,650 | | |

Madison River near West Yellowstone, Mont.

Location.- Water-stage recorder a quarter of a mile upstream from Riverside ranger station and $1\frac{1}{2}$ miles east of West Yellowstone and west boundary of Yellowstone National Park.

Drainage area.- 419 square miles.

Records available.- June 1913 to September 1934.

Average discharge.- 18 years (1913-17, 1918-21, 1923-34), 490 second-feet.

Extremes.- Maximum discharge during year, 661 second-feet June 8 (gage height, 2.14 feet); minimum, 261 second-feet Aug. 29 (gage height, 1.57 feet).
1913-34: Maximum discharge, 1,950 second-feet June 10, 1917; minimum (estimated), 100 second-feet Feb. 7, 1933.

Remarks.- Records good. Discharge estimated Jan. 7-11; interpolated July 15-17. No diversions or regulation. Gage observations furnished by officials of Yellowstone National Park.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | |
|-----------|------|------|------|---------|------|---------|-------|-------|---------|-----------------|------|------------|--|
| 1 | 325 | 353 | 315 | 365 | 335 | 335 | 383 | 450 | 325 | 300 | 273 | 277 | |
| 2 | 325 | 347 | 325 | 353 | 341 | 341 | 365 | 450 | 330 | 295 | 273 | 277 | |
| 3 | 325 | 359 | 320 | 347 | 341 | 335 | 347 | 443 | 325 | 295 | 273 | 273 | |
| 4 | 325 | 359 | 325 | 353 | 341 | 325 | 353 | 430 | 325 | 305 | 273 | 269 | |
| 5 | 325 | 330 | 320 | 335 | 335 | 330 | 353 | 430 | 315 | 305 | 273 | 269 | |
| 6 | 325 | 330 | 335 | 335 | 330 | 335 | 353 | 457 | 330 | 305 | 281 | 265 | |
| 7 | 330 | 335 | 330 | 335 | 335 | 330 | 377 | 479 | 416 | 295 | 273 | 273 | |
| 8 | 330 | 335 | 325 | 341 | 320 | 409 | 479 | 583 | 295 | 269 | 281 | | |
| 9 | 325 | 330 | 325 | 347 | 325 | 423 | 495 | 464 | 285 | 269 | 273 | | |
| 10 | 325 | 330 | 330 | 335 | 335 | 325 | 423 | 436 | 402 | 281 | 285 | 273 | |
| 11 | 325 | 335 | 335 | 335 | 335 | 330 | 443 | 416 | 359 | 281 | 290 | 273 | |
| 12 | 325 | 335 | 341 | 341 | 335 | 335 | 457 | 436 | 347 | 281 | 277 | 273 | |
| 13 | 325 | 335 | 353 | 335 | 330 | 335 | 479 | 430 | 330 | 281 | 273 | 277 | |
| 14 | 330 | 335 | 359 | 335 | 330 | 341 | 472 | 409 | 330 | 281 | 273 | 277 | |
| 15 | 341 | 330 | 347 | 341 | 325 | 353 | 450 | 383 | 325 | 279 | 269 | 277 | |
| 16 | 330 | 330 | 347 | 330 | 325 | 359 | 423 | 371 | 347 | 277 | 277 | 277 | |
| 17 | 330 | 330 | 341 | 330 | 335 | 335 | 416 | 365 | 335 | 275 | 281 | 277 | |
| 18 | 330 | 330 | 341 | 330 | 325 | 330 | 423 | 359 | 320 | 273 | 273 | 277 | |
| 19 | 335 | 330 | 341 | 330 | 330 | 330 | 436 | 353 | 347 | 273 | 273 | 281 | |
| 20 | 341 | 325 | 335 | 330 | 335 | 347 | 464 | 347 | 389 | 281 | 273 | 281 | |
| 21 | 335 | 325 | 330 | 325 | 330 | 353 | 526 | 341 | 353 | 261 | 269 | 281 | |
| 22 | 325 | 325 | 335 | 325 | 335 | 353 | 558 | 335 | 335 | 273 | 269 | 290 | |
| 23 | 325 | 330 | 341 | 347 | 335 | 347 | 541 | 325 | 320 | 269 | 269 | 310 | |
| 24 | 330 | 330 | 335 | 347 | 335 | 330 | 541 | 325 | 320 | 269 | 269 | 305 | |
| 25 | 330 | 330 | 347 | 347 | 330 | 335 | 541 | 325 | 315 | 277 | 269 | 290 | |
| 26 | 330 | 330 | 347 | 347 | 325 | 330 | 541 | 330 | 341 | 273 | 265 | 290 | |
| 27 | 330 | 330 | 347 | 347 | 330 | 335 | 510 | 325 | 325 | 273 | 265 | 290 | |
| 28 | 335 | 335 | 341 | 347 | 335 | 409 | 487 | 320 | 305 | 273 | 269 | 300 | |
| 29 | 347 | 330 | 335 | 341 | 472 | 487 | 487 | 320 | 305 | 273 | 265 | 300 | |
| 30 | 371 | 315 | 347 | 335 | 423 | 409 | 472 | 320 | 305 | 273 | 281 | 295 | |
| 31 | 353 | | 359 | 335 | | | 409 | 325 | | 273 | 281 | | |
| Month | | | | Maximum | | Minimum | | Mean | | Per square mile | | Run-off | |
| | | | | | | | | | | Inches | | Acres-feet | |
| October | | | | 371 | 325 | 332 | 0.792 | 0.91 | 20,400 | | | | |
| November | | | | 359 | 315 | 333 | .795 | .69 | 19,840 | | | | |
| December | | | | 359 | 315 | 337 | .804 | .93 | 20,740 | | | | |
| January | | | | 365 | 325 | 339 | .809 | .93 | 20,830 | | | | |
| February | | | | 347 | 325 | 334 | .797 | .83 | 18,540 | | | | |
| March | | | | 472 | 320 | 348 | .831 | .96 | 21,400 | | | | |
| April | | | | 558 | 347 | 448 | 1.07 | 1.19 | 26,680 | | | | |
| May | | | | 495 | 320 | 388 | .926 | 1.07 | 23,840 | | | | |
| June | | | | 583 | 305 | 349 | .833 | .93 | 20,760 | | | | |
| July | | | | 305 | 269 | 282 | .673 | .78 | 17,360 | | | | |
| August | | | | 290 | 265 | 273 | .652 | .75 | 16,800 | | | | |
| September | | | | 310 | 265 | 282 | .673 | .75 | 16,760 | | | | |
| The year | | | | 583 | 265 | 337 | .804 | 10.92 | 244,000 | | | | |

Gallatin River near Gallatin Gateway, Mont.

Location.- Water-stage recorder in NE $\frac{1}{4}$ sec. 18, T. 4 S., R. 4 E., a quarter of a mile below mouth of Spanish Creek and 8 miles south of Gallatin Gateway.

Drainage area.- 810 square miles.

Records available.- August 1889 to June 1894, June 1930 to September 1934.

Extremes.- Maximum discharge during year, 1,740 second-feet May 8 (gage height, 3.03 feet); minimum, 229 second-feet Feb. 28 (gage height, 0.96 foot).
1930-34: Maximum discharge, 5,780 second-feet June 18, 1932 (gage height, 4.60 feet); minimum, 172 second-feet Dec. 8, 1932 (gage height, 0.74 foot).

Remarks.- Records good. Discharge estimated July 29, 30. No records Oct. 1 to Jan. 15. One small diversions at station.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|------|------|------|---------|---------|-------|-------|-----------------|------|---------|-----------|---------|
| 1 | | | | | 302 | 284 | 313 | 864 | 700 | 412 | 307 | 260 |
| 2 | | | | | 305 | 298 | 298 | 860 | 678 | 396 | 294 | 260 |
| 3 | | | | | 305 | 291 | 298 | 828 | 644 | 396 | 280 | 256 |
| 4 | | | | | 302 | 277 | 294 | 900 | 644 | 422 | 276 | 255 |
| 5 | | | | | 298 | 277 | 309 | 1,130 | 618 | 467 | 280 | 255 |
| 6 | | | | | 298 | 288 | 316 | 1,530 | 686 | 422 | 298 | 253 |
| 7 | | | | | 294 | 277 | 339 | 1,530 | 995 | 386 | 289 | 253 |
| 8 | | | | | 291 | 264 | 384 | 1,580 | 960 | 375 | 272 | 268 |
| 9 | | | | | 302 | 267 | 412 | 1,480 | 799 | 365 | 272 | 272 |
| 10 | | | | | 298 | 277 | 412 | 1,260 | 774 | 355 | 280 | 260 |
| 11 | | | | | 270 | 280 | 450 | 1,200 | 736 | 360 | 298 | 253 |
| 12 | | | | | 274 | 291 | 497 | 1,210 | 714 | 355 | 289 | 245 |
| 13 | | | | | 280 | 298 | 555 | 1,040 | 707 | 345 | 276 | 241 |
| 14 | | | | | 284 | 302 | 586 | 977 | 678 | 340 | 268 | 249 |
| 15 | | | | | 277 | 309 | 573 | 977 | 744 | 335 | 268 | 249 |
| 16 | | | | 280 | 277 | 316 | 555 | 1,020 | 774 | 320 | 264 | 249 |
| 17 | | | | 284 | 280 | 284 | 502 | 1,020 | 707 | 316 | 260 | 249 |
| 18 | | | | 294 | 280 | 288 | 486 | 1,030 | 618 | 311 | 256 | 245 |
| 19 | | | | 298 | 274 | 298 | 519 | 1,030 | 657 | 307 | 256 | 245 |
| 20 | | | | 306 | 298 | 309 | 592 | 995 | 618 | 302 | 256 | 249 |
| 21 | | | | 302 | 274 | 305 | 693 | 952 | 587 | 298 | 253 | 249 |
| 22 | | | | 305 | 277 | 302 | 812 | 892 | 530 | 302 | 253 | 268 |
| 23 | | | | 313 | 284 | 294 | 918 | 876 | 501 | 302 | 253 | 280 |
| 24 | | | | 302 | 277 | 277 | 943 | 868 | 490 | 311 | 253 | 264 |
| 25 | | | | 294 | 255 | 291 | 1,000 | 860 | 478 | 320 | 253 | 264 |
| 26 | | | | 294 | 258 | 291 | 860 | 844 | 501 | 311 | 249 | 268 |
| 27 | | | | 302 | 284 | 298 | 797 | 820 | 484 | 302 | 245 | 268 |
| 28 | | | | 302 | 284 | 309 | 836 | 797 | 450 | 298 | 241 | 276 |
| 29 | | | | 298 | | 343 | 828 | 774 | 439 | 309 | 245 | 280 |
| 30 | | | | 291 | | 335 | 844 | 766 | 422 | 319 | 294 | 272 |
| 31 | | | | 280 | | 332 | | 744 | | 330 | 276 | |
| Month | | | | Maximum | Minimum | Mean | | Per square mile | | Run-off | | |
| | | | | | | | | | | Inches | Acre-feet | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January 16-31 | | | | 313 | 280 | 296 | 0.365 | | 0.22 | | 9,410 | |
| February | | | | 305 | 255 | 284 | .351 | | .37 | | 15,790 | |
| March | | | | 343 | 264 | 295 | .364 | | .42 | | 19,150 | |
| April | | | | 1,000 | 294 | 574 | .709 | | .79 | | 34,160 | |
| May | | | | 1,580 | 744 | 1,021 | 1.26 | | 1.45 | | 62,820 | |
| June | | | | 995 | 422 | 643 | .794 | | .89 | | 38,290 | |
| July | | | | 467 | 298 | 345 | .426 | | .49 | | 21,200 | |
| August | | | | 307 | 241 | 269 | .332 | | .38 | | 16,570 | |
| September | | | | 280 | 241 | 268 | .319 | | .36 | | 15,370 | |
| The period | | | | | | | | | | | | 231,800 |

Gallatin River at Logan, Mont.

Location.- Wire gage in sec. 26, T. 2 N., R. 2 E., at highway bridge half a mile west of Logan.

Records available.- August 1893 to December 1905, August 1928 to September 1934.

Extremes.- Maximum discharge recorded during period, 758 second-feet Mar. 3 (gage height, 3.50 feet); minimum, 143 second-feet July 21 (gage height, 2.14 feet). 1928-34: Maximum discharge, 4,570 second-feet June 17, 1929, and June 16, 1933 (gage height, 6.44 feet and 6.42 feet respectively); minimum, that of July 21, 1934.

Remarks.- Records good. No records Oct. 1 to Jan. 15, May 20-31. Numerous diversions above station.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | | | | | 695 | *680 | 638 | 191 | 186 | 178 | 163 | 178 |
| 2 | | | | | 695 | 695 | 610 | 185 | 197 | 183 | 161 | 180 |
| 3 | | | | | 695 | 758 | 610 | 186 | 197 | 178 | 152 | 183 |
| 4 | | | | | 655 | *737 | 585 | 175 | 205 | 175 | 156 | 186 |
| 5 | | | | | 665 | *716 | 560 | 168 | 188 | 194 | 163 | 180 |
| 6 | | | | | 665 | 695 | 535 | 166 | 200 | 178 | 163 | 186 |
| 7 | | | | | 665 | 665 | 610 | 200 | 305 | 173 | 161 | 197 |
| 8 | | | | | 665 | 665 | 535 | 180 | 392 | 163 | 156 | 205 |
| 9 | | | | | 695 | 638 | 535 | 197 | 392 | 173 | 163 | 202 |
| 10 | | | | | *666 | *638 | 535 | 175 | 370 | 163 | 168 | 200 |
| 11 | | | | | | 638 | 638 | 610 | 173 | 325 | 168 | 208 |
| 12 | | | | | | 638 | 638 | 610 | 173 | 348 | 163 | 212 |
| 13 | | | | | | *638 | 638 | 610 | 168 | 370 | 158 | 212 |
| 14 | | | | | | 638 | 610 | *610 | 170 | 325 | 149 | 215 |
| 15 | | | | | | 638 | 610 | *610 | 170 | 325 | 149 | 226 |
| 16 | | | | | 638 | *638 | 610 | 610 | *172 | 325 | 147 | 223 |
| 17 | | | | | 665 | 638 | 610 | 485 | 173 | 325 | 145 | 223 |
| 18 | | | | | 665 | 638 | 610 | 415 | 163 | 305 | 149 | 226 |
| 19 | | | | | 665 | 610 | 610 | 392 | 168 | 325 | 152 | 226 |
| 20 | | | | | 665 | 638 | 610 | 325 | | 325 | 149 | 265 |
| 21 | | | | | 665 | 610 | 610 | *315 | | 305 | 143 | 245 |
| 22 | | | | | 665 | 610 | 610 | 305 | | 285 | 145 | 265 |
| 23 | | | | | 695 | 585 | 638 | 285 | | 265 | 147 | 265 |
| 24 | | | | | 665 | 560 | 585 | 265 | | 265 | 158 | 285 |
| 25 | | | | | 638 | 560 | 585 | 265 | | 265 | 161 | 285 |
| 26 | | | | | 665 | 610 | 560 | 245 | | 245 | 163 | 325 |
| 27 | | | | | 665 | 610 | 560 | *234 | | 226 | 158 | 348 |
| 28 | | | | | 665 | 665 | 585 | 223 | | 219 | 166 | 348 |
| 29 | | | | | 665 | | 585 | 205 | | 200 | 161 | 325 |
| 30 | | | | | 665 | | 610 | 197 | | 194 | 163 | 325 |
| 31 | | | | | 665 | | 638 | | | | 175 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January 16-31 | | | | | | | 695 | 638 | 664 | 21,060 | | |
| February | | | | | | | 695 | 560 | 640 | 35,370 | | |
| March | | | | | | | 758 | 560 | 635 | 39,950 | | |
| April | | | | | | | 638 | 197 | 429 | 25,530 | | |
| May 1-19 | | | | | | | 200 | 163 | 177 | 6,660 | | |
| June | | | | | | | 392 | 186 | 280 | 16,560 | | |
| July | | | | | | | 194 | 143 | 162 | 9,960 | | |
| August | | | | | | | 178 | 152 | 167 | 10,290 | | |
| September | | | | | | | 348 | 178 | 238 | 14,190 | | |

*Estimated.

Tenmile Creek near Rimini, Mont.

Location.- Water-stage recorder in NE $\frac{1}{4}$ sec. 20, T. 9 N., R. 5 W., at Moose Creek ranger station, 500 feet above mouth of Moose Creek and 3 miles north of Rimini.

Drainage area.- 34 square miles.

Records available.- March 1915 to September 1934.

Extremes.- Maximum discharge recorded during year, 143 second-feet June 7 (gage height, 1.85 feet); no flow Aug. 15, 16, 1915-34: Maximum discharge, 948 second-feet May 15, 1917 (gage height, 4.87 feet); no flow at various times during 1928, 1929, 1931, 1934.

Remarks.- Records poor. Discharge estimated May 23-27, Aug. 20-29, Aug. 31 to Sept. 6. No records Oct. 1 to Apr. 11. Partly regulated by reservoir on one tributary above station. Some small diversions above station.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | | | | | | | | 43 | 8.2 | 4.6 | 0.3 | |
| 2 | | | | | | | | 38 | 11 | 4.6 | .3 | |
| 3 | | | | | | | | 35 | 14 | 5.4 | .2 | |
| 4 | | | | | | | | 34 | 15 | 5.0 | .2 | |
| 5 | | | | | | | | 30 | 11 | 4.2 | .2 | 0.4 |
| 6 | | | | | | | | 26 | 22 | 4.6 | .2 | |
| 7 | | | | | | | | 24 | 106 | 4.6 | .1 | .4 |
| 8 | | | | | | | | 22 | 87 | 6.0 | .1 | .4 |
| 9 | | | | | | | | 21 | 86 | 4.8 | .1 | .5 |
| 10 | | | | | | | | 17 | 54 | 4.4 | .1 | .5 |
| 11 | | | | | | | | 14 | 46 | 3.5 | .1 | .3 |
| 12 | | | | | | | 54 | 20 | 42 | 2.9 | .1 | .2 |
| 13 | | | | | | | 62 | 17 | 36 | 2.2 | .1 | .2 |
| 14 | | | | | | | 63 | 19 | 31 | 1.0 | .1 | .2 |
| 15 | | | | | | | 54 | 15 | 26 | 1.6 | 0 | .2 |
| 16 | | | | | | | 48 | 12 | 22 | 1.3 | 0 | .2 |
| 17 | | | | | | | 41 | 11 | 19 | .7 | .4 | .2 |
| 18 | | | | | | | 42 | 9.4 | 16 | 2.2 | 1.3 | .2 |
| 19 | | | | | | | 42 | 9.0 | 18 | 6.4 | 1.0 | .2 |
| 20 | | | | | | | 51 | 7.6 | 15 | 5.4 | | .3 |
| 21 | | | | | | | 70 | 7.1 | 13 | 4.6 | | .3 |
| 22 | | | | | | | 79 | 7.8 | 11 | 4.4 | | .4 |
| 23 | | | | | | | 89 | | 9.4 | 4.2 | | .3 |
| 24 | | | | | | | 87 | | 9.8 | 4.2 | 1.0 | .4 |
| 25 | | | | | | | 87 | 8.0 | 13 | 3.1 | | .4 |
| 26 | | | | | | | 76 | | 22 | 2.1 | | .4 |
| 27 | | | | | | | 68 | | 15 | 2.8 | | .5 |
| 28 | | | | | | | 54 | 8.2 | 15 | 4.4 | | .7 |
| 29 | | | | | | | 43 | 7.1 | 9.4 | 2.2 | | .6 |
| 30 | | | | | | | 46 | 6.8 | 7.1 | .5 | 6.2 | .5 |
| 31 | | | | | | | | 6.4 | | .4 | 1.0 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April 12-30 | | | | | | | 89 | 41 | 60.8 | | | 2,290 |
| May | | | | | | | 43 | 6.4 | 16.4 | | | 1,010 |
| June | | | | | | | 106 | 7.1 | 26.3 | | | 1,570 |
| July | | | | | | | 6.4 | .4 | 3.49 | | | 215 |
| August | | | | | | | 6.2 | .0 | .71 | | | 44 |
| September | | | | | | | .7 | .2 | .35 | | | 21 |
| The period | | | | | | | | | | | | 5,150 |

Tennile Creek near Helena, Mont.

Location.- Water-stage recorder in SE $\frac{1}{4}$ sec. 22, T. 10 N., R. 4 W., opposite Broadwater Hotel, near Helena.

Drainage area.- 103 square miles.

Records available.- July 1908 to September 1934.

Extremes.- Maximum discharge during period, 129 second-feet June 7 (gage height, 1.83 feet); minimum, 0.2 second-foot Aug. 11 (gage height, 0.55 foot).
1908-34: Maximum discharge, 865 second-feet May 28, 1917, June 11, 1927;
maximum gage height, 6.58 feet (old datum) June 11, 1927; no flow at times.

Remarks.- Records good. No records Oct. 1 to Mar. 2. Diversions for irrigation and Helena water supply above station.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|------------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | | | | | | | 22 | 50 | 8.0 | 7.5 | 0.2 | 0.2 |
| 2 | | | | | | | 18 | 42 | 13 | 7.1 | .2 | .3 |
| 3 | | | | | | 6.7 | 19 | 43 | 14 | 4.7 | .3 | .3 |
| 4 | | | | | | 7.1 | 22 | 46 | 16 | 5.5 | .3 | .3 |
| 5 | | | | | | 7.1 | 24 | 43 | 12 | 6.7 | .3 | .3 |
| 6 | | | | | | 7.5 | 30 | 38 | 17 | 6.3 | .3 | .2 |
| 7 | | | | | | 7.1 | 38 | 36 | 79 | 4.7 | .2 | .2 |
| 8 | | | | | | 6.3 | 43 | 31 | 66 | 5.5 | .2 | .4 |
| 9 | | | | | | 5.9 | 46 | 30 | 45 | 6.7 | .2 | .5 |
| 10 | | | | | | 6.7 | 44 | 30 | 35 | 4.3 | .3 | .4 |
| 11 | | | | | | 7.1 | 50 | 28 | 27 | 1.5 | .3 | .4 |
| 12 | | | | | | 7.5 | 60 | 36 | 24 | .8 | .2 | .3 |
| 13 | | | | | | 11 | 75 | 31 | 22 | .5 | .3 | .3 |
| 14 | | | | | | 11 | 75 | 33 | 19 | .4 | .3 | .3 |
| 15 | | | | | | 11 | 60 | 28 | 18 | .5 | .3 | .3 |
| 16 | | | | | | 13 | 61 | 27 | 18 | .5 | .4 | .2 |
| 17 | | | | | | 10 | 53 | 25 | 17 | .4 | .4 | .2 |
| 18 | | | | | | 13 | 54 | 22 | 14 | .4 | .4 | .2 |
| 19 | | | | | | 13 | 54 | 22 | 16 | .4 | .3 | .2 |
| 20 | | | | | | 15 | 61 | 19 | 14 | .4 | .3 | .3 |
| 21 | | | | | | 18 | 77 | 17 | 14 | .4 | .3 | .4 |
| 22 | | | | | | 17 | 75 | 18 | 12 | .4 | .3 | .6 |
| 23 | | | | | | 14 | 94 | 18 | 10 | .4 | .3 | .8 |
| 24 | | | | | | 12 | 94 | 13 | 9.7 | .5 | .3 | .8 |
| 25 | | | | | | 14 | 96 | 12 | 14 | .5 | .3 | .9 |
| 26 | | | | | | 11 | 79 | 8.0 | 19 | .5 | .3 | .8 |
| 27 | | | | | | 7.5 | 68 | 7.1 | 18 | .4 | .3 | .7 |
| 28 | | | | | | 11 | 54 | 9.2 | 15 | .3 | .3 | .8 |
| 29 | | | | | | 13 | 45 | 5.9 | 13 | .3 | .3 | .8 |
| 30 | | | | | | 18 | 58 | 6.1 | 10 | .3 | .3 | .7 |
| 31 | | | | | | 22 | | 5.1 | | .3 | .3 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 3-31 | | | | | | | 22 | 5.9 | 11.2 | 642 | | |
| April | | | | | | | 96 | 18 | 55.0 | 3,270 | | |
| May | | | | | | | 50 | 5.1 | 25.1 | 1,540 | | |
| June | | | | | | | 79 | 8.0 | 21.0 | 1,250 | | |
| July | | | | | | | 7.5 | .3 | 2.23 | 137 | | |
| August | | | | | | | .4 | .2 | .29 | 18 | | |
| September | | | | | | | .9 | .2 | .44 | 26 | | |
| The period | | | | | | | | | | 6,880 | | |

Dearborn River near Clemons, Mont.

Location.- Water-stage recorder in NW $\frac{1}{4}$ sec. 26, T. 18 N., R. 7 W., 300 feet above highway bridge, 2 miles below mouth of Falls Creek, and 5 miles southwest of Clemons.

Drainage area.- 122 square miles.

Records available.- April 1921 to September 1923, July 1929 to September 1932, March to September 1934. May 1908 to December 1911 at station half a mile above mouth of Falls Creek.

Extremes.- Maximum discharge during period, 2,450 second-feet June 7 (gage height, 5.58 feet); minimum, 18 second-feet Sept. 30 (gage height, 0.83 foot).
1921-23, 1929-32, 1934: Maximum discharge, that of June 7, 1934; minimum, 10 second-feet Oct. 17-21, 1922 (gage height, 0.84 foot).

Remarks.- Records good. Several small diversions above gage.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|------|---------|---------|-------|----------------------|------|-------|
| 1 | | | | | | | 115 | 520 | 224 | 185 | 39 | 28 |
| 2 | | | | | | | 119 | 465 | 207 | 176 | 38 | 27 |
| 3 | | | | | | | 102 | 460 | 191 | 171 | 38 | 26 |
| 4 | | | | | | | 119 | 441 | 198 | 165 | 38 | 26 |
| 5 | | | | | | | 131 | 605 | 179 | 162 | 37 | 25 |
| 6 | | | | | | | 182 | 639 | 533 | 154 | 36 | 24 |
| 7 | | | | | | | 263 | 676 | 2,080 | 143 | 34 | 23 |
| 8 | | | | | | | 390 | 671 | 1,580 | 136 | 34 | 24 |
| 9 | | | | | | | 480 | 597 | 1,170 | 133 | 34 | 24 |
| 10 | | | | | | | 465 | 510 | 960 | 124 | 33 | 24 |
| 11 | | | | | | | 475 | 561 | 786 | 115 | 32 | 23 |
| 12 | | | | | | | 470 | 510 | 703 | 104 | 32 | 23 |
| 13 | | | | | | | 510 | 422 | 697 | 93 | 31 | 22 |
| 14 | | | | | | | 530 | 400 | 535 | 89 | 31 | 23 |
| 15 | | | | | | | 475 | 418 | 500 | 83 | 30 | 22 |
| 16 | | | | | | | | 436 | 446 | 446 | 78 | 29 |
| 17 | | | | | | 104 | | 404 | 446 | 400 | 74 | 29 |
| 18 | | | | | | 106 | | 404 | 441 | 368 | 67 | 29 |
| 19 | | | | | | 108 | | 408 | 432 | 345 | 64 | 29 |
| 20 | | | | | | 119 | | 451 | 413 | 309 | 62 | 29 |
| 21 | | | | | | 128 | | 525 | 343 | 282 | 59 | 29 |
| 22 | | | | | | 131 | | 602 | 309 | 263 | 57 | 29 |
| 23 | | | | | | 131 | | 671 | 289 | 244 | 54 | 30 |
| 24 | | | | | | 124 | | 655 | 289 | 238 | 54 | 30 |
| 25 | | | | | | 124 | | 655 | 309 | 227 | 54 | 29 |
| 26 | | | | | | | 119 | 650 | 322 | 255 | 53 | 29 |
| 27 | | | | | | | 117 | 644 | 314 | 248 | 50 | 29 |
| 28 | | | | | | | 115 | 644 | 301 | 224 | 57 | 29 |
| 29 | | | | | | | 110 | 654 | 289 | 198 | 45 | 29 |
| 30 | | | | | | | 112 | 587 | 274 | 185 | 40 | 29 |
| 31 | | | | | | | 115 | | 241 | | 39 | 28 |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 17-31 | | | | | | | 131 | 104 | 118 | 3,500 | | |
| April | | | | | | | 671 | 102 | 440 | 26,170 | | |
| May | | | | | | | 676 | 241 | 428 | 26,290 | | |
| June | | | | | | | 2,080 | 179 | 489 | 29,120 | | |
| July | | | | | | | 185 | 39 | 94.8 | 5,350 | | |
| August | | | | | | | 39 | 28 | 31.7 | 1,950 | | |
| September | | | | | | | 28 | 18 | 22.5 | 1,340 | | |
| The period | | | | | | | | | | 94,200 | | |

Smith River near White Sulphur Springs, Mont.

Location.- Wire gage in SE $\frac{1}{4}$ sec. 33, T. 11 N., R. 8 E., at Meachen ranch 14 miles northeast of White Sulphur Springs.

Records available.- September 1922 to September 1931, February to September 1934.

Extremes.- Maximum discharge recorded during year, 48 second-feet Apr. 30 (gage height, 2.47 feet); minimum, 2.2 second-feet Aug. 17 (gage height, 1.76 feet).
1922-31, 1934: Maximum discharge, 224 second-feet June 21, 1923 (gage height, 3.15 feet); no flow Sept. 8, 12, 1931.

Remarks.- Records good except those for ice affected period, Feb. 6 to Mar. 31, which are fair. A few small diversions above gage.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | | | | | | | 15 | 44 | 21 | 7.4 | 6.5 | 3.4 |
| 2 | | | | | | | 14 | 43 | 20 | 7.0 | 6.2 | 2.6 |
| 3 | | | | | | 16 | 12 | 43 | 17 | 7.4 | 4.8 | 3.0 |
| 4 | | | | | | | 14 | 42 | 16 | 7.4 | 4.4 | 2.8 |
| 5 | | | | | | | 16 | 42 | 15 | 8.8 | 5.1 | 3.0 |
| 6 | | | | | | | 16 | 37 | 18 | 10 | 5.1 | 3.4 |
| 7 | | | | | | | 16 | 38 | 35 | 7.8 | 4.0 | 2.8 |
| 8 | | | | | 8.7 | 12 | 17 | 40 | 18 | 7.4 | 2.8 | 4.8 |
| 9 | | | | | | | 16 | 41 | 19 | 7.0 | 2.6 | 4.8 |
| 10 | | | | | | | 16 | 41 | 20 | 7.0 | 3.0 | 4.4 |
| 11 | | | | | | | 15 | 41 | 20 | 7.0 | 3.0 | 4.4 |
| 12 | | | | | | | 13 | 40 | 19 | 6.2 | 2.8 | 4.0 |
| 13 | | | | | 12 | 14 | 14 | 37 | 18 | 5.8 | 3.4 | 3.7 |
| 14 | | | | | | | 14 | 34 | 18 | 6.2 | 3.0 | 4.8 |
| 15 | | | | | | | 14 | 34 | 17 | 5.4 | 3.0 | 4.8 |
| 16 | | | | | | | 14 | 30 | 16 | 4.8 | 3.4 | 3.7 |
| 17 | | | | | | | 14 | 28 | 15 | 5.8 | 2.4 | 3.7 |
| 18 | | | | | 12 | 16 | 14 | 28 | 14 | 7.0 | 3.4 | 3.7 |
| 19 | | | | | | | 14 | 30 | 16 | 6.5 | 3.4 | 3.4 |
| 20 | | | | | | | 15 | 28 | 14 | 6.5 | 3.0 | 5.1 |
| 21 | | | | | | | 17 | 25 | 14 | 6.5 | 3.4 | 5.8 |
| 22 | | | | | | | 24 | 24 | 14 | 7.0 | 4.0 | 6.2 |
| 23 | | | | | 10 | 13 | 27 | 24 | 13 | 7.4 | 4.0 | 6.2 |
| 24 | | | | | | | 32 | 21 | 12 | 14 | 4.8 | 5.1 |
| 25 | | | | | | | 38 | 22 | 14 | 14 | 4.4 | 5.1 |
| 26 | | | | | | | 41 | 22 | 14 | 10 | 4.0 | 5.1 |
| 27 | | | | | 12 | | 43 | 20 | 12 | 8.3 | 3.7 | 5.4 |
| 28 | | | | | | 12 | 43 | 19 | 12 | 8.3 | 3.7 | 5.3 |
| 29 | | | | | | | 46 | 17 | 12 | 7.0 | 3.7 | 6.2 |
| 30 | | | | | | | 47 | 18 | 9.2 | 6.5 | 3.4 | 5.1 |
| 31 | | | | | | | | 17 | | 6.5 | 3.4 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February 6-28 | | | | | | | | | 10.8 | 495 | | |
| March | | | | | | | | | 13.8 | 847 | | |
| April | | | | | | | 47 | 12 | 21.6 | 1,290 | | |
| May | | | | | | | 44 | 17 | 31.3 | 1,920 | | |
| June | | | | | | | 21 | 9.2 | 16.3 | 972 | | |
| July | | | | | | | 14 | 4.8 | 7.55 | 464 | | |
| August | | | | | | | 6.5 | 2.4 | 3.80 | 234 | | |
| September | | | | | | | 8.3 | 2.6 | 4.49 | 267 | | |
| The period | | | | | | | | | | 6,490 | | |

SMITH RIVER BASIN

Smith River above Fivemile Creek, near White Sulphur Springs, Mont.

Location.- Water-stage recorder in sec. 19, T. 10 N., R. 8 E., a quarter of a mile above mouth of Fivemile Creek and 10 miles northeast of White Sulphur Springs.

Records available.- April to September 1934.

Extremes.- Maximum discharge recorded during period, 57 second-feet June 7 (gage height, 2.57 feet); minimum, 1.7 second-feet Aug. 17 (gage height, 0.86 foot).

Remarks.- Records good. Some diversions above station. Discharge interpolated because of missing gage heights June 15, 21, July 4-12, 25-28.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | | |
|------------|------|------|------|------|------|------|---------|-----|---------|------|------|-------|-------------------------|--|
| 1 | | | | | | | | 48 | 20 | 7.8 | 5.6 | 3.1 | | |
| 2 | | | | | | | | 48 | 24 | 7.1 | 5.6 | 3.2 | | |
| 3 | | | | | | | | 46 | 18 | 7.3 | 5.0 | 3.0 | | |
| 4 | | | | | | | | 44 | 17 | 7.0 | 3.9 | 2.8 | | |
| 5 | | | | | | | | 44 | 16 | 6.8 | 4.3 | 2.7 | | |
| 6 | | | | | | | | 40 | 17 | 6.6 | 4.6 | 2.2 | | |
| 7 | | | | | | | | 40 | 40 | 6.4 | 4.0 | 2.2 | | |
| 8 | | | | | | | | 40 | 30 | 6.2 | 3.0 | 3.0 | | |
| 9 | | | | | | | 22 | 42 | 22 | 6.0 | 2.4 | 4.0 | | |
| 10 | | | | | | | 22 | 42 | 23 | 5.8 | 2.2 | 3.5 | | |
| 11 | | | | | | | 20 | 42 | 22 | 5.6 | 2.7 | 3.6 | | |
| 12 | | | | | | | 18 | 43 | 19 | 5.4 | 3.0 | 3.3 | | |
| 13 | | | | | | | 19 | 40 | 19 | 5.2 | 2.7 | 3.2 | | |
| 14 | | | | | | | 18 | 38 | 17 | 5.2 | 3.0 | 3.8 | | |
| 15 | | | | | | | 16 | 36 | 16 | 5.5 | 2.5 | 4.0 | | |
| 16 | | | | | | | 18 | 33 | 16 | 4.2 | 2.6 | 3.6 | | |
| 17 | | | | | | | 20 | 32 | 15 | 4.6 | 2.4 | 3.5 | | |
| 18 | | | | | | | 19 | 31 | 14 | 5.8 | 2.1 | 3.3 | | |
| 19 | | | | | | | 17 | 32 | 15 | 5.8 | 2.8 | 3.2 | | |
| 20 | | | | | | | 17 | 31 | 14 | 5.8 | 2.6 | 4.5 | | |
| 21 | | | | | | | 21 | 29 | 14 | 5.6 | 3.0 | 5.0 | | |
| 22 | | | | | | | 28 | 28 | 13 | 6.1 | 3.2 | 5.6 | | |
| 23 | | | | | | | 31 | 27 | 12 | 7.8 | 3.1 | 6.0 | | |
| 24 | | | | | | | 33 | 24 | 12 | 12 | 3.8 | 5.4 | | |
| 25 | | | | | | | 42 | 24 | 13 | 11 | 3.3 | 5.4 | | |
| 26 | | | | | | | 45 | 22 | 16 | 9 | 3.2 | 5.4 | | |
| 27 | | | | | | | 48 | 21 | 13 | 8.5 | 3.5 | 5.6 | | |
| 28 | | | | | | | 47 | 19 | 12 | 7.6 | 3.6 | 7.3 | | |
| 29 | | | | | | | 46 | 17 | 11 | 7.1 | 3.0 | 7.1 | | |
| 30 | | | | | | | 48 | 19 | 9.2 | 6.6 | 4.2 | 5.6 | | |
| 31 | | | | | | | | 16 | | 6.3 | 3.3 | | | |
| Month | | | | | | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | |
| October | | | | | | | | | | | | | | |
| November | | | | | | | | | | | | | | |
| December | | | | | | | | | | | | | | |
| January | | | | | | | | | | | | | | |
| February | | | | | | | | | | | | | | |
| March | | | | | | | | | | | | | | |
| April 9-30 | | | | | | | 48 | | 16 | | 28.0 | | 1,220 | |
| May | | | | | | | 48 | | 16 | | 35.5 | | 2,060 | |
| June | | | | | | | 40 | | 9.2 | | 17.3 | | 1,030 | |
| July | | | | | | | 12 | | 4.2 | | 6.70 | | 412 | |
| August | | | | | | | 5.6 | | 2.1 | | 3.56 | | 207 | |
| September | | | | | | | 7.3 | | 2.2 | | 4.14 | | 246 | |
| The period | | | | | | | | | | | | | 5,180 | |

Sun River near Vaughn, Mont.

Location.- Water-stage recorder in SE $\frac{1}{4}$ sec. 33, T. 21 N., R. 2 E., three-quarters of a mile below Campbell Dam and 5 miles southeast of Vaughn. Prior to Aug. 4, 1934, staff gage at same location was used.

Records available.- April to September 1934.

Extremes.- Maximum discharge during period, 11,000 second-feet June 8 (gage height, 9.50 feet); minimum, 240 second-feet July 11, Sept. 14, 18, 17; minimum gage height, 1.30 feet July 11.

Remarks.- Records good except those for June 8, 9, which are fair. Numerous diversions above station. Flow partly controlled by operation of gates at Gibson Dam, on North Fork.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|-------|-------|-------|-------|------|-------|
| 1 | | | | | | | | 4,850 | 2,620 | 1,220 | 660 | 350 |
| 2 | | | | | | | | 4,180 | 2,630 | 1,010 | 650 | 360 |
| 3 | | | | | | | | 3,530 | 2,230 | 930 | 683 | 340 |
| 4 | | | | | | | | 3,530 | 1,780 | 948 | 716 | 320 |
| 5 | | | | | | | | 3,530 | 1,840 | 760 | 716 | 280 |
| 6 | | | | | | | | 4,310 | 1,900 | 716 | 727 | 290 |
| 7 | | | | | | | | 5,740 | 2,560 | 672 | 705 | 290 |
| 8 | | | | | | | | 6,920 | 8,920 | 561 | 672 | 310 |
| 9 | | | | | | | | 6,820 | 8,640 | 340 | 661 | 310 |
| 10 | | | | | | | | 6,000 | 5,350 | 400 | 650 | 330 |
| 11 | | | | | | | | 4,440 | 4,440 | 240 | 617 | 310 |
| 12 | | | | | | | | 3,920 | 4,180 | 360 | 573 | 280 |
| 13 | | | | | | | | 3,790 | 3,790 | 340 | 520 | 260 |
| 14 | | | | | | | | 3,270 | 3,400 | 320 | 640 | 240 |
| 15 | | | | | | | | 3,400 | 2,940 | 310 | 651 | 250 |
| 16 | | | | | | | | 3,790 | 2,750 | 350 | 510 | 240 |
| 17 | | | | | | | | 4,440 | 2,420 | 350 | 480 | 240 |
| 18 | | | | | | | | 4,670 | 2,100 | 330 | 460 | 320 |
| 19 | | | | | | | 2,820 | 4,310 | 1,970 | 310 | 500 | 310 |
| 20 | | | | | | | 3,010 | 4,050 | 1,760 | 330 | 490 | 330 |
| 21 | | | | | | | 3,530 | 3,660 | 1,660 | 400 | 480 | 370 |
| 22 | | | | | | | 4,310 | 3,080 | 1,470 | 440 | 510 | 410 |
| 23 | | | | | | | 5,090 | 2,750 | 1,650 | 400 | 470 | 400 |
| 24 | | | | | | | 5,740 | 2,750 | 1,470 | 380 | 500 | 410 |
| 25 | | | | | | | 6,000 | 2,940 | 1,470 | 470 | 520 | 420 |
| 26 | | | | | | | 6,130 | 3,400 | 1,550 | 906 | 500 | 420 |
| 27 | | | | | | | 5,870 | 3,660 | 2,040 | 562 | 510 | 470 |
| 28 | | | | | | | 5,740 | 3,660 | 1,900 | 500 | 510 | 500 |
| 29 | | | | | | | 5,740 | 3,660 | 1,650 | 520 | 430 | 460 |
| 30 | | | | | | | 5,740 | 3,530 | 1,400 | 520 | 360 | 420 |
| 31 | | | | | | | | 3,200 | | 628 | 350 | |

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------|---------|---------|-------|----------------------|
| October | | | | |
| November | | | | |
| December | | | | |
| January | | | | |
| February | | | | |
| March | | | | |
| April 19-30 | 6,130 | 2,820 | 4,977 | 118,500 |
| May | 6,820 | 2,760 | 4,032 | 247,900 |
| June | 8,920 | 1,400 | 2,815 | 187,500 |
| July | 1,220 | 240 | 530 | 32,970 |
| August | 727 | 350 | 565 | 34,140 |
| September | 500 | 240 | 341 | 20,310 |
| The period | | | | 620,900 |

Muddy Creek at Vaughn, Mont.

Location.- Wire gage in SE $\frac{1}{4}$ sec. 24, T. 21 N., R. 1 E., at old highway bridge at Vaughn. Gage used 1925-26 at Great Northern Railway bridge 500 feet below present site and at different datum.

Records available.- May 1925 to February 1926, April to September 1934.

Extremes.- Maximum discharge recorded during period, 423 second-feet June 8 (gage height, 5.83 feet), minimum, 30 second-feet Apr. 19-21 (gage height, 2.76 feet).
1925-26, 1934: Maximum discharge, 602 second-feet June 5, 1925 (gage height, 8.90 feet, former site) minimum, 8.1 second-feet July 21, 1925 (gage height, 1.07 feet, former site).

Remarks.- Records good. Flow increased by return water from Sun River drainage ditch.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | | | | | | | | 49 | 60 | 163 | 163 | 115 |
| 2 | | | | | | | | 44 | 163 | 151 | 189 | 115 |
| 3 | | | | | | | | 38 | 228 | 133 | 215 | 98 |
| 4 | | | | | | | | 37 | 121 | 104 | 242 | 93 |
| 5 | | | | | | | | 37 | 110 | 93 | 228 | 76 |
| 6 | | | | | | | | 33 | 88 | 71 | 242 | 82 |
| 7 | | | | | | | | 35 | 145 | 46 | 189 | 69 |
| 8 | | | | | | | | 46 | 423 | 51 | 145 | 70 |
| 9 | | | | | | | | 35 | 151 | 82 | 133 | 88 |
| 10 | | | | | | | | 37 | 242 | 76 | 110 | 93 |
| 11 | | | | | | | | 35 | 300 | 57 | 93 | 88 |
| 12 | | | | | | | | 42 | 215 | 44 | 82 | 76 |
| 13 | | | | | | | | 59 | 133 | 45 | 88 | 76 |
| 14 | | | | | | | | 59 | 70 | 39 | 110 | 67 |
| 15 | | | | | | | | 51 | 64 | 36 | 121 | 69 |
| 16 | | | | | | | | 176 | 151 | 52 | 110 | 60 |
| 17 | | | | | | | | 202 | 133 | 41 | 98 | 58 |
| 18 | | | | | | | | 228 | 127 | 51 | 104 | 53 |
| 19 | | | | | | | 30 | 202 | 133 | 53 | 115 | 51 |
| 20 | | | | | | | 30 | 242 | 115 | 57 | 121 | 55 |
| 21 | | | | | | | 30 | 256 | 93 | 63 | 145 | 64 |
| 22 | | | | | | | 46 | 145 | 82 | 70 | 139 | 66 |
| 23 | | | | | | | 49 | 98 | 71 | 76 | 133 | 46 |
| 24 | | | | | | | 49 | 82 | 88 | 76 | 163 | 76 |
| 25 | | | | | | | 51 | 76 | 115 | 88 | 163 | 76 |
| 26 | | | | | | | 49 | 71 | 98 | 121 | 163 | 64 |
| 27 | | | | | | | 49 | 59 | 285 | 127 | 163 | 82 |
| 28 | | | | | | | 49 | 47 | 256 | 115 | 163 | 76 |
| 29 | | | | | | | 42 | 82 | 189 | 110 | 163 | 64 |
| 30 | | | | | | | 42 | 56 | 151 | 139 | 115 | 56 |
| 31 | | | | | | | | 56 | | 151 | 110 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April 19-30 | | | | | | | | | | | | |
| May | | | | | | | 51 | 30 | 43.0 | 1,020 | | |
| June | | | | | | | 256 | 33 | 87.5 | 5,880 | | |
| July | | | | | | | 423 | 60 | 153 | 9,120 | | |
| August | | | | | | | 163 | 36 | 53.3 | 5,120 | | |
| September | | | | | | | 242 | 82 | 146 | 8,960 | | |
| | | | | | | | 115 | 46 | 74.1 | 4,410 | | |
| The period | | | | | | | | | | 34,000 | | |

Marias River near Shelby, Mont.

Location.- Water-stage recorder in sec. 20, T. 31 N., R. 2 W., at highway bridge 7 miles south of Shelby.

Drainage area.- 2,610 square miles.

Records available.- April 1902 to January 1908, April 1911 to September 1934.

Extremes.- Maximum discharge during year, 16,200 second-feet June 8 (gage height, 11.05 feet); minimum, 104 second-feet Sept. 7 (gage height, 1.95 feet). 1902-7, 1911-34: Maximum discharge, 23,500 second-feet June 24, 1907 (gage height, 14.9 feet); minimum, 10 second-feet Aug. 20, 1919 (gage height, 1.50 feet).

Remarks.- Records good. No records Oct. 1-9, Nov. 12 to Feb. 28. Ice present Mar. 20-31. Numerous diversions from tributaries. Flow partly regulated by storage in several reservoirs on tributaries.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|-------|-------|------|------|------|---------|---------|-------|----------------------|-------|------|-------|
| 1 | | 1,980 | | | | 1,250 | 1,080 | 4,040 | 2,250 | 1,440 | 344 | 108 |
| 2 | | 1,670 | | | | 1,500 | 1,080 | 3,640 | 2,110 | 1,340 | 353 | 113 |
| 3 | | 1,450 | | | | 1,560 | 1,080 | 3,540 | 1,920 | 1,290 | 353 | 115 |
| 4 | | 1,730 | | | | 1,450 | 920 | 3,450 | 1,730 | 1,260 | 339 | 113 |
| 5 | | 1,450 | | | | 1,210 | 1,040 | 3,160 | 1,960 | 1,200 | 320 | 115 |
| 6 | | 1,350 | | | | 740 | 1,350 | 3,640 | 2,110 | 1,190 | 297 | 108 |
| 7 | | 1,260 | | | | 540 | 1,790 | 4,140 | 4,480 | 1,180 | 275 | 108 |
| 8 | | 1,170 | | | | 540 | 2,320 | 4,240 | 14,000 | 1,120 | 254 | 135 |
| 9 | | 1,080 | | | | 547 | 3,360 | 4,240 | 12,500 | 1,050 | 241 | 152 |
| 10 | 330 | 1,340 | | | | 587 | 3,260 | 4,040 | 8,450 | 949 | 237 | 149 |
| 11 | 330 | 1,120 | | | | 1,030 | 3,070 | 3,830 | 6,520 | 834 | 233 | 143 |
| 12 | 335 | | | | | 950 | 2,800 | 3,830 | 5,300 | 779 | 225 | 136 |
| 13 | 320 | | | | | 1,170 | 2,890 | 3,660 | 4,720 | 734 | 233 | 132 |
| 14 | 310 | | | | | 1,170 | 3,360 | 3,260 | 4,080 | 708 | 229 | 130 |
| 15 | 300 | | | | | 997 | 3,160 | 3,020 | 3,560 | 691 | 229 | 132 |
| 16 | 300 | | | | | 989 | 2,720 | 3,260 | 3,180 | 666 | 221 | 132 |
| 17 | 300 | | | | | 1,040 | 2,640 | 3,500 | 2,860 | 602 | 194 | 130 |
| 18 | 300 | | | | | 988 | 2,980 | 3,580 | 2,620 | 571 | 198 | 125 |
| 19 | 325 | | | | | 942 | 3,260 | 3,420 | 2,320 | 543 | 202 | 125 |
| 20 | 367 | | | | | | 3,360 | 3,100 | 2,180 | 530 | 202 | 125 |
| 21 | 340 | | | | | | 3,840 | 2,780 | 1,980 | 497 | 194 | 130 |
| 22 | 325 | | | | | | 4,340 | 2,460 | 1,790 | 497 | 191 | 167 |
| 23 | 367 | | | | | | 4,860 | 2,250 | 1,730 | 490 | 188 | 198 |
| 24 | 372 | | | | | | 5,070 | 2,110 | 1,610 | 479 | 188 | 205 |
| 25 | 514 | | | | | | 5,070 | 2,180 | 1,500 | 484 | 184 | 237 |
| 26 | 800 | | | | | | 5,070 | 2,250 | 1,560 | 490 | 161 | 279 |
| 27 | 1,260 | | | | | | 4,860 | 2,390 | 2,700 | 473 | 140 | 372 |
| 28 | 1,580 | | | | | | 4,650 | 2,460 | 2,460 | 424 | 130 | 403 |
| 29 | 2,180 | | | | | | 4,650 | 2,460 | 1,850 | 398 | 122 | 377 |
| 30 | 2,640 | | | | | | 4,540 | 2,460 | 1,610 | 377 | 113 | 358 |
| 31 | 2,480 | | | | | | | 2,390 | | 358 | 108 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October 10-31 | | | | | | 2,640 | 300 | 743 | 32,440 | | | |
| November 1-11 | | | | | | 1,980 | 1,040 | 1,391 | 30,350 | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | 1,560 | 540 | 943 | 57,960 | | | |
| April | | | | | | 5,070 | 920 | 3,149 | 187,400 | | | |
| May | | | | | | 4,240 | 2,110 | 3,186 | 195,900 | | | |
| June | | | | | | 14,000 | 1,500 | 3,590 | 213,600 | | | |
| July | | | | | | 1,440 | 358 | 763 | 46,900 | | | |
| August | | | | | | 353 | 108 | 223 | 13,680 | | | |
| September | | | | | | 403 | 108 | 175 | 10,430 | | | |

Marias River near Brinkman, Mont.

Location.- Water-stage recorder in NW $\frac{1}{4}$ sec. 21, T. 29 N., R. 8 E., 4 miles southwest of Brinkman post office. Zero of gage is 2,870.28 feet above mean sea level.

Records available.- October 1921 to September 1934.

Extremes.- Maximum discharge during year, 14,000 second-feet June 10 (gage height, 10.28 feet); minimum, 102 second-feet Sept. 8 (gage height, 2.08 feet).
1921-34: Maximum discharge recorded, 14,300 second-feet June 1, 1927 (gage height, 7.9 feet, present datum); minimum, 45 second-feet Feb. 7-9, 1932.
Maximum known stage, about 16.7 feet (present datum), during 1908 flood.

Remarks.- Records good except those for period of ice effect, Mar. 1-14, which are poor. No records Nov. 1 to Feb. 10. Discharge not computed because of ice Feb. 11-28. Numerous diversions. Flow partly regulated by storage on tributaries.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------|-------|------|------|------|------|------|---------|---------|--------|----------------------|------|-------|
| 1 | | | | | | | 945 | 4,350 | 2,440 | 1,950 | 365 | 122 |
| 2 | | | | | | | 1,320 | 3,990 | 2,370 | 1,690 | 361 | 116 |
| 3 | | | | | | | 1,460 | 3,560 | 2,300 | 1,530 | 345 | 110 |
| 4 | | | | | | | 1,470 | 3,300 | 2,160 | 1,410 | 345 | 106 |
| 5 | | | | | | | 1,340 | 3,140 | 2,020 | 1,320 | 355 | 106 |
| 6 | | | | | | | 1,230 | 3,060 | 2,020 | 1,270 | 345 | 106 |
| 7 | | | | | | | 1,460 | 3,720 | 2,300 | 1,220 | 340 | 104 |
| 8 | 325 | | | | | | 1,690 | 4,440 | 3,780 | 1,210 | 305 | 112 |
| 9 | 330 | | | | | | 2,230 | 4,540 | 12,200 | 1,180 | 265 | 115 |
| 10 | 330 | | | | | | 2,740 | 4,540 | 12,200 | 1,130 | 246 | 116 |
| 11 | 325 | | | | | | 3,060 | 4,260 | 8,650 | 1,090 | 224 | 126 |
| 12 | 325 | | | | | | 2,900 | 3,810 | 6,740 | 1,030 | 203 | 130 |
| 13 | 335 | | | | | | 2,820 | 3,640 | 5,730 | 955 | 210 | 133 |
| 14 | 330 | | | | | | 2,680 | 3,640 | 5,030 | 895 | 206 | 128 |
| 15 | 325 | | | | | | 1,950 | 2,990 | 3,300 | 4,350 | 845 | 203 |
| 16 | 320 | | | | | | 1,430 | 3,060 | 3,140 | 3,900 | 806 | 203 |
| 17 | 315 | | | | | | 1,260 | 2,740 | 3,060 | 3,470 | 777 | 196 |
| 18 | 310 | | | | | | 1,260 | 2,580 | 3,220 | 3,140 | 739 | 206 |
| 19 | 315 | | | | | | 1,260 | 2,740 | 3,380 | 2,820 | 702 | 200 |
| 20 | 325 | | | | | | 1,180 | 3,060 | 3,300 | 2,510 | 666 | 166 |
| 21 | 315 | | | | | | 1,120 | 3,140 | 3,220 | 2,370 | 639 | 175 |
| 22 | 335 | | | | | | 1,240 | 3,470 | 2,900 | 2,160 | 622 | 175 |
| 23 | 367 | | | | | | 1,350 | 3,810 | 2,660 | 1,950 | 606 | 166 |
| 24 | 325 | | | | | | 1,280 | 4,170 | 2,440 | 1,820 | 582 | 186 |
| 25 | 280 | | | | | | 1,140 | 4,540 | 2,300 | 1,760 | 574 | 175 |
| 26 | 345 | | | | | | 1,080 | 4,540 | 2,230 | 1,690 | 566 | 175 |
| 27 | 379 | | | | | | 1,020 | 4,540 | 2,230 | 1,630 | 558 | 170 |
| 28 | 748 | | | | | | 975 | 4,540 | 2,300 | 1,880 | 543 | 164 |
| 29 | 1,210 | | | | | | 945 | 4,440 | 2,370 | 2,510 | 508 | 151 |
| 30 | 1,690 | | | | | | 895 | 4,440 | 2,440 | 2,230 | 454 | 141 |
| 31 | 2,230 | | | | | | 748 | 2,440 | | | 422 | 130 |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October 8-31 | | | | | | | 2,230 | 260 | 516 | 24,660 | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | 1,950 | | 1,203 | 73,950 | | |
| April | | | | | | | 4,640 | 945 | 2,674 | 171,000 | | |
| May | | | | | | | 4,540 | 2,230 | 3,255 | 200,200 | | |
| June | | | | | | | 12,200 | 1,630 | 3,671 | 218,400 | | |
| July | | | | | | | 1,950 | 422 | 919 | 56,490 | | |
| August | | | | | | | 385 | 130 | 232 | 14,240 | | |
| September | | | | | | | 373 | 104 | 146 | 6,680 | | |

Judith River near Utica, Mont.

Location.- Wire gage in NW $\frac{1}{4}$ sec. 17, T. 13 N., R. 12 E., at Noel ranch, 10 miles above Utica.

Drainage area.- 326 square miles.

Records available.- October 1919 to September 1934.

Extremes.- Maximum discharge during year, 98 second-feet May 12 (gage height, 2.40 feet); minimum, 1.0 second-foot Mar. 21 to Apr. 15 (gage height, 1.32 feet).
1919-34: Maximum discharge, 1,070 second-feet June 11, 1927 (gage height, 5.70 feet); no flow Mar. 19-21, 1933.

Remarks.- Records good. No records Oct. 1 to Feb. 4. Several diversions above station.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|------|------|------|------|------|------|---------|---------|------|------|-------------------------|-------|
| 1 | | | | | | 2.0 | 1.0 | 91 | 23 | 16 | 8.5 | 4.4 |
| 2 | | | | | | 2.0 | 1.0 | 90 | 28 | 16 | 8.5 | 4.6 |
| 3 | | | | | | 2.0 | 1.0 | 88 | 25 | 12 | 8.0 | 3.6 |
| 4 | | | | | | 2.0 | 1.0 | 83 | 23 | 14 | 7.4 | 3.6 |
| 5 | | | | | 2.5 | 2.0 | 1.0 | 74 | 20 | 14 | 6.8 | 2.8 |
| 6 | | | | | 2.5 | 1.5 | 1.0 | 76 | 25 | 14 | 6.3 | 2.8 |
| 7 | | | | | 2.5 | 1.5 | 1.0 | 83 | 65 | 12 | 6.3 | 4.1 |
| 8 | | | | | 2.5 | 1.5 | 1.0 | 92 | 66 | 11 | 6.3 | 3.0 |
| 9 | | | | | 2.5 | 1.5 | 1.0 | 94 | 58 | 12 | 6.3 | 3.0 |
| 10 | | | | | 2.5 | 1.5 | 1.0 | 91 | 51 | 11 | 6.3 | 3.0 |
| 11 | | | | | 2.5 | 1.5 | 1.0 | 88 | 46 | 10 | 6.3 | 3.0 |
| 12 | | | | | 2.5 | 1.5 | 1.0 | 95 | 47 | 10 | 6.3 | 3.0 |
| 13 | | | | | 2.5 | 1.5 | 1.0 | 79 | 42 | 9.2 | 5.8 | 2.5 |
| 14 | | | | | 2.5 | 1.5 | 1.0 | 70 | 43 | 6.5 | 5.8 | 3.0 |
| 15 | | | | | 2.5 | 1.5 | 1.0 | 63 | 40 | 9.2 | 5.8 | 2.5 |
| 16 | | | | | 2.5 | 1.5 | 1.1 | 60 | 35 | 9.9 | 5.2 | 2.5 |
| 17 | | | | | 2.5 | 1.5 | 1.4 | 54 | 34 | 8.0 | 5.6 | 2.5 |
| 18 | | | | | 2.5 | 1.5 | 1.8 | 48 | 31 | 8.0 | 5.2 | 2.5 |
| 19 | | | | | 2.5 | 1.5 | 2.2 | 48 | 30 | 8.5 | 5.8 | 2.5 |
| 20 | | | | | 2.5 | 1.5 | 2.5 | 47 | 29 | 8.0 | 5.2 | 2.5 |
| 21 | | | | | 2.5 | 1.0 | 2.6 | 43 | 26 | 7.4 | 4.6 | 2.5 |
| 22 | | | | | 2.5 | 1.0 | 35 | 39 | 25 | 8.0 | 4.1 | 3.0 |
| 23 | | | | | 2.0 | 1.0 | 38 | 36 | 23 | 9.2 | 5.8 | 2.5 |
| 24 | | | | | 2.0 | 1.0 | 71 | 33 | 22 | 11 | 5.2 | 2.5 |
| 25 | | | | | 2.0 | 1.0 | 81 | 29 | 24 | 10 | 5.2 | 2.5 |
| 26 | | | | | 2.0 | 1.0 | 90 | 28 | 26 | 12 | 5.2 | 2.5 |
| 27 | | | | | 2.0 | 1.0 | 90 | 26 | 26 | 9.2 | 5.8 | 2.5 |
| 28 | | | | | 2.0 | 1.0 | 90 | 24 | 25 | 8.5 | 6.8 | 2.5 |
| 29 | | | | | | 1.0 | 90 | 22 | 20 | 9.2 | 5.8 | 2.5 |
| 30 | | | | | | 1.0 | 92 | 21 | 18 | 9.2 | 4.1 | 2.5 |
| 31 | | | | | | 1.0 | | 21 | | 8.5 | 4.1 | |
| Month | | | | | | | Maximum | Minimum | Mean | | Run-off in acre-feet | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February 5-28 | | | | | | | 2.5 | 2.0 | 2.38 | | 113 | |
| March | | | | | | | 2.0 | 1.0 | 1.40 | | 86 | |
| April | | | | | | | 92 | 1.0 | 26.9 | | 1,600 | |
| May | | | | | | | 95 | 21 | 59.2 | | 3,640 | |
| June | | | | | | | 66 | 18 | 33.1 | | 1,970 | |
| July | | | | | | | 16 | 7.4 | 10.4 | | 641 | |
| August | | | | | | | 8.5 | 4.1 | 5.95 | | 366 | |
| September | | | | | | | 4.6 | 2.5 | 2.90 | | 172 | |
| The period | | | | | | | | | | | 6,590 | |

*Interpolated.

Big Spring Creek near Lewistown, Mont.

Location.- Staff gage in NE $\frac{1}{4}$ sec. 5, T. 14 N., R. 19 E., at highway bridge half a mile below the Big Springs and 5 miles southeast of Lewistown.

Records available.- June 1932 to September 1934.

Extremes.- Maximum discharge recorded during year, 180 second-feet Jan. 20 (gage height, 0.79 foot), minimum, 100 second-feet Aug. 27 to Sept. 1 (gage height, 0.59 foot).
1932-34: Maximum discharge recorded, 183 second-feet May 7, 1933 (gage height, 0.85 foot); minimum, that of Aug. 27 to Sept. 1, 1934.

Remarks.- Records fair. Discharge interpolated for days of no gage reading. Variations in flow are known to be small.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | 150 | *157 | *157 | 157 | 150 | 138 | 156 | 124 | 107 | 102 | *102 | *100 |
| 2 | 150 | 157 | 157 | 157 | 150 | 137 | *136 | 124 | 107 | 102 | *102 | 101 |
| 3 | *150 | 157 | 157 | 157 | *150 | *136 | 136 | 124 | 107 | 102 | 102 | 101 |
| 4 | 150 | 157 | *157 | 157 | 150 | *136 | 135 | 124 | *107 | 102 | 102 | *102 |
| 5 | 150 | 157 | 157 | 157 | 150 | 136 | 134 | *124 | 107 | 102 | 102 | 102 |
| 6 | 150 | *157 | *157 | *157 | 150 | 136 | 133 | *121 | 107 | *102 | 102 | 102 |
| 7 | *150 | 157 | 157 | 157 | 150 | 136 | 132 | 119 | 107 | 102 | 102 | 102 |
| 8 | 151 | 157 | 157 | 157 | 150 | 136 | 131 | 116 | 107 | 102 | 102 | 102 |
| 9 | 153 | *157 | *157 | 157 | *150 | 136 | 130 | *113 | 107 | 102 | 102 | 102 |
| 10 | *154 | 157 | 157 | 157 | 157 | 149 | 136 | 129 | 112 | 107 | *102 | 102 |
| 11 | 154 | 157 | 157 | 157 | 148 | 136 | *129 | 111 | *107 | *102 | 102 | 102 |
| 12 | 154 | 157 | 157 | 157 | 148 | 136 | 129 | 110 | 107 | *102 | 102 | 102 |
| 13 | *154 | 157 | 157 | *157 | 148 | 136 | 129 | 110 | 106 | 102 | 102 | 102 |
| 14 | 154 | *157 | 157 | 157 | 144 | 136 | 128 | 109 | 106 | *102 | 102 | *102 |
| 15 | 154 | 157 | 157 | 157 | *143 | 136 | 128 | 108 | 106 | 102 | *102 | 102 |
| 16 | 154 | 157 | 157 | 158 | 143 | 136 | 127 | *107 | 105 | 102 | 102 | 102 |
| 17 | 154 | 157 | 157 | 158 | *143 | 136 | 127 | *105 | 104 | *102 | 102 | 102 |
| 18 | 154 | *157 | 157 | 159 | 143 | 136 | 126 | 104 | 104 | 102 | 102 | 102 |
| 19 | *154 | 157 | 157 | 159 | 143 | 136 | 126 | *102 | 103 | 102 | 102 | 102 |
| 20 | 154 | 157 | 157 | *160 | 143 | 136 | 125 | 102 | 102 | *102 | 102 | 102 |
| 21 | *154 | *157 | 157 | 155 | 143 | 136 | 125 | 103 | *102 | 102 | 102 | *102 |
| 22 | 155 | 157 | 157 | *150 | 143 | 136 | 124 | 104 | 102 | 102 | *102 | 102 |
| 23 | 156 | *157 | 157 | 150 | *143 | 136 | 124 | 104 | 102 | 102 | *102 | 102 |
| 24 | *157 | 157 | 157 | 150 | 142 | *136 | *124 | *105 | 102 | 102 | 102 | 102 |
| 25 | 157 | 157 | 157 | 150 | 141 | 136 | 124 | 104 | 102 | 102 | 101 | 102 |
| 26 | 157 | 157 | 157 | 150 | 140 | 136 | 124 | 103 | 102 | 102 | 101 | 102 |
| 27 | *157 | *157 | 157 | 150 | 139 | 136 | 124 | *102 | 102 | 102 | *100 | *102 |
| 28 | 157 | 157 | 157 | 150 | 139 | 136 | *124 | 104 | 102 | *102 | 100 | 102 |
| 29 | 157 | 157 | 157 | 150 | 136 | 136 | 124 | 106 | 102 | 102 | 100 | 102 |
| 30 | 157 | 157 | 157 | 150 | 136 | 136 | 124 | *107 | *102 | 102 | *100 | 102 |
| 31 | *157 | | 157 | 150 | | 136 | | 107 | | 102 | 100 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 157 | 150 | 154 | 9,460 | | |
| November | | | | | | | 157 | 157 | 157 | 9,340 | | |
| December | | | | | | | 157 | 157 | 157 | 9,650 | | |
| January | | | | | | | 160 | 150 | 155 | 9,530 | | |
| February | | | | | | | 150 | 139 | 145 | 8,070 | | |
| March | | | | | | | 138 | 136 | 136 | 8,370 | | |
| April | | | | | | | 136 | 124 | 128 | 7,650 | | |
| May | | | | | | | 124 | 102 | 110 | 6,780 | | |
| June | | | | | | | 107 | 102 | 105 | 6,230 | | |
| July | | | | | | | 102 | 102 | 102 | 6,270 | | |
| August | | | | | | | 102 | 100 | 102 | 6,260 | | |
| September | | | | | | | 102 | 100 | 102 | 6,060 | | |
| The year | | | | | | | 160 | 100 | 129 | 93,600 | | |

*Gage read.

Mussellsell River at Harlowton, Mont.

Location.- Chain gage in sec. 26, T. 8 N., R. 15 E., at highway bridge 1 mile south of Harlowton.

Drainage area.- 1,130 square miles.

Records available.- July 1907 to September 1934.

Extremes.- Maximum discharge during year, 385 second-feet June 8 (gage height, 3.85 feet); no flow at times.
1907-34: Maximum discharges recorded, 4,020 second-feet May 27, 1917 (gage height, 7.3 feet, present datum); no flow at times.

Remarks.- Records good. No records Oct. 1 to Jan. 31. Stage-discharge relation affected by ice Feb. 1-4, Feb. 24 to Mar. 3.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|------------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | | | | | | 44 | 85 | 74 | 3.9 | 3.5 | 0.4 | |
| 2 | | | | | | 62 | 88 | 72 | 10 | 2.2 | .3 | |
| 3 | | | | | 40 | 68 | 81 | 66 | 5.1 | 2.2 | 0 | |
| 4 | | | | | | 61 | 72 | 66 | 5.1 | 2.0 | 0 | |
| 5 | | | | | 88 | 79 | 70 | 66 | 4.3 | 2.2 | 0 | |
| 6 | | | | | 83 | 81 | 74 | 66 | 17 | 1.8 | 0 | |
| 7 | | | | | 72 | 68 | 77 | 58 | 45 | 1.5 | 0 | |
| 8 | | | | | 70 | 70 | 85 | 66 | 360 | 1.3 | 0 | |
| 9 | | | | | 77 | 68 | 97 | 70 | 306 | .9 | 0 | |
| 10 | | | | | 77 | 83 | 106 | 64 | 197 | .8 | 0 | |
| 11 | | | | | 58 | 64 | 101 | 56 | 154 | .8 | 0 | |
| 12 | | | | | 68 | 64 | 106 | 54 | 146 | .6 | 0 | |
| 13 | | | | | 72 | 75 | 88 | 55 | 128 | .4 | 0 | |
| 14 | | | | | 75 | 88 | 72 | 55 | 106 | .2 | 0 | |
| 15 | | | | | 77 | 79 | 70 | 48 | 106 | 0 | 0 | |
| 16 | | | | | 68 | 66 | 70 | 48 | 75 | 0 | 0 | |
| 17 | | | | | 72 | 79 | 72 | 36 | 68 | 0 | 0 | |
| 18 | | | | | 75 | 66 | 70 | 31 | 61 | 0 | 0 | |
| 19 | | | | | 68 | 62 | 64 | 27 | 55 | 0 | 0 | |
| 20 | | | | | 68 | 60 | 60 | 22 | 46 | 0 | 0 | |
| 21 | | | | | 74 | 66 | 50 | 20 | 41 | 0 | 0 | |
| 22 | | | | | 70 | 66 | 42 | 17 | 35 | 0 | 0 | |
| 23 | | | | | 55 | 72 | 41 | 9.2 | 31 | 0 | 0 | |
| 24 | | | | | 36 | 68 | 41 | 6.0 | 28 | 9.8 | 0 | |
| 25 | | | | | 26 | 70 | 46 | 4.7 | 24 | 2.1 | 0 | |
| 26 | | | | | 12 | 66 | 58 | 3.9 | 17 | 1.5 | 0 | |
| 27 | | | | | 20 | 72 | 50 | 3.5 | 13 | 1.1 | 0 | |
| 28 | | | | | 24 | 66 | 50 | 3.0 | 11 | .9 | 0 | |
| 29 | | | | | | 62 | 52 | 2.2 | 7.4 | .8 | 0 | |
| 30 | | | | | | 64 | 61 | 2.6 | 5.6 | .8 | 0 | |
| 31 | | | | | | 77 | | 2.1 | | .6 | 0 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | 88 | 12 | 58.8 | 3,260 | | | |
| March | | | | | | 88 | 44 | 68.9 | 4,240 | | | |
| April | | | | | | 106 | 41 | 70.0 | 4,160 | | | |
| May | | | | | | 74 | 2.1 | 37.9 | 2,330 | | | |
| June | | | | | | 360 | 3.9 | 70.4 | 4,190 | | | |
| July | | | | | | 9.8 | 0 | 1.22 | 75 | | | |
| August | | | | | | .4 | 0 | .02 | 1.4 | | | |
| September | | | | | | 0 | 0 | 0 | 0 | | | |
| The period | | | | | | | | | 18,260 | | | |

Note.- No flow during September.

Musselshell River at Mosby, Mont.

Location.- Wire gage in NW $\frac{1}{4}$ sec. 11, T. 14 N., R. 30 E., at highway bridge half a mile west of Mosby. Temporary gage used after destruction of permanent gage by high water of June 8, 1934.

Records available.- May 1929 to September 1932, February to September 1934.

Extremes.- Maximum discharge during period, 8,630 second-feet June 6 (gage height, 10.1 feet); no flow at times.

1929-32, 1934: Maximum discharge, that of June 6, 1934; no flow at times.

Remarks.- Records fair. Numerous diversions.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | | | | | | 521 | 94 | 0.8 | 0 | 44 | | |
| 2 | | | | | | 420 | 85 | .8 | 0 | 27 | | |
| 3 | | | | | | 198 | 103 | .7 | 0 | 30 | | |
| 4 | | | | | 150 | 103 | 160 | .7 | 0 | 12 | | |
| 5 | | | | | 154 | 113 | 147 | .6 | 2 | 3 | | |
| 6 | | | | | 108 | | 147 | .6 | 4,690 | 1 | | |
| 7 | | | | | 90 | | 119 | .5 | 2,310 | 0 | | |
| 8 | | | | | 102 | 139 | 113 | .4 | 2,960 | 0 | | |
| 9 | | | | | 94 | | 99 | .2 | 4,040 | 0 | | |
| 10 | | | | | 99 | | 85 | .2 | 2,960 | 0 | | |
| 11 | | | | | 99 | 260 | 64 | .2 | 960 | 0 | | |
| 12 | | | | | 124 | 147 | 43 | .2 | 600 | 0 | | |
| 13 | | | | | 119 | 103 | 43 | 0 | 519 | 0 | | |
| 14 | | | | | 119 | 85 | 34 | 0 | 429 | 0 | | |
| 15 | | | | | 99 | 99 | 34 | 0 | 690 | 0 | | |
| 16 | | | | | | 90 | 28 | 0 | 348 | 0 | | |
| 17 | | | | | | 85 | 28 | 0 | 216 | 0 | | |
| 18 | | | | | | 74 | 22 | 0 | 144 | 0 | | |
| 19 | | | | | | 81 | 17 | 0 | 124 | 0 | | |
| 20 | | | | | | 81 | 14 | 0 | 109 | 0 | | |
| 21 | | | | | | 85 | 9.2 | 0 | 95 | 0 | | |
| 22 | | | | | | 74 | 5.7 | 0 | 89 | 0 | | |
| 23 | | | | | | 58 | 4.6 | 0 | 79 | 18 | | |
| 24 | | | | | | 58 | 3.4 | 0 | 69 | 1 | | |
| 25 | | | | | | 66 | 1.4 | 0 | 69 | 0 | | |
| 26 | | | | | | 58 | 1.0 | 0 | 69 | 0 | | |
| 27 | | | | | | 46 | 1.0 | 0 | 71 | 0 | | |
| 28 | | | | | | 63 | 1.0 | 0 | 40 | 0 | | |
| 29 | | | | | | 66 | 1.0 | 0 | 117 | 0 | | |
| 30 | | | | | | 81 | .9 | 0 | 69 | 0 | | |
| 31 | | | | | | 70 | | 0 | | 0 | | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February 4-28 | | | | | | | | | | | | |
| March | | | | | | 521 | 46 | 111 | 5,520 | | | |
| April | | | | | | 160 | .9 | 125 | 7,700 | | | |
| May | | | | | | .8 | 0 | 50.3 | 2,990 | | | |
| June | | | | | | 4,690 | 0 | 729 | 45,370 | | | |
| July | | | | | | 44 | 0 | 4.4 | 270 | | | |
| August | | | | | | 0 | 0 | 0 | 0 | | | |
| September | | | | | | 0 | 0 | 0 | 0 | | | |
| The period | | | | | | | | | 59,860 | | | |

Note.- No flow during August and September.

Box Elder Creek near Winnett, Mont.

Location.- Wire gage near north quarter corner of sec. 3, T. 14 N., R. 28 E., on highway bridge a quarter of a mile above mouth of McDonald Creek and 9 miles east of Winnett.

Records available.- June 1930 to December 1932, February to September 1934.

Extremes.- Maximum discharge during period, 2,840 second-feet June 7 (gage height, 8.07 feet); no flow at times.
1930-32, 1934: Maximum discharge, 4,740 second-feet June 8, 1932 (gage height, 9.30 feet); no flow at times.

Remarks.- Records fair. Some diversions from tributaries for storage and irrigation.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|------|------|------|------|------|------|---------|---------|-------|----------------------|------|-------|
| 1 | | | | | | 1.6 | 2.2 | | 0 | 8.4 | 0.1 | |
| 2 | | | | | | 1.9 | 13 | | 0 | 5.2 | .1 | |
| 3 | | | | | | 2.2 | 89 | | 0 | 9.2 | .1 | |
| 4 | | | | | | 1.9 | 81 | | 0 | 4.7 | 0 | |
| 5 | | | | | | .8 | 51 | | 0 | 4.7 | 0 | |
| 6 | | | | | 6.0 | .6 | 64 | | 56 | 1.9 | 0 | |
| 7 | | | | | 5.2 | .4 | 89 | | 2,120 | 1.0 | 0 | |
| 8 | | | | | 3.8 | .6 | 51 | | 2,060 | .9 | 0 | |
| 9 | | | | | 4.7 | .6 | 53 | | 1,160 | .6 | 0 | |
| 10 | | | | | 5.2 | .2 | 13 | | 286 | .4 | 0 | |
| 11 | | | | | 3.0 | .6 | 8.4 | | 89 | 0 | 0 | |
| 12 | | | | | 4.7 | 1.9 | 4.7 | | 63 | .1 | 0 | |
| 13 | | | | | 4.7 | 1.6 | 4.7 | | 31 | .1 | 0 | |
| 14 | | | | | 6.8 | 1.3 | .9 | | 38 | 0 | 0 | |
| 15 | | | | | 6.0 | .6 | .3 | | 52 | 0 | 0 | |
| 16 | | | | | 5.2 | .4 | .9 | | 35 | 0 | 0 | |
| 17 | | | | | 5.2 | .6 | .3 | | 23 | 0 | 0 | |
| 18 | | | | | 1.9 | .6 | .3 | | 8.0 | 0 | 0 | |
| 19 | | | | | 2.2 | .3 | .2 | | 5.6 | 0 | 0 | |
| 20 | | | | | 2.5 | .3 | .6 | | 4.4 | 0 | 0 | |
| 21 | | | | | .3 | .3 | .2 | | 3.3 | 0 | 0 | |
| 22 | | | | | .3 | .3 | .2 | | 2.0 | 0 | 0 | |
| 23 | | | | | .3 | .7 | .2 | | .8 | 0 | 0 | |
| 24 | | | | | .3 | .3 | .1 | | .4 | 2.2 | 0 | |
| 25 | | | | | .3 | .2 | .1 | | .8 | 28 | 0 | |
| 26 | | | | | .3 | .6 | 0 | | .7 | 8.4 | 0 | |
| 27 | | | | | .9 | .2 | 0 | | 30 | 23 | 0 | |
| 28 | | | | | 1.6 | .1 | 0 | | 23 | 14 | 0 | |
| 29 | | | | | | .6 | 0 | | 47 | 6.0 | 0 | |
| 30 | | | | | | .9 | 0 | | 15 | 3.2 | 0 | |
| 31 | | | | | | 1.6 | | | | .3 | 0 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February 6-28 | | | | | | | 6.8 | 0.3 | 3.10 | 142 | | |
| March | | | | | | | 2.2 | .1 | .79 | 49 | | |
| April | | | | | | | 81 | 0 | 16.3 | 969 | | |
| May | | | | | | | 0 | 0 | 0 | 0 | | |
| June | | | | | | | 2,120 | 0 | 205 | 12,210 | | |
| July | | | | | | | 28 | 0 | 3.85 | 245 | | |
| August | | | | | | | .1 | 0 | .01 | .6 | | |
| September | | | | | | | 0 | 0 | 0 | 0 | | |
| The period | | | | | | | | | | 13,610 | | |

Note.- No flow during May and September.

McDonald Creek at Winnett, Mont.

Location.- Wire gage in NE $\frac{1}{4}$ sec. 6, T. 14 N., R. 27 E., at highway bridge at Winnett.

Records available.- April 1930 to December 1932, February to September 1934.

Extremes.- Maximum discharge during period, 351 second-feet June 9 (gage height, 18.12 feet); no flow at times.

1930-32, 1934: Maximum discharge, 562 second-feet June 9, 1932 (gage height, 20.40 feet); no flow at times.

Remarks.- Records fair. Numerous diversions. Discharge interpolated Feb. 8, 9, 21.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | |
|---------------|------|------|------|------|------|------|---------|-----|---------|------|------|-------|-------------------------|
| 1 | | | | | | 0.3 | 0.5 | 0.1 | 0.1 | 0.4 | 0.1 | 0.1 | |
| 2 | | | | | | .3 | .3 | .1 | .1 | .4 | .1 | .1 | |
| 3 | | | | | | .3 | .3 | .1 | .2 | .2 | .1 | .1 | |
| 4 | | | | | 1.6 | .3 | .3 | .1 | .3 | .2 | 0 | .1 | |
| 5 | | | | | 1.8 | .3 | .3 | .1 | .3 | .2 | 0 | .1 | |
| 6 | | | | | 1.8 | .3 | .3 | .1 | .5 | .1 | 0 | .1 | |
| 7 | | | | | 2.1 | .3 | .3 | .1 | 51 | .3 | 0 | .1 | |
| 8 | | | | | 2.0 | .3 | .3 | .1 | 268 | .3 | 0 | .1 | |
| 9 | | | | | 2.0 | .3 | .3 | .1 | 322 | .3 | 0 | .1 | |
| 10 | | | | | 1.9 | .3 | .3 | .1 | 81 | 0 | 0 | .1 | |
| 11 | | | | | 2.2 | .5 | .1 | .1 | 48 | 0 | 0 | .1 | |
| 12 | | | | | 1.6 | .5 | .1 | .1 | 24 | 0 | 0 | .1 | |
| 13 | | | | | 3.3 | .3 | .1 | .1 | 8.6 | 0 | 0 | .1 | |
| 14 | | | | | 4.8 | .3 | .2 | .1 | 6.7 | 0 | 0 | .1 | |
| 15 | | | | | 3.0 | .3 | .1 | .1 | 7.1 | 0 | 0 | .1 | |
| 16 | | | | | .3 | .3 | .1 | .1 | 6.7 | 0 | 0 | .1 | |
| 17 | | | | | .3 | .3 | .1 | .1 | 3.6 | 0 | 0 | .1 | |
| 18 | | | | | .3 | .3 | .1 | .1 | 2.2 | 0 | 0 | .3 | |
| 19 | | | | | .3 | .3 | .1 | .1 | 2.5 | 0 | 0 | .2 | |
| 20 | | | | | .3 | .3 | .2 | .1 | 1.8 | 0 | 0 | .2 | |
| 21 | | | | | .3 | .3 | .2 | .1 | 1.3 | 0 | 0 | .3 | |
| 22 | | | | | .3 | .3 | .2 | .1 | .5 | 0 | 0 | .2 | |
| 23 | | | | | .3 | .3 | .2 | .1 | .4 | 0 | 0 | .3 | |
| 24 | | | | | .3 | .3 | .3 | .1 | .3 | .2 | 0 | .3 | |
| 25 | | | | | .3 | .3 | .2 | .1 | .1 | .3 | 0 | .2 | |
| 26 | | | | | .3 | .3 | .2 | .1 | .2 | .2 | 0 | .2 | |
| 27 | | | | | .3 | .3 | .2 | .1 | 1.1 | .2 | .1 | .2 | |
| 28 | | | | | .3 | .3 | .2 | .1 | .4 | .1 | .1 | .2 | |
| 29 | | | | | .3 | .3 | .2 | .1 | 3.6 | .2 | 0 | .1 | |
| 30 | | | | | .3 | .3 | .2 | .1 | 4.8 | .1 | .1 | .1 | |
| 31 | | | | | .3 | .3 | .1 | .1 | | .1 | .1 | | |
| Month | | | | | | | Maximum | | Minimum | | Mean | | Run-off in acre-feet |
| October | | | | | | | | | | | | | |
| November | | | | | | | | | | | | | |
| December | | | | | | | | | | | | | |
| January | | | | | | | | | | | | | |
| February 4-28 | | | | | | | 4.8 | | 0.3 | | 1.28 | | 63 |
| March | | | | | | | .5 | | .3 | | .31 | | 19 |
| April | | | | | | | .1 | | .1 | | .22 | | 13 |
| May | | | | | | | .1 | | .1 | | .10 | | 6.1 |
| June | | | | | | | 322 | | .1 | | 28.2 | | 1,680 |
| July | | | | | | | .4 | | 0 | | .12 | | 7.5 |
| August | | | | | | | .1 | | 0 | | .02 | | 1.4 |
| September | | | | | | | .3 | | .1 | | .16 | | 8.9 |
| The period | | | | | | | | | | | | | 1,800 |

Flatwillow Creek near Flatwillow, Mont.

Location.- Chain gage in NE $\frac{1}{4}$ sec. 19, T. 12 N., R. 25 E., on Flatwillow Land & Live-stock Co.'s ranch, 12 miles above Flatwillow.

Drainage area.- 195 square miles.

Records available.- April 1918 to September 1932, February to September 1934. May 1911 to April 1918 at station in sec. 23, T. 12 N., R. 25 E., about 4 miles downstream.

Extremes.- Maximum discharge recorded during period, 15 second-feet Mar. 5 (gage height, 1.30 feet); no flow at times.
1911-32, 1934: Maximum discharge, 954 second-feet, June 4-10, 1917 (gage height, 9.0 feet, at former location); no flow at times.

Remarks.- Records fair. Several diversions above station.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | | | | | | 11 | 10.2 | 0 | 0 | | | |
| 2 | | | | | | 10.6 | 9.4 | 0 | 0 | | | |
| 3 | | | | | | 11 | 9.8 | 0 | 0 | | | |
| 4 | | | | | | 14 | 12 | 0 | 0 | | | |
| 5 | | | | | | 15 | 10.2 | 0 | 0 | | | |
| 6 | | | | | 8.6 | 8.6 | 9.8 | 0 | 0 | | | |
| 7 | | | | | 9.4 | 7.0 | 9.0 | 0 | 6.2 | | | |
| 8 | | | | | 9.4 | 6.6 | 7.4 | 0 | 4.2 | | | |
| 9 | | | | | 11 | 6.6 | 1.6 | .3 | 1.6 | | | |
| 10 | | | | | 13 | 9.0 | .9 | .3 | .6 | | | |
| 11 | | | | | 8.2 | 13 | .6 | .2 | .1 | | | |
| 12 | | | | | 11 | 11 | .6 | .1 | 0 | | | |
| 13 | | | | | 10.2 | 2.8 | .6 | 0 | 0 | | | |
| 14 | | | | | 8.6 | 1.4 | .6 | 0 | 0 | | | |
| 15 | | | | | 4.6 | 1.4 | .5 | 0 | 0 | | | |
| 16 | | | | | 5.0 | .8 | .4 | 0 | 0 | | | |
| 17 | | | | | 7.0 | .8 | .3 | 0 | 0 | | | |
| 18 | | | | | 6.6 | 3.4 | .2 | 0 | 0 | | | |
| 19 | | | | | 6.6 | 3.8 | .1 | 0 | 0 | | | |
| 20 | | | | | 5.8 | 4.2 | 0 | 0 | .8 | | | |
| 21 | | | | | 2.6 | 4.2 | 0 | 0 | .1 | | | |
| 22 | | | | | 3.4 | 5.0 | 0 | 0 | 0 | | | |
| 23 | | | | | 3.8 | 5.4 | 0 | 0 | 0 | | | |
| 24 | | | | | 4.2 | 6.6 | 0 | 0 | 0 | | | |
| 25 | | | | | 3.4 | 7.4 | 0 | 0 | 0 | | | |
| 26 | | | | | 5.0 | 8.2 | 0 | 0 | 0 | | | |
| 27 | | | | | 8.6 | 6.6 | 0 | 0 | 0 | | | |
| 28 | | | | | 10.6 | 3.8 | 0 | 0 | 0 | | | |
| 29 | | | | | | 2.4 | 0 | 0 | 0 | | | |
| 30 | | | | | | 6.2 | 0 | 0 | 0 | | | |
| 31 | | | | | | 8.2 | | 0 | | | | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February 6-28 | | | | | | 13 | 2.6 | 7.24 | 330 | | | |
| March | | | | | | 15 | .8 | 6.65 | 409 | | | |
| April | | | | | | 12 | 0 | 2.80 | 167 | | | |
| May | | | | | | .3 | 0 | .03 | 1.8 | | | |
| June | | | | | | 6.2 | 0 | .44 | 27 | | | |
| July | | | | | | 0 | 0 | 0 | 0 | | | |
| August | | | | | | 0 | 0 | 0 | 0 | | | |
| September | | | | | | 0 | 0 | 0 | 0 | | | |
| The period | | | | | | | | | 935 | | | |

Note.- No flow July to September.

South Fork of Milk River near international boundary
(International gaging station)

Location.- Water-stage recorder in NW $\frac{1}{4}$ sec. 6, T. 1 R. 19 W. fourth meridian, 1 mile north of international boundary and 20 miles west of Milk River, Alberta.

Drainage area.- 433 square miles.

Records available.- March 1931 to September 1934. April 1905 to October 1930 at site 5 miles south of international boundary.

Extremes.- Maximum discharge during year, 983 second-feet June 9 (gage height, 3.56 feet); minimum, 8.2 second-feet August 19-21 (gage height, 0.97 foot).
1905-34: Maximum stage, 15.4 feet June 6, 1908 (discharge not determined); no flow at times during 1919 and 1931.

Remarks.- Records good except those for periods of ice effect, Oct. 17-26 and Mar. 1-21, which are fair. No records Nov. 1 to Feb. 28. Staff gage used Oct. 16-31, Mar. 1 to Apr. 16, May 14-16, Sept. 20-27. This station is one of the international gaging stations maintained jointly by the United States and Canada under the Boundary Waters Treaty. The records have been collected and compiled jointly with the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 11.9 | | | | | | *126 | 196 | 76 | 94 | 15.0 | 9.1 |
| 2 | 13.9 | | | | | | 158 | 189 | 60 | 85 | 13.8 | 10.9 |
| 3 | 13.9 | | | | | | 115 | 239 | 97 | 82 | 13.8 | 12.0 |
| 4 | 12.6 | | | | | | 161 | 212 | 123 | 80 | 13.6 | 12.0 |
| 5 | 11.2 | | | | | | 287 | 189 | 178 | 85 | 13.2 | 10.9 |
| 6 | 11.2 | | | | | | 451 | 219 | 231 | 71 | 11.5 | 10.3 |
| 7 | 11.9 | | | | | | 635 | 354 | 308 | 73 | 12.0 | 8.8 |
| 8 | 11.9 | | | | | | *586 | 275 | 776 | 67 | 10.3 | 10.9 |
| 9 | 11.2 | | | | | | 537 | 239 | 809 | 60 | 10.3 | 12.6 |
| 10 | 11.2 | | | | | | 54 | 423 | 215 | 390 | 52 | 9.7 |
| 11 | 10.6 | | | | | | 117 | 367 | 193 | 246 | 49.0 | 9.1 |
| 12 | 10.0 | | | | | | 171 | 349 | 204 | 193 | 43.0 | 9.1 |
| 13 | 10.0 | | | | | | 260 | 331 | 262 | 171 | 41.5 | 9.1 |
| 14 | 10.6 | | | | | | | 358 | 246 | 158 | 38.5 | 9.1 |
| 15 | 10.6 | | | | | | | *318 | 212 | 148 | 34.6 | 10.3 |
| 16 | 10.6 | | | | | | | 279 | 193 | 139 | 33.4 | 10.3 |
| 17 | 10.6 | | | | | | | 239 | 158 | 126 | 32.2 | 9.1 |
| 18 | 10.6 | | | | | | | 250 | 151 | 112 | 29.8 | 8.5 |
| 19 | 10.6 | | | | | | | 270 | 142 | 102 | 28.6 | 8.2 |
| 20 | 10.0 | | | | | | 223 | 246 | 129 | 99 | 25.0 | 8.2 |
| 21 | 10.0 | | | | | | 223 | 250 | 123 | 89 | 25.0 | 8.2 |
| 22 | 10.0 | | | | | | 204 | 266 | 120 | 82 | 24.0 | 8.5 |
| 23 | 11.2 | | | | | | 171 | 262 | 115 | 78 | 25.0 | 8.8 |
| 24 | 11.9 | | | | | | 132 | 262 | 107 | 76 | 25.0 | 9.1 |
| 25 | 13.2 | | | | | | *152 | 250 | 102 | 73 | 24.0 | 10.3 |
| 26 | 22.5 | | | | | | 171 | 235 | 97 | 99 | 27.4 | 10.9 |
| 27 | 37.4 | | | | | | 178 | 219 | 89 | 254 | 27.4 | 11.5 |
| 28 | 87 | | | | | | 142 | 212 | 87 | 266 | 25.0 | 10.3 |
| 29 | *72 | | | | | | 99 | 208 | 92 | 158 | 31.0 | 6.8 |
| 30 | 57 | | | | | | 85 | 200 | 76 | 115 | 19.0 | 8.5 |
| 31 | 45.1 | | | | | | 94 | | 76 | | 17.0 | 8.8 |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 87 | 10.0 | 19.4 | 1,190 | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | 147 | 9,020 | | |
| April | | | | | | | 635 | 115 | 295 | 17,550 | | |
| May | | | | | | | 354 | 76 | 171 | 10,490 | | |
| June | | | | | | | 809 | 73 | 195 | 11,610 | | |
| July | | | | | | | 94 | 17.0 | 44.0 | 2,710 | | |
| August | | | | | | | 150 | 8.2 | 10.3 | 631 | | |
| September | | | | | | | 400 | 8.6 | 16.4 | 977 | | |

*Interpolated

Milk River at Milk River, Alberta

(International gaging station)

Location.- Water-stage recorder in SE $\frac{1}{4}$ sec. 28., T. 2., R. 16 W. fourth meridian, at Milk River, Alberta. Zero of gage is 3,402.78 feet above mean sea level.

Drainage area.- 1,104 square miles.

Records available.- July 1909 to September 1934. Prior to October 1920 station maintained by Department of the Interior, Canada.

Extremes.- Maximum discharge during year, 1,720 second-feet June 9 (gage height, 4.75 feet); no flow Jan. 8.

1909-34: Maximum discharge, 7,460 second-feet May 22, 1927 (gage height, 11.41 feet); no flow at times during 1922, 1923, 1927, and 1934.

Remarks.- Records good except those for periods of ice effect, Oct. 18-26, Nov. 1-14, Nov. 28 to Mar. 30, which are fair. Flow increased by water from St. Mary Canal during irrigation season. This station is one of the international gaging stations maintained jointly by the United States and Canada under the Boundary Waters Treaty. The records have been collected and compiled jointly with the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|-------|----------------------|------|-------|
| 1 | 29.0 | 57 | 46 | | 209 | 170 | 268 | 803 | 722 | 779 | 750 | 361 |
| 2 | 29.0 | 40 | 48 | | 240 | 177 | 292 | 815 | 727 | 762 | 756 | 239 |
| 3 | 27.5 | 38 | 50 | | 290 | 180 | 313 | 838 | 745 | 739 | 756 | 172 |
| 4 | 27.5 | 50 | 42 | | 338 | 177 | 207 | 904 | 774 | 739 | 756 | 164 |
| 5 | 27.5 | 70 | 46 | | 338 | 174 | 344 | 874 | 809 | 756 | 750 | 157 |
| 6 | 29.0 | 66 | 44 | | 325 | 174 | 577 | 856 | 850 | 774 | 756 | 153 |
| 7 | 307 | 66 | 42 | | 320 | 170 | 774 | 966 | 941 | 762 | 750 | 142 |
| 8 | 380 | 61 | 35 | | 316 | 174 | 745 | 1,020 | 1,330 | 766 | 745 | 117 |
| 9 | 325 | 70 | 29 | 2 | 312 | 174 | 648 | 953 | 1,630 | 762 | 745 | 80 |
| 10 | 184 | 78 | 29 | | 316 | 170 | 561 | 922 | 1,120 | 745 | 745 | 57 |
| 11 | 120 | 112 | 28 | | 298 | 170 | 454 | 910 | 745 | 739 | 739 | 53 |
| 12 | 101 | 132 | 26 | | 286 | 184 | 398 | 692 | 670 | 733 | 727 | 48.2 |
| 13 | 88 | 157 | 24 | | 261 | 303 | 379 | 922 | 648 | 739 | 699 | 46.5 |
| 14 | 88 | 187 | 18 | | 273 | 330 | 370 | 966 | 642 | 745 | 676 | 44.8 |
| 15 | 90 | 170 | 16 | | 273 | 334 | 398 | 910 | 648 | 745 | 670 | 41.4 |
| 16 | 88 | 129 | 20 | | 273 | 343 | 326 | 862 | 642 | 750 | 665 | 41.4 |
| 17 | 85 | 92 | 16 | 40 | 264 | 367 | 272 | 850 | 637 | 756 | 659 | 39.7 |
| 18 | 59 | 126 | 13 | 55 | 260 | 360 | 272 | 838 | 642 | 756 | 659 | 33.8 |
| 19 | 48 | 86 | 13 | 70 | 260 | 409 | 297 | 838 | 642 | 750 | 659 | 33.8 |
| 20 | 40 | 78 | 16 | 61 | 252 | 438 | 309 | 826 | 665 | 750 | 654 | 33.8 |
| 21 | 40 | 70 | 17 | 59 | 252 | 385 | 280 | 815 | 682 | 756 | 659 | 33.8 |
| 22 | 40 | 70 | 14 | 78 | 236 | 352 | 280 | 791 | 704 | 756 | 642 | 36.6 |
| 23 | 48 | 70 | 13 | 88 | 228 | 202 | 297 | 785 | 704 | 756 | 593 | 48.2 |
| 24 | 50 | 68 | 13 | 126 | 209 | 161 | 288 | 774 | 716 | 762 | 582 | 63 |
| 25 | 57 | 78 | 10 | 129 | 194 | 167 | 284 | 774 | 739 | 768 | 588 | 59 |
| 26 | 61 | 78 | 8 | 157 | 184 | 180 | 299 | 756 | 774 | 762 | 577 | 71 |
| 27 | 98 | 75 | 6 | 167 | 174 | 177 | 615 | 745 | 698 | 774 | 535 | 61 |
| 28 | 112 | 63 | 4 | 194 | 170 | 101 | 687 | 739 | 1,100 | 774 | 484 | 63 |
| 29 | 142 | 57 | 4 | 206 | | 68 | 722 | 739 | 886 | 762 | 464 | 57 |
| 30 | 132 | 50 | 3 | 191 | | 148 | 774 | 739 | 820 | 750 | 430 | 52 |
| 31 | 132 | | 2 | 174 | | 216 | | 733 | | 750 | 407 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 380 | 27.5 | 99.5 | 6,120 | | |
| November | | | | | | | 187 | 38 | 84.8 | 5,050 | | |
| December | | | | | | | 50 | 2 | 22.4 | 1,380 | | |
| January | | | | | | | 206 | | 58.9 | 3,620 | | |
| February | | | | | | | 338 | 170 | 263 | 14,620 | | |
| March | | | | | | | 438 | 68 | 230 | 14,170 | | |
| April | | | | | | | 774 | 207 | 424 | 25,260 | | |
| May | | | | | | | 1,020 | 733 | 844 | 51,880 | | |
| June | | | | | | | 1,630 | 637 | 806 | 48,100 | | |
| July | | | | | | | 779 | 733 | 755 | 46,450 | | |
| August | | | | | | | 756 | 407 | 654 | 40,220 | | |
| September | | | | | | | 361 | 33.8 | 86.8 | 5,160 | | |
| The year | | | | | | | 1,630 | 2 | 362 | 262,000 | | |

Milk River at eastern crossing of international boundary
(International gaging station)

Location.- Water-stage recorder in NE $\frac{1}{4}$ sec. 6, T. 37 N., R. 9 E., at eastern crossing of international boundary, 30 miles north of Rudyard, Mont., and 37 miles south of Mary Berries, Alberta. Zero of gage is 2,698.92 feet above mean sea level.

Drainage area.- 2,514 square miles.

Records available.- April 1913 to September 1934. From August 1909 to November 1912 maintained by Irrigation Branch, Department of the Interior, Canada.

Extremes.- Maximum discharge during year, 2,270 second-feet June 10 (gage height, 4.06 feet); minimum, 38 second-feet Oct. 8 (gage height, 0.40 feet).
1909-34: Maximum discharge, 12,000 second-feet May 23, 1927 (gage height, 10.16 feet); no flow at times in 1914, 1922, 1923, and 1933.

Remarks.- Records good except those for periods of ice effect, Mar. 1-13, 29-31, which are fair. Staff gage used Oct. 1-31, Mar. 1-31. No records Nov. 1 to Feb. 28. No diversions. Flow increased by water from St. Mary Canal during irrigation season. This station is one of the international gaging stations maintained jointly by the United States and Canada under the Boundary Waters Treaty. The records have been collected and compiled jointly with the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|------|---------|-------|------|------|----------------------|
| 1 | 50 | | | | | 220 | 299 | 671 | 816 | 916 | 671 | 463 |
| 2 | 50 | | | | | | *316 | 685 | 648 | 891 | 671 | 445 |
| 3 | 50 | | | | | 275 | 334 | 768 | 808 | 608 | 692 | 403 |
| 4 | 49.0 | | | | | | 339 | 784 | 800 | 776 | 671 | 334 |
| 5 | 45.2 | | | | | | 311 | 752 | 816 | 760 | 664 | 258 |
| 6 | 43.4 | | | | | | 320 | 840 | 961 | 768 | 636 | 200 |
| 7 | 41.6 | | | | | 445 | 295 | 808 | 1,480 | 784 | 643 | 182 |
| 8 | 39.8 | | | | | | 476 | 808 | 1,480 | 816 | 636 | 209 |
| 9 | *116 | | | | | | 692 | 988 | 1,340 | 792 | 643 | 242 |
| 10 | 193 | | | | | 420 | 708 | 1,020 | 2,200 | 800 | 622 | 197 |
| 11 | 328 | | | | | | 615 | 943 | 1,660 | 792 | 643 | 166 |
| 12 | 320 | | | | | | 547 | 882 | 1,050 | 760 | 622 | 127 |
| 13 | 187 | | | | | 380 | 482 | 874 | 784 | 738 | 664 | 103 |
| 14 | 149 | | | | | 334 | 409 | 848 | 745 | 708 | 745 | 69 |
| 15 | 121 | | | | | 397 | 380 | 900 | 730 | 692 | 730 | 81 |
| 16 | *112 | | | | | 601 | 358 | 943 | 722 | 671 | 722 | 70 |
| 17 | 103 | | | | | 588 | 363 | 882 | 700 | 685 | 692 | 62 |
| 18 | 107 | | | | | 397 | 353 | 891 | 700 | 715 | 700 | 56 |
| 19 | *118 | | | | | 363 | 311 | 874 | 730 | 692 | 678 | 54 |
| 20 | 128 | | | | | *398 | 279 | 824 | 692 | 722 | 650 | 51 |
| 21 | 124 | | | | | 432 | 272 | 866 | 657 | 685 | 643 | 46 |
| 22 | 72 | | | | | 588 | 299 | 816 | 657 | 715 | 643 | 57 |
| 23 | *77 | | | | | 409 | 295 | 824 | 643 | 722 | 685 | 67 |
| 24 | 82 | | | | | 397 | 268 | 792 | 664 | 685 | 643 | 65 |
| 25 | 88 | | | | | 275 | 268 | 768 | 671 | 664 | 561 | 64 |
| 26 | 107 | | | | | 190 | 275 | 792 | 891 | 664 | 554 | 101 |
| 27 | 119 | | | | | 209 | 272 | 816 | 1,200 | 678 | 554 | 214 |
| 28 | 145 | | | | | 162 | 272 | 808 | 952 | 664 | 547 | 180 |
| 29 | 163 | | | | | 151 | 368 | 800 | 943 | 657 | 534 | 138 |
| 30 | 121 | | | | | 170 | 608 | 784 | 1,140 | 664 | 495 | 114 |
| 31 | 128 | | | | | 228 | | 808 | | 664 | 476 | |
| Month | | | | | | Maximum | | Minimum | | Mean | | Run-off in acre-feet |
| October | | | | | | 328 | | 39.8 | | 116 | | 7,090 |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | 366 | | 22,530 |
| April | | | | | | 708 | | 268 | | 380 | | 22,620 |
| May | | | | | | 1,020 | | 671 | | 834 | | 51,290 |
| June | | | | | | 2,200 | | 643 | | 949 | | 56,490 |
| July | | | | | | 916 | | 657 | | 734 | | 45,120 |
| August | | | | | | 745 | | 476 | | 656 | | 39,130 |
| September | | | | | | 463 | | 46 | | 161 | | 9,600 |

*Interpolated.

Milk River at Lohman, Mont.

Location.- Water stage recorder in SE $\frac{1}{4}$ sec. 20, T. 33 N., R. 18 E., a quarter of a mile below Fort Belknap Dam and three-quarters of a mile north of Lohman.

Records available.- January to September 1934. March 1923 to September 1925 at site half a mile downstream.

Extremes.- Maximum discharge recorded during period, 1,760 second-feet June 12 (gage height, 7.52 feet); maximum gage height, 9.00 feet Feb. 10 (ice present); minimum discharge, 21 second-feet Sept. 18 (gage height, 1.82 feet).
1923-25, 1934: Maximum discharge, 3,250 second-feet Mar. 24, 1925 (gage height, 13.20 feet, former datum); minimum, that of Sept. 18, 1934.

Remarks.- Records good except those prior to July, which are fair. No records Oct. 1 to Jan. 6. Discharge not computed Jan. 7 to Mar. 28 because of ice. Fort Belknap Canal diverts at dam a quarter of a mile upstream. Flow increased by inflow from St. Mary Canal during irrigation season.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|-------|------|------|-------|
| 1 | | | | | | | 300 | 289 | 502 | 607 | 444 | 362 |
| 2 | | | | | | | 502 | 564 | 502 | 597 | 444 | 336 |
| 3 | | | | | | | 597 | 500 | 632 | 614 | 416 | 324 |
| 4 | | | | | | | 532 | 580 | 614 | 548 | 402 | 300 |
| 5 | | | | | | | 532 | 580 | 668 | 548 | 416 | 271 |
| 6 | | | | | | | 502 | 580 | 632 | 548 | 416 | 187 |
| 7 | | | | | | | 458 | 564 | 807 | 548 | 402 | 142 |
| 8 | | | | | | | 444 | 580 | 1,350 | 502 | 416 | 112 |
| 9 | | | | | | | 402 | 597 | 1,700 | 502 | 416 | 115 |
| 10 | | | | | | | 614 | 580 | 1,300 | 487 | 402 | 122 |
| 11 | | | | | | | 765 | 765 | 1,400 | 458 | 402 | 105 |
| 12 | | | | | | | 687 | 687 | 1,760 | 444 | 402 | 124 |
| 13 | | | | | | | 580 | 668 | 1,040 | 416 | 416 | 116 |
| 14 | | | | | | | 532 | 597 | 706 | 416 | 416 | 68 |
| 15 | | | | | | | 487 | 548 | 706 | 402 | 402 | 58 |
| 16 | | | | | | | 444 | 548 | 650 | 402 | 402 | 40 |
| 17 | | | | | | | 416 | 548 | 614 | 375 | 402 | 37 |
| 18 | | | | | | | 375 | 548 | 597 | 388 | 402 | 38 |
| 19 | | | | | | | 324 | 472 | 597 | 402 | 430 | 30 |
| 20 | | | | | | | 324 | 487 | 614 | 402 | 430 | 35 |
| 21 | | | | | | | 269 | 472 | 614 | 388 | 416 | 30 |
| 22 | | | | | | | 211 | 502 | 564 | 388 | 430 | 34 |
| 23 | | | | | | | 182 | 458 | 517 | 402 | 444 | 40 |
| 24 | | | | | | | 156 | 517 | 487 | 388 | 472 | 35 |
| 25 | | | | | | | 176 | 532 | 502 | 416 | 487 | 24 |
| 26 | | | | | | | 166 | 502 | 580 | 416 | 458 | 50 |
| 27 | | | | | | | 150 | 502 | 725 | 416 | 388 | 109 |
| 28 | | | | | | | 139 | 487 | 829 | 402 | 349 | 79 |
| 29 | | | | | | 91 | 140 | 502 | 765 | 388 | 362 | 94 |
| 30 | | | | | | 136 | 140 | 497 | 650 | 416 | 362 | 183 |
| 31 | | | | | | 136 | | 487 | | 430 | 362 | |

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------|---------|---------|------|----------------------|
| October | | | | |
| November | | | | |
| December | | | | |
| January | | | | |
| February | | | | |
| March 29-31 | | | | |
| April | 136 | 91 | 121 | 720 |
| May | 765 | 139 | 385 | 22,900 |
| June | 765 | 289 | 542 | 33,340 |
| July | 1,760 | 487 | 787 | 46,860 |
| August | 807 | 375 | 460 | 28,280 |
| September | 487 | 349 | 413 | 25,400 |
| | 562 | 24 | 120 | 7,140 |
| The period | | | | 164,600 |

Milk River near Vandalia, Mont.

Location.- Staff gage in NE $\frac{1}{4}$ sec. 7, T. 30 N., R. 37 E., just below Vandalia Dam and 2 miles west of Vandalia.

Records available.- May 1915 to September 1920, August 1928 to September 1934.

Extremes.- Maximum discharge during year, 3,180 second-feet Mar. 21 (gage height, 13.4 feet); minimum, 4.8 second-feet Apr. 30 and May 1 (gage height, 2.60 feet).
1915-20, 1928-34: Maximum discharge, 25,200 second-feet Apr. 11, 1917 (gage height, 34.5 feet); no flow Aug. 9-13, 1910, June 5, 1919, Sept. 4, 7-16, 1929.

Remarks.- Records fair. Numerous diversions from river and tributaries above station including Vandalia Canal, which diverts at dam above gage. Some regulation at Vandalia Dam and some storage in Nelson Reservoir.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|-------|------|-------|-------|-------|---------|---------|-------|----------------------|------|-------|
| 1 | 186 | 63 | 180 | | 1,670 | | 1,090 | 4.8 | 97 | 60 | 14 | 67 |
| 2 | 110 | 99 | 203 | | 1,560 | | 1,210 | 8.8 | 70 | 60 | 11 | 46 |
| 3 | 81 | 134 | 233 | | 2,220 | | 1,820 | 14 | 40 | 64 | 9.3 | 35 |
| 4 | 77 | 1,090 | 180 | | | | 1,970 | 11 | 38 | 83 | 9.3 | 29 |
| 5 | 77 | 190 | 150 | | | 2,270 | 1,730 | 11 | 32 | 123 | 8.8 | 29 |
| 6 | 73 | 131 | 180 | 18 | | | 1,520 | 11 | 29 | 114 | 8.8 | 29 |
| 7 | 105 | 91 | 91 | | 2,530 | | 1,620 | 11 | 83 | 123 | 8.4 | 29 |
| 8 | 137 | 87 | | | | | 1,570 | 11 | 237 | 102 | 11 | 29 |
| 9 | 117 | 87 | 80 | | | | 1,330 | 13 | 735 | 66 | 13 | 25 |
| 10 | 91 | 110 | | | | | 1,170 | 13 | 310 | 58 | 17 | 24 |
| 11 | 85 | 121 | | | | 1,400 | 1,070 | 13 | 496 | 57 | 35 | 24 |
| 12 | 83 | 131 | | | | | 1,040 | 14 | 820 | 57 | 61 | 22 |
| 13 | 83 | 137 | | | | | 1,070 | 16 | 935 | 50 | 64 | 20 |
| 14 | 71 | 137 | | | | | 1,040 | 16 | 935 | 50 | 67 | 20 |
| 15 | 60 | 285 | | | | 1,730 | 1,040 | 16 | 898 | 48 | 72 | 20 |
| 16 | 60 | 285 | 30 | 18 | 2,720 | | 1,420 | 16 | 1,420 | 20 | 72 | 19 |
| 17 | 60 | 165 | | | | 1,520 | 820 | 16 | 1,300 | 7.5 | 67 | 20 |
| 18 | 56 | 150 | | | | 1,420 | 690 | 16 | 1,000 | 7.5 | 57 | 23 |
| 19 | 35 | 117 | | | | 1,520 | 520 | 14 | 327 | 7.5 | 48 | 61 |
| 20 | 19 | 119 | | | | 2,520 | 448 | 16 | 263 | 7.5 | 57 | 102 |
| 21 | 18 | 119 | | | | 3,180 | 403 | 22 | 132 | 7.5 | 64 | 132 |
| 22 | 17 | 112 | | | | 2,450 | 346 | 22 | 83 | 7.5 | 64 | 162 |
| 23 | 17 | 117 | | | | 1,850 | 263 | 22 | 72 | 7.5 | 64 | 182 |
| 24 | 16 | 131 | | | | 1,420 | 213 | 21 | 69 | 7.5 | 64 | 152 |
| 25 | 15 | 165 | | 30 | 1,260 | 1,490 | 192 | 22 | 87 | 7.2 | 80 | 123 |
| 26 | 15 | 268 | 10 | | | 1,370 | 111 | 29 | 106 | 7.2 | 97 | 123 |
| 27 | 17 | 525 | | | | 1,120 | 57 | 49 | 106 | 36 | 88 | 111 |
| 28 | 38 | 445 | | 79 | | 898 | 63 | 75 | 85 | 72 | 97 | 94 |
| 29 | 67 | 321 | | 153 | | 935 | 63 | 72 | 72 | 57 | 132 | 90 |
| 30 | 67 | 171 | | 285 | | 1,090 | 22 | 64 | 66 | 67 | 152 | 78 |
| 31 | 67 | | | 1,380 | | 1,120 | | 95 | | 43 | 114 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 186 | 15 | 65.2 | 4,010 | | |
| November | | | | | | | 1,090 | 63 | 203 | 12,110 | | |
| December | | | | | | | 233 | | 60.2 | 3,700 | | |
| January | | | | | | | 1,380 | | 79.6 | 4,890 | | |
| February | | | | | | | | | 2,159 | 119,900 | | |
| March | | | | | | | 3,180 | 898 | | 104,700 | | |
| April | | | | | | | 1,970 | 22 | 850 | 50,580 | | |
| May | | | | | | | 95 | 4.8 | 24.3 | 1,500 | | |
| June | | | | | | | 1,420 | 29 | 364 | 21,710 | | |
| July | | | | | | | 123 | 7.2 | 47.9 | 2,940 | | |
| August | | | | | | | 152 | 8.4 | 55.7 | 3,420 | | |
| September | | | | | | | 162 | 19 | 63.0 | 3,750 | | |
| The year | | | | | | | 3,180 | 4.8 | 460 | 333,200 | | |

North Fork of Milk River above St. Mary Canal, near Browning, Mont.

(International gaging station)

Location.- Water-stage recorder in SW $\frac{1}{4}$ sec. 16, T. 37 N., R. 11 W., about 1 $\frac{1}{2}$ miles above outlet of canal, 3 miles south of international boundary, and 30 miles north of Browning.

Drainage area.- 62 square miles.

Records available.- June 1921 to September 1934. May 1911 to July 1912 at site 1 mile below present gage. Records obtained at this station only during period when the St. Mary Canal is in operation.

Extremes.- Maximum discharge during year, 103 second-feet June 7 (gage height, 1.67 feet); minimum, 4.6 second-feet Aug. 7 (gage height, 0.40 foot).
1911-12, 1921-34: Maximum discharge, 363 second-feet May 29, 1927 (gage height, 4.93 feet); minimum, 2.5 second-feet Aug. 12, 1933 (gage height, 0.35 foot).

Remarks.- Records good except those for Oct. 16-31, which are fair. Discharge estimated Oct. 21-31, July 3-5. No record Nov. 1 to Apr. 25. No diversions or regulation. This station is one of the international gaging stations maintained jointly by the United States and Canada under the Boundary Waters Treaty. The records have been collected and compiled jointly with the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|------|------|---------|---------|------|-------------------------|-------|
| 1 | 8.6 | | | | | | | 16.5 | 6.4 | 6.4 | 6.4 | 10.2 |
| 2 | 8.6 | | | | | | | 17.7 | 8.8 | 6.4 | 6.0 | 9.7 |
| 3 | 8.6 | | | | | | | 17.1 | 8.6 | 7.8 | 6.0 | 8.4 |
| 4 | 8.6 | | | | | | | 15.9 | 15.4 | 9.3 | 5.7 | 8.0 |
| 5 | 8.6 | | | | | | | 15.9 | 11.2 | 10.8 | 6.4 | 8.0 |
| 6 | 8.6 | | | | | | | 17.7 | 15.4 | 12.2 | 5.7 | 8.0 |
| 7 | 8.6 | | | | | | | 15.4 | 78 | 9.7 | 5.4 | 8.0 |
| 8 | 8.6 | | | | | | | 13.7 | 35.5 | 9.2 | 6.0 | 12.7 |
| 9 | 8.6 | | | | | | | 13.2 | 14.8 | 8.8 | 5.7 | 13.2 |
| 10 | 8.6 | | | | | | | 12.7 | 10.7 | 8.0 | 5.4 | 9.7 |
| 11 | 9.2 | | | | | | | 14.8 | 9.2 | 8.4 | 5.7 | 8.4 |
| 12 | 9.2 | | | | | | | 20.7 | 9.7 | 8.4 | 5.4 | 8.8 |
| 13 | 9.2 | | | | | | | 14.8 | 9.7 | 8.0 | 6.0 | 9.2 |
| 14 | 8.6 | | | | | | | 13.7 | 8.6 | 8.4 | 6.4 | 9.7 |
| 15 | 9.2 | | | | | | | 12.2 | 8.0 | 8.4 | 6.4 | 8.8 |
| 16 | 9.2 | | | | | | | 11.7 | 8.4 | 7.6 | 6.0 | 8.4 |
| 17 | 9.2 | | | | | | | 11.2 | 7.6 | 7.2 | 5.7 | 8.4 |
| 18 | 9.2 | | | | | | | 11.2 | 7.2 | 7.2 | 5.7 | 8.4 |
| 19 | 9.2 | | | | | | | 10.7 | 6.6 | 7.2 | 6.4 | 10.2 |
| 20 | 8.6 | | | | | | | 10.7 | 6.4 | 6.8 | 6.4 | 11.7 |
| 21 | 8.5 | | | | | | | 10.2 | 6.0 | 6.8 | 6.8 | 11.2 |
| 22 | 8.0 | | | | | | | 10.2 | 6.0 | 7.2 | 7.6 | 13.2 |
| 23 | 11 | | | | | | | 10.2 | 6.0 | 7.2 | 8.0 | 13.2 |
| 24 | 15 | | | | | | | 10.2 | 6.0 | 7.6 | 8.8 | 15.4 |
| 25 | 18 | | | | | | | 9.7 | 7.2 | 8.0 | 8.0 | 13.2 |
| 26 | 20 | | | | | | | 18.9 | 8.4 | 22.0 | 8.0 | 7.6 |
| 27 | 20 | | | | | | | 18.3 | 6.4 | 27.1 | 6.8 | 14.8 |
| 28 | 17 | | | | | | | 18.3 | 6.4 | 8.8 | 6.8 | 7.2 |
| 29 | 11 | | | | | | | 17.7 | 6.0 | 7.2 | 6.4 | 7.2 |
| 30 | 10 | | | | | | | 16.5 | 6.0 | 6.8 | 6.0 | 8.4 |
| 31 | 9 | | | | | | | 6.0 | | | 6.0 | 10.2 |
| Month | | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October | | | | | | | | 20.0 | 8.0 | 10.5 | 643 | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April 26-30 | | | | | | | | 18.9 | 16.5 | 17.9 | 178 | |
| May | | | | | | | | 20.7 | 6.0 | 12.2 | 748 | |
| June | | | | | | | | 78 | 6.0 | 13.0 | 773 | |
| July | | | | | | | | 12.2 | 6.0 | 7.84 | 482 | |
| August | | | | | | | | 10.2 | 5.4 | 6.63 | 407 | |
| September | | | | | | | | 15.9 | 8.0 | 10.7 | 637 | |

North Fork of Milk River near international boundary
(International gaging station)

Location.- Water-stage recorder in NE $\frac{1}{4}$ sec. 11, T. 1 R. 23 W. fourth meridian, about 2 miles north of international boundary and 18 miles east of Kimball, Alberta.

Drainage area.- 101 square miles.

Records available.- January 1913 to September 1934. July 1909 to December 1912 at station in NE $\frac{1}{4}$ sec. 13, T. 1, R. 23 W. fourth meridian, about 2 miles downstream.

Extremes.- Maximum discharge during year, 917 second-feet June 27 (gage height, 4.75 feet); minimum, 8.4 second-feet Oct. 1, 4 (gage height, 1.72 feet).
1909-34: Maximum discharge, 1,070 second-feet May 8, 1920 (gage height, 4.14 feet); minimum, 3.2 second-feet Mar. 1, 1927.

Remarks.- Records good except those for periods of ice effect, Oct. 18-25 and Mar. 1-15, which are fair. No records Nov. 1 to Feb. 28. Discharge interpolated Sept. 25, 26, 28. No diversions. Flow increased by discharge of St. Mary Canal during irrigation season. This station is one of the international gaging stations maintained jointly by the United States and Canada under the Boundary Waters Treaty. The records have been collected and compiled jointly with the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | 8.4 | | | | | | 38.5 | 572 | 694 | 683 | 687 | 194 |
| 2 | 12.4 | | | | | | 35.9 | 604 | 705 | 690 | 690 | 151 |
| 3 | 10.4 | | | | | 36 | 25.0 | 625 | 694 | 694 | 690 | 157 |
| 4 | 9.0 | | | | | | 39.8 | 615 | 715 | 697 | 683 | 151 |
| 5 | 177 | | | | | | 72 | 615 | 661 | 701 | 687 | 148 |
| 6 | 394 | | | | | | 139 | 622 | 661 | 705 | 687 | 117 |
| 7 | 385 | | | | | 33 | 65 | 622 | 795 | 697 | 687 | 42.4 |
| 8 | 278 | | | | | | 59 | 629 | 633 | 697 | 679 | 25.0 |
| 9 | 100 | | | | | 40 | 43.7 | 622 | 432 | 694 | 679 | 26.0 |
| 10 | 68 | | | | | | 34.6 | 622 | 422 | 694 | 679 | 22.0 |
| 11 | 60 | | | | | 50 | 32.0 | 636 | 482 | 694 | 679 | 21.1 |
| 12 | 60 | | | | | | 30.0 | 643 | 499 | 694 | 679 | 20.2 |
| 13 | 62 | | | | | | 35.3 | 629 | 520 | 694 | 679 | 15.7 |
| 14 | 58 | | | | | 35 | 29.0 | 625 | 530 | 690 | 679 | 13.9 |
| 15 | 55 | | | | | | 26.0 | 629 | 530 | 697 | 679 | 11.2 |
| 16 | 50 | | | | | | 41.1 | 23.0 | 640 | 538 | 694 | 687 |
| 17 | 32.6 | | | | | | 30.0 | 24.0 | 651 | 552 | 694 | 687 |
| 18 | 30.8 | | | | | | 22.0 | 26.0 | 558 | 558 | 694 | 683 |
| 19 | 17.4 | | | | | | 35.9 | 24.0 | 661 | 580 | 694 | 683 |
| 20 | 11.0 | | | | | | 30.0 | 24.0 | 669 | 604 | 694 | 683 |
| 21 | 11.0 | | | | | | 25.0 | 24.0 | 654 | 633 | 694 | 661 |
| 22 | 10.4 | | | | | | 20.2 | 25.0 | 661 | 640 | 694 | 611 |
| 23 | 13.1 | | | | | | 24.0 | 23.0 | 665 | 629 | 687 | 604 |
| 24 | 16.0 | | | | | | 42.4 | 21.1 | 672 | 643 | 690 | 600 |
| 25 | 18.8 | | | | | | 21.1 | 195 | 676 | 658 | 694 | 597 |
| 26 | 21.8 | | | | | | 20.2 | 360 | 676 | 726 | 694 | 555 |
| 27 | 21.8 | | | | | | 17.5 | 443 | 679 | 759 | 694 | 506 |
| 28 | 18.1 | | | | | | 23.0 | 492 | 687 | 643 | 690 | 499 |
| 29 | 13.8 | | | | | | 24.0 | 544 | 694 | 658 | 694 | 454 |
| 30 | 13.1 | | | | | | 15.3 | 555 | 697 | 676 | 690 | 422 |
| 31 | 13.8 | | | | | | 33.3 | 694 | | | 690 | 345 |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 394 | 8.4 | 66.2 | 4,070 | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | 17.5 | 32.0 | 1,970 | | |
| April | | | | | | | 555 | 21.1 | 118 | 6,990 | | |
| May | | | | | | | 697 | 672 | 647 | 39,760 | | |
| June | | | | | | | 795 | 422 | 615 | 36,610 | | |
| July | | | | | | | 705 | 653 | 694 | 42,560 | | |
| August | | | | | | | 690 | 345 | 630 | 38,740 | | |
| September | | | | | | | 194 | 9.4 | 43.6 | 2,600 | | |

Big Sandy Creek near Box Elder, Mont.

Location.- Staff gage in NE $\frac{1}{4}$ sec. 13, T. 30 N., R. 13 E., at Cowan ranch, 3 miles north of Box Elder.

Records available.- March 1928 to September 1932, March to September 1934.

Extremes.- Maximum discharge during year, 11.6 second-feet Apr. 3 (gage height, 2.71 feet); minimum, 0.4 second-foot several days in September.

1928-32, 1934: Maximum discharge, 338 second-feet Mar. 25, 1298 (gage height, 10.96 feet); no flow Mar. 17, 1929.

Remarks.- Records fair. Discharge interpolated Apr. 6-11. Flow regulated by storage in Cowan Reservoir. Small diversions for irrigation above station.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|------------|------|------|------|------|------|---------|------|---------|------|------|------|----------------------|
| 1 | | | | | | 3.7 | 4.5 | 1.5 | 0.5 | 0.8 | 0.5 | 0.5 |
| 2 | | | | | | 3.9 | 6.3 | 1.3 | .6 | .8 | .5 | .5 |
| 3 | | | | | | 3.9 | 11.6 | 1.3 | .6 | .8 | .6 | .5 |
| 4 | | | | | | 4.2 | 10.8 | 1.1 | .6 | .8 | .5 | .5 |
| 5 | | | | | | 4.2 | 10.8 | 1.0 | .6 | .8 | .6 | .6 |
| 6 | | | | | | 3.8 | 9.5 | .8 | .7 | .6 | .6 | .5 |
| 7 | | | | | | 3.8 | 8.2 | .8 | 1.4 | .7 | .6 | .5 |
| 8 | | | | | | 3.8 | 6.9 | .9 | .9 | .7 | .6 | .5 |
| 9 | | | | | | 4.1 | 5.6 | .8 | .8 | .6 | .6 | .4 |
| 10 | | | | | | 4.1 | 4.3 | .7 | .8 | .6 | .7 | .5 |
| 11 | | | | | | 3.7 | 3.0 | .8 | 1.2 | .6 | .6 | .4 |
| 12 | | | | | | 3.5 | 1.7 | .8 | .8 | .6 | .6 | .4 |
| 13 | | | | | | 3.2 | 2.0 | .8 | .6 | .6 | .6 | .4 |
| 14 | | | | | | 3.2 | 1.7 | .7 | .6 | .6 | .6 | .4 |
| 15 | | | | | | 3.0 | 1.3 | .6 | .7 | .6 | .6 | .4 |
| 16 | | | | | | 2.8 | 1.1 | .6 | .7 | .5 | .5 | .4 |
| 17 | | | | | | 2.8 | 1.1 | .6 | .7 | .5 | .5 | .4 |
| 18 | | | | | | 6.8 | 1.0 | .8 | .6 | .5 | .6 | .4 |
| 19 | | | | | | 6.8 | 1.0 | .8 | .6 | .5 | .5 | .4 |
| 20 | | | | | | 6.8 | 1.1 | .7 | .6 | .6 | .5 | .4 |
| 21 | | | | | | 6.3 | 1.0 | .8 | .5 | .6 | .5 | .4 |
| 22 | | | | | | 6.0 | 1.0 | .7 | .6 | .8 | .5 | .4 |
| 23 | | | | | | 6.0 | 1.0 | .8 | .6 | .8 | .6 | .4 |
| 24 | | | | | | 5.7 | 1.0 | .6 | .6 | .6 | .5 | .4 |
| 25 | | | | | | 5.4 | 1.0 | .6 | .6 | .6 | .5 | .5 |
| 26 | | | | | | 4.6 | 1.0 | .5 | .9 | .6 | .5 | .5 |
| 27 | | | | | | 4.1 | 1.0 | .6 | .8 | .6 | .5 | .5 |
| 28 | | | | | | 3.7 | 1.0 | .5 | .8 | .5 | .5 | .5 |
| 29 | | | | | | 3.1 | 1.0 | .6 | .8 | .6 | .5 | .5 |
| 30 | | | | | | 3.6 | 1.1 | .6 | .8 | .5 | .5 | .5 |
| 31 | | | | | | 2.8 | | .6 | | .5 | | |
| Month | | | | | | Maximum | | Minimum | | Mean | | Run-off in acre-feet |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | 6.8 | | 2.8 | | 4.30 | | 284 |
| April | | | | | | 11.6 | | 1.0 | | 3.45 | | 205 |
| May | | | | | | 1.5 | | .5 | | .73 | | 48 |
| June | | | | | | 1.4 | | .5 | | .72 | | 43 |
| July | | | | | | .8 | | .5 | | .63 | | 38 |
| August | | | | | | .7 | | .5 | | .55 | | 34 |
| September | | | | | | .6 | | .4 | | .45 | | 27 |
| The period | | | | | | | | | | | | 659 |

Lodge Creek at international boundary
(International gaging station)

Location.— Water-stage recorder in SE $\frac{1}{4}$ sec. 12, T. 1, R. 29 W. third meridian, in Saskatchewan, 1 mile north of international boundary and 30 miles northwest of Havre, Mont. Zero of gage is 2,721.06 feet above mean sea level.

Drainage area.— 797 square miles.

Records available.— April 1910 to September 1934. Prior to 1917 station maintained by Irrigation Branch, Department of the Interior, Canada.

Extremes.— Maximum stage during year, 8.20 feet Mar. 20 (ice present); no flow at various times.
1917-34: Maximum discharge, 3,680 second-feet May 23, 1927 (gage height, 12.40 feet); no flow at times, usually after July 15 each year.

Remarks.— Records good except those for period of ice effect, Feb. 1 to Mar. 31, which are fair. Staff gage used except for period Apr. 1 to May 12. Several diversions above gage. This station is one of the international gaging stations maintained jointly by the United States and Canada under the Boundary Waters Treaty. The records have been collected and compiled jointly with the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | | | | | 0 | | 42.8 | 1.6 | 0 | 0.3 | | |
| 2 | | | | | 0 | | 51 | 1.3 | 0 | .1 | | |
| 3 | | | | | 0 | | 177 | 1.2 | 0 | 0 | | |
| 4 | | | | | 0 | | 154 | 1.1 | 0 | 0 | | |
| 5 | | | | | | 142 | 120 | 1.0 | 0 | 0 | | |
| 6 | | | | | | | 134 | .7 | 0 | 0 | | |
| 7 | | | | | 15 | | 126 | .6 | .5 | 0 | | |
| 8 | | | | | | | 112 | .6 | .5 | 0 | | |
| 9 | | | | | | | 88 | .5 | 25.8 | 0 | | |
| 10 | | | | | | | 65 | .5 | 57 | 0 | | |
| 11 | | | | | | | 50 | .4 | 25.8 | 0 | | |
| 12 | | | | | | | 37.5 | .4 | 20.0 | 0 | | |
| 13 | | | | | | | 31.2 | .4 | 13.7 | 0 | | |
| 14 | | | | | | | 22.8 | .3 | 10.2 | 0 | | |
| 15 | | | | | | 103 | 19.5 | .2 | 7.1 | 0 | | |
| 16 | | | | | | | 15.1 | .2 | 7.1 | 0 | | |
| 17 | | | | | | | 12.8 | .2 | 3.2 | 0 | | |
| 18 | | | | | | | 11.0 | .3 | 4.0 | 0 | | |
| 19 | | | | | | | 9.0 | .3 | 3.8 | 0 | | |
| 20 | | | | | | | 7.8 | .3 | 2.7 | 0 | | |
| 21 | | | | | | | 6.8 | .3 | 1.5 | 0 | | |
| 22 | | | | | | | 5.6 | .3 | 1.0 | 0 | | |
| 23 | | | | | | | 5.2 | .3 | .8 | 0 | | |
| 24 | | | | | | | 4.9 | .2 | .5 | 0 | | |
| 25 | | | | | 63 | | 4.6 | .2 | .4 | 0 | | |
| 26 | | | | | | 128 | 4.3 | .2 | .7 | 0 | | |
| 27 | | | | | | | 3.8 | .2 | .6 | 0 | | |
| 28 | | | | | | | 3.2 | .1 | .6 | 0 | | |
| 29 | | | | | | | 2.1 | .1 | .4 | 0 | | |
| 30 | | | | | | | 1.9 | | .3 | 0 | | |
| 31 | | | | | | | | 0 | | 0 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 0 | 0 | 0 | 0 | | |
| November | | | | | | | 0 | 0 | 0 | 0 | | |
| December | | | | | | | 0 | 0 | 0 | 0 | | |
| January | | | | | | | 0 | 0 | 0 | 0 | | |
| February | | | | | | | | | 58.0 | 3,220 | | |
| March | | | | | | | | | 154 | 9,460 | | |
| April | | | | | | | 177 | 1.9 | 44.3 | 2,640 | | |
| May | | | | | | | 1.8 | 0 | .45 | 28 | | |
| June | | | | | | | 57 | 0 | 6.26 | 375 | | |
| July | | | | | | | .3 | 0 | .01 | .5 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 0 | 0 | 0 | 0 | | |
| The year | | | | | | | | | | 15,720 | | |

Note.— No flow during months left blank.

McRae Coulee at international boundary
(International gaging station)

Location.— Water-stage recorder in NW $\frac{1}{4}$ sec. 5, T. 1, R. 28 W. third meridian, a quarter of a mile above mouth and three-quarters of a mile north of international boundary, in Saskatchewan.

Drainage area.— 53 square miles.

Records available.— March 1927 to September 1934.

Extremes.— Maximum stage during year, 7.63 feet Mar. 3 (ice present); no flow during most of year.
1927-34: Maximum discharge, 486 second-feet May 23, 1927 (gage height, 5.74 feet); no flow at times.

Remarks.— Records poor. No regulation or diversion. This station is one of the international gaging stations maintained jointly by the United States and Canada under the Boundary Waters Treaty. The records have been collected and compiled jointly with the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | | | | | 0 | | 3.4 | | | | | |
| 2 | | | | | 0 | | 3.6 | | | | | |
| 3 | | | | | 0 | | 4.3 | | | | | |
| 4 | | | | | 0 | 25 | 2.8 | | | | | |
| 5 | | | | | 0 | | 1.3 | | | | | |
| 6 | | | | | 0 | | 1.0 | | | | | |
| 7 | | | | | 0 | | .8 | | | | | |
| 8 | | | | | 0 | 0 | .5 | | | | | |
| 9 | | | | | 0 | 0 | .3 | | | | | |
| 10 | | | | | 0 | | .2 | | | | | |
| 11 | | | | | 0 | | .1 | | | | | |
| 12 | | | | | 0 | 10 | .1 | | | | | |
| 13 | | | | | 0 | | 0 | | | | | |
| 14 | | | | | | | 0 | | | | | |
| 15 | | | | | | | 0 | | | | | |
| 16 | | | | | | | 0 | | | | | |
| 17 | | | | | | | 0 | | | | | |
| 18 | | | | | 4 | 6 | 0 | | | | | |
| 19 | | | | | | | 0 | | | | | |
| 20 | | | | | | | 0 | | | | | |
| 21 | | | | | | | 0 | | | | | |
| 22 | | | | | | | 0 | | | | | |
| 23 | | | | | 0 | | 0 | | | | | |
| 24 | | | | | 0 | | 0 | | | | | |
| 25 | | | | | 0 | | 0 | | | | | |
| 26 | | | | | | 2 | 0 | | | | | |
| 27 | | | | | | | 0 | | | | | |
| 28 | | | | | 0 | | 0 | | | | | |
| 29 | | | | | | | 0 | | | | | |
| 30 | | | | | | | 0 | | | | | |
| 31 | | | | | | | | | | | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 0 | 0 | 0 | 0 | | |
| November | | | | | | | 0 | 0 | 0 | 0 | | |
| December | | | | | | | 0 | 0 | 0 | 0 | | |
| January | | | | | | | 0 | 0 | 0 | 0 | | |
| February | | | | | | | | | 1.3 | 71 | | |
| March | | | | | | | 4.3 | 0 | 9.3 | 569 | | |
| April | | | | | | | 0 | 0 | .61 | 36 | | |
| May | | | | | | | 0 | 0 | 0 | 0 | | |
| June | | | | | | | 0 | 0 | 0 | 0 | | |
| July | | | | | | | 0 | 0 | 0 | 0 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 0 | 0 | 0 | 0 | | |
| The year | | | | | | | | | | 676 | | |

Note.— No flow during months left blank.

North Chinook Canal near Havre, Mont.

Location.- Water-stage recorder in SE $\frac{1}{4}$ sec. 2, T. 35 N., R. 17 E., 1 mile below head-works of canal and 23 miles northeast of Havre.

Records available.- May 1928 to September 1934.

Remarks.- Records good except those for periods of ice effect, Feb. 4-11, 20-27, and estimated period Mar. 5-10, which are poor. Staff gage used Feb. 4 to Mar. 17, Mar. 28 to Apr. 7, June 7-22. Canal diverts flood water from Lodge Creek in sec. 3, T. 35 N., R. 17 E., and stores it in North Chinook Reservoir for irrigation of lands between Lodge Creek and Battle Creek, north of Chinook.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|------|-------------------------|------|------|-------|
| 1 | | | | | 0 | 4.8 | 5.9 | 4.2 | 0 | | | |
| 2 | | | | | 0 | 30 | 4.0 | 7.4 | 0 | | | |
| 3 | | | | | 0 | 55 | 5.6 | 1.3 | 0 | | | |
| 4 | | | | | .5 | 109 | 18 | .7 | 0 | | | |
| 5 | | | | | 1.0 | | 12 | .6 | 0 | | | |
| 6 | | | | | 1.4 | | 36 | 2.5 | 0 | | | |
| 7 | | | | | 1.8 | 50 | 75 | 2.0 | 6.5 | | | |
| 8 | | | | | 2.2 | | 64 | .1 | 34 | | | |
| 9 | | | | | 2.6 | | 65 | .6 | 18 | | | |
| 10 | | | | | 3.0 | | 62 | .1 | 11 | | | |
| 11 | | | | | 3.4 | 27 | 60 | 0 | 12 | | | |
| 12 | | | | | 3.8 | 55 | 54 | 0 | 46 | | | |
| 13 | | | | | 3.8 | 70 | 44 | 1.3 | 29 | | | |
| 14 | | | | | 6.5 | 87 | 34 | .5 | 33 | | | |
| 15 | | | | | 6.5 | 109 | 26 | 0 | 14 | | | |
| 16 | | | | | 5.0 | 98 | 21 | 0 | 8.2 | | | |
| 17 | | | | | 6.5 | 55 | 17 | 0 | 4.8 | | | |
| 18 | | | | | 5.9 | 78 | 15 | 0 | 2.5 | | | |
| 19 | | | | | 6.5 | 78 | 13 | 0 | 2.0 | | | |
| 20 | | | | | 6.3 | 84 | 12 | 0 | 1.0 | | | |
| 21 | | | | | 6.0 | 90 | 10 | 0 | 0 | | | |
| 22 | | | | | 5.8 | 55 | 9.1 | 0 | 0 | | | |
| 23 | | | | | 5.5 | 37 | 6.5 | 0 | 0 | | | |
| 24 | | | | | 5.3 | 6.5 | 3.8 | 0 | 0 | | | |
| 25 | | | | | 5.0 | .3 | 4.6 | 0 | 0 | | | |
| 26 | | | | | 4.5 | 0 | 6.0 | 0 | 0 | | | |
| 27 | | | | | 4.5 | .2 | 6.5 | 0 | 0 | | | |
| 28 | | | | | 4.3 | 5.2 | 4.4 | 0 | 0 | | | |
| 29 | | | | | | 5.9 | 1.3 | 0 | 0 | | | |
| 30 | | | | | | 5.6 | 1.3 | 0 | 0 | | | |
| 31 | | | | | | 4.8 | | 0 | | | | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 0 | 0 | 0 | 0 | | | |
| November | | | | | | 0 | 0 | 0 | 0 | | | |
| December | | | | | | 0 | 0 | 0 | 0 | | | |
| January | | | | | | 0 | 0 | 0 | 0 | | | |
| February | | | | | | 6.5 | 0 | 3.35 | 214 | | | |
| March | | | | | | 109 | 0 | 46.9 | 2,880 | | | |
| April | | | | | | 75 | 1.3 | 23.2 | 1,380 | | | |
| May | | | | | | 7.4 | 0 | .69 | 42 | | | |
| June | | | | | | 46 | 0 | 7.40 | 440 | | | |
| July | | | | | | 0 | 0 | 0 | 0 | | | |
| August | | | | | | 0 | 0 | 0 | 0 | | | |
| September | | | | | | 0 | 0 | 0 | 0 | | | |
| The year | | | | | | 109 | 0 | | 4,960 | | | |

Note.- No flow during months left blank.

Battle Creek at international boundary

(International gaging station)

Location.- Water-stage recorder in SE $\frac{1}{4}$ sec. 4, T. 1 R. 26 W. third meridian, in Saskatchewan, a quarter of a mile above international boundary and 35 miles north of Chinook, Mont. Zero of gage is 2,731.04 feet above mean sea level.

Drainage area.- 726 square miles.

Records available.- April 1917 to September 1934.

Extremes.- Maximum open channel discharge recorded during year, 324 second-feet Apr. 9 (gage height, 3.96 feet); no flow for long periods, 1917-34: Maximum discharge, 3,200 second-feet Apr. 13, 1917 (gage height, 8.50 feet); no flow at times.

Remarks.- Records good except those for period of ice effect Feb. 25 to Apr. 4, which are poor. Staff gage used Feb. 25 to Apr. 25, May 4-6. No records Nov. 1 to Feb. 24. Numerous diversions above station. This station is one of the international gaging stations maintained jointly by the United States and Canada under the Boundary Waters Treaty. The records have been collected and compiled jointly with the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|----------------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | | | | | | | 29 | 11.9 | 0.2 | 1.9 | | |
| 2 | | | | | | | 39 | 11.9 | .2 | 1.5 | | |
| 3 | | | | | | 245 | 76 | 10.8 | .2 | 1.1 | | |
| 4 | | | | | | | 86 | 10.8 | .4 | .8 | | |
| 5 | | | | | | | 119 | 10.8 | .6 | .7 | | |
| 6 | | | | | | | 128 | 10.8 | .6 | 3.2 | | |
| 7 | | | | | | | 170 | 10.8 | 4.8 | 3.2 | | |
| 8 | | | | | | 65 | 185 | 8.5 | 23.6 | 2.1 | | |
| 9 | | | | | | | 324 | 8.0 | 10.8 | 1.8 | | |
| 10 | | | | | | | 266 | 9.1 | 5.5 | 1.4 | | |
| 11 | | | | | | | 200 | 7.4 | 33.6 | 1.1 | | |
| 12 | | | | | | 135 | 123 | 6.9 | 64 | .8 | | |
| 13 | | | | | | | 98 | 7.4 | 46.6 | .6 | | |
| 14 | | | | | | | 86 | 6.4 | 33.8 | .4 | | |
| 15 | | | | | | 98 | 58 | 6.4 | 22.7 | .3 | | |
| 16 | | | | | | | 76 | 49.4 | 6.4 | 20.9 | .2 | |
| 17 | | | | | | | 83 | 46.6 | 6.4 | 17.9 | .1 | |
| 18 | | | | | | | 69 | 41.0 | 4.8 | 15.1 | .1 | |
| 19 | | | | | | | 72 | 38.6 | 3.8 | 11.9 | 0 | |
| 20 | | | | | | | 47 | 36.2 | 2.7 | 10.2 | 0 | |
| 21 | | | | | | | 49 | 36.2 | 2.2 | 9.1 | 0 | |
| 22 | | | | | | | 41 | 36.2 | 3.2 | 6.9 | 0 | |
| 23 | | | | | | | 44 | 29.0 | 3.8 | 5.8 | 0 | |
| 24 | | | | | | | 47 | 27.2 | 2.7 | 5.3 | 0 | |
| 25 | | | | | 76 | 41 | 27.2 | 1.8 | 3.2 | 0 | | |
| 26 | | | | | | | 55 | 25.4 | 1.6 | 3.8 | 0 | |
| 27 | | | | | 39 | 41 | 24.5 | 1.4 | 3.8 | 0 | | |
| 28 | | | | | 29 | 44 | 17.9 | .8 | 4.3 | 0 | | |
| 29 | | | | | | 57 | 11.3 | .6 | 3.2 | 0 | | |
| 30 | | | | | | 72 | 12.4 | .3 | 2.2 | 0 | | |
| 31 | | | | | | 65 | | .2 | | 0 | | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 0 | 0 | 0 | 0 | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | 76 | 29 | 49.8 | 395 | | | |
| February 25-28 | | | | | | | 41 | 99.6 | 6,120 | | | |
| March | | | | | | | | 81.5 | 4,850 | | | |
| April | | | | | | 324 | 11.3 | | 737 | | | |
| May | | | | | | 11.9 | .2 | 5.83 | 358 | | | |
| June | | | | | | 64 | .2 | 12.4 | 42 | | | |
| July | | | | | | 3.2 | 0 | .69 | 0 | | | |
| August | | | | | | 0 | 0 | 0 | 0 | | | |
| September | | | | | | 0 | 0 | 0 | 0 | | | |

Note.- No flow during October, August, and September.

Woodpile Coulee near international boundary

(International gaging station)

Location.- Water-stage recorder in NW $\frac{1}{4}$ sec. 8, T. 37 N., R. 17 E., just below Antelope Coulee, 1-1/8 miles south of international boundary.

Drainage area.- 70 square miles.

Records available.- March 1927 to September 1934.

Extremes.- Maximum stage recorded during year, 2.11 feet Mar. 20 (ice present); no flow during most of year.
1927-34: Maximum discharge, 423 second-feet Apr. 4, 1927 (gage height, 16.69 feet, at old gage 3 miles downstream); no flow at times.

Remarks.- Records fair. No records Nov. 1 to Mar. 18. No diversions. This station is one of the international gaging stations maintained jointly by the United States and Canada under the Boundary Waters Treaty. The records have been collected and compiled jointly with the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | | | | | | | 1.6 | | 0 | | | |
| 2 | | | | | | | 10.9 | | 0 | | | |
| 3 | | | | | | | 10.2 | | 0 | | | |
| 4 | | | | | | | 6.3 | | 0 | | | |
| 5 | | | | | | | 2.7 | | 0 | | | |
| 6 | | | | | | | 1.4 | | 0 | | | |
| 7 | | | | | | | .8 | | 0 | | | |
| 8 | | | | | | | .5 | | .2 | | | |
| 9 | | | | | | | .3 | | .1 | | | |
| 10 | | | | | | | .2 | | .1 | | | |
| 11 | | | | | | | .1 | | 0 | | | |
| 12 | | | | | | | .1 | | 0 | | | |
| 13 | | | | | | | 0 | | 0 | | | |
| 14 | | | | | | | 0 | | 0 | | | |
| 15 | | | | | | | 0 | | 0 | | | |
| 16 | | | | | | | 0 | | 0 | | | |
| 17 | | | | | | | 0 | | 0 | | | |
| 18 | | | | | | 12 | 0 | | 0 | | | |
| 19 | | | | | | | 0 | | 0 | | | |
| 20 | | | | | | | 0 | | 0 | | | |
| 21 | | | | | | | 0 | | 0 | | | |
| 22 | | | | | | | 0 | | 0 | | | |
| 23 | | | | | | | 0 | | 0 | | | |
| 24 | | | | | | | 0 | | 0 | | | |
| 25 | | | | | | | 0 | | 0 | | | |
| 26 | | | | | | 7 | 0 | | 0 | | | |
| 27 | | | | | | | 0 | | 0 | | | |
| 28 | | | | | | | 0 | | 0 | | | |
| 29 | | | | | | | 0 | | 0 | | | |
| 30 | | | | | | | 0 | | 0 | | | |
| 31 | | | | | | | 0 | | 0 | | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 0 | 0 | 0 | 0 | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 17-31 | | | | | | | | | 8.3 | 248 | | |
| April | | | | | | | 10.9 | 0 | 1.17 | 70 | | |
| May | | | | | | | 0 | 0 | 0 | 0 | | |
| June | | | | | | | 0.2 | 0 | .01 | .8 | | |
| July | | | | | | | 0 | 0 | 0 | 0 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 0 | 0 | 0 | 0 | | |
| The period | | | | | | | | | | 319 | | |

Note.- No flow during October, May, and July to September.

East Fork of Battle Creek near international boundary
(International gaging station)

Location.- Water-stage recorder in NW $\frac{1}{4}$ sec. 17, T. 37 N., R. 20 E., 2 miles south of international boundary and 6 miles east of Norheim, Mont.

Drainage area.- 98 square miles.

Records available.- March 1927 to September 1934.

Extremes.- Maximum stage during year, 3.65 feet Mar. 1 (ice present); no flow for long periods.

1927-34: Maximum discharge, 432 second-feet Apr. 1, 1928 (gage height, 5.48 feet); no flow for long periods.

Remarks.- Records fair. No records Nov. 1 to Feb. 28. No diversions. This station is one of the international gaging stations maintained jointly by the United States and Canada under the Boundary Waters Treaty. The records have been collected and compiled jointly with the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | | | | | | | 0 | | | | | |
| 2 | | | | | | | 1 | | | | | |
| 3 | | | | | | | 4 | | | | | |
| 4 | | | | | | 25 | 4.7 | | | | | |
| 5 | | | | | | | 3.8 | | | | | |
| 6 | | | | | | | 3.9 | | | | | |
| 7 | | | | | | 10 | 2.5 | | | | | |
| 8 | | | | | | | 1.8 | | | | | |
| 9 | | | | | | 2 | 1.6 | | | | | |
| 10 | | | | | | | 1.4 | | | | | |
| 11 | | | | | | | .8 | | | | | |
| 12 | | | | | | | .5 | | | | | |
| 13 | | | | | | 15 | .2 | | | | | |
| 14 | | | | | | | .1 | | | | | |
| 15 | | | | | | 12 | 0 | | | | | |
| 16 | | | | | | 14 | 0 | | | | | |
| 17 | | | | | | 11 | 0 | | | | | |
| 18 | | | | | | 4 | 0 | | | | | |
| 19 | | | | | | 3 | 0 | | | | | |
| 20 | | | | | | 17 | 0 | | | | | |
| 21 | | | | | | 13 | 0 | | | | | |
| 22 | | | | | | 7 | 0 | | | | | |
| 23 | | | | | | 2 | 0 | | | | | |
| 24 | | | | | | 1 | 0 | | | | | |
| 25 | | | | | | 1 | 0 | | | | | |
| 26 | | | | | | 1 | 0 | | | | | |
| 27 | | | | | | 0 | 0 | | | | | |
| 28 | | | | | | 0 | 0 | | | | | |
| 29 | | | | | | 0 | 0 | | | | | |
| 30 | | | | | | 0 | 0 | | | | | |
| 31 | | | | | | 0 | 0 | | | | | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 0 | 0 | 0 | 0 | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | 0 | 9.6 | 589 | | | |
| April | | | | | | 4.7 | 0 | .88 | 52 | | | |
| May | | | | | | 0 | 0 | 0 | 0 | | | |
| June | | | | | | 0 | 0 | 0 | 0 | | | |
| July | | | | | | 0 | 0 | 0 | 0 | | | |
| August | | | | | | 0 | 0 | 0 | 0 | | | |
| September | | | | | | 0 | 0 | 0 | 0 | | | |

Note.- No flow during October and May to September.

Lyons Coulee at international boundary
(International gaging station)

Location.- Chain gage in NE $\frac{1}{4}$ sec. 4, T. 37 N., R. 19 E., half a mile south of international boundary, at Norheim, Mont.

Drainage area.- 47 square miles.

Records available.- March 1927 to September 1934.

Extremes.- Maximum stage during year, 5.14 feet Mar. 3 (ice present); no flow at times. 1927-34: Maximum discharge, 668 second-feet Apr. 3, 1927 (gage height, 7.65 feet); no flow at times.

Remarks.- Records fair. Stage-discharge relation affected by ice Feb. 14 to Mar. 27. Some small diversions above gage when creek flows during irrigation season. This station is one of the international gaging stations maintained jointly by the United States and Canada under the Boundary Waters Treaty. The records have been collected and compiled jointly with the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | | | | | 0 | | 0 | | | | | |
| 2 | | | | | 0 | | 0 | | | | | |
| 3 | | | | | 0 | 10 | 0 | | | | | |
| 4 | | | | | 0 | | 1.3 | | | | | |
| 5 | | | | | 0 | | 3.6 | | | | | |
| 6 | | | | | 0 | 6 | 2.5 | | | | | |
| 7 | | | | | 0 | | 1.5 | | | | | |
| 8 | | | | | 0 | | .9 | | | | | |
| 9 | | | | | 0 | 2 | .6 | | | | | |
| 10 | | | | | 0 | | .1 | | | | | |
| 11 | | | | | 0 | 5 | 0 | | | | | |
| 12 | | | | | 0 | | 0 | | | | | |
| 13 | | | | | 0 | 15 | 0 | | | | | |
| 14 | | | | | | 11 | 0 | | | | | |
| 15 | | | | | | | | | | | | |
| 16 | | | | | | 4 | 0 | | | | | |
| 17 | | | | | | | 0 | | | | | |
| 18 | | | | | | | 0 | | | | | |
| 19 | | | | | | 1 | 0 | | | | | |
| 20 | | | | | | | 0 | | | | | |
| 21 | | | | | | 4 | 0 | | | | | |
| 22 | | | | | | | 0 | | | | | |
| 23 | | | | | | 2 | 0 | | | | | |
| 24 | | | | | | | 0 | | | | | |
| 25 | | | | | 0 | 1 | 0 | | | | | |
| 26 | | | | | 0 | | 0 | | | | | |
| 27 | | | | | 0 | .5 | 0 | | | | | |
| 28 | | | | | 0 | | 0 | | | | | |
| 29 | | | | | | | 0 | | | | | |
| 30 | | | | | | | 0 | | | | | |
| 31 | | | | | | 0 | 0 | | | | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 0 | 0 | 0 | 0 | | |
| November | | | | | | | 0 | 0 | 0 | 0 | | |
| December | | | | | | | 0 | 0 | 0 | 0 | | |
| January | | | | | | | 0 | 0 | 0 | 0 | | |
| February | | | | | | | | 0 | | | | |
| March | | | | | | | | 0 | 4.66 | 287 | | |
| April | | | | | | | 3.6 | 0 | .35 | 21 | | |
| May | | | | | | | 0 | 0 | 0 | 0 | | |
| June | | | | | | | 0 | 0 | 0 | 0 | | |
| July | | | | | | | 0 | 0 | 0 | 0 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 0 | 0 | 0 | 0 | | |

Note.- Data insufficient to determine discharge Feb. 14-24. No flow during months left blank.

Matheson Canal near Chinook, Mont.

Location.- Water stage recorder in NW $\frac{1}{4}$ sec. 29, T. 33 N., R. 20 E., at headworks of canal, $3\frac{1}{2}$ miles east of Chinook.

Records available.- April 1905 to October 1921, May 1928 to September 1934.

Remarks.- Records fair. Staff gage used Mar. 3-16. Discharge interpolated Mar. 4-6. Canal diverts water from right bank of Battle Creek for irrigation of lands between Battle Creek and Milk River.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | | | | | | 0 | 0 | 5.7 | 0.7 | 0.2 | | |
| 2 | | | | | | 0 | 0 | 4.4 | .6 | .2 | | |
| 3 | | | | | | 2.0 | 0 | 3.7 | .6 | .2 | | |
| 4 | | | | | | 1.6 | 0 | 5.2 | .8 | .2 | | |
| 5 | | | | | | 1.2 | 0 | 5.5 | 1.6 | .5 | | |
| 6 | | | | | | .8 | 0 | 5.5 | .9 | .3 | | |
| 7 | | | | | | .5 | 0 | 5.3 | 1.8 | 0 | | |
| 8 | | | | | | 4.1 | 0 | 5.4 | 2.3 | 0 | | |
| 9 | | | | | | 1.7 | 0 | 6.0 | 1.8 | 0 | | |
| 10 | | | | | | 1.6 | 1.2 | 5.6 | 2.1 | 0 | | |
| 11 | | | | | | 0 | 6.9 | 5.7 | 2.2 | 0 | | |
| 12 | | | | | | 0 | 7.3 | 5.4 | 1.9 | 0 | | |
| 13 | | | | | | 1.4 | 6.5 | 5.6 | 1.5 | 0 | | |
| 14 | | | | | | 6.3 | 5.9 | 5.4 | 2.2 | 0 | | |
| 15 | | | | | | 3.8 | 9.3 | 5.5 | 2.4 | 0 | | |
| 16 | | | | | | 3.4 | 8.0 | 4.9 | 2.3 | 0 | | |
| 17 | | | | | | 0 | 7.5 | 3.9 | 1.9 | 0 | | |
| 18 | | | | | | 0 | 7.9 | 3.4 | 1.8 | 0 | | |
| 19 | | | | | | 0 | 9.6 | 3.4 | 1.7 | 0 | | |
| 20 | | | | | | 0 | 8.9 | 4.4 | 1.7 | 0 | | |
| 21 | | | | | | 0 | 8.3 | 3.8 | 1.6 | 0 | | |
| 22 | | | | | | 0 | 7.1 | 3.4 | 1.6 | 0 | | |
| 23 | | | | | | 0 | 6.3 | 3.4 | 1.2 | 0 | | |
| 24 | | | | | | 0 | 5.9 | 3.2 | .9 | 0 | | |
| 25 | | | | | | 0 | 5.4 | 2.9 | .6 | 0 | | |
| 26 | | | | | | 0 | 5.0 | 2.6 | .3 | 0 | | |
| 27 | | | | | | 0 | 5.5 | 2.4 | .2 | 0 | | |
| 28 | | | | | | 0 | 7.1 | 2.1 | .2 | 0 | | |
| 29 | | | | | | 0 | 7.2 | 1.9 | .4 | 0 | | |
| 30 | | | | | | 0 | 6.8 | 1.6 | .4 | 0 | | |
| 31 | | | | | | 0 | | 1.0 | | 0 | | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| November | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| December | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| January | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| February | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| March | | | | | | 6.3 | 0 | 0 | 0 | 0 | | |
| April | | | | | | 9.6 | 0 | 0 | 4.79 | 56.3 | | |
| May | | | | | | 6.0 | 1.0 | 4.14 | 254 | | | |
| June | | | | | | 2.4 | .2 | 1.34 | 79.7 | | | |
| July | | | | | | .6 | 0 | .05 | 3.2 | | | |
| August | | | | | | 0 | 0 | 0 | 0 | | | |
| September | | | | | | 0 | 0 | 0 | 0 | | | |
| The year | | | | | | | | | | 678 | | |

Note.- No flow during months left blank.

Whitewater Creek near international boundary

(International gaging station)

Location.— Water-stage recorder in NW $\frac{1}{4}$ sec. 24, T. 37 N., R. 29 E., just below mouth of North Fork of Whitewater Creek, $3\frac{1}{2}$ miles south of international boundary, 5 miles northeast of Lowrane, Mont., and 18 miles south of Roche Plain, Saskatchewan.

Records available.— March 1927 to September 1934.

Extremes.— Maximum stage during year, 4.64 feet Feb. 11 (ice present); no flow at times. 1927-34: Maximum discharge, 1,140 second-feet Apr. 5, 1927 (gage height, 4.71 feet); no flow at times.

Remarks.— Records fair. No records Nov. 1 to Feb. 10. Stage-discharge relation affected by ice Feb. 11 to Mar. 20. Staff gage used Feb. 11 to Mar. 25, July 3-20. This station is one of the international gaging stations maintained jointly by the United States and Canada under the Boundary Waters Treaty. The records have been collected and compiled jointly with the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada.

Discharge. in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | | | | | | 20 | 0.5 | 0.2 | 0.1 | 0.1 | | 0.1 |
| 2 | | | | | | | 1.0 | .2 | .2 | .1 | | .1 |
| 3 | | | | | | | .8 | .2 | .1 | .1 | | .1 |
| 4 | | | | | | 10 | .6 | .2 | .1 | *.1 | | .1 |
| 5 | | | | | | | .4 | .1 | .2 | .1 | | .1 |
| 6 | | | | | | | .4 | .1 | .1 | .1 | | .1 |
| 7 | | | | | | 5 | .3 | .1 | .2 | *.1 | | .1 |
| 8 | | | | | | | .3 | .1 | .2 | .1 | | .1 |
| 9 | | | | | | 1 | .4 | .1 | .2 | .1 | | .1 |
| 10 | | | | | | | .3 | .1 | .2 | .1 | | .1 |
| 11 | | | | | | 5 | .3 | .1 | .2 | .1 | | .2 |
| 12 | | | | | | | .3 | .1 | .2 | 0 | | .2 |
| 13 | | | | | | | .3 | .1 | .1 | 0 | | .2 |
| 14 | | | | | | 25 | .3 | .1 | .1 | 0 | | .2 |
| 15 | | | | | | | .3 | .1 | .1 | 0 | | .2 |
| 16 | | | | | | 1 | .3 | .1 | .1 | 0 | | .2 |
| 17 | | | | | | | .3 | .1 | .1 | 0 | | .2 |
| 18 | | | | | | 20 | .3 | .2 | .1 | 0 | | .2 |
| 19 | | | | | | | .3 | .2 | .1 | 0 | | .1 |
| 20 | | | | | | | .3 | .2 | .1 | 0 | | .1 |
| 21 | | | | | | 2 | .2 | .1 | .1 | 0 | | .1 |
| 22 | | | | | | | .3 | .2 | .1 | 0 | | .1 |
| 23 | | | | | | 0 | .2 | .2 | .1 | 0 | | .3 |
| 24 | | | | | | 0 | .2 | .2 | .1 | 0 | | .4 |
| 25 | | | | | | 0 | .2 | .2 | .1 | 0 | | .1 |
| 26 | | | | | | 0 | *.2 | .2 | .1 | .2 | | .1 |
| 27 | | | | | | 13 | .3 | .2 | .1 | .4 | | .1 |
| 28 | | | | | | | .3 | .2 | .1 | .2 | | .1 |
| 29 | | | | | | | .3 | .1 | .1 | .1 | | .1 |
| 30 | | | | | | | .3 | .2 | .1 | .1 | | .1 |
| 31 | | | | | | | .4 | .1 | | 0 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | *0.1 | 6.1 | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | 14.7 | 526 | | |
| March | | | | | | | | | 3.42 | 210 | | |
| April | | | | | | | 1.0 | .1 | .33 | 20 | | |
| May | | | | | | | .2 | | .12 | 7.5 | | |
| June | | | | | | | .4 | 0 | .13 | 7.7 | | |
| July | | | | | | | .1 | 0 | .04 | 2.2 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 4 | .1 | .14 | 8.5 | | |

*Estimated.

Note.— No flow during August.

Frenchman River at international boundary

(International gaging station)

Location.- Water-stage recorder in SW $\frac{1}{4}$ sec. 4, T. 1, R. 10 W. third meridian, in Saskatchewan, just across international boundary from east side of lot 3, sec. 6, T. 37 N., R. 34 E. Montana meridian. Zero of gage is 2,420.85 feet above mean sea level.

Drainage area.- 1,875 square miles.

Records available.- April 1917 to September 1934.

Extremes.- Maximum discharge during year, 456 second-feet Apr. 12 (gage height, 4.15 feet); maximum gage height, 5.27 feet Mar. 5 (ice present); no flow at times. 1917-34: Maximum discharge, 5,440 second-feet Mar. 29, 1925 (gage height, 13.12 feet); no flow at times.

Remarks.- Records good except those for period of ice effect, Mar. 1 to Apr. 5, which are fair. No records Nov. 1 to Feb. 12. Staff gage used Feb. 13 to Apr. 3. Data insufficient to warrant estimates of flow Feb. 13-23. Discharge interpolated July 16, 18, 20. Numerous diversions in Canada. This station is one of the international gaging stations maintained jointly by the United States and Canada under the Boundary Waters Treaty. The records have been collected and compiled jointly with the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | | | | | | | 86 | 45.6 | 13.6 | 15.5 | | |
| 2 | | | | | | | 165 | 43.8 | 14.6 | 13.1 | | |
| 3 | | | | | | | 288 | 42.0 | 15.0 | 16.0 | | |
| 4 | | | | | | | 335 | 41.2 | 15.0 | 14.1 | | |
| 5 | | | | | | | 310 | 36.8 | 14.1 | 10.6 | | |
| 6 | | | | | | 30 | 345 | 36.4 | 15.0 | 9.2 | | |
| 7 | | | | | | | 256 | 35.6 | 23.4 | 7.6 | | |
| 8 | | | | | | | 195 | 36.4 | 36.8 | 6.7 | | |
| 9 | | | | | | | 212 | 34.8 | 39.6 | 6.4 | | |
| 10 | | | | | | | 322 | 51.9 | 51.9 | 6.4 | | |
| 11 | | | | | | | 425 | 30.5 | 35.6 | 5.8 | | |
| 12 | | | | | | | 452 | 29.8 | 34.0 | 4.5 | | |
| 13 | | | | | | | 404 | 29.8 | 31.9 | 3.9 | | |
| 14 | | | | | | | 273 | 28.1 | 27.0 | 3.2 | | |
| 15 | | | | | | 80 | 170 | 27.0 | 22.8 | 2.6 | | |
| 16 | | | | | | | 133 | 26.4 | 36.8 | 2.4 | | |
| 17 | | | | | | | 114 | 27.0 | 45.6 | 2.3 | | |
| 18 | | | | | | | 98 | 29.1 | 34.8 | 1.6 | | |
| 19 | | | | | | | 91 | 28.4 | 36.0 | 1.0 | | |
| 20 | | | | | | | 85 | 27.0 | 36.4 | .5 | | |
| 21 | | | | | | 110 | 77 | 25.2 | 29.1 | 0 | | |
| 22 | | | | | | | 74 | 24.6 | 24.6 | 0 | | |
| 23 | | | | | | | 69 | 23.4 | 20.5 | 0 | | |
| 24 | | | | | | 200 | 64 | 22.2 | 17.0 | 0 | | |
| 25 | | | | | | | 60 | 20.0 | 16.0 | 0 | | |
| 26 | | | | | | | 247 | 57 | 20.0 | 17.0 | 0 | |
| 27 | | | | | | | 224 | 56 | 20.0 | 16.0 | 0 | |
| 28 | | | | | | | 184 | 53 | 19.0 | 18.0 | 0 | |
| 29 | | | | | | | 152 | 51 | 18.0 | 20.0 | 0 | |
| 30 | | | | | | | 129 | 47.4 | 17.0 | 16.5 | 0 | |
| 31 | | | | | | | 85 | 14.6 | | 0 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 0 | 0 | 0 | 0 | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | 96.8 | 5,950 | | |
| April | | | | | | | 452 | 47.4 | 179 | 10,640 | | |
| May | | | | | | | 45.6 | 14.6 | 23.9 | 1,770 | | |
| June | | | | | | | 45.6 | 13.6 | 25.5 | 1,510 | | |
| July | | | | | | | 15.0 | 0 | 4.31 | 265 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 0 | 0 | 0 | 0 | | |

Note.- No flow during October, August, and September.

Frenchman Canal near Saco, Mont.

Location.- Water-stage recorder in NE $\frac{1}{4}$ sec. 27, T. 33 N., R. 34 E., 14 miles northeast of Saco.

Records available.- May 1928 to September 1934.

Remarks.- Records poor. Canal diverts from Frenchman River about 1 mile above gage for irrigation of land in Frenchman Valley.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | | | | | | | 0 | 13.0 | 13.2 | 5.5 | | |
| 2 | | | | | | | 0 | 13.2 | 12.6 | 4.9 | | |
| 3 | | | | | | | 0 | 14.3 | 13.3 | 4.6 | | |
| 4 | | | | | | | 0 | 15.9 | 12.2 | 8.0 | | |
| 5 | | | | | | | 0 | 15.6 | 11.0 | 8.3 | | |
| 6 | | | | | | | 0 | 15.4 | 12.6 | 7.2 | | |
| 7 | | | | | | | 0 | 14.8 | 20.5 | 5.5 | | |
| 8 | | | | | | | 0 | 15.0 | 15.9 | 4.7 | | |
| 9 | | | | | | | 0 | 20.3 | 15.5 | 4.6 | | |
| 10 | | | | | | | 0 | 20.3 | 14.5 | 3.7 | | |
| 11 | | | | | | | 1.0 | 19.7 | 11.4 | 2.1 | | |
| 12 | | | | | | | 7.7 | 18.2 | 11.5 | 1.4 | | |
| 13 | | | | | | | 8.4 | 15.2 | 11.9 | 1.6 | | |
| 14 | | | | | | | 6.8 | 14.8 | 11.9 | .8 | | |
| 15 | | | | | | | 5.1 | 14.1 | 11.7 | .6 | | |
| 16 | | | | | | | 4.3 | 14.5 | 10.7 | 0 | | |
| 17 | | | | | | | 3.2 | 16.8 | 8.7 | 0 | | |
| 18 | | | | | | | 2.5 | 17.3 | 3.6 | 0 | | |
| 19 | | | | | | | 1.5 | 15.5 | 11.1 | 0 | | |
| 20 | | | | | | | 0 | 16.1 | 14.3 | 0 | | |
| 21 | | | | | | | 2.5 | 15.6 | 12.6 | 0 | | |
| 22 | | | | | | | 8.4 | 15.2 | 13.3 | 0 | | |
| 23 | | | | | | | 8.4 | 15.2 | 11.9 | 0 | | |
| 24 | | | | | | | 6.3 | 16.8 | 9.6 | 0 | | |
| 25 | | | | | | | 7.9 | 15.2 | 7.3 | 0 | | |
| 26 | | | | | | | 7.3 | 12.8 | 6.4 | 0 | | |
| 27 | | | | | | | 8.9 | 11.2 | 7.3 | 0 | | |
| 28 | | | | | | | 12.2 | 9.6 | 11.4 | 0 | | |
| 29 | | | | | | | 12.6 | 12.6 | 12.6 | 0 | | |
| 30 | | | | | | | 12.8 | 13.5 | 8.7 | 0 | | |
| 31 | | | | | | | | 14.3 | | 0 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 0 | 0 | 0 | 0 | | |
| November | | | | | | | 0 | 0 | 0 | 0 | | |
| December | | | | | | | 0 | 0 | 0 | 0 | | |
| January | | | | | | | 0 | 0 | 0 | 0 | | |
| February | | | | | | | 0 | 0 | 0 | 0 | | |
| March | | | | | | | 0 | 0 | 0 | 0 | | |
| April | | | | | | | 12.8 | 0 | 4.33 | 257 | | |
| May | | | | | | | 20.3 | 9.6 | 15.4 | 944 | | |
| June | | | | | | | 20.5 | 3.6 | 11.7 | 695 | | |
| July | | | | | | | 8.3 | 0 | 2.05 | 125 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 0 | 0 | 0 | 0 | | |
| The year | | | | | | | | | | 2,020 | | |

Note.- No flow during months left blank.

Rock Creek at international boundary
(International gaging station)

Location.- Chain gage in SE $\frac{1}{4}$ sec. 1, T. 37 N., R. 37 E., three-quarters of a mile south of international boundary, 2 miles above mouth of Horse Creek, and 5 miles west of Barnard, Mont.

Drainage area.- 242 square miles.

Records available.- March 1927 to September 1934.

Extremes.- Maximum stage during year, 8.03 feet Mar. 4 (ice present, discharge not determined); no flow at times.
1927-34: Maximum discharge, 982 second-feet Apr. 6, 1927 (gage height, 10.51 feet); no flow at times.

Remarks.- Records poor. No records Nov. 1 to Feb. 28. Stage-discharge relation affected by ice Mar. 1 to Apr. 4. One small diversion above gage. This station is one of the international gaging stations maintained jointly by the United States and Canada under the Boundary Waters Treaty. The records have been collected and compiled jointly with the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 0 | | | | | 100 | 19 | *4.1 | *1.0 | *2.2 | | |
| 2 | 0 | | | | | | 41 | *4.8 | 1.3 | *2.1 | | |
| 3 | 0 | | | | | | 98 | *5.5 | *1.3 | *2.0 | | |
| 4 | 0 | | | | | 200 | 109 | 6.2 | *1.3 | *1.9 | | |
| 5 | 0 | | | | | | 141 | *6.0 | *1.3 | *1.8 | | |
| 6 | 0 | | | | | 140 | 91 | *5.8 | *1.3 | *1.7 | | |
| 7 | 0 | | | | | | 68 | *5.7 | 1.3 | *1.6 | | |
| 8 | 0 | | | | | | 44.5 | 5.5 | *1.4 | *1.5 | | |
| 9 | 0 | | | | | | 40.9 | *6.6 | 1.5 | *1.4 | | |
| 10 | 0 | | | | | 95 | 26.6 | 7.7 | *3.2 | *1.3 | | |
| 11 | 0 | | | | | | 19.2 | *7.0 | *4.8 | *1.3 | | |
| 12 | 0 | | | | | 200 | *17.0 | *6.3 | 6.4 | 1.3 | | |
| 13 | 0 | | | | | | 14.9 | *5.6 | 2.7 | *1.2 | | |
| 14 | 0 | | | | | | *13.0 | *4.9 | *2.7 | *1.0 | | |
| 15 | 0 | | | | | 130 | *11.1 | 4.2 | *2.7 | *.9 | | |
| 16 | 0 | | | | | | 9.3 | 4.2 | *2.8 | *.8 | | |
| 17 | 0 | | | | | | *8.8 | *3.8 | *2.8 | *.7 | | |
| 18 | 0 | | | | | 50 | *8.4 | *3.4 | *2.9 | *.6 | | |
| 19 | 0 | | | | | | *8.0 | *3.0 | 2.9 | .4 | | |
| 20 | 0 | | | | | | *7.6 | *2.6 | *2.9 | *.2 | | |
| 21 | 0 | | | | | 140 | 7.2 | 2.3 | *2.8 | *.1 | | |
| 22 | 0 | | | | | | *7.2 | *1.8 | *2.7 | 0 | | |
| 23 | 0 | | | | | 60 | 7.2 | *1.3 | *2.6 | 0 | | |
| 24 | 0 | | | | | | *6.6 | *.7 | *2.5 | 0 | | |
| 25 | 0 | | | | | 20 | *6.0 | .2 | *2.4 | 0 | | |
| 26 | .1 | | | | | | *5.5 | *.2 | *2.3 | 0 | | |
| 27 | *1.8 | | | | | | *6.0 | *.2 | *2.2 | 0 | | |
| 28 | 3.6 | | | | | | *4.4 | .2 | *2.2 | 0 | | |
| 29 | 3.4 | | | | | 18 | *3.9 | *.4 | 2.2 | 0 | | |
| 30 | *3.4 | | | | | | 3.4 | *.6 | *2.2 | 0 | | |
| 31 | *3.3 | | | | | | | *.8 | | 0 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 3.6 | 0 | 0.50 | 31 | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | 98.0 | 6,090 | | |
| April | | | | | | | 141 | 3.4 | 23.4 | 1,890 | | |
| May | | | | | | | 7.7 | .2 | 3.60 | 221 | | |
| June | | | | | | | 6.4 | 1.0 | 2.42 | 144 | | |
| July | | | | | | | 2.2 | 0 | .84 | 52 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 0 | 0 | 0 | 0 | | |

*Interpolated.

Note.- No flow during August and September.

Horse Creek at international boundary

(International gaging station)

Location.- Staff gage in SE $\frac{1}{4}$ sec. 3, T. 37 N., R. 37 E., three-quarters of a mile south of international boundary.

Drainage area.- 71 square miles.

Records available.- March 1927 to September 1934; May 1914 to October 1926 maintained by Department of the Interior, Canada.

Extremes.- Maximum discharge recorded during year, 81 second-feet Apr. 2 (gage height, 5.50 feet); no flow at times.
1914-34: Maximum discharge, 1,040 second-feet Mar. 30, 1925 (gage height, 10.85 feet); no flow at times.

Remarks.- Records fair. No records Nov. 1 to Feb. 28. Data Mar. 1-22 insufficient to warrant estimates of flow. No diversions. Stage-discharge relation affected by ice Mar. 1-22. This station is one of the international gaging stations maintained jointly by the United States and Canada under the Boundary Waters Treaty. The records have been collected and compiled jointly with the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | | | | | | | *43.0 | | | | | |
| 2 | | | | | | | 81.0 | | | | | |
| 3 | | | | | | | 34.8 | | | | | |
| 4 | | | | | | | 23.7 | | | | | |
| 5 | | | | | | | *22.2 | | | | | |
| 6 | | | | | | | 20.8 | | | | | |
| 7 | | | | | | | 7.5 | | | | | |
| 8 | | | | | | | *6.8 | | | | | |
| 9 | | | | | | | 4.2 | | | | | |
| 10 | | | | | | | 4.4 | | | | | |
| 11 | | | | | | | 1.5 | | | | | |
| 12 | | | | | | | *1.2 | | | | | |
| 13 | | | | | | | .8 | | | | | |
| 14 | | | | | | | *.7 | | | | | |
| 15 | | | | | | | *.6 | | | | | |
| 16 | | | | | | | .4 | | | | | |
| 17 | | | | | | | *.3 | | | | | |
| 18 | | | | | | | *.3 | | | | | |
| 19 | | | | | | | .2 | | | | | |
| 20 | | | | | | | *.2 | | | | | |
| 21 | | | | | | | .3 | | | | | |
| 22 | | | | | | | *.3 | | | | | |
| 23 | | | | | | | .3 | | | | | |
| 24 | | | | | | 10 | *.3 | | | | | |
| 25 | | | | | | | *.2 | | | | | |
| 26 | | | | | | 8 | .2 | | | | | |
| 27 | | | | | | | *.2 | | | | | |
| 28 | | | | | | | .1 | | | | | |
| 29 | | | | | | | *.1 | | | | | |
| 30 | | | | | | 6 | .1 | | | | | |
| 31 | | | | | | | | | | | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 0 | 0 | 0 | 0 | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 23-31 | | | | | | | | | 6.78 | 121 | | |
| April | | | | | | | 81 | .1 | 8.52 | 507 | | |
| May | | | | | | | 0 | 0 | 0 | 0 | | |
| June | | | | | | | 0 | 0 | 0 | 0 | | |
| July | | | | | | | 0 | 0 | 0 | 0 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 0 | 0 | 0 | 0 | | |

*Interpolated.

Note.- No flow during October and May to September.

McEachern Creek at international boundary

(International gaging station)

Location.- Staff gage in SW $\frac{1}{4}$ sec. 1, T. 37 N., R. 36 E., half a mile south of international boundary and 7 miles north of Thoeny.

Drainage area.- 160 square miles.

Records available.- March 1927 to September 1934. March 1924 to October 1926 at station above east fork of this stream maintained by the Department of the Interior, Canada.

Extremes.- Maximum stage during year, 7.18 feet Mar. 2 (ice present); no flow at times. 1927-34. Maximum discharge, 1,850 second-feet Apr. 9, 1927 (gage height, 10.42 feet); no flow at times.

Remarks.- Records fair. No records Nov. 1 to Feb. 13. Data insufficient to warrant estimates of flow Feb. 14-26. No diversions. This station is one of the international gaging stations maintained jointly by the United States and Canada under the Boundary Waters Treaty. The records have been collected and compiled jointly with the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | | | | | | 32 | 54 | 0.1 | | | | |
| 2 | | | | | | 52 | 56 | .1 | | | | |
| 3 | | | | | | 52 | 43.2 | .1 | | | | |
| 4 | | | | | | 56 | 26.9 | .1 | | | | |
| 5 | | | | | | | 22.6 | .1 | | | | |
| 6 | | | | | | | 16.2 | .1 | | | | |
| 7 | | | | | | | 8.2 | .1 | | | | |
| 8 | | | | | | | 3.3 | .1 | | | | |
| 9 | | | | | | 33 | 3.3 | .1 | | | | |
| 10 | | | | | | | 3.3 | .1 | | | | |
| 11 | | | | | | | 2.3 | .1 | | | | |
| 12 | | | | | | 44 | 1.4 | .1 | | | | |
| 13 | | | | | | 120 | 1.2 | .1 | | | | |
| 14 | | | | | | 49 | 1.2 | 0 | | | | |
| 15 | | | | | | | 1.2 | 0 | | | | |
| 16 | | | | | | 24 | | | | | | |
| 17 | | | | | | | 1.2 | 0 | | | | |
| 18 | | | | | | 12 | 1.2 | 0 | | | | |
| 19 | | | | | | | 1.0 | 0 | | | | |
| 20 | | | | | | 91 | 1.0 | 0 | | | | |
| 21 | | | | | | 106 | .9 | 0 | | | | |
| 22 | | | | | | 35 | .4 | 0 | | | | |
| 23 | | | | | | 22 | .4 | 0 | | | | |
| 24 | | | | | | 15 | .2 | 0 | | | | |
| 25 | | | | | | 8 | .2 | 0 | | | | |
| 26 | | | | | | 6 | .2 | 0 | | | | |
| 27 | | | | | | 8 | .2 | 0 | | | | |
| 28 | | | | | | 8 | .2 | 0 | | | | |
| 29 | | | | | | 8 | .1 | 0 | | | | |
| 30 | | | | | | 8 | .1 | 0 | | | | |
| 31 | | | | | | 15 | | 0 | | | | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | | | *0.1 | 6.1 | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | 120 | 6 | 36.7 | 2,260 | | | |
| April | | | | | | 66 | .1 | 8.66 | 515 | | | |
| May | | | | | | .1 | 0 | .04 | 2.6 | | | |
| June | | | | | | 0 | 0 | 0 | 0 | | | |
| July | | | | | | 0 | 0 | 0 | 0 | | | |
| August | | | | | | 0 | 0 | 0 | 0 | | | |
| September | | | | | | 0 | 0 | 0 | 0 | | | |

*Estimated.

Note.- No flow June to September.

Middle Fork of Poplar River at international boundary

(International gaging station)

Location.- Water-stage recorder in SE $\frac{1}{4}$ sec. 6, T. 37 N., R. 46 E., half a mile south of international boundary and 20 miles northwest of Scobey, Mont.

Drainage area.- 381 square miles.

Records available.- March 1931 to September 1934.

Extremes.- Maximum discharge during year, 186 second-feet Apr. 3 (gage height, 3.57 feet); no flow at times during August.
1931-34: Maximum discharge, 365 second-feet Mar. 19, 1933 (gage height, 5.48 feet, affected by ice); no flow at times.

Remarks.- Records fair. No records Nov. 1 to Feb. 12. Data insufficient to warrant estimates of flow Feb. 13-23. Stage-discharge relation affected by ice Mar. 1-31. This station is one of the international gaging stations maintained jointly by the United States and Canada under the Boundary Waters Treaty. The records have been collected and compiled jointly with the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|-----|---------|---------|------|----------------------|------|-------|
| 1 | 0.7 | | | | | | 60 | 6.6 | 2.8 | 0.4 | 0.1 | 0.1 |
| 2 | .8 | | | | | | 89 | 6.6 | 3.5 | .4 | .1 | .2 |
| 3 | 1.0 | | | | | | 146 | 6.6 | 4.6 | .4 | 0 | .2 |
| 4 | 1.0 | | | | | | 140 | 6.6 | 4.3 | .4 | 0 | .2 |
| 5 | 1.0 | | | | | | 88 | 7.0 | 4.6 | .4 | 0 | .2 |
| 6 | .9 | | | | | 84 | 55 | 5.8 | 6.2 | .4 | 0 | .1 |
| 7 | 1.0 | | | | | | 51 | 5.4 | 11.0 | .5 | .2 | .1 |
| 8 | 1.0 | | | | | | 39.6 | 5.4 | 23.5 | .5 | .1 | .1 |
| 9 | 1.1 | | | | | | 29.4 | 6.2 | 19.5 | .5 | .1 | .2 |
| 10 | 1.1 | | | | | | 23.0 | 5.4 | 16.0 | .4 | .1 | .2 |
| 11 | 1.1 | | | | | | 18.0 | 5.4 | 12.0 | .4 | .1 | .1 |
| 12 | 1.1 | | | | | | 16.0 | 5.0 | 8.6 | .4 | .1 | .1 |
| 13 | 1.1 | | | | | | 15.0 | 5.0 | 7.4 | .3 | .1 | .1 |
| 14 | 1.1 | | | | | | 13.5 | 4.3 | 6.2 | .2 | .1 | .1 |
| 15 | 1.1 | | | | | 91 | 11.5 | 4.6 | 5.0 | .2 | .1 | .1 |
| 16 | 1.1 | | | | | | 12.0 | 4.3 | 4.3 | .3 | .1 | .2 |
| 17 | 1.1 | | | | | | 12.0 | 3.2 | 3.5 | .2 | .2 | .2 |
| 18 | 1.2 | | | | | | 10.0 | 2.4 | 2.4 | .2 | 0 | .2 |
| 19 | 2.0 | | | | | | 9.0 | 2.4 | 1.3 | .2 | 0 | .2 |
| 20 | 4.6 | | | | | | 8.6 | 2.8 | 1.1 | .2 | 0 | .2 |
| 21 | 7.4 | | | | | | 7.8 | 2.8 | .9 | .2 | 0 | .2 |
| 22 | 5.0 | | | | | | 7.4 | 2.8 | .7 | .2 | 0 | .2 |
| 23 | 4.3 | | | | | | 7.0 | 2.8 | .4 | .2 | 0 | .2 |
| 24 | 2.0 | | | | | | 7.4 | 3.2 | .4 | .2 | .1 | .3 |
| 25 | 3.5 | | | | | | 7.4 | 3.2 | .2 | .2 | .1 | .4 |
| 26 | 8.2 | | | | | 71 | 7.0 | 3.2 | .2 | .2 | 0 | .4 |
| 27 | 8.6 | | | | | | 7.4 | 3.5 | .2 | .2 | 0 | 1.0 |
| 28 | 7.4 | | | | | | 7.0 | 3.9 | .2 | .2 | 0 | 1.7 |
| 29 | 8.6 | | | | | | 7.0 | 3.5 | .2 | .2 | 0 | 1.1 |
| 30 | 9.0 | | | | | | 6.6 | 3.2 | .4 | .2 | 0 | .9 |
| 31 | 8.2 | | | | | | | 3.2 | | .1 | 0 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 9.0 | 0.7 | 3.14 | 193 | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | 81.6 | 5,020 | | |
| April | | | | | | | 146 | 6.6 | 30.6 | 1,820 | | |
| May | | | | | | | 7.0 | 2.4 | 4.40 | 270 | | |
| June | | | | | | | 23.5 | .2 | 5.06 | 301 | | |
| July | | | | | | | .5 | .1 | .29 | 18 | | |
| August | | | | | | | .2 | 0 | .06 | 3.4 | | |
| September | | | | | | | 1.7 | .1 | .32 | 19 | | |

Poplar River near Bredette, Mont.

Location.- Wire gage in SW $\frac{1}{4}$ sec. 27, T. 31 N., R. 50 E., 11 miles southeast of Bredette and 24 miles north of Poplar.

Records available.- March to September 1934.

Extremes.- Maximum discharge during period, 920 second-feet Mar. 22 (gage height, 6.80 feet); minimum, 0.2 second-foot several times during July and August.

Remarks.- Records good except those estimated for July 3-30, which are fair. Discharge interpolated June 22, 23. Some diversions above gage.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | | | | | | | 420 | 51 | 11 | 12 | 2.4 | 0.8 |
| 2 | | | | | | | 311 | 56 | 11 | 11 | 2.6 | 1.0 |
| 3 | | | | | | | 364 | 51 | 10 | 10 | 2.6 | .9 |
| 4 | | | | | | | 322 | 45 | 19 | | 2.6 | 1.6 |
| 5 | | | | | | | 364 | 39 | 16 | | 2.6 | 1.6 |
| 6 | | | | | | | 512 | 35 | 8.4 | 5 | 2.2 | 2.0 |
| 7 | | | | | | | 450 | 39 | 31 | | 2.2 | 2.0 |
| 8 | | | | | | | 364 | 35 | 47 | | 1.6 | 2.0 |
| 9 | | | | | | | 311 | 35 | 43 | 1 | 1.6 | 2.0 |
| 10 | | | | | | | 263 | 47 | 31 | | 1.2 | 2.0 |
| 11 | | | | | | | 219 | 39 | 20 | | 1.2 | 1.6 |
| 12 | | | | | | | 179 | 39 | 19 | .2 | 1.6 | 1.6 |
| 13 | | | | | | | 125 | 39 | 16 | | .9 | 2.0 |
| 14 | | | | | | | 118 | 35 | 25 | | .7 | 2.0 |
| 15 | | | | | | | 115 | 30 | 22 | | 1.2 | 2.0 |
| 16 | | | | | | | 96 | 19 | 19 | .2 | 1.2 | 2.0 |
| 17 | | | | | | | 69 | 19 | 31 | | 1.2 | 7.2 |
| 18 | | | | | | | 86 | 18 | 28 | | 1.2 | 6.0 |
| 19 | | | | | | | 89 | 19 | 25 | | 1.2 | 7.2 |
| 20 | | | | | | 755 | 86 | 19 | 15 | .2 | 1.4 | 3.0 |
| 21 | | | | | | | 835 | 72 | 19 | .3 | .8 | 2.4 |
| 22 | | | | | | | 920 | 64 | 19 | .2 | .6 | 2.4 |
| 23 | | | | | | | 610 | 59 | 19 | 9.7 | .7 | 2.8 |
| 24 | | | | | | | 680 | 59 | 16 | 9.0 | 9.7 | 3.6 |
| 25 | | | | | | | 718 | 59 | 16 | 9.0 | 13 | 6.0 |
| 26 | | | | | | | 480 | 64 | 15 | 10 | 12 | 7.2 |
| 27 | | | | | | | 546 | 61 | 15 | 15 | 12 | 6.0 |
| 28 | | | | | | | 610 | 61 | 13 | 13 | 8.4 | 6.0 |
| 29 | | | | | | | 507 | 64 | 13 | 12 | 12 | 6.0 |
| 30 | | | | | | | 404 | 56 | 12 | 12 | 6.0 | 7.2 |
| 31 | | | | | | 301 | | 10 | | 6.0 | .8 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 20-31 | | | | | | | 920 | 301 | 614 | 14,610 | | |
| April | | | | | | | 512 | 56 | 183 | 10,210 | | |
| May | | | | | | | 56 | 10 | 28.3 | 1,740 | | |
| June | | | | | | | 47 | 8.4 | 18.6 | 1,110 | | |
| July | | | | | | | 13 | .2 | 5.30 | 326 | | |
| August | | | | | | | 2.6 | .2 | 1.32 | 81 | | |
| September | | | | | | | 7.2 | .8 | 3.34 | 199 | | |
| The period | | | | | | | | | | 28,980 | | |

East Fork of Poplar River at international boundary

(International gaging station)

Location.- Water-stage recorder in SW $\frac{1}{4}$ sec. 3, T. 1, R. 28 W. third meridian, at international boundary in Saskatchewan, 16 miles north of Scooby, Mont.

Drainage area.- 256 square miles.

Records available.- March 1931 to September 1934.

Extremes.- Maximum stage during year, 5.02 feet Mar. 22 (ice present); minimum discharge, 0.3 second-foot July 15 (gage height, 2.27 feet).

1931-34: Maximum discharge, 975 second-foot Aug. 13, 1932 (gage height, 10.70 feet); minimum, that of July 15, 1934.

Remarks.- Records fair. No records Nov. 1 to Feb. 28. Stage-discharge relation affected by ice Oct. 20-31 and Mar. 1 to Apr. 4. Staff gage used Mar. 1 to Apr. 21. This station is one of the international gaging stations maintained jointly by the United States and Canada under the Boundary Waters Treaty. The records have been collected and compiled jointly with the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 2.0 | | | | | | | 6.2 | 1.8 | 1.4 | 0.6 | 1.7 |
| 2 | 2.0 | | | | | | 20 | 6.3 | 2.0 | 1.3 | .5 | 1.8 |
| 3 | 2.1 | | | | | | | 6.3 | 1.8 | 1.2 | .6 | 2.0 |
| 4 | 2.2 | | | | | | | 6.2 | 1.9 | 1.2 | .6 | 2.0 |
| 5 | 2.2 | | | | | 10 | 21.2 | 6.2 | 2.0 | 1.2 | .5 | 2.0 |
| 6 | 2.0 | | | | | | 18.4 | 5.5 | 1.8 | 1.2 | .5 | 2.0 |
| 7 | 2.0 | | | | | | 15.2 | 5.3 | 2.4 | 1.1 | .7 | 2.0 |
| 8 | 2.0 | | | | | | 13.3 | 5.4 | 2.9 | 1.0 | .7 | 2.0 |
| 9 | 2.0 | | | | | | 15.8 | 5.3 | 2.6 | .7 | .6 | 2.1 |
| 10 | 2.0 | | | | | | 15.6 | 4.6 | 2.4 | .7 | .6 | 2.0 |
| 11 | 1.9 | | | | | | 11.2 | 4.7 | 2.1 | .6 | .7 | 2.1 |
| 12 | 2.0 | | | | | | 10.3 | 4.7 | 2.0 | .6 | .8 | 2.2 |
| 13 | 2.2 | | | | | 8 | 9.7 | 4.4 | 2.0 | .5 | .8 | 2.2 |
| 14 | 2.0 | | | | | | 9.7 | 4.1 | 2.0 | .5 | .9 | 2.1 |
| 15 | 2.0 | | | | | | 9.3 | 4.1 | 1.7 | .4 | 1.0 | 2.2 |
| 16 | 2.0 | | | | | | 9.2 | 3.8 | 2.0 | .4 | 1.0 | 2.4 |
| 17 | 2.0 | | | | | | 8.5 | 3.6 | 1.8 | .5 | 1.1 | 2.4 |
| 18 | 1.9 | | | | | 6 | 8.4 | 3.4 | 1.6 | .6 | 1.2 | 2.5 |
| 19 | 2.0 | | | | | 8 | 7.5 | 3.0 | 1.8 | .5 | 1.0 | 2.7 |
| 20 | | | | | | | 7.4 | 3.2 | 1.6 | .4 | 1.2 | 2.5 |
| 21 | | | | | | 25 | 7.4 | 2.9 | 1.6 | .4 | 1.2 | 2.7 |
| 22 | | | | | | | 7.7 | 2.7 | 1.6 | .5 | 1.2 | 2.9 |
| 23 | | | | | | | 6.6 | 2.6 | 1.4 | .6 | 1.4 | 3.1 |
| 24 | | | | | | | 6.9 | 2.4 | 1.2 | .6 | 1.4 | 3.0 |
| 25 | 2.0 | | | | | 30 | 7.0 | 2.4 | 1.2 | .6 | 1.3 | 3.3 |
| 26 | | | | | | | 6.6 | 2.2 | 1.4 | .5 | 1.4 | 3.6 |
| 27 | | | | | | | 6.6 | 2.1 | 1.8 | .6 | 1.3 | 3.8 |
| 28 | | | | | | | 6.4 | 1.9 | 1.6 | .7 | 1.4 | 3.9 |
| 29 | | | | | | | 6.5 | 1.8 | 1.7 | .6 | 1.4 | 3.8 |
| 30 | | | | | | 20 | 6.1 | 1.8 | 1.5 | .5 | 1.5 | 3.7 |
| 31 | | | | | | | | 1.8 | | .6 | 1.6 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 2.2 | | 2.02 | 124 | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | 15.2 | 934 | | |
| April | | | | | | | 21.2 | 6.1 | 11.2 | 667 | | |
| May | | | | | | | 6.3 | 1.8 | 3.90 | 240 | | |
| June | | | | | | | 2.9 | 1.2 | 1.84 | 109 | | |
| July | | | | | | | 1.4 | .4 | .72 | 44 | | |
| August | | | | | | | 1.6 | .5 | .99 | 61 | | |
| September | | | | | | | 3.9 | 1.7 | 2.56 | 152 | | |

West Fork of Poplar River at International boundary

(International gaging station)

Location.- Water-stage recorder in SE $\frac{1}{4}$ sec. 5, T. 1 R. 3 W. third meridian, in Saskatchewan, at West Poplar River Canadian Customs Post, at international boundary, 11 miles north and three-quarters of a mile east of Opheim, Mont. Zero of gage is 2,854.83 feet above mean sea level.

Drainage area.- 141 square miles.

Records available.- March 1931 to September 1934.

Extremes.- Maximum stage during year, 3.9 feet Mar. 11 (ice present, discharge not determined); no flow at times.
1931-34: Maximum discharge, 115 second-feet Mar. 18, 1933 (gage height, 3.36 feet); no flow at times.

Remarks.- Records fair except those for periods of ice effect, Oct. 23-31 and Mar. 21 to Apr. 18, which are poor. No records Nov. 1 to Mar. 14. This station is one of the international gaging stations maintained jointly by the United States and Canada under the Boundary Waters Treaty. The records have been collected and compiled jointly with the Dominion Water Power and Hydrometric Bureau, Department of the Interior, Canada.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | 0.2 | | | | | | | 0.5 | 0 | | | 0 |
| 2 | .2 | | | | | | | .4 | 0 | | | 0 |
| 3 | .2 | | | | | | 3 | .3 | 0 | | | 0 |
| 4 | .2 | | | | | | | .3 | 0 | | | 0 |
| 5 | .2 | | | | | | | .2 | .1 | | | 0 |
| 6 | .2 | | | | | | 10 | .2 | .1 | | | 0 |
| 7 | .2 | | | | | | | .2 | .3 | | | 0 |
| 8 | .2 | | | | | | 15 | .3 | .4 | | | 0 |
| 9 | .2 | | | | | | | .2 | .4 | | | 0 |
| 10 | .3 | | | | | | | .2 | .3 | | | 0 |
| 11 | .3 | | | | | | | .2 | .2 | | | 0 |
| 12 | .3 | | | | | | 10 | .2 | .2 | | | 0 |
| 13 | .4 | | | | | | | .1 | .3 | | | 0 |
| 14 | .4 | | | | | | | .1 | .2 | | | 0 |
| 15 | .4 | | | | | 0 | | .1 | .2 | | | 0 |
| 16 | .4 | | | | | 0 | 2 | .1 | .2 | | | 0 |
| 17 | .3 | | | | | 0 | 2.1 | .1 | .2 | | | 0 |
| 18 | .3 | | | | | 0 | 2.0 | .1 | .3 | | | 0 |
| 19 | .3 | | | | | 0 | 2.6 | .1 | .2 | | | 0 |
| 20 | .5 | | | | | 0 | 1.6 | .1 | .2 | | | 0 |
| 21 | .3 | | | | | | 5 | 1.0 | .1 | | | 0 |
| 22 | .3 | | | | | | | 1.0 | .1 | | | 0 |
| 23 | | | | | | 14 | .8 | .1 | 0 | | | 0 |
| 24 | | | | | | 14.7 | .8 | .1 | 0 | | | 0 |
| 25 | | | | | | 15 | .6 | .1 | 0 | | | 0 |
| 26 | | .3 | | | | | | .6 | 0 | | | 0 |
| 27 | | | | | | | | .5 | 0 | | | .1 |
| 28 | | | | | | | | .5 | 0 | | | .2 |
| 29 | | | | | | 3 | | .5 | 0 | | | .2 |
| 30 | | | | | | | | .5 | 0 | | | .2 |
| 31 | | | | | | | | 0 | 0 | | | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 0.5 | | 0.29 | 18 | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 15-31 | | | | | | | | 0 | 4.22 | 142 | | |
| April | | | | | | | | 0.5 | 4.80 | 286 | | |
| May | | | | | | .5 | | 0 | .15 | 8.9 | | |
| June | | | | | | .4 | | 0 | .13 | 7.5 | | |
| July | | | | | | 0 | | 0 | 0 | 0 | | |
| August | | | | | | 0 | | 0 | 0 | 0 | | |
| September | | | | | | .2 | | 0 | .02 | 1.4 | | |

Note.- No flow during July and August.

YELLOWSTONE RIVER BASIN

Yellowstone Lake at Lake Hotel, Yellowstone National Park

Location.— Staff gage at boat landing at Lake Hotel, $1\frac{1}{2}$ miles southwest of lake outlet. Zero of gage is 7,729.45 feet above mean sea level (adjustment of 1929).

Drainage area.- 1,010 square miles.

Records available.- October 1921 to September 1934.

Extremes.- Maximum stage during year, 2.40 feet June 9, 12, 16; minimum recorded, 0.49 foot Sept. 29.

1921-34: Maximum stage, 6.12 feet June 30, 1927; minimum, -0.1 foot Dec. 7, 8, 1931.

Remarks.- Records good. No regulation. Records furnished by officials of Yellowstone National Park.

Gage height, in feet, 1933-34

[illegible]

Yellowstone River at Yellowstone Lake outlet, Yellowstone National Park

Location.- Water-stage recorder 550 feet below Fishing Bridge and a quarter of a mile below outlet of Yellowstone Lake. Staff gage at Fishing Bridge is also used. Zero of gage at recorder site is 7,727.78 feet and staff gage at Fishing Bridge, 7,728.84 feet above mean sea level (adjustment of 1929).

Drainage area.- 1,010 square miles.

Records available.- December 1922 to September 1934. Gage-height records only prior to October 1928.

Extremes.- Maximum discharge during year, 1,800 second-feet June 22 (gage height, 3.74 feet); minimum, 288 second-feet Dec. 24 (gage height, 1.85 feet).
1922-34: Maximum discharge, 7,420 second-feet June 29, 30, and July 1, 1927 (gage height, 8.3 feet at Fishing Bridge site or 7.1 at recorder site); minimum, 220 second-feet Dec. 7, 1931 (gage height, 1.45 feet).

Remarks.- Records good except those estimated, Dec. 10-23, 25-31, Jan. 1 to Feb. 28, Mar. 1-21, 23-31, Apr. 1-6, 8-14, which are fair. Discharge interpolated Nov. 28-30, Dec. 1, 3-8. Gage-height record furnished by Yellowstone National Park officials. No artificial regulation.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|
| 1 | 712 | 485 | 339 | | | | | 628 | 1,690 | 1,560 | 1,010 | 666 |
| 2 | 705 | 485 | 337 | | | | | 653 | 1,690 | 1,540 | 992 | 646 |
| 3 | 699 | 480 | 335 | | | | | 679 | 1,690 | 1,520 | 974 | 634 |
| 4 | 686 | 466 | 334 | | | | 330 | 698 | 1,690 | 1,500 | 949 | 628 |
| 5 | 679 | 462 | 332 | | | | | 724 | 1,690 | 1,520 | 940 | 610 |
| 6 | 679 | 457 | 330 | | | 300 | | 770 | 1,690 | 1,490 | 932 | 598 |
| 7 | 672 | 452 | 328 | | | | 345 | 826 | 1,740 | 1,470 | 915 | 598 |
| 8 | 666 | 444 | 327 | | | | | 900 | 1,740 | 1,460 | 885 | 586 |
| 9 | 653 | 434 | 325 | | | | 350 | 983 | 1,740 | 1,430 | 878 | 580 |
| 10 | 640 | 430 | | | | | | 1,020 | 1,740 | 1,390 | 870 | 574 |
| 11 | 634 | 426 | | | | | | 1,090 | 1,740 | 1,370 | 870 | 580 |
| 12 | 634 | 412 | | | | | | 1,120 | 1,740 | 1,350 | 848 | 564 |
| 13 | 628 | 403 | | | | | 360 | 1,180 | 1,740 | 1,320 | 833 | 547 |
| 14 | 622 | 398 | | | | | | 1,180 | 1,740 | 1,280 | 819 | 525 |
| 15 | 616 | 394 | | | | | 369 | 1,210 | 1,740 | 1,270 | 819 | 525 |
| 16 | 604 | 390 | 300 | | | 310 | 365 | 1,220 | 1,740 | 1,250 | 812 | 510 |
| 17 | 598 | 385 | | | | | 373 | 1,290 | 1,740 | 1,240 | 812 | 500 |
| 18 | 586 | 381 | | | | | 369 | 1,320 | 1,740 | 1,180 | 798 | 495 |
| 19 | 580 | 377 | | | | | 377 | 1,370 | 1,740 | 1,180 | 770 | 480 |
| 20 | 574 | 373 | | | | | 385 | 1,420 | 1,740 | 1,160 | 757 | 466 |
| 21 | 558 | 369 | | | | | 398 | 1,430 | 1,740 | 1,140 | 744 | 470 |
| 22 | 536 | 365 | | | | 322 | 421 | 1,460 | 1,740 | 1,120 | 718 | 495 |
| 23 | 530 | 361 | | | | | 444 | 1,490 | 1,690 | 1,100 | 718 | 495 |
| 24 | 520 | 357 | 288 | | | | 466 | 1,520 | 1,690 | 1,090 | 698 | 495 |
| 25 | 520 | 349 | | | | | 500 | 1,540 | 1,690 | 1,090 | 698 | 500 |
| 26 | 515 | 347 | | | | 325 | 542 | 1,560 | 1,690 | 1,100 | 698 | 495 |
| 27 | 510 | 346 | 290 | | | | 558 | 1,580 | 1,630 | 1,080 | 679 | 485 |
| 28 | 505 | 344 | | | | | 556 | 1,630 | 1,630 | 1,080 | 679 | 475 |
| 29 | 500 | 342 | | | | | 560 | 1,630 | 1,630 | 1,080 | 679 | 466 |
| 30 | 505 | 340 | | | | | 604 | 1,630 | 1,600 | 1,050 | 666 | 466 |
| 31 | 495 | | | | | | | 1,630 | | 1,050 | 679 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-----------|---------|---------|-------|-----------------|---------|-----------|
| | | | | | Inches | Acre-feet |
| October | 712 | 495 | 599 | 0.593 | 0.68 | 36,810 |
| November | 485 | 340 | 402 | .398 | .44 | 23,910 |
| December | 339 | | 307 | .304 | .35 | 18,850 |
| January | | | 300 | .297 | .34 | 18,450 |
| February | | | 300 | .297 | .31 | 16,660 |
| March | | | 312 | .309 | .36 | 19,180 |
| April | | | 403 | .399 | .46 | 24,000 |
| May | 604 | | 1,206 | 1.19 | 1.37 | 74,140 |
| June | 1,630 | 628 | 1,206 | 1.19 | 1.37 | 74,140 |
| July | 1,740 | 1,600 | 1,707 | 1.69 | 1.89 | 101,600 |
| August | 1,560 | 1,050 | 1,272 | 1.26 | 1.45 | 78,230 |
| September | 1,010 | 679 | 812 | .804 | .93 | 49,900 |
| | 666 | 466 | 538 | .533 | .59 | 32,040 |
| The year | 1,740 | | 682 | .675 | 9.16 | 493,800 |

Yellowstone River near Canyon Hotel, Yellowstone National Park

Location.- Water-stage recorder half a mile upstream from Upper Falls and Canyon Ranger station and $1\frac{1}{4}$ miles south of Canyon Hotel.

Drainage area.- 1,180 square miles.

Records available.- June 1913 to September 1934 (except winters).

Extremes.- Maximum discharge during year, 1,850 second-feet June 22 (gage height, 1.81 feet); minimum recorded discharge, 383 second-feet (result of discharge measurement, Mar. 20. A lesser flow probably occurred during period of no record, 1913-34: Maximum discharge, 8,550 second-feet June 27, 1918 (gage height, 4.50 feet); minimum usually occurs during winter period of no record.

Remarks.- Records good. Discharge estimated June 5-8. No artificial regulation or diversions. Gage observations furnished by officials of Yellowstone National Park.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|---------|------|---------|------|-------|------|-----------------|-------|---------|-----------|-------|
| 1 | 753 | 528 | | | | | | | 1,730 | 1,600 | 1,030 | 684 |
| 2 | 744 | 512 | | | | | | | 1,730 | 1,580 | 1,010 | 667 |
| 3 | 744 | | | | | | | | 1,700 | 1,560 | 1,000 | 650 |
| 4 | 735 | | | | | | | | 1,700 | 1,550 | 960 | 650 |
| 5 | 726 | | | | | | | | 1,550 | 1,550 | 950 | 642 |
| 6 | | | | | | | | | 1,700 | | | |
| 7 | 718 | | | | | | | | | 1,540 | 950 | 635 |
| 8 | 710 | | | | | | | | | 1,520 | 940 | 620 |
| 9 | 710 | | | | | | | | 1,770 | 1,510 | 930 | 628 |
| 10 | 692 | | | | | | | | 1,810 | 1,480 | 910 | 612 |
| 11 | | | | | | | | | 1,800 | 1,460 | 910 | 612 |
| 12 | 684 | | | | | | | | 1,770 | 1,480 | 892 | 606 |
| 13 | 684 | | | | | | | | 1,780 | 1,450 | 872 | 598 |
| 14 | 675 | | | | | | | | 1,750 | 1,410 | 854 | 590 |
| 15 | 676 | | | | | | | | 1,760 | 1,380 | 844 | 575 |
| 16 | 684 | | | | | | | | 1,750 | 1,340 | 834 | 561 |
| 17 | | | | | | | | | 1,770 | 1,320 | 844 | 568 |
| 18 | 658 | | | | | | | | 1,770 | 1,300 | 825 | 561 |
| 19 | 650 | | | | | | | | 1,760 | 1,290 | 825 | 554 |
| 20 | 650 | | | | | 392 | | | 1,780 | 1,250 | 807 | 554 |
| 21 | | | | | | | | | 1,600 | 1,240 | 789 | 533 |
| 22 | 612 | | | | | | | | 1,770 | 1,210 | 771 | 540 |
| 23 | 612 | | | | | | | | 1,800 | 1,200 | 752 | 568 |
| 24 | 605 | | | | | | | | 1,750 | 1,180 | 744 | 582 |
| 25 | 590 | | | | | | | | 1,720 | 1,170 | 726 | 568 |
| 26 | 582 | | | | | | | | 1,720 | 1,180 | 718 | 547 |
| 27 | | | | | | | | 1,620 | 1,730 | 1,170 | 710 | 547 |
| 28 | 575 | | | | | | | 1,640 | 1,700 | 1,150 | 701 | 547 |
| 29 | 554 | | | | | | | 1,670 | 1,660 | 1,120 | 692 | 547 |
| 30 | 554 | | | | | | | 1,670 | 1,620 | 1,090 | 726 | 540 |
| 31 | 540 | | | | | | | 1,700 | 1,610 | 1,080 | 726 | 533 |
| | | | | | | | | 1,720 | | 1,080 | 701 | |
| Month | | Maximum | | Minimum | | Mean | | Per square mile | | Run-off | | |
| | | | | | | | | | | Inches | Acre-feet | |
| October | | 753 | | 540 | | 653 | | 0.563 | | 0.65 | 40,130 | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | | | | | | |
| May 26-31 | | 1,720 | | 1,620 | | 1,670 | | 1.44 | | .32 | 19,870 | |
| June | | 1,810 | | 1,610 | | 1,738 | | 1.50 | | 1.67 | 103,400 | |
| July | | 1,600 | | 1,080 | | 1,336 | | 1.15 | | 1.33 | 82,160 | |
| August | | 1,030 | | 692 | | 837 | | .722 | | .83 | 51,480 | |
| September | | 684 | | 533 | | 587 | | .506 | | .56 | 34,940 | |

Yellowstone River at Corwin Springs, Mont.

Location.- Chain gage in NW $\frac{1}{4}$ sec. 30, T. 8 S., R. 8 E., at highway bridge at Corwin Springs, 8 miles north of Gardiner.

Drainage area.- 2,830 square miles.

Records available.- September 1910 to September 1934.

Extremes.- Maximum discharge recorded during year, 8,480 second-feet May 7, 8 (gage height, 5.40 feet); minimum, 805 second-feet many times during January, February, and March.

1910-34: Maximum discharge, 26,500 second-feet June 14, 15, 1918 (gage height, 11.5 feet); minimum, 585 second-feet Feb. 14-18, 1932 (gage height, 0.42 foot).

Remarks.- Records good. No records Oct. 1 to Jan. 13. Natural storage in Yellowstone Lake.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| 1 | | | | | 805 | 805 | 970 | 4,930 | 4,290 | 2,690 | 1,720 | 1,210 |
| 2 | | | | | 805 | 805 | 910 | 4,930 | 3,890 | 2,840 | 1,620 | 1,210 |
| 3 | | | | | 855 | 805 | 910 | 5,590 | 3,510 | 2,690 | 1,620 | 1,120 |
| 4 | | | | | 805 | 805 | 855 | 6,050 | 3,610 | 2,690 | 1,620 | 1,120 |
| 5 | | | | | 805 | 805 | 910 | 6,280 | 3,610 | 2,690 | 1,620 | 1,040 |
| 6 | | | | | 805 | 805 | 910 | 7,950 | 3,700 | 2,550 | 1,620 | 1,040 |
| 7 | | | | | 805 | 805 | 970 | 8,480 | 4,710 | 2,550 | 1,620 | 1,040 |
| 8 | | | | | 805 | 805 | 1,120 | 8,480 | 5,150 | 2,550 | 1,620 | 1,040 |
| 9 | | | | | 805 | 805 | 1,410 | 8,480 | 4,500 | 2,280 | 1,510 | 1,040 |
| 10 | | | | | 805 | 805 | 1,310 | 6,740 | 5,150 | 2,160 | 1,510 | 1,040 |
| 11 | | | | | 805 | 805 | 1,120 | 5,820 | 5,370 | 2,160 | 1,510 | 1,040 |
| 12 | | | | | 805 | 805 | 1,820 | 6,280 | 5,150 | 2,160 | 1,510 | 1,040 |
| 13 | | | | | 805 | 805 | 2,550 | 5,150 | 4,930 | 2,160 | 1,410 | 1,040 |
| 14 | | | | 805 | 805 | 805 | 2,550 | 5,590 | 5,150 | 2,040 | 1,410 | 1,040 |
| 15 | | | | 805 | 805 | 355 | 2,280 | 6,050 | 4,710 | 1,940 | 1,410 | 1,040 |
| 16 | | | | 805 | 805 | 855 | 2,160 | 6,050 | 4,930 | 1,940 | 1,410 | 1,040 |
| 17 | | | | 805 | 805 | 855 | 1,940 | 6,050 | 4,930 | 1,940 | 1,410 | 970 |
| 18 | | | | 805 | 805 | 855 | 2,280 | 6,510 | 4,710 | 1,940 | 1,310 | 970 |
| 19 | | | | 805 | 805 | 855 | 2,550 | 6,050 | 4,710 | 1,820 | 1,310 | 970 |
| 20 | | | | 805 | 805 | 855 | 3,000 | 6,050 | 4,930 | 1,820 | 1,210 | 910 |
| 21 | | | | 805 | 855 | 855 | 3,890 | 5,820 | 4,710 | 1,820 | 1,210 | 910 |
| 22 | | | | 805 | 805 | 855 | 4,290 | 5,590 | 4,290 | 1,820 | 1,210 | 910 |
| 23 | | | | 805 | 805 | 855 | 4,710 | 5,590 | 3,700 | 1,820 | 1,210 | 910 |
| 24 | | | | 805 | 805 | 855 | 4,930 | 5,370 | 3,510 | 1,720 | 1,210 | 910 |
| 25 | | | | 805 | 855 | 855 | 5,150 | 5,370 | 3,510 | 1,820 | 1,210 | 1,040 |
| 26 | | | | 805 | 855 | 855 | 4,290 | 5,370 | 3,510 | 1,820 | 1,210 | 970 |
| 27 | | | | 805 | 855 | 855 | 4,290 | 5,150 | 3,510 | 1,820 | 1,210 | 970 |
| 28 | | | | 805 | 805 | 855 | 4,290 | 5,370 | 3,330 | 1,720 | 1,120 | 970 |
| 29 | | | | 805 | | 910 | 4,710 | 5,150 | 3,000 | 1,720 | 1,210 | 970 |
| 30 | | | | 805 | | 1,040 | 4,930 | 5,150 | 2,840 | 1,720 | 1,210 | 970 |
| 31 | | | | 805 | | 970 | | 4,710 | | 1,720 | 1,210 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off | |
|---------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | Inches | Acres-feet |
| October | | | | | | |
| November | | | | | | |
| December | | | | | | |
| January 14-31 | 805 | 805 | 805 | 0.306 | 0.20 | 28,740 |
| February | 855 | 805 | 814 | .310 | .32 | 46,200 |
| March | 1,040 | 805 | 841 | .321 | .37 | 51,530 |
| April | 5,150 | 855 | 2,600 | .989 | 1.10 | 154,700 |
| May | 8,480 | 4,710 | 6,005 | 2.28 | 2.63 | 369,200 |
| June | 5,370 | 2,840 | 4,245 | 1.61 | 1.80 | 252,600 |
| July | 2,840 | 1,720 | 2,101 | .799 | .92 | 129,200 |
| August | 1,720 | 1,120 | 1,394 | .530 | .61 | 86,690 |
| September | 1,210 | 910 | 1,016 | .366 | .45 | 60,480 |
| The period | | | | | | 1,178,000 |

Yellowstone River at Billings, Mont.

Location.- Water-stage recorder in NE $\frac{1}{4}$ sec. 2, T. 1 S., R. 26 E., at Billings.

Records available.- May 1904 to December 1905, August 1923 to September 1934.

Extremes.- Maximum discharge during year, 15,200 second-feet May 10 (gage height, 5.00 feet); minimum, 1,280 second-feet Aug. 30 (gage height, 0.28 foot).
1904-5, 1923-34: Maximum discharge, 38,300 second-feet June 14, 1933 (gage height, 8.50 feet); minimum, 430 second-feet Dec. 12, 1932 (ice present).

Remarks.- Records good except those for periods Feb. 25 to Mar. 1, July 1-17, Aug. 18-30, which are fair. No records Oct. 1 to Feb. 3. Staff gage used Aug. 19-31, Sept. 13. Numerous diversions above station.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|------|------|------|------|-------|-------|---------|---------|--------|-------------------------|-------|-------|
| 1 | | | | | | 3,280 | 2,760 | 7,400 | 8,880 | 4,940 | 3,060 | 1,530 |
| 2 | | | | | | 4,560 | 2,760 | 7,560 | 8,050 | 4,690 | 2,660 | 1,670 |
| 3 | | | | | | 2,960 | 2,760 | 7,400 | 7,560 | 4,440 | 2,400 | 1,600 |
| 4 | | | | | 2,570 | 2,570 | 2,660 | 7,100 | 7,100 | 4,440 | 2,150 | 1,670 |
| 5 | | | | | 2,480 | 2,400 | 2,570 | 7,100 | 6,530 | 4,820 | 2,080 | 1,670 |
| 6 | | | | | 2,400 | 2,310 | 2,480 | 9,250 | 9,200 | 5,330 | 2,080 | 1,530 |
| 7 | | | | | 2,400 | 2,310 | 2,570 | 13,100 | 13,600 | 4,820 | 1,900 | 1,550 |
| 8 | | | | | 2,400 | 2,310 | 2,570 | 13,600 | 12,900 | 4,440 | 1,730 | 1,590 |
| 9 | | | | | 2,400 | 2,230 | 2,760 | 13,100 | 12,300 | 4,060 | 1,730 | 1,670 |
| 10 | | | | | 2,400 | 2,230 | 3,060 | 14,700 | 11,400 | 3,730 | 1,670 | 1,730 |
| 11 | | | | | 2,400 | 2,230 | 3,390 | 11,800 | 10,700 | 3,280 | 1,730 | 1,610 |
| 12 | | | | | 2,310 | 2,310 | 3,500 | 11,100 | 11,400 | 3,170 | 1,860 | 1,630 |
| 13 | | | | | 2,230 | 2,310 | 4,060 | 11,800 | 11,600 | 3,060 | 1,860 | 1,420 |
| 14 | | | | | 2,230 | 2,310 | 4,690 | 10,000 | 12,100 | 2,760 | 1,730 | 1,610 |
| 15 | | | | | 2,230 | 2,310 | 5,330 | 8,700 | 12,600 | 2,660 | 1,610 | 1,730 |
| 16 | | | | | 2,230 | 2,400 | 3,330 | 8,530 | 13,100 | 2,570 | 1,540 | 1,800 |
| 17 | | | | | 2,230 | 2,480 | 5,070 | 10,000 | 12,900 | 2,310 | 1,610 | 1,730 |
| 18 | | | | | 2,230 | 2,400 | 4,560 | 10,900 | 12,300 | 2,230 | 1,460 | 1,650 |
| 19 | | | | | 2,230 | 2,400 | 4,060 | 11,600 | 11,600 | 2,150 | 1,400 | 1,530 |
| 20 | | | | | 2,230 | 2,310 | 4,060 | 11,800 | 11,100 | 2,060 | 1,380 | 1,730 |
| 21 | | | | | 2,230 | 2,310 | 4,560 | 11,600 | 10,900 | 2,000 | 1,400 | 1,800 |
| 22 | | | | | 2,230 | 2,480 | 5,460 | 10,900 | 10,000 | 2,000 | 1,400 | 1,860 |
| 23 | | | | | 2,310 | 2,570 | 6,570 | 10,200 | 8,880 | 2,230 | 1,400 | 2,000 |
| 24 | | | | | 2,150 | 2,480 | 7,560 | 10,000 | 8,200 | 2,480 | 1,420 | 2,310 |
| 25 | | | | | 2,150 | 2,310 | 8,050 | 10,200 | 7,710 | 3,500 | 1,420 | 2,660 |
| 26 | | | | | 2,230 | 2,230 | 8,880 | 10,200 | 7,400 | 3,960 | 1,450 | 2,660 |
| 27 | | | | | 2,230 | 2,310 | 7,870 | 10,200 | 7,100 | 3,960 | 1,420 | 2,660 |
| 28 | | | | | 3,060 | 2,310 | 6,960 | 10,000 | 6,810 | 3,620 | 1,400 | 2,660 |
| 29 | | | | | | 2,400 | 6,960 | 9,840 | 6,120 | 3,620 | 1,320 | 2,660 |
| 30 | | | | | | 2,480 | 7,250 | 9,840 | 5,460 | 3,390 | 1,260 | 2,570 |
| 31 | | | | | | 2,660 | | 9,840 | | 2,960 | 1,400 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February 4-28 | | | | | | | 3,060 | 2,150 | 2,328 | 115,400 | | |
| March | | | | | | | 4,560 | 2,230 | 2,489 | 153,000 | | |
| April | | | | | | | 8,880 | 2,480 | 4,709 | 280,000 | | |
| May | | | | | | | 14,700 | 7,100 | 10,300 | 633,000 | | |
| June | | | | | | | 13,600 | 5,460 | 9,849 | 586,100 | | |
| July | | | | | | | 5,330 | 2,000 | 3,410 | 209,700 | | |
| August | | | | | | | 3,060 | 1,260 | 1,705 | 104,800 | | |
| September | | | | | | | 2,660 | 1,420 | 1,880 | 111,800 | | |
| The period | | | | | | | | | | 1,925,000 | | |

Yellowstone River at Miles City, Mont.

Location.- Water-stage recorder at highway bridge just below mouth of Tongue River, at Miles City.

Records available.- September 1922 to August 1923, August 1928 to September 1934.

Extremes.- Maximum discharge during year, 20,100 second-feet May 11 (gage height, 5.85 feet); minimum, 1,870 second-feet Sept. 1 (gage height, 0.23 foot).

1922-23, 1928-34: Maximum discharge, 65,200 second-feet June 28, 1932 (gage height, 12.17 feet); minimum, 996 second-feet Dec. 14, 1932 (ice present).

Remarks.- Records good except those for period Dec. 9 to Mar. 10, which are fair. Discharge estimated Dec. 11 to Jan. 4, June 5-9. Staff gage used Feb. 1-3, Aug. 17 to Sept. 12, Sept. 23-30. Numerous diversions from stream and tributaries above gage. Some storage on tributary streams.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|--------|--------|--------|--------|-------|-------|-------|
| 1 | 5,300 | 5,410 | 4,780 | 3,500 | 5,410 | 5,540 | 4,230 | 11,200 | 11,400 | 6,470 | 5,540 | 1,870 |
| 2 | 5,080 | 5,410 | 4,780 | | 6,190 | 7,680 | 4,560 | 11,200 | 11,000 | 5,540 | 4,560 | 2,050 |
| 3 | 5,190 | 5,520 | 4,600 | | 7,370 | 9,000 | 4,800 | 11,000 | 10,100 | 5,040 | 4,340 | 2,360 |
| 4 | 5,300 | 5,630 | 4,600 | | 7,520 | 10,100 | 4,680 | 10,800 | 9,360 | 4,680 | 3,680 | 2,430 |
| 5 | 5,080 | 5,520 | 4,500 | | 8,160 | 8,470 | 4,680 | 10,400 | 9,000 | 4,450 | 3,340 | 2,560 |
| 6 | 4,980 | 5,520 | 4,500 | 4,800 | 8,330 | 5,920 | 4,560 | 9,550 | 8,660 | 4,560 | 3,090 | 2,630 |
| 7 | 4,680 | 5,410 | 4,500 | 5,410 | 7,060 | 4,920 | 4,340 | 9,940 | 11,400 | 4,800 | 2,850 | 2,700 |
| 8 | 4,680 | 5,300 | 4,210 | 5,790 | 6,330 | 4,680 | 4,340 | 13,800 | 19,000 | 5,160 | 2,780 | 2,430 |
| 9 | 4,680 | 5,410 | 4,210 | 5,160 | 6,790 | 10,100 | 4,460 | 17,300 | 18,400 | 4,800 | 2,560 | 2,500 |
| 10 | 4,680 | 5,410 | 4,030 | 5,040 | 6,660 | 11,900 | 5,040 | 19,600 | 17,800 | 4,560 | 2,300 | 2,300 |
| 11 | 4,680 | 5,630 | 3,900 | 4,920 | 5,540 | 10,100 | 4,920 | 20,100 | 15,800 | 4,130 | 2,240 | 2,700 |
| 12 | 4,590 | 5,750 | | 4,450 | 5,410 | 5,040 | 5,160 | 18,400 | 13,800 | 3,770 | 2,170 | 2,700 |
| 13 | 4,680 | 5,750 | | 5,040 | 5,790 | 4,450 | 5,280 | 16,300 | 13,800 | 3,510 | 2,240 | 2,550 |
| 14 | 4,780 | 5,750 | | 5,160 | 5,920 | 4,340 | 5,410 | 16,300 | 14,800 | 3,280 | 3,090 | 2,780 |
| 15 | 4,780 | 5,630 | | 5,410 | 5,920 | 4,340 | 6,060 | 15,800 | 14,800 | 3,090 | 3,420 | 2,700 |
| 16 | 4,680 | 5,520 | 3,400 | 5,280 | 5,660 | 4,230 | 6,760 | 13,800 | 15,200 | 2,930 | 3,010 | 2,700 |
| 17 | 4,680 | 5,520 | | 4,920 | 8,160 | 4,230 | 7,370 | 12,800 | 16,300 | 2,780 | 2,630 | 2,930 |
| 18 | 5,080 | 5,300 | | 5,040 | 8,500 | 4,340 | 7,370 | 12,400 | 16,800 | 2,700 | 2,300 | 2,930 |
| 19 | 5,300 | 5,190 | | 5,540 | 7,370 | 4,340 | 7,220 | 13,300 | 16,800 | 2,500 | 2,240 | 2,850 |
| 20 | 5,870 | 5,190 | | 5,160 | 4,800 | 4,340 | 6,910 | 13,800 | 15,800 | 2,300 | 2,110 | 2,780 |
| 21 | 5,870 | 5,080 | 3,800 | 5,410 | 4,800 | 4,230 | 6,330 | 15,200 | 15,200 | 2,110 | 2,110 | 2,780 |
| 22 | 5,750 | 4,980 | | 5,280 | 5,160 | 4,230 | 6,060 | 15,200 | 15,200 | 2,060 | 1,930 | 2,850 |
| 23 | 5,750 | 4,980 | | 5,410 | 5,160 | 4,230 | 6,330 | 14,300 | 14,300 | 1,990 | 1,990 | 3,010 |
| 24 | 5,750 | 4,880 | | 5,540 | 5,410 | 4,230 | 7,060 | 13,300 | 12,400 | 2,110 | 1,930 | 3,260 |
| 25 | 5,630 | 4,980 | | 5,160 | 5,160 | 4,340 | 8,500 | 12,800 | 11,000 | 2,240 | 1,990 | 3,420 |
| 26 | 5,520 | 4,860 | 3,200 | 5,160 | 4,230 | 4,230 | 9,740 | 12,800 | 10,100 | 2,500 | 2,110 | 3,750 |
| 27 | 5,520 | 4,980 | | 4,920 | 4,030 | 4,130 | 10,600 | 12,800 | 9,000 | 3,340 | 2,110 | 4,540 |
| 28 | 5,520 | 4,980 | | 4,920 | 4,680 | 4,230 | 11,900 | 12,800 | 8,330 | 4,130 | 2,170 | 4,680 |
| 29 | 5,520 | 4,880 | | 4,230 | 4,230 | 4,230 | 11,900 | 12,400 | 8,000 | 6,560 | 2,050 | 4,680 |
| 30 | 5,410 | 4,880 | | 4,230 | 4,230 | 4,230 | 12,400 | 11,900 | 7,370 | 7,370 | 1,930 | 4,680 |
| 31 | 5,410 | | | 5,410 | 4,340 | 4,340 | | 11,900 | | 6,190 | 1,870 | |

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|-----------|---------|---------|--------|----------------------|
| October | 5,870 | 4,590 | 5,175 | 318,200 |
| November | 5,750 | 4,880 | 5,309 | 315,900 |
| December | 4,780 | | 3,845 | 236,400 |
| January | 5,790 | | 4,905 | 301,600 |
| February | 8,500 | 4,030 | 6,054 | 336,200 |
| March | 11,900 | 4,130 | 6,571 | 342,600 |
| April | 12,400 | 4,230 | 6,832 | 394,600 |
| May | 20,100 | 9,550 | 13,650 | 839,200 |
| June | 19,000 | 7,370 | 13,030 | 775,400 |
| July | 8,560 | 1,990 | 3,988 | 245,200 |
| August | 5,540 | 1,870 | 2,667 | 164,000 |
| September | 4,680 | 1,870 | 2,964 | 176,400 |
| The year | 20,100 | 1,870 | 6,141 | 4,446,000 |

Yellowstone River at Glendive, Mont.

Location.- Chain gage on highway bridge at Glendive, Mont.

Drainage area.- 85,900 square miles (revised).

Records available.- July 1897 to December 1910 (only gage heights prior to 1903), October 1931 to September 1934 (discontinued). January 1911 to September 1931 at Lower Yellowstone Dam at Intake, 18 miles downstream.

Extremes.- Maximum discharge during year, 21,200 second-feet May 12 (gage height, 6.46 feet); minimum, 1,510 second-feet Feb. 25-26, ice on control. Maximum gage height, 17.03 feet Mar. 8, 1933, ice jam.
1897-1934: Maximum discharge, 159,000 second-feet June 21, 1921 (gage height, 12.6 feet, at Intake); minimum, 1,060 second-feet Dec. 14, 1932 (ice present).

Remarks.- Records good except those during ice-affected period, Dec. 7 to Mar. 12, which are fair. Numerous diversions above station. Some storage on tributaries.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|-------|-------|-------|-------|--------|---------|---------|--------|----------------------|-------|-------|
| 1 | 5,910 | 5,910 | 5,420 | 1,930 | 5,660 | 1,670 | 5,660 | 11,600 | 11,200 | 7,080 | 6,470 | 1,760 |
| 2 | 5,660 | 5,910 | 5,660 | 2,020 | 5,660 | 3,420 | 5,420 | 11,200 | 11,200 | 6,180 | 5,660 | 1,670 |
| 3 | 5,420 | 5,910 | 4,960 | 2,020 | 6,180 | 4,560 | 5,190 | 10,500 | 10,500 | 5,420 | 4,730 | 1,670 |
| 4 | 5,420 | 6,180 | 4,960 | 4,050 | 5,910 | 7,080 | 5,420 | 11,200 | 9,730 | 5,190 | 4,600 | 2,020 |
| 5 | 5,660 | 5,910 | 5,190 | 4,730 | 5,910 | 7,400 | 5,420 | 11,200 | 9,380 | 4,730 | 3,840 | 2,500 |
| 6 | 5,420 | 5,910 | 5,190 | 4,500 | 6,470 | 8,370 | 5,420 | 10,500 | 9,380 | 4,500 | 3,630 | 2,600 |
| 7 | 5,190 | 5,910 | 4,960 | 5,190 | 5,660 | 6,470 | 5,420 | 10,100 | 9,040 | 4,730 | 3,210 | 2,600 |
| 8 | 4,960 | 5,660 | 4,730 | 4,960 | 5,910 | 6,180 | 5,190 | 10,800 | 11,200 | 4,960 | 5,000 | 2,600 |
| 9 | 4,960 | 5,660 | 4,500 | 5,190 | 6,180 | 6,180 | 4,960 | 16,200 | 18,600 | 5,190 | 2,800 | 2,500 |
| 10 | 4,960 | 5,910 | 4,050 | 5,420 | 6,180 | 4,730 | 4,960 | 18,600 | 18,000 | 4,730 | 2,600 | 2,400 |
| 11 | 4,960 | 6,180 | 3,630 | 4,960 | 6,180 | 6,180 | 5,660 | 19,900 | 16,800 | 4,500 | 2,300 | 2,400 |
| 12 | 4,960 | 6,770 | 3,210 | 4,960 | 6,180 | 10,100 | 5,420 | 20,600 | 14,400 | 4,270 | 2,120 | 2,300 |
| 13 | 4,960 | 6,180 | 3,000 | 4,500 | 6,180 | 12,600 | 6,180 | 18,000 | 13,400 | 3,840 | 2,120 | 2,600 |
| 14 | 4,960 | 6,180 | 2,800 | 4,270 | 6,770 | 8,470 | 6,180 | 15,600 | 13,400 | 3,630 | 2,020 | 2,600 |
| 15 | 5,190 | 6,180 | 2,700 | 4,050 | 7,080 | 5,420 | 6,470 | 16,200 | 14,400 | 3,210 | 2,800 | 2,600 |
| 16 | 5,190 | 6,180 | 2,700 | 4,500 | 6,180 | 1,190 | 7,080 | 15,000 | 14,400 | 3,000 | 3,420 | 2,800 |
| 17 | 4,960 | 5,910 | 2,700 | 4,270 | 5,660 | 4,960 | 7,720 | 13,000 | 15,000 | 2,800 | 3,000 | 2,600 |
| 18 | 5,190 | 5,910 | 2,800 | 4,050 | 4,500 | 4,960 | 8,040 | 12,100 | 16,600 | 2,600 | 1,800 | 3,000 |
| 19 | 5,420 | 5,660 | 2,800 | 4,270 | 4,050 | 4,960 | 8,040 | 12,100 | 17,400 | 2,600 | 2,400 | 3,000 |
| 20 | 5,660 | 5,420 | 3,000 | 4,600 | 3,420 | 4,960 | 8,040 | 13,000 | 17,400 | 2,400 | 2,120 | 3,000 |
| 21 | 6,180 | 5,420 | 2,800 | 5,190 | 2,700 | 4,960 | 7,400 | 13,900 | 16,200 | 2,210 | 2,020 | 2,800 |
| 22 | 6,180 | 5,420 | 2,700 | 4,730 | 2,120 | 4,960 | 6,770 | 14,400 | 16,600 | 2,020 | 1,840 | 2,800 |
| 23 | 6,180 | 5,420 | 2,700 | 4,960 | 1,840 | 4,730 | 6,470 | 14,400 | 15,000 | 1,760 | 1,840 | 3,000 |
| 24 | 6,180 | 5,420 | 2,600 | 4,960 | 1,670 | 4,730 | 6,470 | 13,900 | 13,400 | 1,670 | 1,840 | 3,210 |
| 25 | 5,910 | 5,420 | 2,400 | 4,500 | 1,610 | 4,960 | 7,400 | 13,000 | 11,600 | 2,020 | 1,760 | 3,210 |
| 26 | 6,180 | 5,420 | 2,300 | 4,600 | 1,510 | 4,730 | 8,700 | 12,500 | 10,600 | 2,020 | 1,760 | 3,420 |
| 27 | 5,910 | 5,420 | 2,210 | 4,730 | 1,760 | 4,660 | 10,100 | 12,500 | 10,100 | 2,210 | 1,930 | 3,840 |
| 28 | 5,910 | 5,660 | 2,020 | 5,190 | 1,840 | 4,730 | 10,800 | 12,500 | 9,040 | 3,210 | 1,840 | 4,270 |
| 29 | 5,910 | 5,420 | 1,930 | 4,960 | | 4,730 | 11,600 | 12,100 | 8,370 | 4,960 | 2,020 | 4,960 |
| 30 | 5,910 | 5,420 | 1,930 | 4,960 | | 4,960 | 12,500 | 12,100 | 8,040 | 10,100 | 2,120 | 4,960 |
| 31 | 5,910 | | 1,840 | 5,660 | | 4,960 | | 11,600 | | 8,040 | 1,840 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 6,180 | 4,960 | 5,528 | 339,900 | | |
| November | | | | | | | 6,770 | 5,420 | 5,796 | 344,900 | | |
| December | | | | | | | 5,660 | 1,840 | 3,367 | 207,100 | | |
| January | | | | | | | 5,660 | 1,930 | 4,474 | 275,100 | | |
| February | | | | | | | 7,080 | 1,610 | 4,674 | 259,600 | | |
| March | | | | | | | 12,500 | 1,670 | 5,664 | 346,200 | | |
| April | | | | | | | 12,500 | 4,960 | 7,003 | 416,700 | | |
| May | | | | | | | 20,600 | 10,100 | 13,560 | 836,000 | | |
| June | | | | | | | 18,600 | 8,040 | 12,950 | 770,700 | | |
| July | | | | | | | 10,100 | 1,670 | 4,084 | 249,800 | | |
| August | | | | | | | 6,470 | 1,760 | 2,785 | 171,300 | | |
| September | | | | | | | 4,960 | 1,670 | 2,556 | 170,000 | | |
| The year | | | | | | | 20,600 | 1,510 | 6.061 | 4,388,000 | | |

Yellowstone River near Sidney, Mont.

Location.- Water-stage recorder in SW $\frac{1}{4}$ sec. 9, T. 22 N., R. 59 E., at highway bridge 2 miles south of Sidney.

Drainage area.- 68,200 square miles.

Records available.- April to September 1934.

Discharge.- Maximum discharge during period, 17,600 second-feet May 12 (gage height, 5.16 feet); minimum, 1,360 second-feet Sept. 4 (gage height, 0.77 foot).

Remarks.- Records good. Numerous diversions above station.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|------------|------|------|------|------|------|------|---------|---------|--------|-------------------------|-------|-------|
| 1 | | | | | | | | 12,400 | 10,700 | 7,900 | 7,340 | 1,520 |
| 2 | | | | | | | | 11,600 | 10,500 | 6,980 | 6,610 | 1,460 |
| 3 | | | | | | | | 11,600 | 10,700 | 6,260 | 5,370 | 1,420 |
| 4 | | | | | | | | 11,600 | 10,100 | 5,370 | 4,380 | 1,390 |
| 5 | | | | | | | | 11,600 | 9,270 | 5,020 | 3,990 | 1,550 |
| 6 | | | | | | | | 11,100 | 9,070 | 4,670 | 3,370 | 1,910 |
| 7 | | | | | | | | 10,500 | 10,100 | 4,330 | 3,040 | 2,050 |
| 8 | | | | | | | | 10,100 | 9,070 | 4,500 | 2,670 | 2,140 |
| 9 | | | | | | | 5,370 | 12,000 | 11,600 | 4,670 | 2,360 | 2,020 |
| 10 | | | | | | | 5,200 | 14,700 | 15,200 | 4,840 | 2,250 | 1,970 |
| 11 | | | | | | | 5,370 | 15,700 | 15,200 | 4,500 | 2,080 | 1,830 |
| 12 | | | | | | | 5,900 | 17,100 | 14,700 | 4,230 | 1,850 | 1,850 |
| 13 | | | | | | | 5,900 | 16,600 | 13,300 | 3,800 | 1,720 | 1,650 |
| 14 | | | | | | | 6,610 | 14,700 | 12,900 | 3,260 | 1,570 | 2,060 |
| 15 | | | | | | | 6,980 | 14,200 | 13,300 | 2,980 | 1,520 | 2,100 |
| 16 | | | | | | | 7,340 | 14,200 | 13,800 | 2,700 | 2,250 | 2,230 |
| 17 | | | | | | | 8,090 | 12,900 | 13,300 | 2,480 | 2,700 | 2,340 |
| 18 | | | | | | | 8,480 | 12,000 | 13,800 | 2,300 | 2,390 | 2,190 |
| 19 | | | | | | | 8,670 | 12,000 | 14,200 | 2,120 | 2,140 | 2,410 |
| 20 | | | | | | | 8,670 | 12,400 | 15,200 | 1,950 | 1,830 | 2,520 |
| 21 | | | | | | | 8,480 | 12,900 | 15,200 | 1,870 | 1,670 | 2,650 |
| 22 | | | | | | | 7,900 | 13,300 | 14,700 | 1,760 | 1,640 | 2,620 |
| 23 | | | | | | | 7,340 | 13,300 | 14,200 | 1,600 | 1,490 | 2,500 |
| 24 | | | | | | | 7,160 | 12,900 | 13,800 | 1,500 | 1,460 | 2,740 |
| 25 | | | | | | | 7,340 | 12,400 | 12,900 | 1,440 | 1,440 | 2,980 |
| 26 | | | | | | | 8,280 | 12,000 | 11,600 | 1,520 | 1,460 | 3,060 |
| 27 | | | | | | | 9,470 | 11,600 | 10,900 | 1,650 | 1,400 | 3,460 |
| 28 | | | | | | | 9,380 | 11,600 | 10,100 | 1,720 | 1,430 | 3,700 |
| 29 | | | | | | | 11,100 | 11,600 | 9,270 | 2,390 | 1,430 | 4,500 |
| 30 | | | | | | | 11,600 | 11,600 | 8,280 | 5,020 | 1,500 | 4,840 |
| 31 | | | | | | | | 11,100 | | 8,670 | 1,600 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April 9-30 | | | | | | | 11,600 | 5,200 | 7,779 | 339,400 | | |
| May | | | | | | | 17,100 | 10,100 | 12,690 | 780,100 | | |
| June | | | | | | | 16,200 | 8,280 | 12,230 | 727,900 | | |
| July | | | | | | | 8,670 | 1,440 | 3,663 | 228,500 | | |
| August | | | | | | | 7,340 | 1,400 | 2,510 | 154,900 | | |
| September | | | | | | | 4,840 | 1,390 | 2,589 | 142,500 | | |
| The period | | | | | | | | | | 2,370,000 | | |

Tower Creek at Tower Falls, Yellowstone National Park

Location.- Staff gage a short distance above Tower Falls, a quarter of a mile above mouth, and 2 miles southeast of Camp Roosevelt.

Drainage area.- 51 square miles.

Records available.- September 1922 to September 1934.

Extremes.- Maximum discharge (estimated), 100 second-feet May 7, 8; minimum, 5.6 second-feet, result of discharge measurement, Mar. 17.
1922-34: Maximum discharge, 642 second-feet May 30, 1925 (gage height, 6.16 feet); maximum gage height, 6.27 feet May 28, 1928; minimum discharge, that of Mar. 17, 1934.

Remarks.- Records fair except those for March, which are poor. No record during winter. No diversions or regulation. Gage observations furnished by officials of Yellowstone National Park.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|------|------|------|---------|---------|------|-----------------|------|---------|-----------|------|-------|
| 1 | | | | | | | | *60 | *50 | *32 | *21 | |
| 2 | | *21 | | | | | | | | 31 | 21 | |
| 3 | | | | | | | *15 | 61 | | *31 | *21 | |
| 4 | *22 | 20 | | | | | | *75 | *40 | 31 | 21 | |
| 5 | | | | | | | | | | 31 | *23 | |
| 6 | | | | | | | | 93 | *50 | *30 | 25 | *20 |
| 7 | 22 | | | | | | *20 | *100 | 60 | 29 | 23 | |
| 8 | *22 | | | | | | 25 | | *60 | *29 | 21 | |
| 9 | *21 | | | | | | | 93 | 53 | 29 | 21 | |
| 10 | 21 | | | | | | *25 | *90 | | 27 | *20 | |
| 11 | | *20 | | | | | | | | 25 | 20 | |
| 12 | *20 | | | | | | 30 | 87 | *45 | 24 | 20 | 19 |
| 13 | | | | | | | *30 | | | *24 | 20 | |
| 14 | 20 | | | | | | | | | *24 | 20 | |
| 15 | | | | | | | 30 | | 47 | *23 | 20 | |
| 16 | | | | | | | | *80 | | | | |
| 17 | *20 | | | | †5.6 | | *30 | | *60 | *23 | *20 | |
| 18 | | 20 | | | | | | | 53 | 23 | 20 | |
| 19 | | | | | | | | 79 | *50 | *23 | 20 | |
| 20 | | *20 | | | | | | | *55 | 23 | 20 | *18 |
| 21 | 20 | | | | | | *40 | *75 | | 23 | | |
| 22 | | | | | | *10 | 43 | | 46 | *23 | | |
| 23 | | *19 | | | | | *50 | *70 | *40 | 23 | | |
| 24 | | | | | | | | | | 23 | | |
| 25 | *20 | 19 | | | | | | | | 25 | | |
| 26 | | | | | | | | 65 | 38 | 24 | *20 | |
| 27 | | | | | | | *60 | 66 | 37 | 22 | | 18 |
| 28 | *22 | | | | | | | | 37 | *22 | | |
| 29 | | | | | | *15 | | *60 | 33 | *22 | | *18 |
| 30 | 22 | | | | | | | | 33 | 22 | | |
| 31 | *22 | | | | | | | *50 | | *22 | | |
| Month | | | | Maximum | Minimum | Mean | Per square mile | | Run-off | | | |
| | | | | | | | | | Inches | Acre-feet | | |
| October | | | | | | 20.6 | 0.408 | | 0.47 | 1,280 | | |
| November 1-25 | | | | | | 20.0 | .392 | | .36 | 990 | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 17-31 | | | | | | 11.4 | .224 | | .12 | 338 | | |
| April | | | | | | 34.6 | .678 | | .76 | 2,060 | | |
| May | | | | | 50 | 75.5 | 1.48 | | 1.71 | 4,640 | | |
| June | | | | 60 | 33 | 46.7 | .896 | | 1.00 | 2,720 | | |
| July | | | | 22 | 22 | 25.4 | .498 | | .57 | 1,560 | | |
| August | | | | 25 | | 20.5 | .402 | | .46 | 1,260 | | |
| September | | | | | | 18.8 | .369 | | .41 | 1,120 | | |

*Estimated.

†Discharge measurement.

Lamar River near Tower Falls ranger station, Yellowstone National Park

Location.- Water-stage recorder half a mile north of Cooke City road, three-quarters of a mile above mouth, and 2 miles northeast of Tower Falls ranger station.

Drainage area.- 640 square miles.

Records available.- September 1922 to September 1934.

Extremes.- Maximum discharge during year, 4,740 second-feet May 9 (gage height, 5.86 feet); minimum recorded, 101 second-feet Nov. 26 (gage height, 0.93 foot).
1922-34: Maximum discharge, 13,600 second-feet May 25, 1925 (gage height, 9.75 feet); minimum recorded, that of Nov. 26, 1933.

Remarks.- Records good except those estimated, Nov. 4-9, 14-24, 29, 30, Mar. 1-15, 17-30, Apr. 1-6, which are fair, and those for Dec. 1 to Feb. 28, which are poor. No regulation or diversions. Gage observations furnished by officials of Yellowstone National Park.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|------|---------|------|-------|------|-----------------|-------|---------|-----------|------|-------|
| 1 | 157 | 164 | | | | | | 2,000 | 1,400 | 701 | 242 | 183 |
| 2 | 144 | 157 | | | | | | 1,940 | 1,220 | 657 | 218 | 160 |
| 3 | 142 | 157 | | | | | | 1,840 | 1,100 | 632 | 210 | 153 |
| 4 | 142 | 150 | | | | | 185 | 2,160 | 1,180 | 682 | 204 | 149 |
| 5 | 142 | | | | | | | 2,770 | 1,040 | 675 | 207 | 146 |
| 6 | 140 | | | | | 150 | | 3,630 | 1,140 | 626 | 224 | 144 |
| 7 | 140 | 140 | | | | | 250 | 3,950 | 1,640 | 539 | 202 | 140 |
| 8 | 138 | | 130 | | | | 292 | 3,950 | 1,640 | 496 | 191 | 155 |
| 9 | 138 | | | | | | 350 | 3,870 | 1,450 | 465 | 183 | 162 |
| 10 | 136 | 138 | | | | | 407 | 2,840 | 1,840 | 436 | 193 | 153 |
| 11 | 136 | 132 | | | | | 496 | 2,700 | 2,050 | 412 | 233 | 144 |
| 12 | 134 | 130 | | | | | 746 | 2,840 | 1,840 | 394 | 202 | 138 |
| 13 | 132 | 126 | | | | 160 | 948 | 2,160 | 1,890 | 367 | 183 | 132 |
| 14 | 130 | | | | | | 891 | 2,000 | 2,000 | 338 | 174 | 130 |
| 15 | 134 | | | | | | 849 | 2,220 | 1,740 | 326 | 171 | 126 |
| 16 | 132 | | | | | *168 | 733 | 2,580 | 2,000 | 314 | 176 | 126 |
| 17 | 132 | | | | | | 614 | 2,640 | 1,740 | 296 | 174 | 124 |
| 18 | 136 | | | | | | 626 | 2,770 | 1,540 | 285 | 164 | 122 |
| 19 | 146 | 130 | | | | | 870 | 2,640 | 1,640 | 278 | 160 | 118 |
| 20 | 153 | | | | | | 1,140 | 2,580 | 1,640 | 275 | 157 | 120 |
| 21 | 136 | | | | | 170 | 1,450 | 2,450 | 1,360 | 265 | 153 | 118 |
| 22 | 132 | | | | | | 1,740 | 2,220 | 1,270 | 358 | 151 | 130 |
| 23 | 136 | | | | | | 1,840 | 2,270 | 1,180 | 289 | 146 | 160 |
| 24 | 140 | | 140 | | | | 1,940 | 2,220 | 1,100 | 278 | 149 | 164 |
| 25 | 162 | 128 | | | | | 2,050 | 2,100 | 1,140 | 322 | 144 | 160 |
| 26 | 164 | 118 | | | | | 1,540 | 2,050 | 1,090 | 358 | 140 | 149 |
| 27 | 157 | 128 | | | | | 1,590 | 2,000 | 972 | 292 | 138 | 146 |
| 28 | 157 | 126 | | | | | 1,740 | 1,940 | 856 | 262 | 138 | 153 |
| 29 | 160 | | | | | 190 | 1,940 | 1,890 | 793 | 255 | 142 | 162 |
| 30 | 169 | 125 | | | | | 1,940 | 1,840 | 746 | 245 | 176 | 176 |
| 31 | 169 | | | | | 188 | | 1,590 | | 271 | 215 | |
| Month | Maximum | | Minimum | | Mean | | Per square mile | | Run-off | | | |
| | | | | | | | | | Inches | Acre-feet | | |
| October | 169 | | 130 | | 144 | | 0.225 | | 0.26 | 8,860 | | |
| November | 164 | | | | 134 | | .209 | | .23 | 8,000 | | |
| December | | | | | 135 | | .211 | | .24 | 8,310 | | |
| January | | | | | 140 | | .219 | | .25 | 8,610 | | |
| February | | | | | 140 | | .219 | | .23 | 7,780 | | |
| March | | | | | 164 | | .256 | | .30 | 10,110 | | |
| April | 2,050 | | | | 936 | | 1.46 | | 1.63 | 55,720 | | |
| May | 3,950 | | 1,590 | | 2,473 | | 3.86 | | 4.45 | 152,000 | | |
| June | 2,050 | | 746 | | 1,408 | | 2.20 | | 2.46 | 83,780 | | |
| July | 701 | | 245 | | 400 | | .625 | | .72 | 24,570 | | |
| August | 242 | | 138 | | 179 | | .280 | | .32 | 11,030 | | |
| September | 183 | | 118 | | 145 | | .227 | | .25 | 8,610 | | |
| The year | 3,950 | | | | 535 | | .836 | | 11.34 | 387,400 | | |

*Discharge measurement.

Gardiner River at Mammoth Hotel, Yellowstone National Park

Location.- Water-stage recorder a quarter of a mile below foot bridge on Mount Everts trail, three-eighths of a mile below Mammoth Hot Springs, and 0.9 mile east of Mammoth Hotel.

Drainage area.- 201 square miles.

Records available.- September 1922 to September 1934.

Extremes.- Maximum discharge during year, 547 second-feet May 9 (gage height, 2.13 feet); minimum recorded, 41 second-feet Nov. 5 (gage height, 0.58 foot). 1922-34: Maximum discharge, 1,790 second-feet May 28, 1928 (gage height, 3.59 feet); minimum, 31 second-feet Apr. 7, 1928; minimum gage height, 0.51 foot Apr. 3, 1931.

Remarks.- Records good except those estimated Dec. 16 to Jan. 29, which are fair; discharge also estimated Feb. 24-27, June 24, 25, and Aug. 29 to Sept. 7. No regulation or diversions. Gage observations furnished by officials of Yellowstone National Park.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|------|---------|------|------|------|-----------------|-----|---------|------------|------|-------|
| 1 | 85 | 86 | 57 | | 65 | 51 | 81 | 282 | 193 | 106 | 80 | |
| 2 | 85 | 83 | 60 | | 67 | 60 | 76 | 267 | 177 | 104 | 76 | |
| 3 | 83 | 88 | 63 | | 67 | 58 | 71 | 269 | 164 | 104 | 74 | |
| 4 | 83 | 79 | 70 | | 65 | 58 | 70 | 266 | 158 | 108 | 73 | |
| 5 | 83 | 65 | 83 | | 65 | 60 | 73 | 352 | 147 | 106 | 74 | 70 |
| 6 | 83 | 81 | 73 | | 65 | 60 | 78 | 445 | 170 | 104 | 81 | |
| 7 | 81 | 81 | 71 | | 63 | 57 | 90 | 498 | 220 | 98 | 76 | |
| 8 | 81 | 81 | 70 | | 64 | 56 | 104 | 475 | 220 | 96 | 73 | 78 |
| 9 | 91 | 81 | 74 | | 55 | 58 | 126 | 470 | 180 | 94 | 71 | 74 |
| 10 | 81 | 81 | 73 | | 63 | 57 | 147 | 379 | 164 | 89 | 78 | 70 |
| 11 | 80 | 81 | 71 | | 68 | 60 | 177 | 357 | 155 | 83 | 65 | 67 |
| 12 | 80 | 81 | 70 | | 63 | 58 | 183 | 351 | 180 | 88 | 76 | 67 |
| 13 | 80 | 80 | 71 | | 63 | 60 | 183 | 314 | 180 | 95 | 73 | 64 |
| 14 | 78 | 78 | 71 | | 63 | 60 | 177 | 286 | 155 | 85 | 71 | 65 |
| 15 | 80 | 76 | 65 | 65 | 63 | 61 | 158 | 275 | 153 | 85 | 70 | 65 |
| 16 | 78 | 76 | | | 65 | 61 | 142 | 294 | 183 | 91 | 73 | 64 |
| 17 | 80 | 76 | | | 64 | 64 | 129 | 302 | 161 | 81 | 73 | 64 |
| 18 | 80 | 74 | | | 60 | 58 | 131 | 310 | 144 | 80 | 67 | 65 |
| 19 | 85 | 70 | | | 61 | 60 | 144 | 298 | 199 | 78 | 64 | 64 |
| 20 | 85 | 73 | | | 63 | 61 | 168 | 286 | 206 | 83 | 65 | 65 |
| 21 | 76 | 70 | | | 67 | 64 | 186 | 271 | 170 | 90 | 64 | 65 |
| 22 | 78 | 73 | | | 67 | 64 | 203 | 248 | 155 | 81 | 64 | 73 |
| 23 | 83 | 73 | 65 | | 61 | 61 | 216 | 245 | 142 | 80 | 64 | 76 |
| 24 | 83 | 73 | | | 63 | 63 | 263 | 241 | 140 | 80 | 65 | 76 |
| 25 | 83 | 71 | | | 61 | 61 | 298 | 245 | | 86 | 65 | 76 |
| 26 | 81 | 68 | | | 50 | 60 | 259 | 237 | 155 | 83 | 64 | 71 |
| 27 | 81 | 70 | | | | 63 | 245 | 227 | 142 | 33 | 61 | 74 |
| 28 | 81 | 71 | | | 61 | 76 | 255 | 220 | 124 | 80 | 63 | 78 |
| 29 | 90 | 64 | | | | 96 | 275 | 213 | 117 | 80 | | 74 |
| 30 | 98 | 63 | | 67 | | 90 | 290 | 206 | 113 | 83 | 70 | 74 |
| 31 | 92 | | | 67 | | 86 | | 192 | | 86 | | |
| Month | Maximum | | Minimum | | Mean | | Per square mile | | Run-off | | | |
| | | | | | | | | | Inches | Ac-re-feet | | |
| October | 98 | | 76 | | 82.5 | | 3.410 | | 0.47 | 5,374 | | |
| November | 88 | | 53 | | 75.5 | | 3.375 | | .42 | 4,495 | | |
| December | 83 | | 57 | | 67.2 | | 3.354 | | .39 | 4,150 | | |
| January | | | | | 65.1 | | 3.324 | | .37 | 4,005 | | |
| February | 68 | | | | 63.5 | | 3.316 | | .33 | 3,527 | | |
| March | 96 | | 56 | | 63.6 | | 3.316 | | .36 | 3,911 | | |
| April | 298 | | 70 | | 166 | | 1.50 | | .92 | 9,894 | | |
| May | 486 | | 192 | | 301 | | 1.801 | | 1.73 | 18,500 | | |
| June | 220 | | 113 | | 113 | | .88.6 | | .441 | 9,600 | | |
| July | 108 | | 78 | | 61 | | .70.7 | | .352 | 4,350 | | |
| August | 85 | | 64 | | 70.0 | | .348 | | .39 | 4,153 | | |
| September | 78 | | | | | | | | | | | |
| The year | 486 | | 56 | | 106 | | .827 | | 7.19 | 77,100 | | |

Shields River at Clyde Park, Mont.

Location.- Wire gage in NW $\frac{1}{4}$ sec. 33, T. 2 N., R. 9 E., at highway bridge a quarter of a mile northwest of Clyde Park and 2 miles above mouth of Brackett Creek.

Drainage area.- 544 square miles.

Records available.- March 1921 to September 1923, April 1929 to December 1932, February to September 1934.

Extremes.- Maximum discharge recorded during period, 182 second-feet Apr. 14 (gage height, 2.08 feet); minimum, 2.6 second-feet Sept. 13 (gage height, 0.78 foot).
1921-23, 1929-32, 1934: Maximum discharge, 1,880 second-feet May 26, 1923; minimum, that of Sept. 13, 1934.

Remarks.- Records good. Numerous diversions above and below station.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|------|------|------|------|------|------|---------|---------|------|------|----------------------|-------|
| 1 | | | | | | 65 | 86 | 72 | 20 | 25 | 5.6 | 4.0 |
| 2 | | | | | | 61 | 86 | 55 | 22 | 16 | 4.9 | 4.0 |
| 3 | | | | | | 57 | 82 | 55 | 20 | 17 | 4.3 | 3.8 |
| 4 | | | | | 55 | 55 | 78 | 49 | 25 | 15 | 4.2 | 3.3 |
| 5 | | | | | 55 | 55 | 74 | 46 | 25 | 15 | 4.2 | 3.1 |
| 6 | | | | | 57 | 60 | 78 | 109 | 31 | 17 | 4.2 | 2.9 |
| 7 | | | | | 52 | 60 | 95 | 86 | 65 | 14 | 4.0 | 3.3 |
| 8 | | | | | 58 | 50 | 104 | 72 | 112 | 13 | 3.4 | 3.6 |
| 9 | | | | | 55 | 63 | 124 | 69 | 135 | 12 | 3.3 | 3.6 |
| 10 | | | | | 57 | 63 | 169 | 69 | 115 | 12 | 3.3 | 3.6 |
| 11 | | | | | 61 | 58 | 151 | 69 | 112 | 14 | 3.3 | 3.4 |
| 12 | | | | | 69 | 58 | 163 | 71 | 109 | 13 | 4.0 | 2.9 |
| 13 | | | | | 71 | 60 | 169 | 31 | 109 | 11 | 3.6 | 2.6 |
| 14 | | | | | 71 | 57 | 182 | 50 | 102 | 9.4 | 3.3 | 2.9 |
| 15 | | | | | 74 | 60 | 169 | 49 | 95 | 8.5 | 3.6 | 3.1 |
| 16 | | | | | 74 | 57 | 163 | 44 | 84 | 7.0 | 3.4 | 3.1 |
| 17 | | | | | 74 | 57 | 151 | 42 | 74 | 6.3 | 3.4 | 3.1 |
| 18 | | | | | 49 | 57 | 135 | 40 | 67 | 5.8 | 3.3 | 3.3 |
| 19 | | | | | 50 | 59 | 124 | 38 | 80 | 6.1 | 2.9 | 3.3 |
| 20 | | | | | 49 | 65 | 129 | 35 | 72 | 6.3 | 3.1 | 4.5 |
| 21 | | | | | 49 | 76 | 135 | 37 | 53 | 5.8 | 3.3 | 5.2 |
| 22 | | | | | 47 | 71 | 157 | 37 | 52 | 5.6 | 3.3 | 6.8 |
| 23 | | | | | 47 | 31 | 169 | 33 | 42 | 5.2 | 3.3 | 8.2 |
| 24 | | | | | 47 | 72 | 169 | 25 | 40 | 7.9 | 2.9 | 8.8 |
| 25 | | | | | 47 | 71 | 163 | 22 | 42 | 9.4 | 2.9 | 9.1 |
| 26 | | | | | 52 | 71 | 151 | 22 | 42 | 8.2 | 3.3 | 11 |
| 27 | | | | | 51 | 69 | 116 | 23 | 39 | 7.9 | 3.4 | 11 |
| 28 | | | | | 61 | 71 | 104 | 22 | 33 | 7.3 | 3.3 | 11 |
| 29 | | | | | | 71 | 95 | 21 | 32 | 7.9 | 3.4 | 11 |
| 30 | | | | | | 84 | 82 | 20 | 30 | 7.9 | 4.0 | 11 |
| 31 | | | | | | 86 | | 18 | | 7.0 | 3.8 | |
| Month | | | | | | | Maximum | Minimum | Mean | | Run-off in acre-feet | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | 74 | 47 | 57.7 | | 2,860 | |
| February 4-28 | | | | | | | 86 | 55 | 64.8 | | 3,990 | |
| March | | | | | | | 182 | 74 | 129 | | 7,650 | |
| April | | | | | | | 109 | 18 | 47.5 | | 2,920 | |
| May | | | | | | | 135 | 20 | 62.7 | | 3,730 | |
| June | | | | | | | 25 | 5.2 | 10.5 | | 646 | |
| July | | | | | | | 5.6 | 2.9 | 3.62 | | 223 | |
| August | | | | | | | 11 | 2.6 | 5.35 | | 316 | |
| September | | | | | | | | | | | | |
| The period | | | | | | | | | | | 22,340 | |

Brackett Creek near Clyde Park, Mont.

Location.- Staff gage near center of NE $\frac{1}{4}$ sec. 1, T. 1 N., R. 8 E., 4 miles southwest of Clyde Park.

Records available.- April to September 1934. March 1921 to September 1923 at station three-quarters of a mile upstream.

Extremes.- Maximum discharge recorded during period, 51 second-feet Apr. 11 (gage height, 2.60 feet); minimum, 1.0 second-foot Aug. 21, 22 (gage height, 1.52 feet). 1921-23, 1934: Maximum discharge, 370 second-feet June 22, 1923; minimum, that of Aug. 21, 22, 1934.

Remarks.- Records good. Numerous small diversions above and below gage.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|------------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | | | | | | | 29 | 10 | 8.4 | 2.8 | 1.6 | |
| 2 | | | | | | | 26 | 10 | 8.1 | 2.6 | 1.6 | |
| 3 | | | | | | | 22 | 9.3 | 7.3 | 2.2 | 1.5 | |
| 4 | | | | | | | 20 | 8.7 | 8.1 | 2.4 | 1.3 | |
| 5 | | | | | | | 24 | 20 | 8.1 | 2.6 | 1.3 | |
| 6 | | | | | | | 26 | 23 | 10 | 2.4 | 1.3 | |
| 7 | | | | | | | 30 | 21 | 15 | 2.2 | 1.2 | |
| 8 | | | | | | | 36 | 20 | 16 | 2.4 | 1.4 | |
| 9 | | | | | | | 41 | 21 | 15 | 2.2 | 1.7 | |
| 10 | | | | | | | 42 | 19 | 15 | 1.8 | 1.6 | |
| 11 | | | | | | | 49 | 16 | 14 | 2.2 | 1.4 | |
| 12 | | | | | | | 45 | 18 | 13 | 1.7 | 1.3 | |
| 13 | | | | | | | 45 | 18 | 12 | 6.7 | 1.7 | 1.3 |
| 14 | | | | | | | 47 | 16 | 11 | 6.7 | 1.6 | 1.6 |
| 15 | | | | | | | 42 | 14 | 11 | 6.1 | 1.6 | 1.8 |
| 16 | | | | | | | 40 | 12 | 11 | 5.4 | 1.4 | 1.6 |
| 17 | | | | | | | 37 | 11 | 12 | 4.3 | 1.2 | 1.4 |
| 18 | | | | | | | 36 | 10 | 13 | 3.6 | 1.4 | 1.6 |
| 19 | | | | | | | 36 | 11 | 15 | 3.6 | 1.4 | 1.6 |
| 20 | | | | | | | 38 | 10 | 15 | 3.8 | 1.2 | 2.4 |
| 21 | | | | | | | 41 | 14 | 13 | 3.2 | 1.0 | 2.4 |
| 22 | | | | | | | 43 | 11 | 12 | 3.4 | 1.0 | 3.0 |
| 23 | | | | | | | 43 | 11 | 12 | 3.2 | 1.3 | 3.8 |
| 24 | | | | | | | 43 | 11 | 11 | 3.4 | 1.4 | 4.6 |
| 25 | | | | | | | 40 | 12 | 11 | 4.1 | 1.1 | 4.8 |
| 26 | | | | | | | 35 | 9.6 | 11 | 5.6 | 1.1 | 5.9 |
| 27 | | | | | | | 32 | 9.3 | 10 | 4.3 | 1.1 | 5.9 |
| 28 | | | | | | | 33 | 9.3 | 9.6 | 3.6 | 1.2 | 6.7 |
| 29 | | | | | | | 31 | 9.6 | 8.7 | 3.6 | 1.5 | 8.7 |
| 30 | | | | | | | 30 | 9.3 | 9.0 | 3.4 | 1.8 | 7.3 |
| 31 | | | | | | | | 10 | | 3.0 | 1.6 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April 5-30 | | | | | | | 49 | 24 | 37.9 | 1,950 | | |
| May | | | | | | | 29 | 9.3 | 15.3 | 933 | | |
| June | | | | | | | 16 | 8.1 | 11.7 | 697 | | |
| July | | | | | | | 10 | 3.0 | 5.64 | 347 | | |
| August | | | | | | | 2.8 | 1.0 | 1.70 | 105 | | |
| September | | | | | | | 8.7 | 1.2 | 2.78 | 166 | | |
| The period | | | | | | | | | | 4,200 | | |

Clarks Fork at Chance, Mont.

Location.- Staff gage in NW $\frac{1}{4}$ sec. 32, T. 9 S., R. 22 E., on highway bridge at Chance, just above mouth of Sand Coulee and half a mile north of the Wyoming-Montana State line.

Records available.- July 1921 to September 1934.

Extremes.- Maximum discharge recorded during year, 4,600 second-feet May 8 and 9 (gage height, 4.20 feet); minimum, 140 second-feet Mar. 8, 10, 11, Sept. 22 (gage height, 0.60 foot).

1921-34: Maximum discharge, 10,900 second-feet May 28, 1928 (gage height, 6.5 feet); minimum, 72 second-feet Mar. 19, 1927 (gage height, 0.5 foot).

Remarks.- Records good. No records Oct. 1 to Feb. 10. Numerous diversions.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|----------------|------|------|------|------|------|------|---------|---------|-------|----------------------|------|-------|
| 1 | | | | | | 234 | 234 | 2,010 | 2,660 | 1,390 | 590 | 250 |
| 2 | | | | | | 218 | 218 | 1,930 | 2,260 | 1,340 | 624 | 218 |
| 3 | | | | | | 189 | 234 | 1,930 | 2,010 | 1,340 | 527 | 218 |
| 4 | | | | | | 189 | 204 | 2,010 | 1,860 | 1,390 | 470 | 189 |
| 5 | | | | | | 163 | 204 | 2,450 | 1,780 | 1,450 | 418 | 189 |
| 6 | | | | | | 158 | 218 | 3,360 | 1,640 | 1,280 | 418 | 189 |
| 7 | | | | | | 145 | 234 | 4,100 | 3,120 | 1,180 | 370 | 189 |
| 8 | | | | | | 140 | 306 | 4,600 | 3,120 | 1,060 | 326 | 189 |
| 9 | | | | | | 145 | 444 | 4,350 | 2,450 | 940 | 326 | 189 |
| 10 | | | | | | 140 | 470 | 3,360 | 2,450 | 895 | 370 | 176 |
| 11 | | | | | 161 | 140 | 444 | 2,890 | 3,120 | 852 | 370 | 163 |
| 12 | | | | | 163 | 145 | 890 | 3,120 | 2,890 | 810 | 348 | 176 |
| 13 | | | | | 158 | 161 | 770 | 2,660 | 3,120 | 731 | 326 | 163 |
| 14 | | | | | 145 | 163 | 852 | 2,260 | 3,600 | 694 | 348 | 163 |
| 15 | | | | | 163 | 189 | 770 | 2,180 | 3,360 | 810 | 326 | 163 |
| 16 | | | | | 163 | 204 | 731 | 2,660 | 3,360 | 694 | 326 | 163 |
| 17 | | | | | 165 | 234 | 858 | 3,120 | 3,360 | 624 | 306 | 183 |
| 18 | | | | | 158 | 189 | 624 | 3,600 | 3,120 | 590 | 286 | 163 |
| 19 | | | | | 163 | 189 | 694 | 3,600 | 2,890 | 590 | 250 | 163 |
| 20 | | | | | 163 | 163 | 810 | 3,360 | 2,890 | 527 | 218 | 152 |
| 21 | | | | | 176 | 189 | 1,080 | 3,360 | 2,260 | 558 | 250 | 145 |
| 22 | | | | | 189 | 189 | 1,610 | 3,120 | 2,010 | 940 | 218 | 140 |
| 23 | | | | | 189 | 189 | 1,640 | 3,120 | 1,930 | 694 | 250 | 152 |
| 24 | | | | | 189 | 156 | 1,760 | 3,120 | 1,860 | 810 | 250 | 163 |
| 25 | | | | | 218 | 163 | 2,090 | 3,120 | 1,930 | 940 | 218 | 189 |
| 26 | | | | | 234 | 189 | 1,780 | 3,360 | 1,930 | 1,060 | 189 | 189 |
| 27 | | | | | 250 | 176 | 1,450 | 3,360 | 1,860 | 852 | 189 | 204 |
| 28 | | | | | 250 | 189 | 1,640 | 3,120 | 1,860 | 731 | 189 | 204 |
| 29 | | | | | | 234 | 1,760 | 3,120 | 1,580 | 694 | 189 | 218 |
| 30 | | | | | | 268 | 1,280 | 3,360 | 1,450 | 770 | 204 | 189 |
| 31 | | | | | | 268 | | 3,120 | | 731 | 234 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February 11-28 | | | | | | | 250 | 145 | 183 | 6,540 | | |
| March | | | | | | | 268 | 140 | 184 | 11,320 | | |
| April | | | | | | | 2,090 | 204 | 858 | 51,050 | | |
| May | | | | | | | 4,600 | 1,930 | 3,059 | 188,100 | | |
| June | | | | | | | 3,600 | 1,450 | 2,458 | 146,200 | | |
| July | | | | | | | 1,450 | 527 | 903 | 55,550 | | |
| August | | | | | | | 624 | 189 | 320 | 19,680 | | |
| September | | | | | | | 250 | 140 | 181 | 10,750 | | |
| The period | | | | | | | | | | 489,200 | | |

Clarks Fork at Edgar, Mont.

Location.— Wire gage in SW $\frac{1}{4}$ sec. 24, T. 4 S., R. 23 E., at highway bridge half a mile east of Edgar.

Records available.— July 1921 to September 1934.

Extremes.— Maximum discharge during period, 4,550 second-feet May 9 (gage height, 5.75 feet); minimum, 196 second-feet Feb. 25 (gage height, 1.68 feet).
1921-34: Maximum discharge, 10,600 second-feet May 26, 1928 (gage height, 8.25 feet); minimum, 41 second-feet July 25, 1931 (gage height, 1.55 feet).

Remarks.— Records good. No records Oct. 1 to Feb. 4. Ice on control Feb. 26-28, discharge estimated. Numerous diversions.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|------|------|------|------|------|------|---------|---------|-------|---------|----------------------|-------|
| 1 | | | | | | 564 | 415 | 1,830 | 2,580 | 1,180 | 620 | 242 |
| 2 | | | | | | 438 | 415 | 1,830 | 2,250 | 1,040 | 538 | 289 |
| 3 | | | | | | 373 | 394 | 1,700 | 1,830 | 1,000 | 512 | 277 |
| 4 | | | | | | 566 | 373 | 1,700 | 1,830 | 1,130 | 415 | 277 |
| 5 | | | | | 343 | 358 | 366 | 2,100 | 1,510 | 1,230 | 373 | 260 |
| 6 | | | | | 358 | 336 | 373 | 3,130 | 1,640 | 1,640 | 369 | 277 |
| 7 | | | | | 343 | 330 | 366 | 4,130 | 3,720 | 1,000 | 317 | 273 |
| 8 | | | | | 358 | 333 | 373 | 4,130 | 3,720 | 848 | 302 | 273 |
| 9 | | | | | 351 | 330 | 462 | 4,340 | 3,130 | 778 | 289 | 271 |
| 10 | | | | | 343 | 333 | 564 | 3,720 | 2,940 | 680 | 277 | 273 |
| 11 | | | | | 333 | 333 | 512 | 2,940 | 2,940 | 620 | 282 | 256 |
| 12 | | | | | 333 | 340 | 592 | 2,940 | 3,130 | 592 | 369 | 256 |
| 13 | | | | | 343 | 327 | 744 | 3,130 | 3,320 | 538 | 311 | 249 |
| 14 | | | | | 336 | 327 | 924 | 2,760 | 3,720 | 487 | 284 | 258 |
| 15 | | | | | 340 | 327 | 848 | 2,260 | 3,720 | 487 | 268 | 260 |
| 16 | | | | | 336 | 369 | 848 | 2,580 | 3,720 | 487 | 264 | 277 |
| 17 | | | | | 340 | 369 | 744 | 3,130 | 3,720 | 394 | 273 | 275 |
| 18 | | | | | 333 | 366 | 712 | 3,320 | 3,320 | 358 | 256 | 268 |
| 19 | | | | | 340 | 358 | 680 | 3,520 | 3,320 | 336 | 264 | 268 |
| 20 | | | | | 336 | 351 | 712 | 3,720 | 3,320 | 333 | 271 | 253 |
| 21 | | | | | 324 | 358 | 812 | 3,520 | 2,760 | 320 | 266 | 273 |
| 22 | | | | | 330 | 373 | 1,340 | 3,320 | 2,410 | 336 | 268 | 277 |
| 23 | | | | | 347 | 373 | 1,570 | 3,130 | 2,100 | 564 | 253 | 302 |
| 24 | | | | | 264 | 340 | 1,640 | 3,130 | 1,960 | 538 | 256 | 351 |
| 25 | | | | | 208 | 333 | 1,830 | 3,320 | 1,960 | 778 | 247 | 394 |
| 26 | | | | | 198 | 330 | 1,830 | 3,320 | 1,830 | 1,090 | 254 | 394 |
| 27 | | | | | 240 | 336 | 1,400 | 3,130 | 1,830 | 924 | 253 | 394 |
| 28 | | | | | 415 | 340 | 1,180 | 3,130 | 1,700 | 812 | 235 | 394 |
| 29 | | | | | | 351 | 1,510 | 2,940 | 1,450 | 744 | 220 | 394 |
| 30 | | | | | | 373 | 1,700 | 3,130 | 1,280 | 744 | 229 | 394 |
| 31 | | | | | | 415 | | 3,130 | | 812 | 235 | |
| Month | | | | | | | Maximum | Minimum | Mean | | Run-off in acre-feet | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February 5-26 | | | | | | | 415 | 198 | 325 | 15,460 | | |
| March | | | | | | | 564 | 327 | 360 | 22,120 | | |
| April | | | | | | | 1,830 | 366 | 874 | 52,320 | | |
| May | | | | | | | 4,340 | 1,700 | 3,035 | 186,600 | | |
| June | | | | | | | 3,720 | 1,280 | 2,622 | 156,000 | | |
| July | | | | | | | 1,640 | 320 | 736 | 45,260 | | |
| August | | | | | | | 620 | 220 | 309 | 18,980 | | |
| September | | | | | | | 394 | 242 | 297 | 17,650 | | |
| The period | | | | | | | | | | | 514,100 | |

Rock Creek near Red Lodge, Mont.

Location.- Staff-gage in SW $\frac{1}{4}$ sec. 17, T. 8 S., R. 20 E., at highway bridge at U. S. ranger station 4 miles southwest of Red Lodge.

Records available.- April to December 1932, May to September 1934.

Extremes.- Maximum discharge recorded during period, 533 second-feet June 16 (gage height, 3.10 feet); minimum, 80 second-feet Sept. 25, 29, 30 (gage height, 1.65 feet).
1932-34: Maximum discharge, 955 second-feet May 21, June 15, 24, 1932 (gage height, 3.80 feet); minimum, 32 second-feet Apr. 15 and May 1, 1932 (gage height, 1.12 feet).

Remarks.- Records fair. Several diversions above gage.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|------------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | | | | | | | | | 374 | 333 | 313 | 143 |
| 2 | | | | | | | | 154 | 333 | 313 | 277 | 143 |
| 3 | | | | | | | | 177 | 277 | 313 | 261 | 143 |
| 4 | | | | | | | | 202 | 277 | 313 | 261 | 133 |
| 5 | | | | | | | | 215 | 261 | 313 | 261 | 133 |
| 6 | | | | | | | | 277 | 353 | 295 | 245 | 133 |
| 7 | | | | | | | | 313 | 396 | 295 | 245 | 133 |
| 8 | | | | | | | | 333 | 353 | 313 | 245 | 123 |
| 9 | | | | | | | | 313 | 333 | 295 | 230 | 123 |
| 10 | | | | | | | | 245 | 353 | 295 | 230 | 123 |
| 11 | | | | | | | | 245 | 313 | 295 | 230 | 113 |
| 12 | | | | | | | | 245 | 396 | 277 | 215 | 113 |
| 13 | | | | | | | | 261 | 418 | 277 | 215 | 123 |
| 14 | | | | | | | | 215 | 487 | 277 | 202 | 113 |
| 15 | | | | | | | | 202 | 487 | 277 | 202 | 103 |
| 16 | | | | | | | | 277 | 533 | 277 | 202 | 103 |
| 17 | | | | | | | | 261 | 441 | 277 | 189 | 95 |
| 18 | | | | | | | | 295 | 441 | 277 | 189 | 95 |
| 19 | | | | | | | | 313 | 487 | 277 | 177 | 95 |
| 20 | | | | | | | | 353 | 441 | 261 | 177 | 87 |
| 21 | | | | | | | | 313 | 396 | 245 | 165 | 87 |
| 22 | | | | | | | | 313 | 353 | 245 | 165 | 87 |
| 23 | | | | | | | | 333 | 333 | 277 | 154 | 87 |
| 24 | | | | | | | | 353 | 313 | 333 | 154 | 87 |
| 25 | | | | | | | | 396 | 333 | 374 | 143 | 80 |
| 26 | | | | | | | | 353 | 353 | 353 | 143 | 87 |
| 27 | | | | | | | | 396 | 396 | 353 | 143 | 87 |
| 28 | | | | | | | | 396 | 353 | 353 | 143 | 87 |
| 29 | | | | | | | | 418 | 353 | 313 | 143 | 80 |
| 30 | | | | | | | | 396 | 333 | 313 | 165 | 80 |
| 31 | | | | | | | | 396 | | 374 | 154 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | | | | | | |
| May 2-31 | | | | | | | 418 | 154 | 299 | 17,770 | | |
| June | | | | | | | 533 | 261 | 376 | 22,350 | | |
| July | | | | | | | 374 | 245 | 303 | 18,610 | | |
| August | | | | | | | 313 | 143 | 201 | 12,370 | | |
| September | | | | | | | 143 | 80 | 107 | 6,380 | | |
| The period | | | | | | | | | | 77,480 | | |

Rock Creek at Rockvale, Mont.

Location.- Wire gage in NW $\frac{1}{4}$ sec. 2, T. 4 S., R. 23 E., 150 feet below highway bridge and half a mile south of Rockvale. Prior to Apr. 19, 1934, wire gage 150 feet upstream was used. Datum relation not determined.

Records available.- October 1920 to September 1922, April 1932 to September 1934.

Extremes.- Maximum discharge recorded during period, 834 second-feet June 7 (gage height, 3.24 feet); minimum, 1.0 second-foot May 2-4, 7, 9, 29 (gage height, 0.50 foot).

1920-22, 1932-34: Maximum discharge, 2,310 second-feet June 8, 1932; minimum, 0.6 second-foot July 16, 1921.

Remarks.- Records good. No records Oct. 1 to Feb. 4. Numerous diversions.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | | | | | | 223 | 172 | 2 | 8 | 2 | 28 | 47 |
| 2 | | | | | | 208 | 152 | 1 | 11 | 23 | 16 | 93 |
| 3 | | | | | | 212 | 166 | 1 | 11 | 10 | 5 | 76 |
| 4 | | | | | | 179 | 146 | 1 | 14 | 2 | 4 | 62 |
| 5 | | | | | 116 | 146 | 172 | 13 | 32 | 35 | 47 | 42 |
| 6 | | | | | 128 | 140 | 172 | 5 | 51 | 91 | 12 | 35 |
| 7 | | | | | 111 | 101 | 186 | 1 | 834 | 2 | 9 | 28 |
| 8 | | | | | 111 | 106 | 172 | 10 | 510 | 2 | 5 | 15 |
| 9 | | | | | 82 | 134 | 200 | 1 | 366 | 2 | 6 | 28 |
| 10 | | | | | 86 | 134 | 200 | 41 | 275 | 27 | 35 | 45 |
| 11 | | | | | 75 | 134 | 179 | 2 | 210 | 9 | 33 | 42 |
| 12 | | | | | 116 | 152 | 166 | 48 | 210 | 15 | 35 | 33 |
| 13 | | | | | 114 | 179 | 159 | 41 | 241 | 6 | 40 | 13 |
| 14 | | | | | 134 | 159 | 166 | 4 | 446 | 9 | 12 | 12 |
| 15 | | | | | 98 | 146 | 166 | 7 | 425 | 8 | 19 | 16 |
| 16 | | | | | 108 | 200 | 166 | 6 | 366 | 56 | 19 | 22 |
| 17 | | | | | 101 | 172 | 179 | 9 | 425 | 24 | 18 | 28 |
| 18 | | | | | 75 | 111 | 152 | 44 | 406 | 6 | 15 | 33 |
| 19 | | | | | 96 | 134 | 95 | 5 | 446 | 12 | 24 | 22 |
| 20 | | | | | 106 | 77 | 91 | 13 | 446 | 11 | 22 | 19 |
| 21 | | | | | 96 | 159 | 82 | 13 | 347 | 6 | 13 | 33 |
| 22 | | | | | 86 | 166 | 62 | 5 | 292 | 69 | 24 | 45 |
| 23 | | | | | 96 | 146 | 70 | 3 | 241 | 50 | 13 | 62 |
| 24 | | | | | 77 | 77 | 51 | 41 | 192 | 5 | 35 | 116 |
| 25 | | | | | 60 | 96 | 15 | 15 | 174 | 147 | 28 | 136 |
| 26 | | | | | 44 | 101 | 13 | 2 | 147 | 147 | 16 | 180 |
| 27 | | | | | 86 | 122 | 3 | 8 | 107 | 93 | 18 | 210 |
| 28 | | | | | 223 | 122 | 2 | 20 | 66 | 69 | 6 | 210 |
| 29 | | | | | | 140 | 2 | 1 | 45 | 66 | 9 | 210 |
| 30 | | | | | | 134 | 2 | 35 | 4 | 28 | 13 | 180 |
| 31 | | | | | | 166 | | 2 | | 21 | 47 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February 5-28 | | | | | | | 223 | 44 | 101 | 4,800 | | |
| March | | | | | | | 223 | 77 | 144 | 8,880 | | |
| April | | | | | | | 200 | 2 | 119 | 7,100 | | |
| May | | | | | | | 48 | 1 | 12.9 | 793 | | |
| June | | | | | | | 834 | 4 | 245 | 14,570 | | |
| July | | | | | | | 147 | 2 | 34.0 | 2,090 | | |
| August | | | | | | | 47 | 4 | 20.2 | 1,240 | | |
| September | | | | | | | 210 | 12 | 69.7 | 4,150 | | |
| The period | | | | | | | | | | 43,600 | | |

West Fork of Rock Creek near Red Lodge, Mont.

Location.- Wire gage on highway bridge in SE $\frac{1}{4}$ sec. 6, T. 8 S., R. 20 E., at U. S. ranger station 3 miles southwest of Red Lodge.

Records available.- April to December 1932, May to September 1934.

Extremes.- Maximum discharge during period, 150 second-feet June 16 (gage height, 2.34 feet); minimum, 14 second-feet Sept. 24 (gage height, 1.10 feet).
1932, 1934: Maximum discharge, 861 second-feet June 24-25, 1932 (gage height, 3.96 feet); minimum, 11 second-feet Oct. 10, 1932 (gage height, 1.06 feet).

Remarks.- Records fair. Discharge interpolated June 13, Aug. 19, Sept. 13, 25.
Several small diversions above gage.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|------------|------|------|------|------|------|------|------|---------|---------|------|-------------------------|-------|
| 1 | | | | | | | | | 76 | 41 | 75 | 20 |
| 2 | | | | | | | | 31 | 61 | 42 | 60 | 20 |
| 3 | | | | | | | | 30 | 53 | 39 | 64 | 23 |
| 4 | | | | | | | | 42 | 37 | 42 | 66 | 21 |
| 5 | | | | | | | | 52 | 29 | 39 | 39 | 11 |
| 6 | | | | | | | | 66 | 57 | 38 | 38 | 21 |
| 7 | | | | | | | | 86 | 64 | 35 | 26 | 21 |
| 8 | | | | | | | | 104 | 52 | 34 | 26 | 22 |
| 9 | | | | | | | | 106 | 45 | 32 | 26 | 21 |
| 10 | | | | | | | | 62 | 45 | 33 | 30 | 20 |
| 11 | | | | | | | | 44 | 53 | 29 | 27 | 18 |
| 12 | | | | | | | | 75 | 72 | 28 | 26 | 19 |
| 13 | | | | | | | | 39 | 92 | 25 | 26 | 19 |
| 14 | | | | | | | | 46 | 112 | 26 | 24 | 19 |
| 15 | | | | | | | | 46 | 106 | 26 | 23 | 18 |
| 16 | | | | | | | | 57 | 139 | 28 | 25 | 17 |
| 17 | | | | | | | | 68 | 114 | 29 | 23 | 17 |
| 18 | | | | | | | | 77 | 112 | 30 | 24 | 17 |
| 19 | | | | | | | | 89 | 117 | 28 | 22 | 17 |
| 20 | | | | | | | | 91 | 124 | 30 | 20 | 24 |
| 21 | | | | | | | | 72 | 102 | 56 | 20 | 21 |
| 22 | | | | | | | | 73 | 75 | 117 | 19 | 17 |
| 23 | | | | | | | | 82 | 77 | 75 | 18 | 16 |
| 24 | | | | | | | | 99 | 77 | 78 | 17 | 14 |
| 25 | | | | | | | | 117 | 87 | 97 | 23 | 19 |
| 26 | | | | | | | | 110 | 106 | 99 | 22 | 24 |
| 27 | | | | | | | | 119 | 126 | 108 | 21 | 15 |
| 28 | | | | | | | | 114 | 73 | 99 | 22 | 15 |
| 29 | | | | | | | | 136 | 58 | 104 | 24 | 16 |
| 30 | | | | | | | | 144 | 64 | 97 | 26 | 15 |
| 31 | | | | | | | | 122 | | 78 | 27 | |
| Month | | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | | | | | | |
| May 2-31 | | | | | | | | 144 | 30 | 80.0 | 4,760 | |
| June | | | | | | | | 139 | 29 | 80.2 | 4,770 | |
| July | | | | | | | | 117 | 25 | 55.6 | 3,500 | |
| August | | | | | | | | 75 | 17 | 30.0 | 1,840 | |
| September | | | | | | | | 24 | 14 | 18.9 | 1,120 | |
| The period | | | | | | | | | | | 15,790 | |

Red Lodge Creek near Boyd, Mont.

Location.- Wire gage in SW $\frac{1}{4}$ sec. 26, T. 4 S., R. 21 E., about 1 $\frac{1}{2}$ miles west of Boyd.

Records available.- April 1932 to March 1933, May to September 1934.

Extremes.- Maximum discharge during period, 332 second-feet June 7 (gage height, 3.38 feet); minimum, 3.0 second-feet May 11 (gage height, 1.40 feet).
1932-33, 1934: Maximum discharge, 1,400 second-feet June 8, 1932 (gage height, 7.34 feet, old datum); minimum, that of May 11, 1934.

Remarks.- Records fair. Numerous diversions above gage. Flow increased by water diverted from East Rosebud River into Red Lodge Creek during irrigation season.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|------------|------|------|------|------|------|------|------|---------|---------|------|----------------------|-------|
| 1 | | | | | | | | 10 | 27 | 70 | 67 | 63 |
| 2 | | | | | | | | 9.1 | 33 | 68 | 64 | 66 |
| 3 | | | | | | | | 7.0 | 33 | 70 | 58 | 64 |
| 4 | | | | | | | | 4.6 | 35 | 70 | 53 | 59 |
| 5 | | | | | | | | 4.2 | 38 | 77 | 49 | 54 |
| 6 | | | | | | | | 4.6 | 59 | 92 | 53 | 55 |
| 7 | | | | | | | | 4.2 | 316 | 90 | 50 | 55 |
| 8 | | | | | | | | 4.2 | 174 | 77 | 44 | 53 |
| 9 | | | | | | | | 5.0 | 145 | 86 | 44 | 55 |
| 10 | | | | | | | | 4.2 | 127 | 79 | 42 | 57 |
| 11 | | | | | | | | 3.4 | 118 | 74 | 49 | 53 |
| 12 | | | | | | | | 5.4 | 118 | 70 | 49 | 51 |
| 13 | | | | | | | | 26 | 118 | 66 | 49 | 49 |
| 14 | | | | | | | | 39 | 242 | 54 | 49 | 51 |
| 15 | | | | | | | | 33 | 164 | 50 | 50 | 58 |
| 16 | | | | | | | | 28 | 154 | 47 | 49 | 59 |
| 17 | | | | | | | | 21 | 145 | 42 | 49 | 55 |
| 18 | | | | | | | | 28 | 195 | 35 | 49 | 52 |
| 19 | | | | | | | | 27 | 195 | 32 | 49 | 49 |
| 20 | | | | | | | | 29 | 164 | 28 | 52 | 57 |
| 21 | | | | | | | | 30 | 145 | 30 | 51 | 66 |
| 22 | | | | | | | | 35 | 136 | 32 | 49 | 68 |
| 23 | | | | | | | | 34 | 127 | 35 | 50 | 68 |
| 24 | | | | | | | | 32 | 127 | 40 | 51 | 73 |
| 25 | | | | | | | | 35 | 127 | 88 | 53 | 73 |
| 26 | | | | | | | | 29 | 118 | 95 | 49 | 78 |
| 27 | | | | | | | | 30 | 102 | 89 | 46 | 79 |
| 28 | | | | | | | | 25 | 102 | 79 | 44 | 78 |
| 29 | | | | | | | | 30 | 102 | 72 | 42 | 75 |
| 30 | | | | | | | | 28 | 90 | 72 | 49 | 71 |
| 31 | | | | | | | | 29 | | 71 | 59 | |
| Month | | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | | | | | | |
| May | | | | | | | | 39 | 3.4 | 20.5 | 1,260 | |
| June | | | | | | | | 318 | 27 | 126 | 7,500 | |
| July | | | | | | | | 95 | 28 | 63.9 | 3,930 | |
| August | | | | | | | | 67 | 42 | 50.4 | 3,100 | |
| September | | | | | | | | 79 | 49 | 61.5 | 3,660 | |
| The period | | | | | | | | | | | 19,450 | |

Wind River at Riverton, Wyo.

Location.- Water-stage recorder in sec. 2, T. 1 S., R. 4 E., three-quarters of a mile east of Riverton. Zero of gage is 4,844.38 feet above mean sea level.

Drainage area.- 2,320 square miles.

Records available.- May 1906 to November 1908, May 1911 to September 1927, October 1928 to September 1934.

Average discharge.- 24 years (1907-8, 1910-27, 1928-34), 1,210 second-feet.

Extremes.- Maximum discharge during year, 5,500 second-feet July 25 (gage height, 5.70 feet); minimum, 154 second-feet Dec. 16 (gage height, 2.22 feet).
1906-8, 1911-27, 1928-34: Maximum discharge, 12,300 second-feet June 14, 1906; minimum, 123 second-feet Dec. 10, 1932 (gage height, 2.24 feet).

Remarks.- Records good. Several irrigation diversions above station. Gage-height record furnished by U. S. Bureau of Reclamation.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|-------|----------------------|-------|-------|
| 1 | 355 | 356 | 265 | 240 | 275 | 314 | 221 | 1,100 | 1,270 | 392 | 1,020 | 379 |
| 2 | 367 | 366 | 250 | 240 | 297 | 286 | 212 | 1,060 | 1,080 | 373 | 984 | 392 |
| 3 | 386 | 367 | 270 | 245 | 297 | 270 | 212 | 1,030 | 791 | 379 | 862 | 418 |
| 4 | 405 | 342 | 255 | 260 | 270 | 260 | 225 | 961 | 669 | 412 | 762 | 398 |
| 5 | 412 | 379 | 216 | 260 | 275 | 250 | 255 | 1,230 | 567 | 678 | 724 | 330 |
| 6 | 432 | 330 | 202 | 225 | 291 | 250 | 270 | 1,630 | 452 | 633 | 696 | 319 |
| 7 | 418 | 336 | 180 | 202 | 291 | 250 | 291 | 2,100 | 432 | 550 | 676 | 330 |
| 8 | 398 | 361 | 184 | 198 | 275 | 245 | 302 | 2,330 | 439 | 392 | 624 | 336 |
| 9 | 432 | 355 | 212 | 193 | 319 | 230 | 330 | 2,390 | 425 | 325 | 599 | 386 |
| 10 | 418 | 361 | 255 | 230 | 291 | 235 | 379 | 2,000 | 412 | 308 | 591 | 355 |
| 11 | 418 | 356 | 275 | 230 | 275 | 240 | 386 | 1,640 | 386 | 308 | 642 | 314 |
| 12 | 418 | 335 | 265 | 225 | 255 | 245 | 355 | 1,640 | 432 | 379 | 800 | 286 |
| 13 | 398 | 325 | 265 | 250 | 245 | 245 | 519 | 1,920 | 418 | 398 | 772 | 250 |
| 14 | 398 | 335 | 250 | 230 | 250 | 255 | 696 | 1,480 | 481 | 425 | 705 | 221 |
| 15 | 379 | 319 | 221 | 240 | 250 | 260 | 669 | 1,260 | 651 | 459 | 642 | 207 |
| 16 | 405 | 308 | 165 | 265 | 245 | 265 | 550 | 1,320 | 810 | 466 | 599 | 216 |
| 17 | 392 | 308 | 157 | 255 | 250 | 291 | 459 | 1,520 | 852 | 474 | 534 | 240 |
| 18 | 398 | 314 | 169 | 255 | 255 | 286 | 418 | 1,560 | 800 | 481 | 504 | 245 |
| 19 | 398 | 314 | 173 | 280 | 265 | 270 | 418 | 1,600 | 800 | 519 | 496 | 260 |
| 20 | 386 | 314 | 202 | 265 | 265 | 275 | 466 | 1,680 | 781 | 527 | 496 | 245 |
| 21 | 405 | 314 | 235 | 255 | 260 | 275 | 567 | 1,740 | 714 | 496 | 459 | 245 |
| 22 | 398 | 302 | 265 | 260 | 260 | 297 | 762 | 1,660 | 608 | 616 | 418 | 260 |
| 23 | 373 | 302 | 286 | 265 | 260 | 297 | 915 | 1,560 | 527 | 1,040 | 379 | 255 |
| 24 | 386 | 306 | 265 | 275 | 265 | 302 | 938 | 1,540 | 496 | 1,020 | 367 | 291 |
| 25 | 392 | 302 | 245 | 280 | 255 | 297 | 1,010 | 1,470 | 496 | 2,500 | 355 | 367 |
| 26 | 405 | 302 | 235 | 255 | 250 | 275 | 1,420 | 1,500 | 481 | 1,860 | 355 | 373 |
| 27 | 373 | 308 | 221 | 255 | 230 | 265 | 1,390 | 1,500 | 519 | 1,560 | 355 | 367 |
| 28 | 392 | 270 | 280 | 270 | 245 | 255 | 1,140 | 1,510 | 481 | 1,280 | 355 | 342 |
| 29 | 355 | 280 | 285 | 260 | 260 | 221 | 1,120 | 1,520 | 474 | 1,090 | 348 | 361 |
| 30 | 373 | 280 | 250 | 275 | 250 | 230 | 1,070 | 1,520 | 439 | 1,020 | 342 | 319 |
| 31 | 392 | | 250 | 265 | | 240 | | 1,480 | | 1,010 | 361 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 432 | 355 | 395 | 24,310 | | |
| November | | | | | | | 386 | 270 | 324 | 19,300 | | |
| December | | | | | | | 286 | 157 | 233 | 14,340 | | |
| January | | | | | | | 280 | 193 | 249 | 15,320 | | |
| February | | | | | | | 319 | 230 | 266 | 14,800 | | |
| March | | | | | | | 314 | 221 | 263 | 16,180 | | |
| April | | | | | | | 1,420 | 212 | 599 | 36,630 | | |
| May | | | | | | | 2,390 | 961 | 1,564 | 96,140 | | |
| June | | | | | | | 1,270 | 386 | 606 | 36,070 | | |
| July | | | | | | | 2,500 | 308 | 722 | 44,370 | | |
| August | | | | | | | 1,020 | 342 | 575 | 35,350 | | |
| September | | | | | | | 418 | 207 | 310 | 18,460 | | |
| The year | | | | | | | 2,500 | 157 | 511 | 370,300 | | |

Big Horn River at Thermopolis, Wyo.

Location.- Chain gage in sec. 36, T. 43 N., R. 95 W., at Thermopolis. Zero of gage is 4,304.80 feet above mean sea level.

Drainage area.- 8,080 square miles.

Records available.- May 1900 to December 1905, June 1910 to September 1934.

Average discharge.- 29 years, 2,050 second-feet.

Extremes.- Maximum discharge during year, 4,730 second-feet July 25 (gage height, 4.80 feet); minimum, 348 second-feet Jan. 12 (gage height, 0.58 foot).
1900-1905, 1910-34: Maximum discharge, 29,800 second-feet July 24, 1923 (gage height, 16.2 feet); minimum, 180 second-feet Apr. 5, 1904 (gage height, 0.2 foot).

Remarks.- Records fair. Discharge estimated Dec. 18-22. Practically no diversions between Thermopolis and junction of Wind and Popo Agie Rivers. Hot Springs entering canyon below station have flow of about 50 second-feet.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|-------|----------------------|-------|-------|
| 1 | 404 | 565 | 465 | 465 | 470 | 538 | 480 | 1,660 | 2,060 | 676 | 1,230 | 432 |
| 2 | 526 | 496 | 470 | 455 | 470 | 480 | 475 | 1,590 | 1,700 | 662 | 1,190 | 460 |
| 3 | 520 | 485 | 455 | 465 | 470 | 408 | 490 | 1,550 | 1,590 | 599 | 1,280 | 526 |
| 4 | 526 | 480 | 440 | 475 | 470 | 412 | 514 | 1,490 | 1,400 | 578 | 986 | 538 |
| 5 | 538 | 496 | 440 | 470 | 470 | 436 | 606 | 1,400 | 1,230 | 592 | 890 | 538 |
| 6 | 571 | 508 | 432 | 470 | 470 | 460 | 740 | 1,590 | 1,010 | 865 | 874 | 485 |
| 7 | 585 | 538 | 424 | 490 | 470 | 460 | 848 | 2,520 | 797 | 756 | 840 | 455 |
| 8 | 599 | 578 | 420 | 460 | 470 | 460 | 665 | 3,790 | 692 | 592 | 806 | 440 |
| 9 | 620 | 599 | 416 | 408 | 470 | 465 | 874 | 3,540 | 692 | 526 | 756 | 1,060 |
| 10 | 644 | 628 | 404 | 388 | 460 | 465 | 788 | 3,380 | 652 | 496 | 732 | 636 |
| 11 | 638 | 628 | 394 | 373 | 460 | 450 | 716 | 3,110 | 652 | 465 | 716 | 684 |
| 12 | 613 | 571 | 388 | 350 | 470 | 424 | 644 | 2,900 | 578 | 436 | 797 | 592 |
| 13 | 613 | 606 | 379 | 391 | 460 | 428 | 571 | 2,860 | 592 | 432 | 977 | 450 |
| 14 | 613 | 613 | 382 | 420 | 460 | 428 | 490 | 2,860 | 700 | 480 | 899 | 465 |
| 15 | 599 | 592 | 373 | 420 | 465 | 436 | 480 | 2,680 | 676 | 480 | 814 | 373 |
| 16 | 599 | 564 | 370 | 436 | 460 | 436 | 585 | 2,350 | 916 | 502 | 788 | 376 |
| 17 | 585 | 538 | 362 | 432 | 460 | 455 | 740 | 2,340 | 1,360 | 470 | 732 | 379 |
| 18 | 599 | 564 | | 420 | 445 | 455 | 914 | 2,690 | 1,350 | 475 | 716 | 412 |
| 19 | 599 | 571 | | 428 | 450 | 520 | 882 | 2,800 | 1,270 | 496 | 636 | 420 |
| 20 | 592 | 564 | 365 | 424 | 514 | 508 | 882 | 2,690 | 1,240 | 532 | 636 | 424 |
| 21 | 585 | 538 | | 428 | 538 | 528 | 874 | 2,860 | 1,210 | 587 | 585 | 428 |
| 22 | 592 | 538 | | 428 | 544 | 587 | 986 | 2,780 | 1,080 | 508 | 584 | 424 |
| 23 | 565 | 538 | 368 | 428 | 564 | 538 | 1,620 | 2,680 | 986 | 620 | 544 | 424 |
| 24 | 599 | 520 | 382 | 428 | 571 | 526 | 1,620 | 2,360 | 882 | 1,180 | 496 | 416 |
| 25 | 626 | 520 | 388 | 420 | 571 | 544 | 1,720 | 2,260 | 924 | 3,380 | 445 | 440 |
| 26 | 628 | 538 | 397 | 424 | 564 | 538 | 3,510 | 2,310 | 614 | 3,400 | 432 | 538 |
| 27 | 620 | 532 | 391 | 428 | 544 | 532 | 2,370 | 2,200 | 756 | 2,090 | 465 | 567 |
| 28 | 636 | 496 | 400 | 428 | 526 | 532 | 2,000 | 2,150 | 724 | 1,760 | 465 | 578 |
| 29 | 626 | 476 | 424 | 428 | 526 | 526 | 1,770 | 2,120 | 724 | 1,440 | 436 | 520 |
| 30 | 628 | 476 | 445 | 470 | 496 | 496 | 1,720 | 2,120 | 740 | 1,350 | 445 | 514 |
| 31 | 626 | | 465 | 470 | 490 | 490 | | 2,060 | | 1,230 | 436 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 644 | 404 | 592 | 36,370 | | |
| November | | | | | | | 628 | 475 | 546 | 32,480 | | |
| December | | | | | | | 470 | 362 | 403 | 24,790 | | |
| January | | | | | | | 490 | 350 | 433 | 26,620 | | |
| February | | | | | | | 571 | 445 | 491 | 27,280 | | |
| March | | | | | | | 557 | 408 | 482 | 29,610 | | |
| April | | | | | | | 3,610 | 475 | 1,082 | 62,630 | | |
| May | | | | | | | 3,790 | 1,400 | 2,440 | 150,000 | | |
| June | | | | | | | 2,060 | 578 | 1,000 | 59,500 | | |
| July | | | | | | | 3,400 | 432 | 923 | 56,760 | | |
| August | | | | | | | 1,280 | 432 | 729 | 44,640 | | |
| September | | | | | | | 1,060 | 373 | 499 | 29,720 | | |
| The year | | | | | | | 3,790 | 350 | 802 | 580,600 | | |

Big Horn River at Kane, Wyo.

Location.- Water-stage recorder in sec. 4, T. 56 N., R. 94 W., half a mile east of Kane. Zero of gage is 3,610.23 feet above mean sea level.

Drainage area.- 15,900 square miles.

Records available.- August 1928 to September 1934.

Extremes.- Maximum discharge during year, 9,000 second-feet July 26 (gage height, 6.58 feet); minimum daily discharge, 179 second-feet July 22.

1928-34: Maximum discharge, 19,300 second-feet June 16, 1933 (gage height, 9.39 feet); minimum daily discharge, that of July 22, 1934.

Remarks.- Records good except those estimated and those for periods of ice effect, Dec. 9-18, Dec. 21 to Feb. 2, Feb. 26, which were based on two discharge measurements, temperature records, and comparison with Big Horn River at Thermopolis. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|--------|-------|--------|--------|--------|---------|-------|---------|-------|----------------------|--------|-------|
| 1 | | 1,080 | *1,110 | | 850 | 911 | 722 | 2,840 | 1,650 | 405 | *1,100 | 338 |
| 2 | | 1,070 | *1,100 | | 900 | 1,080 | 684 | 2,710 | 1,640 | 398 | *1,000 | 345 |
| 3 | *975 | 1,100 | 1,090 | | 950 | 1,080 | 673 | 2,560 | 1,470 | 398 | *925 | 351 |
| 4 | | 1,140 | 1,200 | | 878 | 1,090 | 652 | 2,370 | 1,300 | 395 | *600 | 378 |
| 5 | | 1,280 | 1,210 | | 1,010 | 1,110 | 710 | 2,280 | 1,150 | *380 | 604 | 345 |
| 6 | | | 917 | | | 1,100 | 978 | 2,560 | 937 | *350 | 572 | 364 |
| 7 | | | 1,220 | | | 1,110 | 1,390 | 2,850 | 826 | *300 | 493 | 378 |
| 8 | *1,000 | | 1,330 | | *1,100 | | 1,200 | 4,350 | 856 | 275 | 468 | 384 |
| 9 | | | 1,330 | | | *1,080 | 1,140 | 4,980 | 802 | *270 | 461 | 364 |
| 10 | | | 1,370 | | | | 1,030 | 4,850 | 852 | *260 | 442 | 412 |
| 11 | | 1,400 | | | | 1,040 | 1,020 | 4,160 | 892 | *250 | 480 | 820 |
| 12 | | 1,420 | | | | *1,000 | 1,070 | 3,460 | 964 | *240 | 978 | 604 |
| 13 | *1,100 | 1,430 | 700 | | *970 | *960 | 1,080 | 3,160 | 859 | *230 | 638 | 527 |
| 14 | | 1,400 | | | | *920 | 1,080 | 3,030 | 892 | *220 | 554 | 506 |
| 15 | | 1,340 | | | | 878 | 1,080 | 3,290 | 918 | *210 | 497 | 449 |
| 16 | | 1,300 | | | | *900 | 1,270 | 2,700 | 1,670 | *200 | 506 | 427 |
| 17 | | 1,300 | | | | *820 | 1,460 | 2,430 | 1,550 | 192 | 499 | 409 |
| 18 | | 1,280 | 700 | | | *830 | 1,370 | 2,440 | 1,300 | *190 | 430 | 402 |
| 19 | *1,070 | 1,250 | 725 | †1,060 | *800 | *850 | 1,140 | 2,620 | 1,400 | *186 | 391 | 402 |
| 20 | | 1,220 | 700 | | | *900 | 964 | 2,640 | 1,340 | *184 | *380 | 398 |
| 21 | | 1,220 | | | *850 | *890 | 904 | 2,610 | 1,390 | *182 | *365 | *390 |
| 22 | | 1,220 | | | 878 | 855 | 826 | 2,580 | 1,170 | 179 | *350 | *380 |
| 23 | | 1,220 | | | 872 | *860 | 895 | 2,510 | 957 | *180 | 338 | *420 |
| 24 | | 1,220 | 1,000 | | 866 | *840 | 1,130 | 2,360 | 814 | *190 | *325 | 532 |
| 25 | | 1,210 | | | 532 | *820 | 1,720 | 2,180 | 700 | *250 | *310 | 599 |
| 26 | *1,080 | 1,210 | | | †291 | *780 | 2,300 | 2,080 | 689 | 1,760 | 290 | 663 |
| 27 | *1,070 | 1,220 | | | 545 | 790 | 4,220 | 1,940 | 588 | 5,020 | 290 | 694 |
| 28 | *1,070 | 1,220 | | | 628 | 764 | 4,430 | 1,910 | 454 | 2,580 | 296 | 744 |
| 29 | 1,150 | | 975 | | | 772 | 3,430 | 1,800 | 420 | 2,130 | 326 | 784 |
| 30 | 1,040 | 1,130 | | | | 764 | 3,000 | 1,740 | 412 | *1,600 | 332 | 760 |
| 31 | 1,040 | | | | | 772 | | 1,690 | | *1,200 | 326 | |
| Month | | | | | | Maximum | | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | 1,430 | | 1,070 | 1,045 | 64,250 | | |
| November | | | | | | 1,210 | | | 1,250 | 74,360 | | |
| December | | | | | | | | | 891 | 54,810 | | |
| January | | | | | | | | | 950 | 58,410 | | |
| February | | | | | | | | 291 | 868 | 48,200 | | |
| March | | | | | | 1,110 | | 772 | 929 | 57,120 | | |
| April | | | | | | 4,430 | | 652 | 1,452 | 86,400 | | |
| May | | | | | | 4,980 | | 1,690 | 2,764 | 169,900 | | |
| June | | | | | | 1,670 | | 412 | 1,032 | 61,410 | | |
| July | | | | | | 5,020 | | 179 | 671 | 41,260 | | |
| August | | | | | | 1,100 | | 290 | 508 | 31,250 | | |
| September | | | | | | 820 | | 338 | 485 | 28,880 | | |
| The year | | | | | | 5,020 | | 179 | 1,072 | 776,200 | | |

*Estimated.

†Discharge measurement.

YELLOWSTONE RIVER BASIN

Dry Creek near Burris, Wyo.

Location.- Water-stage recorder in SW $\frac{1}{4}$ sec. 12, T. 4 N., R. 5 W., 2 miles south of Burris.

Drainage area.- 57 square miles.

Records available.- May 1921 to September 1934.

Extremes.- 1932-33: Maximum discharge during year, 675 second-feet June 10 (gage height, 3.00 feet); minimum recorded, 0.4 second-foot several times in April.
 1933-34: Maximum discharge during year, 135 second-feet May 8 (gage height, 1.45 feet); no flow Mar. 1 to Apr. 11.
 1921-34: Maximum discharge, 1,100 second-feet June 12, 1921 (gage height, 3.9 feet); no flow Mar. 1 to Apr. 11, 1934.

Remarks.- Records fair for year ending Sept. 30, 1933. No records Nov. 1 to Mar. 31. Records good for year ending Sept. 30, 1934, except those estimated. Dry Creek Ditch diverts water for irrigation above station. Gage-height record furnished by U. S. Indian Service.

Discharge, in second-feet, 1932-33

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 5.0 | | | | | | *0.4 | 18 | 335 | 114 | 60 | *24 |
| 2 | 4.4 | | | | | | *.4 | 19 | 366 | 97 | 61 | 22 |
| 3 | 4.1 | | | | | | *.4 | 17 | 378 | 92 | 60 | 22 |
| 4 | 4.1 | | | | | | .4 | 19 | 362 | 97 | 57 | 22 |
| 5 | 3.8 | | | | | | .4 | 18 | 335 | 94 | 54 | 24 |
| 6 | | 3.8 | | | | | .5 | 18 | 331 | 97 | 49 | 37 |
| 7 | | 3.8 | | | | | .5 | 17 | 374 | 110 | 44 | 35 |
| 8 | | 3.2 | | | | | .5 | 16 | 339 | 156 | 40 | 34 |
| 9 | | 3.2 | | | | | .4 | 13 | 419 | 148 | 38 | 38 |
| 10 | | 2.9 | | | | | .5 | 10 | 538 | 135 | 37 | 41 |
| 11 | | 2.9 | | | | | .5 | 9.6 | 502 | 118 | 36 | 41 |
| 12 | | 2.6 | | | | | .4 | 12 | 507 | 102 | 35 | 37 |
| 13 | | 2.3 | | | | | .5 | 11 | 578 | 92 | 35 | 37 |
| 14 | | 2.0 | | | | | .6 | 13 | 498 | 88 | 35 | 36 |
| 15 | | 2.0 | | | | | .8 | 14 | 476 | 83 | 35 | 37 |
| 16 | | 1.9 | | | | | 1.0 | 19 | *450 | 60 | 36 | 41 |
| 17 | | 1.9 | | | | | 1.4 | 21 | 428 | 76 | 36 | 36 |
| 18 | | 4.7 | | | | | 1.4 | 25 | 419 | 72 | 36 | 34 |
| 19 | | 9.0 | | | | | 1.5 | 23 | 398 | 68 | 36 | 32 |
| 20 | | 7.4 | | | | | 1.4 | 24 | 331 | 65 | 37 | 29 |
| 21 | | 10 | | | | | 1.4 | 34 | 283 | 60 | 38 | 27 |
| 22 | | 10 | | | | | 1.4 | 43 | 282 | 56 | 37 | 24 |
| 23 | | *9.0 | | | | | 1.7 | 41 | 235 | 55 | 37 | 18 |
| 24 | | *9.0 | | | | | 2.9 | 46 | 202 | 53 | 37 | *17 |
| 25 | | *8.0 | | | | | 4.4 | 57 | 179 | 52 | 37 | *17 |
| 26 | | *8.0 | | | | | 5.0 | 74 | 165 | 51 | 37 | *16 |
| 27 | | *7.2 | | | | | 7.0 | 96 | 140 | 52 | *36 | *15 |
| 28 | | *7.0 | | | | | 16 | 100 | 156 | 55 | *34 | *15 |
| 29 | | *7.0 | | | | | 21 | 114 | 182 | 59 | *32 | *14 |
| 30 | | *7.0 | | | | | 20 | 168 | 143 | 60 | *28 | 14 |
| 31 | | *7.0 | | | | | | 276 | | 60 | *26 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 10 | 1.9 | 5.30 | 326 | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | 21 | .4 | 3.16 | 188 | | |
| May | | | | | | | 276 | 9.6 | 44.7 | 2,750 | | |
| June | | | | | | | 578 | 140 | 343 | 20,430 | | |
| July | | | | | | | 156 | 51 | 83.8 | 5,150 | | |
| August | | | | | | | 61 | 26 | 39.9 | 2,450 | | |
| September | | | | | | | 41 | 14 | 27.9 | 1,660 | | |

*Estimated.

Dry Creek near Burris, Wyo.

(Continued)

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | *13 | 1.6 | 0.8 | | | | 0 | 50 | 77 | 40 | 52 | 23 |
| 2 | *12 | 1.5 | .9 | | | | 0 | 49 | 60 | 40 | 49 | 25 |
| 3 | *12 | 1.4 | 1.1 | | | | 0 | 46 | 59 | 40 | 48 | 23 |
| 4 | *11 | 1.4 | .9 | | | | 0 | 46 | 54 | 42 | 48 | 20 |
| 5 | *10 | .7 | 1.8 | | | | 0 | 54 | 50 | 53 | 48 | 19 |
| 6 | 9.0 | 1.4 | .5 | | | | 0 | 72 | 48 | 53 | 48 | 17 |
| 7 | 9.0 | 1.6 | .5 | | | | 0 | 108 | 47 | 49 | 46 | 16 |
| 8 | 8.6 | 2.3 | .6 | | | | *0 | 120 | 44 | 46 | 45 | 16 |
| 9 | 7.6 | 2.6 | .4 | | | | *0 | 96 | 43 | 40 | 45 | 15 |
| 10 | 7.0 | 2.6 | .5 | | | | *0 | 73 | 41 | 36 | 47 | 13 |
| 11 | 6.6 | 2.6 | .5 | | | | *0 | 66 | 39 | 37 | 58 | 12 |
| 12 | 6.2 | 2.6 | .6 | | | | .1 | 74 | 39 | 37 | 54 | 11 |
| 13 | 5.4 | 2.0 | .6 | | | | 1.0 | 73 | 42 | 36 | 50 | 11 |
| 14 | 5.0 | 2.0 | .8 | | | | 1.3 | 68 | 47 | 35 | 48 | 11 |
| 15 | *4.6 | 2.3 | *.6 | | | | 1.9 | 64 | 50 | 35 | 45 | 11 |
| 16 | *4.2 | 2.0 | | | | | 1.5 | 66 | 62 | 36 | 42 | 10 |
| 17 | *3.6 | 2.0 | | | | | 1.4 | 73 | 68 | 36 | 41 | 9.0 |
| 18 | *3.0 | 1.8 | *.4 | | | | 1.5 | 61 | 61 | 37 | 41 | 8.2 |
| 19 | *2.6 | 2.0 | | | | | 2.0 | 68 | 61 | 37 | 37 | 7.4 |
| 20 | *2.0 | 1.7 | | | | | 4.4 | 69 | 62 | 37 | 34 | 7.4 |
| 21 | 1.6 | 1.4 | | | | | 11 | 63 | 58 | 42 | 32 | 6.6 |
| 22 | 1.8 | 2.0 | | | | | 20 | 62 | 55 | 47 | 32 | 6.2 |
| 23 | 1.8 | 1.7 | *.3 | | | | 34 | 68 | 51 | 49 | 31 | 6.6 |
| 24 | 1.7 | 1.8 | | | | | 47 | 66 | 51 | 53 | 30 | 7.4 |
| 25 | 1.6 | 1.7 | | | | | 56 | 69 | 52 | 60 | 29 | 7.6 |
| 26 | 1.5 | 1.3 | | | | | 61 | 97 | 50 | 61 | 27 | 7.4 |
| 27 | 1.5 | 1.5 | | | | | 53 | 97 | 46 | 58 | 26 | 7.4 |
| 28 | 1.4 | 1.3 | *.4 | | | | 54 | 96 | 42 | 56 | 26 | 8.2 |
| 29 | 1.4 | 1.3 | | | | | 54 | 99 | 41 | 55 | 24 | 12 |
| 30 | 1.5 | .9 | | | | | 52 | 99 | 41 | 51 | 25 | 11 |
| 31 | 1.5 | | | | | | | 55 | | 53 | 31 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 13 | 1.4 | 5.16 | 317 | | |
| November | | | | | | | 2.6 | .7 | 1.76 | 105 | | |
| December | | | | | | | 1.8 | | *.55 | 34 | | |
| January | | | | | | | | | *.3 | 18 | | |
| February | | | | | | | | | *.2 | 11 | | |
| March | | | | | | | 0 | 0 | *0 | 0 | | |
| April | | | | | | | 61 | 0 | 15.3 | 908 | | |
| May | | | | | | | 120 | 46 | 79.3 | 4,870 | | |
| June | | | | | | | 77 | 39 | 51.4 | 3,060 | | |
| July | | | | | | | 61 | 35 | 44.7 | 2,750 | | |
| August | | | | | | | 56 | 24 | 40.0 | 2,460 | | |
| September | | | | | | | 25 | 6.2 | 12.2 | 725 | | |
| The year | | | | | | | 120 | 0 | 21.1 | 15,260 | | |

*Estimated.

Willow Creek near Crowheart, Wyo.

Location.- Water-stage recorder in SW $\frac{1}{4}$ sec. 35, T. 4 N., R. 4 W. (previously published in error), 2 miles southwest of Crowheart.

Drainage area.- 50 square miles.

Records available.- May to October 1909, May 1921 to June 1923, April 1925 to September 1934.

Extremes.- Maximum discharge during year, 131 second-feet July 24 (gage height, 2.05 feet); minimum not determined, occurred during winter.
1921-23, 1925-34: Maximum discharge, 750 second-feet July 28, 1923; minimum not determined.

Remarks.- Records good except those estimated. No records Jan. 1 to Feb. 28. Small diversion for irrigation above station. Gage-height record furnished by U. S. Indian Service.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | 7.4 | 7.4 | | | | | 5.3 | 8.0 | 12 | 6.5 | 4.2 | 3.6 |
| 2 | 7.7 | 7.4 | | | | | 5.6 | 8.0 | 12 | 5.9 | 4.2 | 4.4 |
| 3 | 7.4 | 7.4 | | | | | 5.3 | 8.4 | 12 | 5.9 | 4.2 | 4.4 |
| 4 | 7.1 | 7.4 | | | | | 5.3 | 8.0 | 11 | 6.8 | 4.0 | 4.4 |
| 5 | 7.1 | 4.6 | | | | | 5.3 | 8.0 | 9.6 | 7.4 | 4.0 | 4.2 |
| 6 | 7.4 | 5.6 | | | | | 5.3 | 8.4 | 10 | 6.5 | 4.2 | 3.8 |
| 7 | 7.4 | 6.5 | | | | | 5.0 | 20 | 10 | 6.2 | 4.0 | 3.8 |
| 8 | 7.4 | *6.5 | | | | *5.5 | *5.0 | 28 | 12 | 6.2 | 4.0 | 4.0 |
| 9 | 7.7 | *6.8 | | | | | *5.3 | 22 | 12 | 5.6 | 4.0 | 4.0 |
| 10 | 7.7 | *6.8 | | | | | *5.6 | 18 | 10 | 5.6 | 4.8 | 3.8 |
| 11 | 7.7 | *7.1 | | | | | *6.5 | 18 | 10 | 5.3 | 4.4 | 4.0 |
| 12 | 7.7 | 7.4 | | | | | *6.2 | 22 | 9.6 | 5.0 | 4.0 | 4.0 |
| 13 | 7.7 | 7.1 | | | | | *6.2 | 20 | 8.0 | 5.0 | 3.4 | 4.2 |
| 14 | 7.7 | 7.1 | | | | | 6.2 | 17 | 9.6 | 4.8 | 3.4 | 4.6 |
| 15 | *7.7 | 7.1 | | | | | 6.2 | 14 | 12 | 4.6 | 3.6 | 4.4 |
| 16 | *7.7 | 7.1 | 5.0 | | | *5.9 | 6.2 | 14 | 12 | 4.4 | 3.6 | 4.2 |
| 17 | *7.7 | 7.1 | | | | *5.6 | 6.2 | 17 | 12 | 4.4 | 3.6 | 4.4 |
| 18 | *7.4 | 7.1 | | | | 5.9 | 6.2 | 20 | 10 | 4.0 | 3.6 | 4.4 |
| 19 | *7.4 | 7.1 | | | | 6.8 | 6.2 | 20 | 9.6 | 4.0 | 4.0 | 4.6 |
| 20 | *7.4 | 7.1 | | | | 6.8 | 6.2 | 20 | 9.6 | 4.0 | 3.6 | 4.6 |
| 21 | 7.4 | 7.1 | | | | 6.5 | 6.2 | 18 | 9.2 | 4.2 | 3.6 | 10 |
| 22 | 7.4 | 7.4 | | | | 6.5 | 6.2 | 17 | 9.8 | 4.4 | 3.8 | 5.0 |
| 23 | 7.4 | 7.1 | | | | 6.8 | 6.2 | 17 | 8.4 | 4.4 | 3.6 | *5.0 |
| 24 | 7.4 | 7.1 | | | | 5.9 | 6.5 | 16 | 8.0 | 18 | 4.0 | *5.0 |
| 25 | 7.7 | 7.1 | | | | 6.2 | 7.1 | 18 | 7.7 | 27 | 4.0 | *5.0 |
| 26 | 7.7 | *6.8 | | | | 5.9 | 9.6 | 18 | 7.4 | 6.5 | 4.0 | *5.3 |
| 27 | 7.7 | *6.5 | | | | 5.9 | 9.2 | 17 | 7.4 | 5.6 | 4.0 | *5.3 |
| 28 | 7.4 | *6.2 | | | | 5.6 | 8.4 | 16 | 7.4 | 5.0 | 3.8 | *5.3 |
| 29 | 7.4 | *5.9 | | | | 5.6 | 8.4 | 16 | 7.1 | 4.8 | 3.6 | 5.3 |
| 30 | 7.4 | *5.4 | | | | 5.3 | 8.4 | 15 | 6.8 | 4.8 | 3.8 | 5.3 |
| 31 | 7.4 | | | | | 5.6 | | 14 | | 5.0 | 3.8 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 7.7 | 7.1 | 7.51 | 462 | | |
| November | | | | | | | 7.4 | 4.6 | 6.81 | 405 | | |
| December | | | | | | | | | *5.4 | 332 | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | 6.8 | 5.3 | 5.78 | 356 | | |
| April | | | | | | | 9.6 | 5.0 | 6.38 | 390 | | |
| May | | | | | | | 28 | 8.0 | 16.1 | 991 | | |
| June | | | | | | | 12 | 6.8 | 9.71 | 578 | | |
| July | | | | | | | 27 | 4.0 | 6.38 | 392 | | |
| August | | | | | | | 4.8 | 3.4 | 3.90 | 240 | | |
| September | | | | | | | 10 | 3.6 | 4.68 | 276 | | |

*Estimated.

Bull Lake Creek near Lenore, Wyo.

Location.- Water-stage recorder near north line of sec. 17, T. 3 N., R. 2 W., a quarter of a mile above mouth and 14 miles southeast of Lenore.

Drainage area.- 222 square miles.

Records available.- 1909 (discharge measurements only), May 1918 to September 1934.

Average discharge.- 16 years, 310 second-feet.

Extremes.- Maximum discharge during year, 770 second-feet May 29 (gage height, 5.29 feet); minimum, 8.6 second-feet Dec. 17 (gage height, 3.17 feet).
1918-34: Maximum discharge, 3,990 second-feet June 16, 1918 (gage height, 4.3 feet, old datum); minimum, that of Dec. 17, 1934.

Remarks.- Records fair except those estimated and those for periods of ice effect, Dec. 5, 15-16, which were based on scattering gage heights, and temperature records. Two small ditches divert above station. Natural storage at Bull Lake. Gage-height record furnished by U. S. Bureau of Reclamation.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|-----|
| 1 | 106 | 34 | 18 | 15 | *13 | *14 | *18 | 318 | 655 | 333 | 475 | 240 | |
| 2 | 100 | 34 | 18 | | | | 17 | 304 | 566 | 342 | 485 | 240 | |
| 3 | 97 | 34 | 18 | | | | *17 | 309 | 490 | 352 | 465 | 228 | |
| 4 | 97 | 33 | 18 | | | | *16 | 304 | 430 | 362 | 430 | 213 | |
| 5 | 91 | 42 | 16 | *15 | 13 | 14 | *16 | 323 | 381 | 395 | 405 | 195 | |
| 6 | 91 | 31 | 21 | 15 | *14 | *13 | *16 | 376 | 347 | 415 | 405 | 191 | |
| 7 | 91 | 32 | 18 | | | | | *18 | 480 | 342 | 420 | 410 | 191 |
| 8 | 91 | 34 | 26 | | | | | *22 | 634 | 309 | 371 | 410 | 188 |
| 9 | 94 | 32 | 14 | | | | | 25 | 690 | 323 | 352 | 410 | 188 |
| 10 | 94 | 31 | 15 | | | | *26 | 655 | 328 | 338 | 410 | 181 | |
| 11 | 91 | 31 | 14 | *13 | 14 | 14 | *30 | 608 | 333 | 328 | 460 | 164 | |
| 12 | 91 | 30 | 14 | | | | *36 | 590 | 342 | 328 | 495 | 144 | |
| 13 | 91 | 30 | 14 | | | | *40 | 648 | 357 | 328 | 480 | 131 | |
| 14 | 88 | 28 | 14 | | | | *48 | 608 | 376 | 338 | 450 | 118 | |
| 15 | 85 | 27 | 12 | 13 | *14 | *18 | *47 | 548 | 405 | 342 | 420 | 109 | |
| 16 | 82 | 26 | 10 | | | | *46 | 524 | 400 | 342 | 410 | 109 | |
| 17 | 79 | 26 | 9 | | | | 46 | 536 | 405 | 342 | 390 | 106 | |
| 18 | 64 | 26 | *10 | | | | 46 | 578 | 425 | 352 | 366 | 103 | |
| 19 | 61 | 25 | *11 | *12 | 13 | 21 | 46 | 627 | 430 | 362 | 366 | 94 | |
| 20 | 61 | 24 | *12 | | | | 49 | 676 | 435 | 357 | 352 | 91 | |
| 21 | 53 | 24 | *13 | 14 | *13 | *21 | 58 | 683 | 430 | 362 | 328 | 91 | |
| 22 | 51 | 23 | *13 | | | | 82 | 698 | 400 | 405 | 318 | 88 | |
| 23 | 51 | 22 | *14 | | | | 103 | 683 | 366 | 465 | 295 | 79 | |
| 24 | 51 | 22 | *14 | | | | 140 | 683 | 342 | 480 | 282 | 79 | |
| 25 | 49 | 22 | 14 | | | | 206 | 683 | 328 | 480 | 278 | 65 | |
| 26 | 44 | 21 | *15 | | 14 | 19 | 318 | 698 | 347 | 490 | 273 | 82 | |
| 27 | 44 | 20 | *16 | *12 | 14 | | 338 | 706 | 328 | 495 | 264 | 76 | |
| 28 | 42 | 19 | *14 | | 14 | | 333 | 714 | 342 | 470 | 264 | *76 | |
| 29 | 40 | 19 | *12 | 12 | | *20 | 318 | 714 | 333 | 455 | 256 | *76 | |
| 30 | 35 | 19 | *13 | *12 | | | 318 | 698 | 333 | 445 | 248 | *75 | |
| 31 | 35 | | *14 | *12 | | | | 698 | | 450 | 244 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | | 106 | 35 | 72.3 | 4,440 | | | |
| November | | | | | | | 42 | 19 | 27.4 | 1,630 | | | |
| December | | | | | | | 28 | 9 | 14.7 | 804 | | | |
| January | | | | | | | | | 13.2 | 809 | | | |
| February | | | | | | | | | 13.6 | 754 | | | |
| March | | | | | | | | | 16.9 | 1,040 | | | |
| April | | | | | | | 338 | 16 | 94.6 | 5,630 | | | |
| May | | | | | | | 714 | 304 | 580 | 35,690 | | | |
| June | | | | | | | 655 | 309 | 388 | 23,060 | | | |
| July | | | | | | | 495 | 328 | 390 | 23,990 | | | |
| August | | | | | | | 495 | 244 | 372 | 22,900 | | | |
| September | | | | | | | 240 | 75 | 134 | 8,000 | | | |
| The year | | | | | | | 714 | 9 | 178 | 128,800 | | | |

*Estimated.

Little Wind River near Fort Washakie, Wyo.

Location.- Water-stage recorder in SE $\frac{1}{4}$ sec. 1, T. 1 S., R. 2 W., above Ray ditch and 8 miles above mouth of North Fork, at Fort Washakie.

Drainage area.- 118 square miles.

Records available.- May 1921 to September 1934.

Average discharge.- 15 years, 128 second-feet.

Extremes.- Maximum discharge during year (estimated), 430 second-feet May 8; minimum, 9.0 second-feet Dec. 5, 15 (gage height, 0.63 foot).
1921-33: Maximum discharge, 5,220 second-feet July 9, 1926 (gage height, 7.59 feet); minimum, that of Dec. 5, 15, 1934.

Remarks.- Records good except those estimated, Dec. 17-31, Mar. 1-8, 18-23, Apr. 15-20, May 6-11. No records Jan. 1 to Feb. 28. Water diverted for irrigation above station. Gage-height record furnished by the U. S. Indian Service.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | 43 | 24 | 16 | | | | 20 | 164 | 192 | 92 | 56 | 31 |
| 2 | 41 | 25 | 17 | | | | 19 | 162 | 173 | 89 | 54 | 32 |
| 3 | 40 | 24 | 17 | | | 14 | 20 | 146 | 157 | 85 | 50 | 35 |
| 4 | 39 | 28 | 14 | | | | 20 | 176 | 141 | 87 | 49 | 33 |
| 5 | 38 | 22 | 16 | | | | 22 | 238 | 128 | 97 | 51 | 31 |
| 6 | 36 | 24 | 17 | | | | 22 | 210 | 124 | 97 | 52 | 31 |
| 7 | 38 | 26 | 18 | | | 16 | 25 | 420 | 127 | 92 | 52 | 29 |
| 8 | 37 | 27 | 16 | | | | 31 | 460 | 136 | 85 | 57 | 31 |
| 9 | 36 | 26 | 18 | | | 16 | 41 | 430 | 150 | 78 | 64 | 40 |
| 10 | 36 | 26 | 18 | | | 17 | 44 | 350 | 124 | 70 | 76 | 46 |
| 11 | 35 | 26 | 18 | | | 17 | 42 | 310 | 125 | 73 | 87 | 47 |
| 12 | 34 | 25 | 16 | | | 16 | 52 | 325 | 125 | 69 | 82 | 43 |
| 13 | 34 | 24 | 17 | | | 16 | 70 | 264 | 127 | 67 | 75 | 39 |
| 14 | 32 | 24 | 17 | | | 16 | 72 | 234 | 132 | 63 | 67 | 37 |
| 15 | 31 | 22 | 14 | | | 16 | 72 | 241 | 143 | 63 | 63 | 36 |
| 16 | 31 | 22 | 13 | | | 18 | 74 | 277 | 151 | 60 | 64 | 35 |
| 17 | 28 | 22 | | | | 19 | 76 | 298 | 152 | 58 | 63 | 33 |
| 18 | 28 | 21 | | | | 18 | 80 | 309 | 148 | 56 | 61 | 30 |
| 19 | 28 | 21 | 14 | | | 17 | 82 | 325 | 152 | 55 | 57 | 28 |
| 20 | 28 | 21 | | | | 17 | 86 | 321 | 154 | 54 | 51 | 29 |
| 21 | 26 | 18 | | | | 16 | 94 | 298 | 140 | 54 | 46 | 27 |
| 22 | 22 | 21 | | | | 16 | 125 | 274 | 143 | 58 | 44 | 26 |
| 23 | 26 | 21 | | | | 16 | 146 | 270 | 127 | 61 | 41 | 27 |
| 24 | 26 | 21 | | | | 15 | 162 | 260 | 120 | 63 | 40 | 29 |
| 25 | 26 | 20 | | | | 16 | 180 | 264 | 120 | 66 | 38 | 31 |
| 26 | 25 | 18 | 16 | | | 18 | 173 | 260 | 116 | 66 | 36 | 31 |
| 27 | 24 | 20 | | | | 17 | 165 | 241 | 108 | 63 | 34 | 31 |
| 28 | 24 | 19 | | | | 17 | 167 | 248 | 101 | 60 | 34 | 30 |
| 29 | 24 | 20 | | | | 18 | 164 | 238 | 94 | 56 | 32 | 30 |
| 30 | 24 | 17 | | | | 20 | 170 | 227 | 94 | 56 | 32 | 29 |
| 31 | 24 | | | | | 20 | | 210 | | 57 | 32 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 43 | 22 | 31.2 | 1,920 | | | |
| November | | | | | | 28 | 17 | 22.5 | 1,340 | | | |
| December | | | | | | 18 | 13 | 16.0 | 984 | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | 20 | | 16.5 | 1,010 | | | |
| April | | | | | | 180 | 19 | 83.9 | 4,990 | | | |
| May | | | | | | 460 | 148 | 276 | 16,960 | | | |
| June | | | | | | 192 | 94 | 133 | 7,940 | | | |
| July | | | | | | 97 | 54 | 69.4 | 4,260 | | | |
| August | | | | | | 87 | 32 | 53.6 | 3,290 | | | |
| September | | | | | | 47 | 26 | 32.8 | 1,950 | | | |

North Fork of Little Wind River at Fort Washakie, Wyo.

Location.- Water-stage recorder in SW $\frac{1}{4}$ sec. 33, T. 1 N.. R. 1 W., at Fort Washakie, a quarter of a mile above mouth.

Drainage area.- 127 square miles.

Records available.- May 1921 to September 1934.

Average discharge.- 13 years, 124 second-feet.

Extremes.- Maximum discharge during year, 410 second-feet May 8 (gage height, 2.12 feet); minimum not determined, occurred during winter.
1921-34: Maximum discharge, 2,840 second-feet July 9, 1926 (gage height, 4.85 feet); minimum, 16 second-feet Jan. 9, 1922, from current-meter measurement.

Remarks.- Records good except those for estimated periods, Oct. 13, 29, Nov. 12, 14-17, Dec. 17-31, Mar. 1-8, 10-16, Apr. 1-6, 15-20, 22-27, Aug. 31 to Sept. 3. No records Jan. 1 to Feb. 28. Water diverted for irrigation above station. Gage-height record furnished by U. S. Indian Service.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 40 | 28 | 28 | | | | | 146 | 190 | 73 | 40 | 29 |
| 2 | 38 | 28 | 28 | | | | | 145 | 179 | 72 | 38 | 29 |
| 3 | 38 | 28 | 28 | | | 18 | 26 | 144 | 161 | 72 | 38 | 30 |
| 4 | 36 | 28 | 28 | | | | | 153 | 144 | 72 | 38 | 29 |
| 5 | 34 | 28 | 28 | | | | | 181 | 127 | 72 | 38 | 29 |
| 6 | 34 | 28 | 28 | | | | 28 | 264 | 116 | 72 | 39 | 29 |
| 7 | 32 | 28 | 28 | | | 22 | 34 | 370 | 110 | 70 | 39 | 30 |
| 8 | 32 | 28 | 28 | | | | 36 | 394 | 112 | 70 | 38 | 30 |
| 9 | 32 | 28 | 28 | | | 22 | 38 | 374 | 116 | 69 | 39 | 36 |
| 10 | 32 | 28 | 28 | | | 22 | 36 | 322 | 114 | 69 | 43 | 34 |
| 11 | 31 | 28 | 28 | | | | 37 | 294 | 112 | 63 | 44 | 32 |
| 12 | 30 | 28 | 28 | | | | 48 | 302 | 108 | 55 | 46 | 32 |
| 13 | 30 | 28 | 28 | | | 23 | 50 | 310 | 104 | 52 | 47 | 31 |
| 14 | 30 | 28 | 28 | | | | 48 | 290 | 102 | 50 | 47 | 30 |
| 15 | 30 | 28 | 28 | | | | 48 | 280 | 127 | 48 | 49 | 30 |
| 16 | 29 | 28 | 28 | | | 24 | 45 | 243 | 123 | 45 | 48 | 30 |
| 17 | 28 | 28 | 28 | | | 24 | 40 | 246 | 125 | 44 | 47 | 30 |
| 18 | 28 | 28 | 28 | | | 24 | 40 | 257 | 119 | 42 | 46 | 30 |
| 19 | 28 | 27 | 24 | | | 24 | 44 | 275 | 116 | 39 | 47 | 30 |
| 20 | 28 | 27 | | | | 26 | 46 | 286 | 116 | 38 | 46 | 30 |
| 21 | 27 | 27 | | | | 24 | 48 | 286 | 114 | 39 | 44 | 29 |
| 22 | 27 | 26 | | | | 24 | 65 | 275 | 112 | 39 | 43 | 29 |
| 23 | 27 | 26 | 26 | | | 24 | 90 | 264 | 106 | 39 | 42 | 29 |
| 24 | 26 | 26 | | | | 24 | 130 | 260 | 104 | 43 | 40 | 29 |
| 25 | 26 | 26 | | | | 24 | 170 | 250 | 98 | 47 | 38 | 29 |
| 26 | 26 | 26 | | | | 24 | 150 | 240 | 89 | 47 | 38 | 29 |
| 27 | 26 | 27 | | | | 24 | 140 | 236 | 86 | 46 | 35 | 29 |
| 28 | 26 | 27 | 28 | | | 24 | 144 | 227 | 81 | 45 | 33 | 29 |
| 29 | 27 | 27 | | | | 24 | 144 | 220 | 79 | 44 | 31 | 29 |
| 30 | 28 | 27 | | | | 24 | 148 | 217 | 73 | 44 | 30 | 29 |
| 31 | 28 | | | | | 24 | | 205 | | 44 | 30 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 40 | 26 | 30.1 | 1,850 | | |
| November | | | | | | | 28 | 26 | 27.4 | 1,630 | | |
| December | | | | | | | | | 27.2 | 1,670 | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | 26 | | 22.6 | 1,390 | | |
| April | | | | | | | 170 | | 65.9 | 3,920 | | |
| May | | | | | | | 394 | 144 | 256 | 15,750 | | |
| June | | | | | | | 190 | 73 | 115 | 6,870 | | |
| July | | | | | | | 73 | 38 | 53.7 | 3,300 | | |
| August | | | | | | | 49 | 30 | 40.7 | 2,500 | | |
| September | | | | | | | 36 | 29 | 30.0 | 1,790 | | |

Greybull River near Basin, Wyo.

Location.- Chain gage in sec. 17, T. 51 N., R. 94 W., 8 miles west of Basin.

Drainage area.- 1,130 square miles.

Records available.- April 1930 to September 1934.

Extremes.- Maximum discharge during year, 834 second-feet Apr. 7 (gage height, 3.31 feet); no flow at times.
1930-34: Maximum discharge, 3,120 second-feet June 8, 1931 (gage height, 6.4 feet); no flow at times during 1931, 1932, 1934.

Remarks.- Records good except those estimated. Estimates Dec. 2 to Mar. 17 based on two discharge measurements and temperature records. Numerous diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 0.6 | 7.5 | 83 | | | | 6.0 | 29 | 0.4 | 1.8 | 9.9 | 6.3 |
| 2 | .2 | 7.5 | | | | | 5.4 | 38 | .4 | 0 | .8 | 2.5 |
| 3 | 0 | 8.1 | | | | | 5.7 | 27 | .4 | .2 | 3.6 | 4.5 |
| 4 | 0 | 12 | | | | | 6.0 | 10 | 1.8 | 1.2 | 4.5 | 6.6 |
| 5 | 0 | 21 | | | | | 23 | 4.5 | 13 | 6.6 | 5.1 | 7.5 |
| 6 | 0 | 26 | | | | | 494 | 47 | 19 | 3.6 | .8 | 2.0 |
| 7 | 0 | 39 | | | | | 810 | 475 | 17 | .1 | .4 | .2 |
| 8 | 0 | 38 | | | | | 104 | 424 | 6.0 | .2 | .1 | 4.2 |
| 9 | 0 | 54 | | | | | 83 | 144 | 16 | .4 | 0 | 5.7 |
| 10 | 0 | 59 | | | | | 54 | 9.0 | 4.2 | 0 | 3.6 | 4.5 |
| 11 | 0 | 62 | | | | | 67 | 4.2 | 3.3 | 0 | 4.5 | 5.4 |
| 12 | 0 | 71 | | | | | 112 | 4.2 | 18 | .1 | 2.2 | .2 |
| 13 | 0 | 79 | | | | | 181 | 10 | 3.6 | .5 | .4 | 0 |
| 14 | 0 | 94 | | | | | 284 | .8 | .8 | 5.1 | 1.8 | 0 |
| 15 | 0 | 125 | | | | | 62 | .2 | 27 | 0 | .5 | 0 |
| 16 | | 127 | | | | | 15 | .2 | 6.9 | 0 | 5.1 | 0 |
| 17 | | 127 | | | | | 10 | 6.9 | 12 | .2 | 2.0 | 0 |
| 18 | *1.0 | 127 | | | | | 6.3 | 3.9 | 12 | .4 | 1.0 | 0 |
| 19 | | 125 | | | | | 5.1 | 3.3 | 3.9 | 50 | 6.3 | 1.8 |
| 20 | | 127 | | | | | 4.5 | 3.0 | 2.0 | 39 | 4.2 | 1.0 |
| 21 | | 130 | | | †49 | | 4.5 | 2.8 | 16 | 16 | 3.6 | .3 |
| 22 | | 123 | | | | | 3.6 | 2.8 | 8.1 | 2.5 | 0 | .2 |
| 23 | *3.0 | 121 | | †107 | | | 3.3 | 9.0 | 4.2 | 0 | 10 | .2 |
| 24 | | 110 | | | | | 3.3 | 31 | 9.3 | 0 | 14 | .8 |
| 25 | | 102 | | | | | 3.3 | 15 | 23 | 0 | 9.0 | 3.3 |
| 26 | | 98 | | | | | 3.9 | 230 | 6.3 | 0 | 13 | 5.9 |
| 27 | | 90 | | | | | 4.2 | 38 | 1.2 | 0 | .5 | 2.8 |
| 28 | *5.0 | 87 | | | | | 5.1 | 20 | .8 | 0 | 0 | 2.0 |
| 29 | | 85 | | | | | 5.7 | 17 | 6.6 | 0 | 0 | .4 |
| 30 | | 83 | | | | | 43 | 22 | .4 | 0 | .4 | 1.8 |
| 31 | | | | | | | 12 | 2.5 | | 12 | 6.4 | 1.8 |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | 0 | 1.64 | 101 | | |
| November | | | | | | | 130 | 7.5 | 78.8 | 4,690 | | |
| December | | | | | | | | | *100 | 6,150 | | |
| January | | | | | | | | | *90 | 5,530 | | |
| February | | | | | | | | | *65 | 3,610 | | |
| March | | | | | | | | | 20.4 | 1,260 | | |
| April | | | | | | | 810 | 2.8 | 90.4 | 5,380 | | |
| May | | | | | | | 473 | .2 | 43.0 | 2,640 | | |
| June | | | | | | | 50 | 0 | 8.98 | 534 | | |
| July | | | | | | | 14 | 0 | 3.09 | 190 | | |
| August | | | | | | | 9.9 | 0 | 2.20 | 135 | | |
| September | | | | | | | 18 | 0 | 3.38 | 201 | | |
| The year | | | | | | | 810 | 0 | 42.0 | 30,420 | | |

*Estimated. †Discharge measurement.

Bench Canal near Burlington, Wyo.

Location.- Staff gage in sec. 8, T. 51 N., R. 97 W., 200 yards below head gate and 7 miles southwest of Burlington.

Records available.- April 1930 to August 1934.

Extremes.- Maximum discharge during year, 180 second-feet May 8, 9 (gage height, 1.5 feet); no flow during winter.
1930-33: Maximum discharge, 203 second-feet July 8, 1932 (gage height, 1.66 feet) and June 28 to July 5, 1933 (gage height, 1.5 feet); no flow for long periods each year.

Remarks.- Records fair. Discharge estimated Apr. 1-8, July 16-21, Aug. 12. No records Oct. 1 to Mar. 30, Aug. 14 to Sept. 30. Complete regulation at head gate. Gage-height record furnished by Bench Canal Co. Canal diverts water from Greybull River for irrigation of 10,000 to 15,000 acres around Burlington.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | | | | | | | 24 | 77 | 89 | 24 | 18 | |
| 2 | | | | | | | 24 | 77 | 38 | 24 | 8.0 | |
| 3 | | | | | | | 24 | 77 | 29 | 23 | 8.0 | |
| 4 | | | | | | | 24 | 83 | 32 | 22 | 8.0 | |
| 5 | | | | | | | 24 | 89 | 32 | 28 | 8.0 | |
| 6 | | | | | | | 28 | 102 | 32 | 30 | 8.0 | |
| 7 | | | | | | | 35 | 132 | 67 | 30 | 8.0 | |
| 8 | | | | | | | 50 | 172 | 93 | 24 | 8.0 | |
| 9 | | | | | | | 77 | 172 | 72 | 14 | 8.0 | |
| 10 | | | | | | | 72 | 102 | 57 | 9.6 | 31 | |
| 11 | | | | | | | 77 | 57 | 46 | 8.8 | 19 | |
| 12 | | | | | | | 98 | 82 | 62 | 9.6 | 12 | |
| 13 | | | | | | | 118 | 55 | 112 | 8.8 | 6.5 | |
| 14 | | | | | | | 98 | 30 | 110 | 8.8 | | |
| 15 | | | | | | | 89 | 25 | 117 | 9.6 | | |
| 16 | | | | | | | 102 | 52 | 110 | 5.0 | | |
| 17 | | | | | | | 99 | 102 | 117 | 5.0 | | |
| 18 | | | | | | | 77 | 132 | 89 | 5.0 | | |
| 19 | | | | | | | 74 | 110 | 96 | 5.0 | | |
| 20 | | | | | | | 89 | 89 | 77 | 5.0 | | |
| 21 | | | | | | | 96 | 128 | 72 | 5.0 | | |
| 22 | | | | | | | 88 | 130 | 72 | 11 | | |
| 23 | | | | | | | 67 | 128 | 72 | 9.6 | | |
| 24 | | | | | | | 78 | 132 | 77 | 10 | | |
| 25 | | | | | | | 110 | 132 | 52 | 54 | | |
| 26 | | | | | | | 132 | 132 | 32 | 85 | | |
| 27 | | | | | | | 105 | 132 | 32 | 48 | | |
| 28 | | | | | | | 102 | 132 | 32 | 8.0 | | |
| 29 | | | | | | | 77 | 132 | 28 | 8.0 | | |
| 30 | | | | | | | 77 | 132 | 24 | 8.8 | | |
| 31 | | | | | | 24 | 77 | 132 | | 20 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | 132 | 24 | 74.5 | 4,430 | | |
| May | | | | | | | 172 | 25 | 104 | 6,420 | | |
| June | | | | | | | 117 | 24 | 65.7 | 3,910 | | |
| July | | | | | | | 85 | 5.0 | 18.3 | 1,120 | | |
| August 1-13 | | | | | | | 31 | 6.5 | 11.6 | 299 | | |
| September | | | | | | | | | | | | |
| The period | | | | | | | | | | 15,180 | | |

Shoshone River below Shoshone Reservoir, Wyo.

Location.- Water-stage recorder in lot 76, T. 52 N., R. 102 W., about $4\frac{1}{2}$ miles west of Cody.

Drainage area.- 1,470 square miles.

Records available.- January 1921 to September 1934.

Average discharge.- 14 years, 1,270 second-feet.

Extremes.- Maximum discharge during year, 2,060 second-feet June 21 (gage height, 3.20 feet); minimum, 14 second-feet Nov. 19 (gage height, -0.50 foot).

Remarks.- No diversions between station and Shoshone Dam. Flow completely regulated by storage in Shoshone Reservoir; capacity, 456,000 acre-feet. Complete records furnished by U. S. Bureau of Reclamation.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|-------|----------------------|-------|-------|-------|
| 1 | 269 | 383 | 190 | 155 | 175 | 200 | 361 | 1,240 | 1,400 | 1,760 | 1,140 | 927 |
| 2 | 336 | 383 | 190 | 172 | 175 | 194 | 361 | 1,250 | 1,470 | 1,730 | 1,130 | 886 |
| 3 | 344 | 292 | 175 | 175 | 175 | 200 | 344 | 1,250 | 1,520 | 1,680 | 1,150 | 852 |
| 4 | 348 | 203 | 190 | 175 | 169 | 190 | 344 | 1,250 | 1,530 | 1,630 | 1,280 | 852 |
| 5 | 353 | 190 | 190 | 175 | 178 | 206 | 353 | 1,360 | 1,550 | 1,630 | 1,250 | 852 |
| 6 | 353 | 197 | 187 | 172 | 181 | 206 | 411 | 1,450 | 1,500 | 1,610 | 1,240 | 852 |
| 7 | 353 | 190 | 178 | 178 | 181 | 200 | 420 | 1,470 | 1,560 | 1,590 | 1,280 | 852 |
| 8 | 340 | 197 | 178 | 187 | 184 | 190 | 440 | 1,470 | 1,590 | 1,520 | 1,290 | 852 |
| 9 | 357 | 190 | 190 | 184 | 184 | 197 | 521 | 1,470 | 1,610 | 1,500 | 1,400 | 832 |
| 10 | 361 | 190 | 178 | 187 | 176 | 194 | 722 | 1,470 | 1,650 | 1,510 | 1,490 | 852 |
| 11 | 361 | 190 | 197 | 178 | 158 | 178 | 703 | 1,470 | 1,690 | 1,510 | 1,520 | 792 |
| 12 | 361 | 178 | 187 | 184 | 169 | 197 | 685 | 1,470 | 1,610 | 1,480 | 1,480 | 766 |
| 13 | 361 | 194 | 184 | 166 | 172 | 203 | 679 | 1,470 | 1,630 | 1,480 | 1,460 | 772 |
| 14 | 361 | 200 | 184 | 184 | 178 | 203 | 685 | 1,470 | 1,710 | 1,530 | 1,400 | 772 |
| 15 | 353 | 197 | 190 | 181 | 172 | 206 | 685 | 1,470 | 1,760 | 1,470 | 1,390 | 760 |
| 16 | 361 | 197 | 194 | 181 | 175 | 212 | 685 | 1,490 | 1,810 | 1,460 | 1,370 | 753 |
| 17 | 383 | 203 | 184 | 161 | 172 | 209 | 798 | 1,490 | 1,860 | 1,520 | 1,330 | 760 |
| 18 | 387 | 123 | 187 | 175 | 164 | 197 | 1,010 | 1,480 | 1,910 | 1,610 | 1,400 | 760 |
| 19 | 383 | 14 | 178 | 175 | 172 | 203 | 1,010 | 1,460 | 1,960 | 1,600 | 1,370 | 760 |
| 20 | 383 | 187 | 187 | 175 | 169 | 206 | 1,040 | 1,520 | 2,020 | 1,580 | 1,360 | 526 |
| 21 | 379 | 219 | 187 | 166 | 175 | 209 | 1,100 | 1,520 | 2,030 | 1,540 | 1,340 | 495 |
| 22 | 374 | 258 | 184 | 175 | 181 | 216 | 1,100 | 1,520 | 2,030 | 1,490 | 1,250 | 597 |
| 23 | 387 | 361 | 187 | 175 | 181 | 212 | 1,130 | 1,510 | 2,000 | 1,520 | 1,190 | 747 |
| 24 | 387 | 187 | 166 | 172 | 178 | 216 | 1,190 | 1,440 | 1,980 | 1,530 | 1,140 | 740 |
| 25 | 387 | 187 | 166 | 175 | 178 | 209 | 1,250 | 1,440 | 1,960 | 1,530 | 1,060 | 740 |
| 26 | 383 | 161 | 172 | 175 | 178 | 216 | 1,230 | 1,400 | 1,960 | 1,580 | 1,040 | 710 |
| 27 | 383 | 197 | 172 | 175 | 175 | 216 | 1,220 | 1,460 | 1,920 | 1,490 | 1,040 | 673 |
| 28 | 387 | 194 | 172 | 161 | 190 | 284 | 1,210 | 1,420 | 1,880 | 1,400 | 1,040 | 673 |
| 29 | 370 | 190 | 161 | 169 | 169 | 365 | 1,230 | 1,500 | 1,860 | 1,170 | 1,040 | 673 |
| 30 | 387 | 169 | 161 | 175 | 175 | 370 | 1,240 | 1,560 | 1,820 | 1,170 | 1,020 | 667 |
| 31 | 387 | | 92 | 175 | | 374 | | 1,400 | | 1,160 | 970 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 387 | 269 | 365 | 22,450 | | | |
| November | | | | | | 383 | 14 | 207 | 12,340 | | | |
| December | | | | | | 197 | 92 | 179 | 10,980 | | | |
| January | | | | | | 187 | 155 | 175 | 10,780 | | | |
| February | | | | | | 190 | 168 | 176 | 9,750 | | | |
| March | | | | | | 374 | 178 | 222 | 13,540 | | | |
| April | | | | | | 1,250 | 344 | 805 | 47,810 | | | |
| May | | | | | | 1,560 | 1,240 | 1,440 | 88,540 | | | |
| June | | | | | | 2,030 | 1,400 | 1,759 | 104,700 | | | |
| July | | | | | | 1,760 | 1,160 | 1,515 | 93,180 | | | |
| August | | | | | | 1,520 | 970 | 1,256 | 77,220 | | | |
| September | | | | | | 927 | 495 | 758 | 45,110 | | | |
| The year | | | | | | 2,030 | 14 | 741 | 536,600 | | | |

Shoshone River at Byron, Wyo.

Location.- Water-stage recorder in sec. 34, T. 56 N., R. 97 W., at Byron.

Drainage area.- 2,300 square miles.

Records available.- January 1929 to September 1934.

Extremes.- Maximum discharge during year, 4,030 second-feet Aug. 10 (gage height, 3.78 feet); minimum daily discharge, 123 second-feet Apr. 6.
1929-33: Maximum discharge, about 13,900 second-feet June 25, 1932 (gage height, 6.45 feet); minimum, 29 second-feet Feb. 14, 1932, from discharge measurement.

Remarks.- Records good except those for periods of ice effect, Nov. 4-7, 12-14, Dec. 5-8, 12-19, Dec. 24 to Jan. 19, Feb. 22 to Mar. 2, which were estimated on basis of one discharge measurement and temperature records, and those estimated Oct. 2-4, 25-28. Water diverted for irrigation above station. Flow regulated by Shoshone Reservoir.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|-------|----------------------|-------|-------|
| 1 | 449 | 305 | 332 | 310 | 189 | 280 | 332 | 352 | 403 | 650 | 485 | 485 |
| 2 | 449 | 286 | 359 | | 153 | 310 | 325 | 352 | 396 | 640 | 467 | 580 |
| 3 | 449 | 305 | 352 | | 280 | 292 | 189 | 359 | 512 | 600 | 396 | 521 |
| 4 | 449 | 310 | 325 | | 312 | 286 | 147 | 346 | 710 | 660 | 366 | 494 |
| 5 | 449 | 276 | 310 | | 286 | 280 | 157 | 332 | 660 | 763 | 476 | 458 |
| 6 | 418 | 300 | 315 | 290 | 298 | 298 | 123 | 449 | 774 | 900 | 467 | 476 |
| 7 | 418 | 325 | 352 | | 312 | 292 | 150 | 540 | 1,780 | 720 | 396 | 458 |
| 8 | 458 | 352 | 332 | | 312 | 286 | 153 | 521 | 1,360 | 720 | 381 | 485 |
| 9 | 433 | 346 | 332 | | 312 | 286 | 170 | 467 | 1,240 | 640 | 359 | 512 |
| 10 | 440 | 312 | 332 | | 305 | 274 | 189 | 425 | 1,180 | 540 | 852 | 503 |
| 11 | 449 | 332 | 332 | 300 | 286 | 286 | 388 | 418 | 1,190 | 467 | 1,150 | 476 |
| 12 | 433 | 337 | 325 | | 274 | 262 | 381 | 468 | 1,270 | 440 | 960 | 403 |
| 13 | 458 | 342 | 320 | | 292 | 312 | 305 | 550 | 1,110 | 398 | 924 | 373 |
| 14 | 476 | 347 | 320 | | 298 | 280 | 298 | 570 | 1,090 | 388 | 900 | 359 |
| 15 | 560 | 352 | 320 | | 298 | 256 | 339 | 521 | 1,260 | 418 | 829 | 396 |
| 16 | 512 | 332 | 315 | 310 | 292 | 256 | 332 | 512 | 1,470 | 381 | 710 | 403 |
| 17 | 741 | 339 | 315 | | 298 | 262 | 250 | 495 | 1,440 | 356 | 580 | 403 |
| 18 | 774 | 332 | 318 | | 292 | 250 | 305 | 449 | 1,420 | 433 | 512 | 403 |
| 19 | 752 | 286 | 325 | | 286 | 233 | 433 | 425 | 1,660 | 512 | 521 | 373 |
| 20 | 730 | 189 | 318 | | 298 | 216 | 332 | 468 | 1,650 | 503 | 550 | 410 |
| 21 | 650 | 306 | 318 | 298 | 286 | 195 | 282 | 530 | 1,580 | 467 | 550 | 359 |
| 22 | 512 | 359 | 325 | 292 | 325 | 181 | 280 | 467 | 1,490 | 467 | 580 | 312 |
| 23 | 512 | 418 | 325 | 318 | 310 | 195 | 318 | 467 | 1,350 | 459 | 503 | 352 |
| 24 | 476 | 467 | 320 | 312 | 286 | 199 | 222 | 550 | 1,290 | 553 | 560 | 580 |
| 25 | 430 | 318 | 310 | 318 | 230 | 189 | 233 | 570 | 1,210 | 829 | 485 | 796 |
| 26 | 400 | 305 | 290 | 305 | 180 | 181 | 359 | 449 | 1,060 | 996 | 425 | 720 |
| 27 | 370 | 286 | 300 | 305 | 220 | 184 | 318 | 465 | 956 | 960 | 440 | 720 |
| 28 | 340 | 318 | 306 | 292 | 240 | 132 | 298 | 503 | 807 | 864 | 467 | 720 |
| 29 | 312 | 332 | 310 | 268 | | 174 | 318 | 710 | 710 | 840 | 433 | 660 |
| 30 | 373 | 332 | 315 | 286 | | 286 | 352 | 449 | 660 | 936 | 512 | 570 |
| 31 | 403 | | 326 | 292 | | 339 | | 503 | | 630 | 590 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 774 | 312 | 486 | 29,900 | | |
| November | | | | | | | 467 | 189 | 325 | 19,330 | | |
| December | | | | | | | 359 | 290 | 322 | 19,820 | | |
| January | | | | | | | 325 | 268 | 302 | 18,550 | | |
| February | | | | | | | 325 | 153 | 277 | 15,370 | | |
| March | | | | | | | 359 | 132 | 260 | 15,360 | | |
| April | | | | | | | 433 | 123 | 276 | 16,380 | | |
| May | | | | | | | 710 | 332 | 474 | 23,120 | | |
| June | | | | | | | 1,780 | 396 | 1,122 | 66,760 | | |
| July | | | | | | | 996 | 359 | 615 | 37,830 | | |
| August | | | | | | | 1,150 | 359 | 575 | 35,360 | | |
| September | | | | | | | 796 | 312 | 492 | 29,280 | | |
| The year | | | | | | | 1,790 | 123 | 460 | 333,100 | | |

Tongue River near Decker, Mont.

Location.- Water-stage recorder in sec. 23, T. 9 S., R. 40 E., 1½ miles east of Decker and 2 miles north of Wyoming State line. Prior to Sept. 11, 1934, chain gage at same location. Datum lowered 1.00 foot Aug. 9, 1934.

Drainage area.- 1,610 square miles.

Records available.- April 1928 to September 1934.

Extremes.- Maximum discharge during year, 596 second-feet May 10 (gage height, 3.12 feet, present datum); minimum, 2.9 second-feet Aug. 20, 21 (gage height, 0.75 foot, present datum).
1928-34: Maximum discharge, 7,220 second-feet June 2, 1929 (gage height, 9.25 feet, present datum); minimum, that of Aug. 20, 21, 1934.

Remarks.- Records good except those for periods of ice effect, Dec. 1 to Mar. 8, Mar. 18-19, which were estimated on basis of one discharge measurement and temperature records, and those estimated for Sept. 12-30. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | 168 | 236 | | | | 160 | 160 | 422 | 100 | 62 | 7.4 | 7.0 |
| 2 | 151 | 239 | | | | 155 | 165 | 426 | 84 | 51 | 7.4 | 7.4 |
| 3 | 163 | 242 | | | | 180 | 163 | 400 | 86 | 38 | 5.8 | 9.0 |
| 4 | 180 | 233 | | | | 155 | 175 | 375 | 104 | 27 | 5.8 | 10 |
| 5 | 188 | 218 | | | | 165 | 186 | 338 | 106 | 27 | 5.8 | 10 |
| 6 | 175 | 224 | | | | 170 | 188 | 444 | 111 | 25 | 5.0 | 13 |
| 7 | 183 | 224 | | | | 170 | 191 | 500 | 109 | 28 | 5.8 | 14 |
| 8 | 175 | 230 | | | | 165 | 300 | 515 | 124 | 26 | 5.0 | 14 |
| 9 | 175 | 224 | | | | 160 | 367 | 525 | 166 | 25 | 4.4 | 13 |
| 10 | 170 | 242 | | | | 168 | 383 | 580 | 175 | 24 | 5.0 | 14 |
| 11 | 175 | 230 | | | | 153 | 348 | 404 | 183 | 21 | 4.7 | 15 |
| 12 | 173 | 224 | | | | 156 | 338 | 341 | 173 | 19 | 5.0 | |
| 13 | 180 | 218 | | | | 153 | 330 | 338 | 168 | 16 | 5.4 | |
| 14 | 175 | 224 | | | | 168 | 352 | 341 | 163 | 14 | 4.7 | 13 |
| 15 | 188 | 216 | | | | 160 | 395 | 341 | 160 | 11 | 4.7 | |
| 16 | 193 | 221 | | | | 150 | 404 | 330 | 160 | 11 | 5.0 | |
| 17 | 210 | 218 | | | | 140 | 344 | 306 | 195 | 10 | 5.0 | |
| 18 | 224 | 213 | | | | 142 | 296 | 264 | 236 | 9.0 | 4.4 | 12 |
| 19 | 221 | 207 | | | | 144 | 276 | 230 | 218 | 6.6 | 3.8 | |
| 20 | 230 | 207 | | | | 146 | 324 | 248 | 207 | 7.4 | 2.9 | |
| 21 | 233 | 207 | | | | 151 | 330 | 260 | 188 | 6.2 | 3.2 | |
| 22 | 230 | 213 | | | | 160 | 348 | 270 | 178 | 5.0 | 3.2 | |
| 23 | 221 | 216 | | | | 163 | 472 | 242 | 168 | 8.2 | 4.4 | 14 |
| 24 | 224 | 230 | | | | 168 | 413 | 199 | 124 | 6.6 | 5.8 | |
| 25 | 227 | 236 | | | | 165 | 467 | 170 | 106 | 7.8 | 5.0 | |
| 26 | 227 | 242 | | | | 160 | 490 | 156 | 92 | 7.4 | 5.8 | |
| 27 | 236 | 230 | | | *102 | 160 | 413 | 142 | 79 | 7.4 | 5.0 | |
| 28 | 227 | 227 | | | | 163 | 408 | 133 | 74 | 7.4 | 4.4 | 15 |
| 29 | 221 | 233 | | | | 163 | 400 | 128 | 74 | 7.4 | 5.8 | |
| 30 | 224 | 239 | | | | 160 | 400 | 120 | 70 | 8.2 | 7.4 | |
| 31 | 227 | | | | | 165 | | 106 | | 8.2 | 7.4 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 236 | 151 | 200 | 12,290 | | | |
| November | | | | | | 242 | 207 | 225 | 13,410 | | | |
| December | | | | | | | | 165 | 10,150 | | | |
| January | | | | | | | | 150 | 9,220 | | | |
| February | | | | | | | | 155 | 8,610 | | | |
| March | | | | | | 170 | 140 | 158 | 9,700 | | | |
| April | | | | | | 460 | 160 | 327 | 19,470 | | | |
| May | | | | | | 580 | 106 | 309 | 19,030 | | | |
| June | | | | | | 236 | 68 | 138 | 8,220 | | | |
| July | | | | | | 62 | 5.0 | 17.3 | 1,070 | | | |
| August | | | | | | 7.4 | 2.9 | 5.17 | 318 | | | |
| September | | | | | | | 7.0 | 12.8 | 760 | | | |
| The year | | | | | | 580 | 2.9 | 165 | 112,200 | | | |

*Discharge measurement.

Goose Creek near Sheridan, Wyo.

Location.- Water-stage recorder in sec. 35, T. 55 N., R. 86 W., half a mile above Cave Creek and 14 miles southwest of Sheridan.

Drainage area.- 110 miles.

Records available.- September 1929 to September 1934.

Extremes.- Maximum discharge during year, 329 second-feet May 8 (gage height, 2.86 feet); minimum, 6 second-feet Sept. 8 (gage height, 0.30 foot).
1930-34: Maximum discharge, 1,640 second-feet May 22, 1932 (gage height, 4.64 feet); minimum, probably that of Sept. 8, 1934.

Remarks.- Records good except those estimated Oct. 1-8, 29-30, Sept. 11-12 and those for periods of ice effect, Nov. 7 to Jan. 3, Feb. 7, 24-28, which were estimated on basis of one discharge measurement and temperature records. Water diverted above station from East Fork of Goose Creek into Little Goose Creek. Flow partly regulated by storage in Dome Lake. Gage-height record furnished by city of Sheridan.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 12 | 27 | | 18 | 17 | 13 | 17 | 115 | 59 | 22 | 27 | 8 |
| 2 | 12 | 26 | | 18 | 17 | 13 | 18 | 111 | 53 | 22 | 25 | 8 |
| 3 | 13 | 28 | | 18 | 17 | 12 | 15 | 106 | 51 | 18 | 25 | 8 |
| 4 | 14 | 29 | | 18 | 16 | 12 | 17 | 147 | 50 | 16 | 24 | 7 |
| 5 | 14 | 32 | | 18 | 15 | 12 | 15 | 188 | 40 | 30 | 14 | 7 |
| 6 | 15 | 32 | | 18 | 17 | 14 | 22 | 200 | 45 | 32 | 10 | 7 |
| 7 | 15 | 32 | | 19 | 17 | 15 | 28 | 270 | 46 | 28 | 12 | 7 |
| 8 | 15 | | | 18 | 16 | 14 | 39 | 317 | 84 | 26 | 9 | 7 |
| 9 | 15 | | | 18 | 17 | 14 | 52 | 277 | 95 | 30 | 8 | 8 |
| 10 | 15 | | | 18 | 15 | 14 | 54 | 183 | 81 | 27 | 8 | 8 |
| 11 | 15 | | | 18 | 14 | 15 | 49 | 155 | 70 | 26 | 8 | 8 |
| 12 | 15 | | | 16 | 17 | 15 | 50 | 139 | 65 | 25 | 8 | 7 |
| 13 | 15 | 34 | | 16 | 17 | 15 | 68 | 163 | 60 | 25 | 8 | 7 |
| 14 | 14 | | | 16 | 17 | 16 | 77 | 161 | 56 | 31 | 8 | 7 |
| 15 | 14 | | | 17 | 15 | 17 | 50 | 150 | 56 | 34 | 8 | 8 |
| 16 | 14 | | | 17 | 13 | 17 | 42 | 113 | 66 | 35 | 8 | 8 |
| 17 | 16 | | | 17 | 16 | 13 | 41 | 126 | 78 | 33 | 8 | 8 |
| 18 | 30 | 28 | | 17 | 13 | 17 | 33 | 134 | 64 | 32 | 7 | 8 |
| 19 | 29 | | | 17 | 14 | 18 | 31 | 190 | 58 | 32 | 7 | 8 |
| 20 | 28 | | | 17 | 16 | 20 | 39 | 204 | 51 | 32 | 7 | 9 |
| 21 | 25 | | | 17 | 13 | 20 | 55 | 172 | 46 | 32 | 7 | 9 |
| 22 | 26 | | | 16 | 16 | 18 | 70 | 152 | 40 | 32 | 7 | 9 |
| 23 | 26 | 24 | | 17 | 17 | 16 | 82 | 132 | 30 | 31 | 7 | 9 |
| 24 | 28 | | | 16 | 15 | 14 | 98 | 109 | 27 | 35 | 8 | 9 |
| 25 | 28 | | | 18 | 12 | 17 | 106 | 119 | 25 | 38 | 7 | 9 |
| 26 | 28 | | | 17 | 10 | 15 | 91 | 98 | 21 | 36 | 7 | 9 |
| 27 | 27 | | | 17 | 13 | 17 | 87 | 94 | 18 | 31 | 7 | 49 |
| 28 | 26 | 22 | | 17 | 13 | 17 | 101 | 97 | 16 | 30 | 7 | 47 |
| 29 | 26 | | | 17 | | 20 | 108 | 87 | 16 | 31 | 7 | 29 |
| 30 | 26 | | | 17 | | 19 | 113 | 78 | 20 | 29 | 7 | 9 |
| 31 | 26 | | | 17 | | 19 | | 69 | | 29 | 8 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 30 | 12 | 20.1 | 1,230 | | |
| November | | | | | | | | | 28.1 | 1,670 | | |
| December | | | | | | | | | 20 | 1,230 | | |
| January | | | | | | | 19 | 16 | 17.3 | 1,060 | | |
| February | | | | | | | 17 | 10 | 15.2 | 843 | | |
| March | | | | | | | 20 | 12 | 15.7 | 968 | | |
| April | | | | | | | 113 | 15 | 55.6 | 3,310 | | |
| May | | | | | | | 317 | 69 | 150 | 9,240 | | |
| June | | | | | | | 95 | 16 | 49.6 | 2,950 | | |
| July | | | | | | | 38 | 16 | 29.4 | 1,800 | | |
| August | | | | | | | 27 | 7 | 10.3 | 631 | | |
| September | | | | | | | 49 | 7 | 11.4 | 676 | | |
| The year | | | | | | | 317 | 7 | 35.4 | 25,610 | | |

Powder River at Arvada, Wyo.

Location.- Chain gage in sec. 16, T. 54 N., R. 77 W., at Arvada, a quarter of a mile above Wildhorse Creek. Zero of gage is 3,623.8 feet above mean sea level.

Drainage area.- 6,050 square miles.

Records available.- May 1919 to September 1934. July 1915 to April 1919 just above mouth of Clear Creek, 16 miles downstream.

Average discharge.- 18 years (1916-34), 534 second-feet.

Extremes.- Maximum discharge during year, 5,270 second-feet July 26 (gage height, 5.13 feet); no flow July 21-23, Aug. 26 to Sept. 10.
1915-34: Maximum discharge, determined by slope-area method, 72,000 second-feet Sept. 29, 1923 (gage height, 23.7 feet); no flow during part of summers 1919, 1921-23, 1931-34.

Remarks.- Records fair. Discharge estimated Nov. 5-7, June 1-4, July 14-20, Aug. 21-25. No records Dec. 1 to Mar. 10. Diversions from tributaries upstream.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|---------|---------|------|----------------------|-------|------|-------|
| 1 | 97 | 131 | | | | | 166 | 244 | 160 | 187 | 87 | 0 |
| 2 | 97 | 140 | | | | | 200 | 163 | 135 | 175 | 69 | 0 |
| 3 | 97 | 138 | | | | | 232 | 166 | 160 | 166 | 52 | 0 |
| 4 | 95 | 131 | | | | | 207 | 158 | 165 | 153 | 44 | 0 |
| 5 | 102 | 120 | | | | | 232 | 148 | 210 | 145 | 34 | 0 |
| 6 | 102 | 140 | | | | | 248 | 138 | 136 | 140 | 70 | 0 |
| 7 | 100 | 180 | | | | | 218 | 129 | 558 | 190 | 156 | 0 |
| 8 | 104 | 172 | | | | | 960 | 120 | 1,220 | 210 | 90 | 0 |
| 9 | 107 | 228 | | | | | 880 | 113 | 452 | 63 | 84 | 0 |
| 10 | 109 | 291 | | | | | 1,110 | 105 | 268 | 45 | 80 | 0 |
| 11 | 105 | 272 | | | | 156 | 860 | 104 | 196 | 33 | 69 | 566 |
| 12 | 107 | 225 | | | | 172 | 800 | 109 | 120 | 18 | 48 | 156 |
| 13 | 107 | 225 | | | | 184 | 741 | 102 | 111 | 9 | 35 | 107 |
| 14 | 106 | 232 | | | | 172 | 741 | 98 | 96 | 7 | 50 | 79 |
| 15 | 107 | 196 | | | | 178 | 524 | 94 | 820 | 6 | 38 | 57 |
| 16 | 104 | 172 | | | | 184 | 490 | 86 | 1,310 | 3 | 26 | 53 |
| 17 | 120 | 169 | | | | 184 | 466 | 76 | 138 | 2 | 18 | 39 |
| 18 | 122 | 166 | | | | 184 | 309 | 72 | 1,260 | 2 | 10 | 35 |
| 19 | 125 | 181 | | | | 178 | 248 | 66 | 322 | 2 | 4 | 22 |
| 20 | 127 | 172 | | | | 178 | 210 | 63 | 193 | 1 | 2 | 20 |
| 21 | 131 | 150 | | | | 169 | 153 | 58 | 166 | 0 | 1 | 18 |
| 22 | 140 | 169 | | | | 184 | 156 | 52 | 169 | 0 | 1 | 16 |
| 23 | 145 | 187 | | | | 193 | 161 | 48 | 136 | 0 | 1 | 11 |
| 24 | 143 | 189 | | | | 184 | 163 | 40 | 118 | 60 | 1 | 60 |
| 25 | 145 | 181 | | | | 203 | 163 | 38 | 105 | 550 | 1 | 297 |
| 26 | 138 | 187 | | | | 190 | 221 | 37 | 80 | 3,060 | 0 | 158 |
| 27 | 140 | 178 | | | | 196 | 240 | 207 | 67 | 1,430 | 0 | 136 |
| 28 | 138 | 183 | | | | 187 | 256 | 200 | 56 | 790 | 0 | 94 |
| 29 | 145 | 166 | | | | 187 | 225 | 196 | 46 | 395 | 0 | 68 |
| 30 | 136 | 161 | | | | 166 | 196 | 196 | 38 | 158 | 0 | 34 |
| 31 | 133 | | | | | 166 | | 175 | | 120 | | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 145 | 95 | 118 | 7,290 | | | |
| November | | | | | | 291 | 120 | 178 | 10,600 | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 11-31 | | | | | | 203 | 156 | 181 | 7,530 | | | |
| April | | | | | | 1,110 | 153 | 393 | 23,360 | | | |
| May | | | | | | 244 | 37 | 116 | 7,140 | | | |
| June | | | | | | 1,310 | 38 | 300 | 17,870 | | | |
| July | | | | | | 3,080 | 0 | 263 | 16,140 | | | |
| August | | | | | | 156 | 0 | 54.2 | 2,100 | | | |
| September | | | | | | 566 | 0 | 67.5 | 4,020 | | | |

Powder River at Moorhead, Mont.

Location.- Water-stage recorder in sec. 18, T. 9 S., R. 48 E., at Moorhead.

Records available.- May 1929 to September 1934.

Extremes.- Maximum discharge during year, 1,920 second-feet June 16 (gage height, 5.53 feet); maximum stage, 6.58 feet Mar. 3, 1934 (ice); no flow at times.
1929-34: Maximum discharge, 14,800 second-feet Aug. 30, 1933 (gage height, 10.85 feet); no flow at times.

Remarks.- Records poor. No records Oct. 1-11, Dec. 1 to Jan. 24. Discharge not computed Jan. 25 to Mar. 2, because of ice. Some diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|------|------|------|------|------|------|---------|---------|-------|----------------------|------|-------|
| 1 | | 210 | | | | | 194 | 269 | *5.3 | 30 | 200 | 4 |
| 2 | | 206 | | | | | 185 | 256 | 5.1 | 22 | 143 | |
| 3 | | 210 | | | | 950 | 203 | 239 | 5.4 | 16 | 114 | |
| 4 | | 200 | | | | 666 | 222 | 232 | 11 | 16 | 87 | |
| 5 | | 173 | | | | 474 | 226 | 194 | 8.8 | 9.6 | 76 | |
| 6 | | | | | | 405 | 239 | 182 | 5.7 | 14 | 69 | 6 |
| 7 | | | | | | 362 | 249 | 154 | 47 | 8.0 | 61 | |
| 8 | | | | | | 362 | 239 | 138 | 226 | 7.2 | 64 | |
| 9 | | | | | | 320 | 280 | 106 | 580 | 34 | 58 | |
| 10 | | 240 | | | | 293 | 924 | 136 | 332 | 29 | 56 | |
| 11 | | | | | | 266 | 843 | 112 | 200 | 43 | 119 | 101 |
| 12 | 159 | | | | | 266 | 803 | 76 | 133 | 32 | *103 | |
| 13 | 159 | 308 | | | | 242 | 779 | 68 | 108 | 21 | *87 | |
| 14 | 159 | 269 | | | †349 | 239 | 740 | 60 | 200 | 11 | *71 | |
| 15 | 159 | 256 | | | | 232 | 645 | 51 | 124 | *9.7 | *55 | |
| 16 | 159 | 252 | | | | 226 | 532 | 45 | 1,400 | 9.4 | *40 | 87 |
| 17 | 176 | 249 | | | | 226 | 520 | 41 | 1,480 | *4.2 | 25 | 64 |
| 18 | 179 | 242 | | | | 235 | 508 | 36 | 795 | 0 | 18 | 51 |
| 19 | 185 | 235 | | | | 219 | 468 | 31 | *553 | 0 | 14 | 43 |
| 20 | 194 | 232 | | | | 216 | 349 | 27 | *531 | 0 | 8.0 | 42 |
| 21 | 203 | 222 | | | | 210 | 300 | 22 | 400 | 8.4 | 7.6 | 40 |
| 22 | 213 | 222 | | | | 229 | 256 | 17 | 263 | 8.4 | *7.4 | 37 |
| 23 | 216 | 242 | | | | 239 | 256 | 14 | 262 | 8.0 | *7.2 | 35 |
| 24 | 219 | 249 | | | | 252 | 266 | 9.6 | 219 | 7.6 | *7.0 | 35 |
| 25 | 216 | 252 | | | | 249 | 276 | 8.4 | 159 | 54 | 6.3 | 43 |
| 26 | 219 | 246 | | | | 239 | 290 | 6.4 | 119 | 915 | | *205 |
| 27 | 219 | 239 | | | | 226 | 349 | 6.0 | 78 | 1,480 | | 357 |
| 28 | 226 | 235 | | | | 213 | 380 | *5.8 | 57 | 1,330 | | 256 |
| 29 | 226 | 222 | | | | 222 | 340 | *5.6 | 46 | 1,220 | | 206 |
| 30 | 219 | 226 | | | | 213 | 316 | *5.5 | 37 | 795 | | 167 |
| 31 | 210 | | | | | 210 | | 5.4 | | 293 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October 12-31 | | | | | | | 226 | 159 | 196 | 7,770 | | |
| November | | | | | | | 308 | 173 | 236 | 14,040 | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 3-31 | | | | | | | 950 | 210 | 300 | 17,240 | | |
| April | | | | | | | 924 | 185 | 406 | 24,150 | | |
| May | | | | | | | 269 | 5.4 | 82.6 | 5,080 | | |
| June | | | | | | | 1,480 | 5.1 | 283 | 16,840 | | |
| July | | | | | | | 1,480 | 0 | 209 | 12,860 | | |
| August | | | | | | | 200 | | 49.7 | 3,050 | | |
| September | | | | | | | 367 | | 78.1 | 4,650 | | |

*Discharge interpolated.

†Discharge measurement.

Middle Fork of Powder River near Kaycee, Wyo.

Location.- Chain gage in sec. 13, T. 43 N., R. 81 W., $1\frac{1}{2}$ miles below the North Fork and 6 miles east of Kaycee.

Drainage area.- Not determined.

Records available.- October 1933 to September 1934.

Extremes.- Maximum stage during period, 8.84 feet (discharge not determined); minimum daily discharge (estimated), 1 second-foot July 8-24, 31.

Remarks.- Records good except those estimated Apr. 23, July 8-24, 27-31. No records Oct. 1-22, Dec. 11 to Mar. 17, Aug. 1 to Sept. 30. Numerous diversions above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | | 126 | 105 | | | | 85 | 127 | 2.1 | 2.0 | | |
| 2 | | 132 | 102 | | | | 109 | 109 | 2.2 | 2.0 | | |
| 3 | | 126 | 106 | | | | 107 | 83 | 2.2 | 2.0 | | |
| 4 | | 106 | 106 | | | | 109 | 62 | 2.1 | 2.0 | | |
| 5 | | 95 | 84 | | | | 107 | 54 | 2.1 | 40 | | |
| 6 | | 105 | 89 | | | | 111 | 32 | 567 | 2.0 | | |
| 7 | | 143 | 120 | | | | 218 | 25 | 333 | 2.0 | | |
| 8 | | 132 | 100 | | | | 250 | 19 | 222 | 1.0 | *23 | |
| 9 | | 130 | 96 | | | | 158 | 12 | 114 | 1.0 | | |
| 10 | | 134 | 111 | | | | 253 | 5.8 | 71 | 1.0 | | |
| 11 | | | | | | | 183 | 3.0 | 52 | 1.0 | | |
| 12 | | | | | | | 194 | 2.6 | 32 | 1.0 | | |
| 13 | | | | | | | 238 | 2.5 | 23 | 1.0 | | |
| 14 | | | | | | | 217 | 2.2 | 20 | 1.0 | | |
| 15 | | | | | | | 204 | 2.4 | 29 | 1.0 | | |
| 16 | | 120 | | | | | 146 | 2.4 | 20 | 1.0 | | |
| 17 | | 117 | | | | | 148 | 2.4 | 38 | 1.0 | | |
| 18 | | 117 | | | | 106 | 95 | 2.4 | 25 | 1.0 | | |
| 19 | | 117 | | | | 93 | 73 | 2.3 | 26 | 1.0 | | |
| 20 | | 117 | | | | 89 | 98 | 2.1 | 174 | 1.0 | | |
| 21 | | 117 | | | | 82 | 175 | 2.1 | 33 | 1.0 | | |
| 22 | | 106 | | | | 113 | 174 | 2.0 | 11 | 1.0 | | |
| 23 | 110 | 117 | | | | 117 | 200 | 2.1 | 8.2 | 1.0 | | |
| 24 | 117 | 120 | | | | 117 | 225 | 2.1 | 6.4 | 1.0 | | |
| 25 | 118 | 117 | | | | 121 | 258 | 2.1 | 3.8 | 450 | | |
| 26 | 116 | 114 | | | | 87 | 253 | 2.1 | 2.5 | 210 | | |
| 27 | 117 | 107 | | | | 78 | 220 | 2.1 | 2.1 | 10 | | |
| 28 | 117 | 114 | | | | 75 | 177 | 2.1 | 2.0 | 5.0 | | |
| 29 | 117 | 106 | | | | 78 | 174 | 2.1 | 2.0 | 3.0 | | |
| 30 | 117 | 95 | | | | 83 | 151 | 2.1 | 2.0 | 2.0 | | |
| 31 | 116 | | | | | 85 | | 2.1 | | 1.0 | | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October 23-31 | | | | | | 118 | 110 | 116 | 2,070 | | | |
| November | | | | | | 143 | 95 | 118 | 7,030 | | | |
| December 1-10 | | | | | | 120 | 84 | 102 | 2,020 | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 18-31 | | | | | | 121 | 75 | 94.6 | 2,630 | | | |
| April | | | | | | 258 | 73 | 170 | 10,100 | | | |
| May | | | | | | 127 | 2.0 | 18.6 | 1,140 | | | |
| June | | | | | | 567 | 2.0 | 61.0 | 7,630 | | | |
| July | | | | | | 450 | 1.0 | 24.2 | 1,490 | | | |
| August | | | | | | | | | | | | |
| September | | | | | | | | | | | | |

*Discharge measurement.

Little Missouri River at Medora, N. Dak.

Location.- Wire gage in NE $\frac{1}{4}$ sec. 27, T. 140 N., R. 102 W., at highway bridge at Medora.

Drainage area.- 6,190 square miles.

Records available.- May 1903 to October 1908, October 1921 to September 1924, August 1928 to September 1934.

Extremes.- Maximum discharge during year, 1,510 second-feet June 11 (gage height, 4.27 feet); no flow at times.

1903-8, 1921-24, 1928-34: Maximum discharge, 38,700 second-feet June 7, 1929 (gage height, 17.2 feet); no flow at times during 1933 and 1934.

Remarks.- Records fair. Stage discharge relation affected by ice Oct. 25 to March 16. Discharge estimated Oct. 25 to Mar. 16, June 28-30, July 24 to Aug. 13, Aug. 15-18. Small diversions for irrigation from headwater tributaries.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|-------|----------------------|------|-------|
| 1 | 0.4 | | | 0 | | | 123 | 20 | 0.6 | 354 | 1.5 | 0 |
| 2 | .4 | | | 0 | | | 143 | 17 | .2 | 404 | 1.5 | 0 |
| 3 | .4 | | | 0 | 81 | 73 | 146 | 15 | .2 | 404 | 1.4 | 0 |
| 4 | .3 | 2 | 2 | 0 | | | 182 | 14 | .2 | 404 | 1.4 | .4 |
| 5 | .3 | | | 0 | | | 182 | 12 | 1.8 | 404 | 1.3 | 0 |
| 6 | .3 | | | 0 | | | 182 | 11 | 16 | 379 | 1.3 | 0 |
| 7 | .3 | | | 0 | | | 269 | 10 | 18 | 379 | 1.2 | 0 |
| 8 | .3 | 2 | 2 | 0 | 63 | 46 | 306 | 10 | 247 | 118 | 1.2 | 0 |
| 9 | .3 | | | 0 | | | 330 | 8.2 | 850 | 61 | 1.1 | .8 |
| 10 | .3 | | | 0 | | | 225 | 8.2 | 665 | 52 | 1.0 | .6 |
| 11 | .3 | | | 0 | | | 175 | 7.0 | 1,200 | 35 | 1.0 | .2 |
| 12 | .3 | | 2 | 0 | | | 136 | 6.6 | 1,250 | 24 | .9 | 0 |
| 13 | .3 | 3 | | 0 | | 67 | 108 | 6.6 | 1,110 | 19 | .8 | 0 |
| 14 | .3 | | | 0 | | | 80 | 5.8 | 1,160 | 12 | .8 | 0 |
| 15 | .3 | | 0 | 0 | | 68 | 76 | 6.6 | 700 | 10 | .6 | 0 |
| 16 | .5 | | 0 | 0 | | | 77 | 5.8 | 379 | 9.0 | .4 | 0 |
| 17 | .4 | | 0 | 0 | | 43 | 106 | 5.0 | 251 | 9.0 | .3 | .2 |
| 18 | .3 | 17 | 0 | 0 | 70 | 45 | 97 | 4.7 | 201 | 6.6 | .2 | .4 |
| 19 | .3 | | 0 | 0 | | 45 | 80 | 4.4 | 193 | 4.7 | 0 | .4 |
| 20 | .4 | | 0 | 0 | | 43 | 66 | 4.4 | 197 | 4.4 | 0 | .4 |
| 21 | .3 | | 0 | 0 | | 76 | 56 | 3.8 | 189 | 2.6 | 0 | .2 |
| 22 | .3 | | 0 | 0 | | 71 | 51 | 3.8 | 186 | 2.6 | 0 | 0 |
| 23 | .3 | 22 | 0 | 0 | 32 | 65 | 43 | 3.5 | 182 | 2.0 | 0 | .4 |
| 24 | .6 | | 0 | 0 | | 65 | 41 | 2.9 | 128 | 2.0 | 0 | 1.0 |
| 25 | | | 0 | 0 | | 51 | 36 | 2.3 | 110 | 1.9 | 0 | 1.2 |
| 26 | | | 0 | 0 | | 51 | 31 | 1.8 | 104 | 1.8 | 0 | 1.4 |
| 27 | | | 0 | 0 | 50 | 66 | 29 | 1.6 | 98 | 1.9 | 0 | .4 |
| 28 | 9.0 | 9 | 0 | 0 | | 45 | 28 | 1.6 | 162 | 1.7 | 0 | .4 |
| 29 | | | 0 | 20 | | 45 | 27 | 1.4 | 226 | 1.6 | 0 | .4 |
| 30 | | | 0 | | | 45 | 22 | 1.0 | 290 | 1.6 | 2.9 | 0 |
| 31 | | | 0 | | | 45 | | 1.0 | | 1.5 | 2.6 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | 0.3 | 2.30 | 141 | | |
| November | | | | | | | | | 9.2 | 545 | | |
| December | | | | | | | | 0 | .8 | 52 | | |
| January | | | | | | | | 0 | 5.2 | 108 | | |
| February | | | | | | | | | 61.2 | 3,400 | | |
| March | | | | | | | 76 | 43 | 58.2 | 3,880 | | |
| April | | | | | | | 330 | 22 | 115 | 6,850 | | |
| May | | | | | | | 20 | 1.0 | 6.68 | 411 | | |
| June | | | | | | | 1,250 | .2 | 337 | 20,060 | | |
| July | | | | | | | 404 | 1.5 | 100 | 6,180 | | |
| August | | | | | | | 2.9 | 0 | .75 | 46 | | |
| September | | | | | | | .8 | 0 | .29 | 17 | | |
| The year | | | | | | | 1,250 | 0 | 57.3 | 41,480 | | |

Cannonball River near Timmer, N. Dak.

Location.- Chain gage in NW $\frac{1}{4}$ sec. 21, T. 133 N., R. 82 W., about 4 miles southeast of Timmer and 4 miles above Dogtooth Creek.

Drainage area.- 3,650 square miles.

Records available.- June 1903 to November 1908, August 1911 to September 1918, October 1921 to September 1922, October 1923 to September 1924, March 1928 to November 1934 (discontinued).

Extremes.- Maximum discharge recorded during period October 1933 to November 1934, 180 second-feet Oct. 17, 1934 (gage height, 4.02 feet); no flow at times.
1903-8, 1911-18, 1921-24, 1928-34: Maximum discharge recorded, 8,600 second-feet June 10, 1932 (gage height, 12.66 feet); no flow at times.

Remarks.- Records good except those estimated for period of ice effect, Dec. 3 to Apr. 4, which are poor.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | | 0 | 6.2 | | 0 | | 15 | 3.9 | 0 | 7.6 | | |
| 2 | | 0 | 0 | | 0 | | 17 | 2.9 | 0 | 5.3 | | |
| 3 | | 0 | 8.0 | | 0 | | 20 | 2.6 | 0 | 6.7 | | |
| 4 | | 0 | 3.0 | | 0 | 9.8 | 28 | 2.4 | 0 | 9.5 | | |
| 5 | | 0 | 1.0 | | 0 | | 38 | 2.1 | 0 | 45 | | |
| 6 | | 0 | 0 | | 0 | | 38 | 3.2 | .1 | 33 | | |
| 7 | | 0 | 0 | | 0 | 0 | 40 | 3.9 | 33 | 18 | | |
| 8 | | 0 | 0 | | 0 | 0 | 33 | 2.6 | 72 | 12 | | |
| 9 | | 0 | 0 | | 0 | 0 | 26 | 2.1 | 37 | 8.1 | | |
| 10 | | 0 | 0 | | 0 | 0 | 22 | 1.8 | 30 | 5.3 | | |
| 11 | | 8.2 | 0 | | 0 | 0 | 15 | 1.5 | 14 | 2.9 | | |
| 12 | | 7.0 | 0 | | 0 | 0 | 17 | 1.4 | 5.3 | 2.1 | | |
| 13 | | 5.4 | 0 | | 3.0 | | 17 | 1.4 | 2.4 | 1.8 | | |
| 14 | | 3.8 | 0 | | 6.0 | | 17 | 1.9 | 1.6 | 1.6 | | |
| 15 | | 2.4 | 0 | | 0 | | 14 | 1.7 | .9 | 1.4 | | |
| 16 | | .9 | 0 | | 0 | | 15 | 1.5 | .9 | 1.2 | | |
| 17 | | 0 | 0 | | 0 | 16 | 12 | 1.9 | 1.3 | .8 | | |
| 18 | | 0 | 0 | | 0 | | 11 | 1.2 | 1.6 | .5 | | |
| 19 | | 0 | 0 | | 0 | | 10 | 1.0 | 1.4 | .5 | | |
| 20 | | 0 | 0 | | 0 | | 9.9 | .7 | 1.1 | .1 | | |
| 21 | | 1.5 | 0 | | 0 | | 9.9 | .5 | .7 | 0 | | |
| 22 | | 2.7 | 0 | | 0 | | 9.9 | .4 | .5 | 0 | | |
| 23 | | .9 | 0 | | 0 | | 8.1 | .5 | .4 | 0 | | |
| 24 | | .3 | 0 | | 0 | | 7.2 | .7 | .2 | 0 | | |
| 25 | | 0 | 0 | | 0 | | 6.4 | .5 | 2.9 | 0 | | |
| 26 | | 0 | 0 | | 0 | 8.6 | 6.4 | .4 | 45 | 0 | | |
| 27 | | 1.5 | 0 | | 0 | | 5.6 | .3 | 27 | 0 | | |
| 28 | | 2.7 | 0 | | 0 | | 5.6 | .2 | 23 | 0 | | |
| 29 | | 3.4 | 0 | | | | 5.0 | .1 | 20 | 0 | | |
| 30 | | 5.0 | 0 | | | | 5.0 | 0 | 11 | 0 | | |
| 31 | | | 0 | | | | 0 | 0 | | 0 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 0 | 0 | 0 | 0 | | |
| November | | | | | | | 8.2 | 0 | 1.52 | 90 | | |
| December | | | | | | | 8.2 | 0 | .85 | 52 | | |
| January | | | | | | | 0 | 0 | 0 | 0 | | |
| February | | | | | | | 6.0 | 0 | .32 | 18 | | |
| March | | | | | | | | 0 | 9.32 | 573 | | |
| April | | | | | | | 40 | 5.0 | 16.1 | 968 | | |
| May | | | | | | | 3.9 | 0 | 1.46 | 90 | | |
| June | | | | | | | 72 | 0 | 11.1 | 660 | | |
| July | | | | | | | 45 | 0 | 5.26 | 324 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 0 | 0 | 0 | 0 | | |
| The year | | | | | | | 72 | 0 | 3.82 | 2,760 | | |

Note.- No flow during months left blank

Cannonball River near Timmer, N. Dak.

(Continued)

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|---------|---------|------|--------------------|---------|-----------|------|------|------|-------|
| 1 | 0 | 1.5 | | | | | | | | | | |
| 2 | 0 | 1.4 | | | | | | | | | | |
| 3 | 0 | 1.6 | | | | | | | | | | |
| 4 | 0 | 1.4 | | | | | | | | | | |
| 5 | 0 | 1.3 | | | | | | | | | | |
| 6 | 0 | 1.1 | | | | | | | | | | |
| 7 | 0 | 1.3 | | | | | | | | | | |
| 8 | 0 | 1.3 | | | | | | | | | | |
| 9 | 0 | 1.1 | | | | | | | | | | |
| 10 | 0 | 1.1 | | | | | | | | | | |
| 11 | 0 | 1.1 | | | | | | | | | | |
| 12 | 0 | 1.1 | | | | | | | | | | |
| 13 | 0 | 1.1 | | | | | | | | | | |
| 14 | 0 | .9 | | | | | | | | | | |
| 15 | 0 | .9 | | | | | | | | | | |
| 16 | 22 | 1.1 | | | | | | | | | | |
| 17 | 160 | 1.1 | | | | | | | | | | |
| 18 | 34 | 1.1 | | | | | | | | | | |
| 19 | 13 | 1.1 | | | | | | | | | | |
| 20 | 14 | 1.1 | | | | | | | | | | |
| 21 | 9 | 1.1 | | | | | | | | | | |
| 22 | 6 | 1.1 | | | | | | | | | | |
| 23 | 3.9 | 1.3 | | | | | | | | | | |
| 24 | 3.2 | 1.6 | | | | | | | | | | |
| 25 | 2.6 | 1.6 | | | | | | | | | | |
| 26 | 1.8 | 1.4 | | | | | | | | | | |
| 27 | 1.8 | 1.4 | | | | | | | | | | |
| 28 | 1.4 | 1.3 | | | | | | | | | | |
| 29 | 1.3 | 1.3 | | | | | | | | | | |
| 30 | .9 | 1.3 | | | | | | | | | | |
| 31 | 1.1 | | | | | | | | | | | |
| Month | | | Maximum | Minimum | Mean | Per square mile | Run-off | | | | | |
| | | | | | | | Inches | Acre-feet | | | | |
| October | | | 160 | 0 | 9.06 | 0.0025 | 0.003 | 557 | | | | |
| November | | | 1.6 | .9 | 1.24 | .00034 | .0004 | 74 | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | | | | | | |
| May | | | | | | | | | | | | |
| June | | | | | | | | | | | | |
| July | | | | | | | | | | | | |
| August | | | | | | | | | | | | |
| September | | | | | | | | | | | | |

CANNONBALL RIVER BASIN

Cannonball River at Breien, N. Dak.

Location.- Water-stage recorder in sec. 36, T. 134 N., R. 82 W., at bridge on State highway 6 half a mile south of Breien.

Drainage area.- 4,040 square miles.

Records available.- August to September 1934.

Extremes.- Maximum discharge during period, about 4.6 second-feet Aug. 23 (gage height, 1.24 feet); minimum, 0.01 second-foot Aug. 15-21; minimum gage height, 0.00 foot Aug. 19-21.

Remarks.- Records good except those estimated Aug. 23-26, which are poor.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------|------|------|------|------|------|------|---------|---------|-------|----------------------|------|-------|
| 1 | | | | | | | | | | | | 0.29 |
| 2 | | | | | | | | | | | | .29 |
| 3 | | | | | | | | | | | | .29 |
| 4 | | | | | | | | | | | | .26 |
| 5 | | | | | | | | | | | | .26 |
| 6 | | | | | | | | | | | | .26 |
| 7 | | | | | | | | | | | | .26 |
| 8 | | | | | | | | | | | | .29 |
| 9 | | | | | | | | | | | | .26 |
| 10 | | | | | | | | | | | | .29 |
| 11 | | | | | | | | | | | | .26 |
| 12 | | | | | | | | | | | | .26 |
| 13 | | | | | | | | | | | | .32 |
| 14 | | | | | | | | | | | | .35 |
| 15 | | | | | | | | | | | 0.01 | .35 |
| 16 | | | | | | | | | | | .01 | .35 |
| 17 | | | | | | | | | | | .01 | .35 |
| 18 | | | | | | | | | | | .01 | .32 |
| 19 | | | | | | | | | | | .01 | .32 |
| 20 | | | | | | | | | | | .01 | .35 |
| 21 | | | | | | | | | | | .01 | .35 |
| 22 | | | | | | | | | | | .29 | .35 |
| 23 | | | | | | | | | | | 1.79 | .32 |
| 24 | | | | | | | | | | | 2.65 | .29 |
| 25 | | | | | | | | | | | 1.84 | .29 |
| 26 | | | | | | | | | | | 1.10 | .32 |
| 27 | | | | | | | | | | | .66 | .32 |
| 28 | | | | | | | | | | | .62 | .32 |
| 29 | | | | | | | | | | | .53 | .32 |
| 30 | | | | | | | | | | | .41 | .32 |
| 31 | | | | | | | | | | | .32 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | | | | | | |
| May | | | | | | | | | | | | |
| June | | | | | | | | | | | | |
| July | | | | | | | | | | | | |
| August 15-31 | | | | | | | 2.65 | 0.01 | 0.605 | 20 | | |
| September | | | | | | | .35 | .26 | .306 | 18 | | |
| | | | | | | | | | | | | |

Grand River near Wakpala, S. Dak.

Location.- Chain gage in sec. 26, T. 19 N., R. 29 E., at bridge on State highway 12, 5 miles south of Wakpala.

Drainage area.- 5,640 square miles.

Records available.- August 1928 to September 1934, September 1911 to March 1918 at site 5 miles upstream.

Extremes.- Maximum discharge recorded during year, 1,360 second-feet Mar. 23 (gage height, 5.26 feet); no flow at times.

1911-18, 1928-34: Maximum discharge, 7,130 second-feet June 17, 19, 1915 (gage height, 18.0 feet, former location); no flow at times.

Remarks.- Records good except those estimated for periods of ice effect, Nov. 7-10, Dec. 1 to Mar. 17, and that estimated for June 8, which are poor.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | 0.1 | 0.5 | | | | | 408 | 12 | 0 | 26 | | |
| 2 | .1 | .5 | | | | | 500 | 8 | 0 | 22 | | |
| 3 | .1 | .4 | | | | 5 | 569 | 6 | 0 | 17 | | |
| 4 | 0 | .3 | | | | | 569 | 5 | 0 | 22 | | |
| 5 | 0 | .3 | | | | | 592 | 4.6 | 0 | 20 | | |
| 6 | 0 | .3 | | | | | 546 | 3.9 | 0 | 20 | | |
| 7 | 0 | .2 | | | | | 523 | 3.0 | 0 | 17 | | |
| 8 | 0 | .2 | | | | 10 | 569 | 2.5 | 500 | 14 | | |
| 9 | 0 | .1 | | | | | 638 | 1.9 | 1,110 | 10 | | |
| 10 | 0 | .1 | | | | | 735 | 1.6 | 450 | 7 | | |
| 11 | 0 | 0 | | | | | 785 | 1.4 | 780 | 6 | | |
| 12 | 0 | 0 | | | | 20 | 592 | 1.4 | 663 | 7 | | |
| 13 | 0 | 0 | | | | | 408 | 1.2 | 450 | 26 | | |
| 14 | 0 | 0 | | | | 23 | 386 | 1.0 | 310 | 20 | | |
| 15 | 0 | 0 | | | | | 343 | .8 | 258 | 10 | | |
| 16 | 0 | 0 | | | | 200 | 304 | .6 | 118 | 4.3 | | |
| 17 | 0 | 0 | | | | | 220 | .5 | 111 | 2.9 | | |
| 18 | 0 | 0 | | | | | 835 | .4 | 99 | 2.3 | | |
| 19 | 0 | 0 | | | | 1,170 | 95 | .3 | 77 | 1.7 | | |
| 20 | 0 | 0 | | | | 885 | 74 | .3 | 65 | 1.4 | | |
| 21 | 0 | .1 | | | | 785 | 46 | .1 | 61 | .6 | | |
| 22 | 0 | .2 | | | | 735 | 40 | .1 | 57 | .4 | | |
| 23 | 0 | .5 | | | | 1,110 | 34 | .1 | 57 | 0 | | |
| 24 | 0 | 3.2 | | | | 454 | 28 | .1 | 76 | 0 | | |
| 25 | 0 | 7 | | | | 431 | 23 | .1 | 90 | .3 | | |
| 26 | 0 | 6 | | | | 477 | 19 | .1 | 76 | .5 | | |
| 27 | 0 | 2.8 | | | | 686 | 18 | 0 | 62 | .1 | | |
| 28 | 0 | 1.1 | | | | 592 | 16 | 0 | 45 | 0 | | |
| 29 | .6 | .6 | | | | 408 | 15 | 0 | 35 | 0 | | |
| 30 | .7 | .4 | | | | 323 | 14 | 0 | 26 | 0 | | |
| 31 | .6 | | | | | 366 | | 0 | | 0 | | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 0.7 | 0 | 0.07 | 4.4 | | | |
| November | | | | | | 7 | 0 | .83 | 49 | | | |
| December | | | | | | | 0 | .06 | 4.0 | | | |
| January | | | | | | 0 | 0 | 0 | 0 | | | |
| February | | | | | | 0 | 0 | 0 | 0 | | | |
| March | | | | | | 1,170 | | 324 | 19,900 | | | |
| April | | | | | | 785 | 14 | 309 | 18,560 | | | |
| May | | | | | | 12 | 0 | 1.84 | 113 | | | |
| June | | | | | | 1,110 | 0 | 186 | 11,040 | | | |
| July | | | | | | 26 | 0 | 8.34 | 513 | | | |
| August | | | | | | 0 | 0 | 0 | 0 | | | |
| September | | | | | | 0 | 0 | 0 | 0 | | | |
| The year | | | | | | 1,170 | 0 | 69.1 | 49,980 | | | |

Note.- No flow during months left blank.

Moreau River at Promise, S. Dak.

Location.- Chain gage in sec. 17, T. 16 N., R. 29 E., half a mile below Virgin Creek and three-quarters of a mile north of Promise.

Drainage area.- 5,220 square miles.

Records available.- August 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 630 second-feet June 26 (gage height, 3.60 feet); no flow on many days; minimum gage height, -0.60 foot Sept. 30, 1928-34: Maximum discharge recorded, 13,400 second-feet Sept. 17, 1928; maximum gage height recorded, 18.80 feet May 26, 1933; no flow at times during 1929-34. Minimum gage height, that of Sept. 30, 1934.

Remarks.- Records good except those for period of ice effect, Dec. 1 to Mar. 17, which are poor.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 2.8 | | | | | 0 | 19 | 8 | 0 | 38 | 243 | |
| 2 | 2.0 | | | | | 0 | 25 | 6 | 0 | 26 | 155 | |
| 3 | 1.6 | | | | | 0 | 23 | 4.6 | 0 | 19 | 103 | |
| 4 | 1.2 | | | | | 0 | 30 | 3.6 | 0 | 14 | 62 | |
| 5 | .8 | | | | | 0 | 29 | 2.7 | 0 | 10 | 33 | |
| 6 | .9 | | | | | | 29 | 1.8 | 0 | 29 | 25 | |
| 7 | .6 | | | | | | 25 | 1.7 | 0 | 27 | 19 | |
| 8 | .5 | | | | | | 23 | 1.4 | 0 | 18 | 14 | |
| 9 | 0 | | | | | | 33 | 1.2 | 0 | 13 | 9 | |
| 10 | 0 | | | | | 5 | 29 | 1.1 | 0 | 9 | 2.9 | |
| 11 | 0 | | | | | | 25 | .9 | 0 | 3.8 | 2.2 | |
| 12 | 0 | | | | | | 26 | .7 | 46 | 2.7 | 1.8 | |
| 13 | 0 | | | | | | 41 | .5 | 336 | 2.0 | 1.3 | |
| 14 | 0 | | | | | 22 | 54 | .6 | 350 | 2.7 | 1.2 | |
| 15 | 0 | | | | | 24 | 208 | .5 | 243 | 19 | 20 | |
| 16 | 0 | | | | | 26 | 166 | .6 | 176 | 11 | 40 | |
| 17 | 0 | | | | | 28 | 127 | .4 | 131 | 3.8 | 15 | |
| 18 | 0 | | | | | 29 | 105 | .3 | 99 | 2.5 | 3.8 | |
| 19 | 0 | | | | | 19 | 79 | .2 | 69 | 2.0 | 1.2 | |
| 20 | 0 | | | | | 32 | 60 | .2 | 41 | 2.0 | 1.0 | |
| 21 | 0 | | | | | 32 | 49 | .1 | 39 | 1.3 | 1.3 | |
| 22 | 0 | | | | | 31 | 40 | 0 | 133 | .8 | .7 | |
| 23 | 0 | | | | | 30 | 31 | 0 | 378 | .7 | .4 | |
| 24 | 0 | | | | | 18 | 27 | 0 | 498 | .6 | .4 | |
| 25 | 0 | | | | | 26 | 23 | 0 | 437 | .4 | .2 | |
| 26 | 0 | | | | | 23 | 21 | 0 | 467 | .3 | .2 | |
| 27 | 0 | | | | | 19 | 17 | 0 | 219 | .2 | .1 | |
| 28 | 0 | | | | | 24 | 15 | 0 | 155 | .1 | 0 | |
| 29 | 0 | | | | | 13 | 12 | 0 | 93 | 0 | 0 | |
| 30 | 0 | | | | | 23 | 10 | 0 | 57 | 186 | 0 | |
| 31 | 0 | | | | | 13 | | 0 | | 219 | 0 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | 2.8 | | | | | | 2.8 | 0 | 0.54 | 21 | | |
| November | | | | | | | 0 | 0 | 0 | 0 | | |
| December | | | | | | | 0 | 0 | 0 | 0 | | |
| January | | | | | | | 0 | 0 | 0 | 0 | | |
| February | | | | | | | 0 | 0 | 0 | 0 | | |
| March | | | | | | | 32 | 0 | 18.2 | 936 | | |
| April | | | | | | | 208 | 10 | 46.7 | 2,780 | | |
| May | | | | | | | 8 | 0 | 1.19 | 73 | | |
| June | | | | | | | 498 | 0 | 132 | 7,870 | | |
| July | | | | | | | 219 | 0 | 21.4 | 1,320 | | |
| August | | | | | | | 243 | 0 | 24.4 | 1,500 | | |
| September | | | | | | | 0 | 0 | 0 | 0 | | |
| The year | | | | | | | 498 | 0 | 20.0 | 14,500 | | |

Note.- No flow during months left blank.

Cheyenne River near Wasta, S. Dak.

Location.- Chain gage in sec. 2, T. 1 N., R. 14 E., at State highway bridge 3 miles east of Wasta. Zero of gage is about 2,263.4 feet above mean sea level.

Drainage area.- 11,700 square miles.

Records available.- July 1914 to June 1915, August 1928 to June 1932, March to September 1934.

Extremes.- Maximum discharge recorded during period March to September, 5,300 second-feet July 27 (gage height, 5.50 feet); minimum, 32 second-feet May 26, 27 (gage height, 1.18 feet).

1914-15, 1928-32, 1934: Maximum discharge recorded, 48,300 second-feet May 6, 1932 (gage height, 11.28 feet); minimum, 15 second-feet July 26, 27, 1931 (gage height, 0.92 foot).

Remarks.- Records good except those for rapidly changing stages, which are fair.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | | |
|-------------|------|------|------|------|------|------|---------|-----|---------|-------|-------|-------|-------------------------|--|
| 1 | | | | | | | 310 | 66 | 68 | 310 | 394 | 60 | | |
| 2 | | | | | | | 209 | 66 | 118 | 217 | 144 | 60 | | |
| 3 | | | | | | | 168 | 64 | 70 | 185 | 144 | 51 | | |
| 4 | | | | | | | 213 | 70 | 70 | 135 | 115 | 48 | | |
| 5 | | | | | | *260 | 221 | 64 | 705 | 135 | 100 | 45 | | |
| 6 | | | | | | *230 | 325 | 64 | 580 | 141 | 83 | 43 | | |
| 7 | | | | | | | 1,220 | 56 | 370 | 189 | 69 | 41 | | |
| 8 | | | | | | | 1,340 | 56 | 580 | 105 | 225 | 43 | | |
| 9 | | | | | | | 335 | 52 | 2,250 | 940 | 83 | 45 | | |
| 10 | | | | | | | 238 | 48 | 1,960 | 660 | 63 | 45 | | |
| 11 | | | | | | | 197 | 48 | 1,410 | 660 | 394 | 46 | | |
| 12 | | | | | | | 238 | 48 | 580 | 270 | 360 | 43 | | |
| 13 | | | | | | | 230 | 45 | 430 | 185 | 2,550 | 51 | | |
| 14 | | | | | | | 213 | 45 | 580 | 144 | 1,750 | 39 | | |
| 15 | | | | | | | 174 | 45 | 840 | 115 | 1,160 | 41 | | |
| 16 | | | | | | | 168 | 45 | 424 | 91 | 580 | 43 | | |
| 17 | | | | | | | 160 | 46 | 1,100 | 72 | 310 | 39 | | |
| 18 | | | | | | 105 | 168 | 42 | 1,100 | 57 | 225 | 43 | | |
| 19 | | | | | | 193 | 135 | 42 | 400 | 63 | 150 | 43 | | |
| 20 | | | | | | 234 | 123 | 42 | 2,250 | 44 | 115 | 45 | | |
| 21 | | | | | | | 217 | 141 | 38 | 795 | 52 | 750 | 45 | |
| 22 | | | | | | | 201 | 118 | 36 | 500 | 44 | 500 | 43 | |
| 23 | | | | | | | 201 | 89 | 36 | 376 | 44 | 406 | 45 | |
| 24 | | | | | | | 217 | 85 | 37 | 300 | 46 | 234 | 51 | |
| 25 | | | | | | | 193 | 85 | 34 | 243 | 995 | 171 | 60 | |
| 26 | | | | | | | 209 | 85 | 32 | 217 | 1,960 | 132 | 48 | |
| 27 | | | | | | | 193 | 81 | 32 | 1,610 | 5,300 | 72 | 51 | |
| 28 | | | | | | | 144 | 77 | 33 | 1,750 | 2,860 | 87 | 57 | |
| 29 | | | | | | | 157 | 70 | 34 | 500 | 1,160 | 79 | 57 | |
| 30 | | | | | | | 340 | 70 | 34 | 382 | 840 | 70 | 57 | |
| 31 | | | | | | | 193 | | 34 | | 456 | 63 | | |
| Month | | | | | | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | |
| October | | | | | | | | | | | | | | |
| November | | | | | | | | | | | | | | |
| December | | | | | | | | | | | | | | |
| January | | | | | | | | | | | | | | |
| February | | | | | | | | | | | | | | |
| March 18-31 | | | | | | | 340 | | 105 | | 200 | | 5,550 | |
| April | | | | | | | 1,340 | | 70 | | 243 | | 14,450 | |
| May | | | | | | | 70 | | 32 | | 46.3 | | 2,840 | |
| June | | | | | | | 2,250 | | 68 | | 752 | | 44,740 | |
| July | | | | | | | 5,300 | | 44 | | 596 | | 36,650 | |
| August | | | | | | | 2,550 | | 63 | | 373 | | 22,960 | |
| September | | | | | | | 60 | | 39 | | 47.7 | | 2,840 | |
| The period | | | | | | | | | | | | | 130,000 | |

*Discharge measurement.

Cheyenne River near Eagle Butte, S. Dak.

(Formerly published as Cheyenne River near Carlin, S. Dak.)

Location.- Chain gage in sec. 31, T. 9 N., R. 24 E., at bridge on State highway 63 half a mile above Hermaphrodite Creek and 21 miles south of Eagle Butte.

Drainage area.- 23,400 square miles.

Records available.- August 1923 to September 1934.

Extremes.- Maximum discharge recorded during year, 3,080 second-feet July 28 (gage height, 4.48 feet); minimum discharge recorded, 67 second-feet May 30, 31; minimum gage height recorded, 1.65 feet Sept. 17, 18.
1923-34: Maximum discharge recorded, 104,000 second-feet May 24, 1933 (gage height, 15.00 feet); minimum discharge, 30 second-feet (estimated) Feb. 6-10, 1933; minimum gage height, that of Sept. 17, 18, 1934.
Maximum known stage, 18.1 feet in May 1920 and 1927.

Remarks.- Records good except those for period of ice effect, Dec. 1 to Mar. 17, which were based on three discharge measurements, temperature, and precipitation, and are poor.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|------|----------------------|-------|-------|-------|
| 1 | 390 | 230 | | | | *325 | 435 | 100 | 74 | 645 | 810 | 158 |
| 2 | 390 | 230 | | | | | 405 | 98 | 96 | 435 | 535 | 142 |
| 3 | 374 | 230 | | | | †350 | 357 | 95 | 111 | 357 | 435 | 139 |
| 4 | 359 | 224 | | | | | 328 | 98 | 155 | 296 | 340 | 127 |
| 5 | 359 | 230 | | | | | 328 | 100 | 166 | 280 | 275 | 116 |
| 6 | 337 | 230 | | | | | 318 | 91 | 158 | 535 | 227 | 113 |
| 7 | 281 | *150 | | | | | 301 | 94 | 391 | 260 | 196 | 113 |
| 8 | 268 | *100 | | | | | 465 | 99 | 535 | 205 | 169 | 109 |
| 9 | 256 | *128 | | | | | 1,020 | 81 | 960 | 245 | 155 | 116 |
| 10 | 224 | *150 | | | | *300 | 810 | 78 | 1,490 | 285 | 158 | 113 |
| 11 | 208 | 219 | | | | | 535 | 78 | 1,720 | 645 | 290 | 125 |
| 12 | 202 | 213 | | | | | 465 | 80 | 1,210 | 535 | 275 | 111 |
| 13 | 196 | 236 | | | | | 465 | 85 | 908 | 399 | 399 | 93 |
| 14 | 191 | 294 | | | | | 405 | 87 | 685 | 323 | 685 | 85 |
| 15 | 185 | 281 | | | | | 345 | 89 | 570 | 222 | 1,350 | 83 |
| 16 | 208 | 262 | | | †551 | | 296 | 93 | 570 | 181 | 1,020 | 83 |
| 17 | 213 | 224 | | | | | 275 | 96 | 685 | 181 | 725 | 78 |
| 18 | 219 | 219 | | | | 285 | 260 | 113 | 500 | 162 | 500 | 81 |
| 19 | 219 | 219 | | | | 245 | 256 | 109 | 605 | 152 | 393 | 87 |
| 20 | 219 | 219 | | | | 240 | 196 | 104 | 685 | 205 | 290 | 118 |
| 21 | 219 | 224 | | | | 250 | 181 | 94 | 570 | 166 | 280 | 120 |
| 22 | 224 | 256 | | | †204 | 306 | 158 | 91 | 810 | 139 | 255 | 127 |
| 23 | 224 | 308 | | | | 306 | 155 | 93 | 855 | 127 | 570 | 125 |
| 24 | 236 | 294 | | | | 275 | *155 | 81 | 605 | 122 | 435 | 111 |
| 25 | 224 | 286 | | | | 250 | 155 | 83 | 500 | 270 | 465 | 118 |
| 26 | 224 | 301 | | | | 255 | 152 | 78 | 435 | 196 | 318 | 139 |
| 27 | 236 | 324 | | | | 255 | *136 | 78 | 323 | 1,790 | 270 | 158 |
| 28 | 275 | 308 | | | | 255 | 120 | 74 | 265 | 2,040 | 240 | 158 |
| 29 | 230 | 308 | | | | 255 | 118 | 71 | 1,210 | 2,120 | 222 | 152 |
| 30 | 219 | 308 | | | | 260 | 109 | 67 | 908 | 1,490 | 196 | 152 |
| 31 | 230 | | | | | 285 | | 67 | | 1,140 | 177 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 390 | 185 | 253 | 15,550 | | | |
| November | | | | | | 324 | 100 | 240 | 14,290 | | | |
| December | | | | | | | | *160 | 9,840 | | | |
| January | | | | | | | | *130 | 7,990 | | | |
| February | | | | | | | | *300 | 16,660 | | | |
| March | | | | | | | | 240 | 17,660 | | | |
| April | | | | | | 1,020 | 109 | 323 | 19,210 | | | |
| May | | | | | | 113 | 67 | 88.5 | 5,440 | | | |
| June | | | | | | 1,720 | 74 | 625 | 37,180 | | | |
| July | | | | | | 2,120 | 122 | 521 | 52,050 | | | |
| August | | | | | | 1,350 | 155 | 408 | 25,100 | | | |
| September | | | | | | 158 | 78 | 118 | 7,040 | | | |
| The year | | | | | | 2,120 | 67 | 287 | 208,000 | | | |

*Estimated.

†Discharge measurement.

Rapid Creek at Big Bend, S. Dak.

Location.- Water-stage recorder in sec. 9, T. 1 N., R. 6 E., at Big Bend.

Drainage area.- 332 square miles.

Records available.- March 1915 to September 1917, April 1932 to September 1934.

Extremes.- Maximum discharge during year, 119 second-feet Feb. 11 (gage height, 1.71 feet); minimum daily discharge, 6 second-feet July 21.
1932-34: Maximum discharge, 1,570 second-feet May 24, 1933 (gage height, 5.20 feet); minimum daily discharge, 4 second-feet Dec. 9, 1932.

Remarks.- Records good except those for periods of ice effect, Dec. 26 to Feb. 10, Feb. 23 to Mar. 13, which were estimated on basis of temperature records. Flow regulated by power plant 100 feet above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | 41 | 44 | 36 | 39 | 50 | 40 | 47 | 38 | 18 | 32 | 12 | 20 |
| 2 | 42 | 44 | 42 | 39 | 52 | 44 | 47 | 38 | 18 | 29 | 11 | 19 |
| 3 | 43 | 44 | 40 | 39 | 48 | 46 | 46 | 38 | 24 | 26 | 12 | 20 |
| 4 | 43 | 44 | 43 | 41 | 43 | 41 | 44 | 39 | 27 | 25 | 12 | 19 |
| 5 | 43 | 36 | 37 | 40 | 38 | 40 | 29 | 39 | 31 | 25 | 11 | 18 |
| 6 | 43 | 36 | 39 | 33 | 41 | 41 | 32 | 36 | 31 | 25 | 14 | 16 |
| 7 | 43 | 33 | 42 | 32 | 43 | 41 | 53 | 35 | 34 | 25 | 18 | 16 |
| 8 | 42 | 39 | 38 | 34 | 45 | 34 | 65 | 35 | 33 | 22 | 20 | 16 |
| 9 | 44 | 38 | 39 | 39 | 47 | 28 | 51 | 34 | 30 | 20 | 19 | 19 |
| 10 | 43 | 41 | 39 | 39 | 48 | 26 | 66 | 34 | 25 | 20 | 21 | 19 |
| 11 | 43 | 46 | 16 | 40 | 53 | 28 | 60 | 33 | 25 | 18 | 23 | 19 |
| 12 | 43 | 46 | 34 | 34 | 53 | 33 | 54 | 33 | 25 | 16 | 26 | 18 |
| 13 | 44 | 44 | 52 | 33 | 44 | 40 | 50 | 33 | 29 | 14 | 24 | 20 |
| 14 | 44 | 46 | 58 | 35 | 46 | 52 | 51 | 32 | 32 | 13 | 22 | 20 |
| 15 | 43 | 46 | 52 | 39 | 39 | 56 | 49 | 31 | 31 | 12 | 22 | 21 |
| 16 | 44 | 46 | 35 | 36 | 35 | 53 | 46 | 30 | 31 | 10 | 25 | 20 |
| 17 | 44 | 44 | 26 | 41 | 42 | 39 | 45 | 30 | 34 | 9 | 26 | 20 |
| 18 | 44 | 45 | 39 | 44 | 41 | 31 | 45 | 30 | 34 | 8 | 26 | 20 |
| 19 | 44 | 44 | 44 | 44 | 30 | 49 | 45 | 29 | 29 | 7 | 23 | 19 |
| 20 | 46 | 45 | 47 | 40 | 36 | 53 | 44 | 28 | 30 | 7 | 22 | 20 |
| 21 | 44 | 42 | 49 | 46 | 39 | 51 | 44 | 29 | 34 | 6 | 20 | 22 |
| 22 | 43 | 44 | 50 | 46 | 34 | 49 | 43 | 29 | 30 | 10 | 21 | 23 |
| 23 | 44 | 43 | 49 | 46 | 33 | 40 | 41 | 27 | 28 | 12 | 23 | 21 |
| 24 | 44 | 50 | 34 | 37 | 28 | 29 | 41 | 26 | 26 | 14 | 23 | 20 |
| 25 | 44 | 49 | 34 | 28 | 21 | 37 | 40 | 24 | 32 | 14 | 23 | 22 |
| 26 | 44 | 47 | 27 | 41 | 16 | 46 | 41 | 23 | 36 | 18 | 21 | 22 |
| 27 | 44 | 46 | 29 | 50 | 22 | 44 | 41 | 21 | 30 | 21 | 20 | 23 |
| 28 | 44 | 46 | 33 | 49 | 32 | 50 | 39 | 20 | 26 | 26 | 18 | 23 |
| 29 | 44 | 44 | 34 | 45 | 41 | 41 | 39 | 20 | 28 | 18 | 18 | 23 |
| 30 | 44 | 33 | 40 | 44 | 39 | 39 | 20 | 34 | 17 | 17 | 18 | 24 |
| 31 | 44 | 39 | 48 | | 50 | | | 18 | | 12 | 18 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 46 | 41 | 43.5 | 2,680 | | |
| November | | | | | | | 50 | 33 | 43.3 | 2,580 | | |
| December | | | | | | | 58 | 16 | 39.2 | 2,410 | | |
| January | | | | | | | 50 | 28 | 40.0 | 2,460 | | |
| February | | | | | | | 53 | 16 | 39.2 | 2,180 | | |
| March | | | | | | | 56 | 26 | 41.6 | 2,560 | | |
| April | | | | | | | 66 | 29 | 45.8 | 2,730 | | |
| May | | | | | | | 39 | 18 | 30.1 | 1,860 | | |
| June | | | | | | | 36 | 18 | 29.2 | 1,740 | | |
| July | | | | | | | 32 | 6 | 17.1 | 1,050 | | |
| August | | | | | | | 26 | 11 | 19.7 | 1,210 | | |
| September | | | | | | | 24 | 16 | 20.1 | 1,190 | | |
| The year | | | | | | | 66 | 6 | 34.0 | 24,640 | | |

Belle Fourche River near Belle Fourche, S. Dak.

Location.- Staff gage in sec. 2, T. 8 N., R. 2 E., at diversion dam of Belle Fourche irrigation project $1\frac{1}{2}$ miles below Belle Fourche.

Drainage area.- 4,310 square miles.

Records available.- May to November 1906, January 1912 to September 1934.

Average discharge.- 23 years (1911-34), 432 second-feet.

Extremes.- Maximum discharge during year, 596 second-feet June 10; minimum, 2 second-feet Aug. 19.

1912-34: Maximum discharge, 22,400 second-feet Apr. 9, 1924; no flow for several days during 1914 and 1919.

Remarks.- Diversions for irrigation above station. Flow regulated by Belle Fourche Reservoir, capacity, 203,770 acre-feet. Records include amount diverted at Belle Fourche diversion dam. Records furnished by U. S. Bureau of Reclamation.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 126 | 158 | 153 | 160 | 169 | 118 | 167 | 99 | 11 | 64 | 95 | 6 |
| 2 | 126 | 160 | 155 | 165 | 169 | 162 | 172 | 108 | 11 | 64 | 65 | 4 |
| 3 | 132 | 161 | 156 | 155 | 169 | 172 | 183 | 126 | 14 | 69 | 37 | 11 |
| 4 | 133 | 160 | 139 | 168 | 169 | 167 | 223 | 109 | 14 | 163 | 20 | 7 |
| 5 | 135 | 159 | 144 | 164 | 162 | 176 | 184 | 69 | 14 | 195 | 13 | 12 |
| 6 | 137 | 164 | 142 | 211 | 169 | 167 | 184 | 57 | 14 | 88 | 12 | 25 |
| 7 | 158 | 169 | 135 | 167 | 169 | 172 | 338 | 64 | 22 | 86 | 10 | 21 |
| 8 | 131 | 166 | 71 | 176 | 169 | 162 | 283 | 56 | 175 | 75 | 15 | 19 |
| 9 | 133 | 170 | 35 | 167 | 169 | 176 | 202 | 78 | 90 | 66 | 9 | 28 |
| 10 | 152 | 169 | 75 | 167 | 169 | 162 | 172 | 29 | 147 | 55 | 8 | 44 |
| 11 | 134 | 166 | 141 | 167 | 162 | 172 | 180 | 27 | 410 | 55 | 6 | 38 |
| 12 | 139 | 168 | 139 | 162 | 169 | 176 | 171 | 23 | 188 | 25 | 4 | 42 |
| 13 | 154 | 168 | 137 | 153 | 172 | 176 | 166 | 23 | 141 | 15 | 3 | 43 |
| 14 | 153 | 166 | 153 | 167 | 172 | 167 | 144 | 21 | 121 | 10 | 4 | 40 |
| 15 | 148 | 166 | 155 | 167 | 169 | 162 | 167 | 21 | 143 | 8 | 4 | 60 |
| 16 | 148 | 164 | 143 | 157 | 169 | 167 | 167 | 21 | 145 | 8 | 3 | 63 |
| 17 | 158 | 160 | 134 | 162 | 169 | 162 | 165 | 21 | 362 | 4 | 4 | 67 |
| 18 | 168 | 173 | 154 | 162 | 162 | 162 | 177 | 21 | 230 | 4 | 3 | 69 |
| 19 | 166 | 159 | 163 | 162 | 169 | 167 | 156 | 16 | 252 | 4 | 2 | 70 |
| 20 | 165 | 158 | 164 | 162 | 172 | 167 | 130 | 16 | 370 | 4 | 86 | 109 |
| 21 | 164 | 158 | 164 | 162 | 169 | 172 | 160 | 14 | 244 | 4 | 193 | 93 |
| 22 | 164 | 160 | 164 | 162 | 169 | 172 | 146 | 10 | 175 | 4 | 133 | 95 |
| 23 | 169 | 161 | 164 | 167 | 153 | 167 | 145 | 10 | 176 | 4 | 141 | 93 |
| 24 | 301 | 164 | 158 | 167 | 129 | 162 | 128 | 10 | 142 | 4 | 56 | 94 |
| 25 | 303 | 161 | 121 | 153 | 129 | 167 | 117 | 10 | 410 | 7 | 31 | 96 |
| 26 | 154 | 156 | 128 | 167 | 153 | 167 | 122 | 10 | 164 | 13 | 23 | 99 |
| 27 | 155 | 154 | 151 | 167 | 181 | 167 | 189 | 10 | 140 | 15 | 15 | 113 |
| 28 | 156 | 149 | 129 | 162 | 186 | 167 | 127 | 10 | 140 | 3 | 10 | 122 |
| 29 | 158 | 151 | 138 | 153 | 162 | 151 | 12 | 12 | 104 | 3 | 8 | 99 |
| 30 | 156 | 154 | 158 | 167 | 162 | 145 | 12 | 12 | 105 | 56 | 9 | 102 |
| 31 | 156 | | 164 | 167 | 172 | | 12 | | | 121 | 8 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 303 | 126 | 159 | 9,760 | | |
| November | | | | | | | 173 | 149 | 162 | 9,620 | | |
| December | | | | | | | 164 | 38 | 140 | 8,590 | | |
| January | | | | | | | 211 | 135 | 164 | 10,050 | | |
| February | | | | | | | 186 | 129 | 166 | 9,200 | | |
| March | | | | | | | 176 | 118 | 166 | 10,210 | | |
| April | | | | | | | 338 | 117 | 172 | 10,220 | | |
| May | | | | | | | 126 | 10 | 36.4 | 2,240 | | |
| June | | | | | | | 410 | 11 | 156 | 9,270 | | |
| July | | | | | | | 195 | 3 | 41.8 | 2,570 | | |
| August | | | | | | | 193 | 2 | 33.2 | 2,040 | | |
| September | | | | | | | 122 | 4 | 59.5 | 3,540 | | |
| The year | | | | | | | 410 | 2 | 121 | 87,320 | | |

Belle Fourche River near Elm Springs, S. Dak.

Location.- Chain gage in sec. 26, T. 5 N., R. 13 E., at highway bridge 6 miles north of Elm Springs.

Drainage area.- 7,130 square miles.

Records available.- August 1928 to June 1932, March to September 1934.

Extremes.- Maximum discharge recorded during year, 595 second-feet June 9 (gage height, 2.38 feet); minimum, 21 second-feet Apr. 28, May 1, 3 (gage height, 0.96 foot), 1928-32, 1934: Maximum discharge recorded, 33,500 second-feet June 3, 1929 (gage height, 11.3 feet); minimum discharge, 18 second-feet Sept. 18, 1931; minimum gage height, that of Apr. 28, May 1, 3, 1934.
Maximum stage known, 21.8 feet in May 1927.

Remarks.- Records good. Discharge interpolated for July 27, Aug. 14. Diversions for irrigation above station. Flow partly regulated by storage in Belle Fourche Reservoir.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|------------|------|------|------|------|------|---------|---------|------|----------------------|------|------|--------|
| 1 | | | | | | | 50 | 21 | 100 | 100 | 102 | 55 |
| 2 | | | | | | | 89 | 22 | 77 | 97 | 102 | 63 |
| 3 | | | | | | | 86 | 21 | 117 | 93 | 93 | 61 |
| 4 | | | | | | | 71 | 23 | 137 | 84 | 90 | 63 |
| 5 | | | | | | 122 | 71 | 28 | 112 | 71 | 97 | 71 |
| 6 | | | | | | 122 | 152 | 71 | 165 | 93 | 104 | 77 |
| 7 | | | | | | 122 | 122 | 71 | 501 | 184 | 79 | 73 |
| 8 | | | | | | 67 | 117 | 93 | 515 | 203 | 134 | 62 |
| 9 | | | | | | 52 | 192 | 84 | 565 | 184 | 246 | 50 |
| 10 | | | | | | 71 | 184 | 75 | 326 | 165 | 246 | 52 |
| 11 | | | | | | 93 | 278 | 55 | 242 | 146 | 140 | 37 |
| 12 | | | | | | 107 | 184 | 55 | 192 | 134 | 107 | 32 |
| 13 | | | | | | 117 | 123 | 63 | 259 | 117 | 88 | 32 |
| 14 | | | | | | 93 | 97 | 79 | 117 | 104 | 84 | 23 |
| 15 | | | | | | 77 | 84 | 140 | 97 | 102 | 79 | 40 |
| 16 | | | | | | 79 | 71 | 117 | 79 | 104 | 77 | 61 |
| 17 | | | | | | 59 | 71 | 102 | 84 | 112 | 75 | 67 |
| 18 | | | | | | 38 | 59 | 79 | 71 | 112 | 79 | 120 |
| 19 | | | | | | 50 | 48 | 79 | 79 | 104 | 90 | 100 |
| 20 | | | | | | 100 | 38 | 102 | 259 | 102 | 86 | 97 |
| 21 | | | | | | 71 | 30 | 100 | 310 | 107 | 67 | 71 |
| 22 | | | | | | 67 | 25 | 86 | 146 | 120 | 67 | 79 |
| 23 | | | | | | 59 | 28 | 84 | 107 | 112 | 63 | 134 |
| 24 | | | | | | 50 | 26 | 88 | 59 | 117 | 88 | 134 |
| 25 | | | | | | 59 | 24 | 63 | 73 | 377 | 67 | 146 |
| 26 | | | | | | 67 | 23 | 53 | 59 | 122 | 107 | 120 |
| 27 | | | | | | 63 | 23 | 59 | 377 | 120 | 134 | 125 |
| 28 | | | | | | 52 | 21 | 82 | 184 | 117 | 88 | 122 |
| 29 | | | | | | 33 | 22 | 93 | 107 | 390 | 79 | 102 |
| 30 | | | | | | 53 | 24 | 97 | 107 | 224 | 75 | 84 |
| 31 | | | | | | 41 | | 88 | | 122 | 59 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 1-31 | | | | | | | | 33 | 73.5 | | | 3,940 |
| April | | | | | | 122 | 278 | 21 | 81.2 | | | 4,830 |
| May | | | | | | 140 | | 21 | 73.3 | | | 4,510 |
| June | | | | | | 555 | | 59 | 187 | | | 11,130 |
| July | | | | | | 390 | | 71 | 140 | | | 8,820 |
| August | | | | | | 246 | | 59 | 99.7 | | | 6,130 |
| September | | | | | | 146 | | 23 | 78.5 | | | 4,670 |
| The period | | | | | | | | | | | | 43,830 |

Bad River near Fort Pierre, S. Dak.

Location.- Chain gage in NW $\frac{1}{4}$ sec. 10, T. 4 N., R. 31 E., 2 $\frac{1}{2}$ miles south of Fort Pierre.
Zero of gage is about 1,427.83 feet above mean sea level.

Drainage area.- 3,170 square miles.

Records available.- August 1928 to June 1932, March to September 1934.

Extremes.- Maximum discharge recorded during year, 3,100 second-feet July 26 (gage height, 9.98 feet); no flow during several months.
1928-32, 1934: Maximum discharge recorded, 12,600 second-feet Apr. 25, 1929 (gage height, 21.18 feet); no flow during several months each year.
Maximum stage known, 30.89 feet in 1927, as shown by a well-defined high-water mark (estimated discharge, about 35,000 second-feet).

Remarks.- Records good except those for rapidly changing stage, which are poor.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|------------|------|------|------|------|------|------|------|---------|---------|-------|----------------------|-------|
| 1 | | | | | | | | 0 | 0 | 0 | 5.4 | 0 |
| 2 | | | | | | | | 0 | 0 | 0 | 1.3 | 0 |
| 3 | | | | | | | | 548 | 0 | 0 | .6 | 0 |
| 4 | | | | | | | | 173 | 0 | 0 | .1 | 0 |
| 5 | | | | | | | | 66 | 0 | 0 | .1 | 0 |
| 6 | | | | | | | | 41 | 0 | 0 | 0 | 0 |
| 7 | | | | | | | | 16 | 0 | 0 | 0 | 0 |
| 8 | | | | | | | | 3.9 | 0 | 0 | 0 | 0 |
| 9 | | | | | | | | .9 | 0 | 0 | 0 | 0 |
| 10 | | | | | | | | 1.3 | 0 | 0 | 0 | .5 |
| 11 | | | | | | | | 1.5 | 0 | 0 | 133 | .4 |
| 12 | | | | | | | | .6 | 0 | 0 | 2.4 | 0 |
| 13 | | | | | | | | .9 | 0 | 0 | .4 | 0 |
| 14 | | | | | | | | 0 | 0 | 0 | .1 | 0 |
| 15 | | | | | | | | 0 | 0 | 0 | 0 | 0 |
| 16 | | | | | | | | 0 | 0 | 0 | 0 | 0 |
| 17 | | | | | | | | 0 | 0 | 0 | 0 | 0 |
| 18 | | | | | | | | 0 | 0 | 0 | 143 | 0 |
| 19 | | | | | | | | 0 | 0 | 0 | 31 | 0 |
| 20 | | | | | | | | 0 | 0 | 0 | 7 | 0 |
| 21 | | | | | | | | 0 | 0 | 0 | 1.3 | 0 |
| 22 | | | | | | | | 0 | 0 | 0 | .4 | 0 |
| 23 | | | | | | | | 0 | 230 | 0 | 0 | 0 |
| 24 | | | | | | | | 0 | 127 | 0 | 0 | 0 |
| 25 | | | | | | | | 0 | 312 | 1,330 | 0 | 0 |
| 26 | | | | | | | | 0 | 143 | 3,100 | 0 | 0 |
| 27 | | | | | | | | 0 | 60 | 576 | 0 | 0 |
| 28 | | | | | | | | 0 | 19 | 173 | 0 | 0 |
| 29 | | | | | | | | 0 | 12 | 61 | 0 | 0 |
| 30 | | | | | | | | 0 | 4.3 | 21 | 0 | 0 |
| 31 | | | | | | | | 0 | | 10 | 0 | |
| Month | | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | 0 | 0 | 0 | 0 | 0 |
| April | | | | | | | | 0 | 0 | 0 | 0 | 0 |
| May | | | | | | | | 548 | 0 | 27.5 | 1,690 | |
| June | | | | | | | | 312 | 0 | 30.2 | 1,800 | |
| July | | | | | | | | 3,100 | 0 | 170 | 10,450 | |
| August | | | | | | | | 143 | 0 | 10.5 | 647 | |
| September | | | | | | | | .5 | 0 | .03 | 1.8 | |
| The period | | | | | | | | | | | 14,590 | |

Note.- No flow during March and April.

White River at Crawford, Nebr.

Location.- Chain gage in sec. 9, T. 31 N., R. 52 W., at highway bridge 1 mile southwest of Crawford. Prior to Oct. 16, 1933, records obtained from staff gage half a mile downstream. Records comparable but datum relation not determined.

Drainage area.- 295 square miles.

Records available.- July to December 1897, February 1931 to September 1934.

Extremes.- Maximum discharge during year, 42 second-feet Mar. 30 (gage height, 2.10 feet); minimum, 7 second-feet several days during July and August.
1931-34: Maximum discharge, 1,080 second-feet (slope measurement) Aug. 28, 1933 (gage height, 10.3 feet, former datum); minimum, that of July and August 1934.

Remarks.- Records fair. Discharge estimated Dec. 1 to Feb. 20, Feb. 27 to Mar. 3, on basis of two discharge measurements and temperature records. Small diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | 15 | 19 | | | | 20 | 28 | 22 | 15 | 10 | 7 | 8 |
| 2 | 16 | 19 | | | | 22 | 26 | 22 | 15 | 10 | 7 | 10 |
| 3 | 17 | 18 | | | 33 | 26 | 26 | 23 | 18 | 10 | 7 | 11 |
| 4 | 18 | 18 | | | | 29 | 28 | 21 | 17 | 10 | 7 | 10 |
| 5 | 18 | 20 | | | | 29 | 32 | 21 | 16 | 10 | 8 | 10 |
| 6 | 19 | 21 | | | | 29 | 27 | 20 | 16 | 10 | 8 | 12 |
| 7 | 20 | 24 | | | | 29 | 27 | 24 | 15 | 11 | 9 | 11 |
| 8 | 21 | 23 | | | 32 | 29 | 27 | 21 | 15 | 10 | 8 | 10 |
| 9 | 22 | 23 | | | | 29 | 27 | 19 | 15 | 10 | 8 | 13 |
| 10 | 22 | 22 | | | | 34 | 29 | 19 | 15 | 10 | 12 | 14 |
| 11 | 22 | 22 | | | | 31 | 29 | 19 | 15 | 9 | 11 | 12 |
| 12 | 22 | 23 | | | | *31 | 29 | 28 | 17 | 15 | 9 | 11 |
| 13 | 22 | 24 | | | | 30 | 27 | 16 | 14 | 9 | 11 | 10 |
| 14 | 22 | 21 | | | | 30 | 27 | 16 | 14 | 9 | 10 | 10 |
| 15 | 22 | 21 | | | | 29 | 27 | 16 | 18 | 9 | 10 | 13 |
| 16 | 22 | 20 | | *25 | | 30 | 26 | 16 | 17 | 9 | 10 | 13 |
| 17 | 22 | 20 | | | | 30 | 26 | 16 | 17 | 8 | 9 | 12 |
| 18 | 21 | 20 | | | 27 | 29 | 24 | 16 | 15 | 8 | 9 | 10 |
| 19 | 20 | 20 | | | | 30 | 24 | 16 | 15 | 8 | 9 | 10 |
| 20 | 20 | 20 | | | | 29 | 24 | 15 | 17 | 7 | 9 | 12 |
| 21 | 19 | 21 | | | 24 | 28 | 23 | 15 | 15 | 7 | 9 | 15 |
| 22 | 19 | 21 | | | 24 | 29 | 24 | 15 | 14 | 7 | 9 | 15 |
| 23 | 18 | 20 | | | 25 | 29 | 24 | 15 | 13 | 7 | 10 | 14 |
| 24 | 18 | 21 | | | 24 | 30 | 24 | 15 | 13 | 34 | 10 | 15 |
| 25 | 18 | 21 | | | 24 | 29 | 24 | 15 | 14 | 16 | 10 | 15 |
| 26 | 18 | 21 | | | 22 | 29 | 24 | 14 | 13 | 14 | 11 | 18 |
| 27 | 20 | 22 | | | 18 | 29 | 24 | 14 | 13 | 11 | 11 | 18 |
| 28 | 13 | 22 | | | 20 | 29 | 24 | 14 | 12 | 10 | 11 | 18 |
| 29 | 13 | 22 | | | | 30 | 23 | 14 | 11 | 10 | 10 | 18 |
| 30 | 16 | 22 | | | | 39 | 22 | 14 | 10 | 7 | 9 | 18 |
| 31 | 19 | | | | | 32 | | 14 | | 7 | 8 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 22 | 13 | 19.2 | 1,180 | | | |
| November | | | | | | 24 | 18 | 21.0 | 1,250 | | | |
| December | | | | | | | | 27 | 1,660 | | | |
| January | | | | | | | | 24 | 1,480 | | | |
| February | | | | | | | | 18 | 28.3 | | | |
| March | | | | | | 39 | 20 | 29.2 | 1,790 | | | |
| April | | | | | | 32 | 22 | 25.8 | 1,540 | | | |
| May | | | | | | 24 | 14 | 17.2 | 1,060 | | | |
| June | | | | | | 18 | 10 | 14.7 | 877 | | | |
| July | | | | | | 34 | 7 | 20.3 | 631 | | | |
| August | | | | | | 12 | 7 | 9.3 | 571 | | | |
| September | | | | | | 18 | 8 | 12.8 | 764 | | | |
| The year | | | | | | 39 | 7 | 19.8 | 14,370 | | | |

*Discharge measurement.

White River near Chadron, Nebr.

Location.- Chain gage in sec. 18, T. 33 N., R. 49 W., 2 miles below mouth of Dead Horse Creek and 6 miles west of Chadron.

Drainage area.- 750 square miles.

Records available.- October 1931 to September 1934.

Extremes.- Maximum discharge during year, 1,220 second-feet Aug. 17 by slope measurement (gage height, 18.1 feet); no flow July 6, 7.
1931-34: Maximum discharge, 1,300 second-feet Apr. 24, 1932, Apr. 21, 1933 (gage height, 18.8 feet); no flow Aug. 5-8, Sept. 5-9, 1932, and July 6, 7, 1934.

Remarks.- Records fair. Discharge estimated during period of ice effect, Dec. 1 to Feb. 28, on basis of one discharge measurement and temperature records, and for period June 3 to July 3. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | 4 | 22 | | | | 42 | 27 | 5 | 5 | 2 | 0.4 | 2 |
| 2 | 5 | 25 | | | | 88 | 13 | 6 | 6 | 2 | | 2 |
| 3 | 4 | 20 | | | 34 | 103 | 9 | 7 | 6 | 2 | | 1 |
| 4 | 4 | 16 | | | | 165 | 8 | 5 | 7 | 2 | | 5 |
| 5 | 4 | 32 | | | | 80 | 13 | 6 | 6 | 1 | 2 | 8 |
| 6 | 4 | 25 | | | | 27 | 30 | 9 | 6 | .3 | 2 | 4 |
| 7 | 4 | 20 | | | | 15 | 102 | 4 | 5 | 0 | 102 | 4 |
| 8 | 4 | 24 | | | 33 | 16 | 90 | 4 | 5 | 2 | 72 | 5 |
| 9 | 3 | 25 | | | | 16 | 65 | 4 | 5 | 4 | 149 | 2 |
| 10 | 4 | 34 | | | | 19 | 14 | 4 | 5 | 5 | 13 | 1 |
| 11 | 6 | 25 | | | 12 | 19 | 10 | 4 | 5 | 4 | 3 | 2 |
| 12 | 5 | 25 | | | 6 | 18 | 8 | 4 | 5 | 4 | 2 | 1 |
| 13 | 4 | 25 | | | 3 | 13 | 7 | 4 | 4 | 2 | | .9 |
| 14 | 5 | 20 | | | *8 | 9 | 9 | 5 | 4 | 2 | 1 | .2 |
| 15 | 6 | 19 | | | 15 | 10 | 44 | 4 | 7 | 1 | 28 | .1 |
| 16 | 7 | 19 | | | | 10 | 22 | 4 | 6 | 2 | 185 | .2 |
| 17 | 11 | 20 | | | | 19 | 13 | 4 | 6 | 2 | 615 | .6 |
| 18 | 18 | 19 | | | 22 | 7 | 8 | 4 | 5 | 2 | 14 | 3 |
| 19 | 18 | 18 | | | | 9 | 6 | 6 | 5 | 3 | 4 | 2 |
| 20 | 19 | 19 | | | | 12 | 6 | 5 | 7 | 4 | .4 | .9 |
| 21 | 19 | 16 | | | | 10 | 5 | 3 | 6 | 3 | .4 | .9 |
| 22 | 20 | 14 | | | | 10 | 8 | 3 | 5 | 2 | .4 | 1 |
| 23 | 24 | 16 | | | 18 | 10 | 6 | 4 | 4 | 2 | .2 | 2 |
| 24 | 26 | 14 | | | | 10 | 7 | 5 | 4 | 4 | .2 | 2 |
| 25 | 26 | 14 | | | | 10 | 9 | 5 | 5 | 95 | .1 | 2 |
| 26 | 30 | 13 | | | | 8 | 12 | 4 | 4 | 55 | .1 | 4 |
| 27 | 28 | 16 | | | 20 | 7 | 7 | 4 | 4 | 7 | .1 | 6 |
| 28 | 25 | 32 | | | | 7 | 5 | 2 | 3 | 3 | .4 | 6 |
| 29 | 25 | 34 | | | | 8 | 7 | 2 | 2 | 2 | .2 | 4 |
| 30 | 26 | 36 | | | | 16 | 6 | 2 | 2 | 1 | .4 | 5 |
| 31 | 19 | | | | | 8 | | 4 | | 1 | .4 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 30 | 3 | 13.1 | 805 | | | |
| November | | | | | | 36 | 13 | 22.0 | 1,310 | | | |
| December | | | | | | | | 30 | 1,340 | | | |
| January | | | | | | | | 28 | 1,720 | | | |
| February | | | | | | | 6 | 23.0 | 1,280 | | | |
| March | | | | | | 165 | 7 | 25.4 | 1,560 | | | |
| April | | | | | | 102 | 5 | 19.2 | 1,140 | | | |
| May | | | | | | 9 | 2 | 4.4 | 270 | | | |
| June | | | | | | 8 | 2 | 5.0 | 300 | | | |
| July | | | | | | 95 | 0 | 7.20 | 443 | | | |
| August | | | | | | 615 | .1 | 36.8 | 2,390 | | | |
| September | | | | | | 8 | .1 | 2.59 | 154 | | | |
| The year | | | | | | 615 | 0 | 18.3 | 13,210 | | | |

White River near Oacoma, S. Dak.

Location.- Water-stage recorder in sec. 21, T. 103 N., R. 72 W., at bridge on State highway 47, 8 miles southwest of Oacoma. Chain gage at same location and datum used prior to June 17.

Drainage area.- 10,100 square miles.

Records available.- August 1928 to September 1934.

Extremes.- Maximum discharge during year, 5,880 second-feet June 20 (gage height, 5.00 feet); minimum, 18 second-feet July 28, 29 (gage height, 0.89 foot).

1928-34: Maximum discharge recorded, 12,100 second-feet May 8, 1932 (gage height, 6.8 feet); minimum discharge, about 14 second-feet Nov. 10, 1932; minimum gage height, that of July 28, 29, 1934.

Remarks.- Records good except those estimated for period of ice effect, Dec. 1 to Mar. 17, which were based on one discharge measurement, temperature and precipitation, and are poor.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | 65 | 74 | | | | | 349 | 118 | 21 | 91 | 425 | 140 |
| 2 | 56 | 70 | | | | | 342 | 118 | 29 | 111 | 705 | 79 |
| 3 | 57 | 74 | | | | | 459 | 135 | 29 | 77 | 614 | 56 |
| 4 | 52 | 78 | | | | | 384 | 118 | 49 | 79 | 446 | 48 |
| 5 | 54 | 87 | | | | | 391 | 101 | 38 | 64 | 249 | 46 |
| 6 | 52 | 91 | | | | 100 | 459 | 101 | 42 | 64 | 157 | 89 |
| 7 | 52 | 96 | | | | | 412 | 274 | 65 | 59 | 121 | 91 |
| 8 | 48 | 103 | | | | | 444 | 370 | 46 | 48 | 83 | 51 |
| 9 | 50 | 93 | | | *239 | | 828 | 202 | 35 | 40 | 62 | 46 |
| 10 | 50 | 91 | | | | | 725 | 154 | 725 | 33 | 95 | 118 |
| 11 | 57 | 91 | | | | | 828 | 129 | 580 | 28 | 143 | 104 |
| 12 | 54 | 91 | | | | | 1,170 | 108 | 484 | 28 | 439 | 76 |
| 13 | 54 | 137 | | | | | 775 | 101 | 294 | 27 | 109 | 64 |
| 14 | 52 | 118 | | | | 125 | 628 | 96 | 226 | 27 | 74 | 56 |
| 15 | 56 | 110 | | | | | 459 | 87 | 198 | 258 | 62 | 46 |
| 16 | 54 | 96 | | | | | 391 | 79 | 151 | 235 | 46 | 38 |
| 17 | 56 | 86 | | | | | 330 | 72 | 154 | 161 | 46 | 33 |
| 18 | 56 | 74 | | | | 143 | 274 | 56 | 358 | 614 | 87 | 36 |
| 19 | 57 | 76 | | | | 452 | 262 | 49 | 167 | 383 | 148 | 36 |
| 20 | 59 | 78 | | | | 274 | 230 | 46 | 2,720 | 91 | 173 | 33 |
| 21 | 61 | 103 | | | | 356 | 194 | 43 | 2,040 | 44 | 299 | 32 |
| 22 | 59 | 96 | | | | 420 | 180 | 43 | 383 | 27 | 461 | 30 |
| 23 | 57 | 103 | | | | 242 | 165 | 45 | 213 | 24 | 235 | 28 |
| 24 | 61 | 108 | | | | 311 | 143 | 42 | 333 | 20 | 173 | 30 |
| 25 | 63 | 115 | | | | 198 | 132 | 40 | 253 | 18 | 121 | 35 |
| 26 | 61 | 108 | | | | 198 | 123 | 37 | 213 | 18 | 99 | 32 |
| 27 | 66 | 113 | | | | 212 | 123 | 35 | 278 | 18 | 85 | 31 |
| 28 | 63 | 108 | | | | 216 | 123 | 30 | 210 | 16 | 116 | 28 |
| 29 | 66 | 110 | | | | 198 | 118 | 30 | 143 | 191 | 235 | 29 |
| 30 | 68 | 105 | | | | 176 | 115 | 27 | 101 | 283 | 187 | 28 |
| 31 | 66 | | | | | 202 | | 24 | | 239 | 131 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 68 | 48 | 57.5 | 5,530 | | | |
| November | | | | | | 137 | 70 | 96.1 | 5,720 | | | |
| December | | | | | | | | 75 | 4,610 | | | |
| January | | | | | | | | 60 | 3,690 | | | |
| February | | | | | | | | 150 | 8,330 | | | |
| March | | | | | | 452 | 177 | 368 | 10,860 | | | |
| April | | | | | | 1,170 | 115 | 358 | 22,900 | | | |
| May | | | | | | 370 | 24 | 93.8 | 5,770 | | | |
| June | | | | | | 2,720 | 21 | 352 | 20,950 | | | |
| July | | | | | | 614 | 16 | 110 | 6,780 | | | |
| August | | | | | | 705 | 46 | 207 | 12,750 | | | |
| September | | | | | | 140 | 28 | 53.0 | 3,150 | | | |
| The year | | | | | | 2,720 | 16 | 151 | 109,000 | | | |

*Discharge measurement.

Niobrara River at Dunlap, Nebr.

Location.- Staff gage on line between secs. 26 and 27, T. 29 N., R. 48 W., at Dunlap, half a mile above Cottonwood Creek.

Drainage area.- 1,550 square miles.

Records available.- February 1931 to September 1934.

Extremes.- Maximum discharge during year, about 1,170 second-feet Aug. 16 (gage height, 9.48 feet); minimum, 1 second-foot June 28-30, July 3.
1931-34: Maximum discharge, 1,270 second-feet Aug. 28, 1933 (gage height, 10.62 feet); minimum, 1 second-foot Sept. 22, 1932, and June 28-30, July 3, 1934.

Remarks.- Monthly records poor. Daily records not sufficiently accurate for publication. No diversions or regulation.

Discharge, in second-feet, 1933-34

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|-----------|---------|---------|------|-------------------------|
| October | 47 | 27 | 35.7 | 2,200 |
| November | 42 | 33 | 35.5 | 2,110 |
| December | | | *60 | 3,690 |
| January | | | *65 | 4,000 |
| February | | 45 | 66.9 | 3,710 |
| March | 87 | 63 | 72.0 | 4,430 |
| April | 64 | 20 | 44.7 | 2,660 |
| May | 20 | 2 | 6.9 | 424 |
| June | 14 | 1 | 4.1 | 246 |
| July | 74 | 1 | 11.9 | 732 |
| August | 374 | 2 | 41.9 | 2,580 |
| September | 100 | 3 | 14.8 | 879 |
| The year | 374 | 1 | 38.2 | 27,660 |

*Estimated.

Niobrara River near Spencer, Nebr.

Location.- At power plant of Northern Nebraska Power Co. in N½ sec. 30, T. 33 N., R. 11 W., 5 miles southeast of Spencer.

Drainage area.- 10,800 square miles.

Records available.- May to December 1908, August 1927 to September 1934.

Extremes.- Maximum discharge during year, 11,500 second-feet Sept. 24, minimum daily discharge, 178 second-feet Dec. 29, 1927-34: Maximum discharge, 15,200 second-feet Sept. 6, 1930; minimum daily discharge, 115 second-feet Mar. 10, 1932.

Remarks.- Records good. Spencer Reservoir capacity greatly reduced by filling up with sand; practically no regulation. Discharge computed from flow over spillway and through turbines and gates. Base data furnished by Northern Nebraska Power Co.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|-------|---------|-------|-------|-------|----------------------|-------|-------|------|-------|-------|
| 1 | 939 | 1,150 | 1,180 | 544 | 1,220 | 570 | 1,660 | 954 | 731 | 695 | 656 | 780 |
| 2 | 946 | 1,200 | 1,310 | 725 | 1,880 | 1,110 | 1,430 | 1,020 | 709 | 714 | 642 | 1,720 |
| 3 | 956 | 1,150 | 1,440 | 881 | 2,010 | 4,070 | 1,440 | 1,640 | 885 | 683 | 661 | 1,580 |
| 4 | 937 | 1,170 | 1,360 | 1,070 | 1,890 | 4,030 | 1,510 | 2,670 | 1,380 | 713 | 616 | 1,130 |
| 5 | 955 | 1,120 | 1,400 | 1,080 | 1,900 | 2,080 | 1,540 | 2,200 | 2,020 | 735 | 558 | 968 |
| 6 | 912 | 890 | 1,320 | 1,140 | 1,760 | 1,510 | 1,490 | 1,460 | 1,100 | 854 | 573 | 940 |
| 7 | 983 | 1,150 | 1,350 | 1,110 | 1,720 | 1,150 | 1,440 | 1,280 | 1,660 | 802 | 675 | 659 |
| 8 | 1,030 | 1,380 | 1,210 | 1,240 | 1,620 | 1,280 | 1,310 | 1,170 | 1,220 | 678 | 670 | 822 |
| 9 | 1,030 | 1,220 | 1,290 | 1,280 | 1,540 | 1,130 | 1,280 | 1,000 | 970 | 600 | 709 | 791 |
| 10 | 1,080 | 1,250 | 1,170 | 1,220 | 1,820 | 857 | 1,250 | 1,000 | 917 | 629 | 816 | 1,170 |
| 11 | 1,060 | 1,260 | 451 | 1,180 | 1,610 | 1,840 | 1,220 | 922 | 809 | 625 | 932 | 1,470 |
| 12 | 1,020 | 1,300 | 435 | 1,310 | 1,860 | 1,640 | 1,130 | 972 | 847 | 625 | 807 | 1,180 |
| 13 | 1,060 | 1,220 | 473 | 1,320 | 1,970 | 1,300 | 1,060 | 935 | 987 | 602 | 858 | 908 |
| 14 | 1,130 | 1,170 | 538 | 1,340 | 1,650 | 1,300 | 1,100 | 926 | 1,690 | 635 | 878 | 1,030 |
| 15 | 1,050 | 1,180 | 674 | 1,370 | 1,610 | 1,220 | 1,150 | 932 | 1,190 | 561 | 908 | 1,200 |
| 16 | 1,050 | 1,170 | 965 | 1,400 | 1,450 | 1,220 | 1,100 | 842 | 1,090 | 600 | 941 | 964 |
| 17 | 1,100 | 1,140 | 1,120 | 1,340 | 1,350 | 770 | 1,100 | 771 | 1,000 | 657 | 792 | 919 |
| 18 | 1,120 | 1,200 | 1,010 | 1,380 | 809 | 1,270 | 1,080 | 768 | 1,050 | 703 | 857 | 870 |
| 19 | 1,040 | 1,190 | 1,130 | 1,410 | 817 | 1,460 | 1,080 | 699 | 848 | 642 | 727 | 847 |
| 20 | 1,110 | 1,200 | 1,080 | 1,500 | 1,320 | 1,200 | 1,000 | 731 | 837 | 612 | 896 | 925 |
| 21 | 1,120 | 1,170 | 1,360 | 1,580 | 1,490 | 1,260 | 1,030 | 802 | 1,000 | 560 | 1,080 | 1,190 |
| 22 | 1,050 | 1,220 | 1,760 | 1,650 | 912 | 1,400 | 943 | 1,000 | 982 | 496 | 817 | 1,110 |
| 23 | 1,100 | 1,280 | 2,050 | 1,690 | 776 | 1,450 | 964 | 833 | 835 | 472 | 901 | 1,010 |
| 24 | 1,120 | 1,400 | 1,530 | 1,750 | 461 | 1,310 | 1,020 | 824 | 792 | 510 | 860 | 6,140 |
| 25 | 1,100 | 1,260 | 445 | 1,550 | 229 | 1,390 | 1,020 | 790 | 702 | 569 | 886 | 1,720 |
| 26 | 1,120 | 1,200 | 270 | 1,370 | 218 | 1,290 | 1,030 | 829 | 683 | 641 | 800 | 1,250 |
| 27 | 1,150 | 1,180 | 322 | 1,330 | 224 | 1,300 | 1,040 | 692 | 660 | 677 | 727 | 1,150 |
| 28 | 1,160 | 1,160 | 240 | 1,490 | 230 | 1,350 | 1,010 | 694 | 641 | 675 | 702 | 1,070 |
| 29 | 1,100 | 1,220 | 176 | 1,450 | | 1,170 | 992 | 726 | 664 | 673 | 701 | 1,050 |
| 30 | 1,150 | 1,210 | 273 | 1,270 | | 1,080 | 943 | 726 | 942 | 695 | 1,360 | 1,010 |
| 31 | 1,120 | | 448 | 1,190 | | 1,850 | | 652 | | 667 | 839 | |
| Month | Maximum | | Minimum | | Mean | | Run-off in acre-feet | | | | | |
| October | 1,160 | | 912 | | 1,057 | | 64,970 | | | | | |
| November | 1,400 | | 890 | | 1,200 | | 71,420 | | | | | |
| December | 2,080 | | 176 | | 960 | | 59,030 | | | | | |
| January | 1,780 | | 544 | | 1,295 | | 79,660 | | | | | |
| February | 2,010 | | 218 | | 1,291 | | 71,710 | | | | | |
| March | 4,070 | | 570 | | 1,479 | | 90,960 | | | | | |
| April | 1,660 | | 943 | | 1,179 | | 70,140 | | | | | |
| May | 2,670 | | 652 | | 1,014 | | 62,340 | | | | | |
| June | 2,020 | | 641 | | 996 | | 59,270 | | | | | |
| July | 854 | | 472 | | 644 | | 39,610 | | | | | |
| August | 1,360 | | 556 | | 801 | | 49,280 | | | | | |
| September | 6,140 | | 780 | | 1,259 | | 74,940 | | | | | |
| The year | 6,140 | | 176 | | 1,096 | | 795,300 | | | | | |

James River near Scotland, S. Dak.

Location.- Chain gage in SW $\frac{1}{4}$ sec. 30, T. 97 N., R. 57 W., at county highway bridge 500 feet (revised) above Dawson Creek and 5 miles northeast of Scotland.

Drainage area.- 15,800 square miles.

Records available.- September 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 1,110 second-feet Sept. 25 (gage height, 7.22 feet); no flow July 28 to Aug. 31; minimum gage height, -0.47 foot Aug. 24.

1928-34: Maximum discharge recorded, 2,970 second-feet Mar. 31, 1929 (gage height, 11.92 feet); no flow July 28 to Aug. 31, 1934; minimum gage height, that of Aug. 24, 1934.

Remarks.- Records good except those for Oct. 1 to July 26, which are poor. Records for period of ice effect, Dec. 1 to Mar. 17, were estimated on basis of one discharge measurement, temperature, and precipitation. Discharge also estimated for July 27-31.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 10 | 14 | | | | | 22 | 14 | 2.2 | 7 | | 14 |
| 2 | 8 | 18 | | | | | 21 | 12 | .9 | 7 | | 16 |
| 3 | 6 | 20 | | | | | 19 | 12 | .6 | 6 | | 9 |
| 4 | 5 | 5 | | | | | 19 | 13 | .4 | 5 | | 52 |
| 5 | 4.0 | .8 | | | | | 21 | 13 | .3 | 4.8 | | 29 |
| 6 | 4.0 | .6 | | | | 20 | 21 | 13 | .1 | 17 | | 16 |
| 7 | 3.8 | .5 | | | | | 18 | 12 | .3 | 24 | | 8 |
| 8 | 4.2 | .8 | | | | | 18 | 11 | 18 | 20 | | 6 |
| 9 | 3.6 | .8 | | | *8 | | 19 | 8 | 14 | 14 | | 6 |
| 10 | 2.4 | .7 | | | | | 16 | 9 | 7 | 10 | | 6 |
| 11 | 1.7 | .6 | | | | | 18 | 10 | 10 | 7 | | 6 |
| 12 | 1.7 | .6 | | | | | 20 | 9 | 8 | 6 | | 6 |
| 13 | 2.0 | .6 | | | | | 21 | 8 | 3.2 | 4.6 | | 5 |
| 14 | 2.8 | .6 | | | | | 21 | 8 | 4.6 | 4.0 | | 4.8 |
| 15 | 3.6 | .6 | | | | 15 | 22 | 7 | 7 | 1.8 | | 4.0 |
| 16 | 5 | 1.1 | | | | | 20 | 6 | 10 | 1.6 | | 2.4 |
| 17 | 6 | 5 | | | | | 17 | 7 | 14 | .7 | | 2.0 |
| 18 | 7 | 10 | | | | 17 | 17 | 8 | 13 | .7 | | 1.8 |
| 19 | 9 | 12 | | | | 18 | 18 | 9 | 11 | .6 | | 1.9 |
| 20 | 12 | 12 | | | | 17 | 18 | 9 | 11 | .4 | | 1.8 |
| 21 | 14 | 9 | | | | 19 | 17 | 10 | 11 | .3 | | 1.6 |
| 22 | 13 | 9 | | | | 20 | 17 | 8 | 8 | .2 | | 1.3 |
| 23 | 14 | 10 | | | | 21 | 19 | 7 | 4.6 | .2 | | 1.3 |
| 24 | 16 | 13 | | | | 16 | 15 | 6 | 1.9 | .2 | | 556 |
| 25 | 15 | 14 | | | | 17 | 15 | 4.6 | 1.8 | .2 | | 925 |
| 26 | 16 | 12 | | | | 18 | 17 | 5 | 1.7 | .1 | | 358 |
| 27 | 16 | 12 | | | | 16 | 18 | 6 | 1.7 | .1 | | 147 |
| 28 | 15 | 10 | | | | 17 | 17 | 6 | 2.6 | 0 | | 98 |
| 29 | 15 | 9 | | | | 20 | 17 | 5 | 4.4 | 0 | | 64 |
| 30 | 14 | 11 | | | | 20 | 16 | 4.6 | 7 | 0 | | 56 |
| 31 | 13 | | | | | 20 | | 4.0 | | 0 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 16 | 1.7 | 8.48 | 522 | | |
| November | | | | | | | 20 | .5 | 7.11 | 423 | | |
| December | | | | | | | | | 5 | 307 | | |
| January | | | | | | | | | 4 | 246 | | |
| February | | | | | | | | | 7 | 389 | | |
| March | | | | | | | | | 18.1 | 1,120 | | |
| April | | | | | | | 22 | 15 | 18.5 | 1,100 | | |
| May | | | | | | | 14 | 4.0 | 8.52 | 524 | | |
| June | | | | | | | 18 | .1 | 8.01 | 358 | | |
| July | | | | | | | 24 | 0 | 4.63 | 285 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 925 | 1.3 | 79.9 | 4,750 | | |
| The year | | | | | | | 925 | 0 | 13.8 | 10,020 | | |

*Discharge measurement.

Note.- No flow during August.

Big Sioux River at Akron, Iowa

Location.- Chain gage in sec. 31, T. 93 N., R. 48 W., at bridge on county highway at Akron.

Drainage area.- 7,080 square miles.

Records available.- October 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 10,600 second-feet June 8 (gage height, 18.08 feet); minimum, 41 second-feet June 2, 3 (gage height, 1.20 feet).
1928-34: Maximum discharge recorded, 14,000 second-feet Mar. 15, 1929 (gage height, 18.63 feet); minimum discharge, 28 second-feet Aug. 7, 1931.

Remarks.- Records good except those estimated for period of ice effect, Dec. 1 to Mar. 17, which were based on two discharge measurements, temperature, and precipitation, and are poor.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|-------|----------------------|---------|------|-------|
| 1 | 274 | 132 | | | | | 142 | 99 | 46 | 240 | 118 | 74 |
| 2 | 263 | 142 | | | | | 142 | 101 | 44 | 263 | 110 | 78 |
| 3 | 252 | 132 | | | | | 356 | 99 | 41 | 380 | 108 | 86 |
| 4 | 240 | 142 | | | | | 356 | 97 | 44 | 274 | 102 | 78 |
| 5 | 252 | 142 | | | | 120 | 286 | 97 | 48 | 992 | 93 | 72 |
| 6 | 229 | 132 | | | | | 508 | 91 | 74 | 1,190 | 99 | 72 |
| 7 | 218 | 132 | | | | | 428 | 91 | 1,190 | 1,190 | 102 | 72 |
| 8 | 207 | 132 | | | | | 556 | 86 | 10,300 | 748 | 93 | 69 |
| 9 | 207 | 150 | | | | *152 | 298 | 87 | 8,040 | 508 | 95 | 65 |
| 10 | 207 | 128 | | | | | 252 | 78 | 5,930 | 428 | 102 | 72 |
| 11 | 196 | 132 | | | | | 252 | 80 | 4,540 | 380 | 174 | 67 |
| 12 | 185 | 128 | | | *116 | | 229 | 85 | 2,900 | 356 | 106 | 65 |
| 13 | 185 | 126 | | | | 125 | 218 | 82 | 1,560 | 352 | 93 | 65 |
| 14 | 185 | 122 | | | | | 196 | 82 | 1,150 | 298 | 185 | 74 |
| 15 | 185 | 124 | | | | | 196 | 74 | 882 | 274 | 185 | 67 |
| 16 | 185 | 118 | | | | | 174 | 72 | 748 | 252 | 196 | 70 |
| 17 | 185 | 114 | | | | | 174 | 72 | 694 | 263 | 185 | 67 |
| 18 | 174 | 132 | | | | 93 | 174 | 69 | 594 | 274 | 132 | 69 |
| 19 | 185 | 132 | | | | 104 | 153 | 63 | 556 | 263 | 120 | 67 |
| 20 | 185 | 130 | | | | 142 | 142 | 63 | 480 | 263 | 118 | 67 |
| 21 | 174 | 120 | | | | 153 | 142 | 61 | 454 | 263 | 112 | 65 |
| 22 | 174 | 116 | | | | 153 | 153 | 60 | 428 | 263 | 101 | 65 |
| 23 | 164 | 114 | | | | 142 | 142 | 61 | 380 | 229 | 104 | 63 |
| 24 | 164 | 126 | | | | 153 | 142 | 56 | 356 | 185 | 89 | 153 |
| 25 | 164 | 118 | | | | 132 | 132 | 58 | 309 | 174 | 89 | 142 |
| 26 | 164 | 120 | | | | 142 | 128 | 54 | 274 | 153 | 74 | 124 |
| 27 | 153 | 118 | | | | 132 | 116 | 54 | 274 | 164 | 80 | 108 |
| 28 | 153 | 120 | | | | 132 | 104 | 53 | 263 | 142 | 82 | 110 |
| 29 | 126 | 120 | | | | 132 | 99 | 50 | 252 | 142 | 78 | 106 |
| 30 | 132 | 116 | | | | 132 | 101 | 50 | 240 | 128 | 76 | 309 |
| 31 | 142 | | | | | 118 | | 48 | | 122 | 78 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 274 | 126 | 191 | 11,720 | | | |
| November | | | | | | 142 | 114 | 126 | 7,520 | | | |
| December | | | | | | | | 100 | 6,150 | | | |
| January | | | | | | | | 90 | 5,530 | | | |
| February | | | | | | | | 100 | 5,550 | | | |
| March | | | | | | 153 | 93 | 128 | 7,880 | | | |
| April | | | | | | 508 | 99 | 210 | 12,480 | | | |
| May | | | | | | 101 | 48 | 73.3 | 4,510 | | | |
| June | | | | | | 10,300 | 41 | 1,435 | 85,410 | | | |
| July | | | | | | 1,190 | 122 | 359 | 22,080 | | | |
| August | | | | | | 196 | 74 | 112 | 6,900 | | | |
| September | | | | | | 309 | 63 | 88.7 | 5,280 | | | |
| The year. | | | | | | | 10,300 | 41 | 250 | 181,000 | | |

*Discharge measurement.

Spirit Lake at Orleans, Iowa

Location.- In sec. 27, T. 100 N., R. 36 W., at State fish hatchery at Orleans. Gage consists of a vertical 2-inch pipe tapped into 10-inch gravity main from lake to rearing ponds of fish hatchery; gage height determined by measuring distance from top of pipe to water surface. Top of pipe is at elevation 105.53 feet, Iowa Lake Survey datum.

Records available.- May 1933 to September 1934.

Extremes.- Maximum stage during period of record, 99.88 feet May 20, 1933; minimum, 97.16 feet Sept. 18-19, 22, 23, 1934.

Remarks.- Daily gage heights subject to fluctuation caused by direction and velocity of wind. No gage readings on days of missing record. There has been no discharge through lake outlet for several years.

Gage height, in feet, 1933

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|
| 1 | | | | | | | | | 99.66 | 99.38 | 99.05 | 99.05 |
| 2 | | | | | | | | | 99.68 | 99.47 | 99.11 | 99.05 |
| 3 | | | | | | | | | 99.70 | 99.49 | 99.09 | 99.05 |
| 4 | | | | | | | | | 99.68 | 99.43 | 99.07 | 99.03 |
| 5 | | | | | | | | | 99.68 | 99.41 | 99.01 | 98.99 |
| 6 | | | | | | | | | 99.63 | 99.41 | 99.11 | 99.01 |
| 7 | | | | | | | | | 99.66 | 99.38 | 99.16 | 98.97 |
| 8 | | | | | | | | | 99.66 | 99.41 | 99.13 | 98.97 |
| 9 | | | | | | | | | 99.63 | 99.36 | 99.13 | 99.01 |
| 10 | | | | | | | | | 99.66 | 99.32 | 99.13 | 99.01 |
| 11 | | | | | | | | | 99.68 | 99.34 | 99.11 | 98.99 |
| 12 | | | | | | | | | 99.68 | 99.36 | 99.13 | 98.98 |
| 13 | | | | | | | | | 99.53 | 99.32 | 99.07 | 98.95 |
| 14 | | | | | | | | | 99.53 | 99.30 | 99.03 | 98.93 |
| 15 | | | | | | | | | 99.49 | 99.28 | 99.03 | 98.95 |
| 16 | | | | | | | | | | 99.48 | 99.26 | 99.07 |
| 17 | | | | | | | | 99.82 | 99.45 | 99.24 | 99.11 | 98.91 |
| 18 | | | | | | | | 99.80 | 99.41 | 99.17 | 99.05 | 98.86 |
| 19 | | | | | | | | 99.80 | 99.38 | 99.13 | 99.01 | 98.88 |
| 20 | | | | | | | | 99.88 | 99.38 | 99.11 | 99.00 | 98.86 |
| 21 | | | | | | | | 99.78 | 99.38 | 99.07 | 98.95 | 98.82 |
| 22 | | | | | | | | 99.76 | 99.37 | 99.20 | 98.87 | 98.82 |
| 23 | | | | | | | | 99.70 | 99.39 | 99.32 | 99.07 | 98.82 |
| 24 | | | | | | | | 99.72 | 99.36 | 99.24 | 99.11 | 98.74 |
| 25 | | | | | | | | 99.72 | 99.36 | 99.24 | 99.16 | 98.74 |
| 26 | | | | | | | | 99.72 | 99.34 | 99.22 | 99.07 | 98.76 |
| 27 | | | | | | | | 99.72 | 99.34 | 99.17 | 99.03 | 98.72 |
| 28 | | | | | | | | 99.70 | 99.34 | 99.13 | 99.11 | 98.72 |
| 29 | | | | | | | | 99.72 | 99.32 | 99.07 | 99.05 | 98.68 |
| 30 | | | | | | | | 99.70 | 99.30 | 99.03 | 99.03 | 98.76 |
| 31 | | | | | | | | 99.70 | | 99.07 | 98.95 | |

Spirit Lake at Orleans, Iowa

(Continued)

Gage height, in feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 98.66 | 98.30 | | | | | | | 97.50 | | 97.42 | 97.22 |
| 2 | 98.59 | 98.43 | 98.24 | | | | 98.38 | | 97.46 | | 97.44 | 97.24 |
| 3 | 98.55 | 98.34 | | | 98.20 | | 98.38 | | 97.44 | 97.78 | 97.40 | 97.24 |
| 4 | 98.55 | 98.34 | | | | | | 97.86 | 97.46 | | 97.38 | 97.22 |
| 5 | 98.55 | 98.34 | | | | | | 97.86 | 97.46 | | 97.34 | 97.20 |
| 6 | 98.59 | 98.34 | | 98.28 | | | | 97.66 | | | 97.36 | 97.26 |
| 7 | 98.70 | 98.51 | | | | | | 97.86 | 97.56 | 97.76 | 97.32 | 97.22 |
| 8 | 98.55 | 98.32 | | | | | 98.30 | 97.93 | 97.90 | | | |
| 9 | 98.53 | 98.32 | 98.28 | | | | | 97.95 | | 97.70 | 97.26 | 97.18 |
| 10 | 98.53 | | | | | | | 97.95 | | | 97.26 | 97.20 |
| 11 | 98.53 | | | | | | | 97.93 | | | 97.28 | 97.20 |
| 12 | 98.51 | | | | | | | 97.91 | 97.88 | | 97.28 | 97.20 |
| 13 | 98.49 | | | 98.28 | | | | 97.88 | 97.84 | 97.77 | | 97.18 |
| 14 | 98.45 | | | | | | | 97.93 | 97.88 | 97.70 | 97.38 | 97.20 |
| 15 | | | | | | 98.13 | | 97.86 | | 97.68 | 97.52 | 97.18 |
| 16 | 98.53 | | | | | 98.07 | | 97.84 | 97.86 | 97.70 | 97.50 | 97.16 |
| 17 | 98.49 | | | | | 98.15 | | 97.82 | | 97.74 | 97.46 | 97.16 |
| 18 | | 98.20 | 98.49 | | | 98.11 | | 97.82 | 97.86 | 97.74 | | 97.16 |
| 19 | 98.45 | | | | | 98.11 | | 97.74 | 97.84 | | 97.46 | 97.16 |
| 20 | 98.36 | | | 98.26 | | 98.15 | | | | | | 97.18 |
| 21 | 98.43 | | | | | 98.07 | | 97.78 | | | | 97.18 |
| 22 | 98.43 | | | | | 98.11 | | | | 97.68 | | 97.16 |
| 23 | 98.41 | | 98.24 | | | | | | | 97.64 | 97.24 | 97.16 |
| 24 | 98.43 | | | | | | | | | | 97.21 | 97.18 |
| 25 | 98.32 | 98.20 | | | | | | | | 97.60 | 97.22 | 97.20 |
| 26 | 98.41 | | | | | | | | 97.72 | | 97.22 | |
| 27 | 98.41 | | | 98.36 | | | | | 97.70 | | 97.24 | |
| 28 | 98.33 | | | | | | | | 97.72 | | 97.24 | |
| 29 | 98.32 | | | | | | | 97.56 | | 97.52 | 97.20 | 97.18 |
| 30 | 98.32 | | 98.30 | | | | | 97.56 | | 97.48 | 97.20 | |
| 31 | 98.32 | | | | | | | 97.52 | | 97.44 | 97.22 | |

Okobojo Lake at Arnolds Park, Iowa

Location.- Staff gage in sec. 24, T. 99 N., R. 36 W., at State Pier in town of Arnolds Park. Zero of gage is at elevation 94.51 feet, Iowa Lake Survey datum.

Records available.- May 1933 to September 1934.

Extremes.- Maximum stage during period of record, 3.53 feet May 16, 1933; minimum, 1.68 feet Sept. 21, 1934.

Remarks.- Daily gage heights subject to fluctuation caused by direction and velocity of wind. No gage readings on days of missing gage-height records.

Gage height, in feet, 1933

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1 | | | | | | | | 3.49 | 3.18 | 3.06 | 2.92 | |
| 2 | | | | | | | | 3.49 | 3.30 | 3.12 | 3.08 | |
| 3 | | | | | | | | 3.48 | 3.30 | 3.10 | 3.12 | |
| 4 | | | | | | | | 3.50 | 3.28 | 3.08 | 3.10 | |
| 5 | | | | | | | | 3.50 | 3.26 | 3.06 | 3.10 | |
| 6 | | | | | | | | | 3.50 | 3.24 | 3.10 | 3.12 |
| 7 | | | | | | | | | 3.50 | 3.22 | 3.18 | 3.10 |
| 8 | | | | | | | | | 3.51 | 3.22 | 3.10 | 3.08 |
| 9 | | | | | | | | | 3.49 | 3.20 | 3.14 | 3.08 |
| 10 | | | | | | | | | 3.49 | 3.20 | 3.14 | 3.06 |
| 11 | | | | | | | | | 3.45 | 3.20 | 3.16 | 3.06 |
| 12 | | | | | | | | | 3.43 | 3.20 | 3.16 | 3.05 |
| 13 | | | | | | | | | 3.42 | 3.22 | 3.12 | 3.04 |
| 14 | | | | | | | | | 3.42 | 3.20 | 3.10 | 3.04 |
| 15 | | | | | | | | | 3.40 | 3.22 | 3.14 | 3.02 |
| 16 | | | | | | | | 3.53 | 3.40 | 3.20 | 3.16 | 3.00 |
| 17 | | | | | | | | 3.50 | 3.38 | 3.20 | 3.16 | 2.98 |
| 18 | | | | | | | | 3.52 | 3.35 | 3.20 | 3.14 | 2.96 |
| 19 | | | | | | | | 3.50 | 3.32 | 3.20 | 3.10 | |
| 20 | | | | | | | | 3.52 | 3.30 | 3.19 | 3.06 | 2.90 |
| 21 | | | | | | | | 3.52 | 3.28 | 3.18 | 3.04 | 2.90 |
| 22 | | | | | | | | 3.50 | 3.26 | 3.18 | 3.06 | 2.88 |
| 23 | | | | | | | | 3.50 | 3.24 | 3.30 | 3.06 | 2.90 |
| 24 | | | | | | | | 3.52 | 3.22 | 3.24 | 3.04 | 2.86 |
| 25 | | | | | | | | 3.51 | 3.22 | 3.24 | 3.08 | 2.90 |
| 26 | | | | | | | | 3.51 | 3.20 | 3.22 | 3.04 | 2.86 |
| 27 | | | | | | | | 3.49 | 3.18 | 3.18 | 3.00 | 2.80 |
| 28 | | | | | | | | 3.49 | 3.18 | 3.14 | 3.02 | 2.80 |
| 29 | | | | | | | | 3.50 | 3.16 | 3.12 | 2.98 | 2.76 |
| 30 | | | | | | | | 3.50 | 3.14 | 3.10 | 2.94 | |
| 31 | | | | | | | | 3.48 | | 3.08 | 2.90 | |

Okoboji Lake at Arnolds Park, Iowa

(Continued)

Gage height, in feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1 | 2.74 | 2.32 | 2.14 | 2.18 | 2.26 | 2.24 | | 2.15 | 1.76 | 2.16 | 2.04 | |
| 2 | 2.76 | 2.32 | 2.22 | 2.18 | 2.26 | 2.24 | 2.14 | 2.18 | | 2.12 | 2.02 | |
| 3 | 2.70 | 2.30 | 2.22 | 2.18 | 2.26 | 2.24 | | 2.18 | 1.78 | 2.12 | 2.00 | |
| 4 | 2.70 | 2.30 | | 2.18 | 2.26 | 2.24 | 2.38 | 2.15 | 1.78 | | | |
| 5 | 2.68 | 2.30 | 2.22 | 2.18 | 2.26 | 2.24 | | 2.15 | | 2.30 | 2.00 | |
| 6 | 2.70 | 2.26 | 2.20 | 2.18 | 2.26 | 2.22 | 2.40 | 2.16 | | 2.30 | 1.98 | 1.75 |
| 7 | | 2.24 | | 2.18 | 2.26 | 2.22 | 2.40 | 2.14 | 1.90 | 2.30 | 1.98 | |
| 8 | | | 2.20 | 2.18 | 2.26 | 2.22 | 2.40 | | 2.34 | | 1.96 | |
| 9 | 2.61 | 2.24 | 2.20 | 2.18 | 2.26 | 2.22 | 2.40 | | 2.34 | 2.30 | | |
| 10 | 2.58 | 2.24 | | 2.18 | 2.26 | 2.20 | 2.40 | | 2.36 | 2.28 | 2.00 | |
| 11 | 2.58 | 2.26 | 2.18 | 2.18 | 2.24 | 2.20 | | 2.08 | | 2.28 | 2.02 | |
| 12 | 2.56 | | 2.18 | 2.18 | 2.24 | 2.20 | | 2.05 | 2.36 | 2.30 | 2.04 | 1.76 |
| 13 | 2.50 | 2.22 | 2.18 | 2.18 | 2.24 | 2.18 | 2.40 | 2.06 | 2.34 | 2.28 | 2.04 | |
| 14 | 2.50 | | 2.18 | 2.18 | 2.24 | 2.18 | 2.40 | 2.04 | | 2.28 | 2.06 | |
| 15 | 2.50 | 2.22 | 2.18 | 2.18 | 2.24 | 2.18 | 2.40 | 2.00 | 2.34 | | 2.12 | |
| 16 | 2.52 | 2.20 | 2.18 | 2.18 | 2.24 | 2.14 | 2.40 | | 2.32 | 2.30 | 2.10 | |
| 17 | 2.52 | 2.20 | 2.18 | 2.18 | 2.24 | | 2.36 | 2.00 | 2.32 | 2.30 | 2.08 | |
| 18 | 2.50 | 2.20 | 2.18 | 2.18 | 2.24 | 2.14 | | 2.00 | 2.32 | 2.30 | | |
| 19 | 2.50 | 2.20 | 2.18 | 2.18 | 2.24 | 2.14 | | | | 2.28 | 2.04 | |
| 20 | 2.48 | 2.18 | 2.18 | 2.18 | 2.24 | 2.14 | | 1.92 | 2.32 | 2.28 | 2.00 | |
| 21 | 2.50 | 2.20 | 2.18 | 2.20 | 2.24 | 2.14 | 2.26 | | 2.32 | 2.26 | 2.00 | 1.68 |
| 22 | 2.45 | 2.20 | 2.18 | 2.22 | 2.24 | 2.12 | 2.24 | 1.88 | 2.32 | 2.26 | 2.00 | |
| 23 | 2.42 | 2.20 | 2.18 | 2.24 | 2.24 | 2.12 | | 1.88 | 2.30 | 2.24 | 2.00 | |
| 24 | 2.40 | 2.18 | 2.18 | 2.26 | 2.24 | 2.12 | 2.24 | 1.86 | 2.30 | 2.24 | | |
| 25 | 2.38 | | 2.18 | 2.26 | 2.24 | 2.10 | 2.24 | 1.86 | 2.28 | | | |
| 26 | 2.36 | 2.18 | 2.18 | 2.26 | 2.24 | 2.10 | | 1.84 | 2.26 | 2.20 | | |
| 27 | 2.34 | | 2.18 | 2.26 | 2.24 | 2.10 | 2.24 | 1.82 | | 2.18 | | |
| 28 | 2.30 | 2.16 | 2.18 | 2.26 | 2.24 | 2.10 | | 1.80 | 2.22 | 2.14 | | |
| 29 | 2.34 | 2.16 | 2.18 | 2.26 | 2.24 | | 2.20 | 1.80 | 2.20 | 2.12 | | |
| 30 | 2.30 | 2.14 | 2.18 | 2.26 | | 2.10 | 2.20 | 1.78 | 2.18 | 2.08 | 1.78 | 1.70 |
| 31 | 2.32 | | 2.18 | 2.26 | | 2.10 | | 1.78 | | | | |

Grizzly Creek near Walden, Colo.

Location.- Water-stage recorder in sec. 29, T. 8 N., R. 80 W., half a mile above junction with Little Grizzly Creek and 10 miles south of Walden.

Drainage area.- 229 square miles (revised).

Records available.- May 1904 to October 1905, May to September 1923, October 1926 to September 1930, October 1933 to September 1934 in reports of U. S. Geological Survey; May 1904 to October 1905, May to September 1923, October 1926 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 110 second-feet Apr. 25 (gage height, 1.62 feet); no flow June 20 to Sept. 30, 1904-5, 1923, 1926-34: Maximum discharge, 1,340 second-feet June 10, 1923 (gage height, 4.8 feet); no flow June 20 to Sept. 30, 1934.

Remarks.- Records good except those estimated for Nov. 13-30, Apr. 30 to May 2. No records Dec. 1 to Apr. 17. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 20 | 10 | | | | | | 56 | 5.6 | | | |
| 2 | 14 | 10 | | | | | | 50 | 6.7 | | | |
| 3 | 15 | 10 | | | | | | 42 | 6.9 | | | |
| 4 | 14 | 14 | | | | | | 57 | 7.8 | | | |
| 5 | 12 | 14 | | | | | | 77 | 5.6 | | | |
| 6 | 10 | 14 | | | | | | 62 | 3.0 | | | |
| 7 | 11 | 16 | | | | | | 55 | 1.7 | | | |
| 8 | 7.8 | 16 | | | | | | 51 | 1.4 | | | |
| 9 | 11 | 14 | | | | | | 46 | 1.7 | | | |
| 10 | 12 | 14 | | | | | | 42 | 1.7 | | | |
| 11 | 12 | 15 | | | | | | 40 | 1.6 | | | |
| 12 | 8.9 | 15 | | | | | | 39 | 1.6 | | | |
| 13 | 8.9 | | | | | | | 37 | 1.6 | | | |
| 14 | 10 | 15 | | | | | | 36 | 1.0 | | | |
| 15 | 8.9 | | | | | | | 34 | .5 | | | |
| 16 | 8.9 | | | | | | | 31 | 1.2 | | | |
| 17 | 10 | | | | | | | 22 | .6 | | | |
| 18 | 8.9 | 15 | | | | | 97 | 17 | .4 | | | |
| 19 | 7.8 | | | | | | 80 | 14 | .4 | | | |
| 20 | 7.6 | | | | | | 77 | 11 | 0 | | | |
| 21 | 8.9 | 16 | | | | | 76 | 7.8 | 0 | | | |
| 22 | 7.8 | 19 | | | | | 82 | 11 | 0 | | | |
| 23 | 7.8 | | | | | | 84 | 12 | 0 | | | |
| 24 | 8.9 | 18 | | | | | 91 | 11 | 0 | | | |
| 25 | 10 | | | | | | 95 | 10 | 0 | | | |
| 26 | 8.9 | | | | | | 82 | 11 | 0 | | | |
| 27 | 8.9 | | | | | | 84 | 6.7 | 0 | | | |
| 28 | 10 | 17 | | | | | 71 | 3.5 | 0 | | | |
| 29 | 8.9 | | | | | | 68 | 3.5 | 0 | | | |
| 30 | 8.9 | | | | | | 64 | 7.8 | 0 | | | |
| 31 | 8.9 | | | | | | | 7.8 | | | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 20 | 7.8 | 10.2 | 628 | | |
| November | | | | | | | 19 | 10 | 15.2 | 904 | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April 18-30 | | | | | | | 97 | 64 | 80.8 | 2,080 | | |
| May | | | | | | | 77 | 3.5 | 29.4 | 1,810 | | |
| June | | | | | | | 8.9 | 0 | 1.77 | 105 | | |
| July | | | | | | | 0 | 0 | 0 | 0 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 0 | 0 | 0 | 0 | | |
| | | | | | | | | | | | | |

Note.- No flow during July, August, and September.

North Platte River near Walden, Colo.

Location.- Water-stage recorder in sec. 6, T. 8 N., R. 80 W., 8 miles southwest of Walden.

Drainage area.- 446 square miles.

Records available.- May 1904 to October 1905, October 1923 to September 1930, October 1933 to September 1934 in reports of U. S. Geological Survey; May 1904 to October 1905, October 1923 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 426 second-feet May 30 (gage height, 2.49 feet); minimum daily discharge, 5.2 second-feet Sept. 19, 20.
1904-5, 1923-34: Maximum discharge, 1,770 second-feet June 1, 1928 (gage height, 5.33 feet); minimum daily discharge, that of Sept. 19, 20, 1934.

Remarks.- Records good except those for Oct. 1, Nov. 13-30, Apr. 27-30, June 9-15, 17-24, which were estimated. No records Dec. 1 to Mar. 25. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 57 | 34 | | | | | 156 | 104 | 226 | 11 | 19 | 17 |
| 2 | 59 | 36 | | | | | 138 | 108 | 168 | 11 | 18 | 18 |
| 3 | 56 | 38 | | | | | 132 | 180 | 130 | 11 | 17 | 17 |
| 4 | 54 | 43 | | | | | 110 | 189 | 108 | 11 | 17 | 18 |
| 5 | 54 | 42 | | | | | 100 | 145 | 82 | 11 | 19 | 19 |
| 6 | 54 | 42 | | | | | 94 | 180 | 68 | 11 | 22 | 22 |
| 7 | 54 | 43 | | | | | 90 | 259 | 61 | 11 | 21 | 22 |
| 8 | 54 | 43 | | | | | 90 | 306 | 56 | 11 | 22 | 23 |
| 9 | 55 | 43 | | | | | 117 | 322 | 53 | 11 | 30 | 15 |
| 10 | 56 | 44 | | | | | 121 | 322 | 50 | 11 | 30 | 11 |
| 11 | 58 | 47 | | | | | 141 | 296 | 46 | 8.2 | 29 | 13 |
| 12 | 54 | 45 | | | | | 176 | 325 | 42 | 11 | 25 | 12 |
| 13 | 55 | 30 | | | | | 191 | 368 | 38 | 8.8 | 22 | 11 |
| 14 | 51 | | | | | | 212 | 322 | 35 | 8.8 | 22 | 9.4 |
| 15 | 50 | | | | | | 268 | 214 | 32 | 8.2 | 27 | 11 |
| 16 | 47 | 28 | | | | | 249 | 174 | 29 | 7.6 | 27 | 8.2 |
| 17 | 43 | | | | | | 207 | 182 | 28 | 8.2 | 23 | 7.6 |
| 18 | 43 | | | | | | 185 | 217 | 27 | 7.6 | 23 | 6.4 |
| 19 | 43 | | | | | | 178 | 252 | 26 | 7.0 | 21 | 5.2 |
| 20 | 39 | | | | | | 169 | 270 | 25 | 7.0 | 25 | 5.2 |
| 21 | 37 | 30 | | | | | 185 | 273 | 23 | 7.6 | 25 | 7.0 |
| 22 | 38 | 30 | | | | | 187 | 259 | 22 | 7.6 | 23 | 8.2 |
| 23 | 38 | 30 | | | | | 198 | 257 | 21 | 8.8 | 19 | 7.0 |
| 24 | 37 | | | | | | 203 | 234 | 20 | 13 | 18 | 6.4 |
| 25 | 36 | | | | | | 214 | 236 | 18 | 15 | 16 | 8.8 |
| 26 | 35 | 28 | | | | 123 | 217 | 219 | 16 | 31 | 15 | 11 |
| 27 | 34 | | | | | 138 | 165 | 214 | 15 | 20 | 12 | 11 |
| 28 | 34 | | | | | 147 | 134 | 205 | 14 | 16 | 13 | 10 |
| 29 | 34 | | | | | 156 | 125 | 210 | 12 | 14 | 13 | 9.4 |
| 30 | 34 | | | | | 167 | 115 | 363 | 11 | 14 | 14 | 7.0 |
| 31 | 34 | | | | | 174 | | 336 | | 14 | 15 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 59 | 34 | 46.0 | 2,830 | | |
| November | | | | | | | 47 | | 34.0 | 2,020 | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 26-31 | | | | | | | 174 | 123 | 161 | 1,800 | | |
| April | | | | | | | 268 | 90 | 162 | 9,650 | | |
| May | | | | | | | 368 | 104 | 244 | 15,000 | | |
| June | | | | | | | 226 | 11 | 50.0 | 2,970 | | |
| July | | | | | | | 31 | 7.0 | 11.4 | 701 | | |
| August | | | | | | | 30 | 12 | 20.7 | 1,270 | | |
| September | | | | | | | 23 | 5.2 | 11.9 | 708 | | |

North Platte River near Northgate, Colo.

Location.- Water-stage recorder in sec. 11, T. 11 N., R. 80 W., 6 miles south of Colorado-Wyoming State line and 6 miles northwest of Northgate.

Drainage area.- 1,440 square miles.

Records available.- May to November 1904, May 1915 to September 1934.

Average discharge.- 19 years (1915-34), 542 second-feet.

Extremes.- Maximum discharge during year, 603 second-feet June 13 (gauge height, 2.23 feet); minimum, 19 second-feet July 17-19; minimum gauge height, 0.57 foot July 19.

1904, 1915-34: Maximum discharge, 6,720 second-feet June 11, 1923 (gauge height, 6.24 feet); minimum, that of July 17-19, 1934.

Remarks.- Records good except those for Nov. 6-9, 16-23, 25-30, Dec. 3 to Mar. 26, which were estimated on basis of two discharge measurements and comparison with flow of North Platte River at Saratoga, and those estimated Apr. 4-6, Sept. 2-7. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|----|
| 1 | 178 | 107 | 104 | 83 | 84 | 108 | 374 | 142 | 365 | 25 | 34 | 24 | |
| 2 | 169 | 117 | 102 | | | | 342 | 142 | 270 | 26 | 35 | 26 | |
| 3 | 160 | 120 | 80 | | | | 322 | 154 | 207 | 25 | 37 | 25 | |
| 4 | 148 | 110 | | | | | 222 | 178 | 184 | 22 | 35 | 25 | |
| 5 | 142 | 87 | | | | | 230 | 240 | 166 | 23 | 34 | 23 | |
| 6 | 137 | 87 | 110 | 67 | 95 | 157 | 246 | 188 | 145 | 23 | 37 | 25 | |
| 7 | 137 | 127 | | | | | 248 | 169 | 134 | 23 | 39 | 24 | |
| 8 | 131 | 134 | | | | | 248 | 210 | 112 | 22 | 37 | 24 | |
| 9 | 128 | 138 | | | | | 327 | 270 | 99 | 22 | 43 | 24 | |
| 10 | 128 | 142 | | | | | 374 | 307 | 84 | 22 | 64 | 25 | |
| 11 | 126 | 194 | 106 | 62 | 113 | 93 | 408 | 317 | 75 | 23 | 62 | 28 | |
| 12 | 123 | 163 | | | | | 448 | 297 | 66 | 22 | 54 | 25 | |
| 13 | 120 | 134 | | | | | 485 | 353 | 64 | 23 | 46 | 24 | |
| 14 | 117 | 117 | | | | | 523 | 413 | 60 | 22 | 39 | 22 | |
| 15 | 115 | 115 | | | | | 497 | 312 | 58 | 20 | 47 | 21 | |
| 16 | 115 | 104 | 86 | 65 | 78 | 246 | 479 | 240 | 77 | 20 | 56 | 21 | |
| 17 | 117 | 106 | | | | | 419 | 214 | 60 | 19 | 43 | 22 | |
| 18 | 110 | 112 | | | | | 347 | 218 | 60 | 19 | 37 | 22 | |
| 19 | 104 | 95 | | | | | 322 | 248 | 43 | 19 | 35 | 21 | |
| 20 | 102 | 97 | | | | | 288 | 283 | 37 | 20 | 39 | 22 | |
| 21 | 99 | 123 | 106 | 78 | 87 | 246 | 274 | 312 | 33 | 21 | 42 | 22 | |
| 22 | 102 | 125 | | | | | 274 | 312 | 26 | 21 | 42 | 21 | |
| 23 | 102 | 130 | | | | | 279 | 307 | 31 | 24 | 35 | 21 | |
| 24 | 104 | 142 | | | | | 279 | 312 | 32 | 42 | 33 | 21 | |
| 25 | 104 | 115 | | | | | 283 | 342 | 35 | 39 | 31 | 21 | |
| 26 | 110 | 108 | 108 | 73 | 73 | 307 | 248 | 332 | 39 | 46 | 29 | 22 | |
| 27 | 110 | 110 | | | | | 221 | 347 | 31 | 49 | 28 | 25 | |
| 28 | 110 | 125 | | | | | 332 | 197 | 353 | 27 | 39 | 27 | |
| 29 | 110 | 115 | | | | | 353 | 163 | 327 | 27 | 37 | 25 | 29 |
| 30 | 107 | 108 | | | | | 380 | 148 | 425 | 25 | 36 | 25 | 29 |
| 31 | 104 | | | | | | 419 | 549 | | 34 | 25 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | | 178 | 99 | 122 | 7,480 | | | |
| November | | | | | | | 194 | 87 | 120 | 7,150 | | | |
| December | | | | | | | | | 101 | 6,190 | | | |
| January | | | | | | | | 62 | 71.8 | 4,410 | | | |
| February | | | | | | | 115 | | 90.7 | 5,040 | | | |
| March | | | | | | | 419 | | 191 | 11,740 | | | |
| April | | | | | | | 523 | 148 | 317 | 16,870 | | | |
| May | | | | | | | 549 | 142 | 284 | 17,480 | | | |
| June | | | | | | | 335 | 25 | 86.4 | 5,320 | | | |
| July | | | | | | | 49 | 19 | 26.7 | 1,640 | | | |
| August | | | | | | | 64 | 25 | 38.6 | 2,370 | | | |
| September | | | | | | | 29 | 21 | 23.8 | 1,410 | | | |
| The year | | | | | | | 549 | 19 | 123 | 89,100 | | | |

North Platte River at Saratoga, Wyo.

Location.- Water-stage recorder in sec. 14, T. 17 N., R. 84 W., at Saratoga. Zero of gage is 8,773.8 feet above mean sea level.

Drainage area.- 2,880 square miles.

Records available.- June 1903 to October 1906, April to December 1909, April 1911 to September 1934.

Average discharge.- 27 years (1903-6, 1910-34), 1,330 second-feet.

Extremes.- Maximum discharge during year, 1,680 second-feet May 13 (gage height, 5.49 feet); minimum, 35 second-feet July 19 (gage height, 2.98 feet).
1903-6, 1909, 1911-34: Maximum discharge, 13,000 second-feet June 8, 1909 (gage height, 11.06 feet); minimum, that of July 19, 1934.

Remarks.- Records good except those for Dec. 5, 8, 14-20, Jan. 4-22, 25-31, Feb. 11-13, 15, 18, which are estimated on basis of two discharge measurements and temperature records. A few diversions between Northgate and Saratoga.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|-------|-------|-------|------|------|-------|
| 1 | 321 | 253 | 274 | 240 | 184 | 200 | 599 | 841 | 1,170 | 54 | 82 | 51 |
| 2 | 307 | 257 | 253 | 253 | 190 | 225 | 563 | 841 | 894 | 50 | 72 | 51 |
| 3 | 302 | 261 | 229 | 211 | 204 | 229 | 512 | 894 | 711 | 48 | 65 | 53 |
| 4 | 312 | 283 | 204 | 200 | 211 | 225 | 449 | 1,160 | 608 | 50 | 69 | 54 |
| 5 | 302 | 236 | 200 | 190 | 225 | 232 | 407 | 1,130 | 472 | 58 | 80 | 53 |
| 6 | 312 | 178 | 215 | 176 | 207 | 278 | 350 | 1,230 | 428 | 60 | 90 | 53 |
| 7 | 316 | 178 | 240 | | 211 | 297 | 382 | 1,330 | 435 | 54 | 96 | 50 |
| 8 | 302 | 283 | 283 | | 236 | 232 | 435 | 1,370 | 362 | 50 | 88 | 56 |
| 9 | 302 | 344 | 227 | | 225 | 253 | 430 | 1,460 | 321 | 51 | 88 | 74 |
| 10 | 278 | 297 | 307 | | 229 | 236 | 590 | 1,440 | 292 | 50 | 103 | 82 |
| 11 | 318 | 307 | 283 | 173 | 240 | 253 | 682 | 1,370 | 270 | 50 | 116 | 78 |
| 12 | 265 | 283 | 278 | 171 | 250 | 270 | 760 | 1,530 | 218 | 50 | 126 | 74 |
| 13 | 265 | 288 | 297 | 171 | 260 | 288 | 904 | 1,620 | 194 | 48 | 114 | 70 |
| 14 | 257 | 283 | 235 | | 274 | 297 | 1,010 | 1,390 | 178 | 42 | 101 | 57 |
| 15 | 253 | 283 | 215 | | 210 | 307 | 1,120 | 1,230 | 149 | 40 | 101 | 61 |
| 16 | 253 | 270 | 210 | | 260 | 350 | 1,010 | 1,120 | 168 | 42 | 131 | 60 |
| 17 | 249 | 225 | 205 | | 226 | 321 | 936 | 1,080 | 211 | 40 | 114 | 58 |
| 18 | 257 | 232 | 215 | 171 | 225 | 307 | 830 | 1,000 | 164 | 38 | 103 | 55 |
| 19 | 253 | 236 | 225 | | 218 | 356 | 830 | 1,060 | 141 | 38 | 98 | 51 |
| 20 | 257 | 249 | 240 | | 225 | 393 | 830 | 1,070 | 134 | 38 | 86 | 54 |
| 21 | 249 | 214 | 253 | 190 | 207 | 393 | 872 | 1,100 | 124 | 40 | 74 | 60 |
| 22 | 253 | 197 | 257 | 200 | 236 | 421 | 958 | 1,120 | 109 | 50 | 70 | 58 |
| 23 | 253 | 274 | 265 | 211 | 222 | 435 | 991 | 1,050 | 94 | 67 | 65 | 56 |
| 24 | 249 | 278 | 278 | 225 | 218 | 362 | 1,060 | 1,010 | 82 | 70 | 61 | 54 |
| 25 | 249 | 288 | 274 | 200 | 197 | 350 | 1,130 | 1,080 | 84 | 72 | 58 | 72 |
| 26 | 236 | 253 | 274 | 192 | 200 | 442 | 1,160 | 1,020 | 86 | 103 | 54 | 88 |
| 27 | 236 | 240 | 265 | | 222 | 449 | 947 | 936 | 80 | 109 | 51 | 96 |
| 28 | 240 | 261 | 270 | | 211 | 456 | 894 | 914 | 72 | 96 | 50 | 105 |
| 29 | 240 | 285 | 278 | | 480 | 883 | 884 | 884 | 63 | 92 | 50 | 109 |
| 30 | 236 | 261 | 257 | | 512 | 862 | 862 | 1,070 | 56 | 88 | 50 | 118 |
| 31 | 232 | | 249 | | 572 | | | 1,270 | | 86 | 50 | |

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|-----------|---------|---------|-------|----------------------|
| October | 321 | 232 | 269 | 16,570 |
| November | 344 | 178 | 259 | 15,430 |
| December | 307 | 200 | 252 | 15,520 |
| January | 253 | | 189 | 11,630 |
| February | 274 | 184 | 223 | 12,360 |
| March | 572 | 200 | 336 | 20,870 |
| April | 1,160 | 350 | 780 | 46,430 |
| May | 1,620 | 841 | 1,149 | 70,650 |
| June | 1,170 | 56 | 280 | 16,640 |
| July | 109 | 38 | 58.8 | 3,620 |
| August | 151 | 50 | 82.4 | 5,070 |
| September | 118 | 50 | 67.4 | 4,010 |
| The year | 1,620 | 38 | 330 | 238,600 |

North Platte River above Pathfinder Reservoir, Wyo.

Location.- Water-stage recorder in sec. 27, T. 26 N., R. 84 W., 900 feet below mouth of Lost Creek and 2½ miles above upper end of Pathfinder Reservoir.

Drainage area.- 7,410 square miles.

Records available.- October 1913 to September 1925, June 1929 to September 1934.

Average discharge.- 18 years, 1,660 second-feet.

Extremes.- Maximum discharge during year, 1,980 second-feet May 14 (gauge height, 2.35 feet); minimum daily discharge, 20 second-feet Sept. 7.

1913-25, 1929-34: Maximum discharge, 18,800 second-feet June 26, 1917 (gauge height, 6.2 feet); minimum daily discharge, that of Sept. 7, 1934.

Remarks.- Records excellent except those of discharge below 600 second-feet, which are good, and those estimated Nov. 27 to Feb. 10, June 14-16, July 2-4, 9-10, 12-14, which were based on comparison with flow of North Platte River at Saratoga. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|-------|----------------------|------|-------|
| 1 | 398 | 321 | | | | 475 | 742 | 960 | 1,140 | 67 | 78 | 26 |
| 2 | 383 | 326 | | | | 475 | 820 | 926 | 1,210 | 65 | 78 | 25 |
| 3 | 358 | 330 | | | 380 | 500 | 840 | 949 | 972 | 60 | 67 | 25 |
| 4 | 344 | 262 | | | | 453 | 850 | 984 | 810 | 400 | 61 | 24 |
| 5 | 335 | 182 | | | | 494 | 761 | 1,110 | 685 | 651 | 398 | 22 |
| 6 | 330 | 255 | | | | 570 | 704 | 1,360 | 617 | 218 | 262 | 21 |
| 7 | 321 | 344 | | | | 525 | 660 | 1,340 | 540 | 136 | 123 | 20 |
| 8 | 321 | 330 | | | 470 | 548 | 617 | 1,480 | 494 | 81 | 65 | 22 |
| 9 | 321 | 317 | | | | 548 | 660 | 1,490 | 469 | 70 | 74 | 26 |
| 10 | 317 | 383 | | | | 488 | 742 | 1,650 | 424 | 60 | 65 | 28 |
| 11 | 312 | 469 | | | 414 | 494 | 840 | 1,630 | 398 | 56 | 63 | 31 |
| 12 | 308 | 475 | | | 424 | 494 | 949 | 1,550 | 353 | 50 | 60 | 49 |
| 13 | 308 | 419 | | | 408 | 500 | 1,020 | 1,680 | 308 | 45 | 60 | 39 |
| 14 | 304 | 414 | | | 458 | 513 | 1,110 | 1,890 | 270 | 40 | 61 | 35 |
| 15 | 304 | 408 | | | 452 | 548 | 1,220 | 1,900 | 235 | 31 | 81 | 40 |
| 16 | 295 | 403 | | | 452 | 562 | 1,300 | 1,610 | 250 | 31 | 96 | 39 |
| 17 | 291 | 383 | | | 488 | 592 | 1,270 | 1,440 | 221 | 28 | 74 | 40 |
| 18 | 287 | 363 | | | 469 | 617 | 1,170 | 1,320 | 358 | 26 | 114 | 38 |
| 19 | 291 | 358 | | | 452 | 585 | 1,070 | 1,230 | 335 | 26 | 157 | 37 |
| 20 | 287 | 368 | | | 436 | 570 | 1,030 | 1,180 | 255 | 25 | 96 | 38 |
| 21 | 291 | 317 | | | 419 | 626 | 1,020 | 1,190 | 236 | 24 | 76 | 36 |
| 22 | 287 | 291 | | | 408 | 651 | 995 | 1,250 | 196 | 160 | 67 | 35 |
| 23 | 291 | 312 | | | 388 | 660 | 1,060 | 1,276 | 153 | 48 | 63 | 34 |
| 24 | 295 | 353 | | | 403 | 651 | 1,100 | 1,210 | 150 | 51 | 58 | 37 |
| 25 | 299 | 393 | | | 383 | 651 | 1,180 | 1,050 | 136 | 171 | 55 | 39 |
| 26 | 299 | 373 | | | 378 | 592 | 1,220 | 1,050 | 120 | 225 | 61 | 50 |
| 27 | 299 | 400 | | | 368 | 585 | 1,290 | 1,060 | 108 | 259 | 43 | 74 |
| 28 | 295 | 360 | | | 430 | 651 | 1,210 | 1,030 | 96 | 160 | 38 | 83 |
| 29 | 295 | 360 | | | | 660 | 1,010 | 972 | 87 | 96 | 35 | 92 |
| 30 | 299 | 370 | | | | 668 | | 960 | 76 | 105 | 32 | 92 |
| 31 | 304 | | | | | 704 | | 938 | | 89 | 28 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 398 | 287 | 312 | 19,180 | | |
| November | | | | | | | 475 | 182 | 355 | 21,100 | | |
| December | | | | | | | | | 320 | 16,680 | | |
| January | | | | | | | | | 310 | 19,060 | | |
| February | | | | | | | 488 | 368 | 424 | 23,560 | | |
| March | | | | | | | 704 | 458 | 570 | 35,020 | | |
| April | | | | | | | 1,300 | 617 | 982 | 58,420 | | |
| May | | | | | | | 1,890 | 926 | 1,274 | 78,330 | | |
| June | | | | | | | 1,210 | 76 | 390 | 23,210 | | |
| July | | | | | | | 651 | 24 | 115 | 7,050 | | |
| August | | | | | | | 398 | 28 | 66.4 | 5,310 | | |
| September | | | | | | | 92 | 20 | 39.9 | 2,370 | | |
| The year | | | | | | | 1,690 | 20 | 431 | 312,390 | | |

North Platte River below Pathfinder Reservoir, Wyo.

Location.- Water-stage recorder in sec. 24, T. 29 N., R. 84 W., a quarter of a mile below Pathfinder Dam.

Drainage area.- 10,700 square miles.

Records available.- May 1905 to September 1934.

Average discharge.- 27 years (1907-34), 1,852 second-feet.

Extremes.- Maximum discharge since completion of reservoir, 18,900 second-feet June 25-27, 1917; no flow Nov. 23, 1928, Apr. 1 to May 19, 1932, Mar. 24 to Apr. 19, 1933, Apr. 22 to June 2, 1933, and Nov. 1, 1933, to Apr. 26, 1934.

Remarks.- Flow regulated by Pathfinder Reservoir, completed in June 1909, capacity, 1,070,000 acre-feet. Records furnished by U. S. Bureau of Reclamation.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|------|------|------|------|------|---------|---------|-------|----------------------|-------|-------|
| 1 | 600 | | | | | | 0 | 1,020 | 5,660 | 510 | 2,900 | 80 |
| 2 | 590 | | | | | | 0 | 1,400 | 5,970 | 510 | 3,000 | 83 |
| 3 | 590 | | | | | | 0 | 1,840 | 5,530 | 510 | 2,990 | 83 |
| 4 | 520 | | | | | | 0 | 2,390 | 5,470 | 510 | 2,950 | 84 |
| 5 | 590 | | | | | | 0 | 1,520 | 1,600 | 500 | 3,200 | 83 |
| 6 | 590 | | | | | | 0 | 1,470 | 1,520 | 500 | 3,070 | 83 |
| 7 | 590 | | | | | | 0 | 1,480 | 2,390 | 500 | 2,800 | 83 |
| 8 | 1,040 | | | | | | 0 | 1,480 | 2,510 | 1,340 | 2,510 | 83 |
| 9 | 1,030 | | | | | | 0 | 1,480 | 1,630 | 2,540 | 2,240 | 83 |
| 10 | 1,030 | | | | | | 0 | 1,480 | 960 | 2,540 | 2,020 | 83 |
| 11 | 1,030 | | | | | | 0 | 1,480 | 830 | 2,510 | 1,310 | 83 |
| 12 | 1,030 | | | | | | 0 | 1,480 | 830 | 2,510 | 1,800 | 83 |
| 13 | 1,030 | | | | | | 0 | 1,480 | 830 | 2,970 | 1,340 | 83 |
| 14 | 1,020 | | | | | | 0 | 1,480 | 830 | 2,980 | 1,050 | 83 |
| 15 | 1,020 | | | | | | 0 | 1,000 | 830 | 2,550 | 890 | 83 |
| 16 | 1,020 | | | | | | 0 | 950 | 830 | 2,470 | 820 | 83 |
| 17 | 1,020 | | | | | | 0 | 950 | 830 | 2,590 | 790 | 83 |
| 18 | 330 | | | | | | 0 | 1,470 | 830 | 1,090 | 750 | 83 |
| 19 | 310 | | | | | | 0 | 1,950 | 830 | 990 | 420 | 83 |
| 20 | 260 | | | | | | 0 | 2,360 | 830 | 990 | 360 | 83 |
| 21 | 250 | | | | | | 0 | 2,930 | 830 | 1,930 | 360 | 83 |
| 22 | 200 | | | | | | 0 | 3,410 | 830 | 2,380 | 340 | 83 |
| 23 | 195 | | | | | | 0 | 3,940 | 830 | 2,510 | 330 | 83 |
| 24 | 165 | | | | | | 0 | 4,310 | 600 | 2,480 | 320 | 83 |
| 25 | 140 | | | | | | 0 | 4,750 | 530 | 890 | 130 | 83 |
| 26 | 100 | | | | | | 0 | 4,780 | 520 | 1,360 | 80 | 83 |
| 27 | 100 | | | | | | 280 | 4,730 | 520 | 2,490 | 110 | 83 |
| 28 | 75 | | | | | | 580 | 5,030 | 520 | 2,500 | 110 | 83 |
| 29 | 75 | | | | | | 600 | 5,310 | 510 | 2,570 | 110 | 83 |
| 30 | 75 | | | | | | 600 | 5,460 | 510 | 2,510 | 110 | 83 |
| 31 | 90 | | | | | | | 5,430 | | 2,520 | 105 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 1,040 | 75 | 553 | 34,030 | | |
| November | | | | | | | 0 | 0 | 0 | 0 | | |
| December | | | | | | | 0 | 0 | 0 | 0 | | |
| January | | | | | | | 0 | 0 | 0 | 0 | | |
| February | | | | | | | 0 | 0 | 0 | 0 | | |
| March | | | | | | | 0 | 0 | 0 | 0 | | |
| April | | | | | | | 600 | 0 | 69.7 | 4,090 | | |
| May | | | | | | | 5,460 | 950 | 2,591 | 159,300 | | |
| June | | | | | | | 5,660 | 510 | 1,578 | 93,900 | | |
| July | | | | | | | 2,980 | 500 | 1,798 | 110,600 | | |
| August | | | | | | | 3,200 | 80 | 1,277 | 78,540 | | |
| September | | | | | | | 84 | 80 | 82.9 | 4,930 | | |
| The year | | | | | | | 5,660 | 0 | 670 | 485,400 | | |

Note.- No flow during months left blank.

North Platte River below Casper, Wyo.

Location.- Water-stage recorder in NW¼NW¼ sec. 4, T. 33 N., R. 78 W., 6½ miles east of Casper.

Drainage area.- 12,600 square miles.

Records available.- October 1932 to September 1934. Comparable records May 1929 to September 1932 at site at Casper.

Extremes.- Maximum discharge during year, 5,340 second-feet (gage height, 4.57 feet); minimum daily discharge, 42 second-feet Apr. 16, 17, 21.
1929-34: Maximum discharge, 13,800 second-feet May 30, 1929; minimum daily discharge, that of Apr. 16, 17, 21, 1934.

Remarks.- Records good except those for Nov. 6 to Mar. 18, which are estimated on basis of two discharge measurements, miscellaneous gage heights, and temperature records, and those estimated Apr. 23, 24, 26-28. Staff gage used Nov. 13 to Dec. 9, Mar. 19 to Apr. 25. Flow regulated by Pathfinder Reservoir.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|------|------|------|------|------|---------|-------|---------|-------|----------------------|-------|
| 1 | 708 | 168 | 72 | | | | 75 | 1,670 | 5,180 | 419 | 2,620 | 137 |
| 2 | 630 | 168 | 75 | | | | 83 | 2,350 | 5,200 | 386 | 2,820 | 148 |
| 3 | 674 | 160 | 75 | | | | 90 | 3,060 | 5,210 | 373 | 2,900 | 172 |
| 4 | 674 | 150 | 75 | | | | 90 | 3,940 | 5,180 | 386 | 2,780 | 144 |
| 5 | 652 | 116 | 75 | | | | 99 | 3,170 | 2,220 | 586 | 3,120 | 123 |
| 6 | 699 | 110 | 75 | | | | 99 | 1,970 | 1,700 | 481 | 2,900 | 119 |
| 7 | 861 | 102 | 75 | | | | 102 | 1,320 | 2,280 | 440 | 2,680 | 116 |
| 8 | 1,160 | 95 | 75 | | | | 64 | 1,330 | 2,580 | 558 | 2,400 | 123 |
| 9 | 1,150 | 88 | 75 | | | | 70 | 1,330 | 1,990 | 1,960 | 2,160 | 488 |
| 10 | 1,120 | 80 | 75 | | | | 83 | 1,340 | 1,320 | 2,310 | 1,970 | 271 |
| 11 | 1,100 | 72 | | | | | 70 | 1,350 | 897 | 2,300 | 1,770 | 148 |
| 12 | 1,100 | 64 | | | | | 67 | 1,330 | 879 | 2,300 | 1,590 | 130 |
| 13 | 1,090 | 59 | 78 | | | | 64 | 1,350 | 861 | 2,540 | 1,370 | 123 |
| 14 | 1,090 | 63 | | | | | 59 | 1,330 | 834 | 2,770 | 1,160 | 123 |
| 15 | 1,090 | 67 | | | | | 59 | 1,100 | 924 | 2,580 | 960 | 123 |
| 16 | 1,080 | 65 | | | | | 42 | 843 | 861 | 2,360 | 870 | 119 |
| 17 | 1,080 | 64 | | | | | 42 | 798 | 807 | 2,440 | 807 | 116 |
| 18 | 861 | 62 | 65 | | | | 44 | 978 | 807 | 1,720 | 753 | 112 |
| 19 | 386 | 68 | | | | | 46 | 1,540 | 780 | 1,040 | 658 | 112 |
| 20 | 325 | 75 | | | | | 52 | 1,770 | 780 | 987 | 592 | 109 |
| 21 | 281 | 75 | | | | | 54 | 42 | 2,320 | 753 | 1,430 | 349 |
| 22 | 253 | 75 | | | | | 57 | 44 | 2,630 | 735 | 2,100 | 330 |
| 23 | 230 | 85 | 70 | *59 | | | 54 | 44 | 3,440 | 717 | 2,320 | 319 |
| 24 | 213 | 90 | | | | | 57 | 45 | 3,860 | 674 | 2,310 | 303 |
| 25 | 209 | 90 | | | | | 62 | 46 | 4,380 | 460 | 3,110 | 248 |
| 26 | 184 | 75 | | | | | 62 | 46 | 4,440 | 426 | 771 | 230 |
| 27 | 168 | 67 | | | | | 70 | 100 | 4,480 | 412 | 2,270 | 144 |
| 28 | 152 | 67 | 65 | | | *77 | 67 | 750 | 4,780 | 419 | 2,440 | 137 |
| 29 | 148 | 67 | | | | | 72 | 1,380 | 5,030 | 419 | 2,400 | 141 |
| 30 | 141 | 70 | | | | | 75 | 1,440 | 5,120 | 426 | 2,350 | 141 |
| 31 | 141 | | | | | | 75 | | 5,140 | | 2,350 | 137 |
| Month | | | | | | | Maximum | | Minimum | Mean | Run-off in acre-feet | |
| October | | | | | | | 1,160 | | 141 | 637 | 39,150 | |
| November | | | | | | | 168 | | 59 | 87.9 | 5,230 | |
| December | | | | | | | | | | 71.0 | 4,370 | |
| January | | | | | | | | | | 55 | 3,380 | |
| February | | | | | | | | | | 95 | 5,280 | |
| March | | | | | | | | | | 64.9 | 3,990 | |
| April | | | | | | | 1,440 | | 42 | 178 | 10,570 | |
| May | | | | | | | 5,140 | | 798 | 2,570 | 158,000 | |
| June | | | | | | | 5,210 | | 412 | 1,554 | 92,490 | |
| July | | | | | | | 3,110 | | 373 | 1,703 | 104,700 | |
| August | | | | | | | 3,120 | | 157 | 1,260 | 77,450 | |
| September | | | | | | | 488 | | 109 | 140 | 8,560 | |
| The year. | | | | | | | 5,210 | | 42 | 709 | 513,000 | |

*Discharge measurement.

North Platte River at Douglas, Wyo.

Location.- Water-stage recorder in sec. 8, T. 32 N., R. 71 W., half a mile northwest of Douglas.

Drainage area.- 14,200 square miles.

Records available.- May 1891 to September 1894, April 1919 to September 1923, April 1929 to September 1934.

Extremes.- Maximum discharge during year, 6,330 second-feet July 25 (gage height, 5.29 feet); minimum not determined, occurred during winter. 1891-94, 1919-23, 1929-34: Maximum discharge, 16,600 second-feet Sept. 28, 1923; minimum not determined.

Remarks.- Records good except those estimated for Nov. 4 to Mar. 3, which were based on one discharge measurement and temperature records, and those estimated Oct. 15-17, Oct. 26 to Nov. 2. Flow regulated by Pathfinder Reservoir.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|------|------|------|------|------|---------|---------|-------|-------|----------------------|-------|
| 1 | 782 | 270 | | | | 110 | 160 | 436 | 5,220 | 474 | 2,400 | 218 |
| 2 | 738 | 260 | | | | 150 | 120 | 478 | 5,330 | 451 | 2,710 | 210 |
| 3 | 716 | 253 | | | | 170 | 165 | 911 | 5,330 | 443 | 2,830 | 206 |
| 4 | 716 | 240 | | | | 214 | 183 | 1,380 | 5,290 | 443 | 2,850 | 202 |
| 5 | 716 | 235 | | | | 169 | 169 | 2,010 | 4,970 | 458 | 2,680 | 198 |
| 6 | 705 | 240 | | | | 169 | 169 | 1,660 | 2,130 | 549 | 3,220 | 188 |
| 7 | 675 | | | | | 165 | 169 | 1,610 | 1,970 | 576 | 3,030 | 194 |
| 8 | 738 | | | | | 165 | 169 | 1,490 | 2,100 | 443 | 2,810 | 190 |
| 9 | 1,040 | | | | | 160 | 188 | 1,460 | 2,400 | 499 | 2,560 | 202 |
| 10 | 1,100 | | | | | 156 | 271 | 1,450 | 1,970 | 1,800 | 2,340 | 320 |
| 11 | 1,130 | | | | | 152 | 301 | 1,460 | 1,510 | 2,300 | 2,100 | 324 |
| 12 | 1,160 | | | | | 143 | 314 | 1,460 | 1,050 | 2,340 | 1,880 | 236 |
| 13 | 1,190 | 230 | | | | 138 | 295 | 1,490 | 950 | 2,340 | 1,670 | 202 |
| 14 | 1,200 | | | | | 138 | 288 | 1,480 | 915 | 2,630 | 1,460 | 182 |
| 15 | 1,210 | | | | | 138 | 308 | 1,480 | 938 | 2,740 | 1,220 | 165 |
| 16 | 1,210 | | | | | 138 | 295 | 1,320 | 915 | 2,560 | 1,040 | 162 |
| 17 | 1,220 | | | | | 169 | 269 | 1,050 | 892 | 2,420 | 915 | 149 |
| 18 | 1,230 | 190 | | | | 160 | 236 | 988 | 823 | 2,490 | 834 | 149 |
| 19 | 1,070 | | | | | 156 | 214 | 1,080 | 813 | 1,880 | 781 | 149 |
| 20 | 655 | | | | | 147 | 199 | 1,590 | 823 | 1,220 | 728 | 149 |
| 21 | 549 | | | | | 143 | 178 | 1,990 | 613 | 1,090 | 524 | 149 |
| 22 | 521 | | | | | 143 | 178 | 2,590 | 802 | 1,310 | 428 | 149 |
| 23 | 478 | 170 | | | | 147 | 178 | 3,050 | 760 | 1,990 | 399 | 149 |
| 24 | 406 | | | | | 152 | 178 | 3,560 | 739 | 2,320 | 311 | 149 |
| 25 | 384 | | | | | 152 | 178 | 4,170 | 760 | 3,270 | 346 | 149 |
| 26 | 375 | | | | | 147 | 178 | 4,390 | 603 | 2,600 | 320 | 162 |
| 27 | 340 | 110 | | | | 134 | 174 | 4,390 | 515 | 1,100 | 314 | 172 |
| 28 | 310 | | | | | 134 | 183 | 4,430 | 499 | 2,370 | 246 | 172 |
| 29 | 290 | | | | | 138 | 165 | 4,660 | 491 | 2,370 | 232 | 172 |
| 30 | 280 | | | | | 138 | 183 | 5,060 | 483 | 2,390 | 227 | 168 |
| 31 | 280 | | | | | 152 | | 5,180 | | 2,420 | 223 | |
| Month | | | | | | | Maximum | Minimum | Mean | | Run-off in acre-feet | |
| October | | | | | | | 1,230 | 280 | 755 | | 46,440 | |
| November | | | | | | | 270 | | 199 | | 11,820 | |
| December | | | | | | | | | 90 | | 5,530 | |
| January | | | | | | | | | 80 | | 4,920 | |
| February | | | | | | | | | 135 | | 7,500 | |
| March | | | | | | | 214 | 110 | 151 | | 9,300 | |
| April | | | | | | | 314 | 160 | 210 | | 12,470 | |
| May | | | | | | | 5,180 | 436 | 2,253 | | 138,500 | |
| June | | | | | | | 5,330 | 483 | 1,757 | | 104,500 | |
| July | | | | | | | 3,270 | 443 | 1,693 | | 104,100 | |
| August | | | | | | | 3,220 | 223 | 1,416 | | 87,050 | |
| September | | | | | | | 394 | 149 | 188 | | 11,200 | |
| The year | | | | | | | 5,330 | | 751 | | 543,300 | |

*Discharge measurement.

North Platte River below Guernsey Reservoir, Wyo.

Location.- Water-stage recorder in sec. 35, T. 27 N., R. 66 W., three-quarters of a mile below Guernsey Dam and 1 mile northwest of Guernsey.

Drainage area.- 16,200 square miles.

Records available.- June 1900 to November 1908, March to October 1912, January 1928 to September 1934.

Remarks.- Flow regulated by Pathfinder and Guernsey Reservoirs. Only a few minor diversions for irrigation between this station and diversion dam at Whalen. Records furnished by U. S. Bureau of Reclamation.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|------|------|------|------|------|---------|---------|-------|-------------------------|-------|-------|
| 1 | 1,520 | 253 | 318 | 170 | 247 | 280 | 216 | 899 | 5,170 | 393 | 2,140 | 335 |
| 2 | 1,380 | 285 | 337 | 200 | 269 | 235 | 175 | 931 | 5,350 | 301 | 2,510 | 247 |
| 3 | 1,350 | 258 | 364 | 226 | 253 | 269 | 200 | 983 | 4,910 | 352 | 2,770 | 307 |
| 4 | 1,580 | 239 | 274 | 264 | 302 | 253 | 208 | 852 | 3,350 | 446 | 2,940 | 313 |
| 5 | 1,650 | 269 | 404 | 247 | 247 | 247 | 185 | 513 | 2,800 | 495 | 3,140 | 307 |
| 6 | 1,040 | 247 | 434 | 226 | 269 | 285 | 185 | 470 | 3,380 | 609 | 3,050 | 291 |
| 7 | 939 | 291 | 397 | 258 | 264 | 302 | 200 | 330 | 3,420 | 616 | 2,990 | 290 |
| 8 | 955 | 237 | 381 | 190 | 269 | 302 | 211 | 397 | 3,380 | 1,300 | 3,070 | 274 |
| 9 | 955 | 258 | 369 | 180 | 269 | 285 | 170 | 398 | 3,310 | 2,270 | 3,040 | 266 |
| 10 | 939 | 291 | 346 | 190 | 280 | 280 | 208 | 352 | 2,520 | 2,540 | 3,070 | 237 |
| 11 | 939 | 264 | 307 | 216 | 264 | 291 | 211 | 352 | 2,090 | 2,500 | 2,990 | 264 |
| 12 | 931 | 200 | 404 | 195 | 216 | 247 | 190 | 381 | 2,040 | 2,740 | 2,370 | 318 |
| 13 | 955 | 237 | 381 | 195 | 253 | 285 | 180 | 330 | 1,600 | 2,990 | 1,920 | 341 |
| 14 | 931 | 258 | 397 | 258 | 274 | 280 | 211 | 307 | 1,060 | 2,940 | 1,920 | 361 |
| 15 | 753 | 221 | 393 | 200 | 247 | 290 | 237 | 335 | 931 | 2,990 | 1,960 | 375 |
| 16 | 446 | 258 | 369 | 242 | 237 | 296 | 180 | 410 | 939 | 2,650 | 1,170 | 247 |
| 17 | 296 | 291 | 341 | 185 | 247 | 285 | 195 | 676 | 923 | 2,000 | 786 | 324 |
| 18 | 307 | 264 | 381 | 200 | 264 | 307 | 364 | 1,100 | 675 | 1,670 | 470 | 280 |
| 19 | 307 | 247 | 369 | 195 | 216 | 281 | 520 | 1,800 | 596 | 1,040 | 352 | 237 |
| 20 | 280 | 195 | 352 | 216 | 264 | 307 | 583 | 2,080 | 577 | 1,010 | 758 | 258 |
| 21 | 285 | 307 | 335 | 221 | 280 | 302 | 676 | 2,340 | 570 | 1,400 | 1,350 | 105 |
| 22 | 242 | 346 | 341 | 200 | 264 | 313 | 779 | 2,880 | 577 | 1,400 | 1,520 | 131 |
| 23 | 212 | 334 | 346 | 280 | 258 | 313 | 808 | 3,090 | 564 | 1,770 | 1,520 | 190 |
| 24 | 280 | 375 | 341 | 291 | 285 | 296 | 808 | 3,660 | 498 | 1,920 | 1,500 | 190 |
| 25 | 264 | 391 | 313 | 237 | 274 | 274 | 770 | 4,090 | 410 | 1,930 | 1,500 | 160 |
| 26 | 232 | 387 | 175 | 226 | 211 | 237 | 808 | 4,550 | 326 | 1,710 | 1,500 | 165 |
| 27 | 232 | 285 | 296 | 221 | 269 | 274 | 815 | 4,690 | 375 | 1,830 | 1,460 | 160 |
| 28 | 232 | 410 | 242 | 242 | 269 | 258 | 800 | 5,050 | 375 | 2,480 | 1,330 | 170 |
| 29 | 221 | 416 | 253 | 195 | 232 | 232 | 800 | 5,090 | 360 | 1,710 | 852 | 175 |
| 30 | 190 | 358 | 284 | 258 | 221 | 221 | 815 | 5,210 | 369 | 1,600 | 302 | 140 |
| 31 | 253 | | 247 | 264 | | 206 | | 5,240 | | 1,740 | 226 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 1,650 | 190 | 681 | 41,860 | | |
| November | | | | | | | 416 | 195 | 289 | 17,180 | | |
| December | | | | | | | 434 | 175 | 339 | 20,860 | | |
| January | | | | | | | 291 | 170 | 222 | 13,650 | | |
| February | | | | | | | 302 | 211 | 260 | 14,440 | | |
| March | | | | | | | 313 | 206 | 277 | 17,020 | | |
| April | | | | | | | 815 | 170 | 493 | 25,200 | | |
| May | | | | | | | 5,240 | 307 | 1,924 | 118,300 | | |
| June | | | | | | | 5,170 | 369 | 1,773 | 105,500 | | |
| July | | | | | | | 2,990 | 301 | 1,653 | 101,600 | | |
| August | | | | | | | 3,140 | 226 | 1,819 | 111,800 | | |
| September | | | | | | | 381 | 131 | 251 | 14,930 | | |
| The year | | | | | | | 5,240 | 131 | 832 | 602,400 | | |

North Platte River below Whalen, Wyo.

Location.- In sec. 11, T. 26 N., R. 65 W., at diversion dam at Whalen, 7 miles below Guernsey Dam.

Drainage area.- 16,300 square miles.

Records available.- May 1909 to September 1934.

Average discharge.- 25 years, 1,387 second-feet.

Remarks.- Discharge records obtained by subtracting flow of Interstate and Fort LaRamie Canals from flow below Guernsey Reservoir. Flow regulated by Pathfinder and Guernsey Reservoirs.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|-------|----------------------|------|-------|
| 1 | 156 | 87 | 108 | 49 | 157 | 230 | 116 | 52 | 1,710 | 137 | 295 | 91 |
| 2 | 431 | 121 | 177 | 58 | 174 | 222 | 65 | 52 | 1,580 | 117 | 343 | 41 |
| 3 | 499 | 88 | 157 | 76 | 161 | 206 | 80 | 57 | 1,670 | 117 | 315 | 40 |
| 4 | 700 | 71 | 76 | 94 | 205 | 173 | 86 | 67 | 2,020 | 209 | 207 | 68 |
| 5 | 745 | 76 | 194 | 97 | 147 | 162 | 65 | 86 | 1,490 | 259 | 187 | 74 |
| 6 | 135 | 63 | 224 | 76 | 159 | 210 | 65 | 80 | 1,530 | 387 | 140 | 69 |
| 7 | 39 | 92 | 187 | 78 | 154 | 227 | 80 | 75 | 1,080 | 394 | 65 | 59 |
| 8 | 53 | 61 | 171 | 60 | 159 | 227 | 111 | 75 | 854 | 470 | 72 | 40 |
| 9 | 53 | 111 | 159 | 30 | 159 | 210 | 70 | 98 | 793 | 784 | 41 | 42 |
| 10 | 37 | 118 | 136 | 30 | 170 | 205 | 96 | 80 | 866 | 730 | 52 | 39 |
| 11 | 42 | 86 | 102 | 51 | 172 | 208 | 91 | 75 | 811 | 472 | 50 | 31 |
| 12 | 36 | 64 | 194 | 30 | 116 | 157 | 70 | 70 | 777 | 418 | 54 | 70 |
| 13 | 55 | 78 | 171 | 30 | 153 | 195 | 70 | 60 | 826 | 424 | 50 | 67 |
| 14 | 44 | 78 | 177 | 88 | 174 | 190 | 101 | 60 | 799 | 366 | 50 | 127 |
| 15 | 30 | 63 | 183 | 32 | 172 | 205 | 127 | 60 | 810 | 312 | 50 | 120 |
| 16 | 221 | 83 | 159 | 72 | 162 | 221 | 70 | 130 | 817 | 233 | 50 | 54 |
| 17 | 96 | 119 | 151 | 38 | 155 | 210 | 95 | 386 | 732 | 245 | 50 | 36 |
| 18 | 115 | 79 | 191 | 50 | 164 | 232 | 54 | 791 | 484 | 248 | 50 | 38 |
| 19 | 117 | 85 | 179 | 50 | 116 | 201 | 60 | 1,210 | 365 | 215 | 50 | 32 |
| 20 | 88 | 47 | 162 | 80 | 164 | 217 | 56 | 1,500 | 365 | 671 | 50 | 20 |
| 21 | 89 | 142 | 155 | 171 | 180 | 212 | 65 | 1,530 | 379 | 1,130 | 50 | 20 |
| 22 | 63 | 181 | 161 | 150 | 164 | 223 | 60 | 1,500 | 356 | 1,140 | 74 | 20 |
| 23 | 72 | 169 | 166 | 205 | 158 | 202 | 60 | 1,410 | 373 | 1,180 | 48 | 20 |
| 24 | 99 | 217 | 161 | 209 | 185 | 186 | 60 | 1,460 | 297 | 1,090 | 54 | 20 |
| 25 | 90 | 223 | 133 | 149 | 161 | 164 | 50 | 1,680 | 330 | 1,110 | 33 | 20 |
| 26 | 60 | 204 | 35 | 139 | 86 | 127 | 60 | 1,900 | 135 | 1,050 | 36 | 15 |
| 27 | 82 | 103 | 86 | 121 | 144 | 164 | 60 | 1,750 | 125 | 1,020 | 37 | 10 |
| 28 | 55 | 220 | 42 | 154 | 144 | 148 | 56 | 1,870 | 127 | 1,340 | 33 | 10 |
| 29 | 52 | 226 | 71 | 95 | | 122 | 55 | 1,790 | 121 | 407 | 40 | 10 |
| 30 | 30 | 168 | 67 | 163 | | 111 | 60 | 1,810 | 117 | 292 | 30 | 10 |
| 31 | 106 | | 68 | 169 | | 96 | | 1,800 | | 364 | 30 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 745 | 30 | 144 | 8,870 | | |
| November | | | | | | | 226 | 47 | 118 | 6,990 | | |
| December | | | | | | | 224 | 35 | 142 | 8,730 | | |
| January | | | | | | | 209 | 30 | 93.3 | 5,740 | | |
| February | | | | | | | 205 | 66 | 158 | 8,760 | | |
| March | | | | | | | 232 | 96 | 189 | 11,630 | | |
| April | | | | | | | 127 | 50 | 73.8 | 4,390 | | |
| May | | | | | | | 1,900 | 52 | 759 | 46,700 | | |
| June | | | | | | | 2,020 | 117 | 764 | 45,440 | | |
| July | | | | | | | 1,340 | 117 | 559 | 34,380 | | |
| August | | | | | | | 343 | 30 | 86.6 | 5,330 | | |
| September | | | | | | | 127 | 10 | 43.8 | 2,600 | | |
| The year | | | | | | | 2,020 | 10 | 262 | 189,600 | | |

North Platte River at Torrington, Wyo.

Location.- Water-stage recorder in sec. 15, T. 24 N., R. 61 W., at Torrington.

Drainage area.- 21,700 square miles.

Records available.- April 1930 to September 1934 in reports of U. S. Geological Survey; April 1926 to September 1934 in reports of State engineer of Nebraska.

Extremes.- Maximum discharge during year, 2,570 second-feet June 4 (gage height, 1.51 feet); minimum, 76 second-feet May 16 (gage height, -0.04 foot).
1926-34: Maximum discharge, 14,200 second-feet June 2, 1929; minimum, that of May 16, 1934.

Remarks.- Records good except those estimated for periods of ice effect and for days of missing gage-height record, on basis of one discharge measurement and temperature records. Small diversions for irrigation above station. Flow regulated by Pathfinder and Guernsey Reservoirs.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|------|------|------|------|------|---------|---------|-------|----------------------|------|-------|
| 1 | 866 | 560 | *600 | 524 | *440 | *400 | 436 | 192 | 1,570 | 447 | 548 | 282 |
| 2 | 805 | 560 | *610 | 491 | 425 | 415 | 447 | 208 | 1,630 | 415 | 491 | 299 |
| 3 | 856 | 588 | *610 | 502 | 436 | 458 | 447 | 223 | 1,700 | 365 | 458 | 308 |
| 4 | 941 | 565 | *570 | 524 | 447 | 469 | 458 | 208 | 2,050 | 365 | 425 | 345 |
| 5 | 1,090 | 572 | *490 | 535 | 469 | 415 | 468 | 200 | 1,830 | 425 | 395 | 325 |
| 6 | 689 | 535 | *570 | *560 | 458 | 425 | 447 | 192 | 1,700 | 480 | 345 | 365 |
| 7 | 572 | 524 | *580 | *460 | 458 | 447 | 436 | 223 | 1,370 | 502 | 316 | 325 |
| 8 | 513 | 535 | *580 | *480 | 458 | 469 | 425 | 238 | 1,030 | 513 | 290 | 325 |
| 9 | 491 | 560 | 585 | 502 | 447 | 458 | 415 | 215 | 941 | 598 | 264 | 345 |
| 10 | 469 | 513 | 585 | *490 | 458 | 458 | 405 | 223 | 924 | 689 | 223 | 335 |
| 11 | 458 | 513 | 585 | *490 | 469 | 436 | 405 | 192 | 890 | 610 | 192 | 335 |
| 12 | 436 | 502 | *560 | *490 | 447 | 425 | 325 | 177 | 907 | 524 | 192 | 335 |
| 13 | 425 | 480 | 572 | *480 | 425 | 436 | 385 | 150 | 924 | 502 | 185 | 355 |
| 14 | 415 | 491 | 513 | *475 | 436 | 425 | 385 | 101 | 975 | 491 | 170 | 345 |
| 15 | 415 | 524 | *500 | *490 | 447 | 425 | 385 | 93 | 1,170 | 469 | 162 | 365 |
| 16 | 635 | 524 | *495 | *480 | 436 | 469 | 415 | 80 | 1,170 | 469 | 162 | 375 |
| 17 | 660 | 535 | *610 | *450 | 425 | 458 | 355 | 144 | 1,150 | 480 | 156 | 345 |
| 18 | 648 | 535 | 513 | 436 | 425 | 447 | 335 | 415 | 1,010 | 469 | 170 | 365 |
| 19 | 622 | 548 | 585 | 425 | 425 | 480 | 247 | 689 | 873 | 415 | 247 | 345 |
| 20 | 635 | 535 | 585 | 425 | 425 | 480 | 230 | 1,030 | 822 | 535 | 185 | 335 |
| 21 | 635 | 535 | 585 | 425 | 458 | 502 | 208 | 1,090 | 747 | 958 | 144 | 308 |
| 22 | 635 | 491 | 560 | 415 | 480 | 524 | 177 | 1,110 | 732 | 1,240 | 138 | 308 |
| 23 | 622 | *530 | 535 | 395 | 458 | 502 | 177 | 1,030 | 689 | 1,260 | 132 | 282 |
| 24 | 598 | *570 | 524 | 425 | 395 | 502 | 177 | 994 | 648 | 1,260 | 119 | 282 |
| 25 | *625 | *570 | 535 | 447 | 345 | 491 | 177 | 1,260 | 718 | 1,350 | 113 | 308 |
| 26 | 622 | *570 | 598 | *420 | *300 | 480 | 185 | 1,360 | 776 | 1,350 | 113 | 316 |
| 27 | 585 | *570 | 524 | *410 | *325 | 480 | 192 | 1,320 | 622 | 1,280 | 208 | 316 |
| 28 | 572 | *490 | 535 | *390 | *350 | 480 | 200 | 1,390 | 572 | 1,320 | 223 | 308 |
| 29 | 535 | *520 | 598 | *380 | | 480 | 215 | 1,480 | 513 | 1,110 | 230 | 299 |
| 30 | 572 | *570 | 535 | *420 | | 480 | 200 | 1,520 | 458 | 689 | 282 | 316 |
| 31 | 535 | | 513 | 458 | | 469 | | 1,540 | | 598 | 299 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 1,090 | 415 | 618 | 38,020 | | |
| November | | | | | | | 598 | 490 | 538 | 32,020 | | |
| December | | | | | | | 610 | 490 | 556 | 34,200 | | |
| January | | | | | | | 560 | 380 | 451 | 28,370 | | |
| February | | | | | | | 430 | 300 | 427 | 23,740 | | |
| March | | | | | | | 524 | 400 | 461 | 28,330 | | |
| April | | | | | | | 458 | 177 | 327 | 19,480 | | |
| May | | | | | | | 1,540 | 80 | 623 | 38,310 | | |
| June | | | | | | | 2,050 | 458 | 1,037 | 61,710 | | |
| July | | | | | | | 1,350 | 365 | 715 | 43,990 | | |
| August | | | | | | | 548 | 113 | 244 | 15,030 | | |
| September | | | | | | | 375 | 282 | 327 | 19,430 | | |
| The year | | | | | | | 2,050 | 80 | 529 | 382,600 | | |

*Estimated.

North Platte River at Wyoming-Nebraska State line

Location.- Water-stage recorder in sec. 10, T. 23 N., R. 60 W., a quarter of a mile above Wyoming-Nebraska State line and 1 mile southwest of Henry, Nebr.

Drainage area.- 22,100 square miles.

Records available.- April 1929 to September 1934.

Extremes.- Maximum discharge during year, 2,490 second-feet June 4 (gage height, 2.53 feet); minimum daily discharge, 21 second-feet May 16.
1929-34: Maximum discharge, 17,900 second-feet June 2, 1929 (gage height, 6.04 feet); minimum daily discharge, that of May 16, 1934.

Remarks.- Records good except those estimated for Feb. 24-28. Large diversions for irrigation between Torrington and this station. Flow regulated by Pathfinder and Guernsey Reservoirs.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|------|------|------|------|---------|---------|-------|----------------------|-------|------|-------|
| 1 | 700 | 623 | 642 | 561 | 456 | 604 | 495 | 87 | 1,390 | 314 | 419 | 193 |
| 2 | 711 | 595 | 652 | 535 | 456 | 595 | 518 | 93 | 1,390 | 297 | 377 | 220 |
| 3 | 799 | 537 | 642 | 518 | 463 | 570 | 510 | 93 | 1,410 | 262 | 364 | 206 |
| 4 | 870 | 604 | 595 | 544 | 440 | 570 | 518 | 91 | 1,760 | 276 | 327 | 249 |
| 5 | 1,070 | 604 | 518 | 561 | 412 | 544 | 510 | 93 | 1,720 | 292 | 303 | 259 |
| 6 | 858 | 623 | 597 | 578 | 440 | 544 | 487 | 96 | 1,520 | 327 | 270 | 254 |
| 7 | 614 | 614 | 587 | 497 | 440 | 544 | 471 | 108 | 1,140 | 398 | 225 | 225 |
| 8 | 518 | 662 | 604 | 497 | 448 | 552 | 440 | 114 | 810 | 391 | 198 | 202 |
| 9 | 535 | 623 | 597 | 502 | 433 | 561 | 448 | 100 | 690 | 443 | 160 | 249 |
| 10 | 561 | 541 | 623 | 487 | 471 | 570 | 440 | 98 | 700 | 552 | 139 | 230 |
| 11 | 561 | 535 | 604 | 502 | 463 | 535 | 440 | 78 | 681 | 487 | 120 | 249 |
| 12 | 518 | 578 | 578 | 502 | 471 | 495 | 297 | 74 | 681 | 406 | 106 | 265 |
| 13 | 510 | 561 | 604 | 405 | 440 | 495 | 270 | 45 | 690 | 370 | 96 | 270 |
| 14 | 518 | 570 | 614 | 495 | 448 | 518 | 281 | 40 | 777 | 364 | 87 | 249 |
| 15 | 502 | 595 | 614 | 527 | 479 | 518 | 286 | 28 | 944 | 370 | 76 | 249 |
| 16 | 604 | 587 | 595 | 527 | 495 | 527 | 297 | 21 | 1,080 | 364 | 72 | 303 |
| 17 | 722 | 578 | 614 | 510 | 495 | 510 | 281 | 24 | 1,010 | 391 | 66 | 249 |
| 18 | 690 | 604 | 487 | 471 | 487 | 518 | 286 | 93 | 944 | 370 | 64 | 270 |
| 19 | 662 | 552 | 510 | 456 | 479 | 510 | 244 | 334 | 799 | 314 | 80 | 259 |
| 20 | 633 | 518 | 561 | 471 | 479 | 527 | 181 | 672 | 700 | 364 | 89 | 240 |
| 21 | 652 | 535 | 570 | 456 | 518 | 527 | 198 | 870 | 662 | 834 | 64 | 189 |
| 22 | 662 | 535 | 561 | 495 | 518 | 527 | 181 | 986 | 604 | 1,250 | 58 | 198 |
| 23 | 652 | 578 | 570 | 487 | 495 | 535 | 185 | 972 | 570 | 1,290 | 58 | 202 |
| 24 | 623 | 623 | 561 | 518 | 450 | 561 | 164 | 918 | 552 | 1,240 | 56 | 177 |
| 25 | 642 | 633 | 578 | 510 | 430 | 552 | 142 | 1,080 | 570 | 1,290 | 60 | 193 |
| 26 | 642 | 614 | 544 | 471 | 380 | 544 | 142 | 1,320 | 604 | 1,220 | 66 | 206 |
| 27 | 642 | 614 | 502 | 433 | 400 | 527 | 128 | 1,360 | 518 | 1,200 | 120 | 216 |
| 28 | 642 | 527 | 518 | 426 | 450 | 518 | 106 | 1,340 | 466 | 1,140 | 142 | 226 |
| 29 | 614 | 561 | 544 | 398 | 518 | 518 | 96 | 1,370 | 396 | 966 | 142 | 206 |
| 30 | 604 | 604 | 544 | 398 | 535 | 535 | 93 | 1,340 | 351 | 614 | 172 | 211 |
| 31 | 623 | | 544 | 448 | | 518 | | 1,410 | | 463 | 206 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 1,070 | 502 | 650 | 39,970 | | | |
| November | | | | | | 662 | 518 | 586 | 34,870 | | | |
| December | | | | | | 652 | 467 | 576 | 35,410 | | | |
| January | | | | | | 578 | 398 | 492 | 30,260 | | | |
| February | | | | | | 518 | 360 | 460 | 25,520 | | | |
| March | | | | | | 604 | 495 | 538 | 33,060 | | | |
| April | | | | | | 518 | 93 | 304 | 18,120 | | | |
| May | | | | | | 1,410 | 21 | 497 | 30,640 | | | |
| June | | | | | | 1,760 | 351 | 871 | 51,810 | | | |
| July | | | | | | 1,290 | 276 | 611 | 37,550 | | | |
| August | | | | | | 419 | 56 | 154 | 9,480 | | | |
| September | | | | | | 303 | 177 | 230 | 13,710 | | | |
| The year | | | | | | 1,760 | 21 | 498 | 360,300 | | | |

North Platte River at Mitchell, Nebr.

Location.- Water-stage recorder in sec. 27, T. 23 N., R. 56 W., half a mile south of Mitchell.

Drainage area.- 24,300 square miles.

Records available.- June 1901 to July 1913, October 1930 to September 1934 in reports of U. S. Geological Survey; June 1901 to July 1913, April 1916 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 1,760 second-feet Oct. 6 (gage height, 1.48 feet); minimum, 45 second-feet May 10 (gage height, 0.27 foot).
1901-13, 1916-34: Maximum discharge, 23,600 second-feet June 17, 1921, minimum, that of May 10, 1934.

Remarks.- Records good except those estimated for Feb. 24-28. Numerous diversions for irrigation. Flow partly regulated by Pathfinder and Guernsey Reservoirs.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|-------|------|------|------|------|---------|---------|-------|----------------------|------|-------|
| 1 | 1,140 | 880 | 832 | 817 | 728 | 912 | 548 | 150 | 196 | 95 | 115 | 60 |
| 2 | 1,400 | 880 | 817 | 832 | 743 | 866 | 562 | 135 | 184 | 95 | 102 | 66 |
| 3 | 1,460 | 864 | 802 | 817 | 758 | 848 | 616 | 140 | 184 | 87 | 99 | 76 |
| 4 | 1,510 | 802 | 832 | 758 | 743 | 786 | 630 | 125 | 292 | 83 | 99 | 69 |
| 5 | 1,600 | 773 | 802 | 714 | 743 | 802 | 657 | 106 | 616 | 95 | 102 | 63 |
| 6 | 1,640 | 832 | 848 | 714 | 743 | 802 | 630 | 95 | 422 | 91 | 102 | 66 |
| 7 | 1,330 | 896 | 912 | 714 | 773 | 758 | 589 | 80 | 301 | 87 | 102 | 66 |
| 8 | 1,160 | 912 | 832 | 743 | 788 | 743 | 535 | 66 | 166 | 80 | 102 | 63 |
| 9 | 1,090 | 832 | 839 | 758 | 802 | 728 | 523 | 4 | 130 | 76 | 95 | 72 |
| 10 | 1,140 | 802 | 864 | 743 | 802 | 728 | 589 | 45 | 120 | 76 | 87 | 80 |
| 11 | 1,110 | 817 | 848 | 728 | 788 | 728 | 589 | 48 | 125 | 91 | 83 | 72 |
| 12 | 1,040 | 817 | 817 | 728 | 788 | 743 | 548 | 54 | 135 | 106 | 80 | 69 |
| 13 | 992 | 832 | 848 | 773 | 743 | 743 | 472 | 57 | 135 | 80 | 76 | 72 |
| 14 | 960 | 802 | 848 | 728 | 699 | 743 | 422 | 57 | 150 | 66 | 76 | 72 |
| 15 | 912 | 817 | 864 | 714 | 684 | 788 | 411 | 54 | 196 | 60 | 76 | 72 |
| 16 | 864 | 788 | 864 | 743 | 657 | 773 | 411 | 51 | 220 | 57 | 76 | 72 |
| 17 | 992 | 758 | 848 | 786 | 670 | 743 | 388 | 51 | 214 | 60 | 80 | 72 |
| 18 | 1,030 | 1,050 | 788 | 802 | 684 | 773 | 377 | 48 | 190 | 66 | 76 | 72 |
| 19 | 1,060 | 786 | 758 | 758 | 684 | 728 | 366 | 60 | 172 | 69 | 69 | 72 |
| 20 | 1,060 | 758 | 864 | 758 | 684 | 714 | 344 | 63 | 160 | 72 | 66 | 80 |
| 21 | 1,080 | 802 | 896 | 743 | 670 | 684 | 332 | 69 | 150 | 72 | 63 | 87 |
| 22 | 1,060 | 832 | 880 | 743 | 619 | 670 | 332 | 72 | 150 | 87 | 63 | 87 |
| 23 | 1,030 | 864 | 848 | 728 | 650 | 670 | 310 | 72 | 140 | 115 | 66 | 81 |
| 24 | 992 | 848 | 832 | 728 | 550 | 684 | 310 | 76 | 140 | 145 | 66 | 95 |
| 25 | 976 | 848 | 817 | 714 | 500 | 699 | 301 | 72 | 140 | 190 | 66 | 95 |
| 26 | 1,010 | 864 | 758 | 743 | 450 | 616 | 283 | 102 | 140 | 178 | 63 | 99 |
| 27 | 992 | 912 | 773 | 743 | 480 | 616 | 247 | 172 | 130 | 166 | 63 | 102 |
| 28 | 992 | 864 | 802 | 743 | 650 | 657 | 196 | 172 | 115 | 155 | 63 | 102 |
| 29 | 976 | 864 | 817 | 773 | 684 | 178 | 178 | 110 | 140 | 63 | 99 | 99 |
| 30 | 928 | 896 | 817 | 743 | 643 | 160 | 184 | 102 | 135 | 63 | 99 | 99 |
| 31 | 944 | 802 | 728 | 602 | 602 | 196 | 196 | 196 | 130 | 130 | 63 | 99 |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 1,640 | 864 | 1,112 | 68,370 | | |
| November | | | | | | | 1,050 | 758 | 845 | 50,170 | | |
| December | | | | | | | 912 | 758 | 832 | 51,170 | | |
| January | | | | | | | 832 | 714 | 750 | 45,130 | | |
| February | | | | | | | 802 | 450 | 698 | 38,190 | | |
| March | | | | | | | 912 | 602 | 732 | 45,030 | | |
| April | | | | | | | 657 | 160 | 429 | 28,500 | | |
| May | | | | | | | 196 | 45 | 83.7 | 5,760 | | |
| June | | | | | | | 196 | 102 | 138 | 11,360 | | |
| July | | | | | | | 610 | 57 | 100 | 6,160 | | |
| August | | | | | | | 115 | 63 | 79.5 | 4,900 | | |
| September | | | | | | | 102 | 60 | 78.7 | 4,680 | | |
| The year | | | | | | | 1,640 | 45 | 493 | 357,200 | | |

North Platte River near Minatare, Nebr.

Location.- Water-stage recorder on west line of sec. 18, T. 21 N., R. 53 W., 2 miles south of Minatare.

Drainage area.- 24,700 square miles.

Records available.- October 1930 to September 1934 in reports of U. S. Geological Survey; May 1916 to October 1920, April 1922 to September 1934 in reports of State engineer.

Average discharge.- 11 years (1923-34), 1,820 second-feet.

Extremes.- Maximum discharge during year, 1,970 second-feet Oct. 6 (gage height, 1.55 feet); minimum daily discharge, 17 second-feet May 23, 1916-34: Maximum discharge, 6,370 second-feet May 25, 1933 (gage height, 3.02 feet); minimum daily discharge, that of May 23, 1934. Maximum stage since 1916 occurred in June 1921; discharge not determined.

Remarks.- Records good except those for Dec. 26-31, Feb. 24-28, Mar. 8-21, which were estimated. Numerous diversions for irrigation. Flow partly regulated by Pathfinder and Guernsey Reservoirs.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|-------|-------|-------|-------|-------|---------|---------|-------|----------------------|------|-------|
| 1 | 1,500 | 1,290 | 1,280 | 1,100 | 1,040 | 1,050 | 1,060 | 232 | 154 | 110 | 94 | 106 |
| 2 | 1,640 | 1,240 | 1,410 | 1,040 | 1,040 | 1,280 | 1,040 | 210 | 128 | 105 | 86 | 117 |
| 3 | 1,640 | 1,280 | 1,330 | 977 | 1,080 | 1,030 | 1,030 | 210 | 897 | 103 | 80 | 128 |
| 4 | 1,660 | 1,200 | 1,290 | 1,040 | 1,060 | 928 | 994 | 210 | 366 | 96 | 74 | 143 |
| 5 | 1,870 | 1,130 | 1,200 | 1,040 | 1,080 | 862 | 977 | 200 | 486 | 98 | 76 | 138 |
| 6 | 1,920 | 1,220 | 1,130 | 1,030 | 1,040 | 850 | 911 | 174 | 505 | 95 | 82 | 143 |
| 7 | 1,590 | 1,280 | 1,180 | 977 | 1,060 | 800 | 894 | 160 | 440 | 96 | 74 | 134 |
| 8 | 1,440 | 1,280 | 1,150 | 994 | 1,080 | 800 | 911 | 141 | 315 | 94 | 70 | 134 |
| 9 | 1,310 | 1,330 | 1,130 | 1,060 | 1,060 | 820 | 894 | 117 | 238 | 103 | 69 | 211 |
| 10 | 1,220 | 1,280 | 1,180 | 1,100 | 1,040 | 840 | 878 | 113 | 219 | 105 | 108 | 270 |
| 11 | 1,240 | 1,290 | 1,150 | 1,060 | 994 | 830 | 894 | 62 | 226 | 101 | 105 | 237 |
| 12 | 1,310 | 1,240 | 1,130 | 960 | 977 | 870 | 815 | 68 | 230 | 102 | 86 | 225 |
| 13 | 1,410 | 1,160 | 1,130 | 928 | 1,010 | 870 | 695 | 57 | 185 | 100 | 75 | 219 |
| 14 | 1,460 | 1,130 | 1,200 | 1,030 | 994 | 890 | 695 | 52 | 172 | 86 | 73 | 206 |
| 15 | 1,480 | 1,080 | 1,200 | 1,010 | 994 | 890 | 695 | 36 | 302 | 77 | 63 | 206 |
| 16 | 1,410 | 1,150 | 1,180 | 1,040 | 994 | 900 | 653 | 23 | 452 | 68 | 61 | 205 |
| 17 | 1,460 | 1,130 | 1,130 | 977 | 1,050 | 900 | 659 | 20 | 380 | 60 | 53 | 202 |
| 18 | 1,520 | 1,110 | 1,100 | 1,030 | 960 | 900 | 611 | 13 | 284 | 76 | 63 | 187 |
| 19 | 1,460 | 1,080 | 1,080 | 994 | 931 | 910 | 597 | 18 | 252 | 70 | 56 | 143 |
| 20 | 1,370 | 1,040 | 1,130 | 944 | 931 | 950 | 555 | 18 | 247 | 60 | 55 | 136 |
| 21 | 1,290 | 1,110 | 1,150 | 960 | 928 | 970 | 516 | 18 | 232 | 60 | 56 | 234 |
| 22 | 1,370 | 1,200 | 1,150 | 960 | 944 | 977 | 529 | 18 | 246 | 55 | 54 | 242 |
| 23 | 1,350 | 1,240 | 1,100 | 994 | 960 | 994 | 503 | 17 | 234 | 60 | 69 | 241 |
| 24 | 1,290 | 1,200 | 1,040 | 994 | 800 | 928 | 451 | 74 | 224 | 87 | 68 | 239 |
| 25 | 1,240 | 1,130 | 1,010 | 960 | 650 | 1,010 | 451 | 19 | 233 | 122 | 77 | 233 |
| 26 | 1,310 | 1,060 | 930 | 1,030 | 550 | 1,010 | 401 | 19 | 216 | 178 | 82 | 235 |
| 27 | 1,350 | 1,040 | 950 | 1,060 | 600 | 1,100 | 341 | 41 | 171 | 164 | 80 | 247 |
| 28 | 1,390 | 1,040 | 1,100 | 1,040 | 700 | 1,150 | 274 | 81 | 136 | 147 | 85 | 253 |
| 29 | 1,310 | 1,130 | 1,100 | 1,040 | 600 | 1,150 | 284 | 98 | 139 | 136 | 116 | 251 |
| 30 | 1,310 | 1,240 | 1,120 | 1,060 | 1,110 | 1,150 | 242 | 114 | 116 | 124 | 116 | 261 |
| 31 | 1,350 | | 1,100 | 1,010 | 1,110 | | | 129 | | 122 | 106 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 1,920 | 1,220 | 1,434 | 88,170 | | |
| November | | | | | | | 1,330 | 1,040 | 1,177 | 70,060 | | |
| December | | | | | | | 1,410 | 930 | 1,144 | 70,330 | | |
| January | | | | | | | 1,100 | 928 | 1,014 | 62,360 | | |
| February | | | | | | | 1,080 | 550 | 948 | 52,660 | | |
| March | | | | | | | 1,280 | 800 | 958 | 58,910 | | |
| April | | | | | | | 1,060 | 242 | 681 | 40,520 | | |
| May | | | | | | | 232 | 17 | 90.5 | 5,570 | | |
| June | | | | | | | 887 | 115 | 281 | 16,750 | | |
| July | | | | | | | 178 | 55 | 98.7 | 6,070 | | |
| August | | | | | | | 116 | 54 | 78.1 | 4,800 | | |
| September | | | | | | | 270 | 106 | 197 | 11,730 | | |
| The year | | | | | | | 1,920 | 17 | 674 | 497,900 | | |

North Platte River at Lisco, Nebr.

Location.- Water-stage recorder in sec. 33, T. 18 N., R. 46 W., half a mile south of Lisco.

Drainage area.- 26,900 square miles.

Records available.- September 1931 to September 1934.

Extremes.- Maximum discharge during year, 3,580 second-feet May 3 (gage height, 2.34 feet); minimum daily discharge, 8 second-feet Aug. 4.
1931-34: Maximum discharge, 8,150 second-feet May 28, 1933 (gage height, 3.13 feet); minimum daily discharge, that of Aug. 4, 1934.

Remarks.- Records good except those for periods of ice effect, Dec. 26 to Jan. 31, Feb. 25 to Mar. 3, which were estimated on basis of one discharge measurement and temperature records, and those estimated for Nov. 6, May 14-16, 31, June 1. Numerous diversions for irrigation. Flow partly regulated by Pathfinder Reservoir.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | |
|-----------|-------|-------|-------|-------|-------|-------|---------|---------|-------|----------------------|------|-------|-----|
| 1 | 2,310 | 1,670 | 1,650 | 1,550 | 1,690 | 1,500 | 1,200 | 563 | 135 | 248 | 12 | 37 | |
| 2 | 2,280 | 1,580 | 1,990 | | 1,580 | 1,700 | 1,220 | 563 | 140 | 170 | 11 | 43 | |
| 3 | 2,510 | 1,530 | 2,050 | | 1,580 | 1,900 | 1,240 | 2,440 | 162 | 140 | 9 | 43 | |
| 4 | 2,490 | 1,650 | 1,900 | | 1,510 | 2,180 | 1,340 | 1,050 | 333 | 140 | 8 | 46 | |
| 5 | 2,480 | 1,600 | 1,650 | | 1,450 | 1,720 | 1,380 | 700 | 1,060 | 257 | 9 | 104 | |
| 6 | 2,440 | 1,720 | 1,560 | 1,650 | 1,430 | 1,670 | 1,240 | 552 | 846 | 203 | 11 | 87 | |
| 7 | 2,540 | 1,850 | 1,620 | | 1,360 | 1,600 | 1,240 | 519 | 608 | 148 | 15 | 64 | |
| 8 | 2,510 | 1,880 | 1,620 | | 1,430 | 1,580 | 1,170 | 486 | 508 | 125 | 9 | 58 | |
| 9 | 2,080 | 1,800 | 1,670 | | 1,400 | 1,600 | 1,170 | 465 | 413 | 87 | 22 | 98 | |
| 10 | 1,910 | 1,850 | 1,590 | | 2,000 | 1,560 | 1,580 | 1,240 | 403 | 248 | 75 | 28 | 118 |
| 11 | 1,800 | 1,850 | 1,580 | 1,850 | 1,470 | 1,560 | 1,200 | 362 | 178 | 110 | 508 | 185 | |
| 12 | 1,720 | 1,850 | 1,620 | | 1,490 | 1,560 | 1,170 | 343 | 403 | 212 | 304 | 294 | |
| 13 | 1,690 | 1,770 | 1,560 | | 1,560 | 1,580 | 1,150 | 314 | 333 | 178 | 203 | 324 | |
| 14 | 1,670 | 1,690 | 1,600 | | 1,580 | 1,510 | 1,170 | 330 | 333 | 170 | 140 | 343 | |
| 15 | 1,650 | 1,690 | 1,560 | | 1,510 | 1,530 | 1,110 | 300 | 574 | 178 | 69 | 353 | |
| 16 | 1,650 | 1,690 | 1,560 | 1,700 | 1,490 | 1,580 | 1,190 | 230 | 820 | 140 | 49 | 343 | |
| 17 | 1,740 | 1,690 | 1,450 | | 1,620 | 1,510 | 1,130 | 148 | 748 | 98 | 104 | 304 | |
| 18 | 1,850 | 1,650 | 1,580 | | 1,560 | 1,560 | 1,150 | 140 | 585 | 58 | 98 | 248 | |
| 19 | 2,020 | 1,650 | 1,600 | | 1,510 | 1,530 | 1,130 | 148 | 541 | 43 | 46 | 203 | |
| 20 | 1,990 | 1,670 | 1,560 | | 1,510 | 1,530 | 1,060 | 132 | 424 | 14 | 22 | 203 | |
| 21 | 1,880 | 1,580 | 1,560 | 1,640 | 1,510 | 1,490 | 1,080 | 132 | 382 | 11 | 14 | 148 | |
| 22 | 1,820 | 1,530 | 1,560 | | 1,580 | 1,490 | 966 | 98 | 454 | 11 | 28 | 125 | |
| 23 | 1,850 | 1,490 | 1,560 | | 1,510 | 1,490 | 950 | 81 | 508 | 28 | 28 | 148 | |
| 24 | 1,820 | 1,470 | 1,450 | | 1,620 | 1,450 | 950 | 104 | 486 | 104 | 37 | 178 | |
| 25 | 1,850 | 1,530 | 1,320 | | 1,550 | 1,200 | 1,430 | 911 | 194 | 486 | 52 | 19 | 203 |
| 26 | 1,880 | 1,510 | 1,450 | 1,500 | 1,100 | 800 | 1,380 | 885 | 178 | 403 | 64 | 15 | 230 |
| 27 | 1,880 | 1,600 | | | | 900 | 1,340 | 846 | 155 | 285 | 18 | 52 | 257 |
| 28 | 1,850 | 1,650 | | | | 1,100 | 1,320 | 846 | 118 | 230 | 16 | 28 | 314 |
| 29 | 1,820 | 1,580 | | | | | 1,260 | 796 | 98 | 230 | 16 | 16 | 343 |
| 30 | 1,690 | 1,580 | | | | | 1,200 | 677 | 110 | 257 | 12 | 19 | 353 |
| 31 | 1,670 | | | | | 1,280 | | 130 | | 12 | 22 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | | 2,540 | 1,650 | 1,978 | 121,600 | | | |
| November | | | | | | | 1,880 | 1,470 | 1,662 | 98,880 | | | |
| December | | | | | | | 2,050 | 1,320 | 1,585 | 97,430 | | | |
| January | | | | | | | 2,000 | | 1,651 | 101,500 | | | |
| February | | | | | | | 1,690 | 800 | 1,441 | 80,010 | | | |
| March | | | | | | | 2,180 | 1,200 | 1,536 | 94,430 | | | |
| April | | | | | | | 1,580 | 677 | 1,093 | 65,030 | | | |
| May | | | | | | | 2,440 | 81 | 374 | 22,980 | | | |
| June | | | | | | | 1,060 | 135 | 437 | 26,010 | | | |
| July | | | | | | | 257 | 11 | 101 | 6,220 | | | |
| August | | | | | | | 508 | 8 | 65.1 | 3,880 | | | |
| September | | | | | | | 353 | 37 | 193 | 11,500 | | | |
| The year | | | | | | | 2,540 | 8 | 1,008 | 729,500 | | | |

North Platte River at Oshkosh, Nebr.

Location.- Water-stage recorder on west line of sec. 2, T. 16 N., R. 44 W., 1 mile south of Oshkosh.

Drainage area.- 27,500 square miles.

Records available.- October 1930 to September 1934 in reports of U. S. Geological Survey; April 1916 to October 1917, March 1928 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 3,190 second-feet May 4 (gage height, 2.50 feet); no flow July 21 to Aug. 11, Aug. 21, 24-31.
1916-17, 1928-34: Maximum discharge, 19,200 second-feet June 4, 1929; no flow July 21 to Aug. 11, Aug. 21, 24-31, 1934.

Remarks.- Records fair except those for periods of ice effect, Dec. 26 to Jan. 31, Feb. 24 to Mar. 3, which were estimated on basis of two discharge measurements and temperature records, and those estimated Apr. 8-13, May 2-8. Numerous diversions for irrigation. Flow partly regulated by Pathfinder Reservoir.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|-------|-------|---------|-------|---------|-------|-------|------|----------------------|------|-------|
| 1 | 2,540 | 2,180 | 2,260 | | 1,580 | 1,400 | 1,350 | 611 | 95 | 167 | 0 | 26 |
| 2 | 2,570 | 2,180 | 2,570 | | 1,630 | 1,600 | 1,350 | 650 | 222 | 106 | 0 | 24 |
| 3 | 2,730 | 2,130 | 2,520 | 1,750 | 1,660 | 2,000 | 1,350 | 1,500 | 174 | 66 | 0 | 26 |
| 4 | 2,620 | 2,180 | 2,340 | | 1,630 | 2,280 | 1,390 | 2,400 | 247 | 57 | 0 | 26 |
| 5 | 2,520 | 2,570 | 2,030 | | 1,510 | 1,760 | 1,510 | 2,200 | 400 | 112 | 0 | 30 |
| 6 | 2,490 | 2,600 | 1,700 | | 1,490 | 1,630 | 1,560 | 1,400 | 611 | 118 | 0 | 45 |
| 7 | 2,490 | 2,600 | 1,860 | | 1,540 | 1,560 | 1,610 | 750 | 460 | 77 | 0 | 31 |
| 8 | 2,490 | 2,840 | 1,830 | 1,730 | 1,560 | 1,510 | 1,680 | 600 | 539 | 54 | 0 | 23 |
| 9 | 2,310 | 2,280 | 1,800 | | 1,580 | 1,510 | 1,700 | 472 | 400 | 50 | 0 | 54 |
| 10 | 2,130 | 2,360 | 1,780 | | 1,760 | 1,590 | 1,660 | 400 | 293 | 47 | 0 | 77 |
| 11 | 2,080 | 2,410 | 1,580 | | 1,760 | 1,440 | 1,540 | 345 | 213 | 47 | 0 | 82 |
| 12 | 1,960 | 2,440 | 1,780 | | 1,700 | 1,370 | 1,400 | 345 | 272 | 60 | 83 | 152 |
| 13 | 2,000 | 2,260 | 1,880 | 1,850 | 1,700 | 1,370 | 1,360 | 388 | 293 | 112 | 160 | 251 |
| 14 | 2,030 | 2,210 | 1,830 | | 1,660 | 1,350 | 1,320 | 376 | 255 | 89 | 118 | 290 |
| 15 | 2,130 | 2,160 | 1,830 | | 1,560 | 1,390 | 1,320 | 272 | 496 | 83 | 72 | 313 |
| 16 | 2,100 | 2,160 | 1,830 | | 1,560 | 1,390 | 1,320 | 196 | 878 | 101 | 34 | 338 |
| 17 | 2,130 | 2,210 | 1,700 | | 1,630 | 1,390 | 1,260 | 188 | 768 | 83 | 20 | 334 |
| 18 | 2,180 | 2,230 | 1,900 | 1,800 | 1,560 | 1,390 | 1,230 | 167 | 656 | 47 | 16 | 316 |
| 19 | 2,310 | 2,230 | 1,930 | | 1,540 | 1,370 | 1,170 | 132 | 582 | 27 | 13 | 281 |
| 20 | 2,360 | 2,280 | 1,860 | | 1,660 | 1,350 | 1,100 | 118 | 472 | 1 | 1 | 237 |
| 21 | 2,260 | 2,260 | 1,800 | | 1,630 | 1,280 | 1,100 | 66 | 345 | 0 | 0 | 210 |
| 22 | 2,260 | 2,180 | 1,780 | | 1,560 | 1,300 | 1,060 | 28 | 412 | 0 | 2 | 154 |
| 23 | 2,260 | 2,360 | 1,780 | 1,780 | 1,460 | 1,420 | 995 | 23 | 345 | 0 | 5 | 157 |
| 24 | 2,360 | 2,230 | 1,630 | | 1,280 | 1,490 | 956 | 24 | 400 | 0 | 0 | 205 |
| 25 | 2,280 | 2,340 | 1,540 | | 1,100 | 1,580 | 917 | 66 | 456 | 0 | 0 | 222 |
| 26 | 2,280 | 2,310 | | | 900 | 1,580 | 858 | 146 | 388 | 0 | 0 | 231 |
| 27 | 2,210 | 2,440 | | 1,750 | 950 | 1,560 | 784 | 132 | 355 | 0 | 0 | 234 |
| 28 | 2,180 | 2,440 | | | 1,050 | 1,540 | 752 | 125 | 272 | 0 | 0 | 304 |
| 29 | 2,180 | 2,390 | | | | 1,440 | 672 | 106 | 230 | 0 | 0 | 311 |
| 30 | 2,260 | 2,310 | | 1,640 | | 1,370 | 640 | 77 | 247 | 0 | 0 | 336 |
| 31 | 2,130 | | | 1,470 | | 1,460 | | 66 | | 0 | 0 | |
| Month | | | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | | |
| October | | | | 2,730 | | 1,960 | | 2,285 | | 140,500 | | |
| November | | | | 2,840 | | 2,130 | | 2,326 | | 136,400 | | |
| December | | | | 2,570 | | 1,540 | | 1,857 | | 112,900 | | |
| January | | | | 1,760 | | 1,470 | | 1,758 | | 108,100 | | |
| February | | | | 2,280 | | 900 | | 1,506 | | 83,640 | | |
| March | | | | 1,700 | | 1,280 | | 1,505 | | 92,570 | | |
| April | | | | 2,400 | | 640 | | 1,230 | | 73,220 | | |
| May | | | | 878 | | 23 | | 464 | | 28,500 | | |
| June | | | | 167 | | 95 | | 392 | | 23,320 | | |
| July | | | | 160 | | 0 | | 48.5 | | 1,040 | | |
| August | | | | 338 | | 23 | | 177 | | 10,550 | | |
| September | | | | | | | | | | | | |
| The year | | | | 2,840 | | 0 | | 1,127 | | 815,700 | | |

North Platte River at Martin, Nebr.

Location.- Water-stage recorder in sec. 31, T. 15 N., R. 38 W., 1 mile south of Martin.

Drainage area.- 30,000 square miles.

Records available.- October 1933 to September 1934.

Extremes.- Maximum discharge during year, 3,910 second-feet Mar. 4 (gage height, 2.20 feet); no flow July 25 to Aug. 14, Aug. 27, 29-31.

Remarks.- Records fair. Discharge estimated Oct. 1 to Nov. 19, Mar. 15-18, Aug. 25-27. During periods of ice effect, Dec. 26 to Jan. 24, Feb. 24 to Mar. 3, discharge determined on basis of one discharge measurement and temperature records. Numerous diversions above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|-------|------|-------|---------|---------|-------|----------------------|------|------|-------|
| 1 | | | 2,180 | | 2,210 | 1,500 | 1,760 | 561 | 114 | 443 | 0 | 4 |
| 2 | | | 2,210 | | 2,030 | 2,200 | 1,780 | 610 | 127 | 299 | 0 | 7 |
| 3 | | | 2,650 | | 1,930 | 2,700 | 1,600 | 961 | 218 | 227 | 0 | 6 |
| 4 | | | 2,680 | | 1,810 | 3,480 | 1,640 | 2,650 | 280 | 201 | 0 | 5 |
| 5 | | | 2,430 | | 1,780 | 2,370 | 1,810 | 2,560 | 236 | 398 | 0 | 2 |
| 6 | | | 2,180 | | 1,780 | 1,930 | 1,850 | 1,480 | 70 | 271 | 0 | 8 |
| 7 | | | 2,000 | | 1,810 | 1,850 | 1,760 | 1,120 | 537 | 178 | 0 | 6 |
| 8 | | | 2,050 | | 1,880 | 1,810 | 1,620 | 894 | 398 | 163 | 0 | 5 |
| 9 | | | 2,000 | | 1,830 | 1,880 | 1,550 | 879 | 432 | 156 | 0 | 54 |
| 10 | | | 1,980 | | 2,000 | 1,850 | 1,480 | 692 | 347 | 134 | 0 | 149 |
| 11 | | | 1,780 | | 1,900 | 1,880 | 1,400 | 525 | 299 | 134 | 0 | 104 |
| 12 | | | 1,400 | | 1,980 | 1,850 | 1,290 | 500 | 299 | 98 | 0 | 87 |
| 13 | | | 1,730 | | 1,880 | 1,850 | 1,310 | 454 | 387 | 104 | 0 | 104 |
| 14 | | | 2,000 | | 1,850 | 1,730 | 1,310 | 477 | 500 | 104 | 0 | 201 |
| 15 | | | 2,130 | | 1,730 | 1,750 | 1,330 | 454 | 863 | 104 | 61 | 290 |
| 16 | | | 2,160 | | 1,780 | 1,790 | 1,380 | 357 | 1,290 | 82 | 92 | 328 |
| 17 | | | 2,000 | | 1,900 | 1,670 | 1,440 | 290 | 1,600 | 76 | 23 | 421 |
| 18 | | | 1,890 | | 1,810 | 1,630 | 1,420 | 245 | 1,210 | 46 | 4 | 421 |
| 19 | | | 2,180 | | 1,780 | 1,600 | 1,350 | 262 | 1,010 | 26 | 2 | 432 |
| 20 | | | 2,400 | | 1,900 | 1,500 | 1,160 | 236 | 894 | 9 | 2 | 373 |
| 21 | | | 2,320 | | 2,000 | 1,420 | 1,160 | 210 | 740 | 6 | 2 | 347 |
| 22 | | | 2,290 | | 2,160 | 1,530 | 1,140 | 142 | 711 | 2 | 3 | 262 |
| 23 | | | 2,260 | | 1,600 | 1,640 | 1,140 | 104 | 785 | 2 | 3 | 227 |
| 24 | | | 2,110 | | 1,500 | 1,600 | 927 | 109 | 668 | 1 | 3 | 218 |
| 25 | | | 2,080 | | 1,620 | 1,100 | 944 | 98 | 770 | 0 | 2 | 245 |
| 26 | | | 2,000 | | 1,950 | 870 | 1,550 | 82 | 639 | 0 | 1 | 262 |
| 27 | | | 2,050 | | 2,260 | 900 | 1,530 | 961 | 573 | 0 | 0 | 254 |
| 28 | | | 2,130 | | 2,240 | 1,020 | 1,660 | 894 | 156 | 498 | 0 | 1 |
| 29 | | | 2,110 | | 2,080 | | 1,640 | 832 | 120 | 443 | 0 | 0 |
| 30 | | | 2,050 | | 1,880 | | 1,600 | 696 | 142 | 410 | 0 | 0 |
| 31 | | | | | 2,210 | | 1,730 | 163 | | 0 | 0 | 0 |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | | | 2,285 | 140,500 | | | |
| November | | | | | | | | 2,318 | 137,900 | | | |
| December | | | | | | 2,680 | 1,400 | 2,029 | 124,700 | | | |
| January | | | | | | 2,260 | 1,890 | 2,005 | 123,300 | | | |
| February | | | | | | 2,210 | 870 | 1,735 | 96,340 | | | |
| March | | | | | | 3,480 | 1,420 | 1,818 | 111,800 | | | |
| April | | | | | | 1,850 | 896 | 1,331 | 79,190 | | | |
| May | | | | | | 2,650 | 82 | 570 | 35,040 | | | |
| June | | | | | | 1,600 | 70 | 578 | 34,390 | | | |
| July | | | | | | 443 | 0 | 105 | 6,470 | | | |
| August | | | | | | 92 | 0 | 6.4 | 395 | | | |
| September | | | | | | 432 | 2 | 193 | 11,470 | | | |
| The year | | | | | | 3,480 | 0 | 1,245 | 901,500 | | | |

North Platte River at North Platte, Nebr.

Location.- Water-stage recorder in sec. 28, T. 14 N., R. 30 W., half a mile north of North Platte and 4½ miles above mouth of South Platte River. Zero of gage is 2,794.9 feet above mean sea level.

Drainage area.- 32,000 square miles.

Records available.- February 1895 to September 1915, October 1930 to September 1934 in reports of U. S. Geological Survey; February 1895 to September 1934 in reports of State engineer.

Average discharge.- 40 years, 2,890 second-feet.

Extremes.- Maximum discharge during year, 3,840 second-feet May 6 (gage height, 3.91 feet); minimum daily discharge, 41 second-feet July 25, Aug. 1, 5, 6.
1895-1934: Maximum discharge, 27,100 second-feet June 6, 1909; minimum daily discharge, 20 second-feet Sept. 20, 1904.

Remarks.- Records good except those for periods of ice effect, Jan. 1-25, Feb. 23 to Mar. 5, which were based on one discharge measurement and temperature records. Numerous diversions for irrigation.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|-------|-------|-------|-------|-------|---------|---------|-------|----------------------|------|-------|
| 1 | 2,520 | 2,700 | 2,820 | 1,900 | 2,560 | 1,200 | 1,870 | 593 | 55 | 123 | 41 | 192 |
| 2 | 2,560 | 2,560 | 3,250 | | 2,420 | 2,000 | 1,590 | 494 | 79 | 108 | 44 | 219 |
| 3 | 2,740 | 2,420 | 2,820 | 2,150 | 2,560 | 2,600 | 1,840 | 434 | 171 | 115 | 44 | 242 |
| 4 | 2,930 | 2,390 | 2,970 | | 2,740 | 3,200 | 1,870 | 556 | 185 | 92 | 44 | 185 |
| 5 | 3,180 | 1,980 | 3,270 | | 2,490 | 3,900 | 1,920 | 1,870 | 171 | 128 | 41 | 158 |
| 6 | 3,310 | 2,140 | 2,890 | 2,700 | 2,560 | 3,230 | 1,980 | 3,100 | 151 | 134 | 41 | 134 |
| 7 | 3,140 | 2,300 | 2,670 | | 2,560 | 2,520 | 2,000 | 1,610 | 158 | 205 | 44 | 134 |
| 8 | 2,920 | 3,250 | 2,350 | 2,600 | 2,230 | 2,500 | 2,030 | 1,110 | 113 | 264 | 50 | 128 |
| 9 | 3,020 | 3,060 | 2,300 | | 2,260 | 2,170 | 1,870 | 843 | 68 | 212 | 50 | 192 |
| 10 | 3,100 | 2,780 | 2,260 | | 2,300 | 2,000 | 1,820 | 761 | 65 | 205 | 52 | 538 |
| 11 | 2,850 | 2,520 | 2,120 | 2,700 | 2,260 | 2,120 | 1,430 | 449 | 58 | 205 | 47 | 449 |
| 12 | 2,630 | 2,520 | 2,030 | | 2,300 | 2,060 | 1,480 | 390 | 68 | 198 | 52 | 328 |
| 13 | 2,520 | 2,590 | 2,120 | | 2,390 | 2,060 | 1,530 | 369 | 97 | 185 | 55 | 264 |
| 14 | 2,490 | 2,590 | 2,120 | | 2,490 | 1,980 | 1,530 | 390 | 178 | 151 | 61 | 192 |
| 15 | 2,530 | 2,630 | 2,630 | | 2,490 | 1,950 | 1,530 | 405 | 556 | 115 | 72 | 192 |
| 16 | 2,630 | 2,560 | 2,850 | 2,500 | 2,490 | 1,990 | 1,610 | 369 | 1,140 | 118 | 82 | 205 |
| 17 | 2,490 | 2,520 | 2,740 | | 2,560 | 1,450 | 1,610 | 307 | 1,040 | 113 | 144 | 256 |
| 18 | 2,460 | 2,490 | 2,850 | | 2,870 | 2,000 | 1,590 | 284 | 1,070 | 68 | 317 | 271 |
| 19 | 2,420 | 2,420 | 2,700 | | 2,060 | 2,090 | 1,380 | 219 | 1,040 | 55 | 185 | 307 |
| 20 | 2,500 | 2,460 | 2,700 | | 2,170 | 2,060 | 1,300 | 185 | 843 | 50 | 123 | 338 |
| 21 | 2,260 | 2,560 | 2,890 | 2,550 | 2,330 | 1,920 | 1,140 | 192 | 647 | 50 | 102 | 420 |
| 22 | 2,420 | 2,670 | 3,060 | | 2,170 | 1,690 | 1,110 | 178 | 720 | 44 | 134 | 449 |
| 23 | 2,460 | 2,300 | 2,630 | | 1,700 | 1,870 | 1,110 | 151 | 574 | 44 | 198 | 449 |
| 24 | 2,490 | 2,390 | 2,170 | | 1,300 | 1,870 | 1,020 | 144 | 434 | 44 | 164 | 390 |
| 25 | 2,420 | 2,490 | 2,000 | | 1,100 | 1,840 | 1,040 | 164 | 405 | 41 | 158 | 390 |
| 26 | 2,490 | 2,390 | 684 | 2,460 | 850 | 1,840 | 904 | 164 | 286 | 55 | 134 | 380 |
| 27 | 2,460 | 2,390 | 538 | 2,360 | 900 | 1,870 | 802 | 134 | 205 | 75 | 123 | 359 |
| 28 | 2,420 | 2,390 | 948 | 2,490 | 1,000 | 1,870 | 843 | 118 | 198 | 58 | 118 | 317 |
| 29 | 2,490 | 2,490 | 1,350 | 2,170 | | 1,760 | 802 | 92 | 171 | 50 | 134 | 317 |
| 30 | 2,590 | 2,590 | 1,690 | 2,060 | | 1,690 | 802 | 78 | 134 | 47 | 279 | 338 |
| 31 | 2,630 | | 1,890 | 2,520 | | 1,840 | | 65 | | 47 | 192 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 3,310 | 2,260 | 2,845 | 162,600 | | |
| November | | | | | | | 3,250 | 1,980 | 2,517 | 149,800 | | |
| December | | | | | | | 3,270 | 538 | 2,351 | 145,500 | | |
| January | | | | | | | | 1,900 | 2,465 | 151,600 | | |
| February | | | | | | | 2,740 | 860 | 2,118 | 117,600 | | |
| March | | | | | | | 3,800 | 1,200 | 2,098 | 129,000 | | |
| April | | | | | | | 2,030 | 802 | 1,454 | 86,510 | | |
| May | | | | | | | 3,100 | 65 | 523 | 32,130 | | |
| June | | | | | | | 1,140 | 55 | 369 | 21,970 | | |
| July | | | | | | | 254 | 41 | 110 | 8,750 | | |
| August | | | | | | | 317 | 41 | 107 | 6,600 | | |
| September | | | | | | | 538 | 128 | 291 | 17,300 | | |
| The year | | | | | | | 3,800 | 41 | 1,416 | 1,025,000 | | |

Platte River near Overton, Nebr.

Location.- Water-stage recorder in sec. 12, T. 8 N., R. 20 W., 4 miles south of Overton.

Drainage area.- 58,400 square miles.

Records available.- October 1930 to September 1934 in reports of U. S. Geological Survey; June 1918 to December 1923, April 1925 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 5,210 second-feet Feb. 1 (gage height, 3.99 feet); no flow May 20 to Sept. 30.
1918-23, 1925-34: Maximum discharge, 38,700 second-feet June 14, 1921; no flow at times during 1925, 1927, 1928, 1930-34.

Remarks.- Records fair. Discharge estimated Dec. 17-25, Jan. 1-31, Feb. 24 to Mar. 6 on basis of one discharge measurement and temperature records. Numerous diversions from headwaters.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|-------|---------|--------|-------|-------|----------------------|-----|------|------|------|-------|
| 1 | 2,520 | 1,890 | 2,930 | | 3,700 | 1,000 | 2,000 | 214 | | | | |
| 2 | 2,560 | 1,890 | 3,910 | | 3,520 | 2,000 | 1,960 | 160 | | | | |
| 3 | 2,450 | 1,820 | 3,910 | | 3,100 | 2,600 | 2,110 | 144 | | | | |
| 4 | 2,410 | 1,960 | 3,860 | | 2,890 | 3,000 | 2,180 | 123 | | | | |
| 5 | 2,330 | 1,820 | 3,320 | *1,550 | 2,540 | 3,500 | 2,140 | 92 | | | | |
| 6 | 2,290 | 1,760 | 3,510 | | 2,410 | 3,600 | 2,140 | 70 | | | | |
| 7 | 2,220 | 2,140 | 3,860 | | 2,180 | 3,280 | 2,140 | 53 | | | | |
| 8 | 2,140 | 2,290 | 3,550 | | 2,030 | 2,970 | 2,070 | 206 | | | | |
| 9 | 2,110 | 2,260 | 3,510 | | 1,960 | 2,520 | 1,960 | 323 | | | | |
| 10 | 2,140 | 2,930 | 3,460 | | 1,890 | 2,260 | 1,820 | 144 | | | | |
| 11 | 2,220 | 2,760 | 3,060 | | 1,890 | 2,030 | 1,720 | 63 | | | | |
| 12 | 2,030 | 2,680 | 1,960 | | 1,930 | 1,860 | 1,590 | 29 | | | | |
| 13 | 2,070 | 2,290 | 1,510 | | 1,930 | 1,760 | 1,340 | 9 | | | | |
| 14 | 2,030 | 2,410 | 1,870 | | 1,930 | 1,760 | 1,250 | 7 | | | | |
| 15 | 1,890 | 2,450 | 1,620 | | 2,000 | 1,690 | 1,170 | 5 | | | | |
| 16 | 1,820 | 2,410 | 2,070 | | 2,030 | 1,560 | 1,090 | 3 | | | | |
| 17 | 1,820 | 2,410 | | | 2,070 | 1,500 | 1,030 | 3 | | | | |
| 18 | 1,760 | 2,410 | 2,200 | | 2,220 | 980 | 1,030 | 2 | | | | |
| 19 | 1,690 | 2,450 | | | 2,260 | 2,030 | 1,060 | 1 | | | | |
| 20 | 1,620 | 2,450 | | | 1,960 | 2,290 | 980 | 0 | | | | |
| 21 | 1,690 | 2,330 | | | 2,220 | 2,110 | 930 | 0 | | | | |
| 22 | 1,620 | 2,490 | | | 2,030 | 2,000 | 855 | 0 | | | | |
| 23 | 1,520 | 2,490 | 2,500 | | 2,070 | 1,890 | 805 | 0 | | | | |
| 24 | 2,000 | 2,410 | | | 1,700 | 1,860 | 714 | 0 | | | | |
| 25 | 2,030 | 2,520 | | | 1,100 | 1,790 | 670 | 0 | | | | |
| 26 | 2,070 | 2,490 | 780 | | 800 | 1,760 | 582 | 0 | | | | |
| 27 | 2,110 | 2,410 | 352 | | 650 | 1,720 | 502 | 0 | | | | |
| 28 | 2,140 | 2,290 | 444 | | 900 | 1,690 | 424 | 0 | | | | |
| 29 | 2,140 | 2,260 | 1,230 | | | 1,690 | 352 | 0 | | | | |
| 30 | 2,110 | 2,180 | 1,090 | | | 1,690 | 308 | 0 | | | | |
| 31 | 2,000 | 1,280 | | | | 1,930 | | 0 | | | | |
| Month | Maximum | | Minimum | | Mean | | Run-off in acre-feet | | | | | |
| October | 2,560 | | 1,620 | | 2,053 | | 126,200 | | | | | |
| November | 2,930 | | 1,760 | | 2,312 | | 137,600 | | | | | |
| December | 3,910 | | 352 | | 2,350 | | 146,400 | | | | | |
| January | 3,700 | | 650 | | 2,065 | | 114,700 | | | | | |
| February | 3,600 | | 980 | | 2,075 | | 127,600 | | | | | |
| March | 2,180 | | 308 | | 1,297 | | 77,200 | | | | | |
| April | 323 | | 0 | | 53.3 | | 3,270 | | | | | |
| May | 0 | | 0 | | 0 | | 0 | | | | | |
| June | 0 | | 0 | | 0 | | 0 | | | | | |
| July | 0 | | 0 | | 0 | | 0 | | | | | |
| August | 0 | | 0 | | 0 | | 0 | | | | | |
| September | 0 | | 0 | | 0 | | 0 | | | | | |
| The year | 3,910 | | 0 | | 1,242 | | 899,000 | | | | | |

*Discharge measurement.

Note.- No flow during months left blank.

Platte River near Grand Island, Nebr.

Location.- Water-stage recorder in sec. 36, T. 11 N., R. 9 W., 5 miles southeast of Grand Island.

Drainage area.- 59,500 square miles.

Records available.- October 1933 to September 1934.

Extremes.- Maximum discharge during year, 7,580 second-feet Mar. 5 (gage height, 4.27 feet); no flow May 16 to Sept. 30.

Remarks.- Records fair. Discharge estimated Oct. 1-20 on basis of three discharge measurements and Dec. 15 to Jan. 29, Feb. 21 to Mar. 4, on basis of one discharge measurement and temperature records. Numerous diversions for irrigation above station. Flow partly regulated by reservoirs in Wyoming.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|-------|-------|-------|-------|---------|---------|-------|----------------------|------|------|-------|
| 1 | | 1,330 | 2,600 | | 1,700 | | | 384 | | | | |
| 2 | 1,540 | 1,330 | 3,970 | | 2,640 | | 2,400 | 290 | | | | |
| 3 | | 1,510 | 3,560 | | 4,250 | 2,500 | 1,930 | 226 | | | | |
| 4 | 1,510 | 1,400 | 3,090 | | 3,840 | | 2,170 | 180 | | | | |
| 5 | 1,450 | 1,280 | 2,840 | | 2,840 | 5,700 | 2,280 | 172 | | | | |
| 6 | | 1,480 | 2,640 | | 2,560 | 5,130 | 2,090 | 90 | | | | |
| 7 | | 1,430 | 2,360 | | 2,320 | 5,240 | 2,050 | 52 | | | | |
| 8 | 1,350 | 1,730 | 2,520 | | 2,170 | 4,010 | 2,010 | 19 | | | | |
| 9 | | 1,630 | 2,720 | | 2,280 | 3,350 | 1,830 | 2 | | | | |
| 10 | | 1,700 | 2,640 | | 2,200 | 2,880 | 1,660 | 0 | | | | |
| 11 | | 1,760 | 1,980 | | 2,440 | 2,680 | 1,430 | 0 | | | | |
| 12 | 1,570 | 2,280 | 1,430 | | 2,440 | 2,360 | 1,160 | 25 | | | | |
| 13 | | 2,200 | 1,380 | | 2,600 | 2,130 | 1,210 | 83 | | | | |
| 14 | 1,640 | 2,090 | 1,460 | | 2,800 | 2,090 | 1,100 | 66 | | | | |
| 15 | 1,600 | 2,050 | 1,500 | | 2,840 | 2,130 | 1,070 | 23 | | | | |
| 16 | | 2,130 | 1,630 | | 2,830 | 2,050 | 1,040 | 0 | | | | |
| 17 | | 2,010 | | | 3,010 | 1,460 | 1,020 | 0 | | | | |
| 18 | 1,200 | 2,050 | 2,100 | | 2,800 | 1,300 | 992 | 0 | | | | |
| 19 | | 2,090 | | | 2,400 | 1,560 | 890 | 0 | | | | |
| 20 | | 2,170 | | | 2,280 | 3,700 | 946 | 0 | | | | |
| 21 | 1,020 | 2,050 | | | | 2,200 | 1,010 | 0 | | | | |
| 22 | 1,090 | 2,010 | | | | 1,700 | 946 | 0 | | | | |
| 23 | 1,230 | 2,130 | 2,900 | | 1,400 | 1,700 | 904 | 0 | | | | |
| 24 | 1,170 | 2,240 | | | | 1,700 | 848 | 0 | | | | |
| 25 | 1,260 | 2,010 | | | | 1,940 | 834 | 0 | | | | |
| 26 | 1,330 | 2,130 | | | | 1,900 | 781 | 0 | | | | |
| 27 | 1,480 | 2,240 | | | 400 | 1,870 | 666 | 0 | | | | |
| 28 | 1,560 | 2,200 | 1,300 | | | 1,900 | 618 | 0 | | | | |
| 29 | 1,560 | 2,280 | | | | 1,730 | 538 | 0 | | | | |
| 30 | 1,510 | 2,320 | | 1,400 | | 1,730 | 465 | 0 | | | | |
| 31 | 1,530 | | | 1,380 | | 1,940 | | 0 | | | | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | | 1,020 | 1,388 | 85,330 | | | |
| November | | | | | | 2,320 | 1,280 | 1,909 | 113,600 | | | |
| December | | | | | | 3,970 | | 2,226 | 137,000 | | | |
| January | | | | | | | | 1,900 | 116,800 | | | |
| February | | | | | | 4,250 | | 2,196 | 122,000 | | | |
| March | | | | | | 5,700 | 1,300 | 2,519 | 154,900 | | | |
| April | | | | | | 2,400 | 465 | 1,304 | 77,570 | | | |
| May | | | | | | 384 | 0 | 52.0 | 3,200 | | | |
| June | | | | | | 0 | 0 | 0 | 0 | | | |
| July | | | | | | 0 | 0 | 0 | 0 | | | |
| August | | | | | | 0 | 0 | 0 | 0 | | | |
| September | | | | | | 0 | 0 | 0 | 0 | | | |
| The year | | | | | | 5,700 | 0 | 1,119 | 810,400 | | | |

Note.- No flow during months left blank.

Platte River near Duncan, Nebr.

Location.- Staff gage in sec. 12, T. 16 N., R. 2 W., $1\frac{1}{2}$ miles south of Duncan. Zero of gage is 1,478.7 feet above mean sea level.

Drainage area.- 81,800 square miles.

Records available.- October 1923 to September 1934. At points 7 miles downstream, June 1895 to September 1915.

Extremes.- Maximum discharge during year, 10,300 second-feet Mar. 5 (gage height, 3.04 feet); no flow June 1-4, June 23 to Sept. 30.
1895-1915, 1923-34: Maximum discharge, 51,100 second-feet June 23, 1905; no flow at times.

Remarks.- Records fair. Discharge estimated Dec. 1 to Feb. 15, Feb. 17 to Mar. 2, Mar. 7, 9, 10, 17, 18, on basis of one discharge measurement and temperature records. Numerous diversions from headwaters. Flow partly regulated by reservoirs in Wyoming. Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|------|------|--------|-------|-------|-----|------|------|------|-------|
| 1 | 1,120 | 1,240 | | | | 1,500 | 1,820 | 347 | 0 | | | |
| 2 | 1,060 | 1,310 | | | | 2,500 | 2,250 | 284 | 0 | | | |
| 3 | 1,020 | 1,530 | | | | 3,860 | 2,420 | 215 | 0 | | | |
| 4 | 1,020 | 1,620 | | | | 4,410 | 2,090 | 122 | 0 | | | |
| 5 | 1,070 | 1,530 | | | | 8,580 | 1,890 | 176 | 1 | | | |
| 6 | 1,050 | 1,510 | | | | 5,500 | 2,200 | 168 | 53 | | | |
| 7 | 990 | 1,660 | | | 43,340 | 5,800 | 2,170 | 138 | 30 | | | |
| 8 | 934 | 1,450 | | | | 6,140 | 2,040 | 79 | 76 | | | |
| 9 | 962 | 1,660 | | | | 5,000 | 1,890 | 16 | 28 | | | |
| 10 | 1,010 | 1,920 | | | | 4,000 | 1,920 | 14 | 5 | | | |
| 11 | 1,120 | 1,940 | | | | 3,170 | 1,290 | 11 | 2 | | | |
| 12 | 1,200 | 1,890 | | | | 2,840 | 1,330 | 7 | 2 | | | |
| 13 | 1,310 | 2,250 | | | | 2,420 | 1,570 | 12 | 2 | | | |
| 14 | 1,280 | 2,330 | | | | 2,450 | 1,570 | 11 | 2 | | | |
| 15 | 1,290 | 2,070 | | | | 2,200 | 1,410 | 11 | 2 | | | |
| 16 | 1,350 | 2,090 | | | 2,590 | 2,310 | 1,370 | 9 | 5 | | | |
| 17 | 1,240 | 2,090 | | | 2,720 | 1,800 | 1,220 | 7 | 7 | | | |
| 18 | 1,190 | 2,120 | | | | 2,000 | 1,050 | 5 | 3 | | | |
| 19 | 976 | 2,220 | | | | 2,150 | 920 | 3 | 2 | | | |
| 20 | 626 | 2,250 | | | | 1,680 | 1,020 | 3 | 2 | | | |
| 21 | 802 | 2,310 | | | | 3,450 | 1,150 | 3 | 2 | | | |
| 22 | 864 | 2,200 | | | | 2,720 | 962 | 3 | 2 | | | |
| 23 | 920 | 2,150 | | | | 2,250 | 878 | 9 | 3 | | | |
| 24 | 934 | 2,150 | | | | 2,090 | 864 | 7 | 2 | | | |
| 25 | 1,010 | 1,820 | | | | 2,040 | 934 | 3 | 2 | | | |
| 26 | 1,120 | 2,120 | | | | 1,850 | 686 | 7 | 0 | | | |
| 27 | 1,170 | 1,850 | | | | 2,150 | 708 | 7 | 0 | | | |
| 28 | 1,280 | 1,970 | | | | 2,070 | 708 | 7 | 0 | | | |
| 29 | 1,370 | 1,990 | | | | 1,990 | 520 | 7 | 0 | | | |
| 30 | 1,450 | 2,120 | | | | 2,020 | 420 | 2 | 0 | | | |
| 31 | 1,460 | | | | | 2,020 | | 1 | | | | |

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|-----------|---------|---------|-------|----------------------|
| October | 1,490 | 802 | 1,111 | 68,290 |
| November | 2,330 | 1,240 | 1,912 | 113,800 |
| December | | | 2,100 | 129,100 |
| January | | | 2,000 | 123,000 |
| February | | | 2,300 | 127,700 |
| March | 8,580 | 1,500 | 3,063 | 198,400 |
| April | 2,420 | 420 | 1,372 | 81,660 |
| May | 347 | 1 | 56.9 | 3,500 |
| June | 76 | 0 | 7.8 | 462 |
| July | 0 | 0 | 0 | 0 |
| August | 0 | 0 | 0 | 0 |
| September | 0 | 0 | 0 | 0 |
| The year | 8,580 | 0 | 1,155 | 835,900 |

*Discharge measurement.

Note.- No flow during months left blank.

Platte River near Ashland, Nebr.

Location.— Water-stage recorder in sec. 30, T. 13 N., R. 10 E., 3 miles northeast of Ashland. Zero of gage is 1,020.1 feet above mean sea level. Prior to Oct. 14, 1933, staff gage 900 feet downstream was used. Datum not changed.

Drainage area.— 83,800 square miles.

Records available.— August 1928 to September 1934.

Extremes.— Maximum discharge during year, 14,200 second-feet Mar. 6 (gage height, 4.37 feet); minimum daily discharge, 386 second-feet Feb. 28.
1928-34: Maximum discharge, 58,000 second-feet Feb. 28, 1932 (gage height, 6.7 feet); minimum not determined.

Remarks.— Records good except those during periods of ice effect, Dec. 24 to Feb. 9, Feb. 18 to Mar. 4, which were estimated on basis of three discharge measurements and temperature records, and those estimated Oct. 8-13, Nov. 10, Mar. 10, 11, July 28 to Aug. 2, Aug. 8-10, Aug. 16 to Sept. 4, Sept. 6, which are fair. Numerous diversions from headwaters. Flow partly regulated by reservoirs in Wyoming.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|-------|--------|-------|-------|---------|---------|-------|----------------------|-------|-------|-------|
| 1 | 3,380 | 3,610 | 5,210 | 1,000 | 7,100 | 1,200 | 5,800 | 2,680 | 1,270 | 1,300 | 1,300 | 1,750 |
| 2 | 2,920 | 3,930 | 7,110 | | | 3,000 | 5,420 | 2,700 | 1,280 | 1,250 | 1,100 | |
| 3 | 2,600 | 3,840 | 10,500 | | | 4,500 | 5,360 | 2,440 | 1,270 | 1,380 | 873 | |
| 4 | 2,730 | 4,120 | 10,200 | | | 7,000 | 6,540 | 2,630 | 1,220 | 1,340 | 828 | |
| 5 | 2,650 | 5,160 | 9,630 | | | 9,050 | 9,140 | 2,550 | 1,260 | 1,340 | 735 | |
| 6 | 2,620 | 4,550 | 5,310 | 1,500 | 7,200 | 11,300 | 5,630 | 2,440 | 1,380 | 1,340 | 704 | 3,000 |
| 7 | 2,650 | 4,160 | 7,760 | | | 10,500 | 5,860 | 2,480 | 1,600 | 1,470 | 733 | 2,740 |
| 8 | 2,700 | 3,840 | 6,640 | | | 9,220 | 5,580 | 2,440 | 2,900 | 1,490 | 920 | 2,130 |
| 9 | | 3,650 | 5,140 | | | 10,600 | 5,260 | 3,560 | 7,460 | 1,750 | 880 | 1,730 |
| 10 | | 3,800 | 5,650 | | | 6,900 | 8,000 | 4,650 | 3,200 | 5,000 | 750 | 1,700 |
| 11 | 3,200 | 4,260 | 5,860 | 3,300 | 6,700 | 6,000 | 4,650 | 2,550 | 8,140 | 5,000 | 733 | 1,800 |
| 12 | | 4,360 | 6,210 | | | 9,550 | 4,400 | 3,540 | 4,210 | 3,350 | 752 | 1,650 |
| 13 | | 4,210 | 2,630 | | | 9,720 | 4,600 | 4,020 | 3,350 | 2,740 | 2,460 | 795 |
| 14 | | 3,210 | 4,160 | | | 6,200 | 4,800 | 4,500 | 2,330 | 2,370 | 1,750 | 828 |
| 15 | | 3,650 | 4,550 | | | 5,970 | 4,800 | 3,700 | 2,200 | 1,750 | 1,360 | 964 |
| 16 | 3,740 | 5,000 | 1,780 | 5,000 | 5,520 | 4,800 | 3,700 | 2,000 | 1,650 | 1,120 | 4,800 | 2,370 |
| 17 | 3,740 | 4,500 | 2,780 | | | 5,360 | 4,850 | 3,070 | 1,970 | 1,720 | 1,060 | 5,200 |
| 18 | 3,610 | 4,210 | 3,340 | | | 4,300 | 3,110 | 1,940 | 1,970 | 990 | 3,600 | 2,160 |
| 19 | 3,520 | 4,160 | 3,160 | | | 4,750 | 2,740 | 1,770 | 2,030 | 912 | 2,000 | 2,230 |
| 20 | 3,650 | 4,400 | 4,260 | | | 3,650 | 2,440 | 1,560 | 7,180 | 849 | 1,800 | 1,970 |
| 21 | 3,650 | 4,400 | 4,310 | 6,000 | 2,500 | 4,210 | 2,550 | 1,540 | 3,740 | 794 | 1,600 | 1,630 |
| 22 | 3,180 | 4,450 | 4,310 | | | 4,280 | 2,860 | 1,470 | 2,820 | 733 | | 1,780 |
| 23 | 3,240 | 5,400 | 6,700 | | | 5,970 | 2,550 | 1,430 | 2,330 | 685 | | 1,720 |
| 24 | 3,290 | 5,050 | 5,500 | | | 6,640 | 2,130 | 1,400 | 2,000 | 648 | | 1,860 |
| 25 | 3,290 | 5,560 | 4,500 | | | 6,270 | 2,030 | 1,380 | 1,720 | 651 | | 2,030 |
| 26 | 3,470 | 5,360 | 1,000 | 4,500 | 386 | 5,520 | 1,970 | 1,360 | 1,750 | 614 | 1,500 | 2,260 |
| 27 | 3,550 | 4,850 | | | | 450 | 5,000 | 2,200 | 1,380 | 1,580 | | 2,480 |
| 28 | 3,940 | 5,000 | | | | 750 | 4,950 | 2,550 | 1,400 | 1,400 | | 3,070 |
| 29 | 3,380 | 4,750 | | | | 5,100 | 2,490 | 1,530 | 1,270 | 860 | | 3,200 |
| 30 | 3,590 | 5,000 | | | | 5,210 | 2,550 | 1,340 | 1,390 | 1,200 | | 2,300 |
| 31 | 3,520 | | | | | 5,210 | | 1,320 | | 1,600 | | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 3,840 | 2,620 | 3,256 | 200,200 | | | |
| November | | | | | | 5,360 | 3,610 | 4,436 | 264,000 | | | |
| December | | | | | | 10,500 | | 4,551 | 279,600 | | | |
| January | | | | | | | | 3,607 | 221,800 | | | |
| February | | | | | | 9,720 | 386 | 5,390 | 299,400 | | | |
| March | | | | | | 11,300 | 1,200 | 5,818 | 357,700 | | | |
| April | | | | | | 9,140 | 1,970 | 3,959 | 235,600 | | | |
| May | | | | | | 3,560 | 1,320 | 2,061 | 126,100 | | | |
| June | | | | | | 12,000 | 1,220 | 2,847 | 169,400 | | | |
| July | | | | | | 5,000 | 597 | 1,473 | 80,550 | | | |
| August | | | | | | 5,200 | 704 | 1,532 | 94,200 | | | |
| September | | | | | | 4,160 | 1,630 | 2,183 | 129,900 | | | |
| The year | | | | | | 12,000 | 386 | 3,408 | 2,467,000 | | | |

Little Grizzly Creek near Hebron, Colo.

Location.- Staff gage in sec. 32, T. 8 N., R. 80 W., 3 miles north of Hebron and 1 mile above junction with Grizzly Creek.

Drainage area.- 96 square miles.

Records available.- June 1904 to October 1905, October 1933 to September 1934 in reports of U. S. Geological Survey; June 1904 to October 1905, June 1931 to October 1933 in reports of State engineer.

Extremes.- Maximum discharge recorded during year, 190 second-feet May 13 (gage height, 3.20 feet); no flow July 8 to Sept. 30.

Remarks.- Records good. No records Dec. 3 to Mar. 31. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 17 | 9.2 | 11 | | | | 27 | 32 | 52 | 0.3 | | |
| 2 | 17 | 9.2 | 14 | | | | 30 | 40 | 39 | .3 | | |
| 3 | 17 | 9.2 | | | | | 37 | 100 | 22 | .2 | | |
| 4 | 13 | 11 | | | | | 43 | 112 | 25 | .2 | | |
| 5 | 15 | 11 | | | | | 40 | 55 | 17 | .1 | | |
| 6 | 17 | 11 | | | | | 40 | 100 | 15 | .1 | | |
| 7 | 17 | 9.2 | | | | | 48 | 122 | 16 | .1 | | |
| 8 | 17 | 7.8 | | | | | 55 | 146 | 11 | 0 | | |
| 9 | 13 | 7.8 | | | | | 100 | 166 | 6.9 | 0 | | |
| 10 | 15 | 7.8 | | | | | 120 | 174 | 2.8 | 0 | | |
| 11 | 12 | 7.8 | | | | | 100 | 182 | 1.3 | 0 | | |
| 12 | 12 | 9.2 | | | | | 126 | 174 | 1.3 | 0 | | |
| 13 | 12 | 7.8 | | | | | 120 | 174 | .8 | 0 | | |
| 14 | 8.5 | 7.8 | | | | | 81 | 120 | .9 | 0 | | |
| 15 | 7.3 | 6.8 | | | | | 81 | 76 | .8 | 0 | | |
| 16 | 7.3 | 6.8 | | | | | 61 | 96 | .8 | 0 | | |
| 17 | 7.3 | 7.8 | | | | | 69 | 106 | 2.9 | 0 | | |
| 18 | 7.3 | 7.8 | | | | | 81 | 126 | 1.3 | 0 | | |
| 19 | 7.3 | 6.8 | | | | | 81 | 134 | 1.0 | 0 | | |
| 20 | 7.3 | 6.8 | | | | | 65 | 130 | .9 | 0 | | |
| 21 | 7.8 | 7.8 | | | | | 64 | 126 | .8 | 0 | | |
| 22 | 6.8 | 9.2 | | | | | 72 | 100 | .8 | 0 | | |
| 23 | 6.8 | 9.2 | | | | | 81 | 86 | .9 | 0 | | |
| 24 | 6.8 | 11 | | | | | 83 | 94 | .9 | 0 | | |
| 25 | 7.8 | 11 | | | | | 81 | 61 | .8 | 0 | | |
| 26 | 7.8 | 11 | | | | | 48 | 72 | .9 | 0 | | |
| 27 | 7.8 | 9.2 | | | | | 40 | 100 | 1.1 | 0 | | |
| 28 | 9.2 | 7.8 | | | | | 36 | 110 | .8 | 0 | | |
| 29 | 7.8 | 7.8 | | | | | 35 | 154 | .6 | 0 | | |
| 30 | 7.8 | 7.8 | | | | | 30 | 170 | .6 | 0 | | |
| 31 | 7.8 | | | | | | | 120 | | 0 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 17 | 6.8 | 10.7 | 656 | | |
| November | | | | | | | 11 | 6.8 | 9.68 | 516 | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | 126 | 27 | 66.5 | 3,960 | | |
| May | | | | | | | 182 | 32 | 115 | 7,080 | | |
| June | | | | | | | 52 | .6 | 7.55 | 448 | | |
| July | | | | | | | .3 | 0 | .04 | 2.6 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 0 | 0 | 0 | 0 | | |

Note.- No flow during August and September.

Roaring Fork near Walden, Colo.

Location.- Water-stage recorder in sec. 11, T. 8 N., R. 81 W., 10 miles southwest of Walden.

Drainage area.- 84 square miles.

Records available.- May 1904 to October 1905, October 1923 to September 1930, October 1933 to September 1934 in reports of U. S. Geological Survey; May 1904 to October 1905, October 1923 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 313 second-feet May 30 (gage height, 2.33 feet); minimum daily discharge, 4.2 second-feet July 18.
1904-5, 1923-34: Maximum discharge, 790 second-feet June 15, 1924 (gage height, 3.73 feet); minimum daily discharge, 2 second-feet Aug. 15, 1904.

Remarks.- Records excellent except those for estimated periods, Nov. 25-30, Apr. 10-12, 14, 15, 17-24, which are fair. No records Dec. 1 to Mar. 25. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|------|---------|-----|---------|------|----------------------|-------|
| 1 | 22 | 16 | | | | | 36 | 18 | 93 | 5.5 | 14 | 7.5 |
| 2 | 24 | 15 | | | | | 34 | 20 | 87 | 5.0 | 14 | 6.7 |
| 3 | 23 | 16 | | | | | 26 | 23 | 52 | 5.0 | 13 | 7.0 |
| 4 | 23 | 19 | | | | | 27 | 36 | 44 | 5.5 | 13 | 6.0 |
| 5 | 22 | 14 | | | | | 26 | 21 | 35 | 5.5 | 15 | 4.5 |
| 6 | 20 | 15 | | | | | 29 | 21 | 24 | 5.5 | 14 | 4.8 |
| 7 | 21 | 15 | | | | | 25 | 40 | 17 | 5.5 | 15 | 6.5 |
| 8 | 25 | 18 | | | | | 36 | 78 | 11 | 5.5 | 18 | 8.0 |
| 9 | 25 | 16 | | | | | 36 | 103 | 10 | 5.5 | 25 | 10 |
| 10 | 26 | 14 | | | | | 36 | 109 | 9.5 | 5.5 | 22 | 11 |
| 11 | 26 | 16 | | | | | 37 | 90 | 8.5 | 6.0 | 22 | 9.0 |
| 12 | 25 | 16 | | | | | 39 | 118 | 8.5 | 5.5 | 18 | 8.0 |
| 13 | 23 | 14 | | | | | 38 | 136 | 8.5 | 5.0 | 14 | 7.0 |
| 14 | 24 | 15 | | | | | 40 | 78 | 8.5 | 5.5 | 16 | 6.0 |
| 15 | 22 | 16 | | | | | 45 | 44 | 14 | 5.0 | 20 | 7.0 |
| 16 | 21 | 16 | | | | | 41 | 41 | 12 | 4.2 | 17 | 6.0 |
| 17 | 16 | 13 | | | | | 40 | 56 | 11 | 4.5 | 17 | 6.0 |
| 18 | 16 | 14 | | | | | 39 | 73 | 9.5 | 4.8 | 18 | 6.5 |
| 19 | 16 | 14 | | | | | 36 | 100 | 8.0 | 4.8 | 15 | 6.0 |
| 20 | 15 | 12 | | | | | 34 | 116 | 8.0 | 5.0 | 21 | 6.0 |
| 21 | 16 | 11 | | | | | 38 | 109 | 6.5 | 5.5 | 19 | 6.5 |
| 22 | 15 | 15 | | | | | 42 | 107 | 6.0 | 6.5 | 18 | 7.0 |
| 23 | 15 | 13 | | | | | 46 | 109 | 6.0 | 6.5 | 14 | 7.0 |
| 24 | 15 | 9.5 | | | | | 50 | 95 | 6.5 | 10 | 14 | 5.5 |
| 25 | 14 | 9.5 | | | | | 54 | 95 | 7.5 | 12 | 12 | 6.5 |
| 26 | 14 | 10 | | | | 38 | 52 | 91 | 7.0 | 14 | 12 | 11 |
| 27 | 14 | | | | | 40 | 41 | 91 | 7.5 | 11 | 11 | 9.5 |
| 28 | 14 | | | | | 45 | 27 | 91 | 6.5 | 11 | 10 | 9.5 |
| 29 | 14 | | | | | 46 | 22 | 95 | 5.5 | 10 | 10 | 8.0 |
| 30 | 14 | | | | | 54 | 19 | 250 | 6.0 | 9.5 | 9.5 | 6.5 |
| 31 | 14 | | | | | 52 | | 163 | | 9.5 | 8.0 | |
| Month | | | | | | | Maximum | | Minimum | Mean | Run-off in acre-feet | |
| October | | | | | | | 26 | | 14 | 19.2 | 1,180 | |
| November | | | | | | | 19 | | 9.5 | 13.7 | 817 | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 26-31 | | | | | | | 54 | | 38 | 45.8 | 545 | |
| April | | | | | | | 54 | | 19 | 36.3 | 2,160 | |
| May | | | | | | | 230 | | 18 | 83.8 | 5,150 | |
| June | | | | | | | 95 | | 5.5 | 17.5 | 1,040 | |
| July | | | | | | | 18 | | 4.2 | 7.03 | 432 | |
| August | | | | | | | 25 | | 8.0 | 15.5 | 955 | |
| September | | | | | | | 11 | | 4.5 | 7.21 | 429 | |

Michigan River near Lindland, Colo.

Location.- Water-stage recorder in sec. 21, T. 7 N., R. 77 W., 3 miles southeast of Lindland and 1 mile above mouth of North Fork of Michigan River.

Drainage area.- 62 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; July 1931 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 128 second-feet May 11 (gage height, 1.27 feet); minimum not determined.

Remarks.- Records good except those estimated Nov. 24-30. No records Dec. 1 to Mar. 31. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 23 | 14 | | | | | 7.2 | 29 | 67 | 37 | 15 | 14 |
| 2 | 21 | 15 | | | | | 6.4 | 30 | 54 | 34 | 12 | 13 |
| 3 | 19 | 16 | | | | | 6.0 | 31 | 47 | 29 | 11 | 14 |
| 4 | 20 | 19 | | | | | 7.2 | 35 | 45 | 31 | 19 | 12 |
| 5 | 21 | 23 | | | | | 7.2 | 37 | 45 | 35 | 25 | 10 |
| 6 | 14 | 25 | | | | | 8.0 | 36 | 48 | 30 | 26 | 11 |
| 7 | 13 | 15 | | | | | 10 | 54 | 60 | 29 | 22 | 9.2 |
| 8 | 12 | 19 | | | | | 10 | 53 | 52 | 23 | 20 | 14 |
| 9 | 10 | 14 | | | | | 10 | 59 | 51 | 23 | 22 | 19 |
| 10 | 12 | 16 | | | | | 9.6 | 95 | 41 | 21 | 23 | 16 |
| 11 | 14 | 16 | | | | | 17 | 91 | 29 | 20 | 26 | 15 |
| 12 | 15 | 14 | | | | | 20 | 100 | 32 | 17 | 24 | 14 |
| 13 | 18 | 14 | | | | | 21 | 83 | 38 | 16 | 28 | 12 |
| 14 | 15 | 16 | | | | | 20 | 60 | 41 | 15 | 23 | 11 |
| 15 | 14 | 19 | | | | | 18 | 56 | 43 | 14 | 24 | 11 |
| 16 | 14 | 19 | | | | | 14 | 59 | 48 | 13 | 23 | 10 |
| 17 | 14 | 13 | | | | | 14 | 53 | 46 | 13 | 20 | 8.4 |
| 18 | 14 | 19 | | | | | 19 | 77 | 41 | 14 | 20 | 8.4 |
| 19 | 15 | 19 | | | | | 21 | 94 | 41 | 13 | 21 | 8.4 |
| 20 | 12 | 16 | | | | | 24 | 87 | 41 | 14 | 23 | 11 |
| 21 | 12 | 16 | | | | | 32 | 86 | 44 | 14 | 20 | 12 |
| 22 | 12 | 9.2 | | | | | 33 | 83 | 44 | 14 | 20 | 11 |
| 23 | 10 | 9.6 | | | | | 35 | 77 | 42 | 16 | 19 | 10 |
| 24 | 10 | 9.6 | | | | | 44 | 67 | 44 | 15 | 19 | 8.8 |
| 25 | 10 | 9.2 | | | | | 47 | 67 | 47 | 16 | 19 | 11 |
| 26 | 10 | 9.2 | | | | | 41 | 67 | 45 | 16 | 18 | 11 |
| 27 | 8.8 | 9.0 | | | | | 33 | 65 | 41 | 18 | 18 | 11 |
| 28 | 7.6 | 9.2 | | | | | 35 | 61 | 38 | 18 | 18 | 11 |
| 29 | 6.4 | 9.2 | | | | | 32 | 66 | 37 | 15 | 18 | 11 |
| 30 | 7.2 | 9.2 | | | | | 30 | 80 | 38 | 14 | 17 | 10 |
| 31 | 10 | | | | | | | 100 | | 14 | 14 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 23 | 6.4 | 13.4 | 821 | | |
| November | | | | | | | 25 | 9.0 | 14.6 | 870 | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | 47 | 6.0 | 21.1 | 1,250 | | |
| May | | | | | | | 100 | 29 | 68.0 | 4,180 | | |
| June | | | | | | | 57 | 29 | 44.3 | 2,640 | | |
| July | | | | | | | 37 | 15 | 19.7 | 1,210 | | |
| August | | | | | | | 23 | 11 | 20.2 | 1,240 | | |
| September | | | | | | | 19 | 8.4 | 11.6 | 691 | | |

Michigan River at Walden, Colo.

Location.- Water-stage recorder in NW $\frac{1}{4}$ sec. 21, T. 9 N., R. 79 W., half a mile north of Walden. Zero of gage is 8,044.87 feet above sea level.

Drainage area.- 185 square miles.

Records available.- May 1904 to October 1905, May 1923 to September 1930, October 1933 to September 1934 in reports of U. S. Geological Survey; May 1904 to October 1905, May 1923 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 134 second-feet May 31 (gage height, 1.85 feet); minimum daily discharge, 2.0 second-feet July 17-20.
1904-5, 1923-34: Maximum discharge, 1,070 second-feet June 10, 1923 (gage height, 3.3 feet); minimum daily discharge, that of Aug. 17-20, 1934.

Remarks.- Records good except those estimated Nov. 3-30. No records Dec. 1 to Apr. 30. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 33 | 22 | | | | | | 6.0 | 110 | | 3.3 | 3.9 |
| 2 | 32 | 25 | | | | | | 7.6 | 70 | 4.4 | 3.2 | 4.0 |
| 3 | 32 | 20 | | | | | | 10 | 47 | 3.6 | 2.8 | 4.4 |
| 4 | 32 | | | | | | | 9.4 | 34 | 4.0 | 2.6 | 4.5 |
| 5 | 32 | | | | | | | 8.8 | 42 | 3.8 | 2.9 | 4.5 |
| 6 | 30 | | | | | | | 7.6 | 53 | 2.9 | 4.8 | 4.8 |
| 7 | 29 | 22 | | | | | | 7.0 | 59 | 2.8 | 8.2 | 5.0 |
| 8 | 26 | | | | | | | 7.0 | 62 | 3.3 | 9.7 | 6.5 |
| 9 | 24 | | | | | | | 14 | 55 | 6.0 | 11 | 8.2 |
| 10 | 24 | | | | | | | 22 | 24 | 6.2 | 14 | 8.2 |
| 11 | 24 | 26 | | | | | | 23 | 13 | 6.0 | 16 | 6.8 |
| 12 | 24 | | | | | | | 36 | 8.8 | 4.8 | 15 | 6.5 |
| 13 | 24 | | | | | | | 40 | 6.0 | 3.3 | 13 | 6.0 |
| 14 | 25 | | | | | | | 44 | 4.8 | 2.8 | 13 | 5.2 |
| 15 | 24 | 24 | | | | | | 51 | 4.5 | 2.4 | 16 | 6.5 |
| 16 | 22 | | | | | | | 51 | 4.4 | 2.1 | 18 | 5.2 |
| 17 | 22 | | | | | | | 31 | 4.5 | 2.0 | 16 | 4.4 |
| 18 | 22 | | 24 | | | | | 30 | 3.6 | 2.0 | 13 | 4.4 |
| 19 | 23 | 24 | | | | | *18 | 41 | 2.9 | 2.0 | 12 | 4.5 |
| 20 | 22 | | | | | | | 70 | 2.8 | 2.0 | 13 | 4.5 |
| 21 | 22 | | | | | | | 75 | 2.8 | 2.1 | 13 | 4.5 |
| 22 | 22 | *25 | | | | | | 67 | 2.7 | 2.5 | 12 | 4.5 |
| 23 | 21 | 26 | | | | | | 59 | 4.0 | 2.7 | 9.4 | 5.2 |
| 24 | 21 | | | | | | | 56 | 9.2 | 2.7 | 7.9 | 4.5 |
| 25 | 21 | | | | | | | 51 | 12 | 2.8 | 7.6 | 5.8 |
| 26 | 21 | | | | | | | 44 | 13 | 3.9 | 6.8 | 7.0 |
| 27 | 20 | 26 | | | | | | 44 | 11 | 4.5 | 5.8 | 7.6 |
| 28 | 21 | | | | | | | 49 | 7.6 | 5.5 | 4.8 | 9.2 |
| 29 | 20 | | | | | | | 53 | 7.3 | 5.5 | 4.5 | 12 |
| 30 | 20 | | | | | | | 84 | 6.0 | 4.8 | 4.5 | 14 |
| 31 | 20 | | | | | | | 124 | | 4.0 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 33 | 20 | 24.4 | 1,500 | | |
| November | | | | | | | | | 24.1 | 1,440 | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | | | | | | |
| May | | | | | | | 124 | 6.0 | 39.4 | 2,420 | | |
| June | | | | | | | 110 | 2.7 | 22.8 | 1,360 | | |
| July | | | | | | | 6.2 | 2.0 | 3.57 | 220 | | |
| August | | | | | | | 18 | 2.6 | 9.30 | 572 | | |
| September | | | | | | | 14 | 3.9 | 6.04 | 360 | | |

*Discharge measurement.

Illinois Creek near Rand, Colo.

Location.- Water-stage recorder in sec. 30, T. 6 N., R. 78 W., 1 mile north of Rand and 2½ miles above mouth of Willow Creek.

Drainage area.- 77 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; July 1931 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 123 second-feet May 12 (gage height, 1.27 feet); minimum daily discharge, 1.3 second-feet Sept. 3.

Remarks.- Records good. No records Nov. 4 to Apr. 10. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 11 | 6.5 | | | | | | 24 | 67 | 9.0 | 4.3 | 1.5 |
| 2 | 9.5 | 8.0 | | | | | | 34 | 60 | 8.0 | 3.6 | 1.4 |
| 3 | 9.0 | 7.5 | | | | | | 43 | 45 | 7.5 | 4.0 | 1.3 |
| 4 | 9.5 | | | | | | | 56 | 43 | 8.5 | 4.6 | 1.4 |
| 5 | 9.5 | | | | | | | 56 | 40 | 12 | 4.3 | 1.4 |
| 6 | 9.5 | | | | | | | 60 | 42 | 14 | 5.0 | 1.5 |
| 7 | 9.5 | | | | | | | 70 | 39 | 9.5 | 4.0 | 1.5 |
| 8 | 9.0 | | | | | | | 86 | 35 | 8.0 | 4.0 | 2.9 |
| 9 | 8.5 | | | | | | | 80 | 35 | 5.5 | 4.0 | 4.3 |
| 10 | 8.5 | | | | | | | 92 | 33 | 6.0 | 3.6 | 5.0 |
| 11 | 8.0 | | | | | | 40 | 86 | 29 | 6.0 | 3.6 | 5.5 |
| 12 | 8.0 | | | | | | 30 | 103 | 27 | 5.5 | 3.6 | 4.6 |
| 13 | 8.0 | | | | | | 27 | 99 | 24 | 5.0 | 3.2 | 4.0 |
| 14 | 8.5 | | | | | | 26 | 95 | 26 | 4.6 | 3.2 | 3.2 |
| 15 | 8.5 | | | | | | 23 | 92 | 28 | 4.0 | 3.2 | 2.9 |
| 16 | 8.0 | | | | | | 17 | 89 | 29 | 3.6 | 3.2 | 2.9 |
| 17 | 8.0 | | | | | | 16 | 86 | 29 | 3.6 | 3.2 | 2.9 |
| 18 | 8.0 | | | | | | 15 | 89 | 24 | 3.6 | 3.6 | 2.9 |
| 19 | 8.0 | | | | | | 17 | 92 | 19 | 4.0 | 3.2 | 2.9 |
| 20 | 8.0 | | | | | | 16 | 92 | 18 | 4.6 | 3.6 | 3.6 |
| 21 | 9.0 | | | | | | 20 | 83 | 16 | 7.0 | 3.2 | 5.0 |
| 22 | 7.5 | | | | | | 23 | 80 | 16 | 9.5 | 3.2 | 6.0 |
| 23 | 7.5 | | | | | | 24 | 86 | 15 | 8.0 | 2.6 | 4.6 |
| 24 | 7.0 | | | | | | 30 | 83 | 12 | 8.0 | 2.2 | 4.3 |
| 25 | 7.0 | | | | | | 29 | 73 | 16 | 14 | 1.8 | 5.5 |
| 26 | 7.0 | | | | | | 35 | 64 | 15 | 10 | 1.4 | 8.5 |
| 27 | 7.0 | | | | | | 26 | 60 | 12 | 2.0 | 1.5 | 8.0 |
| 28 | 7.5 | | | | | | 27 | 58 | 10 | 1.5 | 1.5 | 8.5 |
| 29 | 6.5 | | | | | | 24 | 60 | 9.5 | 5.0 | 1.5 | 9.0 |
| 30 | 6.0 | | | | | | 21 | 70 | 10 | 4.3 | 1.5 | 8.5 |
| 31 | 5.5 | | | | | | | 60 | | 4.3 | 1.5 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 11 | 5.5 | 8.13 | 500 | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April 11-30 | | | | | | | 40 | 15 | 24.4 | 968 | | |
| May | | | | | | | 103 | 24 | 74.9 | 4,600 | | |
| June | | | | | | | 67 | 9.5 | 27.4 | 1,630 | | |
| July | | | | | | | 14 | 3.6 | 7.10 | 437 | | |
| August | | | | | | | 5.0 | 1.4 | 3.13 | 192 | | |
| September | | | | | | | 9.0 | 1.3 | 4.18 | 249 | | |

Illinois Creek at Walden, Colo.

Location.- Staff gage in NW $\frac{1}{4}$ sec. 29, T. 9 N., R. 79 W., half a mile southwest of Walden.

Drainage area.- 254 square miles.

Records available.- May 1923 to September 1930, October 1933 to September 1934 in reports of U. S. Geological Survey; May 1917 to August 1918, May 1923 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge recorded during year, 62 second-feet Apr. 1 (gage height, 1.08 feet); no flow at times.
1917-18, 1923-34: Maximum discharge, 2,520 second-feet May 28, 1926 (gage height, 6.4 feet); no flow at times during 1934.

Remarks.- Records fair. Discharge estimated Nov. 12-30. No records Dec. 1 to Mar. 31. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 4.9 | 5.5 | | | | | 56 | 1.4 | 1.9 | 0 | 0.1 | 0 |
| 2 | 3.8 | 5.5 | | | | | 24 | 1.2 | 1.7 | 0 | .1 | 0 |
| 3 | 4.9 | 4.9 | | | | | 35 | 2.2 | 1.7 | 0 | .1 | 0 |
| 4 | 6.2 | 4.9 | | | | | 26 | 2.0 | 1.9 | 0 | 0 | 0 |
| 5 | 6.2 | 4.9 | | | | | 27 | 1.5 | 1.9 | .1 | 0 | 0 |
| 6 | 6.2 | 4.9 | | | | | 26 | .9 | 1.7 | 0 | 0 | 0 |
| 7 | 6.2 | 3.8 | | | | | 22 | .9 | 1.7 | 0 | 0 | 0 |
| 8 | 5.5 | 3.8 | | | | | 24 | .8 | 1.4 | 0 | .2 | 0 |
| 9 | 5.5 | 3.8 | | | | | 32 | .8 | 1.4 | 0 | .2 | 0 |
| 10 | 6.2 | 3.8 | | | | | 38 | .6 | 1.2 | 0 | .5 | 0 |
| 11 | 6.2 | 3.8 | | | | | 36 | .5 | 1.1 | 0 | .5 | 0 |
| 12 | 4.9 | | | | | | 29 | .4 | 1.0 | 0 | .4 | 0 |
| 13 | 4.9 | | | | | | 26 | .5 | .9 | 0 | .2 | 0 |
| 14 | 4.9 | | | | | | 22 | .5 | .8 | 0 | .2 | 0 |
| 15 | 4.9 | | | | | | 17 | .9 | .8 | 0 | .2 | 0 |
| 16 | 4.9 | | | | | | 19 | .5 | .6 | .1 | .2 | 0 |
| 17 | 4.9 | | | | | | 16 | .5 | 1.1 | .1 | .1 | 0 |
| 18 | 3.8 | | | | | | 12 | .4 | 1.2 | .1 | .1 | 0 |
| 19 | 3.8 | | | | | | 13 | .4 | 1.2 | 0 | .2 | 0 |
| 20 | 3.8 | | | | | | 9.0 | .4 | .6 | 0 | .2 | 0 |
| 21 | 4.4 | | | | | | 6.9 | .4 | .4 | .1 | .2 | 0 |
| 22 | 5.5 | | | | | | 4.9 | .4 | .4 | .1 | 0 | 0 |
| 23 | 5.5 | | | | | | 4.4 | .5 | .2 | .2 | 0 | 0 |
| 24 | 6.2 | | | | | | 4.9 | .5 | .2 | .2 | 0 | .1 |
| 25 | 5.8 | | | | | | 4.1 | 1.1 | .2 | .2 | 0 | .1 |
| 26 | 5.5 | | | | | | 3.0 | 1.2 | .2 | .6 | 0 | .1 |
| 27 | 5.5 | | | | | | 2.4 | .8 | .2 | .6 | 0 | .1 |
| 28 | 5.5 | | | | | | 2.4 | .8 | .1 | .5 | 0 | .1 |
| 29 | 5.5 | | | | | | 1.8 | 1.2 | .1 | .2 | 0 | .1 |
| 30 | 4.9 | | | | | | 1.4 | 1.7 | 0 | .2 | 0 | 0 |
| 31 | 4.9 | | | | | | | 1.9 | | .2 | 0 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 6.2 | 3.8 | 5.22 | 321 | | |
| November | | | | | | | | 3.8 | 5.19 | 309 | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | 56 | 1.4 | 18.2 | 1,080 | | |
| May | | | | | | | 2.2 | .4 | .90 | 55 | | |
| June | | | | | | | 1.9 | 0 | .92 | 55 | | |
| July | | | | | | | .6 | 0 | .11 | 6.9 | | |
| August | | | | | | | .6 | 0 | .12 | 7.3 | | |
| September | | | | | | | .1 | 0 | .02 | 1.2 | | |

*Discharge measurement.

Willow Creek near Rand, Colo.

Location.- Water-stage recorder in sec. 23, T. 6 N., R. 79 W., 2½ miles northwest of Rand and 2½ miles above mouth.

Drainage area.- 62 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; July 1931 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 11 second-feet May 4 (gage height, 1.52 feet); no flow for many days during summer.

Remarks.- Records fair. Discharge estimated Nov. 4-30, June 8-12. No records Dec 1 to Apr. 10. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 3.2 | 2.5 | | | | | | 1.8 | 5.1 | 0 | 0.5 | 0 |
| 2 | 2.7 | 3.4 | | | | | | 2.1 | 3.8 | 0 | .4 | 0 |
| 3 | 3.2 | 6.0 | | | | | | 4.3 | 3.0 | 0 | .3 | 0 |
| 4 | 3.4 | 6.0 | | | | | | 9.7 | 2.5 | 0 | .4 | 0 |
| 5 | 3.0 | 5.0 | | | | | | 6.2 | 2.1 | 0 | .5 | 0 |
| 6 | 3.2 | | | | | | | 4.0 | 2.0 | 0 | .6 | 0 |
| 7 | 3.6 | | | | | | | 3.0 | 2.3 | 0 | .5 | .3 |
| 8 | 3.4 | | | | | | | 3.6 | 2.0 | 0 | .5 | .5 |
| 9 | 2.9 | | | | | | | 3.4 | 1.6 | 0 | .5 | 1.4 |
| 10 | 3.0 | | | | | | | 3.4 | 1.2 | 0 | .6 | 1.8 |
| 11 | 3.2 | 5.0 | | | | | 5.1 | 3.8 | .8 | .6 | .8 | 1.4 |
| 12 | 3.2 | | | | | | 5.4 | 4.0 | .6 | .4 | .4 | 1.2 |
| 13 | 3.0 | | | | | | 6.0 | 5.4 | .4 | .2 | .1 | .8 |
| 14 | 3.4 | | | | | | 7.6 | 4.3 | .4 | .2 | .1 | .6 |
| 15 | 3.0 | | | | | | 5.7 | 3.8 | .6 | .2 | .4 | .6 |
| 16 | 2.3 | | | | | | 4.0 | 3.8 | 1.4 | 0 | .3 | .6 |
| 17 | 2.5 | | | | | | 2.9 | 3.6 | 1.5 | 0 | .2 | .6 |
| 18 | 2.9 | 4.6 | | | | | 2.7 | 3.2 | .6 | 0 | .1 | .6 |
| 19 | 2.9 | | | | | | 2.1 | 2.7 | .5 | 0 | 0 | .5 |
| 20 | 2.9 | | | | | | 2.0 | 2.5 | .4 | 0 | .1 | .8 |
| 21 | 3.0 | *4.4 | | | | | 2.1 | 2.7 | .3 | 0 | .4 | 1.0 |
| 22 | 2.7 | | | | | | 2.0 | 1.8 | .1 | 0 | .5 | 1.6 |
| 23 | 2.7 | | | | | | 1.8 | 2.0 | .1 | 0 | .4 | 1.2 |
| 24 | 2.7 | | | | | | 2.3 | 3.2 | .1 | 0 | 0 | .9 |
| 25 | 2.9 | | | | | | 2.1 | 3.8 | .3 | 0 | 0 | 1.5 |
| 26 | 2.9 | 4.0 | | | | | 2.3 | 3.8 | .2 | .1 | 0 | 2.0 |
| 27 | 2.9 | | | | | | 2.9 | 3.4 | .1 | .1 | 0 | 2.0 |
| 28 | 2.7 | | | | | | 2.5 | 3.4 | 0 | .2 | 0 | 2.1 |
| 29 | 2.7 | | | | | | 2.1 | 3.2 | 0 | .1 | 0 | 2.5 |
| 30 | 2.7 | | | | | | 1.6 | 4.3 | 0 | .2 | 0 | 2.1 |
| 31 | 2.5 | | | | | | | 7.6 | | .4 | 0 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 3.6 | 2.3 | 2.95 | 181 | | |
| November | | | | | | | 6.0 | 2.5 | 4.54 | 270 | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April 11-30 | | | | | | | 7.6 | 1.6 | 2.17 | 129 | | |
| May | | | | | | | 9.7 | 1.8 | 3.80 | 234 | | |
| June | | | | | | | 5.1 | 0 | 1.14 | 68 | | |
| July | | | | | | | .6 | 0 | .09 | 5.4 | | |
| August | | | | | | | .8 | 0 | .27 | 17 | | |
| September | | | | | | | 2.5 | 0 | .95 | 57 | | |

*Discharge measurement.

La Prele Creek near Douglas, Wyo.

Location.- Water-stage recorder in sec. 6, T. 31 N., R. 73 W., 16 miles southwest of Douglas.

Drainage area.- 146 square miles.

Records available.- August 1919 to September 1934.

Average discharge.- 15 years, 46.0 second-feet.

Extremes.- Maximum discharge during year, 68 second-feet Apr. 9 (gage height, 4.58 feet); minimum daily discharge, 0.2 second-foot Aug. 18-22.
1919-34: Maximum discharge, 1,220 second-feet May 11, 1920 (gage height, 11.4 feet); minimum daily discharge, that of Aug. 18-22, 1934.

Remarks.- Records fair. Discharge estimated Oct. 29 to Nov. 3, Nov. 5-10, 19-24, Dec. 16-22, Jan. 5-16, Feb. 25-27, Mar. 18-23, Aug. 21-26. Diversions for irrigation above station. Gage-height record furnished by Douglas Reservoir Water Users Association.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 3.7 | 1.0 | 4.5 | 4.7 | 5.9 | 8.2 | 9.1 | 48 | 5.3 | 1.8 | 0.5 | 0.4 |
| 2 | 4.0 | 1.1 | 4.5 | 5.0 | 5.4 | 7.0 | 8.5 | 49 | 5.0 | 1.8 | .5 | .4 |
| 3 | 4.0 | 1.2 | 4.5 | 5.0 | 7.0 | 7.6 | 8.8 | 50 | 3.7 | 1.8 | .4 | .4 |
| 4 | 3.7 | 1.2 | 4.5 | 5.3 | 7.3 | 7.3 | 12 | 52 | 3.4 | 1.8 | .4 | .4 |
| 5 | 3.7 | 1.2 | 7.3 | 5.0 | 7.0 | 7.0 | 15 | 48 | 3.2 | 1.9 | .4 | .4 |
| 6 | 3.4 | 1.4 | 12 | 4.8 | 7.0 | 7.0 | 14 | 46 | 3.7 | 1.9 | .4 | .4 |
| 7 | 2.3 | 2.0 | 5.9 | 4.4 | 7.3 | 6.7 | 17 | 42 | 4.2 | 1.8 | .4 | .4 |
| 8 | 1.2 | 2.4 | 6.4 | 4.6 | 7.3 | 6.2 | 35 | 31 | 5.3 | 1.7 | .4 | .3 |
| 9 | 1.1 | 3.0 | 6.2 | 5.4 | 7.3 | 6.4 | 58 | 28 | 6.9 | 1.2 | .4 | .3 |
| 10 | 1.1 | 4.0 | 4.7 | 5.6 | 7.3 | 6.2 | 56 | 23 | 5.3 | 1.1 | .4 | .3 |
| 11 | 1.0 | 5.0 | 4.7 | 5.4 | 7.6 | 5.9 | 55 | 19 | 4.0 | 1.0 | .4 | .3 |
| 12 | .9 | 5.0 | 4.5 | 5.4 | 7.0 | 5.0 | 46 | 16 | 3.4 | 1.0 | .4 | .3 |
| 13 | .9 | 4.7 | 4.7 | 5.8 | 7.0 | 4.2 | 48 | 16 | 2.9 | .9 | .4 | .3 |
| 14 | .8 | 4.7 | 4.7 | 5.8 | 6.7 | 3.7 | 61 | 15 | 2.4 | .9 | .4 | .3 |
| 15 | .8 | 4.7 | 6.4 | 6.0 | 6.7 | 2.9 | 56 | 14 | 2.9 | .8 | .3 | .3 |
| 16 | .8 | 4.5 | 3.0 | 6.2 | 6.4 | 3.4 | 48 | 12 | 2.9 | .8 | .3 | .3 |
| 17 | .8 | 4.7 | 3.2 | 6.4 | 6.4 | 4.7 | 43 | 9.9 | 3.4 | .7 | .3 | .3 |
| 18 | .8 | 4.7 | 3.4 | 6.6 | 6.4 | 4.8 | 39 | 7.9 | 3.4 | .7 | .2 | .3 |
| 19 | .8 | 4.7 | 3.4 | 7.0 | 5.9 | 5.0 | 39 | 5.6 | 3.4 | .7 | .2 | .3 |
| 20 | .8 | 4.6 | 3.6 | 6.7 | 5.9 | 5.2 | 38 | 4.5 | 3.4 | .6 | .2 | .3 |
| 21 | .9 | 4.6 | 3.8 | 6.4 | 6.2 | 5.6 | 46 | 3.7 | 3.4 | .6 | .2 | .3 |
| 22 | .8 | 4.5 | 3.8 | 5.9 | 6.4 | 6.0 | 50 | 3.4 | 3.7 | .6 | .2 | .3 |
| 23 | .7 | 4.5 | 4.0 | 5.6 | 6.7 | 6.5 | 61 | 7.3 | 3.2 | .5 | .3 | .3 |
| 24 | .7 | 4.5 | 6.2 | 5.0 | 5.9 | 7.0 | 58 | 8.2 | 2.3 | .5 | .3 | .3 |
| 25 | .6 | 4.5 | 8.5 | 6.2 | 3.0 | 7.0 | 62 | 6.4 | 2.2 | .5 | .4 | .4 |
| 26 | .6 | 4.5 | 8.8 | 6.4 | 2.8 | 7.0 | 58 | 6.2 | 2.4 | .6 | .4 | .9 |
| 27 | .5 | 4.5 | 4.7 | 5.0 | 4.2 | 7.0 | 55 | 4.5 | 2.3 | .5 | .4 | .8 |
| 28 | .4 | 4.2 | 5.0 | 5.0 | 6.4 | 6.7 | 61 | 3.4 | 2.2 | .5 | .4 | .9 |
| 29 | .5 | 4.5 | 4.2 | 5.3 | | 7.9 | 50 | 4.7 | 1.7 | .5 | .4 | 1.1 |
| 30 | .6 | 4.5 | | 5.9 | | 8.5 | 48 | 4.7 | 1.8 | .5 | .4 | 1.1 |
| 31 | .8 | | 4.5 | 6.2 | | 9.1 | | 4.7 | | .5 | .4 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 4.0 | 0.4 | 1.41 | 86 | | |
| November | | | | | | | 5.0 | 1.0 | 3.69 | 219 | | |
| December | | | | | | | 12 | 3.0 | 5.16 | 317 | | |
| January | | | | | | | 7.0 | 4.4 | 5.61 | 345 | | |
| February | | | | | | | 7.6 | 2.8 | 6.34 | 352 | | |
| March | | | | | | | 9.1 | 2.9 | 6.22 | 382 | | |
| April | | | | | | | 62 | 3.5 | 41.5 | 2,470 | | |
| May | | | | | | | 52 | 3.4 | 19.2 | 1,180 | | |
| June | | | | | | | 5.9 | 1.7 | 3.41 | 203 | | |
| July | | | | | | | 1.9 | .5 | .99 | 61 | | |
| August | | | | | | | .5 | .2 | .36 | 22 | | |
| September | | | | | | | 1.1 | .3 | .44 | 26 | | |
| The year | | | | | | | 62 | .2 | 7.82 | 5,660 | | |

Laramie River near Glendevvey, Colo.

Location.- Water-stage recorder in SW $\frac{1}{4}$ sec. 25, T. 10 N., R. 76 W., at highway bridge $\frac{1}{2}$ miles north of Glendevvey post office.

Drainage area.- 101 square miles.

Records available.- June 1904 to October 1905, August 1910 to September 1930, October 1933 to September 1934 in reports of U. S. Geological Survey; June 1904 to October 1905, August 1910 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 195 second-feet May 4 and 6 (gage height, 1.83 feet); minimum daily discharge, 8.2 second-feet Aug. 3.
1904-5, 1910-34: Maximum discharge, 2,240 second-feet June 9, 1923; minimum, 5 second-feet Feb. 14, 15, 1911.

Remarks.- Records good. Discharge estimated Apr. 1-6. No records Nov. 8 to Mar. 31.
Divisions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 31 | 25 | 18 | | | | 33 | 110 | 46 | 12 | 13 | 11 |
| 2 | 33 | 21 | 21 | | | | 34 | 108 | 34 | 12 | 10 | 11 |
| 3 | 42 | 23 | 21 | | | | 32 | 98 | 32 | 14 | 8.2 | 11 |
| 4 | 45 | 24 | 20 | | | | 32 | 115 | 31 | 17 | 8.4 | 11 |
| 5 | 40 | 17 | 20 | | | | 28 | 147 | 27 | 17 | 14 | 11 |
| 6 | 39 | 17 | 21 | | | | 30 | 160 | 25 | 14 | 14 | 14 |
| 7 | 38 | 21 | 20 | | | | 32 | 160 | 25 | 12 | 14 | 13 |
| 8 | 36 | 21 | | | | | 27 | 160 | 19 | 11 | 13 | 19 |
| 9 | 34 | 20 | | | | | 26 | 174 | 18 | 12 | 13 | 17 |
| 10 | 54 | 19 | | | | | 25 | 147 | 17 | 12 | 12 | 14 |
| 11 | 32 | 21 | | | | | 55 | 132 | 16 | 11 | 13 | 15 |
| 12 | 33 | 21 | | | | | 60 | 144 | 15 | 9.8 | 11 | 12 |
| 13 | 32 | 20 | | | | | 60 | 141 | 15 | 9.0 | 9.6 | 11 |
| 14 | 33 | 19 | | | | | 62 | 105 | 14 | 9.0 | 9.8 | 11 |
| 15 | 32 | 16 | | | | | 63 | 95 | 14 | 9.0 | 11 | 12 |
| 16 | 28 | 18 | | | | | 54 | 93 | 16 | 9.0 | 14 | 11 |
| 17 | 26 | 20 | | | | | 46 | 100 | 15 | 9.0 | 17 | 10 |
| 18 | 29 | 21 | | | | | 46 | 93 | 14 | 9.0 | 17 | 11 |
| 19 | 25 | 20 | | | | | 48 | 100 | 14 | 8.8 | 17 | 11 |
| 20 | 25 | 19 | | | | | 60 | 98 | 14 | 8.6 | 19 | 13 |
| 21 | 25 | 21 | | | | | 73 | 102 | 14 | 9.0 | 20 | 17 |
| 22 | 25 | 21 | | | | | 91 | 84 | 13 | 12 | 24 | 14 |
| 23 | 25 | 21 | | | | | 98 | 74 | 14 | 14 | 25 | 11 |
| 24 | 25 | 21 | | | | | 108 | 66 | 16 | 12 | 23 | 12 |
| 25 | 25 | 21 | | | | | 126 | 57 | 21 | 14 | 18 | 17 |
| 26 | 24 | 21 | | | | | 132 | 51 | 18 | 15 | 13 | 20 |
| 27 | 24 | 21 | | | | | 91 | 46 | 15 | 14 | 11 | 18 |
| 28 | 26 | 20 | | | | | 91 | 47 | 13 | 12 | 10 | 22 |
| 29 | 26 | 19 | | | | | 102 | 60 | 12 | 11 | 11 | 22 |
| 30 | 26 | 18 | | | | | 102 | 98 | 12 | 13 | 11 | 20 |
| 31 | 25 | | | | | | | 115 | | 14 | 10 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 43 | 24 | 30.4 | 1,670 | | |
| November | | | | | | | 25 | 17 | 20.3 | 1,210 | | |
| December 1-7 | | | | | | | 21 | 18 | 20.1 | 280 | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | 132 | 25 | 62.2 | 3,700 | | |
| May | | | | | | | 174 | 46 | 106 | 6,510 | | |
| June | | | | | | | 46 | 12 | 19.0 | 1,130 | | |
| July | | | | | | | 17 | 8.6 | 11.8 | 724 | | |
| August | | | | | | | 25 | 8.2 | 14.0 | 861 | | |
| September | | | | | | | 22 | 10 | 14.1 | 837 | | |
| | | | | | | | | | | | | |

Laramie River near Jelm, Wyo.

Location.-- Water-stage recorder in sec. 15, T. 12 N., R. 77 W., a quarter of a mile north of Colorado-Wyoming State line and 4 miles south of old Jelm. Zero of gage is 7,685.32 feet above mean sea level.

Drainage area.-- 297 square miles.

Records available.-- June 1904 to October 1905, May 1911 to September 1934.

Average discharge.-- 25 years, 181 second-feet.

Extremes.-- Maximum discharge during year, 416 second-feet May 7 (gage height, 2.23 feet); minimum, 5.6 second-feet Dec. 2 (gage height, 0.69 foot).
1904-5, 1911-34: Maximum discharge, 4,200 second-feet June 9, 1923 (gage height, 4.15 feet); minimum, that of Dec. 2, 1933.

Remarks.-- Records good except those for Dec. 3 to Mar. 25, which were estimated on basis of two discharge measurements and temperature records. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 52 | 32 | 28 | | | | 52 | 177 | 161 | 12 | 29 | 19 |
| 2 | 47 | 32 | 23 | | | | 53 | 152 | 122 | 12 | 28 | 18 |
| 3 | 54 | 32 | | 32 | 37 | | 50 | 165 | 112 | 13 | 28 | 19 |
| 4 | 56 | 35 | | 24 | | | 50 | 174 | 107 | 13 | 28 | 18 |
| 5 | 54 | 28 | | | | | 44 | 230 | 89 | 15 | 35 | 18 |
| 6 | 54 | 28 | | | | | 39 | 303 | 77 | 12 | 49 | 17 |
| 7 | 54 | 37 | | | | | 50 | 340 | 81 | 10 | 43 | 16 |
| 8 | 53 | 34 | 25 | 25 | 42 | 36 | 58 | 332 | 69 | 10 | 35 | 18 |
| 9 | 52 | 39 | | | | | 70 | 344 | 59 | 11 | 35 | 30 |
| 10 | 52 | 37 | | 25 | | | 74 | 315 | 56 | 13 | 36 | 28 |
| 11 | 50 | 37 | | | 37 | | 74 | 291 | 52 | 15 | 36 | 24 |
| 12 | 49 | 35 | | | 37 | | 83 | 311 | 46 | 12 | 31 | 21 |
| 13 | 50 | 31 | 26 | 28 | 36 | 43 | 93 | 332 | 42 | 11 | 28 | 21 |
| 14 | 50 | 32 | | | 37 | | 93 | 267 | 38 | 10 | 27 | 20 |
| 15 | 50 | 30 | | | 37 | | 97 | 252 | 38 | 10 | 28 | 19 |
| 16 | 46 | 32 | | | | | 85 | 233 | 37 | 10 | 29 | 18 |
| 17 | 43 | 36 | | | | | 76 | 252 | 36 | 10 | 29 | 18 |
| 18 | 43 | 34 | 25 | 32 | 36 | 37 | 74 | 205 | 34 | 10 | 28 | 17 |
| 19 | 43 | 31 | | | | | 81 | 245 | 29 | 10 | 27 | 18 |
| 20 | 42 | 37 | | | | | 93 | 248 | 26 | 12 | 29 | 20 |
| 21 | 39 | 30 | | | | | 105 | 233 | 22 | 27 | 34 | 24 |
| 22 | 37 | 34 | | | | | 147 | 219 | 21 | 25 | 29 | 24 |
| 23 | 36 | 34 | 31 | 35 | 36 | 42 | 208 | 184 | 21 | 27 | 26 | 21 |
| 24 | 37 | 32 | | | | | 218 | 177 | 23 | 21 | 25 | 18 |
| 25 | 37 | 29 | | | | | 241 | 181 | 46 | 21 | 24 | 24 |
| 26 | 34 | 26 | | | | 44 | 241 | 155 | 31 | 24 | 24 | 28 |
| 27 | 31 | 31 | | | 35 | | 42 | 149 | 150 | 21 | 53 | 24 |
| 28 | 31 | 26 | | | | | 55 | 161 | 144 | 17 | 35 | 24 |
| 29 | 31 | 24 | 32 | 34 | | | 54 | 197 | 155 | 14 | 31 | 23 |
| 30 | 32 | 26 | | | | | 59 | 184 | 201 | 13 | 29 | 22 |
| 31 | 32 | | | | | | 60 | | 215 | | 31 | 22 |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 56 | 31 | 44.2 | 2,720 | | |
| November | | | | | | | 39 | 24 | 32.0 | 1,910 | | |
| December | | | | | | | | 23 | 27.4 | 1,690 | | |
| January | | | | | | | | | 31.1 | 1,910 | | |
| February | | | | | | | | | 37.3 | 2,070 | | |
| March | | | | | | | 60 | | 41.5 | 2,560 | | |
| April | | | | | | | 241 | 39 | 108 | 6,400 | | |
| May | | | | | | | 344 | 144 | 232 | 14,260 | | |
| June | | | | | | | 161 | 13 | 51.3 | 3,050 | | |
| July | | | | | | | 53 | 10 | 17.9 | 1,100 | | |
| August | | | | | | | 49 | 22 | 29.5 | 1,810 | | |
| September | | | | | | | 34 | 16 | 21.9 | 1,310 | | |
| The year | | | | | | | 344 | 10 | 56.3 | 40,770 | | |

Laramie River and Pioneer Canal near Woods, Wyo.

Location.- Water-stage recorder in sec. 36, T. 14 N., R. 77 W., at diversion dam for Pioneer Canal, 2 miles northeast of Woods. Zero of gage is 7,390.01 feet above mean sea level. Staff gage about half a mile below head gates is used to determine flow in canal.

Drainage area.- 418 square miles.

Records available.- April 1912 to September 1924, April to September 1927, April 1932 to September 1934.

Extremes.- Laramie River: Maximum discharge during year, 404 second-feet May 7 (gage height, 1.09 feet); no flow Sept. 20.

Pioneer Canal: Maximum discharge during year, 109 second-feet May 18 (gage height, 1.76 feet); practically no flow Mar. 27 to Apr. 13.

1912-24, 1927, 1932-34: Combined maximum discharge, 5,060 second-feet June 10, 1923; combined minimum not determined.

Remarks.- Records good. Discharge estimated Oct. 29-31. No records Nov. 17 to Mar. 26. Canal diverts from left bank of river at diversion dam for irrigation in the vicinity of Laramie. Diversions for irrigation above station.

Discharge, in second-feet, of Laramie River near Woods, Wyo., 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 23 | | | | | | 51 | 185 | 143 | 13 | 1.3 | 0.1 |
| 2 | 19 | | | | | | 28 | 185 | 85 | 12 | 1.0 | .1 |
| 3 | 21 | | | | | | 49 | 248 | 59 | 12 | .9 | .6 |
| 4 | 24 | | | | | | 49 | 322 | 51 | 13 | 1.0 | .6 |
| 5 | 24 | | | | | | 49 | 279 | 58 | 16 | 3.2 | .4 |
| 6 | 24 | | | | | | 40 | 305 | 25 | 16 | 9.2 | .7 |
| 7 | 8.0 | | | | | | 47 | 316 | 25 | 13 | 58 | 1.1 |
| 8 | 21 | | | | | | 51 | 300 | 23 | 12 | 28 | 1.3 |
| 9 | 21 | | | | | | 72 | 300 | 23 | 13 | 27 | 3.2 |
| 10 | 21 | | | | | | 82 | 289 | 25 | 14 | 28 | 1.8 |
| 11 | 21 | | | | | | 89 | 288 | 45 | 18 | 27 | 1.1 |
| 12 | 17 | | | | | | 103 | 279 | 53 | 9.2 | 25 | 1.9 |
| 13 | 17 | | | | | | 117 | 305 | 45 | 1.9 | 19 | 4.4 |
| 14 | 26 | | | | | | 85 | 248 | 58 | 1.9 | 18 | 3.2 |
| 15 | 35 | | | | | | 69 | 225 | 38 | 1.9 | 18 | 4.4 |
| 16 | 35 | | | | | | 63 | 185 | 40 | 1.8 | 8.0 | 4.4 |
| 17 | 35 | | | | | | 45 | 178 | 38 | 1.7 | 1.4 | 4.4 |
| 18 | 32 | | | | | | 36 | 166 | 36 | 1.9 | 1.3 | 5.6 |
| 19 | 32 | | | | | | 69 | 193 | 32 | 1.9 | 1.4 | 1.4 |
| 20 | 30 | | | | | | 103 | 202 | 32 | 3.2 | 1.9 | 0 |
| 21 | 30 | | | | | | 99 | 193 | 28 | 12 | 12 | 1.0 |
| 22 | 30 | | | | | | 125 | 185 | 25 | 10 | 8.0 | 1.8 |
| 23 | 30 | | | | | | 193 | 158 | 23 | 8.0 | 5.6 | 1.8 |
| 24 | 28 | | | | | | 206 | 147 | 23 | 9.2 | 5.6 | 1.2 |
| 25 | 28 | | | | | | 238 | 158 | 32 | 6.8 | 5.6 | 1.6 |
| 26 | 28 | | | | | | 289 | 132 | 36 | 12 | 4.4 | 5.6 |
| 27 | 26 | | | | | 49 | 248 | 121 | 25 | 25 | 5.6 | 9.2 |
| 28 | 26 | | | | | 49 | 170 | 117 | 19 | 1.7 | 1.6 | 8.0 |
| 29 | 26 | | | | | 56 | 178 | 121 | 18 | .2 | .3 | 12 |
| 30 | 26 | | | | | 63 | 174 | 143 | 14 | .8 | 1.3 | 13 |
| 31 | 26 | | | | | 66 | | 170 | | 1.9 | .5 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 35 | 8.0 | 25.5 | 1,570 | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 27-31 | | | | | | | 66 | 49 | 56.6 | 561 | | |
| April | | | | | | | 289 | 28 | 107 | 6,380 | | |
| May | | | | | | | 322 | 117 | 214 | 13,140 | | |
| June | | | | | | | 143 | 14 | 37.9 | 2,260 | | |
| July | | | | | | | 25 | .2 | 8.55 | 526 | | |
| August | | | | | | | 38 | .3 | 9.97 | 613 | | |
| September | | | | | | | 13 | 0 | 3.20 | 190 | | |

PLATTE RIVER BASIN

Discharge, in second-feet, of Pioneer Canal near Woods, Wyo., 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | 22 | | | | | | | 69 | 77 | 4 | 24 | 14 |
| 2 | 22 | | | | | | | 70 | 71 | 4 | 24 | 14 |
| 3 | 22 | | | | | | | 70 | 69 | 4 | 24 | 14 |
| 4 | 22 | | | | | | | 68 | 69 | 4 | 23 | 14 |
| 5 | 22 | | | | | | | 62 | 67 | 4 | 23 | 13 |
| 6 | 22 | | | | | | | 64 | 67 | 4 | 20 | 12 |
| 7 | 22 | | | | | | | 63 | 67 | 4 | 22 | 12 |
| 8 | 22 | | | | | | | 67 | 67 | 4 | 7 | 12 |
| 9 | 22 | | | | | | | 76 | 47 | 5 | 7 | 12 |
| 10 | 22 | | | | | | | 76 | 47 | 6 | 7 | 12 |
| 11 | 22 | | | | | | | 75 | 9 | 5 | 7 | 16 |
| 12 | 22 | | | | | | | 75 | 7 | 10 | 7 | 16 |
| 13 | 22 | | | | | | | 74 | 7 | 11 | 7 | 6 |
| 14 | 22 | | | | | | 70 | 76 | 7 | 11 | 8 | 10 |
| 15 | 22 | | | | | | 72 | 67 | 6 | 11 | 8 | 10 |
| 16 | 22 | | | | | | 70 | 87 | 7 | 11 | 23 | 10 |
| 17 | | | | | | | 70 | 108 | 6 | 11 | 23 | 10 |
| 18 | | | | | | | 70 | 109 | 6 | 11 | 23 | 8 |
| 19 | | | | | | | 33 | 68 | 4 | 11 | 23 | 8 |
| 20 | | | | | | | 10 | 68 | 4 | 11 | 23 | 12 |
| 21 | | | | | | | 47 | 67 | 4 | 12 | 14 | 12 |
| 22 | | | | | | | 60 | 71 | 4 | 15 | 16 | 12 |
| 23 | | | | | | | 62 | 70 | 4 | 18 | 16 | 12 |
| 24 | | | | | | | 61 | 69 | 4 | 16 | 14 | 13 |
| 25 | | | | | | | 60 | 70 | 4 | 19 | 14 | 13 |
| 26 | | | | | | | 64 | 70 | 4 | 18 | 13 | 12 |
| 27 | | | | | | | 61 | 69 | 4 | 18 | 13 | 12 |
| 28 | | | | | | | 66 | 70 | 4 | 18 | 12 | 12 |
| 29 | | | | | | | 76 | 71 | 4 | 30 | 18 | 12 |
| 30 | | | | | | | 73 | 72 | 4 | 27 | 16 | 12 |
| 31 | | | | | | | | 76 | | 23 | 14 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October 1-15 | | | | | | | 22 | 22 | 22.0 | 698 | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April 14-30 | | | | | | | 76 | 10 | 60.4 | 2,040 | | |
| May | | | | | | | 109 | 62 | 73.7 | 4,530 | | |
| June | | | | | | | 77 | 4 | 25.0 | 1,490 | | |
| July | | | | | | | 30 | 4 | 11.6 | 712 | | |
| August | | | | | | | 29 | 7 | 16.1 | 990 | | |
| September | | | | | | | 16 | 6 | 11.9 | 708 | | |

Combined monthly discharge of Laramie River and Pioneer Canal near Woods, Wyo., 1933-34

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------|---------|---------|------|-------------------------|
| October | 87 | 26 | 36.8 | 2,270 |
| November | | | | |
| December | | | | |
| January | | | | |
| February | | | | |
| March 27-31 | 66 | 49 | 56.6 | 561 |
| April | 353 | 28 | 141 | 8,420 |
| May | 387 | 187 | 287 | 17,670 |
| June | 220 | 18 | 62.9 | 3,740 |
| July | 43 | 13 | 20.2 | 1,240 |
| August | 60 | 14 | 26.0 | 1,600 |
| September | 25 | 9 | 15.1 | 697 |

Laramie River at Laramie, Wyo.

Location.- Chain gage in sec. 32, T. 16 N., R. 73 W., at western edge of Laramie.

Records available.- April 1933 to September 1934.

Extremes.- Maximum discharge recorded during year, 182 second-feet May 11 (gage height, 2.14 feet); minimum daily discharge, 1.5 second-feet Sept. 6, 7.
1933-34: Maximum discharge recorded, 1,350 second-feet June 7, 1933 (gage height, 4.46 feet); minimum daily discharge, that of Sept. 6, 7, 1934.

Remarks.- Records good. No records Oct. 1 to Mar. 31. Diversions for irrigation above station.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|------------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | | | | | | | 71 | 51 | 37 | 6.9 | 4.8 | 1.6 |
| 2 | | | | | | | 70 | 47 | 57 | 6.9 | 4.2 | 1.7 |
| 3 | | | | | | | 70 | 64 | 46 | 6.0 | 4.4 | 1.6 |
| 4 | | | | | | | 80 | 66 | 41 | 6.3 | 4.0 | 1.6 |
| 5 | | | | | | | 75 | 91 | 19 | 8.1 | 3.6 | 1.6 |
| 6 | | | | | | | 74 | 117 | 15 | 6.6 | 3.2 | 1.5 |
| 7 | | | | | | | 61 | 114 | 22 | 6.0 | 2.8 | 1.5 |
| 8 | | | | | | | 61 | 124 | 29 | 6.6 | 2.6 | 1.6 |
| 9 | | | | | | | 64 | 132 | 41 | 6.9 | 16 | 3.0 |
| 10 | | | | | | | 64 | 134 | 18 | 7.5 | 6.6 | 3.4 |
| 11 | | | | | | | 66 | 153 | 18 | 11 | 11 | 3.2 |
| 12 | | | | | | | 66 | 131 | 12 | 9.0 | 11 | 2.6 |
| 13 | | | | | | | 62 | 94 | 11 | 6.9 | 11 | 2.2 |
| 14 | | | | | | | 64 | 127 | 13 | 5.8 | 9.8 | 2.2 |
| 15 | | | | | | | 64 | 131 | 12 | 5.6 | 10 | 2.2 |
| 16 | | | | | | | 51 | 101 | 12 | 5.4 | 12 | 2.2 |
| 17 | | | | | | | 47 | 86 | 14 | 5.6 | 11 | 2.2 |
| 18 | | | | | | | 40 | 76 | 13 | 5.8 | 9.8 | 1.7 |
| 19 | | | | | | | 34 | 61 | 13 | 5.4 | 9.0 | 1.6 |
| 20 | | | | | | | 29 | 62 | 12 | 5.0 | 8.7 | 1.8 |
| 21 | | | | | | | 29 | 76 | 11 | 5.0 | 7.2 | 4.8 |
| 22 | | | | | | | 30 | 101 | 11 | 10 | 5.8 | 3.0 |
| 23 | | | | | | | 34 | 85 | 9.8 | 8.7 | 5.0 | 3.0 |
| 24 | | | | | | | 40 | 76 | 11 | 36 | 4.4 | 2.2 |
| 25 | | | | | | | 50 | 72 | 11 | 8.4 | 3.4 | 3.4 |
| 26 | | | | | | | 58 | 72 | 9.0 | 9.7 | 2.8 | 3.2 |
| 27 | | | | | | | 72 | 72 | 8.4 | 11 | 3.0 | 3.6 |
| 28 | | | | | | | 72 | 72 | 8.4 | 11 | 2.8 | 4.0 |
| 29 | | | | | | | 62 | 70 | 7.3 | 8.7 | 2.8 | 4.4 |
| 30 | | | | | | | 58 | 62 | 7.8 | 7.2 | 2.6 | 4.6 |
| 31 | | | | | | | | 44 | | 5.8 | 1.8 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | 80 | 29 | 57.1 | 3,400 | | |
| May | | | | | | | 153 | 44 | 89.4 | 5,500 | | |
| June | | | | | | | 57 | 7.8 | 18.3 | 1,090 | | |
| July | | | | | | | 36 | 5.0 | 8.19 | 503 | | |
| August | | | | | | | 16 | 1.8 | 6.36 | 391 | | |
| September | | | | | | | 4.8 | 1.5 | 2.57 | 153 | | |
| The period | | | | | | | | | | 11,040 | | |

Laramie River at Two Rivers, Wyo.

Location.- Water-stage recorder in sec. 5, T. 17 N., R. 74 W., a quarter of a mile above Little Laramie River. Zero of gage is 7,058.90 feet above mean sea level.

Drainage area.- 1,290 square miles.

Records available.- May 1911 to October 1927, May 1933 to September 1934.

Extremes.- Maximum discharge during year, 88 second-feet May 12 (gage height, 1.55 feet); minimum daily discharge, 1.4 second-feet Sept. 1, 1911-27, 1934: Maximum discharge, 3,930 second-feet June 13, 1923 (gage height, 7.48 feet); no flow Sept. 22-25, 1911.

Remarks.- Records good except those for Nov. 19-30, Sept. 23-30, which are estimated. No records Dec. 1 to Apr. 30. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|------|---------|---------|------|----------------------|-------|
| 1 | 6.3 | 9.0 | | | | | | 9.0 | 37 | 2.3 | 4.3 | 1.4 |
| 2 | 12 | 9.8 | | | | | | 9.0 | 31 | 2.3 | 3.6 | 1.9 |
| 3 | 14 | 8.3 | | | | | | 27 | 36 | 3.0 | 2.3 | 2.0 |
| 4 | 15 | 11 | | | | | | 38 | 34 | 3.6 | 2.2 | 2.0 |
| 5 | 15 | 13 | | | | | | 38 | 30 | 7.0 | 2.2 | 2.0 |
| 6 | 15 | 13 | | | | | | 56 | 26 | 13 | 2.2 | 1.9 |
| 7 | 16 | 9.8 | | | | | | 62 | 19 | 7.0 | 1.9 | 1.9 |
| 8 | 16 | 7.7 | | | | | | 65 | 18 | 5.6 | 1.8 | 1.8 |
| 9 | 16 | 11 | | | | | | 70 | 20 | 5.6 | 1.6 | 1.9 |
| 10 | 17 | 13 | | | | | | 80 | 34 | 5.0 | 1.6 | 2.2 |
| 11 | 15 | 12 | | | | | | 70 | 24 | 6.3 | 2.0 | 1.9 |
| 12 | 15 | 23 | | | | | | 74 | 15 | 5.6 | 5.6 | 1.9 |
| 13 | 14 | 24 | | | | | | 66 | 9.0 | 5.0 | 5.6 | 1.8 |
| 14 | 14 | 28 | | | | | | 55 | 7.7 | 3.6 | 6.3 | 1.8 |
| 15 | 14 | 32 | | | | | | 58 | 7.0 | 3.0 | 8.3 | 1.8 |
| 16 | 13 | 32 | | | | | | 68 | 5.6 | 2.3 | 7.0 | 1.5 |
| 17 | 11 | 32 | | | | | | 54 | 5.6 | 2.3 | 7.0 | 1.8 |
| 18 | 13 | 30 | | | | | | 44 | 5.0 | 2.2 | 7.0 | 1.5 |
| 19 | 18 | 30 | | | | | | 47 | 5.0 | 2.2 | 7.0 | 1.5 |
| 20 | 16 | 31 | | | | | | 42 | 5.0 | 2.0 | 5.6 | 1.8 |
| 21 | 15 | 35 | | | | | | 41 | 5.0 | 2.2 | 5.0 | 1.9 |
| 22 | 15 | | | | | | | 51 | 4.3 | 3.0 | 4.3 | 2.0 |
| 23 | 14 | | | | | | | 55 | 4.3 | 3.0 | 3.6 | 2.0 |
| 24 | 15 | | | | | | | 52 | 5.0 | 3.0 | 3.0 | 2.0 |
| 25 | 15 | | | | | | | 51 | 5.0 | 3.6 | 2.3 | 1.9 |
| 26 | 14 | | | | | | | 48 | 4.3 | 18 | 2.2 | 1.9 |
| 27 | 13 | | | | | | | 48 | 4.3 | 9.0 | 2.0 | 1.8 |
| 28 | 12 | | | | | | | 48 | 4.3 | 7.0 | 2.2 | 1.8 |
| 29 | 11 | | | | | | | 48 | 4.3 | 5.6 | 1.9 | 1.7 |
| 30 | 9.8 | | | | | | | 48 | 3.6 | 5.0 | 1.6 | 1.7 |
| 31 | 8.3 | | | | | | | 47 | | 4.3 | 1.8 | |
| Month | | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October | | | | | | | | 18 | 6.3 | 13.8 | 948 | |
| November | | | | | | | | | 7.7 | 24.3 | 1,450 | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | | 80 | 9.0 | 51.1 | 3,140 | |
| May | | | | | | | | 37 | 3.6 | 13.9 | 830 | |
| June | | | | | | | | 18 | 2.0 | 4.92 | 303 | |
| July | | | | | | | | 8.3 | 1.6 | 3.71 | 228 | |
| August | | | | | | | | 2.2 | 1.4 | 1.83 | 109 | |
| September | | | | | | | | | | | | |

Laramie River near Lookout, Wyo.

Location.- Water-stage recorder in sec. 27, T. 21 N., R. 74 W., 9 miles northeast of Lookout. Zero of gage is 6,962.68 feet above mean sea level.

Drainage area.- 2,100 square miles.

Records available.- May 1912 to August 1917, May 1932 to September 1934.

Extremes.- Maximum discharge during year (estimated), 88 second-feet Apr. 2; no flow July 15 to Aug. 5, Aug. 11 to Sept. 30.
1915-17, 1932-34: Maximum discharge (estimated), 3,100 second-feet June 28, 1917; no flow July 15 to Aug. 5, Aug. 11 to Sept. 30, 1934.

Remarks.- Records good except those for Oct. 8-13, Apr. 1-6, which were estimated.
No records Nov. 6 to Mar. 31. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | 4.8 | 9.0 | | | | | 84 | 27 | 38 | 0.8 | 0 | |
| 2 | 5.4 | 9.0 | | | | | 88 | 30 | 38 | .5 | 0 | |
| 3 | 5.4 | 9.0 | | | | | 76 | 30 | 31 | .4 | 0 | |
| 4 | 6.0 | 8.4 | | | | | 70 | 30 | 26 | .8 | 0 | |
| 5 | 9.9 | 8.4 | | | | | 66 | 31 | 27 | 1.1 | 0 | |
| 6 | 12 | | | | | | 76 | 31 | 27 | .6 | .4 | |
| 7 | 12 | | | | | | 84 | 31 | 24 | .8 | 8.4 | |
| 8 | 12 | | | | | | 82 | 34 | 18 | .5 | 4.8 | |
| 9 | 12 | | | | | | 84 | 41 | 15 | .5 | 2.3 | |
| 10 | 12 | | | | | | 52 | 45 | 14 | .5 | 1.6 | |
| 11 | 12 | | | | | | 73 | 45 | 12 | 1.1 | 0 | |
| 12 | 12 | | | | | | 69 | 59 | 14 | .5 | 0 | |
| 13 | 12 | | | | | | 69 | 61 | 16 | .4 | 0 | |
| 14 | 12 | | | | | | 58 | 61 | 14 | .3 | 0 | |
| 15 | 13 | | | | | | 66 | 56 | 14 | 0 | 0 | |
| 16 | 8.4 | | | | | | 52 | 45 | 11 | 0 | 0 | |
| 17 | 8.4 | | | | | | 50 | 45 | 12 | 0 | 0 | |
| 18 | 7.8 | | | | | | 46 | 46 | 12 | 0 | 0 | |
| 19 | 8.4 | | | | | | 38 | 41 | 7.8 | 0 | 0 | |
| 20 | 6.6 | | | | | | 27 | 43 | 4.2 | 0 | 0 | |
| 21 | 9.0 | | | | | | 23 | 46 | 2.0 | 0 | 0 | |
| 22 | 8.4 | | | | | | 22 | 45 | 1.1 | 0 | 0 | |
| 23 | 8.4 | | | | | | 22 | 46 | 1.8 | 0 | 0 | |
| 24 | 8.4 | | | | | | 21 | 52 | 1.6 | 0 | 0 | |
| 25 | 9.0 | | | | | | 19 | 59 | 1.8 | 0 | 0 | |
| 26 | 9.0 | | | | | | 21 | 48 | 1.8 | 0 | 0 | |
| 27 | 9.0 | | | | | | 23 | 46 | 1.6 | 0 | 0 | |
| 28 | 9.0 | | | | | | 23 | 45 | 1.3 | 0 | 0 | |
| 29 | 9.0 | | | | | | 24 | 41 | .8 | 0 | 0 | |
| 30 | 9.0 | | | | | | 26 | 40 | .8 | 0 | 0 | |
| 31 | 9.0 | | | | | | | 40 | | 0 | 0 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 13 | 4.8 | 9.33 | 574 | | |
| November 1-5 | | | | | | | 9 | 8.4 | 8.76 | 87 | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | 88 | 19 | 51.6 | 3,070 | | |
| May | | | | | | | 61 | 27 | 43.2 | 2,660 | | |
| June | | | | | | | 38 | .8 | 13.0 | 771 | | |
| July | | | | | | | 1.1 | 0 | .28 | 17 | | |
| August | | | | | | | 8.4 | 0 | .56 | 36 | | |
| September | | | | | | | 0 | 0 | 0 | 0 | | |

Note.- No flow during September.

Laramie River near Fort Laramie, Wyo.

Location.- Water-stage recorder in sec. 25, T. 26 N., R. 65 W., at siphon crossing of Fort Laramie Canal, 3 miles west of Fort Laramie.

Drainage area.- 4,580 square miles.

Records available.- April 1915 to September 1934.

Remarks.- Diversions for irrigation above station. Discharge tables include flow of Lingle power plant canal, which diverts water from river 4 miles upstream. Flow regulated by Wheatland Reservoir, capacity, about 80,000 acre-feet. Records furnished by U. S. Bureau of Reclamation.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 25 | 59 | 59 | 140 | 96 | 106 | 102 | 38 | 6 | 8 | 5 | 3 |
| 2 | 24 | 59 | 64 | 98 | 96 | 109 | 102 | 38 | 4 | 9 | 7 | 4 |
| 3 | 26 | 64 | 68 | 99 | 86 | 100 | 100 | 43 | 4 | 8 | 6 | 4 |
| 4 | 27 | 64 | 69 | 90 | 86 | 100 | 100 | 30 | 6 | 14 | 5 | 4 |
| 5 | 29 | 40 | 63 | 95 | 86 | 100 | 100 | 30 | 4 | 14 | 6 | 4 |
| 6 | 30 | 76 | 131 | 90 | 86 | 100 | 115 | 30 | 4 | 14 | 6 | 4 |
| 7 | 31 | 87 | 93 | 69 | 86 | 100 | 116 | 33 | 4 | 11 | 6 | 6 |
| 8 | 35 | 83 | 81 | 70 | 86 | 100 | 102 | 38 | 4 | 11 | 6 | 7 |
| 9 | 38 | 83 | 84 | 105 | 86 | 100 | 102 | 27 | 4 | 11 | 5 | 8 |
| 10 | 40 | 83 | 92 | 108 | 96 | 100 | 102 | 15 | 4 | 11 | 5 | 12 |
| 11 | 40 | 83 | 80 | 96 | 86 | 105 | 100 | 12 | 4 | 8 | 5 | 9 |
| 12 | 39 | 63 | 61 | 106 | 91 | 105 | 97 | 12 | 4 | 7 | 4 | 9 |
| 13 | 37 | 60 | 76 | 108 | 96 | 105 | 97 | 12 | 4 | 7 | 4 | 9 |
| 14 | 32 | 58 | 81 | 115 | 96 | 105 | 97 | 10 | 4 | 8 | 5 | 11 |
| 15 | 34 | 56 | 68 | 108 | 96 | 105 | 97 | 10 | 4 | 8 | 3 | 13 |
| 16 | 34 | 59 | 68 | 104 | 91 | 105 | 97 | 10 | 5 | 8 | 3 | 13 |
| 17 | 34 | 60 | 43 | 104 | 91 | 105 | 97 | 2 | 4 | 6 | 3 | 13 |
| 18 | 37 | 60 | 68 | 106 | 79 | 105 | 68 | 6 | 22 | 6 | 3 | 12 |
| 19 | 40 | 60 | 111 | 106 | 79 | 105 | 64 | 6 | 14 | 8 | 3 | 12 |
| 20 | 43 | 61 | 96 | 104 | 79 | 105 | 60 | 6 | 13 | 6 | 3 | 13 |
| 21 | 65 | 61 | 91 | 104 | 79 | 105 | 55 | 6 | 10 | 5 | 3 | 16 |
| 22 | 74 | 79 | 91 | 104 | 78 | 105 | 54 | 8 | 10 | 6 | 3 | 16 |
| 23 | 79 | 86 | 86 | 104 | 83 | 105 | 60 | 6 | 9 | 7 | 3 | 16 |
| 24 | 66 | 58 | 86 | 114 | 53 | 102 | 45 | 6 | 8 | 7 | 3 | 15 |
| 25 | 72 | 50 | 83 | 114 | 43 | 102 | 40 | 6 | 10 | 6 | 3 | 15 |
| 26 | 70 | 44 | 43 | 104 | 47 | 102 | 40 | 6 | 9 | 6 | 3 | 13 |
| 27 | 70 | 46 | 73 | 116 | 88 | 102 | 40 | 6 | 10 | 7 | 3 | 2 |
| 28 | 70 | 43 | 103 | 118 | 110 | 102 | 50 | 6 | 9 | 14 | 3 | 2 |
| 29 | 68 | 43 | 93 | 106 | | 102 | 38 | 6 | 9 | 10 | 3 | 2 |
| 30 | 63 | 51 | 115 | 106 | | 102 | 38 | 6 | 9 | 7 | 3 | 2 |
| 31 | 58 | | 100 | 106 | | 102 | | 6 | | 6 | 3 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 86 | 24 | 45.6 | 2,620 | | |
| November | | | | | | | 87 | 40 | 62.7 | 3,730 | | |
| December | | | | | | | 131 | 43 | 81.0 | 4,980 | | |
| January | | | | | | | 140 | 69 | 104 | 6,380 | | |
| February | | | | | | | 110 | 43 | 84.0 | 4,670 | | |
| March | | | | | | | 109 | 100 | 103 | 6,340 | | |
| April | | | | | | | 115 | 38 | 78.8 | 4,690 | | |
| May | | | | | | | 43 | 2 | 15.4 | 944 | | |
| June | | | | | | | 22 | 4 | 7.2 | 426 | | |
| July | | | | | | | 14 | 5 | 8.5 | 522 | | |
| August | | | | | | | 7 | 3 | 4.1 | 250 | | |
| September | | | | | | | 16 | 2 | 8.9 | 532 | | |
| The year | | | | | | | 140 | 2 | 50.1 | 36,280 | | |

Little Laramie River near Filmore, Wyo.

Location.- Staff gage in sec. 9, T. 15 N., R. 77 W., at Mays ranch $1\frac{1}{2}$ miles south of Filmore.

Drainage area.- 155 square miles.

Records available.- July 1902 to August 1903, May 1911 to September 1926, May 1933 to September 1934.

Extremes.- Maximum discharge during year, 332 second-feet May 13 (gage height, 2.26 feet); minimum daily discharge, 8.6 second-feet Sept. 17, 19.
1902-3, 1911-25, 1933-34: Maximum discharge, 2,400 second-feet June 1, 1914 (gage height, 5.9 feet); minimum, 1 second-foot Sept. 19, 20, 1913 (gage height, 0.25 foot).

Remarks.- Records good. Discharge estimated Nov. 26-30. No records Dec. 1 to Mar. 17. Small diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 18 | 14 | | | | | 23 | 30 | 137 | 24 | 14 | 9.8 |
| 2 | 18 | 15 | | | | | 36 | 28 | 99 | 26 | 14 | 9.8 |
| 3 | 18 | 16 | | | | | 28 | 176 | 88 | 26 | 14 | 9.8 |
| 4 | 17 | 16 | | | | | 31 | 225 | 87 | 25 | 14 | 9.4 |
| 5 | 16 | 16 | | | | | 38 | 239 | 97 | 28 | 15 | 9.4 |
| 6 | 16 | 16 | | | | | 27 | 225 | 72 | 20 | 14 | 9.6 |
| 7 | 16 | 16 | | | | | 23 | 256 | 69 | 20 | 14 | 9.4 |
| 8 | 16 | 16 | | | | | 24 | 224 | 67 | 19 | 14 | 9.4 |
| 9 | 16 | 15 | | | | | 23 | 296 | 55 | 21 | 13 | 9.4 |
| 10 | 16 | 14 | | | | | 31 | 256 | 51 | 18 | 14 | 9.4 |
| 11 | 14 | 14 | | | | | 25 | 276 | 50 | 16 | 13 | 9.4 |
| 12 | 15 | 14 | | | | | 22 | 270 | 35 | 16 | 13 | 9.4 |
| 13 | 14 | 13 | | | | | 17 | 323 | 24 | 16 | 13 | 9.4 |
| 14 | 14 | 13 | | | | | 17 | 202 | 21 | 16 | 12 | 9.4 |
| 15 | 16 | 13 | | | | | 18 | 185 | 66 | 14 | 12 | 9.2 |
| 16 | 15 | 12 | | | | | 17 | 184 | 72 | 13 | 12 | 9.0 |
| 17 | 16 | 12 | | | | | 18 | 192 | 42 | 13 | 11 | 8.6 |
| 18 | 16 | 12 | | | | 9.2 | 23 | 202 | 37 | 13 | 11 | 8.8 |
| 19 | 16 | 12 | | | | 11 | 23 | 169 | 27 | 13 | 12 | 8.6 |
| 20 | 16 | 12 | | | | 20 | 27 | 184 | 24 | 14 | 12 | 10 |
| 21 | 16 | 12 | | | | 16 | 23 | 205 | 22 | 16 | 18 | 11 |
| 22 | 15 | 11 | | | | 24 | 21 | 186 | 21 | 16 | 16 | 10 |
| 23 | 14 | 11 | | | | 21 | 27 | 184 | 21 | 13 | 11 | 10 |
| 24 | 14 | 11 | | | | 22 | 33 | 162 | 22 | 13 | 11 | 9.0 |
| 25 | 14 | 11 | | | | 20 | 42 | 218 | 29 | 14 | 10 | 10 |
| 26 | 14 | 11 | | | | 22 | 58 | 186 | 27 | 26 | 11 | 18 |
| 27 | 14 | 11 | | | | 21 | 44 | 141 | 27 | 21 | 11 | 16 |
| 28 | 14 | 11 | | | | 21 | 31 | 184 | 26 | 18 | 11 | 13 |
| 29 | 14 | 11 | | | | 23 | 34 | 159 | 27 | 16 | 11 | 13 |
| 30 | 13 | 11 | | | | 23 | 25 | 184 | 27 | 15 | 10 | 14 |
| 31 | 13 | | | | | 23 | | 169 | | 15 | 10 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 18 | 13 | 15.2 | 932 | | |
| November | | | | | | | 16 | 11 | 13.1 | 780 | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 18-31 | | | | | | | 24 | 9.2 | 19.7 | 548 | | |
| April | | | | | | | 58 | 17 | 27.7 | 1,650 | | |
| May | | | | | | | 323 | 28 | 200 | 12,280 | | |
| June | | | | | | | 137 | 21 | 48.3 | 2,870 | | |
| July | | | | | | | 28 | 13 | 17.9 | 1,100 | | |
| August | | | | | | | 18 | 10 | 12.6 | 776 | | |
| September | | | | | | | 18 | 8.6 | 10.4 | 617 | | |

Little Laramie River at Two Rivers, Wyo.

Location.- Water-stage recorder on line between secs. 5 and 6, T. 17 N., R. 74 W., at Old Two Rivers. Zero of gage is 7,060.54 feet above mean sea level.

Drainage area.- 310 square miles.

Records available.- May 1911 to October 1927, May 1933 to September 1934.

Extremes.- Maximum discharge during year occurred during period of no record; no flow Oct. 13 to Nov. 8, June 21 to Sept. 30.
1911-27, 1933-34: Maximum discharge, 1,790 second-feet May 29, 1928 (gage height, 6.32 feet); no flow at times.

Remarks.- Records good except those for period Nov. 9, 10, 19-30, which were estimated. No records Dec. 1 to Apr. 30. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 0.4 | 0 | | | | | | 1.8 | 2.2 | | | |
| 2 | .4 | 0 | | | | | | 1.8 | 2.5 | | | |
| 3 | .4 | 0 | | | | | | 15 | 1.7 | | | |
| 4 | .4 | 0 | | | | | | 11 | 1.5 | | | |
| 5 | .5 | 0 | | | | | | 4.0 | 1.3 | | | |
| 6 | .5 | 0 | | | | | | 2.9 | 1.1 | | | |
| 7 | .4 | 0 | | | | | | 2.7 | 1.2 | | | |
| 8 | .4 | 0 | | | | | | 2.9 | .3 | | | |
| 9 | .4 | .6 | | | | | | 2.2 | .6 | | | |
| 10 | .3 | 1.8 | | | | | | 2.5 | .6 | | | |
| 11 | .2 | 4.4 | | | | | | 3.3 | .6 | | | |
| 12 | .2 | 6.4 | | | | | | 2.7 | .5 | | | |
| 13 | 0 | 4.8 | | | | | | 2.9 | .3 | | | |
| 14 | 0 | 5.2 | | | | | | 4.0 | .2 | | | |
| 15 | 0 | 3.8 | | | | | | 4.4 | .2 | | | |
| 16 | 0 | 4.0 | | | | | | 4.4 | .1 | | | |
| 17 | 0 | 4.0 | | | | | | 3.3 | .2 | | | |
| 18 | 0 | 3.3 | | | | | | 3.3 | .4 | | | |
| 19 | 0 | 3.2 | | | | | | 2.7 | .2 | | | |
| 20 | 0 | 3.0 | | | | | | 2.2 | .1 | | | |
| 21 | 0 | 3.0 | | | | | | 1.7 | 0 | | | |
| 22 | 0 | | | | | | | 1.6 | 0 | | | |
| 23 | 0 | | | | | | | 1.4 | 0 | | | |
| 24 | 0 | | | | | | | 1.3 | 0 | | | |
| 25 | 0 | | | | | | | 1.1 | 0 | | | |
| 26 | 0 | | | | | | | 1.1 | 0 | | | |
| 27 | 0 | | | | | | | 1.6 | 0 | | | |
| 28 | 0 | | | | | | | 2.0 | 0 | | | |
| 29 | 0 | | | | | | | 2.0 | 0 | | | |
| 30 | 0 | | | | | | | 1.8 | 0 | | | |
| 31 | 0 | | | | | | | 2.0 | | | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 0.5 | 0 | 0.15 | 8.9 | | |
| November | | | | | | | 6.4 | 0 | 2.48 | 148 | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | | | | | | |
| May | | | | | | | 15 | 1.1 | 3.14 | 193 | | |
| June | | | | | | | 2.5 | 0 | .55 | 33 | | |
| July | | | | | | | 0 | 0 | 0 | 0 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 0 | 0 | 0 | 0 | | |

Note.- No flow during July, August, and September.

Rawhide Creek near Lingle, Wyo.

Location.- Staff gage in sec. 17, T. 25 N., R. 62 W., 1 mile east of Lingle and 2 miles above mouth.

Drainage area.- 510 square miles.

Records available.- May 1928 to September 1934.

Extremes.- Maximum discharge during year, 538 second-feet June 4 (gage height, 5.0 feet); minimum daily discharge, 0.7 second-foot Aug. 2.

1928-34: Maximum and minimum discharges, those of 1934.

Remarks.- Records fair. Discharge estimated Oct. 1 to May 30 on basis of eight discharge measurements and intermittent gage heights. No diversions. Low-water flow represents return seepage from Interstate Canal.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|------|---------|---------|------|----------------------|-------|
| 1 | | | | | | | | 10 | 5.0 | 7.0 | 4.8 | 2.5 |
| 2 | | | | | | | | 8.2 | 13 | 6.2 | 4.7 | 1.9 |
| 3 | | | | | | | | 19 | 16 | 5.8 | .9 | 10 |
| 4 | | | | | | | | 12 | 167 | 12 | 1.3 | 9.2 |
| 5 | | | | | | | | 6.6 | 475 | 13 | 2.1 | 11 |
| 6 | | | | | | | | 6.0 | 82 | 14 | .9 | 10 |
| 7 | | | | | | | | 5.4 | 42 | 4.6 | 20 | 10 |
| 8 | | | | | | | | 4.2 | 16 | 7.4 | 14 | 8.8 |
| 9 | | | | | | | | 3.4 | 16 | 12 | 12 | 2.7 |
| 10 | | | | | | | | 1.5 | 17 | 5.2 | 15 | 7.6 |
| 11 | | | | | | | | 1.7 | 18 | 6.8 | 14 | 8.6 |
| 12 | | | | | | | | 1.9 | 24 | 5.4 | 13 | 9.6 |
| 13 | | | | | | | | 3.5 | 26 | 3.2 | 13 | 10 |
| 14 | | | | | | | | 5.1 | 28 | 2.2 | 11 | 10 |
| 15 | | | | | | | | 8.8 | 36 | 1.7 | 13 | 16 |
| 16 | | | | | | | | 7.0 | 38 | 2.3 | 10 | 10 |
| 17 | | | | | | | | 4.7 | 47 | 2.2 | 11 | 9.8 |
| 18 | | | | | | | | 2.4 | 66 | 2.2 | 10 | 10 |
| 19 | *29 | | | *20 | *17 | | | 5.0 | 56 | .8 | 12 | 9.2 |
| 20 | | | | | | | | 3.4 | 42 | 1.8 | 8.0 | 9.2 |
| 21 | | | | | | | | 1.6 | 30 | 12 | 7.6 | 12 |
| 22 | | *24 | | | | | | 2.2 | 30 | 12 | 6.8 | 9.2 |
| 23 | | | | | | | 23 | 1.0 | 17 | 12 | 6.8 | 9.2 |
| 24 | | | | | | | | 1.0 | 13 | 12 | 5.6 | 10 |
| 25 | | | | | | | | 1.0 | 21 | 11 | 6.0 | 18 |
| 26 | | | | | | | | 1.0 | 147 | 8.4 | 3.6 | 20 |
| 27 | | | | | | | | 1.0 | 69 | 11 | 3.2 | 17 |
| 28 | | | | | | | | 1.0 | 30 | 22 | 3.6 | 14 |
| 29 | | | | | | | | 1.0 | 27 | 14 | 2.5 | 16 |
| 30 | | | *21 | *17 | | | | 1.9 | 16 | 11 | 1.7 | 14 |
| 31 | | | | | | | | 5.0 | | 5.6 | 4.0 | |
| Month | | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October | | | | | | | | | | 31 | 1,910 | |
| November | | | | | | | | | | 27 | 1,610 | |
| December | | | | | | | | | | 22 | 1,350 | |
| January | | | | | | | | | | 21 | 1,290 | |
| February | | | | | | | | | | 18 | 1,000 | |
| March | | | | | | | | | | 20 | 1,230 | |
| April | | | | | | | | | | 20 | 1,190 | |
| May | | | | | | | | 19 | 1.0 | 4.41 | 271 | |
| June | | | | | | | | 475 | 5.0 | 54.2 | 3,230 | |
| July | | | | | | | | 22 | .8 | 7.99 | 492 | |
| August | | | | | | | | 20 | .7 | 7.39 | 473 | |
| September | | | | | | | | 20 | 1.9 | 10.5 | 624 | |
| | | | | | | | | 475 | .7 | 20.3 | 14,670 | |

*Discharge measurement.

Katzner Drain near Henry, Nebr.

Location.- Staff gage in sec. 15, T. 23 N., R. 60 W., $1\frac{1}{2}$ miles above confluence with North Platte River and 3 miles southwest of Henry.

Records available.- June 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 35 second-feet Apr. 29 (gage height, 1.88 feet); minimum daily discharge, 0.8 second-foot Aug. 21.
1928-34: Maximum discharge, about 1,050 second-feet June 2, 1929 (gage height, 9.9 feet); minimum daily discharge, that of Aug. 21, 1934.

Remarks.- Records fair. Discharge estimated Oct. 1 to May 20 on basis of 5 discharge measurements and intermittent gage heights. Records show return flow from area irrigated by Fort Laramie Canal.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | | | | | | | | 4.4 | 12 | 3.6 | 12 | 16 |
| 2 | | | | | *6.9 | | | 4.4 | 16 | 3.6 | 11 | 19 |
| 3 | | | | | | | | 4.4 | 13 | 3.3 | 12 | 7.7 |
| 4 | | | | | | | | 4.4 | 14 | 3.1 | 14 | 6.2 |
| 5 | | | | | | | | 4.1 | 12 | 3.6 | 20 | 4.6 |
| 6 | | | | | | | | 3.7 | 16 | 3.3 | 20 | 3.6 |
| 7 | | | | | | | | 3.4 | 12 | 2.8 | 7.7 | 3.3 |
| 8 | | | | | | | | 3.0 | 16 | 2.2 | 5.7 | 4.9 |
| 9 | | | | | | | | 3.0 | 17 | 3.3 | 4.1 | 5.4 |
| 10 | | | | | | | | 2.5 | 12 | 3.0 | 3.6 | 5.2 |
| 11 | | | | | | | | 3.0 | 10 | 3.0 | 3.4 | 4.1 |
| 12 | | | | | | | | 2.6 | 8.5 | 3.0 | 2.8 | 5.2 |
| 13 | | | | | | | | 2.6 | 4.1 | 2.6 | 2.5 | 4.6 |
| 14 | | | | | | | | 2.5 | 3.9 | 2.8 | 3.1 | 4.1 |
| 15 | | | | | | | | 2.4 | 14 | 2.8 | 3.1 | 4.6 |
| 16 | | | | | | | | 2.3 | 8.1 | 1.9 | 2.6 | 4.6 |
| 17 | | | | | | | | 2.2 | 8.9 | 2.3 | 2.6 | 4.1 |
| 18 | | | | | | | | 2.6 | 5.9 | 2.0 | 2.3 | 4.6 |
| 19 | | | | *14 | | | | 2.6 | 5.9 | 2.3 | 2.5 | 3.6 |
| 20 | *11 | | | | *6.4 | | | 2.4 | 5.9 | 2.2 | 1.4 | 4.1 |
| 21 | | | | | | | | 2.2 | 6.2 | 1.9 | .8 | 4.6 |
| 22 | | | | | | | | 2.0 | 6.6 | 2.0 | 5.2 | 4.6 |
| 23 | | | | | | | 5.9 | 3.3 | 5.2 | 1.8 | 12 | 4.1 |
| 24 | | | | | | | | 3.1 | 4.9 | 1.9 | 15 | 4.1 |
| 25 | | | | | | | | 5.4 | 7.0 | 34 | 15 | 4.6 |
| 26 | | | | | | | | 6.2 | 5.4 | 5.2 | 21 | 5.4 |
| 27 | | | | | | | | 6.6 | 4.1 | 4.1 | 23 | 5.2 |
| 28 | | | | | | | | 10 | 4.4 | 3.1 | 26 | 4.9 |
| 29 | | | | | | | | 9.9 | 3.9 | 10 | 35 | 4.1 |
| 30 | | | | | | | | 10 | 3.6 | 11 | 28 | 4.6 |
| 31 | | | | | | | | 7.7 | | 13 | 26 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | 13 | 799 | | |
| November | | | | | | | | | 12 | 714 | | |
| December | | | | | | | | | 11 | 676 | | |
| January | | | | | | | | | 10 | 615 | | |
| February | | | | | | | | | 6.6 | 367 | | |
| March | | | | | | | | | 6.4 | 393 | | |
| April | | | | | | | | | 6.0 | 357 | | |
| May | | | | | | | 10 | 2.0 | 4.13 | 254 | | |
| June | | | | | | | 17 | 3.6 | 8.88 | 529 | | |
| July | | | | | | | 34 | 1.8 | 4.67 | 287 | | |
| August | | | | | | | 35 | .8 | 11.0 | 677 | | |
| September | | | | | | | 19 | 3.3 | 5.52 | 329 | | |
| The year | | | | | | | 35 | .8 | 8.28 | 6,000 | | |

*Discharge measurement.

Horse Creek near Lyman, Nebr.

Location.- Staff gage in sec. 25, T. 23 N., R. 58 W., half a mile below mouth of Kiowa Drain and 3 miles northeast of Lyman.

Drainage area.- 1,860 square miles.

Records available.- October 1930 to September 1934.

Extremes.- Maximum discharge recorded during year, 373 second-feet Oct. 1 (gage height, 3.22 feet); minimum daily discharge, 6 second-feet May 18-21, 23-25, 1930-34: Maximum discharge, 1,070 second-feet May 23, 1933 (gage height, 4.98 feet); minimum daily discharge, that of May 18-21, 23-25, 1934.

Remarks.- Records good except those for Nov. 5-7, Nov. 29 to Feb. 28, which were estimated on basis of five discharge measurements and temperature records. Numerous small diversions above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|--|
| 1 | 353 | 34 | 27 | | 22 | 28 | 17 | 10 | 11 | 13 | 10 | 16 | |
| 2 | 258 | 35 | | | *22 | 33 | 17 | 10 | 11 | 12 | 10 | 16 | |
| 3 | 234 | 36 | | | | 36 | 19 | 11 | 56 | 12 | 11 | 16 | |
| 4 | 193 | 30 | | | 22 | 26 | 19 | 10 | 20 | 11 | 8 | 15 | |
| 5 | 150 | 30 | | | | 22 | 28 | 10 | 12 | 11 | 12 | 12 | |
| 6 | 135 | 30 | | | | 21 | 26 | 9 | 12 | 12 | 12 | 12 | |
| 7 | 120 | 30 | | | | 20 | 24 | 10 | 12 | 10 | 16 | 12 | |
| 8 | 102 | 34 | | | | 18 | 18 | 9 | 17 | 9 | 12 | 12 | |
| 9 | 90 | 36 | 26 | | | 20 | 16 | 9 | 19 | 9 | 16 | 17 | |
| 10 | 81 | 37 | | | 20 | 19 | 16 | 9 | 21 | 10 | 34 | 16 | |
| 11 | 75 | 34 | | | | 19 | 14 | 8 | 21 | 182 | 25 | 13 | |
| 12 | 66 | 29 | | | | 18 | 19 | 8 | 18 | 17 | 26 | 13 | |
| 13 | 65 | 34 | *26 | | | 18 | 23 | 9 | 16 | 12 | 23 | 12 | |
| 14 | 61 | 35 | | | | 17 | 24 | 9 | 13 | 15 | 25 | 12 | |
| 15 | 62 | 33 | | | | 18 | 26 | 8 | 19 | 12 | 21 | 11 | |
| 16 | 53 | 31 | | 26 | | 17 | 24 | 8 | 58 | 13 | 19 | 11 | |
| 17 | 54 | 29 | | | 18 | 22 | 21 | 7 | 27 | 11 | 17 | 9 | |
| 18 | 50 | 29 | | | | 16 | 21 | 6 | 24 | 8 | 19 | 10 | |
| 19 | 51 | 29 | | | *23 | 18 | 17 | 6 | 18 | 16 | 14 | 13 | |
| 20 | 51 | 27 | | | *18 | 17 | 18 | 6 | 14 | 10 | 12 | 11 | |
| 21 | 47 | 29 | 25 | | | 16 | 18 | 6 | 14 | 9 | 11 | 12 | |
| 22 | 46 | 29 | | | | 16 | 17 | 9 | 14 | 8 | 12 | 12 | |
| 23 | 46 | 29 | | | 18 | 19 | 16 | 6 | 14 | 8 | 14 | 12 | |
| 24 | 43 | 27 | | | | 22 | 16 | 6 | 14 | 8 | 15 | 11 | |
| 25 | 43 | 30 | | | | 17 | 15 | 6 | 21 | 14 | 18 | 12 | |
| 26 | 42 | 29 | | | 15 | 16 | 13 | 9 | 16 | 11 | 18 | 14 | |
| 27 | 39 | 27 | | | 17 | 16 | 14 | 9 | 12 | 7 | 18 | 14 | |
| 28 | 39 | 27 | 22 | | 21 | 15 | 13 | 8 | 12 | 9 | 18 | 14 | |
| 29 | 38 | 27 | | | | 16 | 12 | 8 | 12 | 9 | 17 | 14 | |
| 30 | 38 | 27 | | | *23 | 12 | 11 | 10 | 12 | 8 | 19 | 13 | |
| 31 | 56 | 27 | | | 23 | 16 | | 11 | | 10 | 16 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | | 353 | 36 | 89.1 | 5,480 | | | |
| November | | | | | | | 37 | 27 | 30.8 | 1,830 | | | |
| December | | | | | | | | | 25.2 | 1,550 | | | |
| January | | | | | | | | | 23.0 | 1,410 | | | |
| February | | | | | | | | 15 | 19.4 | 1,080 | | | |
| March | | | | | | | 36 | 12 | 19.5 | 1,200 | | | |
| April | | | | | | | 28 | 11 | 18.4 | 1,090 | | | |
| May | | | | | | | 11 | 6 | 9.4 | 516 | | | |
| June | | | | | | | 58 | 11 | 18.7 | 1,110 | | | |
| July | | | | | | | 182 | 7 | 16.3 | 1,000 | | | |
| August | | | | | | | 34 | 8 | 16.7 | 1,030 | | | |
| September | | | | | | | 17 | 9 | 12.9 | 768 | | | |
| The year | | | | | | | 353 | 6 | 24.9 | 18,060 | | | |

*Discharge measurement.

Sheep Creek near Morrill, Nebr.

Location.- Staff gage in sec. 16, T. 23 N., R. 57 W., 1 mile west of Morrill.

Records available.- October 1931 to September 1934.

Extremes.- Maximum discharge recorded during year, 123 second-feet (gage height, 3.23 feet); minimum, 0.8 second-foot July 7, 8, 1932-34: Maximum gage height, 6.75 feet (discharge not determined) owing to break in Interstate canal Aug. 2, 1932; minimum discharge, that of July 7, 8, 1934.

Remarks.- Records good except those estimated Oct. 1 to Feb. 28, on basis of nine discharge measurements and intermittent gage heights, and those estimated July 2, Sept. 2, 3, 26, which are fair. During irrigation season all flow at a point $1\frac{1}{2}$ miles above station is diverted.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 123 | 113 | | | | 88 | 72 | 45 | 3.8 | 1.8 | 2.6 | 11 |
| 2 | 123 | *113 | | | | 88 | 75 | 33 | 3.8 | 1.8 | 3.0 | 11 |
| 3 | 122 | | 102 | 88 | 85 | 92 | 79 | 34 | 7.5 | 1.7 | 2.2 | 12 |
| 4 | *121 | | | | | 80 | 78 | 33 | 5.3 | 1.7 | 2.6 | 12 |
| 5 | | 112 | | | | 77 | 84 | 3.6 | 3.8 | 1.4 | 2.4 | 6.6 |
| 6 | 121 | | | | | 76 | 81 | 5.5 | 3.8 | 1.2 | 2.4 | 9.3 |
| 7 | | 110 | | | | 75 | 78 | 4.0 | 3.8 | .8 | 2.8 | 9.0 |
| 8 | | 114 | | | | 74 | 74 | 3.8 | 3.8 | .8 | 2.0 | 9.3 |
| 9 | | 116 | 100 | 87 | 84 | 73 | 74 | 3.8 | 5.8 | 1.0 | 2.0 | 11 |
| 10 | 122 | 115 | | | | 74 | 73 | 3.8 | 3.8 | 1.0 | 3.4 | 4.6 |
| 11 | | | | | | 72 | 74 | 3.8 | 2.0 | 1.0 | 3.6 | 9.0 |
| 12 | 122 | | 98 | | | 73 | 74 | 3.8 | 1.7 | 1.0 | 3.2 | 8.4 |
| 13 | | 110 | 97 | 86 | 84 | 72 | 74 | 7.8 | 1.7 | 1.5 | 3.4 | 8.1 |
| 14 | 121 | | *98 | | | 72 | 75 | 6.0 | 1.7 | 1.7 | 3.4 | 6.0 |
| 15 | | 106 | 98 | | | 72 | 76 | 4.8 | 3.2 | 1.2 | 5.8 | 6.9 |
| 16 | | | 98 | | | 73 | 75 | 4.0 | 3.2 | 1.2 | 6.3 | 6.9 |
| 17 | 120 | | 97 | 85 | 83 | 70 | 76 | 3.8 | 3.0 | 1.3 | 6.3 | 6.3 |
| 18 | | 106 | 97 | *85 | | 74 | 75 | 3.6 | 2.2 | 1.2 | 6.0 | 6.0 |
| 19 | *119 | | | | *83 | 70 | 76 | 4.0 | 2.2 | 1.3 | 6.9 | 6.3 |
| 20 | | | 95 | | | 74 | 74 | 2.8 | 2.0 | 1.3 | 9.7 | 6.0 |
| 21 | | 103 | | | | 70 | 74 | 2.4 | 2.4 | 1.5 | 7.5 | 6.0 |
| 22 | 117 | | | | 83 | 70 | 75 | 2.2 | 2.6 | 1.8 | 7.8 | 5.8 |
| 23 | | *105 | | | | 74 | 72 | 2.2 | 2.2 | 2.2 | 7.5 | 5.8 |
| 24 | 115 | | 92 | | | 76 | 68 | 2.2 | 2.0 | 2.8 | 13 | 5.3 |
| 25 | | 105 | | 85 | | 70 | 67 | 3.2 | 2.2 | 3.4 | 12 | 5.8 |
| 26 | | | | | | 70 | 68 | 2.8 | 1.8 | 3.0 | 12 | 5.4 |
| 27 | 115 | | | | 80 | 72 | 67 | 2.4 | 2.4 | 3.0 | 13 | 5.0 |
| 28 | | 104 | 90 | | | 70 | 65 | 2.0 | 2.0 | 3.0 | 7.5 | 4.3 |
| 29 | | | | | | 75 | 65 | 2.0 | 2.0 | 3.0 | 11 | 4.6 |
| 30 | | | *88 | | | 77 | 65 | 2.8 | 1.8 | 3.0 | 11 | 4.3 |
| 31 | | | 88 | *85 | | 78 | | 3.8 | | 3.0 | 11 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 123 | | 119 | 7,320 | | |
| November | | | | | | | 118 | | 108 | 6,450 | | |
| December | | | | | | | | | 96.0 | 5,900 | | |
| January | | | | | | | | | 86.0 | 5,290 | | |
| February | | | | | | | | | 43.4 | 4,630 | | |
| March | | | | | | | 92 | 70 | 74.9 | 4,600 | | |
| April | | | | | | | 84 | 35 | 3.5 | 4,370 | | |
| May | | | | | | | 45 | 2.0 | 7.81 | 460 | | |
| June | | | | | | | 7.5 | 1.7 | 2.98 | 178 | | |
| July | | | | | | | 3.4 | .8 | 1.79 | 110 | | |
| August | | | | | | | 13 | 2.0 | 5.24 | 383 | | |
| September | | | | | | | 12 | 4.3 | 7.28 | 433 | | |
| The year | | | | | | | 123 | .8 | 55.5 | 40,140 | | |

*Discharge measurements.

Winter Creek near Scottsbluff, Nebr.

Location.- Staff gage in sec. 19, T. 22 N., R. 54 W.. 1 mile east of Scottsbluff.

Records available.- October 1931 to September 1934.

Extremes.- Maximum discharge recorded during year, 97 second-feet Oct. 6 (gage height, 2.08 feet); minimum daily discharge, 1 second-foot July 24.
1932-34: Maximum discharge, 176 second-feet Sept. 14, 1933 (gage height, 2.62 feet); minimum daily discharge, that of July 24, 1934.

Remarks.- Records fair. Discharge estimated Oct. 1 to Feb. 26 by means of eight discharge measurements and intermittent gage readings. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | | | | |
|-----------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|----|--|--|--|
| 1 | 90 | 85 | 70 | 61 | 60 | 57 | 48 | 5 | 4 | 59 | 6 | 23 | | | | |
| 2 | | 80 | | | 56 | 52 | 5 | 4 | 11 | 4 | 24 | | | | | |
| 3 | | *73 | | | 54 | 51 | 4 | 59 | 11 | 4 | 23 | | | | | |
| 4 | | 90 | | | 53 | 50 | 4 | 14 | 10 | 4 | 17 | | | | | |
| 5 | *97 | 81 | | | 60 | 53 | 49 | 4 | 7 | 16 | 7 | 26 | | | | |
| 6 | 90 | | | | | 58 | 54 | 48 | 3 | 7 | 24 | 5 | 26 | | | |
| 7 | | | | | | | 53 | 48 | 3 | 48 | 19 | 5 | 25 | | | |
| 8 | | | | | | | 52 | 48 | 3 | 47 | 20 | 4 | 33 | | | |
| 9 | | 52 | | | | | 49 | 4 | 45 | 16 | 4 | 50 | | | | |
| 10 | 84 | 85 | 53 | 42 | | | 10 | 5 | 8 | 4 | 40 | | | | | |
| 11 | | 80 | 59 | 54 | | | 45 | 7 | 3 | 8 | 10 | 35 | | | | |
| 12 | | | | 54 | | | 42 | 4 | 3 | 6 | 16 | 28 | | | | |
| 13 | | | | 54 | | | 43 | 8 | 2 | 6 | 16 | 26 | | | | |
| 14 | 83 | | | 54 | 46 | | 24 | 2 | 6 | 16 | 30 | | | | | |
| 15 | | *65 | | 54 | 48 | 6 | 6 | 3 | 13 | 38 | | | | | | |
| 16 | | 75 | | 64 | 54 | 46 | 6 | 60 | 2 | 14 | 26 | | | | | |
| 17 | | | | | 54 | 45 | 4 | 28 | 2 | 15 | 26 | | | | | |
| 18 | 55 | | | | 45 | 3 | 22 | 2 | 12 | 20 | | | | | | |
| 19 | 54 | | | | 45 | 12 | 28 | 2 | 12 | 26 | | | | | | |
| 20 | *81 | 58 | *53 | | 53 | 44 | 13 | 32 | 2 | 9 | 35 | | | | | |
| 21 | 84 | | 53 | | 45 | 9 | 26 | 2 | 10 | 34 | | | | | | |
| 22 | | | 52 | | 47 | 13 | 22 | 2 | 14 | 34 | | | | | | |
| 23 | | | 55 | | 50 | 9 | 30 | 2 | 16 | 30 | | | | | | |
| 24 | | 87 | 54 | | 53 | 2 | 43 | 1 | 17 | 32 | | | | | | |
| 25 | 52 | | 52 | 5 | 43 | 2 | 14 | 37 | | | | | | | | |
| 26 | 86 | | 59 | 52 | 48 | 6 | 37 | 2 | 12 | 52 | | | | | | |
| 27 | | | | 52 | 60 | 5 | 26 | 3 | 13 | 57 | | | | | | |
| 28 | | 52 | | 52 | 3 | 17 | 3 | 16 | 54 | | | | | | | |
| 29 | | 51 | | 32 | 3 | 9 | 3 | 14 | 53 | | | | | | | |
| 30 | 86 | 72 | | 62 | 51 | 52 | 8 | 6 | 5 | 5 | 17 | 54 | | | | |
| 31 | | | | | | 51 | | 4 | | 6 | 13 | | | | | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | | | | | |
| October | | | | | | 97 | 81 | 86.3 | 5,310 | | | | | | | |
| November | | | | | | 89 | 71 | 77.3 | 4,600 | | | | | | | |
| December | | | | | | | | 65.9 | 4,050 | | | | | | | |
| January | | | | | | | | 59.3 | 3,650 | | | | | | | |
| February | | | | | | | | 55.6 | 3,090 | | | | | | | |
| March | | | | | | 57 | 51 | 53.4 | 3,280 | | | | | | | |
| April | | | | | | 60 | 8 | 46.2 | 2,750 | | | | | | | |
| May | | | | | | 24 | 2 | 6.4 | 391 | | | | | | | |
| June | | | | | | 60 | 2 | 22.8 | 1,360 | | | | | | | |
| July | | | | | | 59 | 1 | 8.5 | 522 | | | | | | | |
| August | | | | | | 17 | 4 | 10.8 | 666 | | | | | | | |
| September | | | | | | 57 | 17 | 33.8 | 2,010 | | | | | | | |
| The year | | | | | | 97 | 1 | 43.7 | 31,680 | | | | | | | |

*Discharge measurement.

Gering Drain near Gering, Nebr.

Location.- Staff gage on line between secs. 5 and 6, T. 21 N., R. 54 W., 2 miles east of Gering.

Records available.- October 1930 to September 1934.

Extremes.- Maximum discharge during year, about 2,250 second-feet (determined by slope-area method) June 2 (gage height, 10.0 feet, from flood marks); minimum daily discharge, 6 second-feet Aug. 21, Sept. 13.
1931-34: Maximum and minimum discharges, those of 1934.

Remarks.- Records fair. Discharge estimated Oct. 1 to Mar. 19 on basis of seven discharge measurements and intermittent gage heights.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 55 | 38 | | | 30 | | 26 | 24 | 24 | 19 | 17 | 11 |
| 2 | 55 | | | | | | 27 | 24 | 150 | 17 | 19 | 21 |
| 3 | 52 | *38 | | 31 | *30 | 28 | 26 | 24 | 175 | 20 | 17 | 9 |
| 4 | 50 | | | | | | 29 | 24 | 100 | 20 | 20 | 8 |
| 5 | *48 | 38 | | | | | 28 | 24 | 50 | 20 | 20 | 10 |
| 6 | | | | | | | | | | | | |
| 7 | | 39 | 36 | | 30 | | 27 | 24 | 40 | 18 | 16 | 6 |
| 8 | | | | | | | 28 | 24 | 31 | 17 | 16 | 12 |
| 9 | 46 | 39 | | | | 27 | 27 | 25 | 33 | 19 | 16 | 10 |
| 10 | | 38 | | | | | 25 | 23 | 23 | 20 | 17 | 18 |
| 11 | | | | 30 | | | 27 | 24 | 26 | 19 | 49 | 10 |
| 12 | | | | | | | 27 | 24 | 25 | 18 | 40 | 13 |
| 13 | 44 | 37 | | | | 26 | 27 | 24 | 23 | 20 | 39 | 14 |
| 14 | | | 36 | | | | 28 | 25 | 21 | 20 | 33 | 6 |
| 15 | 44 | 36 | *35 | | 29 | | 28 | 24 | 20 | 20 | 29 | 10 |
| 16 | | | | | | | 27 | 24 | 40 | 16 | 26 | 12 |
| 17 | | | | | | | 27 | 24 | 30 | 20 | 23 | 10 |
| 18 | *44 | | 34 | 29 | | 25 | 27 | 24 | 20 | 20 | 23 | 7 |
| 19 | | | | | | | 26 | 24 | 11 | 21 | 16 | 16 |
| 20 | 44 | | | *29 | *29 | 25 | 38 | 24 | 11 | 20 | 16 | 12 |
| 21 | | | | | | | 38 | 24 | 10 | 16 | 9 | 13 |
| 22 | | | | | | 24 | 39 | 24 | 57 | 16 | 6 | 13 |
| 23 | 42 | 36 | 33 | | 29 | 25 | 39 | 23 | 28 | 19 | 15 | 12 |
| 24 | | | | | | 25 | 31 | 24 | 21 | 19 | 13 | 16 |
| 25 | | | | 29 | | 26 | 24 | 24 | 20 | 22 | 10 | 16 |
| 26 | | | | | | 26 | 25 | 24 | 17 | 16 | 9 | 16 |
| 27 | | | | | 28 | 25 | 24 | 24 | 18 | 17 | 14 | 18 |
| 28 | | | 32 | | | 26 | 24 | 24 | 17 | 20 | 10 | 20 |
| 29 | 40 | | | | | 26 | 24 | 24 | 16 | 18 | 13 | 21 |
| 30 | | | | | | 26 | 24 | 24 | 20 | 16 | 16 | 20 |
| 31 | | | 32 | | | 26 | 23 | 24 | 18 | 18 | 15 | 24 |
| | | | 32 | | | 27 | | 24 | | 20 | 13 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 55 | | 44.6 | 2,740 | | |
| November | | | | | | | | | 36.9 | 2,200 | | |
| December | | | | | | | | | 34.4 | 2,110 | | |
| January | | | | | | | | | 29.6 | 1,820 | | |
| February | | | | | | | | | 29.2 | 1,620 | | |
| March | | | | | | | | 24 | 26.2 | 1,610 | | |
| April | | | | | | | 39 | 23 | 28.2 | 1,680 | | |
| May | | | | | | | 25 | 23 | 23.9 | 1,470 | | |
| June | | | | | | | 175 | 10 | 38.2 | 2,270 | | |
| July | | | | | | | 22 | 16 | 18.8 | 1,160 | | |
| August | | | | | | | 49 | 6 | 19.8 | 1,380 | | |
| September | | | | | | | 24 | 6 | 13.4 | 795 | | |
| The year | | | | | | | 175 | 6 | 28.5 | 20,660 | | |

*Discharge measurement.

Ninemile Drain near McGrew, Nebr.

Location.- Staff gage in sec. 25, T. 21 N., R. 53 W., $1\frac{1}{2}$ miles north of McGrew.

Records available.- January 1932 to September 1934.

Extremes.- Maximum daily discharge during year (estimated), 220 second-feet Oct. 1; minimum daily discharge, 51 second-feet July 25.
1932-34: Maximum discharge, 385 second-feet Apr. 13, 1932 (gage height, 3.08 feet); minimum daily discharge, that of July 25, 1934.

Remarks.- Records fair. Discharge estimated Oct. 1 to Feb. 28 on basis of seven discharge measurements and intermittent gage heights. Return flow from irrigated lands.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|------|---------|------|------|------|----------------------|
| 1 | 220 | *161 | | | | 98 | 80 | 76 | 93 | 85 | 80 | 70 |
| 2 | 215 | 162 | | | | 98 | 80 | 74 | 101 | 83 | 83 | 80 |
| 3 | 210 | 164 | | 115 | 110 | 99 | 77 | 83 | 112 | 82 | 88 | 91 |
| 4 | 208 | 163 | | | | 96 | 80 | 85 | 105 | 84 | 83 | 83 |
| 5 | 206 | 162 | | | *109 | 92 | 79 | 80 | 108 | 101 | 85 | 88 |
| 6 | 204 | 160 | 140 | | | 93 | 80 | 77 | 110 | 90 | 88 | 87 |
| 7 | 200 | 166 | | 110 | | 92 | 76 | 73 | 102 | 83 | 82 | 78 |
| 8 | 198 | 171 | | | 108 | 92 | 76 | 74 | 87 | 83 | 83 | 80 |
| 9 | *197 | | | *109 | | 91 | 74 | 76 | 79 | 84 | 70 | 115 |
| 10 | 195 | 165 | | | | 89 | 73 | 75 | 97 | 85 | 102 | 112 |
| 11 | 193 | | 135 | | | 87 | 68 | 75 | 90 | 85 | 100 | 100 |
| 12 | 192 | | | 110 | | 89 | 68 | 77 | 90 | 83 | 82 | 92 |
| 13 | 192 | 160 | 134 | | 105 | 87 | 71 | 91 | 91 | 85 | 87 | 92 |
| 14 | 192 | | 132 | | | 88 | 72 | 96 | 95 | 83 | 69 | 94 |
| 15 | 191 | 155 | *131 | | | 88 | 71 | 87 | 106 | 84 | 70 | 86 |
| 16 | 191 | | 130 | | | 86 | 73 | 84 | 104 | 84 | 72 | 92 |
| 17 | 190 | | 128 | | | 90 | 72 | 79 | 110 | 86 | 77 | 94 |
| 18 | 190 | 152 | 125 | 111 | 102 | 92 | 69 | 75 | 99 | 85 | 82 | 89 |
| 19 | | | | | | 90 | 69 | 74 | 90 | 74 | 79 | 85 |
| 20 | | | | *112 | | 88 | 72 | 74 | 80 | 57 | 80 | 87 |
| 21 | 182 | 150 | | | | 90 | 73 | 67 | 129 | 81 | 85 | 89 |
| 22 | | 150 | 122 | | | 90 | 71 | 63 | 115 | 75 | 84 | 93 |
| 23 | | 150 | | 112 | 100 | 90 | 74 | 50 | 112 | 66 | 89 | 90 |
| 24 | 174 | *150 | | | | 88 | 74 | 55 | 109 | 53 | 92 | 92 |
| 25 | | | | | | 85 | 74 | 60 | 103 | 51 | 87 | 110 |
| 26 | 170 | | | | | 83 | 74 | 82 | 92 | 64 | 82 | 113 |
| 27 | | 145 | 120 | | 92 | 85 | 73 | 74 | 88 | 56 | 80 | 114 |
| 28 | | | | 111 | | 83 | 76 | 77 | 89 | 70 | 81 | 114 |
| 29 | | | | | | 83 | 78 | 77 | 88 | 74 | 74 | 104 |
| 30 | 165 | | 119 | | | 82 | 76 | 85 | 85 | 72 | 71 | 124 |
| 31 | | | 118 | | | | | 92 | | 76 | 69 | |
| Month | | | | | | Maximum | | Minimum | | Mean | | Run-off in acre-feet |
| October | | | | | | 220 | | | | 188 | | 11,590 |
| November | | | | | | 171 | | | | 156 | | 9,250 |
| December | | | | | | | | | | 130 | | 7,980 |
| January | | | | | | | | | | 111 | | 6,850 |
| February | | | | | | | | | | 104 | | 5,750 |
| March | | | | | | 99 | | 82 | | 89.2 | | 5,490 |
| April | | | | | | 80 | | 68 | | 74.1 | | 4,410 |
| May | | | | | | 96 | | 50 | | 76.4 | | 4,690 |
| June | | | | | | 129 | | 79 | | 98.6 | | 5,970 |
| July | | | | | | 101 | | 51 | | 77.5 | | 4,780 |
| August | | | | | | 102 | | 67 | | 81.2 | | 4,990 |
| September | | | | | | 124 | | 70 | | 94.6 | | 5,630 |
| The year | | | | | | 220 | | 51 | | 107 | | 77,270 |

*Discharge measurement.

Bayard sugar-factory drain near Bayard, Nebr.

Location.- Staff gage in sec. 4, T. 20 N., R. 52 W., 1½ miles southwest of Bayard.

Records available.- October 1931 to September 1934.

Extremes.- Maximum discharge during year (estimated), 75 second-feet Oct. 1; no flow June 1, 2, July 4-8.
1932-34: Maximum discharge, 115 second-feet July 4 or 5 (gage height, 2.20 feet); no flow June 1, 2, July 4-8, 1934.

Remarks.- Records good except those for Oct. 1 to Feb. 28, which were estimated on basis of six discharge measurements and intermittent gage heights. Some diversions above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 75 | *51 | | | | 37 | 33 | 37 | 0 | 23 | 24 | 24 |
| 2 | 74 | 51 | | | | 36 | 32 | 40 | 0 | 11 | 23 | 26 |
| 3 | | 51 | 47 | 41 | 39 | 39 | 33 | 38 | 8.1 | .5 | 22 | 26 |
| 4 | 70 | | | | | 37 | 34 | 34 | 9.1 | 0 | 22 | 26 |
| 5 | | | | | *38 | 34 | 33 | 30 | .3 | 0 | 23 | 24 |
| 6 | | 51 | | | | 35 | 33 | 28 | .3 | 0 | 23 | 24 |
| 7 | | 65 | | | 40 | 35 | 33 | 27 | .3 | 0 | 26 | 24 |
| 8 | | | 52 | 45 | | 35 | 32 | 27 | .3 | 0 | 25 | 24 |
| 9 | *64 | | | | *40 | 34 | 30 | 27 | .3 | 8.5 | 29 | 26 |
| 10 | 63 | | | | | 34 | 30 | 27 | 9.4 | 22 | 18 | 26 |
| 11 | 63 | 50 | | 40 | | 34 | 30 | 27 | 24 | 22 | 5.3 | 26 |
| 12 | 62 | | 44 | | | 34 | 29 | 27 | 24 | 22 | 4.3 | 25 |
| 13 | | | 43 | | | 34 | 29 | 48 | 22 | 22 | 13 | 25 |
| 14 | 60 | | | | | 35 | 30 | 36 | 22 | 21 | 21 | 25 |
| 15 | | 48 | | 41 | | 36 | 31 | 28 | 27 | 21 | 29 | 25 |
| 16 | | | 43 | | 37 | 37 | 31 | 26 | 13 | 21 | 26 | 20 |
| 17 | | | | | | 35 | 30 | 12 | 2.3 | 22 | 25 | 14 |
| 18 | 58 | 49 | 43 | 42 | | 37 | 29 | 2.3 | 2.6 | 22 | 24 | 13 |
| 19 | | | | | | 38 | 30 | .7 | 3.6 | 21 | 24 | 13 |
| 20 | | | | *42 | | 39 | 30 | .3 | 3.8 | 22 | 24 | 13 |
| 21 | | 50 | 43 | | | 37 | 30 | .2 | 6.7 | 22 | 22 | 15 |
| 22 | 56 | 49 | | 41 | | 34 | 33 | 1.9 | 6.2 | 10 | 34 | 15 |
| 23 | | 49 | | | 36 | 33 | 33 | .9 | 2.6 | 1.3 | 24 | 15 |
| 24 | 55 | *49 | | | | 33 | 33 | .7 | 2.6 | 27 | 24 | 21 |
| 25 | | | | | | 33 | 32 | 12 | 2.3 | 26 | 23 | 21 |
| 26 | | | | | | | | | | | | |
| 27 | | 48 | 42 | | | 32 | 35 | 26 | 3.0 | 26 | 24 | 21 |
| 28 | 53 | | | 40 | 33 | 33 | 37 | .3 | 16 | 11 | 24 | 21 |
| 29 | | | | | | 33 | 38 | .5 | 27 | 1.3 | 23 | 21 |
| 30 | | | 42 | | | 33 | 36 | 8.5 | 24 | 1.9 | 24 | 20 |
| 31 | | | 42 | | | 34 | 35 | 23 | 23 | 11 | 22 | 20 |
| | | | | | | 35 | | 8.8 | | 26 | 23 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 75 | | 60.3 | 3,710 | | |
| November | | | | | | | 52 | | 49.6 | 2,950 | | |
| December | | | | | | | | | 43.8 | 2,690 | | |
| January | | | | | | | | | 40.7 | 2,500 | | |
| February | | | | | | | | | 36.9 | 2,050 | | |
| March | | | | | | | 39 | 32 | 35.0 | 2,150 | | |
| April | | | | | | | 38 | 29 | 32.1 | 1,910 | | |
| May | | | | | | | 48 | .2 | 19.5 | 1,200 | | |
| June | | | | | | | 27 | 0 | 9.53 | 567 | | |
| July | | | | | | | 27 | 0 | 14.3 | 882 | | |
| August | | | | | | | 34 | 4.3 | 22.5 | 1,380 | | |
| September | | | | | | | 26 | 13 | 21.5 | 1,270 | | |
| The year | | | | | | | 75 | 0 | 32.1 | 23,260 | | |

*Discharge measurement.

Red Willow Creek near Bayard, Nebr.

Location.- Staff gage at southwest corner of sec. 7, T. 20 N., R. 51 W., a quarter of a mile below mouth of Wild Horse Drain, three-quarters of a mile above mouth of creek, and 4½ miles southeast of Bayard.

Records available.- February 1932 to September 1934. October 1930 to September 1931, at station 1 mile upstream above mouth of Wild Horse Drain.

Extremes.- Maximum discharge during year, 253 second-feet Aug. 15 (gage height, 2.58 feet); minimum daily discharge, 18 second-feet July 18, 19.
1933-34: Maximum discharge, about 1,650 second-feet Aug. 25, 1933 (gage height, 6.4 feet); minimum daily discharge, that of July 18, 19, 1934.

Remarks.- Records good Mar. 1 to Sept. 30. Discharge estimated Oct. 1 to Feb. 28 on basis of six discharge measurements and intermittent gage heights. Numerous small diversions above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 150 | 104 | 88 | 79 | 70 | 66 | 58 | 36 | 24 | 66 | 23 | 24 |
| 2 | 130 | 104 | | | | 67 | 59 | 35 | 23 | 45 | 27 | 31 |
| 3 | 127 | 103 | | | | 68 | 59 | 48 | 48 | 30 | 23 | 27 |
| 4 | 124 | 103 | | | | 63 | 64 | 52 | 50 | 31 | 22 | 25 |
| 5 | 124 | 103 | 86 | 77 | 67 | 63 | 62 | 51 | 27 | 35 | 22 | 24 |
| 6 | 123 | 102 | | | | 62 | 61 | 47 | 32 | 31 | 22 | 21 |
| 7 | 123 | 102 | | | | 61 | 61 | 49 | 28 | 32 | 22 | 23 |
| 8 | 123 | 102 | | | | 63 | 62 | 47 | 30 | 31 | 22 | 21 |
| 9 | 123 | 102 | 84 | 77 | 66 | 60 | 60 | 45 | 30 | 30 | 22 | 29 |
| 10 | 121 | 101 | | | | 60 | 60 | 43 | 29 | 60 | 63 | 26 |
| 11 | 119 | 100 | | | | 60 | 59 | 44 | 57 | 49 | 53 | 26 |
| 12 | 117 | 100 | | | | 59 | 60 | 42 | 55 | 53 | 52 | 51 |
| 13 | 116 | 99 | 84 | 77 | 60 | 60 | 41 | 49 | 51 | 53 | 48 | |
| 14 | 115 | 98 | 84 | 77 | 61 | 58 | 41 | 49 | 52 | 34 | 48 | |
| 15 | 115 | 98 | 84 | 77 | 60 | 61 | 40 | 50 | 50 | 117 | 37 | |
| 16 | 114 | 98 | 83 | 76 | 62 | 61 | 26 | 54 | 34 | 30 | 26 | |
| 17 | 113 | 97 | 83 | 76 | 59 | 58 | 19 | 40 | 24 | 26 | 23 | |
| 18 | 112 | 96 | 83 | 76 | 60 | 58 | 27 | 39 | 18 | 25 | 32 | |
| 19 | 111 | 95 | 83 | 76 | 60 | 56 | 28 | 40 | 18 | 24 | 37 | |
| 20 | 111 | 94 | 83 | 76 | 59 | 56 | 24 | 38 | 19 | 25 | 30 | |
| 21 | 110 | 94 | 83 | 75 | 58 | 54 | 23 | 41 | 19 | 24 | 30 | |
| 22 | 109 | 94 | 82 | 75 | 58 | 53 | 30 | 48 | 19 | 25 | 29 | |
| 23 | 108 | 93 | 82 | 75 | 58 | 55 | 25 | 49 | 31 | 24 | 30 | |
| 24 | 107 | 93 | 82 | 75 | 58 | 53 | 34 | 46 | 24 | 24 | 29 | |
| 25 | 107 | 90 | 82 | 75 | 59 | 46 | 48 | 45 | 24 | 25 | 30 | |
| 26 | 106 | | 82 | 75 | 59 | 46 | 40 | 43 | 26 | 24 | 30 | |
| 27 | 105 | | 81 | 75 | 58 | 37 | 37 | 40 | 29 | 24 | 31 | |
| 28 | 105 | | 81 | 75 | 58 | 37 | 37 | 35 | 27 | 23 | 33 | |
| 29 | 105 | 81 | 81 | 72 | 60 | 59 | 37 | 50 | 68 | 27 | 23 | 38 |
| 30 | 104 | | | | | 58 | 36 | 58 | 67 | 29 | 23 | 34 |
| 31 | 104 | | | | | 60 | | 49 | | 24 | 23 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 150 | 104 | 116 | 7,100 | | |
| November | | | | | | | 104 | | 97.2 | 5,790 | | |
| December | | | | | | | | 81 | 84.0 | 5,160 | | |
| January | | | | | | | | | 76.1 | 4,680 | | |
| February | | | | | | | | | 65.9 | 3,660 | | |
| March | | | | | | | 68 | 58 | 60.5 | 3,720 | | |
| April | | | | | | | 64 | 36 | 54.9 | 3,270 | | |
| May | | | | | | | 58 | 19 | 39.3 | 2,420 | | |
| June | | | | | | | 75 | 23 | 43.8 | 2,610 | | |
| July | | | | | | | 66 | 18 | 33.5 | 2,060 | | |
| August | | | | | | | 117 | 22 | 31.3 | 1,920 | | |
| September | | | | | | | 51 | 21 | 30.8 | 1,830 | | |
| The year | | | | | | | 150 | 18 | 61.1 | 44,210 | | |

Pumpkin Creek near Bridgeport, Nebr.

Location.- Water-stage recorder on line between secs. 12 and 13, T. 19 N., R. 50 W., at highway bridge half a mile above mouth and 4 miles southeast of Bridgeport. Prior to June 25 staff gage at same location was used.

Drainage area.- 1,080 square miles.

Records available.- October 1930 to September 1934.

Extremes.- Maximum discharge during year, about 700 second-feet (determined by slope-area method) Aug. 28 (gage height, 6.95 feet); minimum daily discharge, 1 second-foot June 8, 9.

1930-34: Maximum discharge, that of Aug. 28, 1934; minimum daily discharge, 1 second-foot at times during 1931, 1934.

Remarks.- Records fair Mar. 1 to Aug. 31. Discharge estimated Oct. 1 to Feb. 28, July 9, Aug. 25, Sept. 1-30 on basis of 10 discharge measurements and intermittent gage heights. Several diversions above station. Discharge represents chiefly return seepage flow.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|------|---------|------|------|------|-------------------------|
| 1 | | | | | | 46 | 42 | 19 | 20 | 23 | 4 | 10 |
| 2 | | | | | | 46 | 42 | 80 | 21 | 21 | 4 | 10 |
| 3 | 40 | 26 | 40 | | 43 | 46 | 42 | 121 | 17 | 21 | 4 | 9 |
| 4 | | | | | | 46 | 43 | 70 | 24 | 22 | 4 | 9 |
| 5 | | | | 43 | | 46 | 44 | 54 | 27 | 22 | 4 | 8 |
| 6 | | *38 | 25 | | *41 | 44 | 44 | 49 | 11 | 21 | 4 | 9 |
| 7 | | | 27 | | | 42 | 43 | 49 | 3 | 21 | 4 | 9 |
| 8 | | 35 | | 42 | | 42 | 42 | 49 | 1 | 20 | 4 | 9 |
| 9 | | | 30 | | | 42 | 42 | 36 | 1 | 20 | 4 | 10 |
| 10 | | | 42 | *43 | | 42 | 42 | 34 | 2 | 19 | 4 | 10 |
| 11 | | | *32 | | | 43 | 42 | 30 | 4 | 18 | 8 | 9 |
| 12 | | | | | | 43 | 42 | 17 | 20 | 21 | 19 | 9 |
| 13 | 30 | | | 42 | | 43 | 42 | 17 | 29 | 23 | 21 | 12 |
| 14 | | | 32 | | | 43 | 42 | 15 | 20 | 23 | 8 | 18 |
| 15 | | | | | | 43 | 42 | 13 | 32 | 22 | 4 | 18 |
| 16 | | 25 | | *43 | 41 | 42 | 42 | 12 | 69 | 13 | 5 | 20 |
| 17 | | | | | | 42 | 41 | 12 | 51 | 5 | 5 | 25 |
| 18 | | 24 | | | 43 | 42 | 40 | 12 | 28 | 4 | 5 | 28 |
| 19 | | 24 | | | | 42 | 38 | 12 | 22 | 4 | 6 | 30 |
| 20 | | | | | | 42 | 36 | 12 | 27 | 5 | 8 | 24 |
| 21 | | | 35 | | | 43 | 36 | 12 | 36 | 5 | 9 | 17 |
| 22 | | | | | | 43 | 34 | 12 | 38 | 5 | 9 | 17 |
| 23 | | 23 | | | | 43 | 26 | 11 | 40 | 5 | 9 | 16 |
| 24 | | | | 43 | | 42 | 24 | 11 | 38 | 5 | 6 | 16 |
| 25 | | *23 | | | *44 | 42 | 23 | 23 | 27 | 5 | 6 | 15 |
| 26 | | 24 | | | 44 | 42 | 22 | 11 | 21 | 5 | 3 | 14 |
| 27 | | *24 | *36 | | 40 | 42 | 21 | 10 | 22 | 4 | 9 | 14 |
| 28 | | | | | | 43 | 20 | 16 | 24 | 4 | 9 | 14 |
| 29 | | | | | *46 | 43 | 21 | 23 | 24 | 4 | 8 | 13 |
| 30 | | 24 | 37 | | | 43 | 20 | 23 | 23 | 4 | 9 | 32 |
| 31 | | | | | 45 | 42 | | 23 | | 4 | 9 | |
| Month | | | | | | Maximum | | Minimum | | Mean | | Run-off in acre-feet |
| October | | | | | | | | | | 29.3 | | 1,800 |
| November | | | | | | | | | | 32.1 | | 1,910 |
| December | | | | | | | | | | 42.2 | | 2,590 |
| January | | | | | | | | | | 43.4 | | 2,670 |
| February | | | | | | | | | | 41.2 | | 2,290 |
| March | | | | | | 46 | | 42 | | 43.1 | | 2,650 |
| April | | | | | | 44 | | 20 | | 36.0 | | 2,140 |
| May | | | | | | 121 | | 10 | | 25.6 | | 1,760 |
| June | | | | | | 69 | | 1 | | 24.4 | | 1,450 |
| July | | | | | | 23 | | 4 | | 12.8 | | 789 |
| August | | | | | | 21 | | 3 | | 7.0 | | 430 |
| September | | | | | | 32 | | 8 | | 15.1 | | 900 |
| The year | | | | | | 121 | | 1 | | 29.5 | | 21,380 |

*Discharge measurement.

Blue Creek near Lewellen, Nebr.

Location.- Water-stage recorder on north line of sec. 30, T. 16 N., R. 42 W., 1½ miles west of Lewellen. Prior to July 16, 1934, staff gage at same location was used.

Drainage area.- 267 square miles.

Records available.- October 1930 to September 1934.

Extremes.- Maximum discharge during year, 229 second-feet May 3 (gage height, 3.04 feet); minimum daily discharge, 0.4 second-foot Aug. 5-8.
1930-34: Maximum discharge, 310 second-feet Apr. 24, 1932 (gage height, 3.72 feet); minimum daily discharge, 0.2 second-foot July 3, 29-31, 1933.

Remarks.- Records fair. Discharge for Oct. 1 to Nov. 9 determined on basis of three discharge measurements. Discharge estimated Dec. 28, Feb. 26-28. Several diversions upstream.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 90 | 110 | 97 | 103 | 106 | 126 | 104 | 14 | 72 | 126 | 2 | 18 |
| 2 | | | 104 | 103 | 109 | 110 | 95 | 87 | 81 | 95 | 2 | 21 |
| 3 | | | 143 | 103 | 109 | 112 | 88 | 212 | 89 | 88 | 1 | 25 |
| 4 | | | 114 | 106 | 109 | 106 | 90 | 181 | 45 | 89 | 1 | 24 |
| 5 | | | 111 | 111 | 108 | 96 | 95 | 127 | 4 | 98 | .4 | 10 |
| 6 | 86 | 122 | 106 | 110 | 106 | 98 | 92 | 109 | 3 | 95 | .4 | 4 |
| 7 | | | 106 | 98 | 109 | 97 | 88 | 85 | 2 | 86 | .4 | 4 |
| 8 | | | 118 | 109 | 105 | 109 | 86 | 73 | 1 | 86 | .4 | 3 |
| 9 | | | 114 | 106 | 110 | 104 | 97 | 87 | 70 | 1 | 85 | 2 |
| 10 | | | 111 | 106 | 110 | 109 | 95 | 87 | 68 | 13 | 84 | 22 |
| 11 | 85 | 110 | 99 | 105 | 111 | 99 | 85 | 72 | 11 | 66 | 29 | 25 |
| 12 | | | 108 | 95 | 104 | 110 | 100 | 82 | 69 | 87 | 72 | 110 |
| 13 | | | 108 | 102 | 95 | 115 | 97 | 86 | 70 | 97 | 67 | 108 |
| 14 | | | 96 | 99 | 106 | 110 | 95 | 91 | 72 | 82 | 64 | 100 |
| 15 | | | 105 | 104 | 108 | 108 | 98 | 89 | 68 | 117 | 49 | 71 |
| 16 | 80 | 103 | 105 | 106 | 104 | 100 | 89 | 64 | 139 | 24 | 25 | 81 |
| 17 | | | 105 | 102 | 109 | 102 | 88 | 92 | 54 | 108 | 12 | 7 |
| 18 | | | 99 | 99 | 110 | 99 | 99 | 81 | 43 | 41 | 14 | 2 |
| 19 | | | 100 | 105 | 110 | 100 | 102 | 68 | 30 | 19 | 18 | 2 |
| 20 | | | 79 | 103 | 111 | 102 | 100 | 70 | 26 | 19 | 14 | 2 |
| 21 | 80 | 99 | 105 | 106 | 103 | 97 | 64 | 13 | 30 | 3 | 2 | 54 |
| 22 | | | 95 | 103 | 108 | 105 | 99 | 54 | 3 | 135 | 3 | 1 |
| 23 | | | 95 | 105 | 109 | 105 | 103 | 49 | 2 | 108 | 4 | 1 |
| 24 | | | 99 | 103 | 112 | 103 | 103 | 33 | 3 | 156 | 2 | 1 |
| 25 | | | 99 | 98 | 105 | 105 | 99 | 34 | 13 | 69 | 4 | 1 |
| 26 | 95 | 92 | 95 | 108 | 90 | 96 | 28 | 77 | 41 | 5 | 1 | 57 |
| 27 | | | 97 | 108 | | 96 | 19 | 14 | 40 | 2 | 1 | 55 |
| 28 | | | 99 | 111 | | 100 | 12 | 36 | 88 | 2 | 1 | 39 |
| 29 | | | 98 | 122 | | 102 | 8 | 103 | 98 | 6 | 1 | 42 |
| 30 | | | 97 | 122 | | 96 | 3 | 90 | 151 | 6 | 1 | 53 |
| 31 | | | 106 | 109 | | 103 | | 76 | | 8 | 1 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | 87.2 | 5,360 | | |
| November | | | | | | | 122 | 79 | 104 | 6,160 | | |
| December | | | | | | | 143 | 44 | 104 | 6,360 | | |
| January | | | | | | | 112 | 95 | 107 | 6,580 | | |
| February | | | | | | | | | 105 | 6,810 | | |
| March | | | | | | | 126 | 89 | 100 | 6,160 | | |
| April | | | | | | | 104 | 3 | 68.3 | 4,060 | | |
| May | | | | | | | 212 | 2 | 65.3 | 4,010 | | |
| June | | | | | | | 156 | 1 | 64.5 | 3,840 | | |
| July | | | | | | | 126 | 2 | 44.4 | 2,730 | | |
| August | | | | | | | 110 | .4 | 16.1 | 991 | | |
| September | | | | | | | 84 | 3 | 42.8 | 2,540 | | |
| The year | | | | | | | 212 | .4 | 75.5 | 54,600 | | |

*Discharge measurement.

Otter Creek near Lemoyne, Nebr.

Location.- Staff gage in sec. 5, T. 15 N., R. 40 W., half a mile above mouth and 5½ miles northwest of Lemoyne. This station had been located at three different sites downstream prior to June 23, 1934. All records comparable.

Drainage area.- 12 square miles.

Records available.- April to September 1931, October 1932 to September 1934.

Extremes.- Maximum discharge recorded during year, 29 second-feet Jan. 9; minimum daily discharge, 2 second-feet Aug. 5.
1931-34: Maximum discharge, 46 second-feet Mar. 1, 1933; minimum daily discharge, that of Aug. 5, 1934.

Remarks.- Records fair. Discharge estimated Oct. 1 to Feb. 28 on basis of five discharge measurements, Sept. 1-30 on basis of two discharge measurements and intermittent gage heights. Several small diversions upstream.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|------|----------------------|-------|
| 1 | | | | | | 25 | 21 | 18 | 22 | 17 | 3 | 5 |
| 2 | | | | | | 26 | 20 | 17 | 22 | 17 | 3 | 5 |
| 3 | | | | | | 28 | 18 | 16 | 20 | 17 | 4 | 5 |
| 4 | | | | | | 29 | 18 | 22 | 20 | 16 | 3 | 5 |
| 5 | | | | | | 28 | 18 | 22 | 22 | 21 | 2 | 6 |
| 6 | | | | | | 26 | 18 | 23 | 20 | 19 | 4 | 7 |
| 7 | | | | | | 27 | 19 | 24 | 20 | 16 | 3 | 8 |
| 8 | | | | | | 26 | 19 | 22 | 20 | 18 | 4 | 8 |
| 9 | | | | | | 25 | 20 | 22 | 21 | 19 | 4 | 10 |
| 10 | | | | | | 25 | 19 | 20 | 21 | 19 | 3 | *16 |
| 11 | | | | | | 24 | 20 | 17 | 21 | 18 | 4 | 17 |
| 12 | | | | | | 24 | 20 | 16 | 22 | 18 | 22 | 20 |
| 13 | | | | | | 23 | 20 | 16 | 22 | 18 | 15 | 20 |
| 14 | | | | | | 23 | 20 | 18 | 22 | 19 | 20 | 20 |
| 15 | | | | | | 23 | 20 | 18 | 26 | 18 | 6 | 20 |
| 16 | | | | | | 23 | 20 | 18 | 24 | 20 | 4 | 22 |
| 17 | | | | | | 23 | 20 | 18 | 20 | 20 | 4 | *23 |
| 18 | | | | | | 23 | 20 | 22 | 19 | 20 | 4 | 25 |
| 19 | | | | | | 23 | 20 | 24 | 20 | 18 | 4 | 25 |
| 20 | | | | | | 23 | 20 | 24 | 20 | 20 | 4 | 25 |
| 21 | | | | | | 23 | 20 | 24 | 20 | 18 | 4 | 28 |
| 22 | | | | | | 22 | 20 | 26 | 20 | 18 | 4 | 27 |
| 23 | | | | | | 22 | 20 | 24 | 20 | 19 | 5 | 26 |
| 24 | | | | | | 22 | 20 | 23 | 20 | 3 | 5 | 25 |
| 25 | | | | | | 23 | 20 | 26 | 20 | 3 | 6 | 24 |
| 26 | | | | | | 22 | 19 | 26 | 20 | 8 | 5 | 23 |
| 27 | | | | | | 22 | 19 | 24 | 20 | 6 | 6 | 23 |
| 28 | | | | | | 21 | 18 | 23 | 19 | 6 | 5 | 23 |
| 29 | | | | | | 22 | 18 | 24 | 19 | 6 | 5 | 23 |
| 30 | | | | | | 21 | 18 | 25 | 19 | 3 | 5 | 23 |
| 31 | | | | | | 24 | 20 | 24 | | 3 | 5 | |
| Month | | | | | | | Maximum | Minimum | Mean | | Run-off in acre-feet | |
| October | | | | | | | | | 23.2 | | 1,430 | |
| November | | | | | | | | | 23.3 | | 1,390 | |
| December | | | | | | | | | 24.0 | | 1,480 | |
| January | | | | | | | 29 | | 25.3 | | 1,560 | |
| February | | | | | | | | | 23.6 | | 1,310 | |
| March | | | | | | | 29 | 20 | 23.8 | | 1,460 | |
| April | | | | | | | 21 | 18 | 19.4 | | 1,150 | |
| May | | | | | | | 26 | 16 | 21.5 | | 1,320 | |
| June | | | | | | | 26 | 19 | 20.7 | | 1,230 | |
| July | | | | | | | 21 | 3 | 14.8 | | 912 | |
| August | | | | | | | 22 | 2 | 5.6 | | 347 | |
| September | | | | | | | 28 | 5 | 17.9 | | 1,070 | |
| The year | | | | | | | 29 | 2 | 20.2 | | 14,660 | |

*Discharge measurement.

Birdwood Creek near Hershey, Nebr.

Location.- Staff gage in sec. 2, T. 14 N., R. 33 W., 1 mile above mouth and 5 miles northwest of Hershey.

Drainage area.- 286 square miles.

Records available.- January 1931 to September 1934.

Extremes.- Maximum discharge recorded during year, 554 second-feet Aug. 17 (gage height, 3.12 feet); minimum daily discharge, 71 second-feet June 29 to July 1. 1931-34: Maximum and minimum discharges, those of 1934.

Remarks.- Records fair. Discharge estimated Oct. 1 to Feb. 28 on basis of six discharge measurements. Small diversions upstream.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|------|---------|------|----------------------|------|-------|
| 1 | | | | | | 205 | 201 | 137 | 103 | 71 | 100 | 218 |
| 2 | | | | | | 173 | 189 | 124 | 158 | 95 | 112 | 214 |
| 3 | | 170 | | 195 | 220 | 169 | 177 | 121 | 181 | 95 | 90 | 205 |
| 4 | | | | | | 181 | 185 | 189 | 151 | 90 | 95 | 185 |
| 5 | | | | | | 173 | 185 | 173 | 151 | 103 | 95 | 165 |
| 6 | | | | | | 165 | 185 | 137 | 158 | 118 | 100 | 158 |
| 7 | | 173 | | | 240 | 165 | 169 | 148 | 112 | 112 | 121 | 158 |
| 8 | | | 200 | 192 | 243 | 169 | 181 | 140 | 85 | 112 | 118 | 154 |
| 9 | | 173 | | | 240 | 169 | 173 | 137 | 90 | 115 | 103 | 193 |
| 10 | | | | | | 162 | 173 | 124 | 95 | 112 | 98 | 275 |
| 11 | | | | | | 165 | 173 | 121 | 90 | 127 | 127 | 228 |
| 12 | | 175 | | 192 | | 165 | 154 | 121 | 82 | 118 | 115 | 201 |
| 13 | | | | | 220 | 165 | 151 | 127 | 144 | 148 | 100 | 173 |
| 14 | | | | 193 | | 144 | 158 | 148 | 144 | 151 | 95 | 151 |
| 15 | | | | | | 144 | 148 | 158 | 232 | 154 | 112 | 154 |
| 16 | | | | | | 162 | 154 | 154 | 189 | 154 | 130 | 158 |
| 17 | | | | 190 | | 140 | 148 | 137 | 154 | 134 | 482 | 155 |
| 18 | | 185 | 210 | | | 144 | 144 | 127 | 137 | 130 | 265 | 154 |
| 19 | | | | | | 169 | 127 | 118 | 121 | 134 | 158 | 158 |
| 20 | | | | | 200 | 169 | 137 | 121 | 121 | 137 | 148 | 151 |
| 21 | | | 220 | | | 169 | 144 | 112 | 127 | 112 | 140 | 181 |
| 22 | | 195 | | | | 173 | 140 | 121 | 162 | 134 | 158 | 189 |
| 23 | | | 218 | | | 175 | 185 | 112 | 148 | 118 | 144 | 165 |
| 24 | | 197 | 220 | | | 169 | 185 | 115 | 127 | 115 | 127 | 197 |
| 25 | | | | 190 | | 177 | 185 | 115 | 106 | 124 | 134 | 165 |
| 26 | | | | | | 181 | 148 | 127 | 106 | 148 | 165 | 169 |
| 27 | | 200 | | | | 181 | 158 | 124 | 92 | 140 | 154 | 169 |
| 28 | | | 200 | | 190 | 181 | 169 | 112 | 75 | 137 | 154 | 169 |
| 29 | | | | | | 185 | 169 | 100 | 71 | 118 | 154 | 175 |
| 30 | | | | | | 181 | 169 | 99 | 71 | 130 | 173 | 173 |
| 31 | | | | | 180 | 189 | | 92 | | 118 | 169 | |
| Month | | | | | | Maximum | | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | | | | 184 | | |
| November | | | | | | | | | | 205 | | |
| December | | | | | | | | | | 191 | | |
| January | | | | | | | | | | 211 | | |
| February | | | | | | | | | | 180 | | |
| March | | | | | | 205 | | 140 | 170 | 10,430 | | |
| April | | | | | | 201 | | 127 | 165 | 9,850 | | |
| May | | | | | | 189 | | 92 | 129 | 7,910 | | |
| June | | | | | | 232 | | 71 | 126 | 7,500 | | |
| July | | | | | | 154 | | 71 | 123 | 7,550 | | |
| August | | | | | | 482 | | 90 | 143 | 8,800 | | |
| September | | | | | | 275 | | 151 | 179 | 10,670 | | |
| The year | | | | | | 482 | | 71 | 167 | 121,000 | | |

South Platte River near Lake George, Colo.

(Locally known as South Fork of South Platte River)

Location.- Water-stage recorder in NW $\frac{1}{4}$ sec. 21, T. 13 S., R. 72 W., $1\frac{1}{2}$ miles below Elevenmile Canyon Reservoir and 8 miles above Lake George. Zero of gage is 8,423.95 feet above mean sea level.

Drainage area.- 929 square miles.

Records available.- October 1929 to September 1934 in reports of U. S. Geological Survey and State engineer.

Extremes.- Maximum discharge during year, 249 second-feet May 23, 24 (gage height, 2.26 feet); minimum daily discharge, 1 second-foot several days in February, 1930-34: Maximum discharge, 990 second-feet Aug. 15, 1930 (gage height, 4.8 feet); no flow Jan. 25, 1930, and during February 1931.

Remarks.- Records good except those for Dec. 8 to Apr. 11, which were based on estimates of water released from Elevenmile Canyon Reservoir. Diversions for irrigation above station. Flow regulated by Antero and Elevenmile Canyon Reservoirs, capacities, 33,000 acre-feet and 80,000 acre-feet, respectively.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|------|
| 1 | 28 | 19 | 27 | | | | 13 | 4 | 186 | 42 | 66 | 48 |
| 2 | 22 | 18 | 29 | | | | 26 | 4 | 195 | 42 | 21 | 48 |
| 3 | 18 | 16 | 26 | | | | 26 | 3 | 87 | 44 | 15 | 45 |
| 4 | 18 | 13 | 21 | | | | 13 | 6 | 58 | 44 | 15 | 33 |
| 5 | 18 | 7 | 17 | | | | 13 | 11 | 89 | 44 | 27 | 26 |
| 6 | 18 | 18 | 16 | | *1 | | 13 | 22 | 94 | 44 | 33 | 21 |
| 7 | 19 | 20 | 10 | | | | 13 | 49 | 85 | 44 | 36 | 24 |
| 8 | 19 | 18 | 10 | | | | 13 | 60 | 60 | 44 | 38 | 26 |
| 9 | 21 | 17 | 10 | | | | 10 | 38 | 13 | 44 | 38 | 39 |
| 10 | 26 | 14 | 4 | | | | 5 | 26 | 29 | 43 | 48 | 49 |
| 11 | 30 | 23 | | | | | 3 | 24 | 32 | 43 | 64 | 58 |
| 12 | 30 | 30 | | | | | 3 | 24 | 32 | 43 | 64 | 48 |
| 13 | 32 | 31 | | | | | 3 | 33 | 31 | 42 | 120 | 36 |
| 14 | 27 | 43 | | | | | 3 | 101 | 31 | 42 | 138 | 36 |
| 15 | 22 | 38 | | | | | 3 | 140 | 33 | 40 | 109 | 36 |
| 16 | 9 | 33 | | | | | 2 | 163 | 45 | 33 | 53 | 35 |
| 17 | 5 | 26 | | | | | 2 | 113 | 61 | 24 | 182 | 25 |
| 18 | 5 | 19 | | | | | 2 | 64 | 72 | 15 | 152 | 15 |
| 19 | 5 | 22 | | | | | 10 | 39 | 80 | 21 | 87 | 14 |
| 20 | 6 | 12 | 4 | | | | 13 | 19 | 80 | 22 | 105 | 14 |
| 21 | 3 | 15 | | | | | 12 | 26 | 62 | 22 | 105 | 14 |
| 22 | 3 | 16 | | | | | 12 | 100 | 31 | 22 | 105 | 14 |
| 23 | 3 | 14 | | | | | 12 | 204 | 23 | 22 | 103 | 14 |
| 24 | 7 | 13 | | | | | 12 | 228 | 24 | 22 | 72 | 12 |
| 25 | 10 | 13 | | | | | 9 | 138 | 30 | 26 | 42 | 21 |
| 26 | 8 | 14 | | | | | 8 | 138 | 45 | 70 | 25 | 21 |
| 27 | 10 | 21 | | | | | 8 | 146 | 47 | 124 | 36 | 17 |
| 28 | 15 | 25 | | | | | 5 | 240 | 45 | 146 | 77 | 12 |
| 29 | 18 | 26 | | | | | 4 | 178 | 44 | 148 | 54 | 14 |
| 30 | 18 | 24 | | | | | 4 | 163 | 43 | 140 | 40 | 15 |
| 31 | 18 | | | | | | | 167 | | 96 | 43 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 32 | 3 | 15.8 | 972 | | |
| November | | | | | | | 43 | 7 | 20.6 | 1,250 | | |
| December | | | | | | | 29 | 4 | 8.2 | 504 | | |
| January | | | | | | | | | 4.0 | 246 | | |
| February | | | | | | | | | 1.4 | 78 | | |
| March | | | | | | | | | 16.3 | 1,000 | | |
| April | | | | | | | 26 | 2 | 9.2 | 547 | | |
| May | | | | | | | 240 | 3 | 86.2 | 5,300 | | |
| June | | | | | | | 195 | 13 | 59.6 | 3,550 | | |
| July | | | | | | | 149 | 15 | 51.5 | 3,170 | | |
| August | | | | | | | 182 | 15 | 69.0 | 4,240 | | |
| September | | | | | | | 58 | 12 | 27.7 | 1,650 | | |
| The year | | | | | | | 240 | | 31.0 | 22,490 | | |

*Discharge measurement.

South Platte River above Lake Cheesman, Colo.

(Locally known as South Fork of South Platte River)

Location.- Water-stage recorder in sec. 22, T. 10 S., R. 71 W., half a mile above high-water line of Lake Cheesman.

Drainage area.- 1,680 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; October 1924 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 405 second-feet July 25 (gage height, 2.80 feet); minimum occurred during winter.
1924-34: Maximum discharge, 1,010 second-feet Aug. 15, 1930 (gage height, 4.40 feet); minimum occurred during winter of 1934.

Remarks.- Records excellent except those for period Nov. 11 to Apr. 11, which are estimates based on amount of water stored in Lake Cheesman. Diversion for irrigation above station. Flow regulated by two reservoirs above station, total capacity, 115,000 acre-feet.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 32 | 32 | | | | | | 26 | 257 | 56 | 128 | 64 |
| 2 | 31 | 32 | | | | | | 28 | 254 | 51 | 61 | 64 |
| 3 | 30 | 32 | | | | | | 30 | 200 | 49 | 39 | 62 |
| 4 | 34 | 28 | | | | | | 36 | 108 | 47 | 38 | 56 |
| 5 | 34 | 19 | | | | | | 38 | 122 | 46 | 32 | 45 |
| 6 | 40 | 26 | | | | | 33 | 63 | 130 | 42 | 44 | 42 |
| 7 | 40 | 26 | | | | | | 84 | 128 | 40 | 56 | 36 |
| 8 | 36 | 28 | | | | | | 102 | 118 | 40 | 54 | 36 |
| 9 | 34 | 28 | | | | | | 98 | 83 | 40 | 54 | 40 |
| 10 | 37 | 31 | | | | | | 58 | 57 | 40 | 56 | 50 |
| 11 | 36 | 31 | | | | | 79 | 46 | 65 | 40 | 89 | 61 |
| 12 | 40 | | | | | | 80 | 45 | 61 | 40 | 130 | 64 |
| 13 | 42 | | | | | | 56 | 47 | 53 | 40 | 120 | 54 |
| 14 | 49 | | | | | | 59 | 70 | 52 | 40 | 139 | 46 |
| 15 | 42 | | | | | | 52 | 133 | 53 | 42 | 135 | 44 |
| 16 | 40 | | | | | | 48 | 163 | 52 | 40 | 152 | 44 |
| 17 | 40 | | | | | | 41 | 141 | 69 | 34 | 191 | 42 |
| 18 | 34 | | | | | | 36 | 104 | 85 | 30 | 179 | 35 |
| 19 | 25 | | | | | | 31 | 92 | 95 | 30 | 116 | 25 |
| 20 | 28 | | | | | | 36 | 52 | 96 | 30 | 116 | 25 |
| 21 | 22 | 23 | | | | | 36 | 40 | 96 | 28 | 124 | 26 |
| 22 | 26 | | | | | | 36 | 56 | 68 | 28 | 133 | 24 |
| 23 | 22 | | | | | | 37 | 163 | 43 | 30 | 133 | 23 |
| 24 | 21 | | | | | | 42 | 274 | 38 | 30 | 128 | 28 |
| 25 | 20 | | | | | | 40 | 226 | 40 | 54 | 92 | 26 |
| 26 | 20 | | | | | | 38 | 203 | 43 | 106 | 61 | 29 |
| 27 | 24 | | | | | | 34 | 197 | 48 | 124 | 49 | 33 |
| 28 | 25 | | | | | | 31 | 200 | 52 | 146 | 76 | 33 |
| 29 | 28 | | | | | | 30 | 246 | 52 | 135 | 165 | 28 |
| 30 | 31 | | | | | | 26 | 191 | 55 | 153 | 75 | 27 |
| 31 | 31 | | | | | | | 236 | | 153 | 59 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 49 | 20 | 32.1 | 1,970 | | |
| November | | | | | | | 32 | 19 | 25 | 1,490 | | |
| December | | | | | | | | | 9.0 | 553 | | |
| January | | | | | | | | | 5.0 | 307 | | |
| February | | | | | | | | | 8.0 | 444 | | |
| March | | | | | | | | | 16.0 | 964 | | |
| April | | | | | | | 80 | 26 | 40.0 | 2,380 | | |
| May | | | | | | | 274 | 26 | 112 | 6,890 | | |
| June | | | | | | | 257 | 38 | 89.0 | 5,300 | | |
| July | | | | | | | 146 | 28 | 56.9 | 3,500 | | |
| August | | | | | | | 191 | 32 | 97.5 | 6,000 | | |
| September | | | | | | | 64 | 23 | 40.5 | 2,410 | | |
| The year | | | | | | | 274 | | 44.5 | 32,230 | | |

South Platte River below Lake Cheesman, Colo.
(Locally known as South Fork of South Platte River)

Location.- Water-stage recorder in sec. 6, T. 10 S., R. 70 W., a quarter of a mile below Lake Cheesman.

Drainage area.- 1,786 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; October 1924 to September 1934 in reports of State engineer.

Average discharge.- 10 years, 187 second-feet.

Extremes.- Maximum discharge during year, 521 second-feet May 29 (gage height, 4.08 feet); minimum daily discharge, 19 second-feet Oct. 15, 18.
1924-34: Maximum discharge, 1,590 second-feet Aug. 9, 1929 (gage height, 6.18 feet); minimum daily discharge, that of Oct. 15, 18, 1933.

Remarks.- Records good. Diversions for irrigation above station. Flow regulated by three reservoirs, total capacity, 194,000 acre-feet.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 49 | 46 | 44 | 20 | 21 | 21 | 21 | 76 | 479 | 400 | 263 | 131 |
| 2 | 50 | 53 | 44 | 21 | 21 | 21 | 21 | 61 | 454 | 282 | 247 | 151 |
| 3 | 50 | 63 | 55 | 21 | 21 | 21 | 39 | 53 | 369 | 194 | 158 | 158 |
| 4 | 51 | 66 | 66 | 21 | 21 | 21 | 23 | 53 | 200 | 186 | 146 | 176 |
| 5 | 50 | 52 | 66 | 21 | 21 | 21 | 22 | 74 | 137 | 164 | 170 | 170 |
| 6 | 44 | 34 | 42 | 21 | 21 | 21 | 22 | 182 | 190 | 166 | 188 | 144 |
| 7 | 26 | 32 | 20 | 21 | 21 | 21 | 23 | 147 | 254 | 164 | 194 | 142 |
| 8 | 26 | 32 | 20 | 21 | 21 | 22 | 22 | 156 | 229 | 164 | 245 | 140 |
| 9 | 24 | 36 | 20 | 21 | 21 | 22 | 22 | 182 | 204 | 180 | 102 | 149 |
| 10 | 20 | 36 | 20 | 21 | 21 | 22 | 22 | 142 | 174 | 199 | 128 | 153 |
| 11 | 20 | 39 | 20 | 21 | 21 | 22 | 21 | 87 | 124 | 196 | 213 | 147 |
| 12 | 20 | 54 | 20 | 21 | 21 | 22 | 21 | 66 | 122 | 182 | 243 | 164 |
| 13 | 20 | 61 | 20 | 21 | 21 | 21 | 31 | 86 | 146 | 172 | 287 | 176 |
| 14 | 20 | 60 | 20 | 21 | 21 | 23 | 40 | 144 | 188 | 170 | 295 | 155 |
| 15 | 19 | 64 | 20 | 21 | 21 | 31 | 22 | 202 | 113 | 170 | 326 | 158 |
| 16 | 19 | 86 | 20 | 21 | 21 | 52 | 21 | 238 | 61 | 194 | 334 | 194 |
| 17 | 24 | 90 | 20 | 21 | 21 | 67 | 21 | 222 | 78 | 218 | 336 | 194 |
| 18 | 45 | 73 | 20 | 21 | 21 | 67 | 44 | 202 | 151 | 218 | 283 | 194 |
| 19 | 45 | 47 | 20 | 21 | 21 | 113 | 67 | 137 | 129 | 211 | 263 | 176 |
| 20 | 43 | 48 | 20 | 21 | 21 | 58 | 61 | 105 | 124 | 192 | 209 | 146 |
| 21 | 36 | 49 | 20 | 21 | 21 | 21 | 75 | 88 | 106 | 192 | 176 | 144 |
| 22 | 33 | 38 | 20 | 21 | 21 | 21 | 92 | 86 | 144 | 190 | 176 | 155 |
| 23 | 33 | 29 | 20 | 21 | 21 | 21 | 116 | 156 | 114 | 196 | 190 | 151 |
| 24 | 33 | 33 | 20 | 21 | 21 | 21 | 116 | 344 | 168 | 194 | 213 | 155 |
| 25 | 33 | 38 | 20 | 21 | 21 | 21 | 116 | 403 | 344 | 200 | 176 | 184 |
| 26 | 32 | 38 | 20 | 21 | 21 | 21 | 114 | 280 | 344 | 275 | 129 | 176 |
| 27 | 32 | 38 | 20 | 21 | 21 | 21 | 103 | 326 | 321 | 323 | 118 | 151 |
| 28 | 32 | 38 | 20 | 21 | 21 | 21 | 79 | 482 | 321 | 308 | 128 | 140 |
| 29 | 32 | 42 | 20 | 21 | 21 | 21 | 76 | 482 | 310 | 308 | 263 | 119 |
| 30 | 37 | 44 | 20 | 21 | 21 | 21 | 76 | 497 | 321 | 290 | 250 | 116 |
| 31 | 39 | | 20 | 21 | 21 | 21 | | 408 | | 252 | 140 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 51 | 19 | 33.5 | 2,060 | | |
| November | | | | | | | 90 | 29 | 46.6 | 2,690 | | |
| December | | | | | | | 66 | 20 | 26.4 | 1,820 | | |
| January | | | | | | | 21 | 20 | 21.0 | 1,290 | | |
| February | | | | | | | 21 | 21 | 21.0 | 1,170 | | |
| March | | | | | | | 113 | 21 | 29.6 | 1,820 | | |
| April | | | | | | | 116 | 21 | 51.6 | 3,070 | | |
| May | | | | | | | 497 | 53 | 199 | 12,200 | | |
| June | | | | | | | 479 | 61 | 211 | 12,600 | | |
| July | | | | | | | 400 | 164 | 217 | 15,300 | | |
| August | | | | | | | 336 | 102 | 212 | 15,000 | | |
| September | | | | | | | 194 | 113 | 157 | 9,340 | | |
| The year | | | | | | | 497 | 19 | 103 | 74,360 | | |

South Platte River at South Platte, Colo.

Location.- Water-stage recorder in sec. 25, T. 7 S., R. 70 W., at South Platte, 375 feet below mouth of North Fork of South Platte River. Zero of gage is 6,078.43 feet above mean sea level.

Drainage area.- 2,550 square miles.

Records available.- March 1902 to September 1934.

Average discharge.- 32 years, 404 second-feet.

Extremes.- Maximum discharge during year, 765 second-feet May 30 (gage height, 3.59 feet); minimum not determined, but occurred during winter.

1902-34: Maximum discharge, 6,320 second-feet June 7, 1921 (gage height, 8.95 feet); minimum, 14 second-feet Mar. 11, 1932.

Remarks.- Records good. Discharge estimated Dec. 19 to Mar. 29, on basis of two discharge measurements and flow of South Platte at Waterton and diversions at intake. Diversions for irrigation above station. Flow regulated by three reservoirs, total capacity, 194,000 acre-feet.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|-----|---------|------|----------------------|-------|
| 1 | 184 | 158 | 134 | | | | 134 | 294 | 626 | 458 | 328 | 220 |
| 2 | 162 | 166 | 138 | | | | 144 | 296 | 686 | 427 | 341 | 228 |
| 3 | 162 | 170 | 124 | | | | 168 | 321 | 608 | 294 | 302 | 238 |
| 4 | 168 | 174 | 133 | | | | 166 | 308 | 555 | 277 | 249 | 238 |
| 5 | 186 | 147 | 131 | *70 | | | 149 | 308 | 382 | 288 | 249 | 252 |
| 6 | 184 | 130 | 111 | | | | 136 | 366 | 379 | 305 | 312 | 238 |
| 7 | 170 | 149 | 111 | | | | 152 | 538 | 434 | 271 | 337 | 223 |
| 8 | 164 | 144 | 121 | | | | 170 | 406 | 427 | 260 | 334 | 216 |
| 9 | 162 | 150 | 114 | | | | 192 | 482 | 406 | 266 | 321 | 225 |
| 10 | 158 | 147 | 124 | | | | 202 | 478 | 390 | 337 | 252 | 249 |
| 11 | 157 | 150 | 122 | | | | 204 | 427 | 331 | 344 | 354 | 223 |
| 12 | 155 | 150 | 120 | | | | 208 | 397 | 299 | 334 | 351 | 230 |
| 13 | 154 | 152 | 120 | | | | 214 | 419 | 302 | 315 | 366 | 236 |
| 14 | 154 | 154 | 107 | | | | 233 | 415 | 318 | 305 | 365 | 228 |
| 15 | 152 | 156 | 93 | | | | 218 | 454 | 337 | 302 | 397 | 223 |
| 16 | 152 | 170 | 87 | | *83 | | 208 | 499 | 285 | 305 | 450 | 238 |
| 17 | 152 | 180 | 87 | | | | 194 | 516 | 263 | 334 | 462 | 243 |
| 18 | 152 | 176 | 86 | | | | 190 | 466 | 280 | 337 | 390 | 243 |
| 19 | 155 | 147 | 85 | | | | 214 | 478 | 294 | 331 | 390 | 236 |
| 20 | 158 | 142 | 85 | | | | 216 | 404 | 280 | 294 | 365 | 206 |
| 21 | 158 | 141 | | | | | 223 | 390 | 266 | 263 | 324 | 210 |
| 22 | 157 | 139 | | | | | 260 | 375 | 263 | 263 | 296 | 212 |
| 23 | 155 | 131 | | | | | 291 | 375 | 271 | 305 | 294 | 216 |
| 24 | 158 | 125 | | | | | 302 | 516 | 243 | 315 | 302 | 208 |
| 25 | 162 | 134 | | | | | 312 | 666 | 246 | 296 | 294 | 206 |
| 26 | 170 | 125 | 84 | | | | 331 | 547 | 482 | 368 | 238 | 204 |
| 27 | 158 | 134 | | | | | 321 | 520 | 462 | 412 | 236 | 208 |
| 28 | 155 | 131 | | | | | 285 | 666 | 458 | 390 | 218 | 208 |
| 29 | 154 | 125 | | | | | 282 | 661 | 466 | 366 | 274 | 190 |
| 30 | 152 | 131 | | | | 141 | 288 | 743 | 458 | 358 | 393 | 186 |
| 31 | 155 | | | | | 138 | | 647 | | 324 | 243 | |
| Month | | | | | | | Maximum | | Minimum | Mean | Run-off in acre-feet | |
| October | | | | | | | 188 | | 152 | 162 | 9,960 | |
| November | | | | | | | 180 | | 125 | 148 | 8,810 | |
| December | | | | | | | 138 | | | 102 | 6,270 | |
| January | | | | | | | | | | 75 | 4,490 | |
| February | | | | | | | | | | 80 | 4,440 | |
| March | | | | | | | | | | 103 | 6,330 | |
| April | | | | | | | 331 | | 134 | 220 | 13,100 | |
| May | | | | | | | 743 | | 294 | 464 | 28,500 | |
| June | | | | | | | 686 | | 243 | 384 | 22,600 | |
| July | | | | | | | 458 | | 260 | 324 | 19,900 | |
| August | | | | | | | 462 | | 218 | 324 | 19,900 | |
| September | | | | | | | 262 | | 186 | 223 | 13,300 | |
| The year | | | | | | | 743 | | | 218 | 157,800 | |

*Discharge measurement.

South Platte River at Waterton, Colo.

Location.- Water-stage recorder in sec. 34, T. 6 S., R. 69 W., half a mile south of Waterton.

Drainage area.- 2,621 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; May 1926 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 539 second-feet May 25 (gage height, 1.47 feet); minimum daily discharge, 4 second-feet Apr. 10.
1926-34: Maximum discharge, 2,150 second-feet June 9, 1926 (gage height, 2.78 feet); minimum daily discharge, that of Apr. 10, 1934.

Remarks.- Records good. Discharge estimated Jan. 1-8. Diversions for irrigation above station. Flow regulated by three storage reservoirs above station, total capacity, 194,000 acre-feet.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 104 | 44 | 34 | 17 | 7 | 63 | 5 | 187 | 361 | 130 | 148 | 48 |
| 2 | 148 | 52 | 52 | 16 | 7 | 63 | 7 | 148 | 800 | 126 | 144 | 55 |
| 3 | 157 | 52 | 44 | 15 | 7 | 55 | 10 | 144 | 448 | 95 | 135 | 63 |
| 4 | 175 | 74 | 71 | 15 | 10 | 24 | 10 | 48 | 567 | 74 | 24 | 67 |
| 5 | 161 | 55 | 52 | 14 | 10 | 41 | 7 | 30 | 185 | 78 | 27 | 75 |
| 6 | 148 | 46 | 55 | 14 | 7 | 55 | 5 | 95 | 175 | 95 | 78 | 59 |
| 7 | 122 | 67 | 55 | 13 | 10 | 63 | 7 | 328 | 220 | 55 | 117 | 52 |
| 8 | 91 | 71 | 37 | 13 | 10 | 30 | 5 | 205 | 210 | 44 | 117 | 55 |
| 9 | 82 | 71 | 48 | 20 | 10 | 37 | 5 | 240 | 205 | 48 | 180 | 55 |
| 10 | 65 | 55 | 44 | 17 | 10 | 34 | 4 | 210 | 180 | 113 | 117 | 66 |
| 11 | 52 | 52 | 44 | 17 | 13 | 41 | 5 | 215 | 122 | 144 | 185 | 63 |
| 12 | 41 | 44 | 44 | 13 | 13 | 63 | 5 | 260 | 78 | 144 | 215 | 67 |
| 13 | 30 | 113 | 37 | 17 | 13 | 34 | 10 | 148 | 74 | 117 | 180 | 71 |
| 14 | 34 | 126 | 34 | 10 | 17 | 20 | 10 | 13 | 91 | 122 | 185 | 74 |
| 15 | 27 | 44 | 30 | 10 | 7 | 13 | 10 | 122 | 126 | 126 | 190 | 78 |
| 16 | 27 | 55 | 30 | 13 | 17 | 10 | 10 | 270 | 148 | 130 | 245 | 71 |
| 17 | 30 | 91 | 37 | 13 | 41 | 27 | 5 | 361 | 126 | 139 | 306 | 74 |
| 18 | 41 | 91 | 48 | 13 | 24 | 10 | 27 | 328 | 126 | 157 | 280 | 67 |
| 19 | 55 | 63 | 71 | 10 | 20 | 13 | 82 | 344 | 144 | 187 | 240 | 63 |
| 20 | 48 | 55 | 95 | 13 | 27 | 86 | 108 | 270 | 130 | 126 | 215 | 37 |
| 21 | 48 | 74 | 59 | 10 | 52 | 20 | 126 | 255 | 139 | 91 | 187 | 50 |
| 22 | 44 | 66 | 37 | 13 | 37 | 10 | 148 | 240 | 117 | 67 | 135 | 24 |
| 23 | 41 | 59 | 41 | 10 | 46 | 10 | 165 | 235 | 104 | 108 | 135 | 24 |
| 24 | 44 | 48 | 48 | 10 | 44 | 10 | 215 | 356 | 52 | 104 | 152 | 30 |
| 25 | 41 | 59 | 48 | 10 | 34 | 10 | 220 | 507 | 117 | 104 | 157 | 30 |
| 26 | 37 | 41 | 55 | 10 | 34 | 10 | 230 | 424 | 144 | 185 | 66 | 27 |
| 27 | 37 | 52 | 44 | 10 | 52 | 10 | 215 | 384 | 135 | 230 | 78 | 24 |
| 28 | 41 | 37 | 27 | 10 | 55 | 7 | 166 | 395 | 126 | 220 | 71 | 17 |
| 29 | 44 | 34 | 20 | 10 | | 5 | 152 | 372 | 130 | 190 | 126 | 27 |
| 30 | 34 | 30 | 17 | 7 | | 7 | 166 | 465 | 126 | 185 | 265 | 24 |
| 31 | 30 | | 17 | 7 | | 7 | | 407 | | 130 | 59 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 175 | 27 | 67.0 | 4,120 | | |
| November | | | | | | | 126 | 30 | 61.4 | 3,650 | | |
| December | | | | | | | 95 | 17 | 44.4 | 2,730 | | |
| January | | | | | | | 20 | 7 | 12.6 | 775 | | |
| February | | | | | | | 55 | 7 | 22.7 | 1,260 | | |
| March | | | | | | | 86 | 5 | 28.6 | 1,760 | | |
| April | | | | | | | 230 | 4 | 72.0 | 4,280 | | |
| May | | | | | | | 507 | 13 | 257 | 15,800 | | |
| June | | | | | | | 500 | 52 | 174 | 10,400 | | |
| July | | | | | | | 230 | 44 | 124 | 7,620 | | |
| August | | | | | | | 306 | 24 | 153 | 9,410 | | |
| September | | | | | | | 86 | 17 | 51.3 | 3,050 | | |
| The year | | | | | | | 507 | 4 | 89.5 | 64,660 | | |

South Platte River at Denver, Colo.

Location.- Water-stage recorder at Nineteenth Street Bridge, in Denver, a quarter of a mile below mouth of Cherry Creek.

Records available.- May 1895 to November 1913, October 1933 to September 1934 in reports of U. S. Geological Survey; May 1895 to September 1934 in reports of State engineer.

Average discharge.- 39 years, 371 second-feet.

Extremes.- Maximum discharge during year, 2,000 second-feet Aug. 9 (gauge height, 3.30 feet); minimum daily discharge, 5.4 second-feet Sept. 24.
1902-34: Maximum discharge, 22,000 second-feet Sept. 10, 1933 (gauge height, 10.98 feet); minimum daily discharge, 15 second-feet Apr. 15, 1925.

Remarks.- Records good except those for Feb. 10 to Apr. 30, which are fair. Diversions for irrigation above station. Flow completely regulated except during extreme high water.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | 126 | 101 | 119 | 110 | 74 | 214 | 92 | 218 | 428 | 122 | 136 | 74 |
| 2 | 157 | 119 | 180 | 104 | 74 | 227 | 101 | 205 | 482 | 129 | 140 | 84 |
| 3 | 180 | 136 | 150 | 104 | 74 | 259 | 173 | 390 | 509 | 104 | 132 | 84 |
| 4 | 184 | 143 | 143 | 104 | 69 | 222 | 154 | 240 | 493 | 95 | 104 | 76 |
| 5 | 188 | 143 | 150 | 92 | 71 | 200 | 136 | 161 | 345 | 92 | 82 | 79 |
| 6 | 180 | 110 | 143 | 95 | 64 | 205 | 143 | 169 | 227 | 84 | 71 | 82 |
| 7 | 169 | 128 | 143 | 92 | 132 | 245 | 113 | 313 | 222 | 87 | 129 | 84 |
| 8 | 129 | 146 | 154 | 87 | 89 | 222 | 113 | 328 | 250 | 69 | 129 | 87 |
| 9 | 107 | 143 | 143 | 104 | 82 | 196 | 113 | 298 | 245 | 60 | 240 | 89 |
| 10 | 95 | 143 | 150 | 104 | 79 | 165 | 116 | 283 | 205 | 66 | 231 | 98 |
| 11 | 92 | 129 | 150 | 104 | 89 | 176 | 122 | 236 | 173 | 107 | 205 | 101 |
| 12 | 82 | 126 | 132 | 89 | 119 | 192 | 116 | 328 | 169 | 116 | 192 | 79 |
| 13 | 69 | 140 | 126 | 89 | 136 | 205 | 126 | 406 | 157 | 104 | 196 | 74 |
| 14 | 71 | 136 | 122 | 92 | 129 | 169 | 128 | 169 | 154 | 87 | 176 | 79 |
| 15 | 79 | 129 | 113 | 113 | 129 | 143 | 132 | 129 | 146 | 95 | 180 | 76 |
| 16 | 82 | 119 | 79 | 95 | 122 | 132 | 116 | 222 | 157 | 84 | 209 | 84 |
| 17 | 76 | 165 | 69 | 52 | 169 | 157 | 101 | 374 | 154 | 119 | 278 | 87 |
| 18 | 59 | 176 | 87 | 79 | 173 | 161 | 92 | 369 | 146 | 136 | 269 | 101 |
| 19 | 110 | 165 | 119 | 79 | 136 | 157 | 122 | 354 | 136 | 132 | 240 | 92 |
| 20 | 126 | 132 | 157 | 79 | 136 | 176 | 192 | 323 | 140 | 143 | 218 | 122 |
| 21 | 129 | 157 | 172 | 87 | 150 | 205 | 173 | 283 | 129 | 101 | 180 | 101 |
| 22 | 126 | 169 | 129 | 110 | 161 | 140 | 184 | 254 | 126 | 95 | 146 | 79 |
| 23 | 104 | 165 | 116 | 89 | 146 | 126 | 205 | 236 | 122 | 87 | 132 | 60 |
| 24 | 104 | 154 | 113 | 82 | 143 | 129 | 227 | 293 | 92 | 107 | 146 | 54 |
| 25 | 98 | 146 | 107 | 87 | 132 | 110 | 231 | 471 | 71 | 107 | 165 | 76 |
| 26 | 95 | 150 | 92 | 82 | 146 | 98 | 283 | 482 | 140 | 101 | 129 | 89 |
| 27 | 101 | 136 | 110 | 84 | 180 | 101 | 308 | 422 | 146 | 218 | 95 | 84 |
| 28 | 104 | 146 | 107 | 82 | 184 | 87 | 227 | 417 | 126 | 184 | 98 | 92 |
| 29 | 98 | 107 | 107 | 71 | 87 | 87 | 209 | 395 | 126 | 173 | 84 | 89 |
| 30 | 84 | 95 | 101 | 69 | 89 | 95 | 218 | 476 | 126 | 157 | 184 | 74 |
| 31 | 82 | 101 | 101 | 76 | 89 | 89 | 554 | 554 | 129 | 129 | 161 | 79 |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 188 | 69 | 113 | 6,950 | | | |
| November | | | | | | 176 | 95 | 138 | 8,210 | | | |
| December | | | | | | 180 | 69 | 125 | 7,690 | | | |
| January | | | | | | 113 | 69 | 90.8 | 5,580 | | | |
| February | | | | | | 184 | 64 | 121 | 6,720 | | | |
| March | | | | | | 259 | 87 | 164 | 10,100 | | | |
| April | | | | | | 308 | 92 | 159 | 9,460 | | | |
| May | | | | | | 554 | 129 | 318 | 19,400 | | | |
| June | | | | | | 509 | 71 | 205 | 12,200 | | | |
| July | | | | | | 218 | 60 | 113 | 6,950 | | | |
| August | | | | | | 278 | 71 | 164 | 10,100 | | | |
| September | | | | | | 122 | 54 | 84.3 | 5,020 | | | |
| The year | | | | | | 554 | 54 | 150 | 108,400 | | | |

South Platte River at Henderson, Colo.

Location.- Water-stage recorder in sec. 34, T. 1 S., R. 67 W., a quarter of a mile west of Henderson.

Drainage area.- 4,740 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; May 1926 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 1,560 second-feet May 31 (gage height, 3.42 feet); minimum daily discharge, 15 second-feet Nov. 28, 1928-34: Maximum discharge, 5,600 second-feet Sept. 10, 1933 (gage height, 7.15 feet); minimum daily discharge, that of Nov. 28, 1933.

Remarks.- Records fair. Diversions for irrigation above station. Flow completely regulated except during extreme high water.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | 96 | 28 | 20 | 208 | 204 | 66 | 58 | 130 | 550 | 102 | 118 | 116 |
| 2 | 102 | 36 | 38 | 211 | 200 | 68 | 56 | 135 | 394 | 102 | 130 | 125 |
| 3 | 123 | 23 | 123 | 211 | 149 | 64 | 63 | 485 | 435 | 102 | 130 | 128 |
| 4 | 130 | 27 | 128 | 214 | 183 | 59 | 66 | 599 | 377 | 108 | 130 | 125 |
| 5 | 149 | 56 | 133 | 211 | 197 | 58 | 68 | 314 | 314 | 128 | 111 | 133 |
| 6 | 149 | 83 | 120 | 183 | 194 | 58 | 63 | 229 | 194 | 113 | 133 | 130 |
| 7 | 146 | 66 | 152 | 164 | 280 | 61 | 61 | 335 | 295 | 100 | 116 | 104 |
| 8 | 135 | 46 | 157 | 160 | 266 | 61 | 61 | 557 | 285 | 102 | 141 | 102 |
| 9 | 106 | 30 | 133 | 180 | 204 | 59 | 64 | 479 | 214 | 116 | 138 | 104 |
| 10 | 52 | 25 | 138 | 211 | 177 | 61 | 63 | 592 | 197 | 102 | 350 | 106 |
| 11 | 38 | 26 | 135 | 204 | 214 | 58 | 42 | 511 | 177 | 108 | 152 | 106 |
| 12 | 31 | 26 | 130 | 187 | 271 | 56 | 42 | 511 | 125 | 113 | 149 | 106 |
| 13 | 23 | 26 | 125 | 177 | 330 | 54 | 52 | 967 | 93 | 118 | 146 | 91 |
| 14 | 19 | 27 | 123 | 187 | 319 | 54 | 111 | 524 | 85 | 106 | 133 | 89 |
| 15 | 18 | 27 | 118 | 222 | 295 | 76 | 108 | 254 | 133 | 96 | 141 | 93 |
| 16 | 18 | 27 | 104 | 225 | 276 | 194 | 96 | 214 | 194 | 89 | 146 | 85 |
| 17 | 18 | 28 | 91 | 211 | 319 | 266 | 79 | 365 | 187 | 91 | 167 | 85 |
| 18 | 18 | 27 | 93 | 211 | 366 | 295 | 96 | 578 | 135 | 102 | 204 | 98 |
| 19 | 20 | 25 | 218 | 211 | 146 | 146 | 87 | 613 | 93 | 120 | 197 | 96 |
| 20 | 30 | 23 | 262 | 208 | 108 | 93 | 108 | 564 | 89 | 123 | 194 | 98 |
| 21 | 83 | 21 | 285 | 211 | 98 | 77 | 118 | 473 | 118 | 130 | 146 | 91 |
| 22 | 51 | 18 | 246 | 225 | 113 | 68 | 120 | 518 | 116 | 130 | 125 | 81 |
| 23 | 35 | 17 | 237 | 222 | 116 | 74 | 135 | 557 | 98 | 133 | 123 | 72 |
| 24 | 28 | 20 | 218 | 211 | 100 | 70 | 164 | 571 | 79 | 146 | 138 | 66 |
| 25 | 30 | 18 | 208 | 211 | 70 | 70 | 174 | 745 | 72 | 152 | 157 | 64 |
| 26 | 32 | 15 | 208 | 200 | 68 | 63 | 204 | 923 | 96 | 152 | 144 | 49 |
| 27 | 35 | 18 | 204 | 200 | 66 | 63 | 324 | 585 | 104 | 154 | 116 | 46 |
| 28 | 34 | 15 | 218 | 197 | 70 | 59 | 250 | 518 | 98 | 149 | 130 | 45 |
| 29 | 31 | 17 | 218 | 204 | | 59 | 174 | 599 | 98 | 125 | 133 | 58 |
| 30 | 27 | 18 | 214 | 204 | | 64 | 138 | 745 | 102 | 123 | 138 | 54 |
| 31 | 27 | | 214 | 211 | | 66 | | 1,100 | | 128 | 174 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 149 | 18 | 59.2 | 3,640 | | |
| November | | | | | | | 83 | 15 | 28.6 | 1,700 | | |
| December | | | | | | | 285 | 20 | 168 | 9,950 | | |
| January | | | | | | | 225 | 160 | 203 | 12,500 | | |
| February | | | | | | | 366 | 66 | 193 | 10,700 | | |
| March | | | | | | | 295 | 54 | 85.2 | 5,240 | | |
| April | | | | | | | 324 | 42 | 108 | 6,430 | | |
| May | | | | | | | 1,100 | 130 | 526 | 32,300 | | |
| June | | | | | | | 550 | 72 | 155 | 11,000 | | |
| July | | | | | | | 154 | 89 | 118 | 7,250 | | |
| August | | | | | | | 350 | 111 | 150 | 9,220 | | |
| September | | | | | | | 133 | 45 | 91.6 | 5,450 | | |
| The year | | | | | | | 1,100 | 15 | 159 | 115,400 | | |

South Platte River at Fort Lupton, Colo.

Location.- Water-stage recorder in sec. 6, T. 1 N., R. 66 W., at west edge of Fort Lupton.

Drainage area.- 5,070 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; May to September 1906, April 1929 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 793 second-feet May 31 (gage height, 2.87 feet); minimum daily discharge, 30 second-feet Sept. 28.
1906, 1929-34: Maximum discharge, 4,150 second-feet Sept. 11, 1933 (gage height, 5.80 feet); minimum daily discharge, that of Sept. 28, 1934.

Remarks.- Records fair. Discharge estimated Oct. 1-7, Dec. 1-19. Diversions for irrigation above station. Flow completely regulated except during extreme high water.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 99 | 73 | 70 | 282 | 256 | 124 | 93 | 115 | 501 | 49 | 50 | 58 |
| 2 | 98 | 86 | 88 | 285 | 259 | 119 | 89 | 119 | 373 | 44 | 49 | 50 |
| 3 | 114 | 84 | 173 | 288 | 227 | 115 | 97 | 253 | 406 | 46 | 49 | 62 |
| 4 | 129 | 69 | 178 | 288 | 227 | 101 | 106 | 493 | 362 | 60 | 46 | 50 |
| 5 | 163 | 99 | 183 | 275 | 256 | 97 | 112 | 305 | 318 | 78 | 38 | 50 |
| 6 | 164 | 137 | 170 | 263 | 263 | 93 | 108 | 215 | 231 | 65 | 67 | 71 |
| 7 | 161 | 135 | 202 | 234 | 288 | 93 | 97 | 247 | 218 | 47 | 47 | 71 |
| 8 | 147 | 133 | 207 | 227 | 341 | 86 | 91 | 387 | 256 | 50 | 55 | 55 |
| 9 | 137 | 110 | 183 | 243 | 288 | 86 | 86 | 348 | 221 | 47 | 47 | 57 |
| 10 | 95 | 97 | 188 | 272 | 213 | 88 | 91 | 425 | 193 | 44 | 170 | 64 |
| 11 | 78 | 80 | 185 | 269 | 250 | 82 | 86 | 395 | 188 | 54 | 78 | 65 |
| 12 | 65 | 73 | 180 | 259 | 305 | 82 | 76 | 362 | 147 | 47 | 50 | 65 |
| 13 | 54 | 69 | 175 | 253 | 351 | 84 | 76 | 521 | 99 | 49 | 47 | 47 |
| 14 | 46 | 65 | 173 | 256 | 348 | 82 | 104 | 549 | 73 | 54 | 47 | 44 |
| 15 | 41 | 65 | 168 | 275 | 344 | 78 | 147 | 308 | 91 | 50 | 46 | 57 |
| 16 | 43 | 69 | 254 | 288 | 331 | 150 | 128 | 237 | 154 | 52 | 60 | 55 |
| 17 | 40 | 67 | 141 | 282 | 338 | 263 | 117 | 256 | 170 | 47 | 64 | 60 |
| 18 | 41 | 67 | 143 | 282 | 395 | 305 | 112 | 387 | 135 | 52 | 95 | 69 |
| 19 | 47 | 69 | 268 | 266 | 269 | 250 | 112 | 452 | 71 | 52 | 104 | 73 |
| 20 | 50 | 69 | 311 | 266 | 190 | 147 | 115 | 467 | 58 | 52 | 99 | 76 |
| 21 | 76 | 67 | 338 | 259 | 190 | 121 | 147 | 410 | 89 | 49 | 82 | 91 |
| 22 | 112 | 71 | 338 | 263 | 152 | 106 | 167 | 452 | 112 | 43 | 52 | 78 |
| 23 | 91 | 80 | 311 | 279 | 160 | 106 | 172 | 429 | 82 | 57 | 38 | 57 |
| 24 | 67 | 80 | 295 | 279 | 160 | 112 | 183 | 440 | 58 | 62 | 44 | 47 |
| 25 | 60 | 76 | 288 | 272 | 112 | 104 | 170 | 493 | 37 | 69 | 60 | 62 |
| 26 | 64 | 73 | 285 | 269 | 110 | 97 | 167 | 566 | 62 | 65 | 55 | 60 |
| 27 | 69 | 71 | 282 | 263 | 115 | 95 | 295 | 482 | 73 | 78 | 43 | 33 |
| 28 | 73 | 67 | 285 | 266 | 121 | 93 | 243 | 417 | 60 | 80 | 37 | 30 |
| 29 | 74 | 65 | 285 | 259 | 89 | 89 | 185 | 452 | 54 | 64 | 52 | 38 |
| 30 | 73 | 67 | 285 | 253 | 97 | 97 | 133 | 482 | 54 | 46 | 46 | 38 |
| 31 | 71 | | 285 | 253 | | 101 | | 670 | | 46 | 74 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 164 | 40 | 85.2 | 5,240 | | |
| November | | | | | | | 137 | 65 | 81.1 | 4,530 | | |
| December | | | | | | | 338 | 70 | 225 | 13,700 | | |
| January | | | | | | | 288 | 227 | 267 | 16,400 | | |
| February | | | | | | | 395 | 110 | 245 | 13,600 | | |
| March | | | | | | | 305 | 78 | 118 | 7,260 | | |
| April | | | | | | | 295 | 76 | 130 | 7,740 | | |
| May | | | | | | | 670 | 115 | 391 | 24,000 | | |
| June | | | | | | | 501 | 37 | 165 | 9,820 | | |
| July | | | | | | | 80 | 43 | 54.8 | 3,370 | | |
| August | | | | | | | 170 | 37 | 61.0 | 3,750 | | |
| September | | | | | | | 91 | 30 | 57.8 | 3,440 | | |
| The year | | | | | | | 670 | 30 | 156 | 113,200 | | |

South Platte River near Kersey, Colo.

Location.- Water-stage recorder in sec. 9, T. 5 N., R. 64 W., $1\frac{1}{2}$ miles north of Kersey.

Drainage area.- 9,500 square miles.

Records available.- April 1901 to October 1903, March 1905 to November 1913, October 1933 to September 1934 in reports of U. S. Geological Survey; April 1901 to October 1903, March 1905 to September 1934 in reports of State engineer.

Average discharge.- 28 years (1901-3, 1905-7, 1909-12, 1913-34), 728 second-feet.

Extremes.- Maximum discharge during year, 687 second-feet Feb. 19 (gare height, 3.07 feet); minimum daily discharge, 57 second-feet May 1.

1901-3, 1905-34: Maximum recorded discharge, 31,000 second-feet June 7, 1921; minimum daily discharge, 42 second-feet Apr. 22 to May 3, 1902.

Remarks.- Records good. Diversions for irrigation above station. Flow completely regulated except during extreme high water.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|------|------|------|------|------|---------|-----|------|------|----------------------|-------|
| 1 | 291 | 370 | 457 | 597 | 557 | 401 | 378 | 57 | 145 | 132 | 81 | 70 |
| 2 | 284 | 392 | 570 | 597 | 550 | 370 | 370 | 61 | 143 | 115 | 83 | 75 |
| 3 | 284 | 425 | 610 | 604 | 557 | 370 | 387 | 79 | 162 | 108 | 86 | 77 |
| 4 | 298 | 452 | 648 | 617 | 544 | 553 | 416 | 128 | 140 | 112 | 85 | 75 |
| 5 | 302 | 514 | 672 | 604 | 526 | 536 | 440 | 378 | 132 | 155 | 81 | 74 |
| 6 | 302 | 544 | 664 | 590 | 538 | 328 | 462 | 294 | 128 | 135 | 81 | 74 |
| 7 | 309 | 577 | 664 | 550 | 550 | 332 | 457 | 224 | 115 | 155 | 81 | 72 |
| 8 | 328 | 597 | 664 | 544 | 570 | 332 | 425 | 180 | 104 | 126 | 86 | 74 |
| 9 | 340 | 590 | 656 | 563 | 610 | 340 | 401 | 148 | 112 | 108 | 83 | 77 |
| 10 | 344 | 577 | 664 | 577 | 597 | 340 | 374 | 158 | 108 | 102 | 79 | 83 |
| 11 | 361 | 544 | 656 | 584 | 544 | 340 | 361 | 197 | 117 | 98 | 83 | 75 |
| 12 | 366 | 532 | 664 | 563 | 538 | 324 | 357 | 165 | 86 | 94 | 104 | 75 |
| 13 | 361 | 526 | 640 | 557 | 597 | 317 | 332 | 160 | 86 | 88 | 112 | 74 |
| 14 | 370 | 520 | 656 | 577 | 640 | 313 | 305 | 452 | 112 | 83 | 110 | 72 |
| 15 | 387 | 520 | 617 | 577 | 633 | 298 | 298 | 526 | 321 | 84 | 112 | 74 |
| 16 | 397 | 520 | 617 | 590 | 633 | 302 | 309 | 264 | 336 | 86 | 123 | 77 |
| 17 | 397 | 508 | 617 | 604 | 633 | 361 | 280 | 162 | 245 | 83 | 121 | 75 |
| 18 | 401 | 490 | 617 | 597 | 633 | 435 | 245 | 126 | 236 | 86 | 121 | 70 |
| 19 | 406 | 484 | 617 | 597 | 679 | 479 | 203 | 90 | 194 | 83 | 121 | 68 |
| 20 | 411 | 474 | 617 | 597 | 550 | 397 | 172 | 86 | 152 | 88 | 96 | 88 |
| 21 | 416 | 468 | 594 | 590 | 474 | 344 | 135 | 79 | 135 | 86 | 79 | 102 |
| 22 | 430 | 468 | 633 | 590 | 416 | 324 | 112 | 74 | 121 | 104 | 72 | 100 |
| 23 | 430 | 462 | 664 | 597 | 392 | 357 | 100 | 68 | 112 | 119 | 66 | 100 |
| 24 | 425 | 457 | 640 | 597 | 392 | 374 | 88 | 68 | 112 | 148 | 66 | 108 |
| 25 | 416 | 452 | 633 | 590 | 366 | 383 | 79 | 75 | 108 | 145 | 65 | 108 |
| 26 | 401 | 452 | 625 | 577 | 336 | 383 | 86 | 86 | 104 | 96 | 65 | 88 |
| 27 | 392 | 452 | 617 | 564 | 370 | 401 | 86 | 79 | 100 | 84 | 68 | 86 |
| 28 | 387 | 446 | 617 | 570 | 411 | 406 | 79 | 83 | 106 | 86 | 70 | 83 |
| 29 | 392 | 446 | 625 | 570 | | 383 | 75 | 77 | 128 | 84 | 68 | 84 |
| 30 | 383 | 446 | 633 | 557 | | 374 | 61 | 74 | 130 | 86 | 68 | 88 |
| 31 | 370 | | 617 | 544 | | | | 104 | | 86 | | |
| Month | Maximum | | | | | | Minimum | | Mean | | Run-off in acre-feet | |
| October | 430 | | | | | | 284 | | 367 | | 22,600 | |
| November | 597 | | | | | | 370 | | 490 | | 29,200 | |
| December | 672 | | | | | | 457 | | 628 | | 38,600 | |
| January | 617 | | | | | | 544 | | 582 | | 35,800 | |
| February | 679 | | | | | | 336 | | 530 | | 29,400 | |
| March | 479 | | | | | | 298 | | 360 | | 22,100 | |
| April | 462 | | | | | | 61 | | 262 | | 15,600 | |
| May | 526 | | | | | | 57 | | 155 | | 9,530 | |
| June | 336 | | | | | | 86 | | 144 | | 8,570 | |
| July | 155 | | | | | | 83 | | 104 | | 6,400 | |
| August | 123 | | | | | | 65 | | 86.6 | | 5,320 | |
| September | 108 | | | | | | 68 | | 81.5 | | 4,850 | |
| The year | 679 | | | | | | 57 | | 315 | | 228,000 | |

South Platte River at Sublette, Colo.

Location.- Water-stage recorder in sec. 14, T. 4 N., R. 61 W., 1,000 feet south of Sublette.

Drainage area.- 12,900 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; April 1928 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 498 second-feet (gage height, 2.40 feet); minimum daily discharge, 41 second-feet Dec. 25, 1933.
1928-34: Maximum discharge, 8,090 second-feet Apr. 23, 1928 (gage height, 5.80 feet); minimum daily discharge, that of Dec. 25, 1933.

Remarks.- Records fair. Diversions for irrigation above station. Flow completely regulated except during extreme high water.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|------|-------------------------|-------|
| 1 | 127 | 101 | 59 | 48 | 53 | 230 | 178 | 188 | 162 | 150 | 93 | 129 |
| 2 | 129 | 103 | 62 | 50 | 54 | 188 | 155 | 193 | 172 | 150 | 93 | 155 |
| 3 | 132 | 101 | 65 | 51 | 64 | 178 | 143 | 268 | 180 | 143 | 93 | 178 |
| 4 | 158 | 97 | 62 | 50 | 67 | 168 | 141 | 255 | 188 | 136 | 93 | 194 |
| 5 | 222 | 93 | 59 | 48 | 67 | 162 | 129 | 309 | 178 | 145 | 93 | 180 |
| 6 | 224 | 89 | 56 | 50 | 67 | 168 | 123 | 320 | 175 | 136 | 112 | 172 |
| 7 | 230 | 85 | 51 | 48 | 67 | 172 | 123 | 245 | 178 | 127 | 155 | 172 |
| 8 | 230 | 81 | 48 | 48 | 67 | 165 | 118 | 202 | 170 | 127 | 160 | 178 |
| 9 | 208 | 78 | 48 | 50 | 65 | 194 | 116 | 183 | 165 | 123 | 120 | 183 |
| 10 | 166 | 72 | 48 | 51 | 67 | 219 | 120 | 162 | 175 | 120 | 101 | 143 |
| 11 | 162 | 69 | 45 | 50 | 65 | 180 | 123 | 168 | 172 | 118 | 99 | 109 |
| 12 | 175 | 71 | 54 | 48 | 65 | 114 | 180 | 186 | 160 | 116 | 93 | 99 |
| 13 | 172 | 64 | 50 | 51 | 65 | 97 | 236 | 183 | 143 | 123 | 91 | 95 |
| 14 | 155 | 65 | 47 | 51 | 69 | 91 | 286 | 205 | 155 | 125 | 91 | 89 |
| 15 | 143 | 67 | 45 | 50 | 67 | 85 | 286 | 419 | 197 | 120 | 91 | 93 |
| 16 | 109 | 81 | 53 | 51 | 67 | 81 | 295 | 410 | 366 | 125 | 89 | 93 |
| 17 | 93 | 61 | 51 | 51 | 67 | 81 | 298 | 320 | 295 | 125 | 83 | 91 |
| 18 | 93 | 87 | 48 | 50 | 63 | 80 | 295 | 258 | 261 | 120 | 87 | 93 |
| 19 | 97 | 76 | 50 | 51 | 227 | 78 | 286 | 213 | 227 | 118 | 87 | 155 |
| 20 | 97 | 78 | 53 | 51 | 249 | 78 | 255 | 202 | 216 | 112 | 91 | 170 |
| 21 | 95 | 74 | 48 | 51 | 216 | 80 | 222 | 199 | 222 | 109 | 65 | 183 |
| 22 | 95 | 72 | 45 | 50 | 194 | 155 | 199 | 199 | 197 | 101 | 101 | 197 |
| 23 | 83 | 80 | 47 | 50 | 186 | 285 | 194 | 197 | 180 | 107 | 99 | 199 |
| 24 | 93 | 83 | 45 | 51 | 197 | 186 | 186 | 194 | 168 | 109 | 99 | 202 |
| 25 | 99 | 61 | 41 | 51 | 350 | 132 | 178 | 199 | 155 | 103 | 103 | 210 |
| 26 | 93 | 57 | 44 | 51 | 382 | 129 | 178 | 208 | 150 | 107 | 101 | 216 |
| 27 | 85 | 57 | 44 | 53 | 390 | 134 | 183 | 205 | 148 | 109 | 101 | 205 |
| 28 | 83 | 59 | 48 | 53 | 362 | 150 | 191 | 199 | 150 | 107 | 101 | 208 |
| 29 | 78 | 61 | 48 | 51 | 172 | 183 | 178 | 148 | 148 | 101 | 109 | 188 |
| 30 | 78 | 59 | 50 | 51 | 210 | 183 | 152 | 150 | 91 | 119 | 120 | 125 |
| 31 | 76 | | 48 | 53 | 197 | | 155 | | | 93 | 120 | |
| Month | | | | | | | Maximum | Minimum | Mean | | Run-off in acre-feet | |
| October | | | | | | | 230 | 76 | 132 | | 8,120 | |
| November | | | | | | | 103 | 57 | 76.7 | | 4,560 | |
| December | | | | | | | 65 | 41 | 50.4 | | 3,100 | |
| January | | | | | | | 53 | 48 | 50.4 | | 3,100 | |
| February | | | | | | | 390 | 53 | 141 | | 7,830 | |
| March | | | | | | | 285 | 78 | 150 | | 9,220 | |
| April | | | | | | | 298 | 116 | 193 | | 11,500 | |
| May | | | | | | | 419 | 162 | 224 | | 13,800 | |
| June | | | | | | | 366 | 143 | 187 | | 11,100 | |
| July | | | | | | | 150 | 91 | 119 | | 7,320 | |
| August | | | | | | | 160 | 83 | 102 | | 6,270 | |
| September | | | | | | | 216 | 89 | 157 | | 9,340 | |
| The year | | | | | | | 419 | 41 | 131 | | 95,260 | |

South Platte River at Balzac, Colo.

Location.- Water-stage recorder in sec. 13, T. 5 N., R. 55 W., at Balzac siding, 1½ miles northeast of Union.

Drainage area.- 17,700 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; January 1917 to September 1934 in reports of State engineer.

Average discharge.- 18 years, 395 second-feet.

Extremes.- Maximum discharge during year, 480 second-feet Feb. 27 (gage height, 2.22 feet); minimum daily discharge, 6 second-feet Jan. 1, 1917-34; Maximum discharge recorded, 31,200 second-feet June 11, 1921; minimum daily discharge, that of Jan. 1, 1934.

Remarks.- Records fair. Diversions for irrigation above station. Flow is completely controlled except during extreme high water.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 98 | 16 | 9 | 6 | 14 | 131 | 149 | 133 | 158 | 120 | 100 | 160 |
| 2 | 92 | 13 | 13 | 8 | 14 | 59 | 153 | 149 | 149 | 120 | 137 | 166 |
| 3 | 80 | 13 | 13 | 12 | 18 | 50 | 92 | 180 | 156 | 122 | 135 | 180 |
| 4 | 72 | 17 | 11 | 12 | 18 | 38 | 34 | 135 | 183 | 137 | 133 | 180 |
| 5 | 62 | 17 | 14 | 9 | 17 | 28 | 26 | 62 | 190 | 142 | 133 | 173 |
| 6 | 55 | 17 | 18 | 13 | 18 | 24 | 26 | 41 | 178 | 117 | 133 | 144 |
| 7 | 53 | 17 | 12 | 13 | 18 | 21 | 26 | 34 | 168 | 115 | 135 | 153 |
| 8 | 48 | 28 | 11 | 12 | 18 | 18 | 21 | 34 | 173 | 105 | 149 | 183 |
| 9 | 43 | 32 | 11 | 13 | 13 | 14 | 33 | 44 | 173 | 107 | 153 | 203 |
| 10 | 41 | 30 | 11 | 17 | 14 | 17 | 41 | 59 | 176 | 111 | 160 | 203 |
| 11 | 43 | 16 | 11 | 13 | 13 | 14 | 28 | 74 | 183 | 115 | 170 | 206 |
| 12 | 46 | 11 | 11 | 12 | 9 | 13 | 28 | 59 | 183 | 151 | 176 | 190 |
| 13 | 44 | 9 | 11 | 14 | 9 | 13 | 28 | 74 | 176 | 146 | 156 | 166 |
| 14 | 41 | 9 | 11 | 16 | 9 | 13 | 51 | 133 | 170 | 144 | 153 | 158 |
| 15 | 33 | 11 | 8 | 13 | 9 | 12 | 64 | 166 | 178 | 140 | 160 | 168 |
| 16 | 30 | 8 | 8 | 14 | 9 | 12 | 55 | 198 | 178 | 135 | 163 | 178 |
| 17 | 30 | 12 | 8 | 17 | 11 | 14 | 53 | 208 | 170 | 135 | 160 | 178 |
| 18 | 30 | 22 | 8 | 14 | 11 | 14 | 78 | 176 | 135 | 170 | 156 | 166 |
| 19 | 24 | 26 | 9 | 12 | 9 | 12 | 86 | 193 | 115 | 137 | 231 | 156 |
| 20 | 21 | 27 | 12 | 13 | 9 | 12 | 76 | 170 | 96 | 124 | 300 | 156 |
| 21 | 20 | 30 | 8 | 14 | 14 | 14 | 74 | 158 | 131 | 115 | 237 | 168 |
| 22 | 16 | 33 | 7 | 13 | 13 | 39 | 76 | 160 | 105 | 122 | 190 | 173 |
| 23 | 17 | 33 | 9 | 13 | 12 | 74 | 78 | 153 | 98 | 135 | 173 | 178 |
| 24 | 16 | 30 | 9 | 16 | 13 | 28 | 120 | 146 | 137 | 144 | 160 | 186 |
| 25 | 16 | 26 | 7 | 13 | 96 | 16 | 135 | 140 | 163 | 144 | 168 | 186 |
| 26 | 16 | 26 | 8 | 14 | 218 | 14 | 140 | 151 | 151 | 158 | 166 | 188 |
| 27 | 16 | 22 | 11 | 13 | 396 | 12 | 140 | 149 | 126 | 146 | 160 | 166 |
| 28 | 16 | 22 | 8 | 13 | 368 | 12 | 142 | 131 | 117 | 120 | 156 | 151 |
| 29 | 16 | 26 | 7 | 13 | 12 | 12 | 144 | 111 | 113 | 92 | 156 | 170 |
| 30 | 13 | 22 | 8 | 13 | 51 | 51 | 135 | 98 | 109 | 96 | 149 | 178 |
| 31 | 13 | | 7 | 14 | 115 | 115 | | 126 | | 98 | 153 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 98 | 13 | 37.5 | 2,310 | | |
| November | | | | | | | 33 | 8 | 20.7 | 1,230 | | |
| December | | | | | | | 18 | 7 | 10.0 | 615 | | |
| January | | | | | | | 17 | 6 | 13.0 | 799 | | |
| February | | | | | | | 396 | 9 | 50.4 | 2,800 | | |
| March | | | | | | | 131 | 12 | 29.5 | 1,810 | | |
| April | | | | | | | 153 | 21 | 77.7 | 4,620 | | |
| May | | | | | | | 208 | 34 | 124 | 7,650 | | |
| June | | | | | | | 190 | 96 | 151 | 8,980 | | |
| July | | | | | | | 170 | 92 | 128 | 7,870 | | |
| August | | | | | | | 300 | 100 | 163 | 10,000 | | |
| September | | | | | | | 206 | 144 | 174 | 10,400 | | |
| The year | | | | | | | 396 | 6 | 81.6 | 59,050 | | |

South Platte River at Julesburg, Colo.

Location.- Water-stage recorder in sec. 33, T. 12 N., R. 44 W., half a mile east of Julesburg and 4 miles above State line. Prior to Feb. 10, 1934, chain gages were used for two of the three channels which compose the river at this point.

Drainage area.- 20,600 square miles.

Records available.- April 1902 to November 1906, May 1908 to September 1914, October 1930 to September 1934 in reports of U. S. Geological Survey; April 1902 to November 1906, May 1908 to November 1912, April 1914 to September 1934 in reports of State engineer of Colorado; October 1914 to September 1934 in reports of State engineer of Nebraska.

Average discharge.- 30 years, 522 second-feet.

Extremes.- Maximum discharge during year, 3,480 second-feet June 16; minimum daily discharge, 16 second-feet Aug. 14, 15.

1902-34: Maximum discharge, 30,800 second-feet June 16, 1921; no flow Aug. 18-20, 1902.

Remarks.- Records good. They represent total flow passing the State line. Numerous diversions for irrigation above station. Flow is mostly return seepage from irrigated lands above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|-------|------|------|-------|
| 1 | 135 | 251 | 183 | 305 | 294 | 386 | 102 | 40 | 27 | 73 | 18 | 21 |
| 2 | 131 | 241 | 218 | 314 | 294 | 587 | 100 | 41 | 26 | 65 | 17 | 22 |
| 3 | 131 | 232 | 248 | 316 | 284 | 610 | 98 | 50 | 28 | 64 | 18 | 23 |
| 4 | 135 | 240 | 275 | 319 | 284 | 522 | 105 | 122 | 29 | 57 | 17 | 22 |
| 5 | 136 | 229 | 296 | 316 | 214 | 451 | 119 | 256 | 27 | 51 | 17 | 21 |
| 6 | 132 | 237 | 291 | 317 | 191 | 314 | 119 | 381 | 26 | 46 | 19 | 22 |
| 7 | 154 | 251 | 301 | 306 | 179 | 315 | 111 | 354 | 26 | 44 | 19 | 23 |
| 8 | 134 | 255 | 305 | 351 | 165 | 307 | 99 | 243 | 24 | 41 | 19 | 23 |
| 9 | 134 | 259 | 310 | 340 | 147 | 270 | 103 | 184 | 24 | 42 | 19 | 27 |
| 10 | 133 | 263 | 314 | 307 | 156 | 249 | 97 | 144 | 25 | 43 | 19 | 31 |
| 11 | 133 | 268 | 308 | 306 | 170 | 232 | 90 | 108 | 24 | 44 | 19 | 26 |
| 12 | 129 | 265 | 318 | 314 | 176 | 201 | 84 | 89 | 23 | 43 | 19 | 24 |
| 13 | 122 | 217 | 318 | 317 | 183 | 185 | 71 | 83 | 23 | 42 | 19 | 23 |
| 14 | 122 | 207 | 321 | 319 | 176 | 167 | 67 | 75 | 56 | 37 | 16 | 22 |
| 15 | 121 | 168 | 315 | 304 | 159 | 158 | 69 | 68 | 814 | 35 | 16 | 23 |
| 16 | 127 | 139 | 318 | 313 | 152 | 148 | 70 | 61 | 1,190 | 32 | 16 | 23 |
| 17 | 138 | 124 | 306 | 307 | 170 | 179 | 74 | 55 | 1,610 | 30 | 26 | 26 |
| 18 | 144 | 124 | 314 | 308 | 185 | 195 | 71 | 49 | 1,390 | 31 | 25 | 31 |
| 19 | 148 | 127 | 316 | 314 | 184 | 217 | 66 | 47 | 776 | 29 | 19 | 31 |
| 20 | 149 | 122 | 311 | 312 | 197 | 177 | 62 | 43 | 543 | 25 | 18 | 35 |
| 21 | 153 | 132 | 308 | 309 | 219 | 135 | 59 | 41 | 410 | 24 | 17 | 39 |
| 22 | 154 | 128 | 313 | 309 | 246 | 109 | 61 | 37 | 292 | 23 | 23 | 38 |
| 23 | 158 | 128 | 318 | 302 | 275 | 108 | 62 | 34 | 228 | 28 | 24 | 38 |
| 24 | 159 | 142 | 304 | 306 | 298 | 162 | 57 | 33 | 193 | 24 | 23 | 40 |
| 25 | 156 | 145 | 300 | 305 | 215 | 187 | 53 | 32 | 152 | 23 | 22 | 43 |
| 26 | 184 | 137 | 318 | 307 | 151 | 208 | 49 | 31 | 130 | 22 | 22 | 42 |
| 27 | 211 | 133 | 304 | 305 | 205 | 196 | 47 | 31 | 111 | 22 | 26 | 42 |
| 28 | 226 | 133 | 340 | 303 | 296 | 169 | 42 | 31 | 98 | 19 | 26 | 41 |
| 29 | 239 | 147 | 332 | 302 | | 143 | 40 | 30 | 88 | 19 | 23 | 35 |
| 30 | 242 | 174 | 309 | 302 | | 120 | 40 | 28 | 81 | 17 | 23 | 35 |
| 31 | 247 | | 315 | 302 | | 109 | | 28 | | 17 | 23 | |

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|-----------|---------|---------|------|----------------------|
| October | 247 | 121 | 155 | 9,530 |
| November | 268 | 122 | 187 | 11,100 |
| December | 340 | 183 | 302 | 18,600 |
| January | 551 | 302 | 312 | 19,200 |
| February | 298 | 147 | 209 | 11,600 |
| March | 610 | 108 | 242 | 14,900 |
| April | 119 | 40 | 76.2 | 4,530 |
| May | 381 | 28 | 91.9 | 5,650 |
| June | 1,610 | 23 | 283 | 16,800 |
| July | 73 | 17 | 35.9 | 2,210 |
| August | 26 | 16 | 20.3 | 1,250 |
| September | 43 | 21 | 29.7 | 1,770 |
| The year | 1,610 | 16 | 162 | 117,100 |

South Platte River at North Platte, Nebr.

Location.- Staff gage in sec. 9, T. 13 N., R. 30 W., three-quarters of a mile south of North Platte. Zero of gage is 2,798.4 feet above mean sea level.

Drainage area.- 24,300 square miles.

Records available.- June 1914 to September 1915, August 1931 to September 1934 in reports of U. S. Geological Survey; 1915 to 1934 in reports of State engineer.

Extremes.- Maximum discharge recorded during year, 1,060 second-feet June 22 (gage height, 2.65 feet); no flow at times.
1914-34: Maximum discharge, 22,000 second-feet June 13, 1921; frequently no flow during summer.

Remarks.- Records fair. Discharge estimated Oct. 26 to Nov. 11, Dec. 12-21, Dec. 25 to Jan. 16, Feb. 21 to Mar. 1 on basis of two discharge measurements and temperature records. Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|-------|----------------------|------|-------|
| 1 | 161 | 70 | 109 | | 202 | 550 | 54 | 3 | 0 | 37 | | 0 |
| 2 | 144 | 70 | 202 | | 232 | 740 | 54 | 3 | 0 | 26 | | 0 |
| 3 | 113 | 70 | 161 | 400 | 232 | 592 | 39 | 3 | 0 | 10 | | 0 |
| 4 | 100 | 80 | 139 | | 217 | 437 | 63 | 13 | 0 | 5 | | 0 |
| 5 | 98 | 180 | 139 | | 194 | 367 | 57 | 39 | 0 | 4 | | 0 |
| 6 | 92 | 200 | 139 | | 194 | 367 | 39 | 39 | 0 | 3 | | 0 |
| 7 | 88 | 200 | 202 | | 194 | 311 | 39 | 39 | 0 | 1 | | 0 |
| 8 | 83 | | 202 | 397 | 161 | 437 | 43 | 42 | 0 | 0 | | 0 |
| 9 | 79 | | 202 | | 161 | 311 | 42 | 39 | 0 | 0 | | 5 |
| 10 | 79 | 195 | 289 | | 134 | 311 | 39 | 54 | 0 | 0 | | 5 |
| 11 | 79 | | 202 | | 144 | 311 | 23 | 63 | 0 | 0 | | 4 |
| 12 | 60 | 194 | 250 | | 134 | 202 | 23 | 69 | 0 | 0 | | 1 |
| 13 | 66 | 194 | 310 | 500 | 117 | 289 | 23 | 69 | 0 | 0 | | 3 |
| 14 | 79 | 194 | 364 | | 144 | 202 | 35 | 69 | 0 | 0 | | 1 |
| 15 | 88 | 194 | 350 | | 172 | 202 | 35 | 75 | 0 | 0 | | 2 |
| 16 | 79 | 202 | | 550 | 144 | 128 | 42 | 57 | 0 | 0 | | 2 |
| 17 | 72 | 202 | | 625 | 144 | 128 | 42 | 42 | 0 | 0 | | 1 |
| 18 | 66 | 202 | 360 | 720 | 117 | 187 | 32 | 32 | 0 | 0 | | 2 |
| 19 | 72 | 150 | | 493 | 117 | 104 | 26 | 17 | 0 | 0 | | 2 |
| 20 | 72 | 139 | | 493 | 117 | 92 | 26 | 6 | 0 | 0 | | 2 |
| 21 | 72 | 128 | 400 | 465 | | 75 | 17 | 5 | 720 | 0 | | 2 |
| 22 | 66 | 109 | 437 | 332 | | 75 | 14 | 0 | 1,060 | 0 | | 2 |
| 23 | 72 | 109 | 353 | 232 | 100 | 75 | 13 | 0 | 699 | 0 | | 2 |
| 24 | 72 | 92 | 172 | 232 | | 75 | 11 | 0 | 559 | 0 | | 0 |
| 25 | 66 | 92 | 165 | 109 | | 96 | 6 | 0 | 409 | 0 | | 2 |
| 26 | | 92 | | 332 | 60 | 69 | 6 | 0 | 258 | 0 | | 0 |
| 27 | | 100 | | 289 | 120 | 69 | 6 | 0 | 166 | 0 | | 0 |
| 28 | | 100 | | 268 | 350 | 54 | 6 | 0 | 113 | 0 | | 0 |
| 29 | 70 | 83 | | 109 | | 42 | 5 | 0 | 113 | 0 | | 0 |
| 30 | | 92 | | 332 | | 26 | 4 | 0 | 72 | 0 | | 0 |
| 31 | | | | 395 | | 75 | | 0 | | 0 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 161 | 60 | 81.8 | 5,030 | | |
| November | | | | | | | 202 | 70 | 144 | 8,560 | | |
| December | | | | | | | 437 | 100 | 274 | 16,860 | | |
| January | | | | | | | 720 | 109 | 400 | 24,620 | | |
| February | | | | | | | 350 | 60 | 154 | 8,530 | | |
| March | | | | | | | 740 | 26 | 226 | 13,880 | | |
| April | | | | | | | 63 | 4 | 28.8 | 1,710 | | |
| May | | | | | | | 75 | 0 | 25.1 | 1,540 | | |
| June | | | | | | | 1,060 | 0 | 139 | 8,270 | | |
| July | | | | | | | 37 | 0 | 2.8 | 175 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 5 | 0 | 1.3 | 79 | | |
| The year | | | | | | | 1,060 | 0 | 123 | 89,250 | | |

Note.- No flow during August.

Tarryall Creek near Lake George, Colo.

(Formerly published as Tarryall Creek near Hayman, Colo.)

Location.- Water-stage recorder in sec. 22, T. 11 S., R. 72 W., 8 miles northwest of Lake George.Drainage area.- 460 square miles.Records available.- October 1910 to June 1912, October 1933 to September 1934 in reports of U. S. Geological Survey; June to October 1916, April 1925 to September 1934 in reports of State engineer.Extremes.- Maximum discharge during year, 269 second-feet Aug. 15 (gage height, 2.87 feet); minimum daily discharge, 3 second-feet July 13.
1910-12, 1916, 1925-34: Maximum discharge, 795 second-feet July 29, 1929 (gage height, 4.52 feet); minimum daily discharge, that of July 13, 1934.Remarks.- Records good except those estimated for Oct. 1, 2, Aug. 19-23. No records Dec. 4 to Mar. 26. Diversions for irrigation above station.

Discharge in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 10 | 13 | 17 | | | | 31 | 15 | 111 | 12 | 25 | 24 |
| 2 | 12 | 14 | 19 | | | | 30 | 15 | 88 | 10 | 20 | 20 |
| 3 | 14 | 14 | 20 | | | | 29 | 15 | 45 | 8 | 15 | 17 |
| 4 | 11 | 11 | | | | | 29 | 18 | 45 | 7 | 16 | 16 |
| 5 | 19 | 20 | | | | | 28 | 23 | 51 | 6 | 16 | 15 |
| 6 | 22 | 20 | | | *7.6 | | 26 | 47 | 41 | 5 | 17 | 14 |
| 7 | 19 | 19 | | | | | 25 | 54 | 37 | 4 | 18 | 14 |
| 8 | 14 | 17 | | | | | 25 | 40 | 35 | 4 | 22 | 14 |
| 9 | 15 | 23 | | | | | 30 | 34 | 35 | 4 | 16 | 15 |
| 10 | 16 | 20 | | | | | 61 | 22 | 32 | 4 | 18 | 14 |
| 11 | 13 | 19 | | | | | 88 | 18 | 29 | 5 | 51 | 16 |
| 12 | 14 | 20 | | | | | 49 | 21 | 22 | 4 | 40 | 16 |
| 13 | 19 | 22 | | | | | 43 | 23 | 17 | 3 | 32 | 14 |
| 14 | 25 | 17 | | | | | 38 | 25 | 16 | 5 | 33 | 13 |
| 15 | 23 | 19 | | | | | 35 | 33 | 16 | 4 | 36 | 14 |
| 16 | 25 | 20 | | | | | 32 | 42 | 16 | 4 | 26 | 12 |
| 17 | 30 | 20 | | | | | 29 | 36 | 16 | 5 | 25 | 11 |
| 18 | 22 | 18 | | | | | 24 | 29 | 16 | 8 | 24 | 11 |
| 19 | 18 | 19 | | | | | 24 | 25 | 16 | 17 | 25 | 10 |
| 20 | 19 | 20 | | | | | 18 | 17 | 16 | 12 | 26 | 9 |
| 21 | 15 | 17 | | | | | 18 | 15 | 15 | 13 | 28 | 11 |
| 22 | 16 | 22 | | | | | 18 | 22 | 14 | 10 | 30 | 10 |
| 23 | 16 | 17 | | | | | 19 | 45 | 14 | 15 | 32 | 12 |
| 24 | 16 | 16 | | | | | 24 | 87 | 14 | 19 | 34 | 14 |
| 25 | 14 | 18 | | | | | 24 | 86 | 15 | 25 | 26 | 12 |
| 26 | 13 | 17 | | | | | 22 | 86 | 14 | 29 | 22 | 14 |
| 27 | 14 | 17 | | | | 31 | 19 | 79 | 13 | 35 | 26 | 12 |
| 28 | 14 | 17 | | | | 36 | 19 | 72 | 12 | 34 | 27 | 13 |
| 29 | 14 | 16 | | | | 37 | 19 | 45 | 11 | 26 | 26 | 16 |
| 30 | 14 | 20 | | | | 37 | 16 | 54 | 12 | 24 | 20 | 13 |
| 31 | 13 | | | | | 34 | | 106 | | 23 | 21 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 30 | 10 | 16.7 | 1,030 | | |
| November | | | | | | | 23 | 11 | 18.1 | 1,080 | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 27-31 | | | | | | | 37 | 31 | 35 | 347 | | |
| April | | | | | | | 88 | 16 | 29.7 | 1,770 | | |
| May | | | | | | | 106 | 15 | 40.5 | 2,490 | | |
| June | | | | | | | 111 | 11 | 27.7 | 1,650 | | |
| July | | | | | | | 35 | 5 | 12.4 | 762 | | |
| August | | | | | | | 51 | 15 | 25.6 | 1,570 | | |
| September | | | | | | | 24 | 9 | 13.9 | 827 | | |

*Discharge measurement.

PLATTE RIVER BASIN

Goose Creek above Lake Cheesman, Colo.

Location.- Water-stage recorder in sec. 3, T. 10 S., R. 71 W., 1 mile above high-water line of Lake Cheesman.

Drainage area.- 86 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; October 1924 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 135 second-feet May 6 (gage height, 2.48 feet); minimum not determined.
1924-34: Maximum discharge, 315 second-feet May 26, 1928 (gage height, 3.75 feet); minimum not determined.

Remarks.- Records excellent. No records Nov. 11 to Apr. 10.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 22 | 17 | | | | | | 31 | 39 | 16 | 14 | 13 |
| 2 | 22 | 16 | | | | | | 31 | 34 | 15 | 13 | 13 |
| 3 | 22 | 16 | | | | | | 33 | 34 | 14 | 12 | 13 |
| 4 | 22 | 19 | | | | | | 30 | 36 | 14 | 12 | 12 |
| 5 | 22 | 20 | | | | | | 40 | 34 | 16 | 11 | 11 |
| 6 | 21 | 20 | | | | | | 80 | 29 | 14 | 31 | 11 |
| 7 | 21 | 20 | | | | | | 56 | 26 | 13 | 28 | 11 |
| 8 | 21 | 20 | | | | | | 44 | 25 | 13 | 22 | 12 |
| 9 | 20 | 20 | | | | | | 42 | 24 | 14 | 21 | 13 |
| 10 | 20 | 20 | | | | | | 42 | 23 | 14 | 23 | 13 |
| 11 | 20 | | | | | | 30 | 44 | 22 | 14 | 19 | 11 |
| 12 | 20 | | | | | | 58 | 42 | 22 | 14 | 20 | 10 |
| 13 | 19 | | | | | | 61 | 54 | 21 | 12 | 17 | 10 |
| 14 | 19 | | | | | | 52 | 53 | 21 | 11 | 16 | 10 |
| 15 | 19 | | | | | | 46 | 54 | 20 | 11 | 16 | 10 |
| 16 | 19 | | | | | | 47 | 46 | 21 | 11 | 18 | 11 |
| 17 | 18 | | | | | | 36 | 44 | 23 | 11 | 17 | 10 |
| 18 | 18 | | | | | | 39 | 42 | 22 | 12 | 15 | 10 |
| 19 | 18 | | | | | | 45 | 40 | 20 | 13 | 19 | 10 |
| 20 | 18 | | | | | | 46 | 40 | 18 | 11 | 21 | 11 |
| 21 | 18 | | | | | | 45 | 39 | 18 | 10 | 17 | 14 |
| 22 | 17 | | | | | | 51 | 46 | 16 | 11 | 14 | 13 |
| 23 | 18 | | | | | | 50 | 41 | 16 | 16 | 14 | 12 |
| 24 | 17 | | | | | | 45 | 40 | 16 | 19 | 13 | 13 |
| 25 | 17 | | | | | | 50 | 46 | 22 | 19 | 13 | 12 |
| 26 | 17 | | | | | | 55 | 54 | 19 | 25 | 16 | 12 |
| 27 | 17 | | | | | | 32 | 48 | 16 | 21 | 15 | 12 |
| 28 | 17 | | | | | | 41 | 44 | 15 | 20 | 15 | 12 |
| 29 | 16 | | | | | | 38 | 46 | 15 | 14 | 16 | 11 |
| 30 | 16 | | | | | | 35 | 39 | 16 | 14 | 16 | 11 |
| 31 | 16 | | | | | | | 39 | | 14 | 14 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 22 | 16 | 18.9 | 1,160 373 | | |
| November 1-10 | | | | | | | 20 | 16 | 18.8 | | | |
| December | | | | | | | | | | 1,790 | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | 2,720 | | |
| March | | | | | | | | | | | | |
| April 11-30 | | | | | | | 61 | 30 | 45.1 | 1,360 | | |
| May | | | | | | | 80 | 30 | 44.2 | | | |
| June | | | | | | | 39 | 15 | 22.8 | 885 | | |
| July | | | | | | | 25 | 10 | 14.4 | | | |
| August | | | | | | | 31 | 11 | 17.0 | 1,050 690 | | |
| September | | | | | | | 14 | 10 | 11.6 | | | |

North Fork of South Platte River at South Platte, Colo.

Location.- Water-stage recorder in sec. 25, T. 7 S., R. 70 W., a third of a mile above South Platte. Zero of gage is 6,090.55 feet above mean sea level.

Drainage area.- 484 square miles.

Records available.- June 1909 to September 1910, April 1913 to September 1934.

Average discharge.- 22 years, 175 second-feet.

Extremes.- Maximum discharge during year, 335 second-feet May 10 (gage height, 3.38 feet); minimum daily discharge, 27 second-feet Dec. 18.
1909-10, 1913-34: Maximum discharge, 1,910 second-feet June 8, 1921 (gage height, 5.9 feet); minimum, 4 second-feet Dec. 8, 1932 (discharge measurement).

Remarks.- Records fair. Discharge estimated Dec. 20 to Mar. 29 on basis of two discharge measurements and temperature records. Minor diversions above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 98 | 77 | 57 | | | | 68 | 167 | 216 | 116 | 59 | 62 |
| 2 | 97 | 80 | 60 | | | | 64 | 165 | 202 | 88 | 59 | 62 |
| 3 | 97 | 74 | 50 | | | | 69 | 191 | 205 | 73 | 59 | 70 |
| 4 | 102 | 79 | 47 | | | | 65 | 187 | 205 | 69 | 57 | 69 |
| 5 | 95 | 61 | 45 | *40 | | | 69 | 187 | 191 | 84 | 54 | 68 |
| 6 | 90 | 59 | 33 | | | | 59 | 221 | 178 | 118 | 93 | 68 |
| 7 | 88 | 88 | 58 | | | | 69 | 277 | 171 | 85 | 100 | 65 |
| 8 | 92 | 84 | 70 | | | | 84 | 290 | 160 | 74 | 71 | 61 |
| 9 | 88 | 87 | 58 | | | | 111 | 290 | 151 | 70 | 74 | 61 |
| 10 | 85 | 80 | 69 | | | | 120 | 308 | 149 | 118 | 97 | 61 |
| 11 | 79 | 80 | 73 | | | | 118 | 290 | 141 | 147 | 97 | 60 |
| 12 | 74 | 74 | 62 | | | | 124 | 292 | 136 | 139 | 88 | 58 |
| 13 | 80 | 65 | 58 | | | | 130 | 300 | 130 | 134 | 71 | 56 |
| 14 | 82 | 65 | 53 | | | | 126 | 277 | 128 | 126 | 65 | 56 |
| 15 | 84 | 66 | 40 | | | | 120 | 257 | 136 | 124 | 70 | 60 |
| 16 | 82 | 68 | 27 | | *41 | | 120 | 250 | 160 | 126 | 100 | 57 |
| 17 | 77 | 75 | 30 | | | | 109 | 245 | 156 | 126 | 109 | 51 |
| 18 | 82 | 70 | 32 | | | | 102 | 250 | 143 | 126 | 90 | 49 |
| 19 | 79 | 68 | 44 | | | | 97 | 252 | 132 | 116 | 85 | 46 |
| 20 | 77 | 68 | | | | | 102 | 252 | 120 | 97 | 120 | 46 |
| 21 | 79 | 69 | | | | | 118 | 250 | 118 | 54 | 111 | 54 |
| 22 | 79 | 66 | | | | | 132 | 248 | 116 | 53 | 85 | 57 |
| 23 | 79 | 68 | | | | | 141 | 238 | 109 | 93 | 62 | 53 |
| 24 | 77 | 62 | | | | | 141 | 226 | 105 | 102 | 71 | 53 |
| 25 | 79 | 70 | 41 | | | | 145 | 238 | 180 | 88 | 70 | 52 |
| 26 | 76 | 59 | | | | | 167 | 240 | 182 | 113 | 68 | 51 |
| 27 | 74 | 65 | | | | | 158 | 231 | 167 | 100 | 71 | 50 |
| 28 | 69 | 60 | | | | | 139 | 214 | 156 | 84 | 70 | 50 |
| 29 | 70 | 57 | | | | | 141 | 207 | 149 | 71 | 74 | 51 |
| 30 | 71 | 56 | | | | 68 | 158 | 226 | 154 | 62 | 70 | 51 |
| 31 | 74 | | | | | 56 | | 236 | | 59 | 65 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 102 | 69 | 82.4 | 5,070 | | |
| November | | | | | | | 88 | 56 | 69.9 | 4,160 | | |
| December | | | | | | | 73 | 27 | 47.0 | 2,890 | | |
| January | | | | | | | | | 40.0 | 2,460 | | |
| February | | | | | | | | | 40.0 | 2,220 | | |
| March | | | | | | | | | 56.0 | 3,440 | | |
| April | | | | | | | 167 | 59 | 112 | 6,660 | | |
| May | | | | | | | 308 | 165 | 242 | 14,900 | | |
| June | | | | | | | 216 | 105 | 155 | 9,220 | | |
| July | | | | | | | 147 | 53 | 97.9 | 6,020 | | |
| August | | | | | | | 120 | 54 | 79.2 | 4,870 | | |
| September | | | | | | | 70 | 46 | 56.9 | 3,390 | | |
| The year | | | | | | | 308 | | 90.2 | 65,300 | | |

*Discharge measurement.

Bear Creek at Idledale, Colo.

Location.- Water-stage recorder in sec. 32, T. 4 S., R. 70 W., at Idledale.

Records available.- October 1933 to September 1934 (discontinued) in reports of U. S. Geological Survey; October 1919 to September 1934 in reports of State engineer.

Average discharge.- 15 years, 60.5 second-feet.

Extremes.- Maximum discharge during year, 4,620 second-feet (slope measurement) Aug. 9 (gage height, 7.09 feet); minimum probably occurred during winter.

Remarks.- Records good except those estimated Jan. 10 to Feb. 25 on basis of one discharge measurement and temperature records and those for Aug. 7 to Sept. 30. Small diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | | |
|-----------|------|------|------|------|------|---------|------|---------|------|------|----------------------|-------|--|--|
| 1 | 43 | 23 | 20 | 14 | * | 14 | 18 | 48 | 58 | 30 | 18 | 14 | | |
| 2 | 44 | 25 | 22 | 14 | | 16 | 18 | 49 | 58 | 23 | 17 | 14 | | |
| 3 | 43 | 25 | 19 | 13 | | 15 | 22 | 92 | 58 | 21 | 17 | 14 | | |
| 4 | 45 | 26 | 17 | 13 | | 15 | 18 | 96 | 51 | 22 | 16 | 14 | | |
| 5 | 43 | 17 | 14 | 16 | | 16 | 19 | 100 | 46 | 36 | 19 | 14 | | |
| 6 | 43 | 23 | 17 | 22 | 15 | 17 | 18 | 107 | 44 | 26 | 24 | 14 | | |
| 7 | 42 | 30 | 29 | 15 | | 14 | 22 | 107 | 40 | 23 | 20 | 14 | | |
| 8 | 40 | 28 | 26 | 14 | | 16 | 28 | 104 | 36 | 20 | 18 | 14 | | |
| 9 | 40 | 30 | 20 | 14 | | 14 | 41 | 102 | 37 | 20 | 274 | 14 | | |
| 10 | 39 | 26 | 21 | 14 | | 16 | 44 | 102 | 37 | 21 | 27 | 14 | | |
| 11 | 37 | 26 | 20 | 13 | | 15 | 52 | 98 | 33 | 22 | 14 | 14 | | |
| 12 | 38 | 24 | 20 | 13 | | 16 | 52 | 98 | 34 | 18 | | 14 | | |
| 13 | 36 | 23 | 22 | 12 | | 15 | 51 | 117 | 34 | 17 | | 13 | | |
| 14 | 36 | 22 | 23 | 12 | | 14 | 49 | 96 | 33 | 16 | | 13 | | |
| 15 | 36 | 21 | 21 | 12 | | 16 | 52 | 92 | 45 | 16 | | 13 | | |
| 16 | 34 | 22 | 23 | 12 | 19 | 18 | 49 | 84 | 59 | 16 | 14 | 13 | | |
| 17 | 32 | 24 | 26 | | | 19 | 44 | 83 | 52 | 14 | | 12 | | |
| 18 | 32 | 22 | 28 | | | 15 | 41 | 77 | 41 | 14 | | 14 | | |
| 19 | 33 | 20 | 22 | | | 18 | 40 | 77 | 36 | 14 | | 15 | | |
| 20 | 31 | 22 | 19 | | | 18 | 40 | 76 | 32 | 13 | | 18 | | |
| 21 | 23 | 20 | 19 | | | 18 | 41 | 71 | 39 | 14 | | 16 | | |
| 22 | 23 | 22 | 19 | | | 18 | 44 | 70 | 32 | 16 | | 20 | | |
| 23 | 23 | 22 | 18 | | | 18 | 46 | 69 | 30 | 25 | | 17 | | |
| 24 | 25 | 20 | 18 | | | 15 | 49 | 66 | 30 | 49 | | 10 | | |
| 25 | 26 | 22 | 18 | | | 17 | 53 | 64 | 31 | 36 | | 8 | | |
| 26 | 26 | 18 | 18 | 14 | 14 | 19 | 55 | 64 | 27 | 36 | 14 | 14 | | |
| 27 | 26 | 22 | 19 | | | 18 | 49 | 63 | 23 | 24 | | 8 | | |
| 28 | 26 | 19 | 18 | | | 17 | 47 | 59 | 22 | 22 | | 12 | | |
| 29 | 27 | 18 | 15 | | | 18 | 46 | 58 | 23 | 21 | | 14 | | |
| 30 | 26 | 20 | 15 | | | 19 | 46 | 58 | 24 | 19 | | 14 | | |
| 31 | 22 | | 14 | | | 18 | | 58 | | 19 | | | | |
| Month | | | | | | Maximum | | Minimum | Mean | | Run-off in acre-feet | | | |
| October | | | | | | 45 | | 22 | 33.5 | | 2,060 | | | |
| November | | | | | | 30 | | 17 | 22.7 | | 1,350 | | | |
| December | | | | | | 29 | | 14 | 20 | | 1,230 | | | |
| January | | | | | | 22 | | | 13 | | 799 | | | |
| February | | | | | | 19 | | 9 | 15 | | 833 | | | |
| March | | | | | | 19 | | 14 | 16.5 | | 1,010 | | | |
| April | | | | | | 55 | | 18 | 39.8 | | 2,370 | | | |
| May | | | | | | 117 | | 48 | 80.8 | | 4,970 | | | |
| June | | | | | | 59 | | 22 | 38.2 | | 2,270 | | | |
| July | | | | | | 49 | | 13 | 22.0 | | 1,350 | | | |
| August | | | | | | 274 | | | 24 | | 1,480 | | | |
| September | | | | | | 20 | | 8 | 13.7 | | 815 | | | |
| The year | | | | | | 274 | | | 28.4 | | 20,540 | | | |

*Discharge measurement.

Bear Creek at mouth, at Sheridan Junction, Colo.

Location.— Water-stage recorder in sec. 5, T. 5 S., R. 68 W., half a mile southwest of Sheridan Junction and three-quarters of a mile above mouth.

Records available.— October 1933 to September 1934 in reports of U. S. Geological Survey; April to November 1914, February 1927 to September 1934 in reports of State engineer.

Extremes.— Maximum discharge during year, 1,300 second-feet Aug. 9 (gage height, 5.22 feet); minimum daily discharge, 3 second-feet June 23-25, July 12, 13, 1914, 1927-34: Maximum discharge, 3,000 second-feet (slope-area measurement) July 7, 1933 (gage height, 6.95 feet); minimum daily discharge, that of June 23-25, July 12, 13, 1934.

Remarks.— Records fair. Discharge estimated June 18-21, Aug. 11-13. Diversions and regulation by storage for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 16 | 14 | 19 | 13 | 9 | 10 | 9 | 5 | 7 | 6 | 4 | 5 |
| 2 | 16 | 11 | 21 | 14 | 9 | 10 | 8 | 16 | 6 | 5 | 4 | 5 |
| 3 | 17 | 11 | 18 | 16 | 9 | 10 | 9 | 56 | 11 | 4 | 5 | 5 |
| 4 | 16 | 11 | 17 | 14 | 10 | 9 | 11 | 16 | 11 | 7 | 5 | 5 |
| 5 | 14 | 11 | 16 | 13 | 9 | 9 | 10 | 12 | 8 | 7 | 5 | 5 |
| 6 | 9 | 10 | 18 | 12 | 9 | 9 | 9 | 11 | 7 | 4 | 4 | 5 |
| 7 | 8 | 10 | 18 | 14 | 11 | 9 | 9 | 14 | 7 | 4 | 4 | 5 |
| 8 | 7 | 11 | 15 | 14 | 11 | 9 | 8 | 14 | 5 | 4 | 4 | 5 |
| 9 | 6 | 11 | 14 | 13 | 11 | 9 | 7 | 14 | 5 | 4 | 88 | 7 |
| 10 | 7 | 11 | 14 | 13 | 11 | 9 | 8 | 13 | 7 | 4 | 28 | 7 |
| 11 | 10 | 11 | 14 | 12 | 13 | 8 | 7 | 11 | 5 | 4 | 22 | 6 |
| 12 | 8 | 12 | 14 | 14 | 11 | 8 | 6 | 9 | 6 | 3 | 16 | 7 |
| 13 | 7 | 14 | 14 | 12 | 11 | 8 | 5 | 9 | 5 | 3 | 11 | 5 |
| 14 | 9 | 13 | 14 | 13 | 11 | 9 | 8 | 11 | 5 | 4 | 7 | 4 |
| 15 | 12 | 16 | 13 | 12 | 11 | 8 | 8 | 8 | 5 | 4 | 8 | 5 |
| 16 | 8 | 16 | 13 | 13 | 11 | 8 | 7 | 7 | 7 | 3 | 6 | 5 |
| 17 | 9 | 17 | 14 | 13 | 13 | 9 | 5 | 7 | 7 | 4 | 8 | 4 |
| 18 | 11 | 16 | 14 | 12 | 14 | 8 | 5 | 6 | 7 | 5 | 7 | 4 |
| 19 | 9 | 16 | 14 | 12 | 12 | 8 | 7 | 10 | 6 | 7 | 5 | 4 |
| 20 | 9 | 16 | 15 | 12 | 12 | 8 | 10 | 8 | 5 | 5 | 7 | 4 |
| 21 | 10 | 15 | 14 | 14 | 13 | 8 | 6 | 11 | 4 | 5 | 7 | 4 |
| 22 | 11 | 15 | 13 | 14 | 12 | 8 | 5 | 10 | 4 | 5 | 7 | 4 |
| 23 | 11 | 14 | 13 | 13 | 14 | 9 | 5 | 11 | 3 | 4 | 7 | 4 |
| 24 | 11 | 14 | 13 | 14 | 12 | 9 | 7 | 13 | 3 | 4 | 9 | 4 |
| 25 | 11 | 14 | 13 | 14 | 10 | 8 | 7 | 5 | 3 | 8 | 13 | 4 |
| 26 | 10 | 16 | 14 | 12 | 13 | 9 | 9 | 8 | 5 | 5 | 12 | 4 |
| 27 | 10 | 16 | 14 | 12 | 13 | 9 | 13 | 8 | 5 | 9 | 8 | 4 |
| 28 | 10 | 16 | 13 | 11 | 11 | 9 | 7 | 9 | 6 | 6 | 6 | 4 |
| 29 | 11 | 16 | 13 | 9 | | 9 | 8 | 8 | 5 | 4 | 7 | 4 |
| 30 | 10 | 17 | 13 | 10 | | 9 | 7 | 19 | 4 | 4 | 8 | 4 |
| 31 | 9 | | 13 | 9 | | 9 | | 26 | | 4 | 5 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 17 | 6 | 10.4 | 640 | | |
| November | | | | | | | 17 | 10 | 13.7 | 815 | | |
| December | | | | | | | 21 | 13 | 14.7 | 904 | | |
| January | | | | | | | 16 | 9 | 12.7 | 781 | | |
| February | | | | | | | 14 | 9 | 11.3 | 628 | | |
| March | | | | | | | 10 | 8 | 8.7 | 535 | | |
| April | | | | | | | 13 | 5 | 7.7 | 458 | | |
| May | | | | | | | 56 | 5 | 12.4 | 762 | | |
| June | | | | | | | 11 | 3 | 5.8 | 345 | | |
| July | | | | | | | 9 | 3 | 4.8 | 295 | | |
| August | | | | | | | 88 | 4 | 10.9 | 670 | | |
| September | | | | | | | 7 | 4 | 4.7 | 280 | | |
| The year | | | | | | | 88 | 3 | 9.82 | 7,110 | | |

Clear Creek near Golden, Colo.

Location.- Water-stage recorder in sec. 32, T. 3 S., R. 70 W., $1\frac{1}{2}$ miles above Golden.
Datum raised 0.87 foot Mar. 17, 1934.

Drainage area.- 392 square miles.

Records available.- December 1908 to December 1909, June 1911 to September 1929,
October 1933 to September 1934 in reports of U. S. Geological Survey; December
1908 to December 1909, June 1911 to September 1934 in reports of State engineer.

Average discharge.- 21 years (1911-22, 1924-34), 241 second-feet.

Extremes.- Maximum discharge during year, 2,160 second-feet Aug. 9 (gage height, 3.20
feet); minimum daily discharge, 21 second-feet Apr. 3.
1908-9, 1911-34: Maximum discharge, 5,890 second-feet (slope measurement)
Sept. 9, 1933 (gage height, 7.97 feet, present datum; minimum daily discharge,
18 second-feet Jan. 11, 1918.

Remarks.- Records good except those estimated Jan. 6-9, 14, Apr. 13-21, which are fair.
Small diversions for irrigation above station. Several small reservoirs regulate
flow slightly.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | 122 | 86 | 59 | 62 | 59 | 41 | 34 | 236 | 747 | 512 | 145 | 91 |
| 2 | 122 | 86 | 68 | 67 | 64 | 56 | 29 | 244 | 706 | 278 | 142 | 104 |
| 3 | 128 | 67 | 54 | 48 | 47 | 53 | 21 | 311 | 683 | 254 | 156 | 118 |
| 4 | 136 | 73 | 56 | 51 | 53 | 46 | 32 | 264 | 602 | 270 | 180 | 111 |
| 5 | 132 | 72 | 53 | 43 | 40 | 48 | 35 | 280 | 574 | 290 | 218 | 104 |
| 6 | 122 | 60 | 54 | 43 | 46 | 51 | 25 | 374 | 588 | 282 | 181 | 104 |
| 7 | 122 | 70 | 68 | 43 | 51 | 59 | 42 | 430 | 595 | 262 | 181 | 97 |
| 8 | 122 | 70 | 54 | 43 | 51 | 46 | 48 | 472 | 517 | 254 | 173 | 97 |
| 9 | 108 | 65 | 57 | 43 | 53 | 37 | 58 | 525 | 517 | 254 | 250 | 102 |
| 10 | 100 | 64 | 59 | 43 | 62 | 40 | 72 | 576 | 510 | 243 | 208 | 102 |
| 11 | 95 | 62 | 56 | 40 | 59 | 50 | 86 | 724 | 486 | 236 | 187 | 97 |
| 12 | 99 | 64 | 56 | 40 | 57 | 50 | 90 | 966 | 468 | 222 | 173 | 97 |
| 13 | 91 | 60 | 56 | 35 | 68 | 51 | 90 | 1,050 | 462 | 211 | 164 | 84 |
| 14 | 97 | 60 | 57 | 40 | 57 | 50 | 100 | 875 | 462 | 194 | 164 | 82 |
| 15 | 97 | 62 | 54 | 78 | 53 | 51 | 100 | 820 | 498 | 184 | 167 | 82 |
| 16 | 97 | 62 | 54 | 67 | 62 | 60 | 110 | 801 | 474 | 181 | 167 | 78 |
| 17 | 99 | 56 | 54 | 68 | 62 | 52 | 110 | 820 | 433 | 176 | 153 | 78 |
| 18 | 100 | 53 | 62 | 64 | 62 | 37 | 110 | 886 | 396 | 170 | 148 | 78 |
| 19 | 97 | 51 | 64 | 64 | 57 | 45 | 120 | 1,010 | 391 | 162 | 148 | 78 |
| 20 | 95 | 50 | 75 | 97 | 68 | 42 | 120 | 1,090 | 396 | 156 | 167 | 78 |
| 21 | 99 | 47 | 54 | 86 | 61 | 40 | 130 | 1,140 | 433 | 170 | 164 | 82 |
| 22 | 95 | 46 | 53 | 78 | 75 | 43 | 146 | 1,030 | 391 | 184 | 162 | 82 |
| 23 | 83 | 46 | 53 | 70 | 76 | 40 | 152 | 1,010 | 376 | 206 | 148 | 82 |
| 24 | 90 | 46 | 51 | 68 | 62 | 34 | 164 | 1,010 | 362 | 218 | 142 | 80 |
| 25 | 90 | 57 | 51 | 78 | 50 | 35 | 194 | 1,030 | 362 | 222 | 134 | 82 |
| 26 | 90 | 57 | 54 | 111 | 53 | 32 | 211 | 1,100 | 348 | 258 | 126 | 86 |
| 27 | 86 | 57 | 56 | 104 | 76 | 32 | 194 | 1,030 | 338 | 222 | 131 | 82 |
| 28 | 86 | 57 | 47 | 69 | 60 | 32 | 177 | 1,000 | 334 | 201 | 153 | 80 |
| 29 | 88 | 60 | 40 | 67 | | 34 | 180 | 1,100 | 320 | 184 | 134 | 80 |
| 30 | 86 | 62 | 44 | 68 | | 37 | 201 | 1,220 | 325 | 176 | 116 | 78 |
| 31 | 86 | | 54 | 57 | | 37 | | 938 | | 156 | 102 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 136 | 83 | 102 | 6,270 | | |
| November | | | | | | | 86 | 46 | 60.9 | 3,620 | | |
| December | | | | | | | 75 | 40 | 55.7 | 3,420 | | |
| January | | | | | | | 111 | 35 | 62.4 | 3,840 | | |
| February | | | | | | | 81 | 40 | 59.4 | 3,500 | | |
| March | | | | | | | 60 | 32 | 45.9 | 2,700 | | |
| April | | | | | | | 211 | 21 | 106 | 6,310 | | |
| May | | | | | | | 1,220 | 236 | 786 | 48,300 | | |
| June | | | | | | | 747 | 320 | 470 | 28,000 | | |
| July | | | | | | | 312 | 156 | 219 | 13,500 | | |
| August | | | | | | | 250 | 102 | 160 | 9,840 | | |
| September | | | | | | | 118 | 78 | 89.2 | 5,310 | | |
| The year | | | | | | | 1,220 | 21 | 186 | 134,400 | | |

Clear Creek at mouth, near Derby, Colo.

Location.- Water-stage recorder in sec. 36, T. 2 S., R. 68 W., three-quarters of a mile above mouth and 2½ miles west of Derby.

Drainage area.- 600 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; April to November 1914, February 1927 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 690 second-feet May 31 (gage height, 2.65 feet); minimum daily discharge, 4 second-feet Nov. 17.
1914, 1927-34: Maximum discharge, 1,260 second-feet June 2, 1914 (gage height, 4.5 feet); minimum daily discharge, that of Nov. 17, 1934.

Remarks.- Records fair except those for September, which are estimated. Diversions for irrigation above station. Flow slightly regulated by storage for irrigation.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 12 | 8 | 15 | 45 | 52 | 43 | 9 | 17 | 270 | 29 | 19 | |
| 2 | 11 | 8 | 65 | 44 | 77 | 25 | 8 | 18 | 113 | 18 | 17 | |
| 3 | 11 | 7 | 67 | 48 | 79 | 24 | 15 | 92 | 111 | 18 | 16 | |
| 4 | 11 | 10 | 67 | 48 | 82 | 23 | 16 | 152 | 65 | 24 | 13 | |
| 5 | 13 | 19 | 66 | 44 | 70 | 21 | 16 | 74 | 23 | 39 | 31 | |
| 6 | 12 | 25 | 50 | 34 | 59 | 18 | 12 | 77 | 65 | 28 | 24 | |
| 7 | 11 | 43 | 77 | 28 | 69 | 16 | 10 | 118 | 335 | 23 | 16 | |
| 8 | 10 | 33 | 74 | 24 | 72 | 14 | 9 | 169 | 198 | 22 | 17 | |
| 9 | 10 | 24 | 60 | 25 | 59 | 12 | 8 | 214 | 125 | 21 | 24 | |
| 10 | 9 | 8 | 65 | 40 | 52 | 12 | 7 | 286 | 138 | 19 | 28 | |
| 11 | 9 | 7 | 65 | 44 | 48 | 12 | 8 | 278 | 128 | 20 | 21 | |
| 12 | 10 | 6 | 65 | 40 | 48 | 11 | 7 | 270 | 97 | 20 | 16 | |
| 13 | 11 | 7 | 56 | 35 | 48 | 11 | 6 | 339 | 88 | 20 | 13 | |
| 14 | 10 | 6 | 62 | 33 | 46 | 10 | 7 | 358 | 84 | 18 | 11 | |
| 15 | 9 | 6 | 58 | 52 | 46 | 10 | 6 | 235 | 195 | 17 | 9 | |
| 16 | 8 | 5 | 50 | 54 | 45 | 8 | 34 | 165 | 158 | 17 | 8 | |
| 17 | 10 | 4 | 40 | 46 | 46 | 9 | 21 | 118 | 118 | 16 | 8 | |
| 18 | 11 | 6 | 36 | 45 | 62 | 13 | 15 | 232 | 45 | 17 | 7 | |
| 19 | 10 | 13 | 58 | 45 | 39 | 15 | 12 | 344 | 24 | 17 | 7 | |
| 20 | 10 | 16 | 68 | 44 | 30 | 14 | 11 | 299 | 18 | 17 | 7 | |
| 21 | 10 | 15 | 54 | 45 | 23 | 14 | 13 | 312 | 70 | 16 | 7 | |
| 22 | 8 | 11 | 56 | 54 | 24 | 13 | 13 | 418 | 54 | 14 | 7 | |
| 23 | 9 | 8 | 53 | 60 | 34 | 13 | 14 | 466 | 27 | 13 | 7 | |
| 24 | 12 | 7 | 50 | 64 | 30 | 12 | 13 | 484 | 18 | 12 | 6 | |
| 25 | 12 | 7 | 39 | 60 | 24 | 11 | 18 | 552 | 17 | 12 | 6 | |
| 26 | 11 | 6 | 42 | 58 | 75 | 10 | 42 | 552 | 16 | 12 | 6 | |
| 27 | 10 | 6 | 43 | 56 | 77 | 10 | 62 | 353 | 16 | 35 | 6 | |
| 28 | 7 | 6 | 44 | 58 | 59 | 10 | 23 | 204 | 19 | 29 | 6 | |
| 29 | 7 | 6 | 45 | 53 | | 10 | 19 | 274 | 22 | 25 | 19 | |
| 30 | 7 | 6 | 46 | 56 | | 10 | 18 | 460 | 21 | 23 | 18 | |
| 31 | 6 | | 45 | 52 | | 10 | | 618 | | 21 | 17 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 13 | 6 | 9.9 | 609 | | |
| November | | | | | | | 45 | 4 | 11.4 | 678 | | |
| December | | | | | | | 77 | 15 | 54.2 | 3,350 | | |
| January | | | | | | | 94 | 24 | 46.3 | 2,850 | | |
| February | | | | | | | 82 | 23 | 52.6 | 2,920 | | |
| March | | | | | | | 43 | 8 | 14.3 | 879 | | |
| April | | | | | | | 62 | 6 | 15.9 | 946 | | |
| May | | | | | | | 618 | 17 | 276 | 17,000 | | |
| June | | | | | | | 335 | 16 | 89.3 | 5,310 | | |
| July | | | | | | | 39 | 12 | 20.4 | 1,250 | | |
| August | | | | | | | 31 | 6 | 13.5 | 830 | | |
| September | | | | | | | | | 10 | 595 | | |
| The year | | | | | | | 618 | | 51.3 | 37,200 | | |

Fall River near Idaho Springs, Colo.

Location.- Water-stage recorder in sec. 28, T. 3 S., R. 73 W., at mouth, $1\frac{1}{2}$ miles west of Idaho Springs.

Drainage area.- 23.6 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; April 1930 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 98 second-feet May 31 (gage height, 1.43 feet); minimum discharge occurred during winter.
1930-34: Maximum discharge, 188 second-feet June 1, 1933 (gage height, 1.82 feet); minimum not determined.

Remarks.- Records fair. Flow regulated by storage for irrigation.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|------|---------|---------|------|----------------------|-------|
| 1 | 7 | | | | | | | | 62 | 34 | 8 | *6 |
| 2 | 7 | | | | | | | | 52 | 34 | 7 | *6 |
| 3 | 9 | | | | | | | | 47 | 37 | 8 | *6 |
| 4 | 9 | | | | | | | | 43 | 37 | 8 | *6 |
| 5 | 8 | | | | | | | | 50 | 37 | 9 | *6 |
| 6 | 7 | | | | | | | *56 | 60 | 39 | 9 | *6 |
| 7 | 7 | | | | | | | | 58 | 36 | 10 | *6 |
| 8 | 6 | | | | | | | | 40 | 34 | 9 | *6 |
| 9 | 5 | | | | | | | | 38 | 33 | 9 | *7 |
| 10 | 5 | | | | | | | | 39 | 30 | *8 | *7 |
| 11 | 3 | | | | | | | 76 | 39 | 29 | *9 | *7 |
| 12 | 3 | | | | | | | 70 | 39 | 25 | *8 | 7 |
| 13 | 4 | | | | | | | *70 | 35 | 18 | *9 | *6 |
| 14 | 5 | | | | | | | *70 | 32 | 14 | *10 | *6 |
| 15 | 6 | | | | | | | *70 | 35 | 14 | *10 | *6 |
| 16 | *5 | | | | | | | *70 | 35 | 14 | *11 | *7 |
| 17 | *5 | | | | | | | *70 | 31 | 13 | *12 | *7 |
| 18 | *4 | | | | | | | 65 | 35 | 12 | *10 | *7 |
| 19 | *4 | | | | | | | 72 | 45 | 11 | *10 | 6 |
| 20 | *3 | †3 | | | | | | 74 | 43 | 10 | *10 | 8 |
| 21 | *3 | | | | | | | 72 | 52 | *10 | 12 | 7 |
| 22 | *4 | | | | | | | 68 | 47 | *10 | 13 | 6 |
| 23 | 5 | | | | | | | 65 | 42 | *10 | *10 | 7 |
| 24 | 4 | | | | | | | *67 | 40 | *10 | *6 | 6 |
| 25 | 3 | | | | | | | 76 | 40 | *10 | *6 | 7 |
| 26 | *3 | | | | | | | 67 | 39 | *10 | *6 | 8 |
| 27 | *3 | | | | | | | 53 | 39 | 10 | *6 | 7 |
| 28 | *3 | | | | | | | 47 | 38 | 9 | *3 | 7 |
| 29 | 3 | | | | | | | 60 | 36 | 8 | *6 | 7 |
| 30 | 3 | | †4 | | | | | 83 | 36 | 8 | *6 | 7 |
| 31 | 2 | | | †2 | | | | 89 | | 7 | *6 | |
| Month | | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October | | | | | | | | 9 | 2 | 4.71 | 290 | |
| November | | | | | | | | | | *3 | 179 | |
| December | | | | | | | | | | *3 | 184 | |
| January | | | | | | | | | | *2 | 123 | |
| February | | | | | | | | | | *2 | 111 | |
| March | | | | | | | | | | *4 | 246 | |
| April | | | | | | | | | | *6 | 357 | |
| May | | | | | | | | 89 | 47 | 65.0 | 4,000 | |
| June | | | | | | | | 62 | 31 | 42.2 | 2,510 | |
| July | | | | | | | | 39 | 7 | 19.8 | 1,220 | |
| August | | | | | | | | 13 | 6 | 8.61 | 529 | |
| September | | | | | | | | 8 | 6 | 6.60 | 393 | |
| The year | | | | | | | | 89 | | 14.0 | 10,140 | |

*Estimated. †Discharge measurement.

North St. Vrain Creek at Longmont Dam, near Lyons, Colo.

Location.- Water-stage recorder in sec. 16, T. 3 N., R. 71 W., three-quarters of a mile above Longmont Dam and 4 miles west of Lyons.

Drainage area.- 109 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; June 1926 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 410 second-feet May 31 (gage height, 2.10 feet); minimum daily discharge, 6 second-feet Jan. 7, 13.
1926-34: Maximum discharge, 783 second-feet May 30, 1928 (gage height, 2.95 feet); minimum daily discharge, 6 second-feet Dec. 15, 1926.

Remarks.- Records good. Discharge estimated May 1-5. Flow partly regulated by small reservoirs above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 42 | 21 | 14 | 13 | 11 | 11 | 23 | 98 | 274 | 87 | 53 | 36 |
| 2 | 41 | 13 | 14 | 14 | 12 | 13 | 23 | 94 | 227 | 92 | 49 | 36 |
| 3 | 50 | 22 | 14 | 12 | 13 | 13 | 23 | 150 | 200 | 92 | 50 | 34 |
| 4 | 55 | 20 | 16 | 14 | 12 | 11 | 22 | 224 | 196 | 123 | 46 | 35 |
| 5 | 51 | 10 | 11 | 9 | 12 | 12 | 22 | 220 | 186 | 140 | 49 | 35 |
| 6 | 48 | 16 | 12 | 9 | 13 | 12 | 20 | 224 | 196 | 118 | 49 | 36 |
| 7 | 45 | 21 | 18 | 8 | 12 | 12 | 23 | 259 | 200 | 102 | 48 | 36 |
| 8 | 44 | 19 | 14 | 9 | 12 | 10 | 28 | 299 | 162 | 93 | 51 | 35 |
| 9 | 40 | 20 | 13 | 14 | 12 | 11 | 31 | 291 | 156 | 86 | 54 | 37 |
| 10 | 40 | 20 | 15 | 13 | 12 | 12 | 32 | 299 | 170 | 81 | 57 | 36 |
| 11 | 37 | 18 | 14 | 14 | 11 | 12 | 33 | 278 | 164 | 77 | 51 | 34 |
| 12 | 36 | 17 | 14 | 9 | 13 | 14 | 35 | 287 | 156 | 75 | 48 | 33 |
| 13 | 36 | 17 | 15 | 8 | 13 | 15 | 37 | 256 | 156 | 71 | 47 | 33 |
| 14 | 35 | 17 | 14 | 12 | 11 | 13 | 37 | 210 | 145 | 67 | 47 | 32 |
| 15 | 33 | 16 | 13 | 13 | 11 | 14 | 38 | 200 | 142 | 63 | 46 | 32 |
| 16 | 32 | 15 | 11 | 13 | 13 | 17 | 37 | 210 | 128 | 57 | 44 | 23 |
| 17 | 33 | 17 | 9 | 13 | 13 | 15 | 36 | 245 | 118 | 54 | 40 | 18 |
| 18 | 32 | 15 | 11 | 12 | 10 | 14 | 39 | 259 | 114 | 53 | 38 | 16 |
| 19 | 32 | 16 | 16 | 12 | 11 | 14 | 48 | 291 | 116 | 49 | 38 | 14 |
| 20 | 29 | 17 | 16 | 11 | 13 | 18 | 49 | 312 | 114 | 48 | 44 | 20 |
| 21 | 28 | 13 | 16 | 11 | 11 | 17 | 56 | 312 | 110 | 48 | 50 | 23 |
| 22 | 27 | 16 | 15 | 11 | 13 | 19 | 62 | 297 | 108 | 48 | 44 | 21 |
| 23 | 25 | 16 | 15 | 11 | 12 | 18 | 61 | 274 | 100 | 49 | 42 | 20 |
| 24 | 24 | 15 | 13 | 12 | 12 | 14 | 74 | 283 | 98 | 54 | 40 | 19 |
| 25 | 22 | 15 | 15 | 12 | 10 | 18 | 77 | 287 | 130 | 55 | 39 | 22 |
| 26 | 21 | 14 | 11 | 11 | 12 | 19 | 85 | 253 | 112 | 81 | 37 | 23 |
| 27 | 21 | 15 | 15 | 11 | 13 | 16 | 78 | 274 | 102 | 67 | 37 | 22 |
| 28 | 21 | 14 | 14 | 11 | 12 | 21 | 72 | 304 | 93 | 59 | 36 | 21 |
| 29 | 19 | 15 | 14 | 11 | | 23 | 77 | 312 | 92 | 55 | 39 | 17 |
| 30 | 19 | 14 | 14 | 11 | | 24 | 87 | 385 | 90 | 52 | 38 | 16 |
| 31 | 20 | | 14 | 11 | | 27 | | 365 | | 50 | 38 | |

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|-----------|---------|---------|------|----------------------|
| October | 55 | 19 | 33.5 | 2,060 |
| November | 22 | 10 | 16.6 | 988 |
| December | 18 | 9 | 13.9 | 855 |
| January | 14 | 8 | 11.5 | 707 |
| February | 13 | 10 | 12.0 | 666 |
| March | 27 | 10 | 15.5 | 953 |
| April | 87 | 20 | 45.5 | 2,710 |
| May | 385 | 94 | 260 | 16,000 |
| June | 274 | 90 | 145 | 8,630 |
| July | 140 | 48 | 72.5 | 4,480 |
| August | 57 | 36 | 44.7 | 2,750 |
| September | 37 | 14 | 27.2 | 1,620 |
| The year | 385 | 8 | 58.5 | 42,400 |

St. Vrain Creek at Lyons, Colo.

Location.- Water-stage recorder in sec. 17, T. 3 N., R. 70 W., 300 feet below junction of North and South St. Vrain Creeks and three-quarters of a mile east of Lyons.

Drainage area.- 226 square miles.

Records available.- August 1887 to October 1890, June 1895 to October 1903, July 1904 to November 1913, October 1933 to September 1934 in reports of U. S. Geological Survey; August 1887 to October 1890, June 1895 to October 1903, July 1904 to September 1934 in reports of State engineer.

Average discharge.- 30 years (1900-1903, 1907-34), 130 second-feet.

Extremes.- Maximum discharge during year, 628 second-feet May 10 (gage height, 3.28 feet); minimum daily discharge, 4 second-feet Dec. 6, 1887-90, 1895-1903, 1904-34: Maximum discharge, 2,050 second feet June 7, 1921 (gage height, 5.55 feet); no flow at times during January 1920, 1922.

Remarks.- Records good. Diversion for irrigation above station. Several reservoirs partly regulate the flow.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 22 | 20 | 5 | 10 | 12 | 18 | 13 | 142 | 377 | 82 | 51 | 27 |
| 2 | 24 | 19 | 6 | 10 | 14 | 21 | 15 | 154 | 305 | 111 | 47 | 26 |
| 3 | 32 | 21 | 5 | 8 | 14 | 22 | 20 | 300 | 325 | 119 | 46 | 30 |
| 4 | 50 | 20 | 5 | 10 | 14 | 18 | 13 | 426 | 372 | 139 | 43 | 27 |
| 5 | 37 | 12 | 5 | 8 | 16 | 20 | 14 | 421 | 345 | 176 | 37 | 26 |
| 6 | 33 | 10 | 4 | 6 | 14 | 20 | 11 | 426 | 345 | 162 | 37 | 26 |
| 7 | 31 | 22 | 5 | 6 | 13 | 16 | 12 | 484 | 372 | 134 | 36 | 23 |
| 8 | 30 | 20 | 9 | 7 | 11 | 19 | 20 | 544 | 305 | 116 | 37 | 23 |
| 9 | 29 | 21 | 13 | 9 | 12 | 18 | 29 | 538 | 291 | 111 | 51 | 27 |
| 10 | 37 | 20 | 14 | 11 | 14 | 18 | 37 | 532 | 310 | 100 | 59 | 30 |
| 11 | 36 | 19 | 14 | 9 | 10 | 18 | 41 | 508 | 296 | 78 | 56 | 26 |
| 12 | 34 | 18 | 12 | 8 | 12 | 18 | 46 | 514 | 278 | 67 | 51 | 23 |
| 13 | 31 | 18 | 13 | 9 | 14 | 18 | 54 | 415 | 269 | 62 | 50 | 21 |
| 14 | 30 | 18 | 12 | 9 | 17 | 18 | 62 | 310 | 252 | 57 | 44 | 18 |
| 15 | 31 | 16 | 10 | 12 | 14 | 17 | 67 | 265 | 208 | 54 | 40 | 19 |
| 16 | 30 | 12 | 9 | 11 | 14 | 23 | 62 | 278 | 190 | 51 | 44 | 19 |
| 17 | 46 | 20 | 8 | 12 | 18 | 25 | 56 | 340 | 173 | 62 | 40 | 16 |
| 18 | 56 | 14 | 8 | 11 | 15 | 15 | 54 | 388 | 159 | 57 | 38 | 15 |
| 19 | 54 | 18 | 10 | 10 | 18 | 24 | 57 | 466 | 169 | 50 | 38 | 13 |
| 20 | 60 | 18 | 14 | 10 | 18 | 23 | 57 | 490 | 169 | 46 | 40 | 16 |
| 21 | 57 | 16 | 14 | 11 | 16 | 23 | 64 | 514 | 162 | 48 | 46 | 23 |
| 22 | 48 | 15 | 13 | 11 | 16 | 24 | 70 | 443 | 166 | 50 | 41 | 22 |
| 23 | 39 | 21 | 11 | 11 | 21 | 26 | 72 | 421 | 152 | 51 | 39 | 19 |
| 24 | 34 | 17 | 10 | 11 | 18 | 16 | 95 | 432 | 145 | 59 | 37 | 18 |
| 25 | 30 | 19 | 10 | 10 | 18 | 27 | 103 | 432 | 163 | 57 | 34 | 22 |
| 26 | 31 | 17 | 6 | 11 | 18 | 34 | 121 | 399 | 159 | 95 | 33 | 25 |
| 27 | 30 | 15 | 10 | 14 | 21 | 28 | 103 | 399 | 142 | 80 | 32 | 23 |
| 28 | 27 | 7 | 10 | 12 | 20 | 32 | 103 | 438 | 121 | 64 | 35 | 19 |
| 29 | 22 | 5 | 10 | 11 | 37 | 37 | 111 | 415 | 66 | 57 | 32 | 17 |
| 30 | 19 | 5 | 11 | 12 | 40 | 40 | 126 | 502 | 84 | 54 | 30 | 15 |
| 31 | 20 | 11 | 12 | 12 | 20 | 20 | | 502 | | 51 | 29 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 60 | 19 | 35.2 | 2,160 | | |
| November | | | | | | | 22 | 5 | 16.4 | 976 | | |
| December | | | | | | | 14 | 4 | 9.5 | 554 | | |
| January | | | | | | | 14 | 5 | 10.1 | 621 | | |
| February | | | | | | | 21 | 10 | 15.4 | 855 | | |
| March | | | | | | | 40 | 15 | 22.5 | 1,380 | | |
| April | | | | | | | 126 | 31 | 36.9 | 3,390 | | |
| May | | | | | | | 544 | 134 | 413 | 25,400 | | |
| June | | | | | | | 377 | 84 | 130 | 13,700 | | |
| July | | | | | | | 176 | 46 | 30.6 | 4,960 | | |
| August | | | | | | | 59 | 29 | 41.1 | 2,530 | | |
| September | | | | | | | 30 | 13 | 21.9 | 1,300 | | |
| The year | | | | | | | 544 | 4 | 90.0 | 57,860 | | |

St. Vrain Creek at mouth, near Platteville, Colo.

Location.- Water-stage recorder in sec. 3, T. 3 N., R. 67 W., 1 mile above mouth and 4 miles northwest of Platteville.

Drainage area.- 1,000 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; April to December 1915, February 1927 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 4,300 second-feet (estimated) June 14 (gauge height, 5.10 feet); minimum daily discharge, 17 second-feet Sept. 16, 17, 30, 1915, 1927-34: Maximum and minimum discharges, those of 1934.

Remarks.- Records good. Diversions for irrigation above station. Flow regulated partly by several small reservoirs.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 71 | 53 | 56 | 66 | 74 | 118 | 62 | 81 | 112 | 24 | 56 | 25 |
| 2 | 67 | 54 | 68 | 57 | 71 | 114 | 69 | 75 | 98 | 20 | 53 | 24 |
| 3 | 64 | 57 | 81 | 57 | 68 | 103 | 78 | 107 | 61 | 23 | 53 | 31 |
| 4 | 60 | 60 | 76 | 62 | 69 | 84 | 107 | 541 | 57 | 40 | 50 | 24 |
| 5 | 58 | 60 | 64 | 66 | 67 | 75 | 127 | 534 | 55 | 56 | 53 | 20 |
| 6 | 64 | 61 | 64 | 63 | 62 | 76 | 120 | 472 | 57 | 52 | 55 | 20 |
| 7 | 69 | 60 | 66 | 56 | 78 | 90 | 103 | 392 | 56 | 44 | 55 | 23 |
| 8 | 75 | 60 | 64 | 61 | 74 | 92 | 92 | 340 | 57 | 43 | 56 | 19 |
| 9 | 78 | 62 | 61 | 88 | 74 | 90 | 87 | 455 | 58 | 45 | 54 | 20 |
| 10 | 88 | 62 | 62 | 76 | 87 | 87 | 87 | 700 | 53 | 48 | 58 | 19 |
| 11 | 84 | 58 | 62 | 68 | 86 | 84 | 95 | 534 | 60 | 41 | 64 | 20 |
| 12 | 79 | 57 | 61 | 61 | 84 | 69 | 102 | 292 | 50 | 42 | 66 | 20 |
| 13 | 75 | 55 | 60 | 58 | 90 | 62 | 107 | 214 | 43 | 48 | 68 | 19 |
| 14 | 74 | 54 | 58 | 82 | 103 | 60 | 123 | 649 | 197 | 48 | 66 | 18 |
| 15 | 71 | 57 | 55 | 81 | 112 | 64 | 140 | 409 | 330 | 52 | 64 | 18 |
| 16 | 64 | 56 | 57 | 66 | 90 | 62 | 131 | 224 | 282 | 48 | 61 | 17 |
| 17 | 62 | 56 | 55 | 78 | 92 | 68 | 123 | 127 | 221 | 49 | 58 | 17 |
| 18 | 63 | 55 | 53 | 78 | 92 | 63 | 105 | 74 | 179 | 56 | 54 | 20 |
| 19 | 75 | 58 | 60 | 67 | 79 | 58 | 90 | 54 | 145 | 52 | 53 | 26 |
| 20 | 75 | 55 | 71 | 60 | 82 | 56 | 90 | 43 | 112 | 47 | 55 | 25 |
| 21 | 75 | 54 | 69 | 64 | 92 | 64 | 95 | 36 | 165 | 52 | 51 | 28 |
| 22 | 75 | 53 | 64 | 72 | 96 | 60 | 118 | 44 | 143 | 55 | 50 | 26 |
| 23 | 71 | 52 | 63 | 63 | 96 | 52 | 116 | 42 | 109 | 54 | 47 | 27 |
| 24 | 61 | 51 | 61 | 63 | 103 | 58 | 136 | 35 | 98 | 63 | 44 | 27 |
| 25 | 58 | 51 | 57 | 69 | 190 | 72 | 112 | 32 | 100 | 62 | 42 | 26 |
| 26 | 62 | 49 | 56 | 68 | 168 | 78 | 107 | 39 | 81 | 60 | 36 | 27 |
| 27 | 61 | 50 | 53 | 75 | 170 | 93 | 165 | 44 | 66 | 78 | 37 | 27 |
| 28 | 60 | 50 | 60 | 76 | 136 | 79 | 148 | 44 | 47 | 67 | 36 | 27 |
| 29 | 53 | 51 | 66 | 62 | 64 | 118 | 53 | 36 | 63 | 63 | 32 | 23 |
| 30 | 54 | 53 | 69 | 61 | 62 | 62 | 95 | 42 | 31 | 66 | 30 | 17 |
| 31 | 53 | | 63 | 65 | 62 | 62 | | 66 | | 60 | 27 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 88 | 53 | 67.7 | 4,160 | | |
| November | | | | | | | 82 | 49 | 55.5 | 3,300 | | |
| December | | | | | | | 81 | 53 | 62.4 | 3,940 | | |
| January | | | | | | | 88 | 56 | 67.4 | 4,140 | | |
| February | | | | | | | 190 | 62 | 96.0 | 5,330 | | |
| March | | | | | | | 118 | 50 | 73.8 | 4,540 | | |
| April | | | | | | | 165 | 62 | 108 | 6,430 | | |
| May | | | | | | | 700 | 32 | 219 | 13,500 | | |
| June | | | | | | | 330 | 31 | 105 | 6,250 | | |
| July | | | | | | | 78 | 20 | 50.4 | 3,100 | | |
| August | | | | | | | 68 | 27 | 51.1 | 3,140 | | |
| September | | | | | | | 31 | 17 | 22.7 | 1,350 | | |
| The year | | | | | | | 700 | 17 | 81.6 | 59,080 | | |

Lefthand Creek at mouth, at Longmont, Colo.

Location.- Water-stage recorder in sec. 10, T. 2 N., R. 69 W., three-quarters of a mile above mouth and 1 mile south of Longmont.

Drainage area.- 74 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; March 1927 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 106 second-feet May 5 (gage height, 1.92 feet); minimum daily discharge, 1 second-foot at times.
1927-34: Maximum discharge, 252 second-feet May 10, 1928 (gage height, 2.22 feet); minimum daily discharge, 1 second-foot at times 1932, 1934.

Remarks.- Records fair. Discharge estimated Dec. 16-19, 25-30, Jan. 3, 4, 6-8, 13, 16-21, 27-29, Feb. 5, 6, 10-12, 21-27. Diversions for irrigation above station. Flow regulated by storage for irrigation.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 5 | 4 | 5 | 5 | 4 | 4 | 2 | 6 | 5 | 4 | 3 | 1 |
| 2 | 5 | 4 | 8 | 5 | 4 | 4 | 2 | 5 | 5 | 4 | 3 | 2 |
| 3 | 5 | 4 | 6 | 5 | 4 | 4 | 3 | 28 | 5 | 4 | 3 | 2 |
| 4 | 5 | 5 | 6 | 5 | 5 | 3 | 70 | 7 | 4 | 3 | 3 | 2 |
| 5 | 5 | 5 | 6 | 5 | 4 | 3 | 103 | 6 | 5 | 3 | 2 | |
| 6 | 5 | 5 | 9 | 4 | 4 | 3 | 3 | 98 | 6 | 4 | 3 | 2 |
| 7 | 6 | 5 | 6 | 4 | 5 | 3 | 3 | 80 | 7 | 4 | 3 | 2 |
| 8 | 5 | 5 | 6 | 4 | 5 | 4 | 2 | 66 | 7 | 4 | 3 | 2 |
| 9 | 4 | 5 | 6 | 4 | 5 | 4 | 2 | 39 | 9 | 4 | 3 | 3 |
| 10 | 4 | 5 | 5 | 5 | 5 | 4 | 2 | 19 | 8 | 4 | 2 | 2 |
| 11 | 4 | 5 | 5 | 5 | 4 | 3 | 5 | 16 | 6 | 4 | 2 | 3 |
| 12 | 3 | 4 | 6 | 5 | 4 | 3 | 8 | 7 | 5 | 4 | 2 | 2 |
| 13 | 3 | 4 | 6 | 5 | 5 | 3 | 9 | 34 | 6 | 3 | 2 | 2 |
| 14 | 4 | 4 | 6 | 5 | 5 | 3 | 11 | 55 | 5 | 3 | 1 | 2 |
| 15 | 3 | 4 | 6 | 4 | 5 | 3 | 13 | 39 | 19 | 4 | 2 | 2 |
| 16 | 3 | 4 | 6 | 4 | 4 | 3 | 18 | 15 | 16 | 4 | 4 | 2 |
| 17 | 3 | 4 | 6 | 4 | 5 | 4 | 16 | 9 | 15 | 4 | 1 | 1 |
| 18 | 3 | 5 | 6 | 5 | 4 | 3 | 11 | 5 | 14 | 4 | 2 | 2 |
| 19 | 3 | 5 | 6 | 5 | 5 | 3 | 6 | 4 | 14 | 4 | 2 | 2 |
| 20 | 4 | 4 | 6 | 5 | 4 | 2 | 5 | 4 | 11 | 3 | 2 | 3 |
| 21 | 6 | 4 | 6 | 5 | 4 | 2 | 4 | 5 | 10 | 3 | 2 | 3 |
| 22 | 6 | 4 | 5 | 5 | 4 | 3 | 4 | 3 | 5 | 3 | 2 | 4 |
| 23 | 4 | 4 | 6 | 4 | 4 | 3 | 3 | 3 | 6 | 3 | 1 | 2 |
| 24 | 3 | 4 | 6 | 4 | 4 | 4 | 3 | 4 | 10 | 4 | 1 | 2 |
| 25 | 4 | 5 | 5 | 5 | 4 | 4 | 5 | 4 | 11 | 4 | 2 | 4 |
| 26 | 3 | 5 | 5 | 5 | 4 | 4 | 12 | 4 | 11 | 3 | 1 | 5 |
| 27 | 3 | 4 | 5 | 4 | 4 | 3 | 19 | 4 | 8 | 4 | 1 | 3 |
| 28 | 3 | 4 | 5 | 4 | 4 | 3 | 10 | 4 | 7 | 4 | 1 | 4 |
| 29 | 4 | 5 | 4 | 4 | 4 | 3 | 8 | 4 | 5 | 3 | 1 | 4 |
| 30 | 3 | 5 | 5 | 4 | 4 | 3 | 6 | 5 | 4 | 3 | 1 | 4 |
| 31 | 4 | | 5 | 4 | | 3 | | 6 | | 3 | 1 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 6 | 3 | 4.0 | 246 | | |
| November | | | | | | | 5 | 4 | 4.5 | 268 | | |
| December | | | | | | | 9 | 4 | 5.7 | 350 | | |
| January | | | | | | | 5 | 4 | 4.5 | 277 | | |
| February | | | | | | | 5 | 4 | 4.4 | 244 | | |
| March | | | | | | | 4 | 2 | 3.3 | 203 | | |
| April | | | | | | | 19 | 2 | 6.7 | 399 | | |
| May | | | | | | | 103 | 3 | 24.1 | 1,480 | | |
| June | | | | | | | 19 | 4 | 8.4 | 500 | | |
| July | | | | | | | 5 | 3 | 3.7 | 228 | | |
| August | | | | | | | 4 | 1 | 2.0 | 125 | | |
| September | | | | | | | 5 | 1 | 2.5 | 149 | | |
| The year | | | | | | | 103 | 1 | 6.2 | 4,470 | | |

Boulder Creek near Orodell, Colo.

Location.- Water-stage recorder in sec. 34, T. 1 N., R. 71 W., 1 mile above old Orodell and 1 mile above mouth of Fourmile Creek.

Drainage area.- 105 square miles.

Records available.- August 1887 to October 1888, March 1907 to December 1913, October 1933 to September 1934 in reports of U. S. Geological Survey; August 1887 to October 1888, March 1907 to November 1914, February 1916 to September 1934 in reports of State engineer. Prior to 1917 station maintained just above mouth of Fourmile Creek 1 mile downstream.

Average discharge.- 26 years (1906-14, 1916-34), 96.1 second-feet.

Extremes.- Maximum discharge during year, 576 second-feet May 31 (gage height, 2.86 feet); minimum daily discharge, 2 second-feet Mar. 4-8, 8.
1887-88, 1907-14, 1916-34: Maximum discharge, 2,500 second-feet June 6, 1921 (gage height, 4.31 feet); minimum daily discharge, 2 second-feet at times 1911, 1920, 1934.

Remarks.- Records good. Discharge estimated Aug. 27, 28, 30. Flow regulated by Barker Meadow Reservoir, capacity 11,500 acre-feet. Low-water flow during non-irrigation season regulated by operation of power plant, 1,500 feet above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|------|----------------------|-------|
| 1 | 13 | 33 | 24 | 29 | 34 | 34 | 27 | 74 | 304 | 80 | 47 | 26 |
| 2 | 21 | 28 | 29 | 36 | 34 | 30 | 37 | 79 | 240 | 79 | 46 | 23 |
| 3 | 23 | 31 | 41 | 41 | 27 | 9 | 43 | 110 | 178 | 82 | 47 | 28 |
| 4 | 26 | 34 | 30 | 50 | 17 | 2 | 37 | 115 | 155 | 80 | 45 | 25 |
| 5 | 27 | 19 | 27 | 56 | 29 | 2 | 44 | 104 | 175 | 85 | 52 | 27 |
| 6 | 27 | 28 | 28 | 26 | 33 | 2 | 42 | 115 | 168 | 86 | 37 | 25 |
| 7 | 27 | 31 | 35 | 27 | 32 | 5 | 42 | 121 | 189 | 84 | 42 | 23 |
| 8 | 27 | 32 | 39 | 32 | 31 | 2 | 36 | 133 | 185 | 84 | 42 | 17 |
| 9 | 27 | 30 | 39 | 38 | 31 | 4 | 44 | 189 | 185 | 80 | 39 | 16 |
| 10 | 28 | 29 | 36 | 38 | 27 | 11 | 53 | 192 | 175 | 78 | 40 | 16 |
| 11 | 29 | 24 | 36 | 44 | 27 | 29 | 58 | 192 | 185 | 70 | 35 | 13 |
| 12 | 29 | 17 | 37 | 49 | 33 | 26 | 63 | 182 | 161 | 69 | 31 | 13 |
| 13 | 30 | 26 | 29 | 45 | 34 | 28 | 69 | 202 | 175 | 69 | 38 | 11 |
| 14 | 32 | 27 | 32 | 25 | 33 | 33 | 74 | 185 | 168 | 69 | 36 | 12 |
| 15 | 27 | 27 | 32 | 38 | 31 | 31 | 42 | 197 | 152 | 63 | 30 | 14 |
| 16 | 27 | 26 | 33 | 44 | 30 | 33 | 53 | 216 | 172 | 63 | 27 | 17 |
| 17 | 34 | 25 | 16 | 40 | 23 | 24 | 44 | 226 | 141 | 56 | 24 | 20 |
| 18 | 28 | 24 | 33 | 39 | 16 | 23 | 44 | 253 | 136 | 56 | 27 | 24 |
| 19 | 27 | 26 | 35 | 43 | 27 | 37 | 54 | 240 | 133 | 52 | 31 | 27 |
| 20 | 27 | 27 | 37 | 36 | 33 | 41 | 54 | 278 | 136 | 55 | 34 | 31 |
| 21 | 28 | 27 | 34 | 32 | 30 | 46 | 69 | 321 | 115 | 56 | 34 | 29 |
| 22 | 14 | 24 | 36 | 43 | 13 | 50 | 61 | 313 | 98 | 52 | 32 | 24 |
| 23 | 20 | 27 | 36 | 41 | 27 | 48 | 70 | 321 | 98 | 50 | 32 | 24 |
| 24 | 26 | 25 | 24 | 40 | 23 | 60 | 69 | 285 | 82 | 54 | 33 | 22 |
| 25 | 27 | 31 | 20 | 40 | 14 | 28 | 69 | 330 | 82 | 50 | 32 | 13 |
| 26 | 30 | 14 | 36 | 38 | 25 | 56 | 82 | 265 | 78 | 56 | 27 | 8 |
| 27 | 33 | 15 | 33 | 29 | 25 | 43 | 69 | 235 | 78 | 56 | 27 | 14 |
| 28 | 30 | 14 | 33 | 15 | 28 | 53 | 80 | 221 | 80 | 55 | 28 | 10 |
| 29 | 20 | 14 | 59 | 36 | | 54 | 63 | 226 | 80 | 52 | 28 | 11 |
| 30 | 24 | 16 | 36 | 36 | | 53 | 65 | 253 | 82 | 47 | 29 | 10 |
| 31 | 27 | | 29 | 37 | | 42 | | 390 | | 50 | 30 | |
| Month | | | | | | | Maximum | Minimum | Mean | | Run-off in acre-feet | |
| October | | | | | | | 34 | 13 | 26.2 | | 1,610 | |
| November | | | | | | | 34 | 14 | 25.0 | | 1,490 | |
| December | | | | | | | 59 | 16 | 33.0 | | 2,030 | |
| January | | | | | | | 56 | 15 | 37.5 | | 2,310 | |
| February | | | | | | | 34 | 13 | 27.4 | | 1,520 | |
| March | | | | | | | 60 | 2 | 30.3 | | 1,860 | |
| April | | | | | | | 82 | 27 | 55.2 | | 3,230 | |
| May | | | | | | | 390 | 74 | 212 | | 13,000 | |
| June | | | | | | | 304 | 78 | 146 | | 8,590 | |
| July | | | | | | | 86 | 47 | 65.1 | | 4,000 | |
| August | | | | | | | 52 | 24 | 34.9 | | 2,150 | |
| September | | | | | | | 31 | 8 | 19.1 | | 1,140 | |
| The year | | | | | | | 390 | 2 | 59.6 | | 43,080 | |

Boulder Creek near mouth, near Longmont, Colo.

Location.- Water-stage recorder in NE $\frac{1}{4}$ sec. 17, T. 2 N., R. 68 W., $1\frac{1}{2}$ miles above mouth and 5 miles southeast of Longmont.

Drainage area.- 512 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; March 1927 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 338 second-feet May 10 (gage height, 3.00 feet); minimum daily discharge, 1 second-foot at times.
1927-34: Maximum discharge, 723 second-feet June 4, 1928 (gage height, 3.84 feet); minimum daily discharge, 1 second-foot at times 1928, 1931-34.

Remarks.- Records good. Diversions and regulation by storage for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 4 | 5 | 3 | 8 | 24 | 59 | 22 | 34 | 42 | 2 | 3 | 2 |
| 2 | 3 | 5 | 7 | 10 | 26 | 57 | 21 | 41 | 3 | 3 | 3 | 3 |
| 3 | 3 | 4 | 8 | 12 | 30 | 47 | 37 | 94 | 3 | 2 | 3 | 3 |
| 4 | 5 | 4 | 5 | 14 | 26 | 30 | 49 | 211 | 3 | 3 | 2 | 2 |
| 5 | 6 | 3 | 4 | 16 | 20 | 24 | 56 | 172 | 2 | 4 | 2 | 2 |
| 6 | 5 | 2 | 4 | 16 | 28 | 36 | 54 | 148 | 2 | 4 | 2 | 1 |
| 7 | 5 | 3 | 4 | 28 | 31 | 49 | 45 | 133 | 1 | 3 | 1 | 1 |
| 8 | 4 | 3 | 5 | 32 | 30 | 51 | 45 | 130 | 1 | 2 | 1 | 2 |
| 9 | 3 | 3 | 12 | 32 | 24 | 38 | 40 | 269 | 1 | 2 | 2 | 1 |
| 10 | 4 | 2 | 10 | 20 | 33 | 52 | 48 | 316 | 1 | 2 | 3 | 1 |
| 11 | 4 | 3 | 8 | 17 | 32 | 32 | 50 | 219 | 1 | 2 | 3 | 1 |
| 12 | 3 | 2 | 9 | 17 | 28 | 21 | 56 | 108 | 1 | 3 | 2 | 1 |
| 13 | 4 | 1 | 8 | 32 | 45 | 20 | 60 | 160 | 1 | 3 | 2 | 1 |
| 14 | 5 | 1 | 8 | 28 | 46 | 26 | 63 | 228 | 4 | 2 | 3 | 1 |
| 15 | 4 | 1 | 6 | 16 | 42 | 29 | 73 | 135 | 10 | 1 | 4 | 1 |
| 16 | 1 | 2 | 10 | 20 | 41 | 21 | 56 | 78 | 7 | 1 | 3 | 1 |
| 17 | 1 | 2 | 10 | 28 | 43 | 19 | 63 | 28 | 5 | 1 | 2 | 1 |
| 18 | 3 | 2 | 11 | 28 | 44 | 17 | 52 | 11 | 6 | 1 | 3 | 1 |
| 19 | 3 | 2 | 12 | 38 | 29 | 16 | 53 | 6 | 6 | 1 | 3 | 1 |
| 20 | 3 | 2 | 10 | 30 | 39 | 14 | 55 | 5 | 3 | 1 | 2 | 2 |
| 21 | 2 | 2 | 9 | 30 | 44 | 13 | 70 | 24 | 5 | 2 | 2 | 2 |
| 22 | 2 | 2 | 10 | 21 | 47 | 12 | 78 | 10 | 3 | 1 | 3 | 1 |
| 23 | 2 | 2 | 10 | 23 | 48 | 16 | 82 | 2 | 3 | 3 | 2 | 1 |
| 24 | 1 | 2 | 8 | 22 | 49 | 18 | 90 | 2 | 8 | 1 | 1 | 1 |
| 25 | 1 | 2 | 7 | 20 | 46 | 21 | 75 | 5 | 5 | 1 | 3 | 2 |
| 26 | 1 | 2 | 7 | 33 | 18 | 24 | 71 | 4 | 1 | 3 | 1 | 2 |
| 27 | 1 | 2 | 8 | 33 | 34 | 19 | 95 | 5 | 2 | 3 | 1 | 1 |
| 28 | 1 | 3 | 14 | 30 | 59 | 18 | 62 | 5 | 3 | 3 | 2 | 1 |
| 29 | 1 | 4 | 20 | 20 | 18 | 48 | 4 | 4 | 3 | 3 | 3 | 1 |
| 30 | 1 | 3 | 14 | 16 | 18 | 38 | 4 | 3 | 3 | 3 | 2 | 1 |
| 31 | 3 | | 12 | 26 | 18 | | 12 | | | 2 | 1 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 6 | 1 | 2.9 | 178 | | |
| November | | | | | | | 5 | 1 | 2.5 | 149 | | |
| December | | | | | | | 20 | 3 | 8.6 | 541 | | |
| January | | | | | | | 38 | 8 | 23.1 | 1,420 | | |
| February | | | | | | | 59 | 18 | 36.0 | 2,000 | | |
| March | | | | | | | 59 | 12 | 27.5 | 1,690 | | |
| April | | | | | | | 95 | 21 | 56.9 | 3,380 | | |
| May | | | | | | | 316 | 2 | 83.9 | 5,180 | | |
| June | | | | | | | 42 | 1 | 4.6 | 274 | | |
| July | | | | | | | 4 | 1 | 2.2 | 135 | | |
| August | | | | | | | 4 | 1 | 2.3 | 141 | | |
| September | | | | | | | 3 | 1 | 1.4 | 83 | | |
| The year | | | | | | | 316 | 1 | 20.9 | 15,160 | | |

South Boulder Creek near Eldorado Springs, Colo.

Location.- Water-stage recorder in sec. 26, T. 1 S., R. 71 W., $1\frac{1}{4}$ miles west of Eldorado Springs. Prior to May 3, 1934, station located a quarter of a mile downstream. Datum relation not determined.

Drainage area.- 114 square miles.

Records available.- May 1895 to September 1901, April 1909 to November 1913, October 1933 to September 1934 in reports of U. S. Geological Survey; May 1895 to September 1901, July 1904 to September 1934 in reports of State engineer. Prior to September 1929 station located at Eldorado Springs but records were corrected for diversions before publishing, thus making them comparable with those obtained at present site.

Average discharge.- 34 years (1896-99, 1900-1901, 1904-34), 77.2 second-feet.

Extremes.- Maximum discharge during year, 275 second-feet May 15 (gage height, 3.28 feet); minimum daily discharge occurred during winter.
1895-1901, 1909-34: Maximum discharge, 804 second-feet May 23, 1926 (gage height, 2.74 feet, former datum); minimum not determined.

Remarks.- Records good except those estimated for Nov. 6 to Mar. 11 on basis of three discharge measurements and temperature records, and those for Mar. 21 to Apr. 3, May 4, 5, June 11-18. Small diversions above station for irrigation.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | 16 | 15 | | | | | 20 | 133 | 206 | 59 | 14 | 11 |
| 2 | 16 | | | | *6 | | 24 | 139 | 191 | 52 | 14 | 9 |
| 3 | 17 | 9 | | | | | 21 | 186 | 179 | 49 | 13 | 10 |
| 4 | 21 | 9 | | | | | 21 | 190 | 170 | 49 | 13 | 11 |
| 5 | 17 | 9 | | | | 12 | 19 | 200 | 158 | 52 | 13 | 11 |
| 6 | 16 | 8 | | | | | 17 | 215 | 149 | 47 | 14 | 10 |
| 7 | 16 | 8 | | | | | 26 | 201 | 146 | 46 | 16 | 10 |
| 8 | 15 | 8 | | | | | 36 | 198 | 134 | 39 | 16 | 9 |
| 9 | 15 | 8 | | | | | 52 | 179 | 122 | 36 | 14 | 9 |
| 10 | 15 | 8 | | | | 13 | 48 | 162 | 119 | 34 | 18 | 9 |
| 11 | 15 | 7 | | | | | 57 | 150 | 118 | 31 | 18 | 9 |
| 12 | 13 | 7 | | | | 14 | 58 | 149 | 115 | 28 | 16 | 9 |
| 13 | 11 | 6 | | | | 17 | 65 | 264 | 110 | 25 | 13 | 8 |
| 14 | 15 | 6 | | | | 15 | 63 | 260 | 110 | 25 | 12 | 8 |
| 15 | 14 | 5 | | | | 13 | 66 | 262 | 110 | 22 | 12 | 8 |
| 16 | 12 | 4 | | | | 20 | 60 | 251 | 105 | 20 | 12 | 8 |
| 17 | 11 | 4 | | | | 23 | 55 | 242 | 100 | 19 | 12 | 7 |
| 18 | 12 | 4 | | | | 22 | 58 | 242 | 100 | 18 | 12 | 7 |
| 19 | 12 | 4 | | | | 16 | 65 | 249 | 97 | 18 | 10 | 7 |
| 20 | 11 | 4 | | | | 15 | 69 | 240 | 96 | 17 | 10 | 7 |
| 21 | 12 | 4 | | | | 15 | 71 | 237 | 100 | 18 | 12 | 9 |
| 22 | 11 | 4 | | | | 15 | 81 | 228 | 96 | 20 | 11 | 10 |
| 23 | 10 | 4 | | | | 18 | 93 | 220 | 89 | 19 | 10 | 9 |
| 24 | 9 | 4 | | | *8 | 25 | 102 | 224 | 83 | 22 | 10 | 9 |
| 25 | 8 | 4 | | | | 40 | 119 | 224 | 81 | 27 | 10 | 8 |
| 26 | 7 | 4 | *4 | | | 35 | 133 | 224 | 78 | 22 | 9 | 9 |
| 27 | 6 | 4 | | | | 20 | 114 | 211 | 73 | 21 | 8 | 9 |
| 28 | 6 | 4 | | | | 25 | 112 | 206 | 67 | 19 | 12 | 10 |
| 29 | 14 | 4 | | | | 25 | 114 | 206 | 64 | 18 | 13 | 10 |
| 30 | 15 | 4 | | | | 20 | 125 | 220 | 60 | 14 | 12 | 8 |
| 31 | 17 | | | | | 20 | | 219 | | 14 | 11 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 21 | 6 | 13.1 | 806 | | |
| November | | | | | | | 15 | 4 | 6.0 | 357 | | |
| December | | | | | | | | | 4.0 | 246 | | |
| January | | | | | | | | | 6.0 | 369 | | |
| February | | | | | | | | | 9.0 | 500 | | |
| March | | | | | | | 40 | | 18.0 | 1,110 | | |
| April | | | | | | | 133 | 17 | 65.5 | 3,900 | | |
| May | | | | | | | 264 | 133 | 211 | 13,000 | | |
| June | | | | | | | 206 | 60 | 114 | 6,780 | | |
| July | | | | | | | 59 | 14 | 29.0 | 1,780 | | |
| August | | | | | | | 18 | 8 | 12.6 | 775 | | |
| September | | | | | | | 11 | 7 | 8.9 | 530 | | |
| The year | | | | | | | 264 | | 41.6 | 30,150 | | |

*Discharge measurement.

Thompson River near Estes Park, Colo.

Location.- Water-stage recorder in sec. 29, T. 5 N., R. 72 W., 1½ miles east of Estes Park. Prior to Feb. 27, 1934, staff gage half a mile downstream was used. Datum relation not determined.

Drainage area.- 158 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; June 1930 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 454 second-feet May 29 (gage height, 3.77 feet); minimum daily discharge, 5 second-feet Mar. 8.
1930-34: Maximum discharge, 1,390 second-feet July 18, 1930 (gage height, 3.00 feet, at former site); minimum daily discharge, that of Mar. 8, 1934.

Remarks.- Records good except those for period Nov. 5 to Feb. 26, which were estimated on basis of five discharge measurements and temperature records. Small diversions for irrigation above station. Flow partly regulated by several natural lakes.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|------|---------|------|------|------|-------------------------|
| 1 | 66 | 27 | | | 12 | 15 | 14 | 121 | 360 | 149 | 81 | 47 |
| 2 | 73 | 26 | | | | 26 | 14 | 128 | 390 | 136 | 78 | 47 |
| 3 | 71 | 25 | | | | 8 | 20 | 158 | 344 | 134 | 74 | 44 |
| 4 | 73 | 23 | | | | 20 | 20 | 156 | 298 | 163 | 74 | 40 |
| 5 | 62 | 23 | | | | 12 | 18 | 185 | 263 | 178 | 85 | 41 |
| 6 | 56 | 23 | | | | 8 | 16 | 243 | 248 | 152 | 87 | 42 |
| 7 | 54 | 22 | | | | 8 | 20 | 313 | 261 | 128 | 100 | 41 |
| 8 | 51 | 21 | | | | 5 | 23 | 328 | 214 | 117 | 89 | 42 |
| 9 | 50 | 21 | | | *23 | 8 | 25 | 335 | 206 | 115 | 90 | 50 |
| 10 | 48 | 20 | | | | 21 | 28 | 348 | 203 | 111 | 104 | 42 |
| 11 | 42 | 21 | | | | 16 | 31 | 325 | 203 | 105 | 105 | 38 |
| 12 | 42 | 19 | | | | 14 | 35 | 354 | 199 | 98 | 92 | 36 |
| 13 | 64 | 18 | | | | 14 | 45 | 313 | 198 | 96 | 85 | 34 |
| 14 | 57 | 18 | | | | 12 | 47 | 263 | 198 | 94 | 78 | 33 |
| 15 | 48 | 19 | | | | 14 | 49 | 254 | 217 | 87 | 74 | 35 |
| 16 | 42 | 19 | | | | 18 | 44 | 263 | 228 | 87 | 70 | 47 |
| 17 | 40 | 19 | | | | 14 | 59 | 292 | 299 | 85 | 65 | 32 |
| 18 | 34 | 19 | | | | 12 | 41 | 239 | 333 | 85 | 60 | 26 |
| 19 | 29 | 19 | | | | 12 | 50 | 332 | 283 | 81 | 54 | 26 |
| 20 | 29 | 19 | | | | 13 | 60 | 325 | 212 | 81 | 59 | 36 |
| 21 | 28 | 20 | | | | 13 | 65 | 341 | 163 | 78 | 57 | 41 |
| 22 | 32 | 20 | | | | 13 | 74 | 328 | 161 | 80 | 56 | 40 |
| 23 | 29 | 21 | | | | 13 | 83 | 298 | 156 | 85 | 59 | 35 |
| 24 | 27 | 21 | | | | 14 | 100 | 316 | 161 | 98 | 102 | 35 |
| 25 | 33 | 21 | | | | 11 | 111 | 307 | 193 | 90 | 47 | 39 |
| 26 | 31 | 21 | | | | 12 | 128 | 307 | 175 | 96 | 44 | 39 |
| 27 | 29 | 20 | | | | 11 | 104 | 335 | 156 | 92 | 57 | 34 |
| 28 | 29 | 20 | *19 | *11 | 8 | 12 | 96 | 360 | 147 | 89 | 69 | 35 |
| 29 | 27 | 20 | | | 15 | 20 | 102 | 396 | 143 | 85 | 56 | 35 |
| 30 | 27 | 20 | | | | 20 | 105 | 430 | 156 | 81 | 50 | 34 |
| 31 | 26 | | | | | 18 | | 417 | | 81 | 49 | |
| Month | | | | | | Maximum | | Minimum | | Mean | | Run-off in acre-feet |
| October | | | | | | 73 | | 26 | | 43.5 | | 2,670 |
| November | | | | | | 27 | | 18 | | 20.9 | | 1,240 |
| December | | | | | | | | | | 20 | | 1,230 |
| January | | | | | | | | | | 15 | | 922 |
| February | | | | | | | | | | 14 | | 778 |
| March | | | | | | 26 | | 5 | | 13.8 | | 948 |
| April | | | | | | 128 | | 14 | | 53.6 | | 3,190 |
| May | | | | | | 430 | | 121 | | 295 | | 15,100 |
| June | | | | | | 383 | | 143 | | 227 | | 13,500 |
| July | | | | | | 178 | | 78 | | 104 | | 6,400 |
| August | | | | | | 105 | | 44 | | 72.3 | | 4,450 |
| September | | | | | | 50 | | 26 | | 38.2 | | 2,270 |
| The year | | | | | | 430 | | | | 76.9 | | 55,600 |

*Discharge measurement.

Thompson River below power house near Drake, Colo.

Location.- Water-stage recorder in NW $\frac{1}{4}$ sec. 7, T. 5 N., R. 70 W., a quarter of a mile below hydroelectric plant of city of Loveland and 4 $\frac{1}{2}$ miles east of Drake. Cedar Creek enters an eighth of a mile downstream.

Drainage area.- 277 square miles.

Records available.- October 1928 to September 1934. Comparable record at site 3 miles upstream from September 1917 to December 1926.

Average discharge.- 15 years, 188 second-feet.

Extremes.- Maximum discharge during year, 503 second-feet May 31 (gage height, 3.12 feet); minimum daily discharge, 11 second-feet Dec. 17.
1929-34: Maximum discharge, 1,010 second-feet June 14, 1933 (gage height, 4.08 feet); minimum daily discharge, 6 second-feet Dec. 23, 1930.
Maximum discharge known, about 8,000 second-feet July 31, 1919.

Remarks.- Records good except those for Apr. 7-12, which are estimated. Small storage reservoir above power plant, capacity, about 30 acre-feet. Gage-height record furnished by city of Loveland.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 87 | 37 | 27 | 23 | 20 | 21 | 26 | 147 | 452 | 182 | 82 | 47 |
| 2 | 84 | 37 | 30 | 28 | 22 | 20 | 26 | 170 | 404 | 174 | 81 | 45 |
| 3 | 82 | 37 | 25 | 20 | 24 | 28 | 29 | 200 | 364 | 160 | 79 | 44 |
| 4 | 81 | 40 | 28 | 17 | 21 | 20 | 26 | 210 | 350 | 165 | 77 | 45 |
| 5 | 78 | 25 | 31 | 18 | 22 | 22 | 29 | 232 | 319 | 177 | 87 | 45 |
| 6 | 76 | 22 | 21 | 14 | 23 | 25 | 31 | 275 | 305 | 174 | 93 | 52 |
| 7 | 71 | 40 | 17 | 12 | 22 | 24 | 33 | 350 | 299 | 172 | 96 | 52 |
| 8 | 68 | 39 | 26 | 12 | 21 | 21 | 36 | 446 | 291 | 156 | 94 | 52 |
| 9 | 65 | 42 | 27 | 14 | 21 | 19 | 39 | 449 | 269 | 140 | 96 | 58 |
| 10 | 61 | 41 | 28 | 15 | 21 | 18 | 42 | 452 | 264 | 138 | 109 | 60 |
| 11 | 56 | 38 | 31 | 22 | 20 | 25 | 45 | 461 | 264 | 127 | 121 | 54 |
| 12 | 56 | 37 | 29 | 18 | 21 | 27 | 48 | 476 | 261 | 119 | 101 | 49 |
| 13 | 56 | 34 | 30 | 15 | 21 | 26 | 51 | 458 | 256 | 109 | 93 | 45 |
| 14 | 64 | 33 | 30 | 14 | 20 | 23 | 54 | 364 | 251 | 104 | 83 | 44 |
| 15 | 61 | 33 | 24 | 16 | 21 | 25 | 58 | 341 | 258 | 99 | 77 | 33 |
| 16 | 56 | 28 | 15 | 15 | 19 | 25 | 56 | 338 | 266 | 97 | 81 | 41 |
| 17 | 49 | 34 | 11 | 21 | 22 | 27 | 50 | 392 | 253 | 96 | 81 | 37 |
| 18 | 48 | 30 | 12 | 21 | 21 | 20 | 47 | 392 | 238 | 94 | 76 | 37 |
| 19 | 47 | 28 | 20 | 18 | 16 | 25 | 52 | 443 | 227 | 90 | 76 | 34 |
| 20 | 45 | 35 | 31 | 18 | 18 | 23 | 59 | 449 | 217 | 84 | 82 | 38 |
| 21 | 46 | 33 | 34 | 20 | 23 | 23 | 68 | 456 | 212 | 82 | 74 | 45 |
| 22 | 45 | 28 | 33 | 18 | 21 | 25 | 84 | 455 | 204 | 81 | 65 | 44 |
| 23 | 43 | 30 | 30 | 20 | 21 | 25 | 123 | 425 | 174 | 82 | 60 | 45 |
| 24 | 45 | 26 | 24 | 22 | 22 | 23 | 142 | 425 | 170 | 93 | 56 | 40 |
| 25 | 39 | 25 | 23 | 21 | 21 | 23 | 160 | 425 | 182 | 102 | 55 | 41 |
| 26 | 42 | 26 | 22 | 20 | 14 | 24 | 131 | 413 | 190 | 105 | 49 | 52 |
| 27 | 41 | 29 | 22 | 18 | 16 | 24 | 117 | 404 | 194 | 115 | 52 | 53 |
| 28 | 36 | 27 | 26 | 18 | 25 | 23 | 117 | 419 | 187 | 96 | 72 | 45 |
| 29 | 37 | 26 | 25 | 22 | | 24 | 123 | 428 | 174 | 86 | 60 | 37 |
| 30 | 37 | 25 | 23 | 19 | | 26 | 140 | 455 | 163 | 82 | 53 | 42 |
| 31 | 37 | | 26 | 18 | | 29 | | 494 | | 81 | 51 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 87 | 36 | 56.1 | 3,450 | | |
| November | | | | | | | 42 | 22 | 32.2 | 1,910 | | |
| December | | | | | | | 34 | 11 | 25.2 | 1,550 | | |
| January | | | | | | | 28 | 12 | 18.4 | 1,130 | | |
| February | | | | | | | 25 | 14 | 20.7 | 1,150 | | |
| March | | | | | | | 29 | 18 | 23.6 | 1,450 | | |
| April | | | | | | | 160 | 26 | 69.1 | 4,050 | | |
| May | | | | | | | 494 | 147 | 333 | 23,560 | | |
| June | | | | | | | 452 | 163 | 255 | 15,190 | | |
| July | | | | | | | 182 | 81 | 118 | 7,260 | | |
| August | | | | | | | 121 | 49 | 77.8 | 4,780 | | |
| September | | | | | | | 60 | 33 | 45.2 | 2,690 | | |
| The year | | | | | | | 494 | 11 | 94.2 | 68,170 | | |

Thompson River at mouth, near La Salle, Colo.

Location.- Water-stage recorder in SE $\frac{1}{4}$ sec. 34, T. 5 N., R. 66 W., 1 mile above mouth and 4 miles west of La Salle.

Drainage area.- 818 square miles.

Records available.- October 1933 to September 1934 in reports of U. S. Geological Survey; April to November 1914, March 1927 to September 1934 in reports of State engineer.

Extremes.- Maximum discharge during year, 73 second-feet Oct. 15 (gage height, 1.11 feet); no flow at times.

1914, 1927-34: Maximum discharge, 1,300 second-feet July 29, 1932 (gage height, 5.22 feet); no flow at times during summer of 1934.

Remarks.- Records good except those for Oct. 1-7, Dec. 11-14, Jan. 26-28, June 16-18, which were estimated. Diversions for irrigation above station. Flow regulated by several reservoirs above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 40 | 33 | 45 | 42 | 32 | 36 | 30 | 1 | 3 | 3 | | |
| 2 | 40 | 34 | 46 | 40 | 32 | 35 | 32 | 1 | 4 | 2 | | |
| 3 | 40 | 33 | 47 | 40 | 32 | 34 | 32 | 20 | 9 | 2 | | |
| 4 | 40 | 31 | 48 | 41 | 32 | 31 | 32 | 49 | 8 | 3 | | |
| 5 | 40 | 29 | 47 | 41 | 32 | 30 | 38 | 5 | 5 | 3 | | |
| 6 | 40 | 27 | 49 | 40 | 31 | 29 | 40 | 5 | 4 | 2 | | |
| 7 | 40 | 27 | 51 | 32 | 32 | 31 | 38 | 4 | 4 | 2 | | |
| 8 | 40 | 26 | 52 | 38 | 31 | 30 | 36 | 4 | 3 | 2 | | |
| 9 | 61 | 26 | 49 | 39 | 32 | 32 | 32 | 3 | 4 | 2 | | |
| 10 | 64 | 28 | 48 | 35 | 34 | 32 | 31 | 2 | 4 | 2 | | |
| 11 | 64 | 29 | 48 | 37 | 32 | 32 | 27 | 2 | 3 | 2 | | |
| 12 | 65 | 27 | 48 | 34 | 32 | 30 | 16 | 2 | 2 | 2 | | |
| 13 | 67 | 33 | 48 | 35 | 33 | 30 | 6 | 3 | 2 | 1 | | |
| 14 | 71 | 39 | 49 | 36 | 34 | 29 | 6 | 6 | 3 | 0 | | |
| 15 | 73 | 40 | 49 | 36 | 35 | 29 | 6 | 2 | 15 | 0 | | |
| 16 | 70 | 40 | 49 | 35 | 31 | 30 | 5 | 1 | 10 | 0 | | |
| 17 | 63 | 41 | 49 | 35 | 31 | 33 | 5 | 0 | 6 | 0 | | |
| 18 | 63 | 40 | 48 | 37 | 32 | 32 | 5 | 0 | 2 | 0 | | |
| 19 | 60 | 36 | 48 | 37 | 32 | 28 | 4 | 1 | 1 | 0 | | |
| 20 | 53 | 38 | 48 | 37 | 31 | 28 | 3 | 2 | 2 | 0 | | |
| 21 | 45 | 39 | 49 | 36 | 31 | 29 | 2 | 4 | 2 | 0 | | |
| 22 | 45 | 40 | 49 | 36 | 32 | 28 | 2 | 3 | 2 | 0 | | |
| 23 | 46 | 41 | 49 | 36 | 33 | 28 | 2 | 2 | 2 | 0 | | |
| 24 | 49 | 45 | 49 | 36 | 32 | 29 | 2 | 2 | 2 | 0 | | |
| 25 | 49 | 48 | 49 | 37 | 30 | 28 | 1 | 1 | 2 | 0 | | |
| 26 | 47 | 46 | 48 | 36 | 27 | 35 | 1 | 1 | 1 | 0 | | |
| 27 | 43 | 44 | 47 | 35 | 28 | 28 | 1 | 1 | 1 | 0 | | |
| 28 | 41 | 44 | 47 | 34 | 34 | 30 | 1 | 1 | 1 | 0 | | |
| 29 | 39 | 43 | 47 | 33 | | 29 | 1 | 1 | 0 | 0 | | |
| 30 | 38 | 44 | 47 | 32 | | 28 | 0 | 1 | 2 | 0 | | |
| 31 | 33 | | 45 | 31 | | 28 | | 5 | | 0 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 73 | 33 | 50.6 | 3,110 | | |
| November | | | | | | | 48 | 26 | 36.4 | 2,170 | | |
| December | | | | | | | 52 | 45 | 48.1 | 2,960 | | |
| January | | | | | | | 42 | 31 | 36.4 | 2,240 | | |
| February | | | | | | | 34 | 27 | 31.7 | 1,760 | | |
| March | | | | | | | 36 | 28 | 30.4 | 1,870 | | |
| April | | | | | | | 40 | 0 | 14.6 | 869 | | |
| May | | | | | | | 49 | 0 | 4.4 | 271 | | |
| June | | | | | | | 15 | 0 | 3.6 | 214 | | |
| July | | | | | | | 3 | 0 | .9 | 55 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 0 | 0 | 0 | 0 | | |
| The year | | | | | | | 73 | 0 | 21.4 | 15,520 | | |

Note.- No flow during months left blank.

Cache La Poudre River at mouth of canyon near Fort Collins, Colo.

Location.- Water-stage recorder in sec. 15, T. 8 N., R. 70 W., at mouth of canyon, 11 miles west of Fort Collins.

Drainage area.- 1,048 square miles.

Records available.- March 1884 to October 1901, February 1910 to November 1913, October 1933 to September 1934 in reports of U. S. Geological Survey; March 1884 to September 1934 in reports of State engineer.

Average discharge.- 50 years, 422 second-feet.

Extremes.- Maximum discharge during year, 1,660 second-feet May 10 (gage height, 3.77 second-feet); minimum daily discharge, 20 second-feet Jan. 8, 1884-1934; Maximum discharge not determined, occurred May 20, 1904; minimum, 12 second-feet (discharge measurement) Jan. 20, 1931.

Remarks.- Records good. Diversions for irrigation above station. Storage for irrigation above station. Transmountain inflow from Colorado, Laramie, and Michigan Rivers above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|-------|----------------------|------|-------|
| 1 | 84 | 40 | 32 | 35 | 35 | 50 | 45 | 386 | 1,090 | 434 | 210 | 45 |
| 2 | 82 | 43 | 35 | 38 | 35 | 41 | 42 | 476 | 948 | 422 | 190 | 43 |
| 3 | 74 | 41 | 31 | 39 | 37 | 41 | 43 | 538 | 728 | 392 | 183 | 45 |
| 4 | 66 | 42 | 30 | 40 | 33 | 39 | 43 | 594 | 685 | 245 | 172 | 48 |
| 5 | 64 | 39 | 29 | 42 | 35 | 33 | 42 | 622 | 685 | 270 | 130 | 44 |
| 6 | 64 | 40 | 29 | 28 | 37 | 36 | 40 | 768 | 650 | 250 | 114 | 43 |
| 7 | 62 | 39 | 33 | 30 | 38 | 38 | 35 | 1,060 | 536 | 194 | 108 | 43 |
| 8 | 58 | 43 | 34 | 20 | 35 | 39 | 41 | 1,240 | 552 | 186 | 93 | 45 |
| 9 | 56 | 45 | 40 | 31 | 32 | 34 | 41 | 1,310 | 468 | 176 | 90 | 47 |
| 10 | 54 | 46 | 40 | 33 | 36 | 35 | 43 | 1,470 | 552 | 155 | 88 | 58 |
| 11 | 52 | 43 | 39 | 31 | 42 | 36 | 44 | 1,310 | 566 | 141 | 96 | 54 |
| 12 | 50 | 42 | 38 | 96 | 38 | 37 | 49 | 1,470 | 545 | 127 | 111 | 48 |
| 13 | 50 | 42 | 39 | 43 | 37 | 36 | 58 | 1,390 | 531 | 114 | 111 | 46 |
| 14 | 49 | 43 | 40 | 34 | 38 | 37 | 64 | 979 | 325 | 102 | 96 | 45 |
| 15 | 49 | 43 | 35 | 35 | 35 | 36 | 76 | 907 | 270 | 226 | 152 | 43 |
| 16 | 48 | 40 | 37 | 30 | 34 | 39 | 78 | 925 | 280 | 295 | 214 | 43 |
| 17 | 45 | 41 | 22 | 30 | 39 | 40 | 70 | 1,170 | 280 | 290 | 218 | 44 |
| 18 | 45 | 41 | 30 | 31 | 39 | 38 | 68 | 1,090 | 260 | 290 | 214 | 39 |
| 19 | 45 | 41 | 34 | 30 | 36 | 34 | 66 | 1,250 | 250 | 260 | 214 | 38 |
| 20 | 45 | 42 | 40 | 30 | 38 | 37 | 72 | 1,300 | 280 | 120 | 158 | 43 |
| 21 | 46 | 42 | 41 | 36 | 43 | 38 | 82 | 1,390 | 280 | 74 | 96 | 48 |
| 22 | 47 | 38 | 38 | 32 | 37 | 39 | 114 | 1,240 | 265 | 124 | 68 | 56 |
| 23 | 45 | 40 | 35 | 32 | 44 | 40 | 162 | 1,150 | 240 | 120 | 54 | 52 |
| 24 | 43 | 37 | 32 | 32 | 44 | 39 | 198 | 1,120 | 230 | 141 | 72 | 49 |
| 25 | 42 | 33 | 39 | 38 | 40 | 38 | 285 | 1,080 | 320 | 158 | 60 | 50 |
| 26 | 41 | 32 | 32 | 40 | 42 | 40 | 398 | 1,070 | 285 | 186 | 48 | 56 |
| 27 | 42 | 30 | 32 | 30 | 44 | 43 | 290 | 1,040 | 222 | 210 | 48 | 58 |
| 28 | 42 | 33 | 36 | 35 | 43 | 42 | 300 | 1,020 | 186 | 134 | 46 | 54 |
| 29 | 41 | 31 | 32 | 39 | | 42 | 315 | 1,060 | 310 | 111 | 47 | 58 |
| 30 | 40 | 29 | 37 | 46 | | 42 | 325 | 1,270 | 434 | 108 | 47 | 58 |
| 31 | 39 | | 39 | 37 | | 45 | | 1,250 | | 169 | 47 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 84 | 39 | 51.9 | 3,190 | | |
| November | | | | | | | 46 | 29 | 39.4 | 2,340 | | |
| December | | | | | | | 41 | 22 | 34.8 | 2,140 | | |
| January | | | | | | | 96 | 20 | 36.2 | 2,230 | | |
| February | | | | | | | 44 | 32 | 38.0 | 2,110 | | |
| March | | | | | | | 50 | 33 | 38.8 | 2,390 | | |
| April | | | | | | | 398 | 35 | 118 | 7,020 | | |
| May | | | | | | | 1,470 | 386 | 1,060 | 65,200 | | |
| June | | | | | | | 1,090 | 186 | 442 | 26,300 | | |
| July | | | | | | | 434 | 74 | 201 | 12,400 | | |
| August | | | | | | | 218 | 46 | 116 | 7,130 | | |
| September | | | | | | | 58 | 36 | 48.1 | 2,860 | | |
| The year | | | | | | | 1,470 | 20 | 186 | 135,300 | | |

Cache La Poudre River near Greeley, Colo.

Location.- Water-stage recorder in sec. 2, T. 5 N., R. 65 W., 2 miles east of Greeley and 2½ miles above mouth. Prior to Dec. 14, 1933, staff gage at same site and datum was used.

Drainage area.- 1,340 square miles.

Records available.- March to October 1903, October 1933 to September 1934 in reports of U. S. Geological Survey; March 1903 to November 1904, February 1914 to December 1919, May 1924 to September 1934 in reports of State engineer.

Average discharge.- 15 years (1914-19, 1924-34), 116 second-feet.

Extremes.- Maximum discharge during year, 108 second-feet Oct. 20 (gage height, 2.28 feet); minimum daily discharge, 5 second-feet Aug. 20, 21, 1903-4, 1914-19, 1924-34: Maximum discharge, 4,240 second-feet June 24, 26, 1917 (gage height, 7.3 feet, at site 1 mile downstream): minimum, 3 second-feet several days during 1931-32.

Remarks.- Records fair. Diversions for irrigation above station. Flow is return water from irrigated lands above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 16 | 74 | 85 | 78 | 70 | 75 | 51 | 9 | 22 | 50 | 8 | 7 |
| 2 | 20 | 75 | 96 | 81 | 70 | 75 | 48 | 10 | 28 | 16 | 7 | 7 |
| 3 | 30 | 78 | 97 | 81 | 71 | 72 | 51 | 10 | 38 | 18 | 8 | 7 |
| 4 | 29 | 75 | 92 | 78 | 71 | 70 | 54 | 10 | 31 | 20 | 8 | 7 |
| 5 | 32 | 76 | 99 | 76 | 70 | 69 | 51 | 10 | 21 | 23 | 8 | 8 |
| 6 | 28 | 83 | 90 | 74 | 70 | 64 | 49 | 10 | 14 | 20 | 9 | 8 |
| 7 | 23 | 82 | 86 | 65 | 72 | 65 | 48 | 9 | 14 | 20 | 10 | 8 |
| 8 | 19 | 81 | 85 | 71 | 71 | 66 | 45 | 10 | 17 | 20 | 10 | 10 |
| 9 | 25 | 79 | 88 | 80 | 70 | 68 | 42 | 10 | 38 | 20 | 10 | 8 |
| 10 | 24 | 81 | 85 | 82 | 74 | 68 | 42 | 9 | 39 | 20 | 11 | 8 |
| 11 | 25 | 81 | 88 | 81 | 72 | 65 | 41 | 10 | 33 | 21 | 11 | 8 |
| 12 | 27 | 79 | 88 | 77 | 72 | 63 | 39 | 12 | 10 | 21 | 11 | 8 |
| 13 | 21 | 81 | 89 | 81 | 76 | 65 | 29 | 27 | 10 | 17 | 20 | 12 |
| 14 | 37 | 74 | 83 | 78 | 77 | 60 | 12 | 30 | 15 | 20 | 12 | 8 |
| 15 | 81 | 74 | 82 | 77 | 74 | 62 | 12 | 13 | 22 | 20 | 20 | 8 |
| 16 | 95 | 78 | 83 | 80 | 72 | 59 | 13 | 12 | 17 | 18 | 36 | 8 |
| 17 | 96 | 78 | 81 | 88 | 72 | 59 | 12 | 10 | 16 | 18 | 34 | 8 |
| 18 | 99 | 78 | 77 | 87 | 72 | 59 | 10 | 13 | 10 | 17 | 34 | 8 |
| 19 | 99 | 75 | 82 | 88 | 71 | 59 | 10 | 14 | 9 | 15 | 24 | 8 |
| 20 | 100 | 72 | 88 | 88 | 72 | 58 | 10 | 16 | 12 | 15 | 5 | 20 |
| 21 | 92 | 75 | 87 | 85 | 74 | 55 | 10 | 13 | 15 | 17 | 5 | 41 |
| 22 | 89 | 75 | 86 | 86 | 74 | 51 | 8 | 14 | 15 | 15 | 6 | 39 |
| 23 | 86 | 74 | 87 | 87 | 74 | 52 | 7 | 14 | 13 | 47 | 7 | 36 |
| 24 | 88 | 78 | 86 | 88 | 74 | 57 | 7 | 18 | 13 | 52 | 7 | 35 |
| 25 | 82 | 76 | 88 | 85 | 65 | 60 | 8 | 28 | 14 | 38 | 7 | 25 |
| 26 | 81 | 76 | 91 | 82 | 60 | 58 | 10 | 25 | 16 | 6 | 8 | 6 |
| 27 | 78 | 81 | 90 | 81 | 69 | 56 | 10 | 19 | 17 | 6 | 7 | 6 |
| 28 | 76 | 79 | 86 | 82 | 72 | 52 | 10 | 17 | 24 | 6 | 7 | 6 |
| 29 | 75 | 81 | 82 | 83 | 49 | 49 | 10 | 14 | 47 | 7 | 8 | 7 |
| 30 | 75 | 81 | 81 | 76 | 50 | 50 | 8 | 14 | 48 | 6 | 8 | 8 |
| 31 | 72 | 81 | 81 | 74 | 51 | 51 | | 20 | | 7 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 100 | 16 | 58.7 | 3,610 | | |
| November | | | | | | | 83 | 72 | 77.7 | 4,620 | | |
| December | | | | | | | 97 | 77 | 86.5 | 5,320 | | |
| January | | | | | | | 88 | 65 | 80.6 | 4,960 | | |
| February | | | | | | | 77 | 60 | 71.5 | 3,970 | | |
| March | | | | | | | 75 | 49 | 61.0 | 3,750 | | |
| April | | | | | | | 54 | 7 | 25.2 | 1,500 | | |
| May | | | | | | | 30 | 9 | 14.5 | 892 | | |
| June | | | | | | | 49 | 9 | 21.3 | 1,270 | | |
| July | | | | | | | 52 | 6 | 20.0 | 1,230 | | |
| August | | | | | | | 36 | 5 | 11.8 | 726 | | |
| September | | | | | | | 41 | 6 | 12.6 | 750 | | |
| The year | | | | | | | 100 | 5 | 45.0 | 32,500 | | |

Lonetree Creek near Granite Canyon, Wyo.

Location.- Water-stage recorder in sec. 24, T. 13 N., R. 70 W., 1½ miles southwest of Granite Canyon.

Drainage area.- 23 square miles.

Records available.- May 1933 to September 1934.

Extremes.- Maximum discharge during year, 8.2 second-feet Apr. 8 (gage height, 0.97 foot); no flow July 28-31.

1933-34: Maximum stage, 4.86 feet Sept. 8, 1933 (discharge not determined); no flow July 28-31, 1934.

Remarks.- Records good except those estimated, which are fair. Small diversions above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 0.7 | 1.1 | 1.0 | 1.6 | *1.2 | 1.2 | 3.7 | 1.0 | 0.7 | 0.3 | *0.1 | 0.2 |
| 2 | .8 | 1.2 | .7 | 1.2 | *1.4 | *1.2 | 4.2 | 1.2 | .6 | .3 | *.1 | .2 |
| 3 | .9 | 1.2 | .9 | 1.2 | 1.6 | *1.4 | 4.2 | 5.4 | .6 | .2 | *.2 | .3 |
| 4 | .9 | 1.0 | 1.4 | 1.6 | 1.5 | *1.4 | 5.2 | 6.9 | .6 | .3 | *.2 | .2 |
| 5 | 1.0 | .8 | *1.2 | *1.4 | 1.8 | *1.4 | 5.4 | 4.4 | .7 | .4 | *.2 | .3 |
| 6 | .9 | .7 | 1.1 | *1.0 | 1.3 | *1.5 | 5.2 | 2.8 | .6 | .3 | .2 | .2 |
| 7 | .8 | .8 | 1.3 | *1.2 | 1.3 | *1.7 | 6.9 | 1.8 | .5 | .3 | .2 | .3 |
| 8 | .9 | .9 | 1.3 | *1.2 | 1.2 | *1.9 | 7.7 | 1.8 | .5 | .3 | .2 | .3 |
| 9 | .8 | 1.2 | 1.3 | *1.4 | 1.1 | *2.1 | 5.9 | 1.4 | .5 | .3 | .5 | .4 |
| 10 | .8 | 1.2 | 1.4 | *1.3 | 1.5 | 3.4 | 4.2 | 1.3 | .5 | .3 | *.4 | .3 |
| 11 | .9 | 1.5 | 1.4 | *1.3 | 1.1 | 2.1 | 3.4 | 1.3 | .5 | .3 | *.3 | .2 |
| 12 | .8 | 1.4 | 1.2 | 1.4 | 1.0 | 3.0 | 2.8 | 1.2 | .5 | .2 | *.2 | .2 |
| 13 | .7 | 1.2 | 1.2 | 1.4 | 1.2 | 2.8 | 1.2 | 1.5 | .5 | .2 | .1 | .2 |
| 14 | .7 | 1.2 | 1.4 | 1.4 | 1.2 | 2.3 | 1.3 | 1.5 | .6 | .2 | .1 | .2 |
| 15 | .7 | 1.2 | *1.2 | 1.3 | 2.8 | 3.2 | 2.5 | 1.4 | .6 | .2 | .3 | .2 |
| 16 | .7 | 1.2 | *1.0 | 1.2 | 2.1 | 3.0 | 3.2 | 1.3 | .6 | .2 | .4 | .2 |
| 17 | .7 | 1.3 | *.9 | 1.3 | 1.5 | 2.5 | 3.9 | 1.3 | .6 | *.2 | .2 | .2 |
| 18 | .7 | 1.3 | .8 | 1.2 | 1.4 | 3.9 | 3.2 | 1.2 | .6 | *.2 | .2 | .2 |
| 19 | .7 | 1.3 | .9 | 1.2 | 1.3 | 3.0 | 1.6 | 1.2 | .5 | *.2 | .2 | .2 |
| 20 | .7 | 1.3 | .8 | *1.3 | 1.4 | 3.4 | 1.2 | .9 | .5 | *.2 | .2 | .2 |
| 21 | .6 | 1.1 | 1.1 | *1.4 | 1.3 | 3.4 | .8 | 1.1 | .5 | *.2 | .2 | .2 |
| 22 | .6 | 1.2 | 1.2 | *1.4 | *1.2 | 3.2 | .8 | 1.1 | .5 | *.2 | .2 | .2 |
| 23 | .7 | 1.2 | 1.2 | *1.5 | *1.2 | 3.0 | .7 | 1.1 | .5 | .2 | .2 | .2 |
| 24 | .7 | 1.2 | 1.6 | *1.3 | *1.0 | 3.0 | .8 | 1.0 | .5 | *.2 | .2 | .2 |
| 25 | .8 | 1.2 | 1.2 | *1.2 | .9 | 3.2 | .8 | 1.0 | .5 | *.2 | .2 | .3 |
| 26 | .8 | 1.0 | 1.2 | 1.1 | *.7 | 3.9 | 1.1 | .8 | .5 | *.1 | .2 | .3 |
| 27 | .9 | 1.0 | 1.0 | *1.0 | *.9 | 3.2 | 1.1 | .8 | .4 | *.1 | .2 | .3 |
| 28 | 1.0 | .7 | 1.2 | *1.2 | *1.0 | 3.0 | 1.1 | .7 | .4 | 0 | .2 | .3 |
| 29 | 1.0 | .7 | 1.2 | *1.1 | | 3.4 | 1.0 | .7 | .3 | 0 | .2 | .3 |
| 30 | 1.0 | | | *1.0 | | 3.4 | 1.0 | | .3 | 0 | .2 | .3 |
| 31 | 1.1 | | 1.0 | *1.0 | | 3.9 | | .7 | | 0 | .2 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 1.1 | 0.6 | 0.81 | 50 | | |
| November | | | | | | | 1.5 | .7 | 1.10 | 65 | | |
| December | | | | | | | 1.6 | .7 | 1.15 | 70 | | |
| January | | | | | | | 1.6 | 1.0 | 1.27 | 78 | | |
| February | | | | | | | 2.8 | .7 | 1.32 | 74 | | |
| March | | | | | | | 3.9 | 1.2 | 2.67 | 164 | | |
| April | | | | | | | 7.7 | .7 | 2.88 | 171 | | |
| May | | | | | | | 6.9 | .7 | 1.62 | 100 | | |
| June | | | | | | | .7 | .3 | .52 | 31 | | |
| July | | | | | | | .4 | 0 | .20 | 12 | | |
| August | | | | | | | .5 | .1 | .22 | 13 | | |
| September | | | | | | | .4 | .2 | .24 | 14 | | |
| The year | | | | | | | 7.7 | 0 | 1.16 | 842 | | |

*Estimated.

Middle Fork of Crow Creek near Hecla, Wyo.

Location.- Water-stage recorder in sec. 20, T. 14 N., R. 70 W., a quarter of a mile above backwater from Crystal Lake Reservoir and 4 miles northwest of Hecla.

Drainage area.- 23 square miles.

Records available.- May 1933 to September 1934. Comparable records April to July 1902, April to November 1903, at a site $1\frac{1}{4}$ miles downstream.

Extremes.- Maximum discharge during year, 12 second-feet May 4 (gage height, 0.70 foot); no flow June 27 to Sept. 30.
1902-3, 1933-34: Maximum stage, 4.90 feet Sept. 8, 1933 (discharge not determined); no flow June 27 to Sept. 30, 1934.

Remarks.- Records excellent except those for Jan. 6 to Mar. 25, which were estimated on basis of weekly gage readings, and those estimated Dec. 5, 6, 17, 18. No diversions or regulation.

Discharge. in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 1.1 | 1.1 | 1.2 | 1.1 | 0.9 | 0.8 | 3.9 | 2.7 | 1.5 | | | |
| 2 | .8 | 1.3 | 1.2 | .9 | .9 | .8 | 3.5 | 2.7 | 1.2 | | | |
| 3 | 1.1 | 1.3 | 1.3 | .9 | .9 | .9 | 2.1 | 6.9 | 1.1 | | | |
| 4 | 1.1 | 1.2 | 1.3 | .9 | .8 | 1.0 | 2.9 | 11 | .9 | | | |
| 5 | 1.1 | 1.4 | 1.3 | 1.3 | .8 | 1.1 | 3.2 | 7.1 | .8 | | | |
| 6 | .9 | 1.2 | 1.3 | 1.2 | .8 | 1.1 | 3.5 | 4.6 | .7 | | | |
| 7 | .8 | 1.1 | 1.3 | 1.0 | .8 | 1.1 | 3.7 | 3.7 | .6 | | | |
| 8 | 1.1 | 1.2 | 1.4 | .9 | .9 | 1.2 | 6.9 | 3.3 | .6 | | | |
| 9 | 1.1 | 1.2 | 1.7 | .9 | .9 | 1.3 | 9.2 | 2.9 | .6 | | | |
| 10 | 1.1 | 1.3 | 1.4 | 1.0 | .9 | 1.4 | 6.7 | 2.9 | .5 | | | |
| 11 | 1.1 | 1.4 | 1.4 | 1.0 | .9 | 1.5 | 6.2 | 2.7 | .4 | | | |
| 12 | .9 | 1.3 | 1.4 | 1.1 | .9 | 1.7 | 5.8 | 2.5 | .4 | | | |
| 13 | .9 | 1.1 | 1.3 | 1.1 | .8 | 1.7 | 5.6 | 3.5 | .4 | | | |
| 14 | .9 | 1.1 | 1.2 | 1.2 | .8 | 1.8 | 5.8 | 4.1 | .4 | | | |
| 15 | .9 | .7 | 1.4 | 1.3 | .7 | 1.8 | 4.8 | 3.3 | .4 | | | |
| 16 | .9 | .9 | 1.3 | 1.2 | .7 | 1.8 | 5.6 | 2.7 | .3 | | | |
| 17 | .9 | .8 | 1.2 | .9 | 1.0 | 1.9 | 6.4 | 2.1 | .4 | | | |
| 18 | .9 | .7 | 1.1 | .8 | .9 | 1.9 | 6.4 | 1.9 | .5 | | | |
| 19 | .9 | .8 | 1.1 | .8 | .9 | 1.9 | 5.2 | 1.5 | .4 | | | |
| 20 | 1.1 | .9 | 1.3 | .8 | .9 | 2.1 | 4.4 | 1.4 | .4 | | | |
| 21 | 1.1 | .8 | 1.7 | .7 | .9 | 2.3 | 4.1 | 1.3 | .4 | | | |
| 22 | .9 | 1.1 | 1.5 | .7 | .9 | 2.5 | 3.7 | 1.1 | .4 | | | |
| 23 | .9 | 1.1 | 1.3 | .8 | .9 | 2.6 | 3.7 | 1.2 | .2 | | | |
| 24 | 1.1 | 1.2 | 1.3 | 1.0 | .9 | 2.7 | 3.5 | 1.1 | .1 | | | |
| 25 | .9 | 1.2 | 1.2 | .6 | .8 | 2.8 | 3.5 | 1.2 | .1 | | | |
| 26 | 1.1 | 1.1 | 1.1 | .8 | .8 | 2.7 | 3.5 | 1.1 | .1 | | | |
| 27 | 1.1 | 1.2 | 1.2 | .9 | .6 | 2.9 | 4.4 | 1.1 | 0 | | | |
| 28 | .9 | 1.1 | 1.2 | .9 | .8 | 3.5 | 3.5 | 1.2 | 0 | | | |
| 29 | 1.1 | 1.1 | 1.2 | .9 | | 4.6 | 3.3 | .9 | 0 | | | |
| 30 | .9 | 1.1 | 1.2 | .9 | | 4.8 | 2.9 | .8 | 0 | | | |
| 31 | 1.2 | | 1.1 | .9 | | 5.0 | | 1.1 | | | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 1.2 | 0.8 | 1.00 | 61 | | |
| November | | | | | | | 1.4 | .7 | 1.10 | 65 | | |
| December | | | | | | | 1.7 | 1.1 | 1.29 | 80 | | |
| January | | | | | | | 1.3 | .7 | .96 | 59 | | |
| February | | | | | | | 1.0 | .7 | .85 | 47 | | |
| March | | | | | | | 5.0 | .8 | 2.10 | 129 | | |
| April | | | | | | | 9.2 | 2.1 | 4.60 | 274 | | |
| May | | | | | | | 11 | .8 | 2.76 | 170 | | |
| June | | | | | | | 1.5 | 0 | .46 | 27 | | |
| July | | | | | | | 0 | 0 | 0 | 0 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 0 | 0 | 0 | 0 | | |
| The year | | | | | | | 11 | 0 | 1.26 | 912 | | |

Note.- No flow during months left blank.

South Fork of Crow Creek near Hecla, Wyo.

Location.- Water-stage recorder in sec. 2, T. 13 N., R. 70 W., just above backwater from South Crow Creek Reservoir and 2.8 miles southwest of Hecla.

Drainage area.- 16 square miles.

Records available.- May 1933 to June 1934.

Extremes.- Maximum discharge during year, 4.5 second-feet Apr. 8 (gage height, 1.83 feet); no flow Oct. 3-6, June 5 to Sept. 30.

1933-34: Maximum discharge, 26 second-feet Sept. 8, 1933 (gage height, 2.59 feet); no flow at times.

Remarks.- Records good except those estimated for Oct. 17-24, Nov. 6-14, 23-27, Dec. 8 to Mar. 22. No diversions or regulation.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 0.1 | 0.4 | 0.4 | | | | 2.4 | 0.6 | 0.2 | | | |
| 2 | .1 | .4 | .4 | | | | 2.2 | .9 | .2 | | | |
| 3 | 0 | .5 | .4 | | | | 1.8 | 2.6 | .1 | | | |
| 4 | 0 | .4 | .5 | | | | 2.1 | 4.0 | .1 | | | |
| 5 | 0 | .3 | .3 | | | | 2.1 | 2.9 | 0 | | | |
| 6 | 0 | .4 | .3 | | | 1.0 | 2.2 | 1.6 | 0 | | | |
| 7 | .1 | .4 | .3 | | | | 3.4 | 1.1 | 0 | | | |
| 8 | .1 | .5 | .4 | | | | 4.3 | 1.1 | 0 | | | |
| 9 | .2 | .5 | .5 | | | | 3.8 | 1.4 | 0 | | | |
| 10 | .2 | .5 | .4 | | | | 3.1 | 1.3 | 0 | | | |
| 11 | .2 | .5 | .4 | | | | 2.8 | 1.1 | 0 | | | |
| 12 | .2 | .5 | .5 | | | | 2.5 | 1.1 | 0 | | | |
| 13 | .2 | .5 | .5 | | | | 2.5 | 1.9 | 0 | | | |
| 14 | .2 | .5 | .5 | | | | 2.5 | 1.9 | 0 | | | |
| 15 | .2 | .5 | .4 | | | | 2.5 | 1.3 | 0 | | | |
| 16 | .2 | .5 | .4 | | | 1.5 | 2.9 | .8 | 0 | | | |
| 17 | .2 | .5 | .3 | | | | 3.4 | .6 | 0 | | | |
| 18 | .2 | .5 | .3 | | | | 2.8 | .5 | 0 | | | |
| 19 | .2 | .5 | .4 | | | | 1.7 | .4 | 0 | | | |
| 20 | .3 | .5 | .4 | | | | 1.6 | .3 | 0 | | | |
| 21 | .3 | .5 | .5 | | | 1.8 | 1.1 | .2 | 0 | | | |
| 22 | .4 | .5 | .5 | | | 2.0 | .5 | .2 | 0 | | | |
| 23 | .4 | | .6 | | | 2.2 | .5 | .2 | 0 | | | |
| 24 | .4 | | .6 | | | 2.1 | .5 | .2 | 0 | | | |
| 25 | .4 | .5 | .6 | | | 1.9 | .5 | .3 | 0 | | | |
| 26 | .4 | | .5 | | | 2.5 | .9 | .2 | 0 | | | |
| 27 | .4 | | .5 | | | 2.6 | 1.1 | .2 | 0 | | | |
| 28 | .4 | .5 | .4 | | | 2.5 | .7 | .2 | 0 | | | |
| 29 | .4 | .5 | .4 | | | 2.6 | .5 | .2 | 0 | | | |
| 30 | .4 | .4 | .3 | | | 2.5 | .7 | .1 | 0 | | | |
| 31 | .4 | | .3 | | | 2.6 | | .2 | | | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 0.4 | 0 | 0.23 | 14 | | |
| November | | | | | | | .5 | .3 | .47 | 28 | | |
| December | | | | | | | .6 | .3 | .43 | 26 | | |
| January | | | | | | | | | .40 | 25 | | |
| February | | | | | | | | | .60 | 33 | | |
| March | | | | | | | 2.8 | | 1.54 | 101 | | |
| April | | | | | | | 4.3 | .5 | 1.99 | 118 | | |
| May | | | | | | | 4.0 | .1 | .97 | 60 | | |
| June | | | | | | | .2 | | .02 | 1 | | |
| July | | | | | | | 0 | 0 | 0 | 0 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 0 | 0 | 0 | 0 | | |
| The year | | | | | | | 4.3 | 0 | .56 | 406 | | |

Note.- No flow July to September.

North Fork of Crow Creek near Hecla, Wyo.

Location.- Water-stage recorder in sec. 35, T. 15 N., R. 70 W., 800 feet above back-water from North Crow Creek Reservoir and 5½ miles northwest of Hecla.

Drainage area.- 27 square miles.

Records available.- May 1933 to September 1934.

Extremes.- Maximum discharge during year, 29 second-feet June 30 (gage height, 2.47 feet); minimum daily discharge, 0.1 second-foot at times.
1933-34: Maximum stage, 8.65 feet Sept. 8, 1933 (discharge not determined); minimum, that of 1934.

Remarks.- Records good except those estimated Oct. 31 to Nov. 24, Jan. 7 to Mar. 23 on basis of intermittent gage heights. Flow partly regulated by North Crow Creek Reservoir.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 2.0 | 3.2 | 6.7 | 1.0 | 1.0 | | 1.0 | 2.0 | 9.6 | 1.1 | 0.2 | 0.1 |
| 2 | 2.0 | 3.2 | 7.0 | .8 | 1.0 | | 1.1 | 4.2 | 9.0 | .2 | .2 | .1 |
| 3 | 2.0 | 3.2 | 7.0 | .8 | 1.2 | 1.4 | 1.0 | 7.3 | 1.7 | .1 | .2 | .1 |
| 4 | 2.2 | 3.2 | 6.7 | .6 | 1.2 | | 1.1 | 7.3 | 1.6 | .1 | .2 | .1 |
| 5 | 2.2 | 2.4 | 4.9 | .5 | 1.2 | | 1.2 | 2.0 | 5.4 | .5 | .2 | .1 |
| 6 | 2.2 | 2.2 | 6.5 | .6 | | | 1.2 | 1.6 | 6.0 | .2 | .1 | .1 |
| 7 | 2.3 | 2.2 | 7.3 | | | | 1.1 | 1.1 | 6.0 | .1 | .3 | .1 |
| 8 | 2.5 | 2.0 | 5.7 | .8 | 1.2 | | 1.0 | 1.0 | 6.0 | .1 | .1 | .1 |
| 9 | 2.5 | 2.0 | 7.3 | | | | 1.0 | 1.0 | 6.7 | .1 | .3 | .1 |
| 10 | 2.5 | 2.0 | 7.3 | | | | 1.1 | 5.7 | 10 | .1 | .1 | .1 |
| 11 | 2.6 | 1.9 | 7.0 | | 1.2 | 2.0 | 1.1 | 6.5 | 10 | .1 | .1 | .1 |
| 12 | 2.6 | 1.9 | 7.3 | | 1.2 | | 1.2 | 7.0 | 10 | .1 | .1 | .1 |
| 13 | 4.7 | 1.8 | 7.3 | .8 | | | 1.2 | 6.2 | 10 | .1 | .1 | .1 |
| 14 | 5.8 | 1.7 | 4.9 | | 1.2 | | 1.2 | 1.8 | 10 | .1 | .1 | .2 |
| 15 | 5.8 | 1.7 | 3.2 | | | | 1.1 | 1.4 | 10 | .1 | .1 | .3 |
| 16 | 5.4 | 1.8 | 3.2 | | | | 1.1 | 1.1 | 3.0 | .1 | .1 | .3 |
| 17 | 5.4 | 1.8 | 3.2 | | | | 1.2 | .8 | 1.1 | .1 | .1 | .3 |
| 18 | 5.0 | 1.7 | 3.7 | .8 | 1.2 | 1.6 | 1.2 | .6 | .6 | .1 | .1 | .3 |
| 19 | 4.5 | 1.6 | 3.9 | | | | 1.2 | 1.8 | 1.8 | 4.9 | .1 | .3 |
| 20 | 4.4 | 1.5 | 3.4 | | | | 1.1 | 12 | 9.1 | 1.8 | .1 | .4 |
| 21 | 4.2 | 1.4 | 3.4 | | | 1.6 | 1.0 | 13 | 12 | .3 | .1 | .4 |
| 22 | 3.5 | 1.3 | 3.0 | | 1.0 | 1.8 | .8 | 13 | 9.3 | .1 | .1 | .5 |
| 23 | 3.5 | 1.2 | 1.6 | .8 | | 1.7 | .5 | 12 | 1.4 | .2 | .1 | .5 |
| 24 | 3.4 | 1.1 | 1.4 | | .9 | 1.7 | .4 | 2.0 | .6 | .2 | .1 | .5 |
| 25 | 3.4 | 1.1 | 1.4 | | .8 | 1.6 | .4 | 1.4 | .4 | .2 | .1 | .5 |
| 26 | 3.4 | 1.1 | 1.4 | | .9 | 1.2 | .2 | 1.0 | .3 | .2 | .1 | .6 |
| 27 | 3.3 | 1.2 | 1.2 | | .9 | 1.1 | .2 | .6 | .2 | .2 | .1 | .6 |
| 28 | 3.3 | 1.2 | 1.2 | | 1.0 | 1.0 | .2 | .8 | .1 | .2 | .1 | .6 |
| 29 | 3.3 | 2.2 | 1.2 | .8 | | 1.1 | .2 | 6.3 | .1 | .2 | .1 | .8 |
| 30 | 3.3 | 6.5 | 1.1 | | | 1.1 | .2 | 8.8 | 1.4 | .2 | .1 | .8 |
| 31 | 3.2 | | 1.0 | | | .8 | | 9.1 | | .2 | .1 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 5.8 | 2.0 | 3.45 | 211 | | |
| November | | | | | | | 6.5 | 1.1 | 2.04 | 122 | | |
| December | | | | | | | 7.3 | 1.0 | 4.24 | 261 | | |
| January | | | | | | | 1.0 | .5 | .78 | 48 | | |
| February | | | | | | | 1.2 | .8 | 1.11 | 61 | | |
| March | | | | | | | | .8 | 1.60 | 99 | | |
| April | | | | | | | 1.2 | .2 | .88 | 53 | | |
| May | | | | | | | 13 | .6 | 4.59 | 282 | | |
| June | | | | | | | 12 | .1 | 5.08 | 302 | | |
| July | | | | | | | 4.9 | .1 | .40 | 24 | | |
| August | | | | | | | .3 | .1 | .13 | 7.9 | | |
| September | | | | | | | .8 | .1 | .31 | 18 | | |
| The year | | | | | | | 13 | .1 | 2.06 | 1,490 | | |

Lodgepole Creek near Federal, Wyo.

Location.- Water-stage recorder in sec. 34, T. 16 N., R. 70 W., 7 miles northwest of Federal.

Drainage area.- 25 square miles.

Records available.- May 1933 to September 1934.

Extremes.- Maximum discharge during year, 6.4 second-feet Apr. 8 (gage height, 0.95 foot); no flow at times.

1933-34: Maximum discharge, 21 second-feet May 24, 1933 (gage height, 1.30 feet); no flow at times.

Remarks.- Records good except those estimated, Nov. 24 to Dec. 1, Dec. 10-22, Jan. 7 to Feb. 2, Feb. 11 to Mar. 23, on basis of intermittent gage heights. Small diversions above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 0.6 | 1.4 | 1.1 | 1.1 | 1.2 | 1.2 | 2.6 | 1.6 | 1.0 | 0 | | |
| 2 | .6 | 1.6 | 1.1 | 1.1 | 1.2 | 1.4 | 3.9 | 1.5 | .9 | 0 | | |
| 3 | .6 | 1.6 | 1.0 | 1.1 | 1.2 | 1.7 | 2.4 | 1.8 | .8 | 0 | | |
| 4 | .6 | 1.6 | 1.0 | 1.1 | 1.2 | 1.6 | 2.4 | 3.0 | .8 | 0 | | |
| 5 | .6 | 1.3 | .8 | 1.1 | 1.3 | 1.5 | 2.4 | 2.0 | .8 | 0 | | |
| 6 | .7 | 1.4 | 1.0 | 1.1 | 1.4 | 1.7 | 2.4 | 1.8 | .8 | 0 | | |
| 7 | .8 | 1.3 | 1.0 | 1.0 | 1.4 | 1.7 | 2.1 | 1.5 | .7 | 0 | | |
| 8 | .8 | 1.5 | 1.0 | .9 | 1.4 | 1.8 | 4.1 | 1.4 | .7 | .2 | | |
| 9 | .8 | 1.4 | 1.0 | .9 | 1.4 | 1.8 | 4.7 | 1.4 | .7 | .4 | | |
| 10 | .8 | 1.5 | 1.0 | 1.0 | 1.3 | 1.9 | 3.0 | 1.2 | .7 | .4 | | |
| 11 | .8 | 1.6 | 1.1 | 1.0 | 1.2 | 2.1 | 2.6 | 1.3 | .6 | .4 | | |
| 12 | .9 | 1.7 | | | | | 2.5 | 1.3 | .6 | .4 | | |
| 13 | .9 | 1.5 | | | | | 2.3 | 1.4 | .5 | .3 | | |
| 14 | 1.0 | 1.4 | | | | | 2.3 | 1.8 | .5 | .1 | | |
| 15 | 1.1 | 1.3 | | | | | 2.4 | 1.7 | .6 | 0 | | |
| 16 | 1.0 | 1.2 | .9 | 1.1 | 1.4 | 1.9 | 2.3 | 1.5 | .7 | 0 | | |
| 17 | 1.1 | 1.6 | | | | | 2.6 | 1.3 | .7 | 0 | | |
| 18 | 1.1 | 1.2 | | | | | 2.6 | 1.2 | .6 | 0 | | |
| 19 | 1.0 | 1.4 | | | | | 2.1 | 1.2 | .6 | 0 | | |
| 20 | 1.0 | 1.6 | | | | | 2.0 | 1.1 | .5 | 0 | | |
| 21 | 1.0 | 1.1 | 1.0 | 1.2 | 1.0 | 2.0 | 1.8 | 1.0 | .5 | 0 | | |
| 22 | 1.1 | 1.2 | 1.0 | | | | 1.8 | 1.0 | .5 | 0 | | |
| 23 | 1.1 | 1.2 | 1.2 | | | | 1.8 | 1.0 | .4 | 0 | | |
| 24 | 1.2 | 1.2 | 1.1 | | | | 2.5 | 1.8 | 1.0 | .4 | 0 | |
| 25 | 1.2 | 1.2 | 1.2 | | | | 2.6 | 1.8 | 1.0 | .4 | 0 | |
| 26 | 1.2 | 1.1 | 1.1 | 1.2 | 1.0 | 2.8 | 1.8 | 1.0 | .5 | 0 | | |
| 27 | 1.3 | | 1.1 | 1.4 | .8 | 2.9 | 1.8 | 1.0 | .3 | 0 | | |
| 28 | 1.3 | | 1.1 | 1.0 | 2.9 | 1.7 | .9 | .3 | 0 | | | |
| 29 | 1.3 | | 1.2 | 2.9 | 1.6 | .8 | .3 | 0 | | | | |
| 30 | 1.3 | | 1.2 | 2.6 | 1.5 | .8 | .3 | 0 | | | | |
| 31 | 1.3 | 1.1 | 2.1 | 2.1 | .9 | .3 | 0 | | | | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 1.3 | | 0.6 | 0.97 | 60 | |
| November | | | | | | | 1.7 | | | 1.35 | 80 | |
| December | | | | | | | 1.2 | | .3 | 1.04 | 64 | |
| January | | | | | | | 1.4 | | .9 | 1.11 | 68 | |
| February | | | | | | | 1.5 | | .8 | 1.26 | 70 | |
| March | | | | | | | 2.9 | | 1.2 | 2.07 | 128 | |
| April | | | | | | | 4.7 | | 1.5 | 2.37 | 141 | |
| May | | | | | | | 3.0 | | .2 | 1.33 | 92 | |
| June | | | | | | | 1.0 | | .3 | .59 | 35 | |
| July | | | | | | | .4 | | 0 | .07 | 4.4 | |
| August | | | | | | | 0 | | 0 | 0 | 0 | |
| September | | | | | | | 0 | | 0 | 0 | 0 | |
| The year | | | | | | | 4.7 | | 0 | 1.01 | 732 | |

Note.- No flow during August and September.

Lodgepole Creek at Bushnell, Nebr.

Location.- Staff gage in sec. 33, T. 15 N., R. 57 W., 1½ miles east of Bushnell.

Drainage area.- 1,090 square miles.

Records available.- March 1931 to September 1934.

Extremes.- Maximum discharge recorded during year, 117 second-feet Aug. 8 (gage height, 3.10 feet); minimum daily discharge, 5 second-feet July 30, 31, 1931-34: Maximum discharge, about 620 second-feet Aug. 27, 1933 (gage height, 6.8 feet); minimum daily discharge, 4 second-feet Mar. 9, 1933.

Remarks.- Records good except those for Dec. 1 to Feb. 20, which were estimated on basis of two discharge measurements and temperature records. Small diversions upstream.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 17 | 19 | *19 | | | 19 | 15 | 9 | 6 | 7 | 6 | 8 |
| 2 | 17 | 19 | | | | 21 | 14 | 9 | 7 | 7 | 6 | 8 |
| 3 | 17 | 19 | | | | 18 | 13 | 11 | 9 | 7 | 7 | 8 |
| 4 | 17 | 18 | | | | 19 | 14 | 13 | 8 | 7 | 6 | 8 |
| 5 | 17 | 18 | | | | 19 | 17 | 11 | 8 | 7 | 7 | 9 |
| 6 | 17 | 20 | | | 16 | 19 | 17 | 11 | 8 | 7 | 8 | 10 |
| 7 | 17 | 20 | | | | 17 | 17 | 11 | 8 | 7 | 7 | 9 |
| 8 | 17 | 20 | | | | 16 | 16 | 11 | 8 | 7 | 40 | 9 |
| 9 | 17 | 20 | | | | 16 | 14 | 12 | 8 | 7 | 12 | 9 |
| 10 | 17 | 20 | | | | 16 | 14 | 12 | 7 | 7 | 11 | 9 |
| 11 | 18 | 20 | | | | 16 | 14 | 11 | 7 | 7 | 10 | 9 |
| 12 | 17 | 20 | | | | 15 | 14 | 11 | 7 | 6 | 9 | 9 |
| 13 | 17 | 19 | | | 18 | 15 | 13 | 12 | 8 | 6 | 9 | 8 |
| 14 | 17 | 19 | | | | 14 | 14 | 12 | 8 | 6 | 9 | 9 |
| 15 | 17 | 19 | | | | 14 | 14 | 12 | 9 | 6 | 9 | 9 |
| 16 | 18 | 20 | | | | 14 | 15 | 11 | 10 | 6 | 9 | 9 |
| 17 | 18 | 19 | | | | 13 | 14 | 11 | 10 | 6 | 10 | 9 |
| 18 | 19 | 19 | | | 15 | 15 | 14 | 10 | 10 | 6 | 9 | 9 |
| 19 | 17 | 19 | | *15 | 15 | 15 | 13 | 10 | 8 | 6 | 9 | 9 |
| 20 | 17 | 19 | | | | 14 | 13 | 9 | 8 | 6 | 9 | 9 |
| 21 | 17 | 18 | | | 14 | 13 | 13 | 8 | 8 | 6 | 8 | 9 |
| 22 | 18 | 18 | | | 14 | 13 | 13 | 8 | 8 | 6 | 8 | 10 |
| 23 | 18 | 20 | | | 16 | 14 | 12 | 9 | 8 | 7 | 8 | 9 |
| 24 | 18 | 20 | | | 15 | 14 | 12 | 8 | 8 | 7 | 8 | 10 |
| 25 | 18 | 19 | | | 15 | 12 | 12 | 7 | 8 | 7 | 6 | 10 |
| 26 | 18 | 18 | | | 15 | 13 | 12 | 8 | 7 | 7 | 6 | 10 |
| 27 | 18 | 19 | | | 15 | 15 | 11 | 7 | 7 | 7 | 7 | 10 |
| 28 | 18 | 19 | | | 16 | 14 | 11 | 7 | 7 | 6 | 8 | 10 |
| 29 | 18 | 18 | | | | 14 | 11 | 7 | 6 | 6 | 7 | 10 |
| 30 | 18 | 18 | | | | 15 | 11 | 7 | 7 | 5 | 6 | 10 |
| 31 | 18 | | | | | 15 | | 8 | | 5 | 7 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 19 | 17 | 17.5 | 1,080 | | |
| November | | | | | | | 20 | 18 | 19.1 | 1,140 | | |
| December | | | | | | | | | 20 | 1,230 | | |
| January | | | | | | | | | 17 | 1,050 | | |
| February | | | | | | | | 14 | 15.9 | 853 | | |
| March | | | | | | | 21 | 12 | 15.4 | 946 | | |
| April | | | | | | | 17 | 11 | 13.6 | 807 | | |
| May | | | | | | | 13 | 7 | 9.8 | 601 | | |
| June | | | | | | | 10 | 6 | 7.8 | 466 | | |
| July | | | | | | | 7 | 5 | 6.5 | 397 | | |
| August | | | | | | | 40 | 6 | 9.1 | 557 | | |
| September | | | | | | | 10 | 8 | 9.1 | 543 | | |
| The year | | | | | | | 40 | 5 | 13.4 | 9,700 | | |

*Discharge measurement.

South Fork of Lodgepole Creek near Federal, Wyo.

Location.- Water-stage recorder in sec. 15, T. 15 N., R. 70 W., 6 miles northwest of Federal.

Drainage area.- 16 square miles.

Records available.- May 1933 to September 1934.

Extremes.- Maximum discharge during year, 4.9 second-feet Mar. 25 (gage height, 1.05 feet); no flow at times.
1933-34: Maximum stage, 4.95 feet Sept. 8, 1933 (discharge not determined); no flow at times.

Remarks.- Records good except those estimated, Dec. 5-9, 18-20, Dec. 23 to Jan. 31, Feb. 11-14, Feb. 21 to Mar. 17. Small diversions above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|------|---------|------|------|------|----------------------|
| 1 | 0.7 | 1.1 | 1.2 | 1.3 | 2.6 | 1.8 | 2.0 | 1.1 | 0.9 | 0.6 | 0 | 0 |
| 2 | .8 | 1.2 | 1.4 | | 2.4 | | 1.8 | .9 | .7 | .5 | 0 | 0 |
| 3 | 1.0 | 1.2 | 1.2 | | 2.6 | | 1.6 | 1.1 | .7 | .4 | 0 | 0 |
| 4 | .8 | 1.2 | 1.2 | | 2.4 | | 2.0 | 2.6 | .7 | .4 | 0 | 0 |
| 5 | .7 | 1.0 | 1.0 | | 2.4 | | 2.0 | 2.0 | .6 | .5 | 0 | .1 |
| 6 | .7 | 1.0 | 1.0 | 1.3 | 2.4 | 2.0 | 1.8 | 1.4 | .6 | .3 | 0 | .2 |
| 7 | .8 | 1.1 | 1.2 | | 2.0 | | 2.0 | 1.2 | .5 | .2 | 0 | .2 |
| 8 | .7 | 1.0 | 1.2 | | 2.0 | | 3.0 | 1.2 | .5 | .2 | 0 | .2 |
| 9 | .7 | 1.0 | 1.3 | | 2.0 | | 3.0 | .9 | .5 | .2 | 0 | .5 |
| 10 | .7 | 1.1 | 1.4 | | 1.6 | | 2.2 | .7 | .5 | .2 | .6 | .7 |
| 11 | .6 | 1.2 | 1.4 | 1.4 | 1.0 | 2.6 | 2.0 | .7 | .6 | .2 | 1.2 | .6 |
| 12 | .6 | 1.1 | 1.6 | | 1.1 | | 1.8 | .9 | .5 | .2 | .6 | .6 |
| 13 | .6 | 1.0 | 1.6 | | 1.2 | | 1.8 | 1.4 | .5 | .1 | .5 | .5 |
| 14 | .6 | .8 | 1.4 | | 1.2 | | 2.0 | 1.4 | .5 | .1 | .4 | .4 |
| 15 | .6 | .7 | 1.2 | | 1.2 | | 2.0 | .9 | .5 | .1 | .3 | .3 |
| 16 | .7 | .7 | 1.1 | 1.4 | 1.8 | 2.5 | 2.0 | .7 | .5 | 0 | .3 | .2 |
| 17 | .8 | .8 | 1.0 | | 1.4 | 2.2 | 2.0 | .7 | .5 | 0 | .4 | .3 |
| 18 | .9 | .7 | 1.0 | | 1.4 | 2.6 | 1.8 | 1.1 | .4 | 0 | .2 | .5 |
| 19 | .9 | .9 | 1.2 | | 1.4 | 2.6 | 1.6 | .6 | .2 | 0 | .2 | .4 |
| 20 | 1.0 | 1.0 | 1.3 | | 1.8 | 2.8 | 1.6 | .6 | .2 | 0 | .1 | .3 |
| 21 | .8 | .6 | 1.4 | 1.6 | 2.8 | 1.6 | 1.6 | .6 | .2 | 0 | .1 | .9 |
| 22 | .8 | .7 | 1.4 | | 2.8 | 1.4 | 1.4 | .6 | .2 | 0 | .1 | .9 |
| 23 | .9 | .9 | 1.4 | | 2.4 | 1.4 | 1.4 | .6 | .2 | 0 | .1 | .9 |
| 24 | 1.0 | 1.0 | 1.3 | | 2.4 | 1.4 | 1.4 | .7 | .2 | 0 | .1 | .9 |
| 25 | 1.0 | 1.2 | 1.2 | | 2.8 | 1.2 | 1.2 | .6 | .2 | 0 | .1 | .9 |
| 26 | 1.0 | 1.2 | 1.2 | 1.5 | 2.8 | 1.4 | .5 | .3 | 0 | .1 | 1.2 | |
| 27 | 1.0 | 1.2 | | | 2.4 | 1.4 | .5 | .3 | 0 | .1 | 1.2 | |
| 28 | 1.0 | 1.2 | | | 2.2 | 1.1 | .6 | .2 | 0 | 0 | 1.1 | |
| 29 | 1.0 | 1.2 | | | 2.2 | 1.1 | .6 | .2 | 0 | 0 | .7 | |
| 30 | 1.0 | 1.2 | | | 2.4 | 1.2 | .6 | .3 | 0 | 0 | .9 | |
| 31 | 1.0 | | | | 2.0 | | .7 | | 0 | 0 | | |
| Month | | | | | | Maximum | | Minimum | | Mean | | Run-off in acre-feet |
| October | | | | | | 1.0 | | 0.6 | | 0.82 | | 50 |
| November | | | | | | 1.2 | | .6 | | 1.01 | | 60 |
| December | | | | | | 1.6 | | 1.0 | | 1.25 | | 77 |
| January | | | | | | | | | | 1.37 | | 84 |
| February | | | | | | 2.6 | | 1.0 | | 1.70 | | 94 |
| March | | | | | | 2.8 | | | | 2.33 | | 143 |
| April | | | | | | 3.0 | | 1.1 | | .77 | | 106 |
| May | | | | | | 2.6 | | .5 | | .93 | | 57 |
| June | | | | | | .9 | | .2 | | .43 | | 26 |
| July | | | | | | .6 | | 0 | | .14 | | 8.3 |
| August | | | | | | 1.2 | | 0 | | .18 | | 11 |
| September | | | | | | 1.2 | | 0 | | .62 | | 31 |
| The year | | | | | | 3.0 | | 0 | | 1.03 | | 747 |

Middle Loup River at St. Paul, Nebr.

Location.- Water-stage recorder in sec. 10, T. 14 N., R. 10 W., at St. Paul. Prior to June 15, 1934, chain gage at same datum, 900 feet downstream was used. Zero of gage is 1,778.4 feet above mean sea level.

Drainage area.- 7,320 square miles.

Records available.- May 1895 to October 1897, April to October 1899, April to November 1903, August 1928 to September 1934.

Extremes.- Maximum discharge during year, 4,610 second-feet June 17 (gage height, 2.52 feet); minimum daily discharge, 361 second-feet July 22, 1895-97, 1899, 1903, 1928-34: Maximum discharge, 18,000 second-feet Mar. 17, 1932 (gage height, 5.10 feet at former site); minimum daily discharge, 230 second-feet Nov. 23, 1929.

Remarks.- Records fair. Discharge estimated Dec. 1 to Apr. 15, June 7-14 on basis of three discharge measurements and flow of North Loup River near St. Paul. No diversions or regulation.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|-------|--------|------|--------|--------|---------|-------|---------|-------|----------------------|-------|
| 1 | 795 | 964 | *1,900 | | | | 1,100 | 1,070 | 689 | 743 | 727 | 908 |
| 2 | 702 | 1,470 | | | | | 1,200 | 947 | 728 | 840 | 710 | 1,090 |
| 3 | 795 | 1,450 | | | | | 2,020 | 1,070 | 602 | 727 | 648 | 1,720 |
| 4 | 964 | 1,060 | | | | | 1,500 | 1,070 | 728 | 743 | 617 | 1,390 |
| 5 | 915 | 1,150 | | | | | 1,280 | 1,120 | 754 | 857 | 572 | 1,030 |
| 6 | 998 | 1,180 | | | | | 1,200 | 1,410 | 702 | 1,070 | 694 | 759 |
| 7 | 1,080 | 1,180 | | | | | 1,120 | 1,170 | 800 | 1,320 | 678 | 759 |
| 8 | 1,130 | 1,080 | | | | | 1,100 | 1,200 | 1,220 | 710 | 648 | 743 |
| 9 | 1,180 | 1,120 | | | | | 1,100 | 999 | 680 | 727 | 710 | 710 |
| 10 | 870 | 998 | | | *1,170 | | 1,180 | 1,170 | 850 | 678 | 775 | 857 |
| 11 | | 1,050 | | | | | 1,320 | 1,070 | 800 | 663 | 1,030 | 1,630 |
| 12 | 885 | 1,070 | | | | | 1,100 | 930 | 780 | 678 | 1,070 | 1,120 |
| 13 | 1,020 | 1,250 | | | | | 1,000 | 1,080 | 780 | 824 | 2,510 | 840 |
| 14 | 915 | 1,150 | | | | | 1,020 | 1,130 | 700 | 775 | 1,120 | 824 |
| 15 | 825 | 955 | | | | | 1,020 | 1,070 | 775 | 678 | 857 | 1,090 |
| 16 | 825 | 915 | | | | | 1,020 | 900 | 640 | 602 | 925 | 959 |
| 17 | 1,410 | 1,100 | | | | | 1,080 | 795 | 2,620 | 556 | 791 | 541 |
| 18 | 1,100 | 1,270 | | | | | 1,250 | 780 | 1,830 | 513 | 791 | 808 |
| 19 | 947 | 1,340 | | | | | 1,200 | 840 | 727 | 486 | 1,050 | 759 |
| 20 | 1,020 | 1,120 | | | | | 1,120 | 754 | 632 | 472 | 1,030 | 925 |
| 21 | | 1,270 | | | | *1,020 | 1,080 | 754 | 648 | 466 | 791 | 1,220 |
| 22 | | 1,100 | | | | | 1,070 | 754 | 908 | 361 | 743 | 1,050 |
| 23 | | 1,180 | | | | | 1,120 | 870 | 1,050 | 466 | 648 | 775 |
| 24 | | 1,200 | | | | | 1,100 | 754 | 1,050 | 432 | 710 | 1,220 |
| 25 | | 1,270 | | | | | 998 | 767 | 874 | 499 | 908 | 1,550 |
| 26 | 1,250 | 1,020 | | | | | 1,150 | 795 | 775 | 791 | 874 | 1,260 |
| 27 | 1,250 | 1,240 | | | | | 1,380 | 702 | 678 | 1,160 | 824 | 840 |
| 28 | 1,130 | 1,150 | | | | | 1,130 | 780 | 632 | 1,090 | 759 | 743 |
| 29 | 1,020 | 981 | | | | | 964 | 728 | 602 | 857 | 824 | 840 |
| 30 | 1,080 | 1,170 | | | | | 1,130 | 754 | 710 | 857 | 808 | 942 |
| 31 | 915 | | | | | | | 741 | | 775 | 824 | |
| Month | | | | | | | Maximum | | Minimum | Mean | Run-off in acre-feet | |
| October | | | | | | | 1,410 | | 702 | 1,021 | 62,800 | |
| November | | | | | | | 1,470 | | 855 | 1,159 | 68,970 | |
| December | | | | | | | | | | 1,280 | 78,700 | |
| January | | | | | | | | | | 1,050 | 84,560 | |
| February | | | | | | | | | | 1,100 | 81,090 | |
| March | | | | | | | | | | 1,080 | 66,410 | |
| April | | | | | | | 2,020 | | 964 | 1,162 | 69,130 | |
| May | | | | | | | 1,410 | | 702 | 935 | 87,470 | |
| June | | | | | | | 2,620 | | 602 | 880 | 52,370 | |
| July | | | | | | | 1,320 | | 361 | 724 | 44,540 | |
| August | | | | | | | 2,510 | | 572 | 860 | 52,890 | |
| September | | | | | | | 1,720 | | 541 | 996 | 59,290 | |
| The year | | | | | | | 2,620 | | 361 | 1,020 | 736,200 | |

*Discharge measurement.

Loup River at Columbus, Nebr.

Location.- Water-stage recorder in sec. 29, T. 17 N., R. 1 E., at Columbus, $3\frac{1}{2}$ miles above mouth.

Drainage area.- 14,200 square miles.

Records available.- March to September 1931, October 1933 to September 1934. Comparable records October 1894 to September 1915 at station 2 miles above.

Extremes.- Maximum discharge during year, 9,620 second-feet Aug. 14 (gage height, 2.59 feet); minimum, 185 second-feet Feb. 24 (gage height, 0.24 foot).
1894-1915, 1931, 1933-34: Maximum discharge, about 70,000 second-feet June 6, 7, 1896 (gage height, 12.55 feet, former datum); minimum not determined.

Remarks.- Records fair except those estimated, Oct. 1 to Nov. 20, Dec. 31 to Feb. 7, Feb. 25 to Mar. 8. Diversions for irrigation on headwaters.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|-------|-------|--------|-------|---------|---------|-------|----------------------|-------|-------|-------|
| 1 | | | 3,260 | | | | 2,660 | 2,130 | 1,020 | 938 | 1,100 | 1,280 |
| 2 | | | 5,310 | | | | 2,900 | 2,080 | 916 | 1,020 | 998 | 1,720 |
| 3 | | 2,400 | 5,590 | | | 3,000 | 5,140 | 2,130 | 880 | 1,400 | 380 | 3,670 |
| 4 | | | 5,030 | | 2,300 | | 4,760 | 2,130 | 1,020 | 1,540 | 844 | 4,100 |
| 5 | | | 4,260 | | | | 3,410 | 2,320 | 1,020 | 1,670 | 808 | 3,630 |
| 6 | | | 4,160 | | | | 3,050 | 2,750 | 1,620 | 1,760 | 952 | 3,050 |
| 7 | | | 3,680 | | | 2,800 | 2,630 | 3,310 | 1,760 | 2,320 | 1,100 | 2,320 |
| 8 | | 2,440 | 3,410 | | 2,800 | | 2,700 | 3,210 | 4,760 | 2,510 | 1,060 | 2,180 |
| 9 | | | 3,260 | | 2,660 | 2,510 | 2,900 | 2,360 | 2,950 | 1,900 | 916 | 1,400 |
| 10 | | | 2,900 | | 2,750 | 2,460 | 3,100 | 2,180 | 2,030 | 1,490 | 808 | 1,680 |
| 11 | | | 2,560 | | 2,750 | 2,360 | 3,210 | 1,720 | 1,800 | 1,230 | 1,230 | 1,150 |
| 12 | | 2,350 | 2,130 | *1,960 | 2,700 | 2,460 | 3,100 | 2,030 | 1,620 | 1,150 | 1,580 | 3,100 |
| 13 | | | 1,450 | | 2,360 | 2,130 | 3,000 | 1,800 | 1,490 | 1,100 | 2,080 | 3,310 |
| 14 | | | 1,580 | | 2,410 | 1,900 | 2,900 | 1,670 | 1,450 | 1,150 | 5,420 | 3,000 |
| 15 | | 2,400 | 1,450 | | 2,410 | 2,030 | 2,510 | 1,350 | 1,320 | 1,280 | 3,990 | 2,700 |
| 16 | | | 2,130 | | 2,510 | 2,270 | 2,700 | 2,080 | 1,490 | 1,360 | 2,610 | 2,510 |
| 17 | | | 2,300 | | 3,000 | 1,620 | 2,560 | 1,800 | 1,900 | 1,190 | 2,220 | 2,750 |
| 18 | | 2,450 | 3,050 | | 3,310 | 2,080 | 2,360 | 1,490 | 4,920 | 1,060 | 1,940 | 1,800 |
| 19 | | | 3,050 | | 3,160 | 2,180 | 2,180 | 1,280 | 3,940 | 988 | 1,540 | 1,540 |
| 20 | | | 2,650 | | 1,940 | 2,410 | 2,410 | 1,150 | 2,610 | 808 | 1,550 | 1,370 |
| 21 | | 2,030 | 3,410 | | 1,560 | 1,940 | 2,320 | 1,150 | 2,030 | 736 | 1,990 | 1,760 |
| 22 | | 2,320 | 4,320 | | 2,220 | 1,900 | 2,130 | 1,190 | 1,990 | 678 | 1,450 | 1,940 |
| 23 | | 2,850 | 5,090 | | 2,560 | 2,160 | 2,030 | 1,400 | 2,030 | 700 | 1,350 | 2,030 |
| 24 | | 3,620 | 3,620 | | 736 | 2,610 | 2,030 | 1,720 | 2,030 | 546 | 1,230 | 2,030 |
| 25 | | 3,100 | 2,850 | | | 2,410 | 2,220 | 1,650 | 1,990 | 612 | 1,360 | 2,700 |
| 26 | | 3,000 | 1,190 | | 1,000 | 1,900 | 2,320 | 1,540 | 1,670 | 655 | 1,540 | 2,610 |
| 27 | | 2,610 | 844 | | | 2,080 | 2,270 | 1,350 | 1,400 | 844 | 1,620 | 2,560 |
| 28 | | 2,610 | 502 | | | 2,510 | 2,320 | 1,280 | 1,020 | 1,350 | 1,490 | 2,270 |
| 29 | | 2,660 | 736 | | | 1,990 | 2,320 | 1,190 | 916 | 1,720 | 1,350 | 2,130 |
| 30 | | 3,000 | 1,360 | | | 2,610 | 2,220 | 1,190 | 916 | 1,450 | 1,230 | 1,600 |
| 31 | | | 1,300 | | | 2,660 | | 1,020 | | 1,100 | 1,190 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | | | 2,250 | 138,300 | | | |
| November | | | | | | 3,620 | 2,030 | 2,535 | 150,800 | | | |
| December | | | | | | 5,590 | 502 | 2,875 | 176,800 | | | |
| January | | | | | | | | 1,900 | 116,800 | | | |
| February | | | | | | 3,310 | 736 | 2,208 | 122,500 | | | |
| March | | | | | | | 1,620 | 2,408 | 146,100 | | | |
| April | | | | | | 5,140 | 2,030 | 2,746 | 163,400 | | | |
| May | | | | | | 3,310 | 1,020 | 1,613 | 111,600 | | | |
| June | | | | | | 4,920 | 860 | 1,884 | 112,100 | | | |
| July | | | | | | 2,510 | 546 | 1,235 | 76,000 | | | |
| August | | | | | | 5,420 | 808 | 1,589 | 97,680 | | | |
| September | | | | | | 4,100 | 1,150 | 2,335 | 139,000 | | | |
| The year | | | | | | 5,590 | 502 | 2,146 | 1,553,000 | | | |

*Discharge measurement.

North Loup River near St. Paul, Nebr.

Location.- Water-stage recorder in sec. 22, T. 15 N., R. 10 W., 3 miles north of St. Paul. Prior to Mar. 20, 1934, chain gage 60 feet upstream was used. Datum unchanged.

Drainage area.- 4,040 square miles.

Records available.- May 1895 to October 1897, April to October 1899, April to December 1903, August 1928 to September 1934.

Extremes.- Maximum discharge during year, 3,240 second-feet Sept. 2 (gage height, 2.73 feet); minimum, 351 second-feet July 23 (gage height, 1.11 feet).
1895-97, 1899, 1903, 1928-34: Maximum discharge (estimated), 90,000 second-feet June 6, 1896; minimum, 128 second-feet Jan. 15, 1931.

Remarks.- Records good except those for Dec. 26 to Mar. 19, which were estimated on basis of two discharge measurements and temperature records. Small diversions on headwaters for irrigation.

Discharge, in second-feet. 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|-------|------|------|---------|---------|-------|----------------------|---------|------|-------|
| 1 | 725 | 802 | 879 | | | | 750 | 702 | 520 | 583 | 455 | 658 |
| 2 | 708 | 844 | 1,100 | | | | 872 | 714 | 520 | 547 | 455 | 1,120 |
| 3 | 708 | 891 | 903 | | | 1,000 | 1,120 | 774 | 512 | 573 | 447 | 1,260 |
| 4 | 725 | 903 | 915 | | | | 1,000 | 810 | 529 | 547 | 432 | 1,120 |
| 5 | 760 | 951 | 1,000 | | | | 1,000 | 872 | 604 | 582 | 424 | 898 |
| 6 | 733 | 927 | 915 | | | | 898 | 1,150 | 636 | 726 | 447 | 750 |
| 7 | 750 | 927 | 915 | | | | 885 | 1,030 | 647 | 556 | 478 | 666 |
| 8 | 771 | 903 | 927 | | | 625 | 855 | 910 | 714 | 529 | 520 | 614 |
| 9 | 771 | 903 | 951 | | | | 810 | 872 | 658 | 503 | 556 | 604 |
| 10 | 771 | 951 | 927 | | *970 | | 810 | 822 | 614 | 512 | 556 | 636 |
| 11 | 733 | 879 | 927 | | | | 848 | 726 | 604 | 512 | 668 | 989 |
| 12 | 725 | 879 | 824 | | | 775 | 810 | 726 | 573 | 520 | 726 | 910 |
| 13 | 733 | 903 | 716 | | | | 750 | 774 | 564 | 520 | 910 | 885 |
| 14 | 760 | 891 | 666 | | | *844 | 798 | 798 | 564 | 503 | 679 | 822 |
| 15 | 742 | 879 | 750 | | | 900 | 810 | 738 | 614 | 503 | 658 | 786 |
| 16 | 725 | 879 | 802 | | | | 810 | 647 | 658 | 478 | 647 | 726 |
| 17 | 716 | 891 | 815 | | | 625 | 822 | 656 | 786 | 459 | 658 | 702 |
| 18 | 750 | 903 | 813 | | | | 855 | 614 | 935 | 415 | 647 | 679 |
| 19 | 760 | 854 | 716 | | | | 796 | 804 | 679 | 402 | 668 | 658 |
| 20 | 733 | 855 | 834 | | | 690 | 738 | 668 | 658 | 402 | 647 | 636 |
| 21 | 742 | 855 | 834 | | | 798 | 679 | 604 | 593 | 387 | 668 | 658 |
| 22 | 742 | 879 | 834 | | | 798 | 658 | 625 | 593 | 373 | 668 | 679 |
| 23 | 725 | 891 | 834 | | | 848 | 658 | 556 | 614 | 373 | 679 | 690 |
| 24 | 725 | 903 | 1,000 | | | 810 | 625 | 673 | 582 | 384 | 702 | 1,250 |
| 25 | 708 | 951 | 834 | | | 786 | 647 | 564 | 547 | 402 | 752 | 910 |
| 26 | 700 | 975 | | | | | 922 | 702 | 547 | 538 | 466 | 762 |
| 27 | 750 | 903 | | | | 798 | 714 | 547 | 529 | 520 | 738 | 872 |
| 28 | 771 | 855 | | | | 810 | 726 | 556 | 520 | 529 | 726 | 786 |
| 29 | 792 | 879 | 650 | | | 855 | 702 | 556 | 520 | 512 | 714 | 786 |
| 30 | 792 | 855 | | | | 922 | 702 | 556 | 564 | 471 | 702 | 733 |
| 31 | 792 | | | | | 798 | | 529 | | 447 | 690 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 732 | | 700 | 743 | 45,700 | | |
| November | | | | | | 975 | | 802 | 891 | 53,040 | | |
| December | | | | | | 1,100 | | | 824 | 60,640 | | |
| January | | | | | | | | | 750 | 46,120 | | |
| February | | | | | | | | | 770 | 42,760 | | |
| March | | | | | | | | | 787 | 43,410 | | |
| April | | | | | | 1,120 | | 625 | 793 | 47,210 | | |
| May | | | | | | 1,150 | | 529 | 703 | 43,240 | | |
| June | | | | | | 935 | | 512 | 606 | 36,080 | | |
| July | | | | | | 726 | | 373 | 492 | 30,280 | | |
| August | | | | | | 910 | | 424 | 629 | 38,660 | | |
| September | | | | | | 1,260 | | 604 | 812 | 46,350 | | |
| The year | | | | | | 1,260 | | 373 | 733 | 530,500 | | |

*Discharge measurement.

Elkhorn River at Neligh, Nebr.

Location.- Chain gage in sec. 20, T. 25 N., R. 6 W., at Neligh.

Drainage area.- 1,740 square miles.

Records available.- March 1931 to September 1934.

Extremes.- Maximum discharge during year, 456 second-feet Apr. 3 (gage height, 4.27 feet); minimum, 18 second-feet Aug. 5 (gage height, 1.71 feet).
1931-34: Maximum discharge, 670 second-feet June 11, 1932 (gage height, 3.64 feet, on former gage); minimum, 12 second-feet July 2, 1932 (gage height, 1.26 feet, former gage).

Remarks.- Records good except those for Dec. 1 to Feb. 28, which were estimated on basis of one discharge measurement and temperature records. No diversions.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 91 | 119 | | | | 204 | 224 | 131 | 67 | 60 | 23 | 26 |
| 2 | 89 | 110 | | | | 207 | 225 | 124 | 68 | 55 | 22 | 39 |
| 3 | 87 | 109 | | | | 260 | 415 | 170 | 68 | 60 | 20 | 71 |
| 4 | 92 | 112 | | | | 252 | 275 | 214 | 67 | 71 | 19 | 68 |
| 5 | 93 | 117 | | | | 224 | 248 | 210 | 68 | 71 | 19 | 60 |
| 6 | 93 | 121 | | | | 194 | 237 | 191 | 79 | 79 | 19 | 55 |
| 7 | 91 | 119 | | | | 188 | 238 | 180 | 84 | 82 | 21 | 52 |
| 8 | 92 | 117 | | | | 175 | 217 | 172 | 149 | 70 | 20 | 49 |
| 9 | 95 | 117 | | | *137 | 164 | 208 | 156 | 114 | 74 | 22 | 52 |
| 10 | 98 | 116 | | | | 154 | 197 | 149 | 95 | 78 | 29 | 58 |
| 11 | 100 | 114 | | | | 148 | 184 | 144 | 96 | 74 | 31 | 64 |
| 12 | 101 | 116 | | | | 196 | 167 | 138 | 91 | 68 | 30 | 62 |
| 13 | 105 | 119 | | | | 191 | 156 | 133 | 84 | 58 | 31 | 61 |
| 14 | 109 | 123 | | | | 180 | 159 | 131 | 117 | 54 | 28 | 66 |
| 15 | 109 | 121 | | | | 167 | 162 | 128 | 126 | 51 | 33 | 59 |
| 16 | 107 | 123 | | | | 158 | 158 | 123 | 102 | 47 | 34 | 59 |
| 17 | 106 | 120 | | | | 141 | 159 | 113 | 106 | 44 | 33 | 59 |
| 18 | 107 | 121 | | | | 124 | 156 | 107 | 104 | 41 | 32 | 58 |
| 19 | 110 | 119 | | | | 167 | 148 | 105 | 98 | 37 | 32 | 57 |
| 20 | 110 | 120 | | | | 178 | 144 | 100 | 101 | 34 | 30 | 56 |
| 21 | 110 | 123 | | | | 172 | 142 | 96 | 90 | 30 | 30 | 60 |
| 22 | 109 | 128 | | | | 178 | 145 | 95 | 83 | 26 | 28 | 66 |
| 23 | 112 | 134 | | | | 186 | 142 | 98 | 79 | 23 | 30 | 66 |
| 24 | 110 | 138 | | | | 180 | 141 | 98 | 73 | 22 | 32 | 85 |
| 25 | 113 | 140 | | | | 176 | 140 | 93 | 66 | 24 | 36 | 83 |
| 26 | 114 | 134 | | | | 189 | 138 | 91 | 61 | 26 | 35 | 80 |
| 27 | 116 | 134 | | | | 184 | 134 | 86 | 53 | 28 | 32 | 78 |
| 28 | 117 | 134 | | | | 199 | 135 | 83 | 49 | 28 | 28 | 74 |
| 29 | 116 | 133 | | | | 210 | 131 | 82 | 63 | 28 | 28 | 74 |
| 30 | 119 | 131 | | | | 194 | 133 | 78 | 74 | 26 | 27 | 72 |
| 31 | 119 | | | | | 199 | | 72 | | 25 | 26 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 119 | 87 | 104 | 6,420 | | |
| November | | | | | | | 140 | 109 | 123 | 7,300 | | |
| December | | | | | | | | | 140 | 8,610 | | |
| January | | | | | | | | | 135 | 8,300 | | |
| February | | | | | | | | | 150 | 8,330 | | |
| March | | | | | | | 260 | 124 | 185 | 11,380 | | |
| April | | | | | | | 415 | 131 | 182 | 10,800 | | |
| May | | | | | | | 214 | 72 | 126 | 7,720 | | |
| June | | | | | | | 149 | 49 | 85.8 | 5,110 | | |
| July | | | | | | | 82 | 22 | 48.2 | 2,960 | | |
| August | | | | | | | 36 | 19 | 27.8 | 1,710 | | |
| September | | | | | | | 85 | 26 | 62.3 | 3,710 | | |
| The year | | | | | | | 415 | 19 | 115 | 82,350 | | |

*Discharge measurement

Elkhorn River at Waterloo, Nebr.

Location.— Water-stage recorder in sec. 10, T. 15 N., R. 10 E., at Waterloo. Prior to Apr. 13, 1934, chain gage referred to same datum 55 feet upstream was used. Zero of gage is 1,110.1 feet above mean sea level.

Drainage area.— 6,390 square miles.

Records available.— May 1911 to July 1913, August 1928 to September 1934.

Extremes.— Maximum discharge during year, 8,040 second-feet June 9 (gage height, 6.46 feet); minimum, 118 second-feet Aug. 10 (gage height, 0.76 foot).
1911-13, 1928-34: Highest flood occurred in April 1912 (gage height and discharge not determined); minimum, 118 second-feet Sept. 12, 1931, and Aug. 10, 1934.

Remarks.— Records good except those for Dec. 1 to Feb. 15, Feb. 23 to Mar. 3, which were estimated on basis of one discharge measurement and temperature records. No diversions.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|-------|---------|---------|-------|----------------------|------|-------|
| 1 | 303 | 380 | | | | | 662 | 404 | 249 | 271 | 147 | 180 |
| 2 | 303 | 388 | | | | 600 | 676 | 400 | 237 | 266 | 144 | 543 |
| 3 | 299 | 392 | | | 616 | | 730 | 388 | 225 | 269 | 138 | 335 |
| 4 | 299 | 392 | | | | 963 | 840 | 388 | 223 | 309 | 132 | 264 |
| 5 | 296 | 412 | | | | 1,120 | 1,500 | 388 | 232 | 289 | 126 | 366 |
| 6 | 289 | 388 | | | | 892 | 1,020 | 390 | 232 | 271 | 122 | 303 |
| 7 | 296 | 384 | | | | 788 | 915 | 371 | 465 | 309 | 130 | 252 |
| 8 | 292 | 380 | | | 650 | 723 | 963 | 368 | 1,890 | 374 | 132 | 230 |
| 9 | 296 | 376 | | | | 669 | 855 | 365 | 7,040 | 284 | 127 | 218 |
| 10 | 306 | 384 | | | | 618 | 772 | 388 | 3,770 | 2,620 | 121 | 223 |
| 11 | 306 | 388 | | | | 624 | 716 | 308 | 2,850 | 2,010 | 122 | 211 |
| 12 | 303 | 388 | | | | 618 | 669 | 365 | 1,680 | 1,520 | 126 | 228 |
| 13 | 303 | 384 | | | 720 | 624 | 634 | 353 | 1,160 | 1,350 | 124 | 242 |
| 14 | 313 | 388 | | | | 582 | 608 | 350 | 896 | 762 | 121 | 223 |
| 15 | 320 | 380 | | | | 564 | 595 | 359 | 688 | 517 | 124 | 205 |
| 16 | 324 | 384 | | | 765 | 559 | 576 | 338 | 621 | 408 | 134 | 196 |
| 17 | 328 | 376 | | | 695 | 548 | 562 | 326 | 628 | 347 | 132 | 205 |
| 18 | 328 | 388 | | | 688 | 515 | 555 | 314 | 595 | 303 | 134 | 209 |
| 19 | 338 | 396 | | | 570 | 520 | 530 | 306 | 628 | 279 | 132 | 203 |
| 20 | 346 | 400 | | | 542 | 515 | 488 | 292 | 569 | 252 | 132 | 198 |
| 21 | 342 | 400 | | | 510 | 559 | 484 | 282 | 434 | 225 | 130 | 203 |
| 22 | 342 | 404 | | | 490 | 542 | 472 | 271 | 474 | 209 | 129 | 205 |
| 23 | 342 | 404 | | | | 570 | 465 | 271 | 408 | 194 | 126 | 211 |
| 24 | 346 | 420 | | | 400 | 548 | 447 | 271 | 353 | 188 | 135 | 228 |
| 25 | 350 | 416 | | | | 570 | 438 | 271 | 368 | 178 | 135 | 232 |
| 26 | 350 | 420 | | | | 576 | 434 | 269 | 320 | 176 | 132 | 306 |
| 27 | 363 | 420 | | | 250 | 576 | 424 | 261 | 298 | 172 | 130 | 350 |
| 28 | 365 | 420 | | | | 570 | 424 | 256 | 279 | 167 | 128 | 424 |
| 29 | 361 | 420 | | | | 570 | 424 | 256 | 271 | 167 | 127 | 380 |
| 30 | 372 | 408 | | | | 630 | 416 | 252 | 289 | 163 | 130 | 317 |
| 31 | 376 | | | | | 630 | | 247 | | 154 | 147 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 376 | 289 | 325 | 20,010 | | |
| November | | | | | | | 420 | 376 | 396 | 23,560 | | |
| December | | | | | | | | | 450 | 27,670 | | |
| January | | | | | | | | | 400 | 24,600 | | |
| February | | | | | | | 765 | | 576 | 32,010 | | |
| March | | | | | | | 1,120 | 515 | 632 | 35,840 | | |
| April | | | | | | | 1,500 | 416 | 636 | 37,070 | | |
| May | | | | | | | 404 | 247 | 327 | 20,110 | | |
| June | | | | | | | 7,040 | 223 | 943 | 55,140 | | |
| July | | | | | | | 2,620 | 154 | 485 | 29,800 | | |
| August | | | | | | | 147 | 121 | 131 | 8,040 | | |
| September | | | | | | | 545 | 180 | 269 | 16,000 | | |
| The year | | | | | | | 7,040 | 121 | 462 | 334,600 | | |

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Location.- Water-stage recorder on line between SE $\frac{1}{4}$ sec. 20 and NE $\frac{1}{4}$ sec. 29, T. 67 N., R. 38 W., at bridge on county highway G, 1 mile north of Blanchard. Chain gage at same site and datum used prior to Aug. 7, 1934.

Records available.- March to September 1934.

Remarks.- Records good prior to Aug. 6, excellent thereafter.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|---------|---------|------|-----------------|------|---------|-----------|------|-------|
| 1 | | | | | | | 6.25 | 0.75 | 0.13 | 0.13 | 0.11 | 27.5 |
| 2 | | | | | | | 7.38 | .60 | .19 | .06 | .06 | 12.1 |
| 3 | | | | | | | 8.06 | .92 | .19 | .26 | .04 | 4.14 |
| 4 | | | | | | | 12.9 | .75 | .13 | .26 | .09 | 17.7 |
| 5 | | | | | | | 16.7 | 4.04 | .13 | 2.04 | .09 | 4.90 |
| 6 | | | | | | | 10.8 | 3.16 | .13 | 3.60 | .09 | 1.37 |
| 7 | | | | | | | 8.74 | 1.68 | .36 | 2.04 | .16 | .64 |
| 8 | | | | | | | 8.06 | 1.38 | 5.12 | 1.13 | .04 | .43 |
| 9 | | | | | | | 7.38 | 1.68 | 21.3 | .80 | .03 | .37 |
| 10 | | | | | | | 5.68 | 3.60 | 1.38 | .48 | .03 | .66 |
| 11 | | | | | | | 3.60 | 1.38 | .48 | .48 | .09 | .27 |
| 12 | | | | | | | 2.38 | 8.06 | .36 | .26 | .11 | .23 |
| 13 | | | | | | 13.6 | 1.68 | 96.0 | .13 | .26 | .13 | .18 |
| 14 | | | | | | 6.81 | 2.04 | 17.5 | .36 | .26 | .09 | .16 |
| 15 | | | | | | 7.38 | 2.75 | 2.81 | .48 | .19 | .11 | .23 |
| 16 | | | | | | 6.25 | 2.75 | 4.04 | .48 | .09 | .13 | 10.1 |
| 17 | | | | | | 9.42 | 3.60 | 2.75 | .75 | .06 | .11 | 6.66 |
| 18 | | | | | | 6.25 | 3.60 | 2.04 | .75 | .13 | .11 | 2.51 |
| 19 | | | | | | 7.38 | 2.75 | 1.68 | .92 | .04 | .09 | .89 |
| 20 | | | | | | 8.74 | 2.04 | 1.13 | .26 | .04 | .09 | .49 |
| 21 | | | | | | 8.74 | 2.04 | .75 | .26 | .04 | .11 | .49 |
| 22 | | | | | | 4.55 | 2.04 | .48 | 14.3 | .04 | .09 | .37 |
| 23 | | | | | | 4.55 | 1.68 | .48 | 16.7 | .04 | .09 | .27 |
| 24 | | | | | | 7.38 | 1.38 | .36 | 5.12 | .09 | .09 | .23 |
| 25 | | | | | | 8.06 | 1.38 | .36 | 2.38 | 0 | .09 | .27 |
| 26 | | | | | | 8.06 | 2.04 | .36 | .92 | .09 | .09 | 76.8 |
| 27 | | | | | | 8.06 | 1.38 | .36 | .36 | .06 | .09 | 54.9 |
| 28 | | | | | | 5.68 | .92 | .19 | .26 | .06 | .07 | 26.0 |
| 29 | | | | | | 9.42 | .92 | .13 | .19 | .06 | .06 | 31.8 |
| 30 | | | | | | 7.38 | 1.13 | .09 | .09 | .06 | .06 | 13.3 |
| 31 | | | | | | 6.25 | | .06 | | .05 | 5.02 | |
| Month | | | | Maximum | Minimum | Mean | Per square mile | | Run-off | | | |
| | | | | | | | | | Inches | Acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 13-31 | | | | 13.6 | 4.55 | 7.68 | 0.038 | | 0.03 | | | 286 |
| April | | | | 16.7 | .92 | 4.47 | .022 | | .02 | | | 266 |
| May | | | | 96.0 | .06 | 5.28 | .026 | | .03 | | | 324 |
| June | | | | 21.3 | .09 | 2.49 | .012 | | .01 | | | 148 |
| July | | | | 3.60 | 0 | 4.19 | .0021 | | .002 | | | 26 |
| August | | | | 5.02 | .03 | .247 | .0012 | | .001 | | | 15 |
| September | | | | 76.8 | .16 | 9.86 | .049 | | .05 | | | 597 |
| The period | | | | | | | | | | | | 1,655 |

Tarkio River at Fairfax, Mo.

Location.- Chain gage on line between secs. 22 and 27, T. 64 N., R. 40 W., at highway bridge half a mile west of Fairfax.

Drainage area.- 508 square miles.

Records available.- March 1922 to September 1934.

Average discharge.- 12 years, 152 second-feet.

Extremes.- Maximum discharge recorded during year, 710 second-feet Sept. 26 (gage height, 5.90 feet); no flow July 17 to Aug. 4, Aug. 8-15; minimum gage height, 1.17 feet July 23.
1922-34: Maximum discharge, about 15,000 second-feet July 7, 1929 (gage height, 22.33 feet, from flood mark); no flow several days in July, August 1934.

Remarks.- Records fair except those estimated for Nov. 19 to Dec. 2, when gage was not read, and those estimated for periods of ice effect, Dec. 10-15, Dec. 24 to Jan. 21, Jan. 26 to Feb. 3, Feb. 20 to Mar. 3, Mar. 9, 10, 17, 18, which are poor.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|---------|------|---------|------|------|------|-----------------|------|---------|-----------|-------|
| 1 | 24 | 15 | 16 | 23 | 16 | 31 | 25 | 3.8 | 0.4 | 1.3 | 0 | 8 |
| 2 | 21 | 15 | 20 | 23 | 16 | 50 | 23 | 3.8 | .4 | .5 | 0 | 50 |
| 3 | 20 | 15 | 63 | 23 | 23 | 89 | 18 | 3.8 | .2 | .4 | 0 | 217 |
| 4 | 20 | 15 | 57 | 23 | 28 | 72 | 20 | 8 | .2 | .3 | 0 | 33 |
| 5 | 19 | 18 | 41 | 23 | 28 | 49 | 28 | 15 | .8 | .2 | 1.0 | 17 |
| 6 | 18 | 19 | 30 | 23 | 26 | 36 | 24 | 7 | .5 | 10 | .1 | 18 |
| 7 | 17 | 17 | 30 | 23 | 29 | 28 | 24 | 6 | .5 | 2.6 | .1 | 3.8 |
| 8 | 15 | 17 | 25 | 23 | 31 | 20 | 20 | 3.8 | 495 | 2.9 | 0 | 1.7 |
| 9 | 16 | 15 | 17 | 23 | 25 | 16 | 14 | 1.4 | 149 | 2.9 | 0 | 1.2 |
| 10 | 17 | 15 | 16 | 23 | 30 | 16 | 10 | 6 | 16 | 1.2 | 0 | 3.2 |
| 11 | 17 | 15 | 16 | 23 | 41 | 23 | 7 | 8 | 6 | 1.5 | 0 | 2.3 |
| 12 | 16 | 14 | 16 | 23 | 23 | 31 | 2.4 | 323 | 2.6 | 1.6 | 0 | .8 |
| 13 | 15 | 14 | 16 | 23 | 26 | 29 | 4.8 | 323 | 1.3 | 1.7 | 0 | 1.7 |
| 14 | 15 | 13 | 16 | 23 | 25 | 23 | 6 | 65 | 7 | 3.5 | 0 | 16 |
| 15 | 37 | 12 | 16 | 23 | 25 | 22 | 6 | 26 | 2.6 | .6 | 0 | 247 |
| 16 | 58 | 11 | 15 | 31 | 20 | 22 | 8 | 15 | 2.9 | .3 | .2 | 69 |
| 17 | 44 | 14 | 27 | 31 | 22 | 16 | 7 | 11 | 3.2 | 0 | .6 | 14 |
| 18 | 30 | 13 | 25 | 31 | 19 | 16 | 7 | 7 | 2.6 | 0 | .6 | 21 |
| 19 | 26 | 15 | 27 | 31 | 22 | 22 | 6 | 4.6 | 2.6 | 0 | .4 | 12 |
| 20 | 22 | 16 | 27 | 31 | 23 | 26 | 4.3 | 3.5 | 1.3 | 0 | .2 | 4.6 |
| 21 | 20 | 15 | 28 | 40 | 23 | 23 | 5 | 3.2 | .7 | 0 | .4 | 6 |
| 22 | 17 | 13 | 29 | 167 | 23 | 21 | 5.8 | 2.6 | 7 | 0 | .4 | 4.2 |
| 23 | 15 | 17 | 27 | 120 | 23 | 20 | 4.8 | 2.0 | 41 | 0 | .2 | 2.3 |
| 24 | 15 | 18 | 23 | 112 | 23 | 20 | 3.8 | 1.3 | 12 | 0 | .3 | 2.0 |
| 25 | 15 | 19 | 16 | 33 | 23 | 14 | 4.8 | 1.2 | 7 | 0 | .2 | 9 |
| 26 | 16 | 16 | 16 | 31 | 23 | 23 | 4.8 | 1.7 | 3.2 | 0 | .1 | 710 |
| 27 | 16 | 15 | 16 | 31 | 23 | 16 | 5.8 | 1.7 | 1.5 | 0 | .2 | 300 |
| 28 | 16 | 16 | 16 | 23 | 23 | 16 | 3.4 | 1.3 | .6 | 0 | .5 | 149 |
| 29 | 16 | 16 | 16 | 23 | 20 | 20 | 3.4 | 1.5 | .6 | 0 | .5 | 132 |
| 30 | 15 | 16 | 16 | 16 | 16 | 20 | 2.4 | 1.7 | .8 | 0 | .1 | 93 |
| 31 | 17 | | 23 | 16 | | 22 | | .8 | | 0 | .3 | |
| Month | | Maximum | | Minimum | | Mean | | Per square mile | | Run-off | | |
| | | | | | | | | | | Inches | Acre-feet | |
| October | | 58 | | 15 | | 20.8 | | 0.041 | | 0.05 | 1,280 | |
| November | | 19 | | 11 | | 15.3 | | .030 | | .03 | 910 | |
| December | | 63 | | 15 | | 23.9 | | .047 | | .05 | 1,470 | |
| January | | 167 | | 16 | | 35.9 | | .071 | | .08 | 2,210 | |
| February | | 41 | | 16 | | 24.4 | | .048 | | .05 | 1,350 | |
| March | | 89 | | 14 | | 27.5 | | .064 | | .06 | 1,890 | |
| April | | 28 | | 2.4 | | 10.2 | | .020 | | .02 | 504 | |
| May | | 323 | | .8 | | 27.9 | | .055 | | .06 | 1,710 | |
| June | | 485 | | .2 | | 25.3 | | .050 | | .06 | 1,510 | |
| July | | 10 | | 0 | | .98 | | .0019 | | .002 | 60 | |
| August | | 1 | | 0 | | .21 | | .00041 | | .0005 | 33 | |
| September | | 710 | | .8 | | 71.6 | | .141 | | .16 | 4,260 | |
| The year | | 710 | | 0 | | 23.6 | | .0465 | | .62 | 17,070 | |

West Tarkio Creek near Westboro, Mo.

Location.- Water-stage recorder in NE $\frac{1}{4}$ sec. 13, T. 66 N., R. 40 W., at bridge on county highway C, 3 $\frac{1}{2}$ miles west of Westboro. Chain gage at same site and datum used prior to July 19.

Drainage area.- 127 square miles.

Records available.- March to September 1934.

Extremes.- Maximum discharge during period, 172 second-feet Sept. 26 (gage height, 5.50 feet); minimum discharge, about 0.01 second-foot July 19-25; minimum gage height, 2.36 feet June 1, 2, 6.

Remarks.- Records good prior to July 19; excellent thereafter. Discharge estimated for June 19.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------|------|------|------|---------|---------|------|--------|-----------------|---------|-----------|------|-------|
| 1 | | | | | | | 0.77 | 0.63 | 0.02 | 0.13 | 0.03 | 1.45 |
| 2 | | | | | | | 3.16 | .63 | .07 | .05 | .10 | 2.15 |
| 3 | | | | | | | 1.50 | .63 | .02 | .05 | .03 | 1.35 |
| 4 | | | | | | | 4.72 | .77 | .07 | .06 | .05 | 3.70 |
| 5 | | | | | | | 3.89 | 2.63 | .14 | .21 | .04 | .83 |
| 6 | | | | | | | 2.51 | 1.50 | .07 | .13 | .04 | .31 |
| 7 | | | | | | | 4.30 | .77 | .04 | .06 | .03 | .13 |
| 8 | | | | | | | 2.51 | .93 | 12.9 | .08 | .03 | .10 |
| 9 | | | | | | | 3.16 | 1.50 | 19.3 | .08 | .02 | .10 |
| 10 | | | | | | | 2.22 | 3.89 | .51 | .43 | .02 | .26 |
| 11 | | | | | | | 1.72 | .77 | .30 | .21 | .04 | .10 |
| 12 | | | | | | | 1.11 | 30.1 | .07 | .10 | .04 | .08 |
| 13 | | | | | | | 1.30 | 54.4 | .14 | .10 | .05 | .05 |
| 14 | | | | | | 2.51 | 1.11 | 13.9 | .51 | .10 | .05 | 2.69 |
| 15 | | | | | | 3.52 | .77 | 3.52 | .30 | .13 | .10 | 42.0 |
| 16 | | | | | | 2.51 | 1.50 | 2.83 | .22 | .08 | .08 | 5.80 |
| 17 | | | | | | 2.51 | 1.72 | 1.96 | .30 | .05 | .06 | 1.89 |
| 18 | | | | | | 3.89 | 1.50 | 1.11 | .14 | .03 | .06 | 1.72 |
| 19 | | | | | | 3.16 | 1.30 | .93 | .12 | .01 | .05 | 1.10 |
| 20 | | | | | | 2.51 | 1.30 | .51 | .10 | .01 | .06 | .65 |
| 21 | | | | | | 2.51 | 1.11 | .63 | .05 | .01 | .06 | .65 |
| 22 | | | | | | 2.83 | 1.50 | .30 | 2.06 | .01 | .04 | .37 |
| 23 | | | | | | 2.83 | 1.30 | .40 | .65 | .01 | .04 | .26 |
| 24 | | | | | | 1.72 | 1.30 | .40 | .65 | .01 | .04 | .16 |
| 25 | | | | | | 2.83 | 1.11 | .40 | 1.72 | .01 | .04 | 4.97 |
| 26 | | | | | | 3.89 | 1.30 | .30 | .92 | .02 | .05 | 76.5 |
| 27 | | | | | | 1.50 | 1.11 | .40 | .43 | .03 | .06 | 15.4 |
| 28 | | | | | | 1.96 | .93 | .14 | .37 | .03 | .04 | 16.6 |
| 29 | | | | | | 1.96 | 1.50 | .14 | .13 | .03 | .04 | 9.85 |
| 30 | | | | | | 2.83 | .77 | .14 | .16 | .03 | .04 | 5.80 |
| 31 | | | | | | 1.72 | | .07 | | .03 | .10 | |
| Month | | | | Maximum | Minimum | Mean | | Per square mile | Run-off | | | |
| | | | | | | | | | Inches | Acre-feet | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March 14-31 | | | | 3.89 | 1.50 | 2.62 | 0.021 | 0.01 | | 94 | | |
| April | | | | 4.72 | .77 | 1.80 | .014 | .02 | | 107 | | |
| May | | | | 54.4 | .07 | 4.11 | .032 | .04 | | 253 | | |
| June | | | | 19.3 | .02 | 1.42 | .011 | .01 | | 84 | | |
| July | | | | .43 | .01 | .075 | .00059 | .0007 | | 4.6 | | |
| August | | | | .10 | .02 | .049 | .00039 | .0004 | | 3.0 | | |
| September | | | | 76.5 | .05 | 6.57 | .052 | .06 | | 391 | | |
| The period. | | | | | | | | | | 937 | | |

Nodaway River near Burlington Junction, Mo.

Location.- Chain gage in sec. 17, T. 65 N., R. 37 W., at bridge on State highway 18, $1\frac{1}{2}$ miles west of Burlington Junction.

Drainage area.- 1,240 square miles.

Records available.- March 1922 to September 1934.

Average discharge.- 12 years, 398 second-feet.

Extremes.- Maximum discharge recorded during year, 2,150 second-feet Sept. 27 (gage height, 7.20 feet); minimum discharge, 1.1 second-feet Aug. 7; minimum gage height, 1.90 feet July 24, Aug. 7, 8, 11, 12.

1922-34: Maximum discharge recorded, 21,000 second-feet July 6, 1929; maximum gage height recorded, 19.5 feet Sept. 3, 1928; minimum discharge, that of Aug. 7, 1934; minimum gage height, 1.80 feet July 26, 1923.

Remarks.- Records fair. Stage-discharge relation affected by ice Dec. 25-29, Jan. 30 to Feb. 2, Feb. 23 to Mar. 2.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|---------|------|---------|------|------|------|-----------------|------|---------|-----------|-------|
| 1 | 73 | *33 | 39 | 54 | 62 | 43 | 52 | 21 | 14 | 8 | 1.4 | 393 |
| 2 | 58 | 34 | 48 | 50 | 62 | 101 | 52 | 20 | 13 | 14 | 1.5 | 36 |
| 3 | 54 | 32 | 94 | 47 | 66 | 166 | 52 | 21 | 13 | 16 | 1.4 | 656 |
| 4 | *52 | 34 | 106 | 60 | 78 | 340 | 50 | 20 | 13 | 22 | 1.5 | 76 |
| 5 | 50 | 36 | 110 | 57 | 71 | 218 | 58 | 32 | 13 | 13 | 1.8 | 22 |
| 6 | 41 | 36 | 88 | *58 | 76 | 127 | 62 | 27 | 13 | 19 | 1.2 | 12 |
| 7 | 43 | 33 | 65 | 59 | 69 | 94 | 60 | 23 | 12 | 11 | 1.1 | 8 |
| 8 | 40 | 34 | 51 | 57 | *56 | 60 | 62 | 21 | 31 | 29 | 1.2 | 7 |
| 9 | 38 | 32 | 48 | 55 | 43 | 62 | 48 | 21 | 93 | 26 | 1.5 | 8 |
| 10 | 39 | 32 | 41 | 59 | 50 | 66 | 38 | 21 | 62 | 22 | 1.6 | 8 |
| 11 | 41 | 33 | 37 | 57 | 62 | 66 | 37 | 21 | 36 | 16 | 1.5 | 7 |
| 12 | 37 | 32 | *38 | 61 | 56 | 64 | 31 | 98 | 62 | 10 | 1.6 | 7 |
| 13 | 39 | 32 | 39 | 59 | 56 | 62 | 29 | 496 | 39 | 8 | 3.1 | 7 |
| 14 | 36 | 30 | 36 | 59 | 60 | 60 | 22 | 285 | 36 | 6 | 2.6 | 8 |
| 15 | 41 | 28 | 32 | 59 | 56 | 58 | 26 | 78 | 31 | 8 | 320 | 374 |
| 16 | 259 | 29 | 33 | *59 | *58 | 60 | 27 | 54 | 31 | 5 | 16 | 22 |
| 17 | *186 | 28 | 46 | 59 | 60 | 54 | 31 | 45 | 27 | 4.3 | 6 | 11 |
| 18 | *150 | 27 | 32 | 64 | 47 | *48 | 27 | 33 | 22 | 3.1 | 5 | 9 |
| 19 | *120 | 32 | 35 | 68 | 45 | 41 | 24 | 30 | 18 | 1.7 | 4.3 | 8 |
| 20 | *92 | 34 | 47 | 68 | 47 | 54 | 24 | 22 | 13 | 2.2 | 5 | 7 |
| 21 | *75 | 32 | 45 | 70 | 54 | 60 | 24 | 21 | 11 | 1.7 | 10 | 8 |
| 22 | *50 | 32 | 47 | 118 | 47 | 52 | 24 | 19 | 40 | 3.1 | 6 | 11 |
| 23 | 38 | 31 | 38 | 358 | 35 | 48 | 21 | 17 | 78 | 1.6 | 5 | 11 |
| 24 | 35 | 34 | 28 | 645 | 28 | 41 | 22 | 16 | 31 | 1.2 | 4.3 | 11 |
| 25 | 37 | 35 | 19 | 358 | 19 | 45 | 21 | 16 | 19 | 1.4 | 4.3 | 12 |
| 26 | 32 | 34 | 11 | 92 | 19 | 41 | 21 | 16 | 16 | 1.6 | 4.3 | 1,380 |
| 27 | 34 | 35 | 11 | 136 | 19 | 38 | 21 | 14 | 10 | 1.8 | 4.3 | 2,180 |
| 28 | 35 | *34 | 15 | 85 | 23 | 41 | 22 | 16 | 8 | 1.5 | 3.5 | 2,080 |
| 29 | 31 | 32 | 23 | 73 | 45 | 45 | 21 | 14 | 6 | 2.2 | 5.6 | 996 |
| 30 | 32 | 35 | 38 | 62 | 43 | 43 | 21 | 14 | 11 | 1.5 | 2.6 | 453 |
| 31 | 32 | | 41 | 62 | | 47 | | 14 | | 1.4 | 4.3 | |
| Month | | Maximum | | Minimum | | Mean | | Per square mile | | Run-off | | |
| | | | | | | | | | | Inches | Acre-feet | |
| October | | 259 | | 31 | | 61.9 | | 0.056 | | 0.06 | 3,810 | |
| November | | 36 | | 27 | | 32.5 | | .026 | | .03 | 1,940 | |
| December | | 110 | | 11 | | 44.5 | | .036 | | .04 | 2,740 | |
| January | | 645 | | 47 | | 104 | | .084 | | .10 | 6,400 | |
| February | | 78 | | 19 | | 50.9 | | .041 | | .04 | 2,820 | |
| March | | 340 | | 39 | | 75.3 | | .061 | | .07 | 4,630 | |
| April | | 34 | | 21 | | 34.3 | | .028 | | .03 | 2,040 | |
| May | | 496 | | 14 | | 50.5 | | .041 | | .05 | 3,110 | |
| June | | 93 | | 6 | | 27.4 | | .022 | | .02 | 1,650 | |
| July | | 29 | | 1.2 | | 8.62 | | .0070 | | .008 | 530 | |
| August | | 320 | | 1.1 | | 13.9 | | .011 | | .01 | 566 | |
| September | | 2,150 | | 7 | | 293 | | .24 | | .26 | 17,410 | |
| The year | | 2,150 | | 1.1 | | 66.2 | | .0634 | | .72 | 47,920 | |

*Discharge estimated.

Platte River near Agency, Mo.

Location.- Chain gage in NE $\frac{1}{4}$ sec. 10, T. 56 N., R. 34 W., at bridge on State highway 169, 1 $\frac{1}{2}$ miles below Third Fork and 3 $\frac{1}{2}$ miles northwest of Agency. Zero of gage is 808.0 feet (revised) above mean sea level.

Drainage area.- 1,760 square miles.

Records available.- May 1932 to September 1934. May 1924 to August 1930 at site 4 miles downstream.

Extremes.- Maximum discharge recorded during year ending Sept. 30, 1934, 1,020 second-feet May 14, 1934 (gage height, 6.01 feet); no flow during part of July and August 1934; minimum gage height, 1.40 feet Aug. 14, 1934.

1932-34: Maximum discharge recorded, 11,100 second-feet June 4, 1932 (gage height, 18.42 feet); no flow during part of July and August 1934; minimum gage height, that of Aug. 14, 1934.

Maximum stage known since channel was straightened in 1921, 25.5 feet Sept. 18, 1926 (discharge, 22,600 second-feet).

Remarks.- Records poor. Stage-discharge relation affected by ice Nov. 25-29, Dec. 7-24, 1932; Jan. 11, Feb. 3-23, Dec. 12, 14, 16-20, 25-31, 1933; Jan. 6-19, 30, 31, Feb. 10, 19-21, 23-27, 1934. Discharge interpolated for Dec. 28, 1932; Feb. 3, May 2, 1934.

Discharge, in second-feet, 1932-33

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 1 | 50 | 39 | 113 | 463 | 145 | 110 | 3,050 | 154 | 94 | 1,450 | 12 | 136 |
| 2 | 46 | 46 | 127 | 404 | 154 | 102 | 2,510 | 136 | 73 | 182 | 29 | 94 |
| 3 | 44 | 37 | 118 | 230 | 102 | 94 | 1,450 | 145 | 38 | 110 | 31 | 74 |
| 4 | 46 | 37 | 136 | 200 | 73 | 60 | 802 | 184 | 32 | 67 | 31 | 67 |
| 5 | 37 | 31 | 145 | 172 | 38 | 62 | 531 | 210 | 30 | 56 | 22 | 55 |
| 6 | 39 | 39 | 163 | 172 | 28 | 145 | 463 | 432 | 42 | 32 | 30 | 44 |
| 7 | 39 | 36 | 102 | 191 | 28 | 154 | 531 | 288 | 40 | 26 | 62 | 39 |
| 8 | 34 | 37 | 87 | 136 | 49 | 182 | 463 | 252 | 26 | 2,010 | 31 | 34 |
| 9 | 36 | 154 | 73 | 163 | 38 | 252 | 376 | 210 | 25 | 288 | 27 | 30 |
| 10 | 127 | 432 | 61 | 200 | 28 | 241 | 300 | 182 | 27 | 404 | 1,400 | 27 |
| 11 | 81 | 432 | 49 | 102 | 20 | 210 | 264 | 163 | 19 | 191 | 1,800 | 26 |
| 12 | 51 | 337 | 38 | 23 | 28 | 182 | 223 | 210 | 22 | 136 | 1,350 | 60 |
| 13 | 56 | 200 | 28 | 118 | 28 | 154 | 182 | 531 | 20 | 77 | 531 | 34 |
| 14 | 46 | 172 | 28 | 102 | 28 | 163 | 182 | 681 | 27 | 48 | 276 | 57 |
| 15 | 40 | 210 | 28 | 72 | 28 | 127 | 163 | 496 | 23 | 36 | 163 | 720 |
| 16 | 37 | 642 | 28 | 136 | 28 | 77 | 136 | 432 | 20 | 27 | 102 | 404 |
| 17 | 35 | 284 | 20 | 163 | 28 | 127 | 136 | 404 | 19 | 33 | 56 | 220 |
| 18 | 34 | 230 | 20 | 163 | 38 | 110 | 127 | 220 | 18 | 25 | 63 | 154 |
| 19 | 31 | 312 | 20 | 145 | 49 | 127 | 127 | 182 | 12 | 20 | 83 | 200 |
| 20 | 31 | 496 | 28 | 220 | 61 | 118 | 145 | 145 | 11 | 17 | 61 | 163 |
| 21 | 31 | 163 | 28 | 163 | 87 | 102 | 300 | 1,260 | 10 | 13 | 110 | 102 |
| 22 | 31 | 145 | 38 | 172 | 118 | 102 | 404 | 1,650 | 9 | 14 | 96 | 80 |
| 23 | 39 | 145 | 61 | 200 | 172 | 136 | 350 | 761 | 9 | 12 | 2,930 | 118 |
| 24 | 36 | 102 | 102 | 404 | 210 | 172 | 210 | 350 | 9 | 11 | 1,960 | 87 |
| 25 | 36 | 87 | 1,650 | 312 | 200 | 324 | 163 | 210 | 12 | 10 | 642 | 69 |
| 26 | 41 | 73 | 5,080 | 496 | 163 | 496 | 136 | 172 | 12 | 8 | 566 | 802 |
| 27 | 49 | 73 | 2,690 | 230 | 118 | 681 | 118 | 154 | 11 | 7 | 324 | 5,560 |
| 28 | 38 | 73 | 1,600 | 191 | 127 | 761 | 94 | 200 | 1,110 | 6 | 1,750 | 5,490 |
| 29 | 34 | 87 | 603 | 200 | | 803 | 87 | 350 | 154 | 6 | 432 | 1,800 |
| 30 | 41 | 136 | 463 | 300 | | 603 | 118 | 376 | 69 | 6 | 110 | 603 |
| 31 | 36 | | 531 | 136 | | 350 | | 154 | | 6 | 191 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-----------|---------|---------|------|-----------------|---------|-----------|
| | | | | | Inches | Acre-feet |
| October | 127 | 31 | 43.6 | 0.025 | 0.03 | 2,680 |
| November | 642 | 31 | 176 | .100 | .11 | 10,450 |
| December | 5,080 | 20 | 460 | .261 | .30 | 28,290 |
| January | 496 | 23 | 206 | .117 | .13 | 12,650 |
| February | 210 | 20 | 79.1 | .045 | .06 | 4,390 |
| March | 761 | 60 | 250 | .151 | .15 | 14,140 |
| April | 3,050 | 87 | 471 | .268 | .30 | 25,060 |
| May | 1,450 | 136 | 363 | .208 | .24 | 22,340 |
| June | 1,110 | 9 | 67.4 | .038 | .04 | 4,010 |
| July | 2,010 | 6 | 172 | .098 | .11 | 10,560 |
| August | 2,930 | 12 | 492 | .280 | .32 | 30,270 |
| September | 5,560 | 26 | 578 | .328 | .37 | 34,390 |
| The year | 5,560 | 6 | 279 | .159 | 2.15 | 202,800 |

Platte River near Agency, Mo.

(Continued)

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|------|------|---------|------|------|------|-------|------|-----------------|--------|-----------|
| 1 | 324 | 41 | 41 | 20 | 81 | 24 | 34 | 14 | 6 | 19 | 0 | 404 |
| 2 | 220 | 44 | 40 | 32 | 65 | 51 | 37 | 12 | 5 | 26 | 0 | 72 |
| 3 | 163 | 44 | 69 | 33 | 64 | 50 | 34 | 10 | 4.9 | 16 | 0 | 350 |
| 4 | 127 | 35 | 110 | 39 | 63 | 67 | 94 | 12 | 4.5 | 68 | 0 | 463 |
| 5 | 102 | 38 | 127 | 33 | 71 | 110 | 182 | 110 | 3.5 | 102 | 0 | 220 |
| 6 | 94 | 40 | 136 | 20 | 57 | 191 | 284 | 72 | 3.5 | 81 | 0 | 241 |
| 7 | 76 | 38 | 163 | 20 | 57 | 200 | 276 | 38 | 3.5 | 40 | 0 | 154 |
| 8 | 56 | 38 | 127 | 20 | 57 | 172 | 200 | 26 | 3.2 | 26 | 0 | 74 |
| 9 | 30 | 34 | 102 | 20 | 28 | 94 | 154 | 22 | 843 | 20 | 0 | 35 |
| 10 | 51 | 40 | 86 | 20 | 28 | 55 | 118 | 38 | 376 | 12 | 0 | 27 |
| 11 | 54 | 39 | 55 | 20 | 26 | 94 | 81 | 200 | 276 | 9 | 0 | 18 |
| 12 | 50 | 48 | 49 | 28 | 22 | 55 | 61 | 53 | 87 | 6 | 0 | 681 |
| 13 | 47 | 35 | 45 | 28 | 38 | 47 | 40 | 34 | 45 | 4.9 | 0 | 61 |
| 14 | 41 | 37 | 49 | 28 | 42 | 40 | 42 | 1,020 | 30 | 4.9 | 0 | 21 |
| 15 | 40 | 33 | 46 | 28 | 36 | 42 | 39 | 929 | 23 | 4.1 | 46 | 15 |
| 16 | 41 | 36 | 38 | 28 | 32 | 36 | 33 | 40 | 19 | 3.2 | 31 | 20 |
| 17 | 80 | 38 | 20 | 28 | 32 | 44 | 32 | 230 | 14 | 1.6 | 2.6 | 16 |
| 18 | 59 | 31 | 13 | 28 | 33 | 25 | 30 | 127 | 12 | 1.6 | .3 | 13 |
| 19 | 404 | 35 | 13 | 28 | 20 | 39 | 25 | 81 | 7 | 0 | 0 | 59 |
| 20 | 264 | 31 | 20 | 32 | 13 | 42 | 20 | 60 | 6 | .2 | 0 | 27 |
| 21 | 324 | 33 | 33 | 50 | 13 | 29 | 18 | 42 | 20 | 0 | 1.3 | 276 |
| 22 | 110 | 35 | 44 | 48 | 10 | 33 | 19 | 36 | 9 | 0 | .1 | 182 |
| 23 | 81 | 34 | 50 | 59 | 13 | 33 | 15 | 49 | 7 | 0 | 0 | 68 |
| 24 | 66 | 39 | 40 | 172 | 13 | 38 | 14 | 26 | 94 | 0 | 0 | 46 |
| 25 | 56 | 33 | 28 | 496 | 13 | 32 | 14 | 16 | 230 | .2 | 0 | 30 |
| 26 | 57 | 38 | 20 | 145 | 13 | 38 | 163 | 12 | 252 | .4 | 0 | 62 |
| 27 | 51 | 37 | 13 | 182 | 13 | 26 | 24 | 10 | 182 | .4 | 0 | 163 |
| 28 | 30 | 37 | 13 | 182 | 19 | 9 | 21 | 9 | 81 | 0 | 0 | 136 |
| 29 | 49 | 22 | 13 | 110 | 25 | 12 | 8 | 46 | 0 | 0 | 0 | 843 |
| 30 | 46 | 35 | 13 | 87 | 27 | 12 | 8 | 26 | 0 | 0 | 0 | 276 |
| 31 | 40 | | 20 | 73 | | 30 | | 7 | | 0 | 0 | |
| Month | Maximum | | | Minimum | | | Mean | | | Run-off | | |
| | | | | | | | | | | Per square mile | Inches | Acre-feet |
| October | 404 | | | 30 | | | 104 | | | 0.059 | 0.07 | 6,410 |
| November | 48 | | | 22 | | | 36.6 | | | .021 | .02 | 2,190 |
| December | 163 | | | 13 | | | 52.8 | | | .030 | .03 | 3,240 |
| January | 496 | | | 20 | | | 68.9 | | | .039 | .04 | 4,240 |
| February | 71 | | | 10 | | | 34.0 | | | .019 | .02 | 1,890 |
| March | 200 | | | 9 | | | 58.0 | | | .033 | .04 | 3,570 |
| April | 276 | | | 12 | | | 70.3 | | | .040 | .04 | 4,180 |
| May | 1,020 | | | 7 | | | 108 | | | .061 | .07 | 6,650 |
| June | 843 | | | 3.2 | | | 90.6 | | | .051 | .06 | 5,390 |
| July | 102 | | | 0 | | | 14.4 | | | .0082 | .009 | 886 |
| August | 46 | | | 0 | | | 2.62 | | | .0015 | .002 | 161 |
| September | 843 | | | 13 | | | 168 | | | .095 | .11 | 10,020 |
| The year | 1,020 | | | 0 | | | 67.4 | | | .0383 | .51 | 48,820 |

One Hundred and Two River near Maryville, Mo.

Location.- Wire gage in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 34, T. 65 N., R. 35 W., on county highway bridge 4 $\frac{1}{2}$ miles northeast of Maryville.

Drainage area.- 500 square miles.

Records available.- June to September 1934.

Extremes.- Maximum discharge recorded during period, 292 second-feet Sept. 1 (gage height, 4.65 feet); minimum discharge, less than 0.05 second-foot Aug. 1, 3, 4, 7-11, 29, Sept. 25; minimum gage height, 1.81 feet Aug. 10.
Maximum known stage, about 21.2 feet, date unknown.

Remarks.- Records fair.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|------------|------|------|------|---------|---------|------|-----------------|---------|-----------|------|-------|-------|
| 1 | | | | | | | | | | 1.8 | * | 292 |
| 2 | | | | | | | | | | 26 | .3 | 12 |
| 3 | | | | | | | | | | 14 | * | 91 |
| 4 | | | | | | | | | | 9 | * | 57 |
| 5 | | | | | | | | | | 6 | 1.4 | 15 |
| 6 | | | | | | | | | | 4.7 | .2 | 9 |
| 7 | | | | | | | | | | 4.4 | * | 5 |
| 8 | | | | | | | | | | 3.1 | * | 3.4 |
| 9 | | | | | | | | | | 3.4 | * | 2.0 |
| 10 | | | | | | | | | | 3.9 | * | 1.8 |
| 11 | | | | | | | | | | 2.9 | * | 1.4 |
| 12 | | | | | | | | | | 2.3 | .4 | 1.2 |
| 13 | | | | | | | | | | 2.0 | .4 | 1.2 |
| 14 | | | | | | | | | | 1.7 | .1 | 1.3 |
| 15 | | | | | | | | | | 1.4 | 10 | 29 |
| 16 | | | | | | | | | | 1.5 | 3.7 | 32 |
| 17 | | | | | | | | | | 1.2 | 1.7 | 4.0 |
| 18 | | | | | | | | | | 1.2 | 1.4 | 1.5 |
| 19 | | | | | | | | | | 1.2 | .8 | 1.0 |
| 20 | | | | | | | | | 1.4 | .9 | .3 | .9 |
| 21 | | | | | | | | | .9 | .8 | .9 | 1.2 |
| 22 | | | | | | | | | 3.1 | .5 | .5 | 1.0 |
| 23 | | | | | | | | | 10 | .8 | .5 | .9 |
| 24 | | | | | | | | | 22 | .6 | .4 | .1 |
| 25 | | | | | | | | | 13 | .9 | .8 | * |
| 26 | | | | | | | | | 7 | 1.7 | .5 | 92 |
| 27 | | | | | | | | | 4.7 | 1.2 | .4 | 37 |
| 28 | | | | | | | | | 3.9 | .6 | .3 | 14 |
| 29 | | | | | | | | | 2.9 | .6 | * | 203 |
| 30 | | | | | | | | | 2.8 | .2 | .2 | 10 |
| 31 | | | | | | | | | | .2 | .5 | |
| Month | | | | Maximum | Minimum | Mean | Per square mile | Run-off | | | | |
| | | | | | | | | Inches | Acre-feet | | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February | | | | | | | | | | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | | | | | | |
| May | | | | | | | | | | | | |
| June 20-30 | | | | | 22 | 0.9 | | 6.52 | 0.013 | | 0.005 | 142 |
| July | | | | | 26 | .2 | | 3.26 | .0065 | | .007 | 200 |
| August | | | | | 10 | * | | .63 | .0017 | | .002 | 51 |
| September | | | | | 292 | * | | 30.7 | .061 | | .07 | 1,630 |
| The period | | | | | | | | | | | | 2,220 |

*Discharge less than 0.05 second-foot (not included in computations of monthly discharge).

One Hundred and Two River at Maryville, Mo.

Location.- Staff gage in SW $\frac{1}{4}$ sec. 15, T. 64 N., R. 35 W., at city water works, 1 mile east of Maryville.

Drainage area.- 515 square miles.

Records available.- October 1932 to September 1934 (discontinued).

Extremes.- 1932-34: Maximum discharge, 2,920 second-feet Aug. 22, 1933 (gage height, 8.20 feet); no flow at times during July and August 1934.

Remarks.- Records poor. Stage-discharge relation affected by ice Jan. 11, 1933. Records not computed for discharges less than 4.0 second-feet for year ending Sept. 30, 1934.

Discharge, in second-feet, 1932-33

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|------|------|-------|-------|-----|------|------|-------|-------|
| 1 | 9 | 12 | 43 | 59 | 35 | 28 | 1,140 | 38 | 10 | 82 | 4.4 | 18 |
| 2 | *10 | 10 | 43 | 49 | 22 | 26 | 266 | 49 | 8 | 62 | 10 | 16 |
| 3 | 10 | 8 | 52 | 35 | 15 | 23 | 258 | 46 | 7 | 22 | 6 | 13 |
| 4 | 8 | 7 | 52 | 32 | 10 | 19 | 178 | 38 | 8 | 14 | 6 | 11 |
| 5 | 8 | 9 | 49 | 19 | 22 | 22 | 190 | 40 | 6 | 8 | 32 | 10 |
| 6 | 7 | 8 | 46 | 19 | 32 | 38 | 184 | 49 | 6 | 6 | 9 | 8 |
| 7 | 7 | 10 | 14 | 38 | 24 | 66 | 178 | 43 | 6 | 6 | 7 | 7 |
| 8 | 8 | 102 | 22 | 29 | 14 | 73 | 124 | 52 | 5 | 104 | 4.7 | 6 |
| 9 | 10 | 100 | 27 | 32 | *10 | 88 | 94 | 46 | 4.4 | 59 | 460 | 6 |
| 10 | 9 | 220 | 24 | 46 | 6 | 29 | 86 | 38 | 4.4 | 35 | 1,340 | 6 |
| 11 | 9 | 92 | 17 | *40 | 6 | 27 | 71 | 32 | 4.4 | 17 | 890 | 6 |
| 12 | 9 | 62 | 14 | 10 | 6 | 43 | 60 | 38 | 5 | 17 | 480 | 8 |
| 13 | 9 | 80 | 10 | 27 | 8 | 38 | 54 | 127 | 5 | 19 | 60 | 480 |
| 14 | 8 | 122 | 10 | 22 | 9 | 35 | 51 | 460 | *4 | 17 | 33 | 402 |
| 15 | 9 | 153 | 9 | 27 | 6 | 32 | 46 | 142 | *4 | 15 | 20 | 167 |
| 16 | 9 | 276 | 9 | 43 | 8 | 39 | 45 | 73 | *4 | 15 | 13 | 78 |
| 17 | 10 | 127 | 9 | 46 | 8 | 38 | 40 | 52 | *4 | 5 | 18 | 120 |
| 18 | 9 | 80 | 8 | 32 | 10 | 35 | 40 | 38 | *3 | 6 | 16 | 94 |
| 19 | 10 | 32 | 7 | 32 | 26 | 43 | 38 | 32 | *3 | 6 | 11 | 60 |
| 20 | 10 | 29 | 8 | 24 | 23 | 17 | 40 | 24 | *2 | 4.4 | 13 | 48 |
| 21 | 7 | 27 | 8 | 46 | 26 | 24 | 88 | 181 | *2 | *4 | 1,660 | 102 |
| 22 | 8 | 32 | 9 | 76 | 51 | 59 | 62 | 113 | *4 | *3 | 1,770 | 94 |
| 23 | 14 | 56 | 132 | 62 | 48 | 52 | 43 | 56 | 4 | *2 | 755 | 28 |
| 24 | 10 | 19 | 480 | 84 | 60 | 52 | 38 | 46 | *5 | *2 | 190 | 620 |
| 25 | 12 | 19 | 846 | 100 | 54 | 194 | 38 | 32 | 5 | *2 | 184 | 161 |
| 26 | 12 | 40 | 1,140 | 69 | 42 | 268 | 35 | *32 | *4 | *2 | 665 | 2,210 |
| 27 | 17 | 49 | *600 | 66 | 36 | 266 | 29 | 32 | *4 | *2 | 172 | 1,040 |
| 28 | 15 | 32 | *300 | *81 | 31 | 190 | 27 | 29 | 15 | *2 | 67 | 460 |
| 29 | 15 | 46 | *150 | 56 | | 120 | 24 | 17 | 104 | *2 | 48 | 156 |
| 30 | 14 | 69 | 92 | *50 | | 130 | 32 | 15 | 122 | *2 | 39 | 82 |
| 31 | 14 | | 56 | 43 | | 1,290 | | 12 | | 5 | 23 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-----------|---------|---------|------|-----------------|---------|-----------|
| | | | | | Inches | Acre-feet |
| October | 17 | 7 | 10.2 | 0.020 | 0.02 | 627 |
| November | 276 | 7 | 64.3 | .125 | .14 | 3,820 |
| December | 1,140 | 7 | 138 | .268 | .31 | 8,500 |
| January | 100 | 10 | 44.3 | .086 | .10 | 2,730 |
| February | 60 | 6 | 23.1 | .045 | .05 | 1,280 |
| March | 1,290 | 17 | 109 | .212 | .24 | 6,730 |
| April | 1,140 | 24 | 120 | .233 | .26 | 7,130 |
| May | 460 | 12 | 65.2 | .127 | .15 | 4,010 |
| June | 122 | 2 | 12.4 | .024 | .03 | 738 |
| July | 104 | 2 | 17.0 | .033 | .04 | 1,050 |
| August | 1,770 | 4.4 | 291 | .565 | .65 | 17,860 |
| September | 2,210 | 6 | 217 | .421 | .47 | 12,920 |
| The year | 2,210 | 2 | 93.1 | .181 | 2.46 | 67,400 |

*Estimated.

One Hundred and Two River at Maryville, Mo.

(Continued)

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|---------|------|---------|------|------|------|-----------------|------|---------|-----------|-------|
| 1 | 48 | 14 | 15 | 8 | 14 | 6 | 13 | | | | | |
| 2 | 39 | 15 | 32 | 8 | 14 | 9 | 13 | | | | | 59 |
| 3 | 31 | 14 | 32 | 8 | 11 | 29 | 11 | | | | | 59 |
| 4 | 26 | 14 | 73 | 8 | 11 | 43 | 20 | | | | | 59 |
| 5 | 23 | 14 | 88 | 8 | 11 | 84 | 48 | 6 | | | | 17 |
| 6 | 20 | 14 | 62 | 8 | 16 | 66 | 54 | 6 | | | | 9 |
| 7 | 20 | 15 | 43 | 8 | 20 | 40 | 45 | | | | | 4.4 |
| 8 | 18 | 15 | 32 | 10 | 14 | 15 | 33 | | | | | |
| 9 | 16 | 19 | 19 | 10 | 8 | 22 | 20 | | 39 | | | |
| 10 | 16 | 19 | 22 | 10 | 8 | 7 | 14 | 4.1 | 8 | | | |
| 11 | 14 | 19 | *17 | 10 | 7 | 17 | *12 | | 6 | | | |
| 12 | 14 | 19 | 12 | 10 | 14 | 14 | 10 | 8 | | | | |
| 13 | 13 | 14 | 12 | 10 | 15 | 14 | 8 | 312 | | | | |
| 14 | 11 | 14 | 10 | 10 | 12 | 14 | 8 | 500 | | | | |
| 15 | 11 | 9 | 10 | 10 | 12 | 17 | 8 | 140 | | | | |
| 16 | 71 | 7 | 7 | 10 | 14 | 17 | 8 | 57 | | | | 8 |
| 17 | 240 | 9 | 7 | 10 | 14 | 15 | 6 | 28 | | | | 6 |
| 18 | 181 | 9 | 4.4 | 10 | 14 | 12 | 6 | 13 | | | | |
| 19 | 80 | 9 | 10 | 11 | 6 | 9 | 6 | 8 | | | | |
| 20 | 49 | 9 | 10 | 13 | 6 | 14 | 4.7 | 8 | | | | |
| 21 | 32 | 9 | 10 | 13 | 8 | 14 | 4.7 | 6 | | | | |
| 22 | 19 | 8 | 10 | 90 | 6 | 14 | 4.1 | 4.7 | | | | |
| 23 | 22 | 10 | 10 | 226 | 6 | 14 | 4.1 | | | | | |
| 24 | 19 | 10 | 8 | 294 | 6 | 12 | 4.1 | | | | | |
| 25 | 17 | 10 | 6 | 33 | 6 | 12 | 4.1 | 4.1 | | | | |
| 26 | 19 | 10 | 6 | 42 | 5 | 12 | 4.1 | | | | | 120 |
| 27 | 15 | 10 | 6 | *38 | 5 | 6 | 4.7 | 4.1 | | | | 71 |
| 28 | 12 | 10 | 6 | *33 | 4.4 | 12 | 4.1 | | | | | 33 |
| 29 | 14 | 12 | 6 | *28 | | 12 | | | | | | 230 |
| 30 | 14 | 12 | 6 | *23 | | 10 | | | | | | 11 |
| 31 | 14 | | 6 | *18 | | 10 | | | | | | |
| Month | | Maximum | | Minimum | | Mean | | Per square mile | | Run-off | | |
| | | | | | | | | | | Inches | Acre-feet | |
| October | | 240 | | 11 | | 36.7 | | 0.071 | | 0.08 | 2,260 | |
| November | | 19 | | 7 | | 12.4 | | .024 | | .03 | 738 | |
| December | | 88 | | 4.4 | | 20.2 | | .039 | | .04 | 1,240 | |
| January | | 294 | | 6 | | 33.2 | | .064 | | .07 | 2,040 | |
| February | | 20 | | 4.4 | | 10.3 | | .020 | | .02 | 570 | |
| March | | 84 | | 6 | | 19.1 | | .037 | | .04 | 1,170 | |
| April | | 54 | | | | | | | | | | |
| May | | 500 | | | | | | | | | | |
| June | | 39 | | | | | | | | | | |
| July | | | | 0 | | | | | | | | |
| August | | | | 0 | | | | | | | | |
| September | | 230 | | | | | | | | | | |
| The year | | 500 | | 0 | | | | | | | | |

*Estimated.

Arikaree River at Haigler, Nebr.

Location.- Staff gage in sec. 28, T. 1 N., R. 41 W., half a mile northwest of Haigler and 1½ miles above mouth.

Drainage area.- 2,210 square miles.

Records available.- March 1932 to September 1934.

Extremes.- Maximum discharge during year, about 3,520 second-feet (gage height, 7.60 feet); no flow July 30 to Aug. 10, Aug. 12, 13.

1932-34: Maximum stage, 11.0 feet July 9, 1933 (discharge not determined); no flow July 30 to Aug. 10, Aug. 12, 13, 1934.

Remarks.- Records fair. Discharge estimated Dec. 1 to Mar. 1 on basis of three discharge measurements and temperature records. Small diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|-------|
| 1 | 14 | 16 | | | | *21 | 21 | 16 | 4 | 5 | 0 | 6 |
| 2 | 12 | 21 | | | | 23 | 21 | 16 | 4 | 4 | 0 | 6 |
| 3 | 14 | 18 | | | | 22 | 21 | 16 | 13 | 4 | 0 | 5 |
| 4 | 14 | 18 | | | | 21 | 21 | 16 | 10 | 4 | 0 | 6 |
| 5 | 16 | 18 | | | | 22 | 20 | 16 | 10 | 2 | 0 | 6 |
| 6 | 14 | 21 | *22 | | | 21 | 21 | 12 | 10 | 2 | 0 | 5 |
| 7 | 15 | 23 | | | | 24 | 21 | 10 | 6 | 2 | 0 | 5 |
| 8 | 11 | 20 | | | | 28 | 22 | 10 | 4 | 2 | 0 | 5 |
| 9 | 12 | 21 | | | | 19 | 22 | 8 | 2 | 2 | 0 | 7 |
| 10 | 12 | 22 | | | | 19 | 22 | 7 | 2 | 2 | 0 | 5 |
| 11 | 12 | 22 | | | | 21 | 22 | 8 | 2 | 2 | .2 | 5 |
| 12 | 14 | 19 | | | | 20 | 22 | 9 | 3 | 1 | 0 | 5 |
| 13 | 15 | 19 | | | | 20 | 21 | 8 | 3 | 1.0 | 0 | 4 |
| 14 | 16 | 16 | | 25 | | 19 | 20 | 9 | 47 | 1 | 1,080 | 5 |
| 15 | 17 | 16 | | | | 21 | 23 | 9 | 810 | .8 | 128 | 7 |
| 16 | 12 | 16 | | | | 22 | 29 | 10 | 53 | .5 | 75 | 7 |
| 17 | 16 | 17 | | | | 22 | 45 | 5 | 30 | 4 | 31 | 5 |
| 18 | 16 | 16 | | | | 22 | 27 | 5 | 21 | .8 | 81 | 4 |
| 19 | 16 | 16 | | | | 22 | 24 | 5 | 15 | .6 | 19 | 4 |
| 20 | 15 | 18 | | | | 22 | 21 | 5 | 14 | .3 | 15 | 3 |
| 21 | 16 | 18 | | | | 21 | 19 | 5 | 11 | | 15 | 3 |
| 22 | 15 | 18 | | | | 21 | 22 | 4 | 62 | 0 | 14 | 3 |
| 23 | 14 | 18 | | | | 21 | 20 | 4 | 22 | 0 | 10 | 5 |
| 24 | 14 | 18 | | | | 21 | 19 | 6 | 14 | .2 | 10 | 6 |
| 25 | 14 | 19 | | *22 | | 22 | 18 | 10 | 13 | .4 | 10 | 7 |
| 26 | 16 | 19 | | | | 22 | 18 | 7 | 7 | .4 | 9 | 7 |
| 27 | 16 | 18 | | | | 22 | 16 | 7 | 6 | .4 | 8 | 6 |
| 28 | 16 | 18 | | | | 21 | 16 | 7 | 7 | .2 | 8 | 6 |
| 29 | 16 | 16 | | | | 21 | 16 | 6 | 15 | .4 | 7 | 6 |
| 30 | 15 | 17 | | | | 22 | 16 | 4 | 5 | 0 | 6 | 6 |
| 31 | 16 | | | | | 22 | | 4 | | 0 | 5 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 17 | 11 | 14.5 | 891 | | | |
| November | | | | | | 23 | 16 | 18.5 | 1,100 | | | |
| December | | | | | | | | 23 | 1,410 | | | |
| January | | | | | | | | 24 | 1,480 | | | |
| February | | | | | | | | 21 | 1,170 | | | |
| March | | | | | | 28 | 19 | 21.5 | 1,320 | | | |
| April | | | | | | 45 | 16 | 21.5 | 1,280 | | | |
| May | | | | | | 16 | 4 | 8.6 | 526 | | | |
| June | | | | | | 810 | 2 | 40.8 | 2,430 | | | |
| July | | | | | | 5 | 0 | 1.40 | 86 | | | |
| August | | | | | | 1,080 | 0 | 49.4 | 3,040 | | | |
| September | | | | | | 7 | 3 | 5.3 | 317 | | | |
| The year | | | | | | 1,080 | 0 | 20.8 | 15,050 | | | |

*Discharge measurement.

Republican River at Max, Nebr.

Location.- Staff gage in sec. 32, T. 2 N., R. 36 W., three-quarters of a mile south of Max. Zero of gage is 2,873.6 feet above mean sea level.

Drainage area.- 6,220 square miles.

Records available.- August 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 3,970 second-feet June 15 (gage height, 4.30 feet); no flow June 3-13, July 15 to Aug. 13.
1928-34: Maximum discharge recorded, about 5,620 second-feet Aug. 29, 1933 (gage height, 5.20 feet); no flow at times.

Remarks.- Records fair. Discharge estimated Dec. 1 to Feb. 15, Feb. 24-28, on basis of three discharge measurements and temperature records. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | |
|-----------|------|------|------|------|------|------|---------|---------|-------|------|----------------------|-------|----|
| 1 | 185 | 87 | | | | 364 | 250 | 95 | 5 | 22 | 0 | 6 | |
| 2 | 155 | 82 | | | | 300 | 228 | 78 | 2 | 16 | 0 | 7 | |
| 3 | 176 | 78 | | | | 255 | 244 | 65 | 0 | 10 | 0 | 10 | |
| 4 | 171 | 74 | | | | 228 | 264 | 65 | 0 | 8 | 0 | 9 | |
| 5 | 171 | 82 | *229 | | | 250 | 255 | 59 | 0 | 8 | 0 | 7 | |
| 6 | 161 | 82 | | | | 233 | 327 | 50 | 0 | 9 | 0 | 6 | |
| 7 | 151 | 104 | | | | 250 | 264 | 47 | 0 | 18 | 0 | 5 | |
| 8 | 137 | 118 | | | 205 | 233 | 238 | 40 | 0 | 70 | 0 | 5 | |
| 9 | 142 | 123 | | | | 235 | 244 | 30 | 0 | 32 | 0 | 14 | |
| 10 | 146 | 142 | | | | 250 | 244 | 23 | 0 | 18 | 0 | 14 | |
| 11 | 146 | 128 | | | | 273 | 233 | 20 | 0 | 14 | 0 | 12 | |
| 12 | 142 | 128 | | | | 300 | 228 | 17 | 0 | 11 | 0 | 11 | |
| 13 | 128 | 132 | | | | 273 | 228 | 16 | 0 | 8 | 0 | 11 | |
| 14 | 118 | 128 | | | | 244 | 211 | 20 | 15 | 4 | 1,480 | 10 | |
| 15 | 118 | 109 | | | | 250 | 228 | 25 | 2,580 | 0 | 151 | 9 | |
| 16 | 109 | 113 | | | | 228 | 255 | 190 | 24 | 744 | 0 | 32 | 8 |
| 17 | 104 | 109 | | | | 244 | 264 | 336 | 18 | 660 | 0 | 18 | 7 |
| 18 | 137 | 95 | | | | 273 | 291 | 195 | 14 | 472 | 0 | 28 | 7 |
| 19 | 132 | 113 | | | | 244 | 273 | 156 | 12 | 250 | 0 | 20 | 7 |
| 20 | 132 | 118 | | | | 206 | 273 | 132 | 11 | 176 | 0 | 13 | 7 |
| 21 | 123 | 128 | | | | 190 | 244 | 123 | 10 | 156 | 0 | 10 | 8 |
| 22 | 109 | 113 | | | | 151 | 238 | 113 | 9 | 185 | 0 | 2 | 8 |
| 23 | 109 | 132 | | | | 156 | 250 | 113 | 7 | 421 | 0 | 10 | 9 |
| 24 | 109 | 128 | | *199 | | 150 | 238 | 87 | 5 | 195 | 0 | 10 | 10 |
| 25 | 128 | 128 | | | | 140 | 238 | 74 | 14 | 142 | 0 | 10 | 12 |
| 26 | 118 | 142 | | | | 100 | 244 | 82 | 16 | 100 | 0 | 9 | 14 |
| 27 | 109 | 137 | | | | 150 | 250 | 74 | 18 | 61 | 0 | 10 | 15 |
| 28 | 100 | 118 | | | | 190 | 250 | 100 | 12 | 47 | 0 | 7 | 16 |
| 29 | 91 | 95 | | | | | 244 | 87 | 18 | 37 | 0 | 5 | 16 |
| 30 | 95 | 87 | | | | | 228 | 74 | 17 | 27 | 0 | 5 | 20 |
| 31 | 113 | | | | | | 250 | | 8 | | 0 | 6 | |
| Month | | | | | | | Maximum | Minimum | Mean | | Run-off in acre-feet | | |
| October | | | | | | | 185 | 91 | 132 | | 8,120 | | |
| November | | | | | | | 142 | 74 | 112 | | 6,650 | | |
| December | | | | | | | | | 185 | | 11,390 | | |
| January | | | | | | | | | 170 | | 10,450 | | |
| February | | | | | | | 273 | 100 | 196 | | 10,900 | | |
| March | | | | | | | 364 | 228 | 257 | | 15,800 | | |
| April | | | | | | | 336 | 74 | 187 | | 11,150 | | |
| May | | | | | | | 95 | 5 | 28 | | 1,720 | | |
| June | | | | | | | 2,580 | 0 | 209 | | 12,450 | | |
| July | | | | | | | 70 | 0 | 8 | | 492 | | |
| August | | | | | | | 1,480 | 0 | 59.1 | | 3,630 | | |
| September | | | | | | | 20 | 5 | 10 | | 595 | | |
| The year | | | | | | | 2,580 | 0 | 129 | | 93,340 | | |

*Discharge measurement.

Republican River at Culbertson, Nebr.

Location.- Staff gage in sec. 20, T. 3 N., R. 31 W., three-quarters of a mile south of Culbertson and 2 miles above mouth of Frenchman Creek.

Drainage area.- 8,790 square miles.

Records available.- March 1931 to September 1934.

Extremes.- Maximum discharge recorded during year, 2,030 second-feet June 15 (gage height, 3.04 feet); no flow at times.
1931-34: Maximum discharge, about 18,400 second-feet Aug. 28, 1933 (gage height, 8.00 feet); no flow for several days during summer 1931-34.

Remarks.- Records fair. Discharge estimated Dec. 1 to Feb. 22, Feb. 24-28, on basis of three discharge measurements and temperature records. Diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|-------|----------------------|------|-------|
| 1 | 123 | 130 | | | | 365 | 154 | 87 | 8 | 24 | 0 | 2 |
| 2 | 130 | 130 | | | | 375 | 150 | 78 | 8 | 22 | 0 | 0 |
| 3 | 126 | 126 | | | 220 | 435 | 182 | 70 | 5 | 11 | 0 | 1 |
| 4 | 126 | 122 | | | | 199 | 199 | 65 | 4 | 0 | 0 | 0 |
| 5 | 130 | 122 | *258 | | | 176 | 182 | 60 | 4 | 0 | 0 | 0 |
| 6 | 142 | 126 | | | | 171 | 199 | 53 | 3 | 0 | 0 | 0 |
| 7 | 138 | 134 | | | | 171 | 165 | 40 | 0 | 0 | 0 | 0 |
| 8 | 142 | 150 | | | 230 | 160 | 165 | 34 | 4 | 0 | 0 | 0 |
| 9 | 138 | 150 | | | | 100 | 160 | 26 | 0 | 0 | 0 | 0 |
| 10 | 146 | 154 | | | | 118 | 150 | 22 | 0 | 15 | 0 | 1 |
| 11 | 138 | 150 | | | | 107 | 165 | 21 | 3 | 14 | 0 | 0 |
| 12 | 142 | 150 | | | | 118 | 150 | 21 | 6 | 0 | 0 | 2 |
| 13 | 150 | 142 | | | 250 | 142 | 154 | 24 | 14 | 0 | 0 | 2 |
| 14 | 146 | 138 | | | | 176 | 154 | 28 | 15 | 0 | 0 | 2 |
| 15 | 136 | 142 | | | | 176 | 182 | 19 | 858 | 0 | 182 | 0 |
| 16 | 134 | 146 | | | | 150 | 176 | 17 | 1,260 | 0 | 83 | 0 |
| 17 | 142 | 165 | | | | 134 | 165 | 19 | 520 | 0 | 24 | 0 |
| 18 | 138 | 150 | | | 225 | 130 | 176 | 16 | 385 | 0 | 8 | 0 |
| 19 | 130 | 154 | | | | 176 | 176 | 11 | 305 | 0 | 4 | 0 |
| 20 | 138 | 176 | | | | 134 | 142 | 5 | 150 | 0 | 4 | 0 |
| 21 | 126 | 176 | | | 210 | 176 | 130 | 4 | 87 | 0 | 1 | 0 |
| 22 | 118 | 182 | | | 205 | 194 | 118 | 2 | 100 | 0 | 0 | 0 |
| 23 | 126 | 193 | | *216 | 204 | 218 | 104 | 0 | 78 | 0 | 0 | 0 |
| 24 | 134 | 182 | | | 190 | 210 | 97 | 4 | 255 | 0 | 0 | 0 |
| 25 | 126 | 154 | | | 175 | 199 | 100 | 5 | 118 | 0 | 0 | 0 |
| 26 | 134 | 154 | | | 125 | 199 | 97 | 5 | 65 | 0 | 0 | 0 |
| 27 | 130 | 165 | | | 180 | 176 | 97 | 6 | 51 | 0 | 0 | 0 |
| 28 | 130 | 142 | | | 250 | 165 | 94 | 5 | 46 | 0 | 0 | 0 |
| 29 | 130 | 150 | | | | 150 | 87 | 2 | 40 | 0 | 0 | 0 |
| 30 | 130 | 160 | | | | 154 | 94 | 5 | 28 | 0 | 0 | 0 |
| 31 | 130 | | | | | 160 | | 9 | | 0 | 8 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 150 | 118 | 134 | 8,240 | | |
| November | | | | | | | 193 | 122 | 150 | 8,960 | | |
| December | | | | | | | | | 210 | 12,910 | | |
| January | | | | | | | | | 195 | 11,990 | | |
| February | | | | | | | | 125 | 220 | 12,230 | | |
| March | | | | | | | 433 | 100 | 184 | 11,330 | | |
| April | | | | | | | 199 | 87 | 145 | 8,660 | | |
| May | | | | | | | 87 | 0 | 24.6 | 1,510 | | |
| June | | | | | | | 1,260 | 0 | 147 | 8,770 | | |
| July | | | | | | | 24 | 0 | 2.8 | 171 | | |
| August | | | | | | | 182 | 0 | 10.1 | 623 | | |
| September | | | | | | | 2 | 0 | .3 | 20 | | |
| The year | | | | | | | 1,260 | 0 | 118 | 85,410 | | |

*Discharge measurement.

Republican River near Bloomington, Nebr.

Location.- Chain gage in sec. 8, T. 1 N., R. 15 W., 2 miles south of Bloomington.
Zero of gage is 1,822.5 feet above mean sea level.

Drainage area.- 19,000 square miles.

Records available.- April 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 6,600 second-feet June 17 (gage height, 7.10 feet); minimum, 9.2 second-feet Aug. 8 (gage height, -0.26 foot).
1929-34: Maximum discharge, 11,000 second-feet June 5, 1930 (gage height, 8.54 feet, from high-water mark); minimum, that of Aug. 8, 1934.

Remarks.- Records good except those for Dec. 1 to Feb. 15, Feb. 24 to Mar. 1, which were estimated on basis of three discharge measurements and temperature records.
Minor diversions for irrigation.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|-------|----------------------|------|------|-------|
| 1 | 458 | 308 | | | | 725 | 443 | 286 | 46 | 399 | 20 | 191 |
| 2 | 446 | 332 | | | | 995 | 471 | 261 | 42 | 298 | 18 | 166 |
| 3 | 423 | 337 | | | | 1,170 | 465 | 272 | 43 | 233 | 16 | 763 |
| 4 | 388 | 332 | *723 | | 490 | 920 | 463 | 248 | 42 | 198 | 13 | 1,110 |
| 5 | 388 | 343 | | | | 787 | 477 | 260 | 36 | 161 | 12 | 960 |
| 6 | 365 | 348 | | | | 676 | 471 | 252 | 31 | 139 | 11 | 399 |
| 7 | 337 | 332 | | | | 624 | 489 | 260 | 26 | 125 | 10 | 172 |
| 8 | 326 | 326 | | | 480 | 573 | 477 | 232 | 4,680 | 114 | 10 | 125 |
| 9 | 312 | 337 | | | | 555 | 471 | 210 | 2,600 | 130 | 14 | 142 |
| 10 | 308 | 354 | | | | 537 | 477 | 180 | 1,920 | 118 | 16 | 215 |
| 11 | 294 | 365 | | | | 537 | 471 | 156 | 405 | 96 | 16 | 2,520 |
| 12 | 280 | 371 | | | | 519 | 443 | 145 | 277 | 82 | 15 | 1,400 |
| 13 | 286 | 360 | | | 475 | 483 | 443 | 134 | 189 | 64 | 16 | 1,080 |
| 14 | 280 | 360 | | | | 495 | 448 | 151 | 145 | 54 | 16 | 769 |
| 15 | 294 | 354 | | | | 477 | 454 | 145 | 395 | 47 | 16 | 446 |
| 16 | 308 | 354 | | | 471 | 471 | 465 | 122 | 2,660 | 39 | 18 | 260 |
| 17 | 294 | 348 | | | 477 | 471 | 471 | 120 | 5,300 | 32 | 35 | 204 |
| 18 | 299 | 360 | | | 495 | 460 | 525 | 110 | 3,980 | 36 | 112 | 164 |
| 19 | 298 | 360 | | | 489 | 448 | 501 | 99 | 2,300 | 29 | 142 | 142 |
| 20 | 294 | 371 | | | 483 | 438 | 519 | 84 | 1,360 | 27 | 240 | 132 |
| 21 | 289 | 348 | | | 519 | 448 | 416 | 76 | 1,040 | 24 | 91 | 125 |
| 22 | 289 | 348 | | | 543 | 426 | 438 | 82 | 950 | 23 | 98 | 110 |
| 23 | 289 | 348 | | | 555 | 432 | 421 | 74 | 880 | 25 | 68 | 98 |
| 24 | 289 | 360 | | | 450 | 443 | 426 | 78 | 985 | 24 | 57 | 87 |
| 25 | 289 | 360 | | | 275 | 454 | 438 | 72 | 887 | 24 | 44 | 87 |
| 26 | 294 | 371 | | | 190 | 471 | 375 | 70 | 699 | 24 | 35 | 82 |
| 27 | 280 | 376 | | | 223 | 465 | 365 | 66 | 612 | 25 | 32 | 78 |
| 28 | 280 | 371 | | | 450 | 443 | 346 | 63 | 531 | 22 | 28 | 68 |
| 29 | 298 | 360 | | | | 460 | 299 | 59 | 428 | 22 | 27 | 66 |
| 30 | 321 | 348 | | | | 471 | 290 | 54 | 500 | 21 | 28 | 67 |
| 31 | 317 | | | *499 | | 471 | | 50 | | 21 | 80 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 458 | 280 | 319 | 19,630 | | | |
| November | | | | | | 376 | 308 | 351 | 20,910 | | | |
| December | | | | | | | | 575 | 35,360 | | | |
| January | | | | | | | | 510 | 31,360 | | | |
| February | | | | | | 555 | 190 | 459 | 25,450 | | | |
| March | | | | | | 1,170 | 426 | 560 | 34,400 | | | |
| April | | | | | | 525 | 290 | 443 | 26,340 | | | |
| May | | | | | | 286 | 50 | 145 | 8,910 | | | |
| June | | | | | | 5,300 | 26 | 1,133 | 67,410 | | | |
| July | | | | | | 399 | 21 | 86.3 | 5,310 | | | |
| August | | | | | | 240 | 10 | 43.6 | 2,550 | | | |
| September | | | | | | 2,520 | 66 | 407 | 24,230 | | | |
| The year | | | | | | 5,300 | 10 | 417 | 302,000 | | | |

*Discharge measurement.

Republican River near Hardy, Nebr.

Location.- Water-stage recorder in sec. 6, T. 1 S., R. 5 W., 1½ miles southwest of Hardy.

Drainage area.- 20,500 square miles.

Records available.- May 1932 to September 1934.

Extremes.- Maximum discharge during year, 6,000 second-feet June 18 (gage height, 8.50 feet); no flow Aug. 9-19.
1932-34: Maximum discharge, about 6,200 second-feet Apr. 22, 1933; no flow Aug. 9-19, 1934.

Remarks.- Records fair except those estimated Apr. 26 to May 28, and those for ice affected periods, Dec. 25 to Jan. 31, Feb. 22 to Mar. 3, which were estimated on basis of one discharge measurement and temperature records. Power plant 8 miles above station regulates flow

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|-------|---------|---------|-------|----------------------|------|-------|
| 1 | 430 | 410 | 390 | | 574 | 425 | 528 | 390 | 57 | 446 | 8.6 | 55 |
| 2 | 451 | 400 | 462 | | 598 | 575 | 550 | 375 | 44 | 415 | 8.6 | 49 |
| 3 | 435 | 395 | 666 | | 550 | 720 | 528 | 355 | 44 | 395 | 8.0 | 100 |
| 4 | 435 | 385 | 556 | | 517 | 1,270 | 522 | 365 | 44 | 321 | 7.4 | 204 |
| 5 | 425 | 340 | 544 | | 539 | 1,150 | 544 | 350 | 49 | 255 | 7.4 | 350 |
| 6 | 405 | 420 | 631 | | 500 | 922 | 556 | 325 | 41 | 212 | 6.8 | 778 |
| 7 | 390 | 370 | 652 | | 495 | 805 | 539 | 300 | 36 | 181 | 4.0 | 659 |
| 8 | 345 | 350 | 631 | | 490 | 712 | 534 | 285 | 29 | 158 | 1.0 | 370 |
| 9 | 430 | 350 | 617 | | 495 | 666 | 539 | 260 | 1,580 | 132 | 0 | 233 |
| 10 | 395 | 350 | 598 | | 495 | 631 | 522 | 245 | 3,110 | 129 | 0 | 264 |
| 11 | 390 | 355 | 562 | | 490 | 610 | 495 | 240 | 2,670 | 108 | 0 | 145 |
| 12 | 385 | 335 | 506 | | 522 | 624 | 490 | 240 | 1,290 | 111 | 0 | 123 |
| 13 | 380 | 390 | 512 | | 511 | 604 | 490 | 300 | 550 | 90 | 0 | 1,150 |
| 14 | 390 | 360 | 528 | | 522 | 574 | 484 | 235 | 370 | 79 | 0 | 1,170 |
| 15 | 355 | 360 | 598 | | 522 | 568 | 490 | 225 | 360 | 70 | 0 | 922 |
| 16 | 380 | 370 | 592 | | 522 | 568 | 506 | 200 | 287 | 60 | 0 | 659 |
| 17 | 370 | 370 | 562 | | 534 | 550 | 506 | 175 | 698 | 47 | 0 | 451 |
| 18 | 380 | 355 | 522 | | 562 | 568 | 490 | 160 | 5,340 | 38 | 0 | 302 |
| 19 | 380 | 345 | 512 | | 638 | 539 | 473 | 145 | 4,380 | 31 | 0 | 233 |
| 20 | 330 | 360 | 534 | | 598 | 528 | 484 | 150 | 3,190 | 26 | 24 | 173 |
| 21 | 375 | 360 | 556 | | 580 | 522 | 508 | 170 | 2,000 | 18 | 26 | 148 |
| 22 | 375 | 350 | 592 | | 560 | 517 | 478 | 125 | 1,380 | 17 | 52 | 123 |
| 23 | 405 | 345 | 610 | | 480 | 528 | 478 | 115 | 1,080 | 17 | 75 | 111 |
| 24 | 420 | 311 | 592 | | 350 | 517 | 456 | 115 | 922 | 15 | 55 | 108 |
| 25 | 425 | 330 | 570 | | 175 | 517 | 456 | 115 | 796 | 14 | 47 | 105 |
| 26 | 420 | 335 | 350 | | 200 | 522 | 455 | 100 | 970 | 13 | 55 | 126 |
| 27 | 420 | 335 | 450 | | 250 | 506 | 445 | 90 | 744 | 12 | 39 | 108 |
| 28 | 410 | 345 | 550 | | 304 | 500 | 445 | 85 | 574 | 10 | 34 | 111 |
| 29 | 405 | 345 | 575 | | | 517 | 425 | 71 | 468 | 9.8 | 32 | 132 |
| 30 | 395 | 365 | 575 | | | 522 | 405 | 60 | 490 | 9.8 | 41 | 125 |
| 31 | 405 | | 575 | | | 528 | | 60 | | 9.8 | 23 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 451 | 345 | 400 | 24,570 | | |
| November | | | | | | | 420 | 311 | 360 | 21,400 | | |
| December | | | | | | | 666 | 350 | 553 | 34,030 | | |
| January | | | | | | | | | 530 | 32,590 | | |
| February | | | | | | | 638 | 175 | 485 | 26,920 | | |
| March | | | | | | | 1,270 | 425 | 623 | 38,290 | | |
| April | | | | | | | | 556 | 405 | 29,390 | | |
| May | | | | | | | 390 | 60 | 207 | 12,750 | | |
| June | | | | | | | 5,340 | 29 | 1,120 | 66,630 | | |
| July | | | | | | | 446 | 9.8 | 110 | 5,780 | | |
| August | | | | | | | 75 | 0 | 17.9 | 1,100 | | |
| September | | | | | | | 1,170 | 49 | 320 | 19,020 | | |
| The year | | | | | | | 5,340 | 0 | 433 | 313,500 | | |

Republican River at Scandia, Kans.

Location.- Chain gage in NE $\frac{1}{4}$ sec. 17, T. 3 S., R. 4 W., at Scandia, 4 miles below Dry Creek.

Drainage area.- 23,000 square miles.

Records available.- August 1919 to July 1925, August 1928 to September 1934.

Average discharge.- 11 years (1919-24, 1928-34), 731 second-feet.

Extremes.- Maximum discharge during year, 6,150 second-feet June 18 (gage height, 7.38 feet); no flow Aug. 9-21.
1919-25, 1928-34: Maximum discharge, 16,700 second-feet June 12, 1923 (gage height, 11.4 feet); no flow Aug. 9-21, 1934. Bank-full stage, 9 feet. Maximum stage known, 14.2 feet June 30, 1915.

Remarks.- Records fair. Discharge estimated for periods of ice effect and days of missing gage-height record.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|-------|---------|---------|-------|----------------------|------|-------|
| 1 | 465 | 267 | 610 | | *610 | | 570 | 406 | 65 | 512 | 3 | 30 |
| 2 | 435 | 211 | 675 | | *630 | | 540 | 406 | 59 | 485 | 2 | 63 |
| 3 | 435 | 187 | 610 | | 642 | *500 | 600 | 378 | 44 | 457 | 1 | 61 |
| 4 | 435 | 312 | 550 | | 642 | | 600 | 378 | 40 | 405 | 1 | 149 |
| 5 | 378 | 312 | 550 | *450 | 642 | 950 | 665 | 378 | 61 | 355 | 1 | 409 |
| 6 | 700 | 285 | 580 | | 580 | 1,020 | 632 | 378 | 52 | 330 | 1 | 312 |
| 7 | 351 | 245 | 710 | | 550 | 1,100 | 570 | 324 | 25 | 239 | 1 | 409 |
| 8 | 265 | 220 | 675 | | 550 | 805 | 570 | 314 | 8 | 213 | 1 | 462 |
| 9 | 235 | 237 | 580 | *380 | 550 | 770 | 600 | 289 | 5 | 182 | 0 | 335 |
| 10 | 274 | 335 | 610 | *380 | 580 | 700 | 600 | 269 | 3,070 | 161 | 0 | 335 |
| 11 | 560 | 359 | 610 | *380 | 710 | 700 | 570 | 228 | 2,360 | 134 | 0 | 232 |
| 12 | 242 | 359 | 520 | | 550 | 950 | 540 | 233 | 1,530 | 111 | 0 | 199 |
| 13 | 242 | 409 | 520 | | 550 | 1,020 | 540 | 406 | 595 | 126 | 0 | 550 |
| 14 | 269 | 359 | 550 | | 520 | 805 | 540 | 251 | 324 | 51 | 0 | 1,280 |
| 15 | 237 | 335 | 610 | | 520 | 875 | 540 | 228 | 269 | 69 | 0 | 1,020 |
| 16 | 242 | 289 | 610 | | 462 | 1,020 | 540 | 224 | 228 | 63 | 0 | 805 |
| 17 | 237 | 263 | 580 | | 490 | 875 | 540 | 198 | 215 | 55 | 0 | 540 |
| 18 | 242 | 359 | 490 | | 520 | 735 | 875 | 174 | 5,470 | 47 | 0 | 405 |
| 19 | 159 | 359 | | | | 875 | 525 | 159 | 4,040 | 37 | 0 | 330 |
| 20 | 198 | 383 | | 820 | | 632 | 528 | 182 | 3,540 | | 0 | 239 |
| 21 | 274 | 359 | | 675 | | 600 | 560 | 159 | 2,230 | | 0 | 226 |
| 22 | 139 | 359 | 580 | 782 | | 512 | 560 | 133 | 1,360 | | 26 | 191 |
| 23 | 113 | 289 | 580 | 745 | | 570 | 528 | 116 | 1,020 | | 96 | 166 |
| 24 | 124 | 312 | 520 | 710 | *370 | 540 | 528 | 116 | 950 | | 96 | 178 |
| 25 | *355 | 335 | 490 | 710 | | 600 | 495 | 108 | 735 | *15 | 83 | 166 |
| 26 | *334 | 359 | 490 | 710 | | 570 | 495 | 110 | 875 | | 61 | 355 |
| 27 | 312 | 359 | | 710 | | 570 | 465 | 91 | 875 | | 115 | 147 |
| 28 | 312 | 359 | | 645 | | 570 | 465 | 76 | 700 | | 29 | 112 |
| 29 | 289 | 359 | *400 | 610 | | 570 | 465 | 70 | 540 | | 24 | 105 |
| 30 | 312 | 359 | | *600 | | 570 | 435 | 74 | 512 | | 26 | 105 |
| 31 | 263 | | | *600 | | 600 | | 32 | | | 34 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 700 | 113 | 304 | 18,700 | | |
| November | | | | | | | 409 | 187 | 318 | 18,900 | | |
| December | | | | | | | 710 | 400 | 545 | 33,800 | | |
| January | | | | | | | 820 | 380 | 580 | 33,800 | | |
| February | | | | | | | 710 | 370 | 500 | 27,800 | | |
| March | | | | | | | 1,100 | 500 | 713 | 43,800 | | |
| April | | | | | | | 875 | 435 | 556 | 33,100 | | |
| May | | | | | | | 406 | 32 | 221 | 13,600 | | |
| June | | | | | | | 5,470 | 5 | 1,060 | 63,100 | | |
| July | | | | | | | 512 | 15 | 136 | 8,350 | | |
| August | | | | | | | 115 | 0 | 19.0 | 1,180 | | |
| September | | | | | | | 1,280 | 30 | 331 | 19,700 | | |
| The year | | | | | | | 5,470 | 0 | 436 | 316,000 | | |

*Estimated.

Republican River at Clay Center, Kans.

Location.- Water-stage recorder in SW $\frac{1}{4}$ sec. 17, T. 8 S., R. 3 E., about 1 mile south of Clay Center.

Drainage area.- 24,500 square miles.

Records available.- February to September 1934.

Extremes.- Maximum discharge during year, 3,830 second-feet June 20 (gage height, 8.20 feet); no flow Aug. 6, 7, 9-31, Sept. 1-8.

Remarks.- Records good except those estimated for Mar. 2-8, and those for Aug. 21-23, Sept. 16-30, which are fair.

Discharge, in second-feet, 1934

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|------|------|------|------|------|---------|---------|-------|----------------------|------|------|-------|
| 1 | | | | | | 244 | 565 | 429 | 140 | 565 | 18 | 0 |
| 2 | | | | | | | 545 | 417 | 124 | 545 | 14 | 0 |
| 3 | | | | | | | 565 | 421 | 112 | 525 | 12 | 0 |
| 4 | | | | | | 450 | 545 | 497 | 110 | 477 | 7 | 0 |
| 5 | | | | | | | 565 | 461 | 105 | 417 | 3 | 0 |
| 6 | | | | | | 1,000 | 545 | 481 | 100 | 402 | 0 | 0 |
| 7 | | | | | | 1,140 | 545 | 417 | 96 | 379 | 0 | 0 |
| 8 | | | | | 570 | 970 | 565 | 364 | 87 | 331 | 1 | 0 |
| 9 | | | | | 570 | 645 | 565 | 349 | 83 | 303 | 0 | 233 |
| 10 | | | | | 570 | 760 | 545 | 505 | 71 | 272 | 0 | 390 |
| 11 | | | | | 570 | 735 | 525 | 349 | 119 | 252 | 0 | 313 |
| 12 | | | | | 550 | 665 | 525 | 313 | 1,780 | 235 | 0 | 283 |
| 13 | | | | | 550 | 665 | 525 | 1,420 | 1,780 | 215 | 0 | 209 |
| 14 | | | | | 530 | 645 | 501 | 2,510 | 1,140 | 187 | 0 | 177 |
| 15 | | | | | 530 | 645 | 505 | 905 | 710 | 178 | 0 | 141 |
| 16 | | | | | 530 | 625 | 525 | 457 | 710 | 160 | 0 | 688 |
| 17 | | | | | 530 | 625 | 505 | 387 | 710 | 157 | 0 | 688 |
| 18 | | | | | 550 | 605 | 505 | 351 | 625 | 140 | 0 | 645 |
| 19 | | | | | 570 | 625 | 505 | 296 | 1,500 | 112 | 0 | 545 |
| 20 | | | | | 590 | 605 | 505 | 272 | 3,700 | 79 | 0 | 433 |
| 21 | | | | | 590 | 585 | 489 | 262 | 3,510 | 33 | 0 | 357 |
| 22 | | | | | 630 | 605 | 485 | 216 | 2,670 | 22 | 0 | 303 |
| 23 | | | | | 590 | 565 | 489 | 213 | 2,160 | 8 | 0 | 269 |
| 24 | | | | | 560 | 585 | 505 | 210 | 1,500 | 2 | 0 | 245 |
| 25 | | | | | 570 | 565 | 497 | 197 | 1,100 | 2 | 0 | 219 |
| 26 | | | | | | 434 | 585 | 497 | 187 | 935 | 2 | 0 |
| 27 | | | | | | 240 | 565 | 497 | 181 | 790 | 2 | 0 |
| 28 | | | | | | 240 | 545 | 497 | 175 | 815 | 2 | 0 |
| 29 | | | | | | | 545 | 465 | 169 | 735 | 3 | 0 |
| 30 | | | | | | | 545 | 487 | 151 | 655 | 2 | 0 |
| 31 | | | | | | | 545 | | 140 | | 2 | 0 |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | | | | | | | |
| November | | | | | | | | | | | | |
| December | | | | | | | | | | | | |
| January | | | | | | | | | | | | |
| February 8-28 | | | | | | 630 | 240 | 528 | 22,000 | | | |
| March | | | | | | 1,140 | 244 | 628 | 38,580 | | | |
| April | | | | | | 565 | 457 | 518 | 30,850 | | | |
| May | | | | | | 2,510 | 140 | 441 | 27,130 | | | |
| June | | | | | | 3,700 | 71 | 955 | 56,800 | | | |
| July | | | | | | 565 | 2 | 195 | 11,950 | | | |
| August | | | | | | 18 | 0 | | 1.8 | | | |
| September | | | | | | 688 | 0 | 235 | 14,030 | | | |
| The period | | | | | | 3,700 | 0 | 432 | 202,000 | | | |

Republican River at Wakefield, Kans.

Location.- Chain gage in NE $\frac{1}{4}$ sec. 5, T. 10 S., R. 4 E., a quarter of a mile north of Wakefield and 25 miles above confluence with Smoky Hill River.

Drainage area.- 24,700 square miles.

Records available.- June 1917 to February 1934 (discontinued).

Average discharge.- 16 years, 975 second-feet.

Extremes.- Maximum discharge recorded during period, 765 second-feet Feb. 4 (gage height, 3.29 feet); minimum, 336 second-feet Nov. 8, 11-15 (gage height, 2.97 feet).

1917-34: Maximum discharge, 20,100 second-feet June 4, 1923 (gage height, 12.86 feet); minimum, 8 second-feet Sept. 19, 1931. Bank-full stage, 11 feet.

Remarks.- Records fair except those for January and February, which are poor.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------|------|------|------|------|------|---------|---------|------|-------------------------|------|------|-------|
| 1 | 600 | 357 | 357 | *450 | 420 | | | | | | | |
| 2 | 570 | 357 | 378 | | 442 | | | | | | | |
| 3 | 542 | 357 | 399 | | 442 | | | | | | | |
| 4 | 515 | 357 | 465 | | 765 | | | | | | | |
| 5 | 490 | 378 | 490 | | 662 | | | | | | | |
| 6 | 490 | 378 | 662 | | 600 | | | | | | | |
| 7 | 465 | 378 | 570 | | 570 | | | | | | | |
| 8 | 442 | 336 | 542 | | 542 | | | | | | | |
| 9 | 420 | 378 | 662 | | 542 | | | | | | | |
| 10 | 420 | 357 | 662 | | 542 | | | | | | | |
| 11 | 399 | 336 | 600 | | 515 | | | | | | | |
| 12 | 420 | 336 | 570 | | 515 | | | | | | | |
| 13 | 420 | 336 | 490 | | 465 | 542 | | | | | | |
| 14 | 399 | 336 | 542 | | 465 | 515 | | | | | | |
| 15 | 399 | 336 | 600 | | 542 | | | | | | | |
| 16 | 378 | 357 | 515 | 515 | | | | | | | | |
| 17 | 378 | 357 | 570 | 515 | | | | | | | | |
| 18 | 357 | 357 | 542 | 600 | | | | | | | | |
| 19 | 357 | 357 | 490 | 600 | | | | | | | | |
| 20 | 357 | 357 | 399 | 600 | | | | | | | | |
| 21 | 357 | 357 | 442 | 630 | | | | | | | | |
| 22 | 357 | 357 | 570 | 630 | | | | | | | | |
| 23 | 357 | 357 | 695 | 695 | | | | | | | | |
| 24 | 357 | 357 | 662 | 730 | | | | | | | | |
| 25 | 357 | 357 | 465 | 662 | | | | | | | | |
| 26 | 357 | 357 | *400 | 662 | | | | | | | | |
| 27 | 357 | 357 | | 630 | | | | | | | | |
| 28 | 357 | 336 | | 662 | | | | | | | | |
| 29 | 357 | 357 | | 630 | | | | | | | | |
| 30 | 357 | 357 | | 560 | | | | | | | | |
| 31 | 357 | | | 490 | | | | | | | | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 600 | 357 | 411 | 25,280 | | | |
| November | | | | | | 378 | 336 | 355 | 21,120 | | | |
| December | | | | | | 695 | 357 | 506 | 31,130 | | | |
| January | | | | | | 730 | 450 | 540 | 33,220 | | | |
| February 1-14 | | | | | | 765 | 420 | 544 | 15,100 | | | |
| March | | | | | | | | | | | | |
| April | | | | | | | | | | | | |
| May | | | | | | | | | | | | |
| June | | | | | | | | | | | | |
| July | | | | | | | | | | | | |
| August | | | | | | | | | | | | |
| September | | | | | | | | | | | | |
| The period | | | | | | | | | 126,000 | | | |

*Estimated.

Kansas River at Ogden, Kans.

Location.- Water-stage recorder in SW $\frac{1}{4}$ sec. 12, T. 11 S., R. 6 E., three-quarters of a mile south of Ogden and 10 miles below junction of Smoky Hill and Republican Rivers. Prior to June 15, 1934, chain gage at same datum was used.

Drainage area.- 45,200 square miles.

Records available.- June 1917 to September 1934.

Average discharge.- 17 years, 2,069 second-feet.

Extremes.- Maximum discharge during year, 11,100 second-feet June 22 (gage height, 12.55 feet); minimum, 51 second-feet Aug. 20 (gage height, 4.20 feet).
1917-34: Maximum discharge, 32,600 second-feet June 10, 1923 (gage height, 18.15 feet); minimum, that of Aug. 20, 1934. Bank-full stage, 18 feet.

Remarks.- Records fair. Stage-discharge relation affected by ice Dec. 25 to Jan. 3, Jan. 30 to Feb. 2.

Discharge, in second-feet, 1933

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|------|-------|------|------|-------|---------|---------|--------|----------------------|------|-------|
| 1 | 1,590 | 580 | 610 | *570 | *600 | *650 | 768 | 582 | 345 | 2,010 | 295 | 120 |
| 2 | 2,300 | 580 | 590 | | 610 | | 832 | 582 | 345 | 1,690 | 250 | 317 |
| 3 | 2,520 | 610 | 550 | | 640 | | 768 | 555 | 308 | 1,500 | 264 | 500 |
| 4 | 1,690 | 610 | 550 | | 520 | | 1,040 | 702 | 768 | 670 | 345 | 1,530 |
| 5 | 1,400 | 610 | 580 | 495 | 955 | 865 | 800 | 670 | 385 | 1,280 | 214 | 317 |
| 6 | 1,220 | 675 | 610 | 495 | 833 | 1,010 | 900 | 640 | 405 | 1,240 | 230 | 313 |
| 7 | 1,220 | 610 | 745 | 495 | 770 | 1,010 | 768 | 768 | 345 | 1,120 | 210 | 745 |
| 8 | 1,060 | 580 | 995 | 520 | 770 | 1,240 | 735 | 800 | 308 | 1,040 | 172 | 1,450 |
| 9 | 1,010 | 550 | 995 | 470 | 703 | 1,160 | 900 | 702 | 308 | 955 | 182 | 1,360 |
| 10 | 1,010 | 642 | 1,040 | 550 | 670 | 1,010 | 768 | 865 | 272 | 898 | 169 | 1,270 |
| 11 | 970 | 610 | 1,040 | 550 | 670 | 900 | 768 | 935 | 290 | 850 | 157 | 1,140 |
| 12 | 930 | 467 | 955 | 640 | 735 | 935 | 735 | 1,080 | 290 | 780 | 157 | 970 |
| 13 | 890 | 550 | 990 | 703 | 703 | 865 | 702 | 900 | 800 | 710 | 108 | 745 |
| 14 | 890 | 580 | 905 | 670 | 670 | 965 | 735 | 1,930 | 2,300 | 675 | 157 | 623 |
| 15 | 930 | 580 | 770 | 735 | 670 | 965 | 702 | 3,120 | 4,050 | 580 | 145 | 675 |
| 16 | 890 | 550 | 880 | 670 | 640 | 865 | 702 | 1,660 | 2,260 | 522 | 135 | 604 |
| 17 | 815 | 550 | 735 | 735 | 703 | 832 | 735 | 1,400 | 2,420 | 550 | 154 | 642 |
| 18 | 780 | 522 | 735 | 703 | 703 | 900 | 702 | 1,080 | 3,540 | 495 | 145 | 938 |
| 19 | 642 | 550 | 735 | 770 | 703 | 832 | 702 | 1,080 | 3,460 | 610 | 115 | 759 |
| 20 | 745 | 580 | 703 | 805 | 640 | 965 | 702 | 1,080 | 5,650 | 610 | 78 | 780 |
| 21 | 710 | 550 | 610 | 805 | 770 | 900 | 702 | 935 | 9,950 | 522 | 120 | 852 |
| 22 | 710 | 550 | 590 | 833 | 735 | 832 | 702 | 900 | 10,900 | 440 | 120 | 1,050 |
| 23 | 710 | 550 | 670 | 805 | 640 | 800 | 702 | 702 | 10,900 | 440 | 120 | 745 |
| 24 | 642 | 550 | 833 | 833 | 770 | 900 | 670 | 640 | 10,900 | 415 | 108 | 616 |
| 25 | 642 | 580 | | 890 | 580 | 768 | 670 | 592 | 6,720 | 390 | 118 | 522 |
| 26 | 610 | 550 | | 805 | | 800 | 670 | 528 | 3,690 | 365 | 120 | 852 |
| 27 | 610 | 522 | | 890 | | 768 | 670 | 428 | 2,980 | 340 | 132 | 1,580 |
| 28 | 610 | 550 | *650 | 833 | | 768 | 670 | 475 | 2,740 | 340 | 145 | 1,220 |
| 29 | 610 | 550 | | 833 | | 735 | 640 | 428 | 2,690 | 317 | 132 | 945 |
| 30 | 580 | 590 | | *700 | | 768 | 670 | 405 | 2,470 | 295 | 120 | 703 |
| 31 | 580 | | | *700 | | 768 | | 385 | | 272 | 115 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 2,520 | 580 | 984 | 60,530 | | |
| November | | | | | | | 675 | 467 | 571 | 33,960 | | |
| December | | | | | | | 1,040 | | 732 | 45,020 | | |
| January | | | | | | | 880 | | 682 | 41,940 | | |
| February | | | | | | | 1,040 | | 699 | 38,820 | | |
| March | | | | | | | 1,240 | | 845 | 52,000 | | |
| April | | | | | | | 932 | 640 | 725 | 43,150 | | |
| May | | | | | | | 3,120 | 385 | 884 | 54,560 | | |
| June | | | | | | | 10,900 | 272 | 3,079 | 183,200 | | |
| July | | | | | | | 2,010 | 272 | 760 | 46,730 | | |
| August | | | | | | | 295 | 78 | 159 | 9,750 | | |
| September | | | | | | | 1,590 | 120 | 799 | 46,920 | | |
| The year | | | | | | | 10,900 | 78 | 907 | 656,400 | | |

*Estimated.

Kansas River at Wamego, Kans.

Location.- Water-stage recorder in SE $\frac{1}{4}$ sec. 9, T. 10 S., R. 10 E., at Wamego, 3 miles below Antelope Creek. Prior to Aug. 1, 1934, chain gage at same location was used.

Drainage area.- 54,900 square miles.

Records available.- January 1919 to September 1934. Intermittent observations made by U. S. Weather Bureau 1914-19.

Average discharge.- 15 years, 3,384 second-feet.

Extremes.- Maximum discharge during year, 11,400 second-feet June 24 (gage height, 7.2 feet); minimum, 200 second-feet Aug. 23 (gage height, 1.14 feet).
1919-34: Maximum discharge, 53,400 second-feet May 8, 1930 (gage height, 16.3 feet); minimum, that of Aug. 23, 1934. Bank-full stage, 15 feet.

Remarks.- Records good except those for Dec. 25 to Mar. 2, Sept. 11-30, which are fair. Stage-discharge relation affected by ice Dec. 25 to Jan. 4, Jan. 21 to Feb. 7, Feb. 25 to Mar. 2, and by shifting control Feb. 8-24, Sept. 11-30. Small diurnal fluctuation in flow caused by operation of power plant on Big Blue River at Manhattan. Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|------|-------|
| 1 | 3,330 | 1,050 | 940 | 1,170 | 1,170 | 1,170 | 1,290 | 940 | 470 | 2,350 | 370 | 255 |
| 2 | 2,210 | 1,080 | 1,170 | 1,170 | 1,170 | 1,350 | 1,290 | 830 | 470 | 2,210 | 298 | 310 |
| 3 | 3,150 | 1,050 | 1,170 | 1,170 | 1,170 | 1,540 | 1,170 | 830 | 470 | 2,070 | 310 | 400 |
| 4 | 2,540 | 1,050 | 1,050 | 1,170 | 1,170 | 1,540 | 1,170 | 830 | 470 | 1,800 | 280 | 730 |
| 5 | 2,210 | 1,050 | 1,050 | 1,050 | 1,410 | 1,540 | 1,170 | 1,050 | 470 | 1,570 | 265 | 940 |
| 6 | 2,070 | 1,050 | 1,050 | 1,050 | 1,410 | 1,540 | 1,170 | 940 | 470 | 1,410 | 275 | 1,110 |
| 7 | 1,800 | 1,050 | 1,050 | 1,050 | 1,290 | 1,540 | 1,170 | 830 | 470 | 1,290 | 292 | 1,300 |
| 8 | 1,670 | 1,050 | 1,050 | 1,050 | 1,170 | 1,540 | 1,170 | 830 | 400 | 1,050 | 280 | 1,500 |
| 9 | 1,540 | 1,050 | 1,170 | 1,050 | 1,170 | 1,670 | 1,170 | 830 | 400 | 1,050 | 250 | 2,140 |
| 10 | 1,540 | 1,050 | 1,410 | 1,050 | 1,050 | 1,930 | 1,170 | 1,050 | 400 | 1,050 | 255 | 2,140 |
| 11 | 1,540 | 1,050 | 1,540 | 940 | 1,170 | 1,800 | 1,170 | 1,290 | 400 | 1,050 | 255 | 1,930 |
| 12 | 1,540 | 1,050 | 1,290 | 940 | 1,050 | 1,540 | 1,170 | 1,540 | 400 | 940 | 255 | 1,740 |
| 13 | 1,540 | 1,050 | 1,290 | 940 | 1,050 | 1,540 | 1,170 | 2,070 | 400 | 940 | 255 | 1,540 |
| 14 | 1,540 | 1,050 | 1,170 | 940 | 1,050 | 1,540 | 1,170 | 1,540 | 1,050 | 830 | 235 | 1,380 |
| 15 | 1,410 | 940 | 1,170 | 940 | 1,050 | 1,540 | 1,170 | 2,350 | 3,510 | 830 | 255 | 1,050 |
| 16 | 1,410 | 940 | 1,290 | 940 | 1,050 | 1,410 | 1,170 | 4,470 | 2,640 | 830 | 230 | 1,010 |
| 17 | 1,410 | 940 | 1,410 | 1,050 | 1,050 | 1,410 | 1,170 | 2,970 | 1,800 | 830 | 270 | 1,030 |
| 18 | 1,290 | 940 | 1,410 | 1,050 | 1,050 | 1,410 | 1,170 | 2,070 | 3,330 | 730 | 255 | 1,220 |
| 19 | 1,170 | 940 | 1,290 | 1,050 | 1,050 | 1,410 | 1,170 | 1,540 | 3,890 | 730 | 270 | 1,390 |
| 20 | 1,050 | 940 | 1,290 | 1,170 | 1,050 | 1,410 | 1,170 | 1,540 | 4,080 | 730 | 304 | 1,120 |
| 21 | 1,050 | 940 | 1,290 | 1,170 | 1,050 | 1,410 | 1,050 | 1,410 | 6,940 | 730 | 270 | 1,160 |
| 22 | 1,050 | 940 | 1,290 | 1,170 | 1,050 | 1,410 | 1,050 | 1,410 | 10,000 | 640 | 316 | 1,270 |
| 23 | 1,050 | 940 | 1,170 | 1,170 | 1,050 | 1,290 | 940 | 1,410 | 10,700 | 550 | 240 | 1,330 |
| 24 | 1,050 | 830 | 1,170 | 1,170 | 1,050 | 1,290 | 940 | 1,290 | 11,000 | 550 | 270 | 1,030 |
| 25 | 1,050 | 830 | 1,170 | 1,290 | 1,050 | 1,290 | 940 | 940 | 8,800 | 470 | 255 | 918 |
| 26 | 1,050 | 830 | 1,050 | 1,290 | 1,050 | 1,290 | 940 | 940 | 5,680 | 470 | 255 | 1,050 |
| 27 | 1,050 | 830 | 940 | 1,290 | 1,050 | 1,290 | 940 | 940 | 3,700 | 470 | 255 | 1,270 |
| 28 | 1,050 | 830 | 940 | 1,290 | 1,050 | 1,290 | 940 | 940 | 3,350 | 470 | 255 | 2,560 |
| 29 | 1,050 | 940 | 940 | 1,290 | | 1,290 | 940 | 830 | 2,970 | 400 | 280 | 2,640 |
| 30 | 1,050 | 940 | 1,050 | 1,170 | | 1,290 | 940 | 640 | 2,970 | 400 | 292 | 2,000 |
| 31 | 1,050 | | 1,050 | 1,170 | | 1,290 | | 550 | | 400 | 255 | |

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|-----------|---------|---------|-------|----------------------|
| October | 3,330 | 1,050 | 1,536 | 94,430 |
| November | 1,050 | 830 | 973 | 57,900 |
| December | 1,540 | 940 | 1,172 | 72,040 |
| January | 1,290 | 940 | 1,110 | 68,250 |
| February | 1,410 | 1,050 | 1,114 | 61,880 |
| March | 1,930 | 1,170 | 1,445 | 85,360 |
| April | 1,290 | 940 | 1,109 | 65,970 |
| May | 4,470 | 550 | 1,343 | 82,590 |
| June | 11,000 | 400 | 3,069 | 182,600 |
| July | 2,350 | 400 | 966 | 59,390 |
| August | 370 | 230 | 271 | 16,670 |
| September | 2,640 | 255 | 1,318 | 78,430 |
| The year | 11,000 | 230 | 1,283 | 929,000 |

Kansas River at Topeka, Kans.

Location.- Chain gage in Topeka, about 1 1/2 miles above Soldier Creek.

Drainage area.- 56,400 square miles.

Records available.- April to August 1904, and 1901 to September 1903.

Average discharges.- 17 years (1917-34), 3,384 second-feet per day.

Extremes.- Maximum discharge recorded during 1904, 10,600 second-feet (June 25 (gage height, 7.50 feet); minimum, 200 second-feet Aug. 31 (gage height, 4.4 feet). 1917-34: Maximum discharge, 73,700 second-feet (June 1, 1934 (gage height, 21.5 feet); minimum, 100 second-feet (Aug. 31, 1934).

Remarks.- Records fair. Gage-height record furnished by U. S. Weather Bureau.

Discharge, in second-feet, 1904-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|-------|-------|-------|------|-------|---------|---------|-------|----------------------|------|-------|
| 1 | 2,390 | 1,700 | 1,700 | | | 2,000 | 1,310 | 1,100 | 790 | 2,730 | 370 | 235 |
| 2 | 2,840 | 1,710 | 1,700 | | | 1,400 | 1,200 | 995 | 700 | 2,570 | 370 | 235 |
| 3 | 2,530 | 1,710 | 1,700 | | | 1,400 | 1,300 | 1,100 | 700 | 2,290 | 370 | 235 |
| 4 | 3,600 | 1,700 | 1,700 | | | 1,400 | 1,400 | 1,100 | 700 | 1,820 | 370 | 275 |
| 5 | 2,700 | 1,700 | 1,700 | | | 1,400 | 1,310 | 1,200 | 700 | 1,310 | 370 | 370 |
| 6 | 2,340 | 1,200 | 1,200 | | | 1,310 | 1,200 | 1,200 | 620 | 1,510 | 175 | 870 |
| 7 | 1,930 | 1,200 | 1,200 | | | 1,310 | 1,310 | 1,200 | 620 | 1,810 | 275 | 1,070 |
| 8 | 1,740 | 1,200 | 1,200 | | | 1,310 | 1,300 | 1,000 | 700 | 1,590 | 275 | 1,370 |
| 9 | 1,740 | 1,200 | 1,200 | | | 1,310 | 1,200 | 1,100 | 620 | 1,480 | 275 | 1,480 |
| 10 | 1,830 | 1,200 | 1,200 | | | 1,310 | 1,200 | 1,200 | 700 | 1,370 | 275 | 2,150 |
| 11 | 1,520 | 1,100 | 1,320 | | | 1,310 | 1,200 | 1,200 | 590 | 1,270 | 275 | 2,150 |
| 12 | 1,300 | 1,100 | 1,240 | | | 1,310 | 1,200 | 1,200 | 790 | 1,170 | 275 | 1,920 |
| 13 | 1,320 | 1,100 | 1,250 | | | 1,310 | 1,200 | 1,200 | 620 | 1,070 | 275 | 1,910 |
| 14 | 1,490 | 995 | 1,430 | | | 1,310 | 1,200 | 1,200 | 620 | 895 | 275 | 1,480 |
| 15 | 1,420 | 1,100 | 1,330 | | | 1,310 | 1,200 | 1,100 | 700 | 370 | 275 | 1,480 |
| 16 | 1,380 | 1,100 | 1,300 | | | 1,310 | 1,200 | 1,200 | 700 | 500 | 275 | 1,370 |
| 17 | 1,740 | 1,100 | 1,500 | | | 1,310 | 1,200 | 1,200 | 700 | 895 | 275 | 1,070 |
| 18 | 1,630 | 1,100 | 1,740 | 2,170 | | 1,310 | 1,200 | 1,200 | 700 | 500 | 275 | 1,070 |
| 19 | 1,480 | 1,100 | 1,500 | | | 1,310 | 1,200 | 1,200 | 700 | 500 | 275 | 970 |
| 20 | 1,420 | 1,000 | 1,520 | | | 1,310 | 1,200 | 1,200 | 700 | 500 | 275 | 1,370 |
| 21 | 1,310 | 995 | 1,420 | | | 1,310 | 1,200 | 1,200 | 700 | 500 | 275 | 1,170 |
| 22 | 1,300 | 995 | 1,420 | | | 1,310 | 1,200 | 1,200 | 700 | 500 | 275 | 1,170 |
| 23 | 1,260 | 1,200 | 1,310 | 2,150 | | 1,310 | 1,200 | 1,200 | 700 | 500 | 275 | 1,170 |
| 24 | 1,310 | 1,100 | 1,310 | | | 1,310 | 1,200 | 1,200 | 700 | 500 | 275 | 1,270 |
| 25 | 1,310 | 1,200 | 1,320 | | | 1,310 | 1,200 | 1,200 | 700 | 500 | 275 | 1,070 |
| 26 | 1,310 | 1,200 | 1,200 | | | 1,310 | 1,200 | 1,200 | 700 | 500 | 275 | 1,170 |
| 27 | 1,310 | 1,200 | 1,210 | | | 1,310 | 1,200 | 1,200 | 700 | 500 | 275 | 2,570 |
| 28 | 1,310 | 1,200 | 1,150 | 2,150 | | 1,310 | 1,200 | 1,200 | 700 | 500 | 275 | 1,590 |
| 29 | 1,200 | 1,200 | 1,200 | | | 1,310 | 1,200 | 1,200 | 700 | 500 | 275 | 2,290 |
| 30 | 1,800 | 1,100 | 1,250 | 1,250 | | 1,310 | 1,200 | 1,200 | 700 | 500 | 275 | 2,730 |
| 31 | 1,100 | | 1,270 | | | 1,310 | 1,200 | 1,200 | 700 | 500 | 275 | 1,070 |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 3,380 | 1,100 | 1,720 | 105,800 | | |
| November | | | | | | | 1,200 | 995 | 1,113 | 66,220 | | |
| December | | | | | | | 1,350 | 1,100 | 1,392 | 85,570 | | |
| January | | | | | | | 1,450 | 995 | 1,219 | 74,930 | | |
| February | | | | | | | | | 1,290 | 71,660 | | |
| March | | | | | | | 1,850 | 1,310 | 1,428 | 90,280 | | |
| April | | | | | | | 1,420 | 1,100 | 1,166 | 89,590 | | |
| May | | | | | | | 4,960 | 690 | 1,692 | 97,830 | | |
| June | | | | | | | 10,600 | 620 | 2,993 | 178,100 | | |
| July | | | | | | | 2,730 | 370 | 1,112 | 68,390 | | |
| August | | | | | | | 370 | 500 | 262 | 16,560 | | |
| September | | | | | | | 2,730 | 235 | 1,296 | 77,100 | | |
| The year | | | | | | | 10,600 | 200 | 1,384 | 1,000,000 | | |

*Estimated.

Kansas River at Bonner Springs, Kans.

Location.— Chain gage in NW $\frac{1}{4}$ sec. 32, T. 11 S., R. 23 E., at Bonner Springs, half a mile below Acid Creek.

Drainage area.— 59,800 square miles.

Records available.— July 1917 to September 1934.

Average discharge.— 17 years, 4,906 second-feet.

Extremes.— Maximum discharge during year, 19,200 second-feet June 22 (gage height, 7.13 feet); minimum, 500 second-feet Sept. 1 (gage height, 1.67 feet).
1917-34: Maximum discharge, 110,000 second-feet Apr. 31, 1929 (gage height, 22.10 feet); minimum, that of Sept. 1, 1934.

Remarks.— Records good except those for Oct. 19-31, Apr. 6 to May 12, and those estimated for periods of ice effect, which are fair.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| 1 | 5,054 | 1,410 | 1,300 | 1,300 | 1,550 | 21,300 | 1,410 | 1,100 | 790 | 3,020 | 485 | 305 |
| 2 | 4,340 | 1,410 | 1,410 | 1,520 | 1,300 | 21,700 | 1,300 | 1,100 | 860 | 3,020 | 485 | 365 |
| 3 | 3,450 | 1,520 | 1,410 | 1,410 | 1,640 | 2,050 | 1,410 | 1,100 | 930 | 2,410 | 440 | 530 |
| 4 | 2,610 | 1,520 | 1,410 | 1,410 | 1,520 | 2,050 | 1,770 | 1,200 | 790 | 2,420 | 140 | 1,610 |
| 5 | 3,920 | 1,410 | 1,640 | 1,410 | 1,300 | 1,640 | 1,640 | 2,050 | 790 | 1,520 | 400 | 1,260 |
| 6 | 3,450 | 1,410 | 1,410 | 1,200 | 1,410 | 1,770 | 1,520 | 3,020 | 790 | 1,910 | 400 | 695 |
| 7 | 2,810 | 1,410 | 1,410 | 1,410 | 1,300 | 1,640 | 1,410 | 1,770 | 790 | 1,760 | 400 | 695 |
| 8 | 2,420 | 1,410 | 1,520 | 1,200 | 1,520 | 1,640 | 1,410 | 1,520 | 860 | 1,520 | 365 | 320 |
| 9 | 2,070 | 1,410 | 1,640 | 1,200 | 1,640 | 1,910 | 1,200 | 1,410 | 730 | 1,370 | 365 | 970 |
| 10 | 1,760 | 1,410 | 1,770 | 1,100 | 1,640 | 1,770 | 1,520 | 1,300 | 730 | 1,370 | 400 | 1,050 |
| 11 | 1,910 | 1,410 | 1,770 | 1,010 | 1,410 | 1,770 | 1,300 | 1,300 | 730 | 1,150 | 365 | 1,490 |
| 12 | 1,620 | 1,300 | 1,770 | 1,500 | 1,410 | 1,910 | 1,300 | 1,200 | 860 | 1,150 | 365 | 1,810 |
| 13 | 1,820 | 1,300 | 2,050 | 1,520 | 1,520 | 1,910 | 1,200 | 1,910 | 1,010 | 1,050 | 400 | 1,610 |
| 14 | 1,620 | 1,410 | 2,050 | 1,300 | 1,300 | 1,770 | 1,300 | 5,750 | 1,100 | 970 | 265 | 1,760 |
| 15 | 1,520 | 1,410 | 1,770 | 1,410 | 1,410 | 1,640 | 1,300 | 5,980 | 790 | 970 | 1,250 | 1,370 |
| 16 | 1,490 | 1,300 | 1,910 | 1,410 | 1,640 | 1,500 | 3,980 | 730 | 695 | 590 | 1,370 | |
| 17 | 1,750 | 1,300 | 1,520 | 1,410 | 1,300 | 1,520 | 1,300 | 2,200 | 360 | 890 | 590 | 1,020 |
| 18 | 2,310 | 1,300 | 1,540 | 1,300 | 1,410 | 1,520 | 1,300 | 4,190 | 3,580 | 820 | 590 | 970 |
| 19 | 1,760 | 1,300 | 1,770 | 1,410 | | 1,410 | 1,520 | 3,790 | 3,020 | 755 | 440 | 690 |
| 20 | 1,570 | 1,500 | 1,770 | 1,410 | | 1,520 | 1,200 | 2,850 | 2,850 | 695 | 440 | 970 |
| 21 | 1,480 | 1,410 | 1,640 | 1,640 | 1,300 | 1,410 | 1,100 | 1,910 | 3,360 | 695 | 400 | 970 |
| 22 | 1,150 | 1,200 | 1,410 | 1,300 | | 1,410 | 1,200 | 1,770 | 3,580 | 580 | 365 | 1,150 |
| 23 | 1,300 | 1,300 | 1,410 | 1,300 | | 1,410 | 1,300 | 1,540 | 5,320 | 590 | 365 | 970 |
| 24 | 1,150 | 1,300 | 1,110 | 1,520 | | 1,300 | 1,300 | 1,520 | 5,350 | 695 | 365 | 970 |
| 25 | 1,060 | 1,300 | 1,300 | 1,520 | | 1,410 | 1,100 | 1,410 | 5,340 | 695 | 365 | 1,150 |
| 26 | 970 | 1,200 | | 1,520 | 1,200 | 1,200 | 1,300 | 5,940 | 590 | 335 | 1,260 | |
| 27 | 1,370 | 1,300 | | 1,520 | 1,410 | 1,300 | 1,200 | 9,140 | 235 | 365 | 1,260 | |
| 28 | 870 | 1,300 | | 1,410 | 1,300 | 1,200 | 1,100 | 4,790 | 590 | 365 | 6,290 | |
| 29 | 890 | 1,300 | 1,300 | | 1,300 | 1,300 | 1,200 | 1,010 | 4,110 | 590 | 455 | 5,290 |
| 30 | 890 | 1,300 | | 1,400 | 1,300 | 1,300 | 1,100 | 1,100 | 3,450 | 530 | 335 | 3,990 |
| 31 | 970 | | | | 1,300 | 1,300 | | 790 | | 530 | 320 | |

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|-----------|---------|---------|-------|----------------------|
| October | 5,050 | 820 | 1,943 | 119,500 |
| November | 1,520 | 1,200 | 1,349 | 80,250 |
| December | 2,050 | 1,300 | 1,545 | 95,030 |
| January | 1,640 | 1,010 | 1,351 | 84,910 |
| February | 1,640 | 1,200 | 1,377 | 76,480 |
| March | 2,050 | 1,300 | 1,576 | 97,050 |
| April | 1,770 | 1,100 | 1,514 | 76,170 |
| May | 5,360 | 790 | 2,047 | 126,900 |
| June | 3,940 | 730 | 2,323 | 171,600 |
| July | 3,300 | 530 | 1,180 | 72,550 |
| August | 1,260 | 320 | 455 | 27,650 |
| September | 6,290 | 305 | 1,518 | 90,510 |
| The year | 9,940 | 305 | 1,547 | 1,120,000 |

*Estimated.

North Fork of Republican River at Colorado-Nebraska State line

Location.- Staff gage in sec. 10, T. 1 N., R. 42 W., 100 feet east of Colorado-Nebraska State line.

Records available.- March 1931 to September 1934.

Extremes.- Maximum discharge recorded during year, 378 second-feet June 15 (gage height, 4.00 feet); minimum daily discharge, 4 second-feet several days during July and August.

1931-34: Maximum discharge, 378 second-feet July 30, 1932, June 15, 1934; maximum gage height, 4.00 feet June 15, 1934; no flow Aug. 25, 26, 1932.

Remarks.- Records fair. Discharge estimated Dec. 1 to Feb. 21, on basis of two discharge measurements and temperature records. Small diversions for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 41 | 22 | | | | 76 | 61 | 14 | 11 | 7 | 4 | 13 |
| 2 | 44 | 20 | | | | 76 | 61 | 24 | 12 | 7 | 4 | 20 |
| 3 | 44 | 24 | | | | 74 | 62 | 8 | 11 | 7 | 4 | 18 |
| 4 | 48 | 25 | | | | 74 | 65 | 10 | 12 | 6 | 4 | 12 |
| 5 | 52 | 55 | | | | 71 | 71 | 9 | 13 | 6 | 5 | 10 |
| 6 | 56 | 42 | *77 | | 60 | 72 | 68 | 9 | 13 | 7 | 4 | 9 |
| 7 | 61 | 40 | | | | 74 | 68 | 7 | 10 | 6 | 4 | 9 |
| 8 | 62 | 40 | | | | 74 | 66 | 7 | 8 | 6 | 4 | 10 |
| 9 | 52 | 38 | | | | 74 | 65 | 5 | 10 | 5 | 4 | 18 |
| 10 | 45 | 37 | | | | 76 | 64 | 6 | 8 | 5 | 4 | 17 |
| 11 | 42 | 40 | | | | 74 | 68 | 7 | 8 | 6 | 33 | 16 |
| 12 | 41 | 65 | | | | 72 | 70 | 6 | 9 | 6 | 13 | 18 |
| 13 | 42 | 61 | | | | 72 | 65 | 9 | 141 | 4 | 9 | 14 |
| 14 | 44 | 62 | | | | 71 | 59 | 28 | 144 | 5 | 11 | 15 |
| 15 | 66 | 59 | | | | 71 | 41 | 13 | 301 | 5 | 21 | 13 |
| 16 | 59 | 61 | | | 79 | 71 | 23 | 10 | 196 | 5 | 12 | 12 |
| 17 | 38 | 61 | | | | 71 | 21 | 9 | 190 | 5 | 10 | 12 |
| 18 | 38 | 61 | | | | 72 | 20 | 10 | 93 | 6 | 7 | 12 |
| 19 | 25 | 68 | | | | 71 | 22 | 11 | 61 | 6 | 7 | 11 |
| 20 | 19 | 65 | | | | 74 | 30 | 12 | 55 | 6 | 9 | 12 |
| 21 | 28 | 65 | | | 78 | 71 | 24 | 9 | 38 | 5 | 9 | 12 |
| 22 | 64 | 62 | | | 77 | 74 | 20 | 7 | 38 | 5 | 13 | 15 |
| 23 | 49 | 62 | | | 80 | 79 | 19 | 8 | 51 | 5 | 18 | 17 |
| 24 | 41 | 64 | | | 80 | 74 | 22 | 12 | 28 | 4 | 14 | 18 |
| 25 | 23 | 65 | | *76 | 83 | 71 | 19 | 35 | 20 | 4 | 17 | 24 |
| 26 | 21 | 68 | | | 82 | 71 | 28 | 31 | 23 | 4 | 10 | 31 |
| 27 | 22 | 66 | | | 76 | 70 | 33 | 16 | 18 | 4 | 10 | 32 |
| 28 | 30 | 68 | | | 74 | 68 | 23 | 13 | 13 | 4 | 9 | 35 |
| 29 | 54 | 66 | | | | 66 | 26 | 10 | 8 | 6 | 9 | 37 |
| 30 | 24 | 66 | | | | 65 | 12 | 8 | 11 | 4 | 8 | 40 |
| 31 | 22 | | | | | 64 | | 6 | | 4 | 9 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 66 | 19 | 41.8 | 2,570 | | |
| November | | | | | | | 68 | 20 | 53.3 | 3,170 | | |
| December | | | | | | | | | 75 | 4,610 | | |
| January | | | | | | | | | 73 | 4,490 | | |
| February | | | | | | | 83 | 74 | 79.3 | 4,400 | | |
| March | | | | | | | 79 | 64 | 72.0 | 4,430 | | |
| April | | | | | | | | | 43.2 | 2,570 | | |
| May | | | | | | | 35 | 5 | 11.8 | 732 | | |
| June | | | | | | | 301 | 8 | 51.5 | 3,060 | | |
| July | | | | | | | 7 | 4 | 5.3 | 327 | | |
| August | | | | | | | 33 | 4 | 9.6 | 593 | | |
| September | | | | | | | 40 | 9 | 17.7 | 1,060 | | |
| The year | | | | | | | 301 | 4 | 44.2 | 32,010 | | |

*Discharge measurement.

Frenchman Creek near Champion, Nebr.

Location.- Water-stage recorder in sec. 19, T. 6 N., R. 39 W., $2\frac{1}{2}$ miles west of Champion.

Drainage area.- 1,020 square miles.

Records available.- July 1932 to September 1934.

Extremes.- Maximum discharge during year, about 849 second-feet June 17 (gage height, 5.85 feet); minimum daily discharge, 11 second-feet at times during May, June, and July.

1932-34: Maximum and minimum discharges, those of 1934.

Remarks.- Records good. Diversions for irrigation above station. Discharge estimated Dec. 27.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 32 | 28 | 24 | 44 | 32 | 38 | 36 | 14 | 13 | 28 | 30 | 15 |
| 2 | 33 | 28 | 30 | 42 | 30 | 36 | 34 | 15 | 13 | 28 | 30 | 16 |
| 3 | 33 | 28 | 26 | 40 | 28 | 38 | 33 | 21 | 13 | 28 | 28 | 16 |
| 4 | 34 | 28 | 26 | 40 | 27 | 32 | 34 | 21 | 11 | 28 | 27 | 14 |
| 5 | 32 | 30 | 27 | 42 | 28 | 17 | 36 | 22 | 11 | 28 | 26 | 14 |
| 6 | 30 | 32 | 26 | 42 | 28 | 20 | 36 | 20 | 11 | 30 | 24 | 14 |
| 7 | 30 | 33 | 26 | 42 | 30 | 21 | 33 | 16 | 11 | 30 | 24 | 14 |
| 8 | 30 | 27 | 24 | 40 | 27 | 22 | 21 | 15 | 11 | 30 | 22 | 14 |
| 9 | 30 | 27 | 24 | 40 | 21 | 24 | 22 | 14 | 16 | 30 | 22 | 17 |
| 10 | 32 | 27 | 24 | 42 | 30 | 24 | 21 | 14 | 21 | 30 | 24 | 21 |
| 11 | 32 | 26 | 24 | 44 | 30 | 26 | 21 | 14 | 14 | 30 | 32 | 26 |
| 12 | 30 | 24 | 34 | 42 | 30 | 27 | 22 | 14 | 14 | 30 | 21 | 22 |
| 13 | 30 | 22 | 34 | 40 | 30 | 24 | 22 | 15 | 14 | 28 | 20 | 18 |
| 14 | 33 | 22 | 33 | 40 | 28 | 24 | 18 | 18 | 20 | 28 | 20 | 17 |
| 15 | 30 | 24 | 33 | 40 | 27 | 26 | 18 | 17 | 74 | 28 | 14 | 17 |
| 16 | 30 | 26 | 34 | 40 | 27 | 21 | 18 | 15 | 358 | 30 | 33 | 17 |
| 17 | 28 | 27 | 34 | 40 | 32 | 18 | 17 | 15 | 499 | 30 | 13 | 17 |
| 18 | 30 | 30 | 34 | 40 | 34 | 21 | 15 | 15 | 177 | 32 | 15 | 18 |
| 19 | 30 | 28 | 34 | 40 | 30 | 21 | 14 | 16 | 96 | 20 | 17 | 17 |
| 20 | 30 | 28 | 34 | 39 | 30 | 20 | 15 | 16 | 60 | 11 | 17 | 18 |
| 21 | 32 | 26 | 34 | 36 | 44 | 20 | 16 | 17 | 60 | 12 | 17 | 18 |
| 22 | 32 | 26 | 34 | 30 | 46 | 21 | 14 | 21 | 39 | 13 | 18 | 18 |
| 23 | 30 | 26 | 34 | 30 | 44 | 21 | 12 | 28 | 46 | 13 | 20 | 18 |
| 24 | 28 | 26 | 34 | 30 | 40 | 21 | 13 | 34 | 45 | 20 | 18 | 18 |
| 25 | 28 | 24 | 34 | 30 | 39 | 21 | 14 | 30 | 38 | 20 | 18 | 18 |
| 26 | 28 | 22 | 36 | 30 | 39 | 21 | 14 | 24 | 36 | 16 | 21 | 18 |
| 27 | 28 | 22 | 33 | 30 | 38 | 21 | 14 | 35 | 36 | 15 | 26 | 18 |
| 28 | 30 | 26 | 42 | 30 | 39 | 21 | 14 | 50 | 34 | 24 | 21 | 18 |
| 29 | 32 | 22 | 39 | 30 | 30 | 21 | 14 | 26 | 32 | 30 | 17 | 18 |
| 30 | 30 | 20 | 40 | 30 | 36 | 14 | 11 | 27 | 30 | 14 | 18 | 18 |
| 31 | 28 | 40 | 30 | 30 | 38 | 12 | 30 | 15 | 30 | 15 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 34 | 28 | 30.5 | 1,870 | | |
| November | | | | | | | 33 | 20 | 26.2 | 1,560 | | |
| December | | | | | | | 42 | 24 | 31.8 | 1,950 | | |
| January | | | | | | | 44 | 30 | 37.3 | 2,290 | | |
| February | | | | | | | 46 | 21 | 32.4 | 1,800 | | |
| March | | | | | | | 38 | 17 | 24.6 | 1,510 | | |
| April | | | | | | | 36 | 12 | 20.8 | 1,240 | | |
| May | | | | | | | 50 | 11 | 19.8 | 1,220 | | |
| June | | | | | | | 499 | 11 | 61.7 | 3,670 | | |
| July | | | | | | | 32 | 11 | 25.2 | 1,550 | | |
| August | | | | | | | 33 | 13 | 21.5 | 1,320 | | |
| September | | | | | | | 26 | 14 | 17.4 | 1,040 | | |
| The year | | | | | | | 499 | 11 | 29.0 | 21,020 | | |

Frenchman Creek near Hamlet, Nebr.

Location.- Water-stage recorder in sec. 19, T. 5 N., R. 34 W., 1 mile east of Hamlet.
Zero of gage is 2,788.43 feet above mean sea level.

Drainage area.- 1,420 square miles.

Records available.- April 1929 to September 1934.

Extremes.- Maximum discharge during year, about 675 second-feet June 15 (gage height, 5.38 feet); minimum daily discharge, 57 second-feet Aug. 26.
1929-34: Maximum discharge, 1,090 second-feet Aug. 2, 1931 (gage height, 10.0 feet); minimum, 49 second-feet Nov. 21, 1931 (gage height, 1.13 feet).

Remarks.- Records fair. Discharge estimated Oct. 1-18, Mar. 25-29, July 6-13.
Diversion for irrigation above station.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | 100 | 106 | 116 | 112 | 114 | 142 | 129 | 55 | 84 | 20 | 59 | 90 |
| 2 | 100 | 105 | 122 | 111 | 113 | 135 | 129 | 80 | 74 | 82 | 72 | 85 |
| 3 | 100 | 102 | 119 | 116 | 113 | 123 | 123 | 86 | 74 | 72 | 73 | 81 |
| 4 | 102 | 102 | 119 | 118 | 108 | 138 | 120 | 90 | 94 | 67 | 64 | 84 |
| 5 | 104 | 104 | 115 | 118 | 108 | 142 | 125 | 86 | 83 | 67 | 67 | 77 |
| 6 | 102 | 104 | 115 | 116 | 108 | 130 | 125 | 91 | 74 | 67 | 65 | 80 |
| 7 | 100 | 103 | 117 | 118 | 109 | 135 | 121 | 91 | 70 | 68 | 60 | 79 |
| 8 | 99 | 107 | 112 | 119 | 109 | 134 | 120 | 89 | 72 | 68 | 67 | 73 |
| 9 | 98 | 104 | 111 | 115 | 109 | 134 | 119 | 86 | 68 | 69 | 71 | 130 |
| 10 | 98 | 104 | 109 | 119 | 115 | 130 | 114 | 86 | 71 | 68 | 98 | 97 |
| 11 | 98 | 103 | 112 | 113 | 110 | 134 | 112 | 83 | 61 | 70 | 82 | 96 |
| 12 | 98 | 104 | 107 | 117 | 111 | 136 | 111 | 81 | 95 | 70 | 30 | 86 |
| 13 | 98 | 103 | 104 | 119 | 109 | 133 | 107 | 88 | 89 | 71 | 96 | 80 |
| 14 | 98 | 102 | 114 | 119 | 114 | 135 | 104 | 83 | 139 | 72 | 31 | 91 |
| 15 | 100 | 105 | 113 | 120 | 113 | 133 | 108 | 91 | 106 | 70 | 23 | 90 |
| 16 | 98 | 108 | 112 | 113 | 112 | 133 | 110 | 80 | 105 | 68 | 84 | 92 |
| 17 | 96 | 108 | 110 | 118 | 113 | 132 | 102 | 84 | 127 | 69 | 80 | 87 |
| 18 | 98 | 108 | 111 | 115 | 115 | 134 | 99 | 84 | 178 | 70 | 73 | 85 |
| 19 | 98 | 119 | 109 | 116 | 116 | 139 | 97 | 83 | 201 | 69 | 76 | 81 |
| 20 | 99 | 111 | 108 | 119 | 111 | 131 | 95 | 80 | 333 | 69 | 72 | 89 |
| 21 | 98 | 106 | 111 | 116 | 117 | 133 | 93 | 76 | 198 | 69 | 64 | 81 |
| 22 | 99 | 110 | 108 | 117 | 118 | 134 | 96 | 81 | 160 | 63 | 63 | 83 |
| 23 | 100 | 110 | 110 | 114 | 117 | 135 | 91 | 79 | 129 | 60 | 73 | 80 |
| 24 | 97 | 110 | 110 | 115 | 120 | 131 | 96 | 90 | 112 | 81 | 73 | 86 |
| 25 | 100 | 110 | 111 | 115 | 122 | 131 | 80 | 84 | 105 | 57 | 72 | 90 |
| 26 | 102 | 108 | 101 | 109 | 107 | 131 | 96 | 84 | 100 | 60 | 72 | 94 |
| 27 | 101 | 112 | 95 | 110 | 119 | 132 | 84 | 87 | 97 | 61 | 140 | 92 |
| 28 | 100 | 108 | 104 | 109 | 138 | 133 | 80 | 86 | 95 | 64 | 113 | 94 |
| 29 | 101 | 111 | 129 | 111 | | 134 | 88 | 83 | 90 | 79 | 94 | 89 |
| 30 | 103 | 111 | 129 | 107 | | 134 | 80 | 90 | 88 | 88 | 84 | 94 |
| 31 | 100 | | 118 | 110 | | 134 | | 86 | | 64 | 92 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 104 | 96 | 99.5 | 6,120 | | |
| November | | | | | | | 112 | 100 | 106 | 6,310 | | |
| December | | | | | | | 129 | 85 | 115 | 6,900 | | |
| January | | | | | | | 130 | 107 | 115 | 7,080 | | |
| February | | | | | | | 143 | 105 | 114 | 6,340 | | |
| March | | | | | | | 142 | 131 | 135 | 6,270 | | |
| April | | | | | | | 129 | 90 | 104 | 6,220 | | |
| May | | | | | | | 91 | 78 | 84.7 | 5,210 | | |
| June | | | | | | | 406 | 65 | 130 | 7,760 | | |
| July | | | | | | | 89 | 37 | 58.3 | 4,200 | | |
| August | | | | | | | 140 | 69 | 70.0 | 4,960 | | |
| September | | | | | | | 130 | 77 | 86.5 | 5,270 | | |
| The year | | | | | | | 406 | 57 | 103 | 74,570 | | |

Frenchman Creek at Culbertson, Mont.

Location.- Staff gage in sec. 17, T. 3 N., R. 11 W., at Culbertson.

Drainage area.- 1,300 square miles.

Records available.- June 1913 to September 1914, March 1931 to September 1934.

Extremes.- Maximum discharge during year, at 1,000 second-feet June 13 (gage height, 5.10 feet); minimum, 13 second-feet Aug. 17 (gage height, 0.00 foot).
 1931-34: Maximum discharge, about 3,730 second-feet Aug. 26, 1933 (gage height, 7.00 feet); minimum, 2 second-feet Sept. 2, 10, 1934.

Remarks.- Records fair. Discharge estimated Dec. 1 to Feb. 21, 1933, 1934, on basis of three discharge measurements and temperature records. Diversion for irrigation above station.

Discharge in second-feet, 1933-34

| Date | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | 22 | 21 | | | | 219 | 157 | 36 | 24 | 39 | 70 | 45 |
| 2 | 18 | 21 | | | | 214 | 159 | 40 | 21 | 21 | 28 | 21 |
| 3 | 199 | 21 | | | 21 | 205 | 182 | 38 | 21 | 48 | 26 | 46 |
| 4 | 103 | 1 | 200 | | | 202 | 180 | 34 | 26 | 43 | 26 | 46 |
| 5 | 90 | 75 | | | | 203 | 147 | 20 | 22 | 13 | 94 | 2 |
| 6 | 98 | | | | | 186 | 141 | 34 | 21 | 27 | 27 | 27 |
| 7 | 94 | 12 | | | | 192 | 146 | 32 | 21 | 28 | 23 | 48 |
| 8 | 36 | 1 | | | 708 | 194 | 160 | 20 | 21 | 27 | 26 | 48 |
| 9 | 2 | 78 | | | | 178 | 121 | 29 | 21 | 32 | 23 | 50 |
| 10 | 24 | 32 | | | | 177 | 140 | 22 | 23 | 21 | 24 | 21 |
| 11 | 150 | 29 | | | | 173 | 135 | 21 | 102 | 31 | | 47 |
| 12 | 122 | 26 | | | | 177 | 134 | 24 | 55 | 21 | 27 | 39 |
| 13 | 128 | 16 | | | 110 | 174 | 147 | 22 | 72 | 40 | 27 | 29 |
| 14 | 126 | 12 | | | | 172 | 154 | 22 | 20 | 43 | 26 | 20 |
| 15 | 132 | 20 | | | | 177 | 146 | 22 | 1,000 | 40 | 20 | 24 |
| 16 | 130 | 27 | | | | 177 | 148 | 30 | 452 | 39 | 18 | 20 |
| 17 | 132 | 27 | | | | 171 | 149 | 27 | 190 | 46 | 15 | 21 |
| 18 | 130 | 77 | | | | 175 | 145 | 19 | 179 | 27 | 24 | 77 |
| 19 | 127 | 78 | | | | 174 | 140 | 24 | 224 | 34 | 23 | 40 |
| 20 | 129 | 76 | | | | 173 | 138 | 21 | 446 | 21 | 25 | 20 |
| 21 | 121 | 72 | | | | 180 | 126 | 16 | 39 | 22 | 22 | 21 |
| 22 | 122 | 76 | | | | 175 | 120 | 22 | 41 | 208 | 30 | 26 |
| 23 | 122 | 20 | | | 100 | 170 | 127 | 22 | 228 | 30 | 23 | 20 |
| 24 | 130 | 135 | | | | 169 | 163 | 112 | 42 | 152 | 73 | 29 |
| 25 | 134 | 13 | | | | 160 | 170 | 26 | 26 | 171 | 21 | 29 |
| 26 | 132 | 140 | | | | 140 | 131 | 20 | 27 | 127 | 33 | 20 |
| 27 | 119 | 140 | | | | 155 | 127 | 27 | 116 | 38 | 21 | 2 |
| 28 | 101 | 122 | | | | 124 | 171 | 20 | 56 | 26 | 44 | 2 |
| 29 | 37 | 127 | | | | 152 | 152 | 22 | 22 | 36 | 46 | 22 |
| 30 | 43 | 101 | | | | 125 | 61 | 36 | 77 | 31 | 21 | 35 |
| 31 | 22 | | | | | 123 | | 18 | | 32 | 47 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 134 | 82 | 114 | 7,000 | | | |
| November | | | | | | 161 | 78 | 126 | 5,570 | | | |
| December | | | | | | | | 128 | 11,200 | | | |
| January | | | | | | | | 160 | 11,260 | | | |
| February | | | | | | | | 140 | 10,760 | | | |
| March | | | | | | 218 | 153 | 173 | 10,340 | | | |
| April | | | | | | 162 | 51 | 103 | 7,590 | | | |
| May | | | | | | 46 | 18 | 30.6 | 1,680 | | | |
| June | | | | | | 1,000 | 21 | 125 | 2,330 | | | |
| July | | | | | | 68 | 30 | 32.3 | 2,370 | | | |
| August | | | | | | 43 | 15 | 27.7 | 1,700 | | | |
| September | | | | | | 50 | 40 | 40.0 | 4,220 | | | |
| The year | | | | | | 1,000 | 15 | 116 | 35,130 | | | |

*discharge measurement.

Smoky Hill River at Ellsworth, Kans.

Location.- Chain gage in SE $\frac{1}{4}$ sec. 20, T. 15 S., R. 8 W., in Ellsworth, 2 miles below Turkey Creek.

Drainage area.- 7,580 square miles.

Records available.- April 1895 to October 1905, July 1918 to July 1925, August 1928 to September 1934.

Average discharge.- 21 years (1895-1904, 1918-24, 1928-34), 187 second-feet.

Extremes.- Maximum discharge recorded during year, 7,630 second-feet June 18 (gage height, 14.80 feet); minimum, 14 second-feet Aug. 20-28 (gage height, 1.43 feet).
1895-1905, 1918-25, 1928-34: Maximum discharge, 21,000 second-feet July 5, 1895; minimum, 1.6 second-feet Oct. 8, 9, 1922. Bank-full stage, 20 feet.
A flood stage of 25.0 feet was reached in August 1927 (discharge, about 24,000 second-feet).

Remarks.- Records good except those estimated for periods of ice effect, Dec. 19-23, 27-31, Jan. 1, 2, Feb. 20, 21, 25-28, Mar. 1, and those for Dec. 5-18, June 20-26, July 18, Aug. 26, Sept. 17-30, which are fair.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|-------|----------------------|------|-------|
| 1 | 219 | 95 | 70 | 57 | 62 | 40 | 45 | 32 | 32 | 148 | 25 | 241 |
| 2 | 199 | 95 | 339 | 55 | 54 | 42 | 43 | 32 | 30 | 132 | 23 | 832 |
| 3 | 191 | 95 | 124 | 53 | 48 | 61 | 43 | 190 | 30 | 117 | 22 | 483 |
| 4 | 172 | 88 | 172 | 44 | 48 | 61 | 42 | 647 | 28 | 110 | 20 | 393 |
| 5 | 172 | 88 | 132 | 53 | 47 | 59 | 40 | 300 | 27 | 102 | 18 | 264 |
| 6 | 164 | 88 | 124 | 69 | 47 | 61 | 41 | 190 | 27 | 140 | 18 | 172 |
| 7 | 156 | 88 | 132 | 70 | 48 | 61 | 42 | 132 | 26 | 102 | 17 | 124 |
| 8 | 156 | 88 | 117 | 42 | 44 | 61 | 39 | 110 | 25 | 88 | 17 | 95 |
| 9 | 148 | 88 | 117 | 50 | 45 | 59 | 39 | 95 | 24 | 82 | 16 | 82 |
| 10 | 148 | 88 | 110 | 65 | 47 | 59 | 39 | 423 | 22 | 73 | 15 | 74 |
| 11 | 140 | 88 | 102 | 70 | 45 | 58 | 37 | 156 | 22 | 70 | 15 | 75 |
| 12 | 140 | 88 | 95 | 67 | 42 | 56 | 37 | 69 | 27 | 67 | 15 | 64 |
| 13 | 132 | 88 | 82 | 67 | 46 | 54 | 36 | 88 | 24 | 67 | 22 | 55 |
| 14 | 132 | 82 | 82 | 64 | 48 | 51 | 36 | 67 | 22 | 276 | 25 | 49 |
| 15 | 132 | 82 | 75 | 65 | 45 | 50 | 37 | 60 | 300 | 69 | 16 | 339 |
| 16 | 124 | 82 | 82 | 53 | 47 | 50 | 37 | 54 | 2,360 | 95 | 15 | 156 |
| 17 | 124 | 82 | 70 | 61 | 48 | 47 | 37 | 53 | 5,520 | 102 | 16 | 156 |
| 18 | 117 | 82 | 73 | 61 | 52 | 40 | 37 | 61 | 7,530 | 69 | 16 | 102 |
| 19 | 117 | 82 | 59 | 47 | 43 | 35 | 47 | 3,580 | 58 | 15 | 74 | |
| 20 | 117 | 82 | 58 | 45 | 48 | 36 | 46 | 1,430 | 50 | 14 | 62 | |
| 21 | 230 | 62 | 71 | 60 | 42 | 45 | 36 | 46 | 908 | 46 | 14 | 52 |
| 22 | 110 | 82 | 55 | 45 | 45 | 45 | 36 | 36 | 647 | 41 | 14 | 48 |
| 23 | 110 | 75 | 55 | 44 | 46 | 35 | 35 | 483 | 38 | 14 | 55 | |
| 24 | 102 | 75 | 69 | 51 | 40 | 44 | 35 | 37 | 483 | 35 | 14 | 42 |
| 25 | 102 | 74 | 63 | 53 | 45 | 45 | 35 | 41 | 339 | 37 | 14 | 48 |
| 26 | 95 | 74 | 61 | 51 | 40 | 46 | 35 | 38 | 288 | 35 | 14 | 45 |
| 27 | 95 | 71 | 53 | 43 | 43 | 43 | 35 | 37 | 230 | 32 | 172 | 39 |
| 28 | 95 | 71 | 51 | 42 | 44 | 42 | 35 | 35 | 199 | 38 | 579 | 39 |
| 29 | 95 | 71 | 58 | 48 | 42 | 42 | 33 | 34 | 172 | 30 | 82 | 36 |
| 30 | 95 | 73 | 37 | 42 | 42 | 42 | 33 | 34 | 148 | 29 | 49 | 35 |
| 31 | 95 | | 40 | 40 | 43 | 43 | | 33 | | 27 | 37 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 230 | 95 | 136 | 8,360 | | |
| November | | | | | | | 95 | 71 | 82.9 | 4,950 | | |
| December | | | | | | | 339 | | 94.7 | 5,820 | | |
| January | | | | | | | 70 | 37 | 56.0 | 3,450 | | |
| February | | | | | | | 62 | 40 | 45.9 | 2,550 | | |
| March | | | | | | | 61 | 40 | 49.8 | 3,060 | | |
| April | | | | | | | 46 | 35 | 37.5 | 2,230 | | |
| May | | | | | | | 647 | 32 | 105 | 6,440 | | |
| June | | | | | | | 7,630 | 22 | 843 | 50,150 | | |
| July | | | | | | | 276 | 27 | 77.6 | 4,770 | | |
| August | | | | | | | 579 | 14 | 44.0 | 2,700 | | |
| September | | | | | | | 832 | 35 | 144 | 8,590 | | |
| The year | | | | | | | 7,630 | 14 | 142 | 103,000 | | |

Smoky Hill River at Lindsborg, Kans.

Location.- Chain gage in NE $\frac{1}{4}$ sec. 20, T. 17 S., R. 3 W., on highway bridge at Lindsborg.

Drainage area.- 8,100 square miles.

Records available.- February 1930 to September 1934.

Extremes.- Maximum discharge during year, 5,220 second-feet June 20 (gage height, 21.47 feet); minimum, 24 second-feet June 12 (gage height, 3.11 feet).

1930-34: Maximum discharge, 6,300 second-feet August 1933 (gage height, 23.88 feet); minimum, 22 second-feet Sept. 20, 1931.

Maximum stage known, 31.5 feet during May 1903.

Remarks.- Records fair except those for January, February, and September, which are poor. Discharge estimated for periods of ice effect, Jan. 17-24, Feb. 1, 2, and for period of missing gage-height record, Feb. 18-22.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|-------|------|------|-------|
| 1 | 335 | 107 | 79 | 98 | 86 | 37 | 54 | 37 | 39 | 234 | 42 | 82 |
| 2 | 320 | 107 | 84 | 91 | 102 | 53 | 54 | 36 | 38 | 228 | 41 | 82 |
| 3 | 280 | 108 | 138 | 91 | 62 | 60 | 52 | 35 | 36 | 228 | 41 | 260 |
| 4 | 261 | 112 | 279 | 58 | 62 | 64 | 52 | 50 | 34 | 228 | 62 | 588 |
| 5 | 235 | 108 | 160 | 60 | 61 | 63 | 52 | 313 | 34 | 176 | 41 | 396 |
| 6 | 216 | 107 | 149 | 101 | 61 | 66 | 54 | 476 | 34 | 166 | 48 | 306 |
| 7 | 216 | 106 | 149 | 91 | 60 | 64 | 54 | 260 | 30 | 154 | 46 | 240 |
| 8 | 209 | 102 | 149 | 75 | 59 | 61 | 52 | 176 | 29 | 166 | 44 | 176 |
| 9 | 196 | 100 | 149 | 73 | 58 | 64 | 51 | 144 | 31 | 144 | 44 | 144 |
| 10 | 196 | 99 | 144 | 67 | 57 | 67 | 49 | 198 | 29 | 127 | 41 | 122 |
| 11 | 184 | 98 | 138 | 81 | 56 | 71 | 48 | 171 | 28 | 117 | 39 | 114 |
| 12 | 178 | 98 | 127 | 85 | 55 | 69 | 46 | 160 | 28 | 112 | 39 | 101 |
| 13 | 172 | 98 | 122 | 78 | 57 | 66 | 46 | 127 | 30 | 108 | 39 | 93 |
| 14 | 166 | 98 | 122 | 75 | 59 | 62 | 45 | 144 | 28 | 127 | 36 | 89 |
| 15 | 160 | 98 | 116 | 75 | 58 | 59 | 44 | 127 | 34 | 492 | 34 | 83 |
| 16 | 160 | 97 | 113 | 75 | 58 | 58 | 45 | 97 | 85 | 198 | 34 | 86 |
| 17 | 154 | 96 | 107 | 70 | 58 | 57 | 45 | 81 | 1,380 | 122 | 41 | 222 |
| 18 | 149 | 94 | 102 | | 60 | 58 | 45 | 73 | 2,880 | 122 | 58 | 171 |
| 19 | 144 | 94 | 99 | | | 57 | 44 | 69 | 4,110 | 132 | 66 | 154 |
| 20 | 138 | 96 | 94 | | | 60 | 42 | 67 | 5,040 | 109 | 45 | 122 |
| 21 | 133 | 94 | 99 | 70 | 62 | 57 | 41 | 64 | 2,760 | 94 | 38 | 122 |
| 22 | 133 | 95 | 98 | | | 55 | 40 | 82 | 1,060 | 87 | 35 | 117 |
| 23 | 128 | 91 | 98 | | | 54 | 40 | 58 | 743 | 78 | 34 | 87 |
| 24 | 123 | 90 | 93 | | | 62 | 54 | 39 | 57 | 588 | 75 | 34 |
| 25 | 116 | 89 | 71 | 65 | 36 | 55 | 39 | 54 | 524 | 58 | 32 | 73 |
| 26 | 118 | 87 | 57 | 63 | 32 | 57 | 39 | 52 | 460 | 55 | 31 | 292 |
| 27 | 118 | 87 | 53 | 62 | 30 | 55 | 39 | 51 | 380 | 64 | 31 | 480 |
| 28 | 118 | 94 | 57 | 60 | 32 | 55 | 39 | 246 | 335 | 61 | 27 | 176 |
| 29 | 116 | 82 | 68 | 49 | 55 | 55 | 39 | 46 | 299 | 52 | 886 | 193 |
| 30 | 112 | 82 | 101 | 40 | | 55 | 38 | 44 | 266 | 49 | 328 | 87 |
| 31 | 110 | | 94 | 51 | | 55 | | 40 | | 47 | 122 | |

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|-----------|---------|---------|------|----------------------|
| October | 335 | 110 | 174 | 10,700 |
| November | 112 | 82 | 96.7 | 5,760 |
| December | 279 | 53 | 113 | 6,960 |
| January | 101 | 40 | 71.7 | 4,410 |
| February | 102 | 30 | 58.0 | 3,220 |
| March | 71 | 37 | 58.8 | 3,620 |
| April | 54 | 39 | 45.6 | 2,710 |
| May | 476 | 35 | 117 | 7,170 |
| June | 5,040 | 28 | 713 | 42,440 |
| July | 492 | 47 | 136 | 8,350 |
| August | 886 | 27 | 79.9 | 4,920 |
| September | 588 | 73 | 177 | 10,540 |
| The year | 5,040 | 27 | 153 | 111,000 |

Smoky Hill River at Solomon, Kans.

Location.- Chain gage in SE $\frac{1}{4}$ sec. 18, T. 13 S., R. 1 E., 500 feet below Solomon River and 1 mile south of Solomon.

Drainage area.- 18,700 square miles.

Records available.- April to July 1904, October 1922 to October 1934 (discontinued).

Average discharge.- 12 years (1922-34), 437 second-feet.

Extremes.- Maximum discharge recorded during year. 11,200 second-feet June 22 (gage height, 22.10 feet); minimum, 60 second-feet Aug. 17 (gage height, 2.8 feet). 1904, 1922-34: Maximum discharge, 18,400 second-feet Aug. 13, 1903 (gage height, 28.0 feet); minimum, 25 second-feet Oct. 14, 1925. Bank-full stage, 24.0 feet.

Maximum stage known, about 35.0 feet during flood of 1903.

Remarks.- Records fair. Gage-height records furnished by U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|------|---------|---------|---------|---------|---------|-------|---------|----------------------|---------|-------|
| 1 | 2,180 | 170 | 126 | 148 | 126 | *160 | 247 | 110 | 116 | 763 | 137 | 445 |
| 2 | 894 | 170 | 126 | 148 | 126 | *155 | 247 | 96 | 320 | 682 | 116 | 345 |
| 3 | 521 | 170 | 126 | 148 | 148 | *160 | 190 | 116 | 270 | 628 | 116 | 320 |
| 4 | 521 | 148 | 126 | 148 | 148 | *170 | 180 | 158 | 224 | 574 | 96 | 320 |
| 5 | 344 | 148 | 214 | 126 | 148 | 192 | 202 | 158 | 190 | 495 | 78 | 736 |
| 6 | 368 | 148 | 482 | 126 | 148 | 214 | 158 | 370 | 158 | 547 | 96 | 1,680 |
| 7 | 320 | 126 | 406 | 126 | 126 | 214 | 137 | 247 | 96 | 620 | 116 | 1,350 |
| 8 | 296 | 148 | 331 | 126 | 126 | 214 | 158 | 601 | 116 | 470 | 116 | 1,170 |
| 9 | 344 | 126 | 332 | 126 | 126 | 192 | 137 | 520 | 116 | 445 | 116 | 984 |
| 10 | 368 | 126 | 308 | 126 | 148 | 192 | 158 | 445 | 96 | 445 | 116 | 736 |
| 11 | 320 | 148 | 284 | 148 | 148 | 214 | 180 | 345 | 78 | 420 | 137 | 520 |
| 12 | 296 | 170 | 260 | 126 | 148 | 192 | 158 | 445 | 78 | 395 | 137 | 520 |
| 13 | 296 | 170 | 260 | 126 | 148 | 214 | 137 | 320 | 116 | 395 | 137 | 520 |
| 14 | 260 | 148 | 260 | 126 | 148 | 192 | 137 | 345 | 395 | 395 | 116 | 520 |
| 15 | 284 | 148 | 260 | 126 | 148 | 192 | 137 | 844 | 495 | 270 | 96 | 320 |
| 16 | 284 | 148 | 260 | 126 | 170 | 192 | 137 | 520 | 1,340 | 370 | 78 | 270 |
| 17 | 260 | 148 | 236 | 84 | 148 | 214 | 137 | 270 | 1,580 | 601 | 116 | 270 |
| 18 | 236 | 126 | 192 | 105 | 170 | 214 | 137 | 790 | 2,700 | 495 | 78 | 190 |
| 19 | 260 | 126 | 192 | 126 | 148 | 192 | 158 | 570 | 6,080 | 370 | 96 | 2,260 |
| 20 | 236 | 126 | 170 | 126 | 148 | 192 | 158 | 495 | 7,620 | 320 | 78 | 736 |
| 21 | 214 | 126 | 170 | 126 | 148 | 170 | 137 | 370 | 10,000 | 270 | 78 | 395 |
| 22 | 214 | 126 | 170 | 126 | 148 | 137 | 137 | 320 | 11,200 | 224 | 96 | 395 |
| 23 | 214 | 126 | 148 | 105 | 192 | 137 | 116 | 324 | 10,700 | 224 | 96 | 395 |
| 24 | 214 | 105 | 148 | 105 | 170 | 158 | 180 | 190 | 3,310 | 224 | 96 | 247 |
| 25 | 192 | 105 | 148 | 126 | *145 | 180 | 116 | *174 | 1,350 | 202 | 96 | 137 |
| 26 | 142 | 105 | 148 | 126 | 192 | 137 | 137 | 1,310 | 202 | 78 | 470 | 470 |
| 27 | 192 | 105 | 148 | 126 | 192 | 158 | 137 | 1,720 | 202 | 78 | 470 | 470 |
| 28 | 132 | 105 | 148 | 126 | 170 | 137 | 116 | 1,630 | 202 | 96 | 445 | 445 |
| 29 | 192 | 126 | 148 | 105 | 170 | 96 | 96 | 1,130 | 180 | 470 | 445 | 445 |
| 30 | 170 | 126 | 148 | 105 | 192 | 96 | 116 | 599 | 180 | 345 | 345 | 345 |
| 31 | 170 | 148 | 148 | 105 | 192 | 116 | 116 | 116 | 156 | 763 | 763 | 763 |
| 1934 | | | | | | | | | | | | |
| Oct. 1 | 320 | | Oct. 6 | 180 | Oct. 11 | 96 | Oct. 16 | 96 | Oct. 21 | 78 | Oct. 26 | 50 |
| Oct. 2 | 247 | | Oct. 7 | 158 | Oct. 12 | 96 | Oct. 17 | 78 | Oct. 22 | 60 | Oct. 27 | 60 |
| Oct. 3 | 224 | | Oct. 8 | 96 | Oct. 13 | 78 | Oct. 18 | 60 | Oct. 23 | 60 | Oct. 28 | 78 |
| Oct. 4 | 202 | | Oct. 9 | 96 | Oct. 14 | 78 | Oct. 19 | 78 | Oct. 24 | 78 | Oct. 29 | 60 |
| Oct. 5 | 202 | | Oct. 10 | 96 | Oct. 15 | 60 | Oct. 20 | 96 | Oct. 25 | 60 | Oct. 30 | 60 |
| | | | | | | | | | | | Oct. 31 | 78 |
| Month | | | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | | |
| 1933-34 | | | | 2,180 | | 170 | | 356 | | 21,000 | | |
| October | | | | 170 | | 105 | | 136 | | 8,120 | | |
| November | | | | 482 | | 126 | | 215 | | 13,240 | | |
| December | | | | 148 | | 84 | | 125 | | 7,670 | | |
| January | | | | 170 | | 126 | | 145 | | 8,050 | | |
| February | | | | 214 | | 150 | | 190 | | 11,670 | | |
| March | | | | 247 | | 96 | | 154 | | 9,140 | | |
| April | | | | 844 | | 96 | | 316 | | 19,430 | | |
| May | | | | 11,200 | | 78 | | 2,405 | | 131,200 | | |
| June | | | | 763 | | 156 | | 356 | | 23,740 | | |
| July | | | | 763 | | 60 | | 145 | | 8,910 | | |
| August | | | | 2,260 | | 137 | | 602 | | 35,790 | | |
| September | | | | | | | | | | | | |
| The year | | | | 11,200 | | 60 | | 413 | | 299,000 | | |
| 1934 | | | | | | | | | | | | |
| October | | | | 320 | | 60 | | 102 | | 6,680 | | |

*Estimated.

Saline River near Wilson, Kans.

Location.- Water-stage recorder in SW $\frac{1}{4}$ sec. 11, T. 13 S., R. 11 W., three-quarters of a mile above Hell Creek and 8 miles northwest of Wilson.

Drainage area.- 1,200 square miles.

Records available.- May 1929 to September 1934.

Extremes.- Maximum discharge during year, 5,500 second-feet June 17 (gage height, 15.80 feet); minimum, 2 second-feet Aug. 15 (gage height, 2.60 feet).

1929-34: Maximum and minimum discharges, those of 1934. Bank-full stage, about 20 feet.

A stage of about 26.75 feet occurred during July 1928.

Remarks.- Records fair. Discharge estimated Dec. 14-18 and interpolated Apr. 3-5.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|---------|------|---------|------|-------|-------|----------------------|------|-------|
| 1 | 10 | 12 | 32 | 28 | 18 | 15 | 13 | 9 | 24 | 55 | 8 | 180 |
| 2 | 8 | 14 | 36 | 25 | 19 | 23 | 11 | 9 | 18 | 43 | 6 | 225 |
| 3 | 8 | 15 | 26 | 24 | 18 | 34 | 9 | 17 | 41 | 7 | 526 | |
| 4 | 8 | 14 | 79 | 17 | 19 | 29 | 12 | 10 | 14 | 38 | 7 | 362 |
| 5 | 7 | 14 | 43 | 23 | 17 | 24 | | 12 | 14 | 34 | 7 | 189 |
| 6 | 7 | 14 | 32 | 30 | 15 | 22 | 13 | 10 | 13 | 26 | 7 | 51 |
| 7 | 7 | 14 | 28 | 34 | 16 | 19 | 12 | 9 | 11 | 26 | 5 | 32 |
| 8 | 7 | 15 | 26 | 35 | 16 | 16 | 11 | 9 | 10 | 26 | 6 | 19 |
| 9 | 8 | 16 | 26 | 25 | 16 | 17 | 10 | 8 | 10 | 23 | 4 | 19 |
| 10 | 8 | 15 | 26 | 32 | 15 | 16 | 9 | 7 | 9 | 22 | 5 | 22 |
| 11 | 9 | 17 | 25 | 29 | 16 | 10 | 9 | 8 | 11 | 20 | 6 | 15 |
| 12 | 9 | 15 | 22 | 29 | 17 | 14 | 10 | 8 | 35 | 20 | 4 | 14 |
| 13 | 9 | 14 | 24 | 24 | 18 | 13 | 10 | 13 | 28 | 18 | 3 | 14 |
| 14 | 8 | 14 | 23 | 23 | 17 | 12 | 11 | 182 | 14 | 15 | 3 | 556 |
| 15 | 8 | 16 | 23 | 23 | 16 | 12 | 10 | 145 | 1,430 | 15 | 2 | 73 |
| 16 | 9 | 17 | 35 | 22 | 17 | 10 | 11 | 56 | 1,450 | 15 | 2 | 44 |
| 17 | 9 | 18 | | 24 | 17 | 9 | 12 | 36 | 3,440 | 14 | 4 | 25 |
| 18 | 9 | 19 | 51 | 23 | 20 | 13 | 12 | 25 | 1,400 | 15 | 4 | 14 |
| 19 | 9 | 18 | 44 | 23 | 17 | 14 | 10 | 23 | 877 | 14 | 4 | 13 |
| 20 | 9 | 18 | 44 | 22 | 20 | 15 | 9 | 17 | 556 | 13 | 4 | 11 |
| 21 | 9 | 20 | 34 | 20 | 19 | 14 | 9 | 14 | 338 | 12 | 4 | 7 |
| 22 | 9 | 22 | 32 | 19 | 15 | 14 | 9 | 14 | 401 | 11 | 4 | 14 |
| 23 | 9 | 20 | 32 | 20 | 16 | 14 | 9 | 14 | 645 | 9 | 4 | 14 |
| 24 | 9 | 16 | 29 | 19 | 12 | 14 | 9 | 13 | 338 | 9 | 2 | 14 |
| 25 | 9 | 15 | 26 | 17 | 12 | 13 | 9 | 13 | 300 | 9 | 8 | 14 |
| 26 | 9 | 16 | 15 | 15 | 15 | 14 | 9 | 12 | 295 | 10 | 9 | 14 |
| 27 | 10 | 19 | 14 | 20 | 16 | 14 | 9 | 9 | 232 | 10 | 14 | 14 |
| 28 | 11 | 20 | 17 | 19 | 13 | 14 | 9 | 8 | 77 | 10 | 13 | 14 |
| 29 | 11 | 20 | 19 | 16 | | 14 | 9 | 40 | 73 | 9 | 7 | 14 |
| 30 | 11 | 20 | 26 | 16 | | 16 | 9 | 41 | 77 | 9 | 4 | 13 |
| 31 | 11 | | 56 | 32 | | 15 | | 34 | | 9 | 28 | |
| Month | | | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | | |
| October | | | | 11 | | 7 | | 8.8 | | 543 | | |
| November | | | | 22 | | 12 | | 16.6 | | 986 | | |
| December | | | | 79 | | 14 | | 31.5 | | 1,940 | | |
| January | | | | 35 | | 15 | | 23.5 | | 1,440 | | |
| February | | | | 20 | | 12 | | 16.5 | | 916 | | |
| March | | | | 34 | | 9 | | 16.1 | | 988 | | |
| April | | | | 13 | | 9 | | 10.3 | | 613 | | |
| May | | | | 182 | | 7 | | 26.4 | | 1,620 | | |
| June | | | | 3,440 | | 9 | | 405.0 | | 24,100 | | |
| July | | | | 56 | | 9 | | 19.4 | | 1,190 | | |
| August | | | | 28 | | 2 | | 6.4 | | 391 | | |
| September | | | | 566 | | 7 | | 84.5 | | 5,030 | | |
| The year | | | | 3,440 | | 2 | | 54.9 | | 39,760 | | |

Saline River at Tescott, Kans.

Location.-- Chain gage in SE $\frac{1}{4}$ sec. 16, T. 12 S., R. 5 W., half a mile south of Tescott and half a mile above Dry Creek.

Drainage area.-- 2,800 square miles.

Records available.-- September 1919 to September 1934.

Average discharge.-- 15 years, 145 second-feet.

Extremes.-- Maximum discharge recorded during year, 2,750 second-feet June 20 (gage height, 20.61 feet); minimum, 2 second-feet Aug. 10 (gage height, 2.40 feet).
1919-34: Maximum discharge recorded, 6,150 second-feet July 12, 1928 (gage height, 29.48 feet); minimum, 0.5 second-foot in July 1928. Bank-full stage, 25 feet.

Remarks.-- Records fair.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|-------|----------------------|------|-------|
| 1 | 15 | 7 | 38 | 5 | 41 | *15 | 14 | 10 | 5 | *100 | 19 | 59 |
| 2 | 53 | 6 | 44 | 9 | 30 | | 16 | 11 | 4 | 105 | 23 | 16 |
| 3 | 47 | 8 | 111 | 16 | 14 | | 29 | 18 | 5 | 91 | 19 | 29 |
| 4 | 50 | 17 | 125 | 25 | 9 | | 32 | 18 | 6 | *88 | 17 | 100 |
| 5 | 44 | 23 | 111 | 28 | 12 | | 29 | *17 | 10 | 67 | 17 | 435 |
| 6 | 44 | 41 | 59 | 29 | 29 | 20 | 32 | 17 | 11 | 63 | 14 | 225 |
| 7 | 44 | 35 | 53 | 14 | 26 | 28 | 34 | 7 | 18 | 63 | 3 | 135 |
| 8 | 34 | 35 | 50 | 7 | 26 | 29 | 30 | 23 | 10 | 63 | 3 | 83 |
| 9 | 7 | 54 | 47 | 5 | 30 | 38 | 23 | 24 | 10 | 53 | 4 | 79 |
| 10 | 5 | 28 | 41 | 26 | 30 | 41 | 11 | 59 | 5 | 59 | 2 | 83 |
| 11 | 9 | 19 | 44 | 30 | 24 | 41 | 10 | 67 | 4 | 53 | 3 | 67 |
| 12 | 23 | 15 | 41 | 29 | 8 | 28 | 16 | 38 | 7 | 53 | 3 | 56 |
| 13 | 9 | 38 | *29 | 23 | 25 | 28 | 20 | 23 | 11 | 63 | 3 | 56 |
| 14 | 14 | 44 | 41 | 8 | 28 | 23 | 29 | 67 | 11 | 59 | 5 | 47 |
| 15 | 9 | 41 | 24 | 19 | 29 | 28 | 29 | 725 | 111 | 53 | 5 | 50 |
| 16 | 12 | 44 | 34 | 23 | 23 | 41 | 23 | 329 | 1,400 | 56 | 3 | 253 |
| 17 | 2 | 41 | 41 | 30 | 14 | 32 | 32 | 142 | 1,650 | 36 | 4 | 271 |
| 18 | 9 | 36 | 20 | 29 | 18 | 35 | 16 | 83 | 2,290 | 36 | 2 | 99 |
| 19 | 10 | 34 | 23 | 28 | 18 | 30 | 14 | 71 | 2,380 | 44 | 3 | 47 |
| 20 | 23 | 30 | 26 | 19 | 29 | 23 | 28 | 71 | 2,720 | 26 | 3 | 36 |
| 21 | 9 | 41 | 36 | 24 | 29 | 23 | 26 | 71 | 1,240 | 20 | 3 | 34 |
| 22 | 10 | 41 | 35 | 23 | 23 | 16 | 23 | 44 | 347 | 19 | 3 | 24 |
| 23 | 18 | 34 | 36 | 29 | 19 | 16 | 12 | 38 | 266 | 19 | 3 | 22 |
| 24 | 20 | 19 | 32 | 28 | 14 | 17 | 10 | 23 | 682 | 15 | 9 | 20 |
| 25 | 23 | 23 | 24 | 28 | 7 | 23 | 12 | 18 | 445 | 18 | 71 | 30 |
| 26 | 11 | 58 | 24 | 30 | *10 | 23 | 28 | 19 | 293 | 24 | 91 | 17 |
| 27 | 10 | 41 | 24 | 34 | | 12 | 24 | 24 | 193 | 23 | 47 | 22 |
| 28 | 11 | 30 | 14 | 35 | | 23 | 19 | 24 | 117 | 14 | 34 | 28 |
| 29 | 7 | 58 | 8 | 17 | | 28 | 12 | 23 | 95 | 10 | 24 | 14 |
| 30 | 10 | 44 | 8 | 10 | | 38 | 6 | 14 | 87 | 8 | 63 | *20 |
| 31 | 9 | | 6 | 23 | | 29 | | 10 | | 11 | 83 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 53 | 2 | 19.4 | 1,190 | | |
| November | | | | | | | 44 | 6 | 30.8 | 1,830 | | |
| December | | | | | | | 123 | 6 | 40.2 | 2,470 | | |
| January | | | | | | | 35 | 5 | 22.0 | 1,550 | | |
| February | | | | | | | 41 | 7 | 21.1 | 1,170 | | |
| March | | | | | | | 41 | 12 | 25.5 | 1,570 | | |
| April | | | | | | | 34 | 6 | 21.4 | 1,270 | | |
| May | | | | | | | 723 | 7 | 68.6 | 4,220 | | |
| June | | | | | | | 2,720 | 4 | 481.0 | 28,630 | | |
| July | | | | | | | 105 | 8 | 45.7 | 2,810 | | |
| August | | | | | | | 91 | 2 | 18.9 | 1,150 | | |
| September | | | | | | | 435 | 14 | 81.9 | 4,870 | | |
| The year | | | | | | | 2,720 | 2 | 72.6 | 52,540 | | |

*Estimated.

Solomon River at Beloit, Kans.

Location.- Water-stage recorder in SW $\frac{1}{4}$ sec. 9, T. 7 S., R. 7 W., at highway bridge in Beloit, 93 miles above junction with Smoky Hill River.

Drainage area.- 5,410 square miles.

Records available.- April 1929 to September 1934.

Extremes.- Maximum discharge during year, 7,100 second-feet June 19 (gage height, 24.50 feet); minimum, 2 second-feet Aug. 8 and Sept. 30.
1929-34: Maximum discharge, 11,900 second-feet June 8, 1929 (gage height, 26.40 feet); minimum, 1 second-foot at times of low flow, during which power plant is shut down and only leakage through dam passes station.

Remarks.- Records good except those for Oct. 19-30, June 27 to Aug. 19, Sept. 22-24, and those estimated Oct. 31 to Nov. 3, Sept. 8-13, which are fair. Power plant about 200 feet upstream regulates extreme low-water flow. Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|-------|----------------------|------|-------|
| 1 | 6 | 50 | 8 | 12 | 26 | 13 | 17 | 32 | 43 | 117 | 5 | 31 |
| 2 | 69 | 5 | 37 | 42 | 33 | 30 | 71 | 5 | 42 | 104 | 20 | 653 |
| 3 | 9 | 5 | 16 | 5 | 37 | 60 | 10 | 17 | 13 | 95 | 4 | 1,670 |
| 4 | 4 | 50 | 64 | 6 | 8 | 16 | 64 | 37 | 37 | 95 | 24 | 1,100 |
| 5 | 6 | 5 | 150 | 23 | 44 | 53 | 53 | 19 | 3 | 99 | 4 | 846 |
| 6 | 54 | 7 | 182 | 39 | 33 | 42 | 31 | 7 | 27 | 48 | 3 | 491 |
| 7 | 5 | 51 | 107 | 5 | 37 | 52 | 78 | 32 | 5 | 64 | 3 | 389 |
| 8 | 5 | 5 | 126 | 20 | 33 | 53 | 45 | 26 | 24 | 45 | 2 | 352 |
| 9 | 50 | 5 | 82 | 9 | 28 | 53 | 87 | 22 | 4 | 50 | 3 | 315 |
| 10 | 4 | 16 | 18 | 33 | 29 | 45 | 45 | 4 | 5 | 50 | 4 | 278 |
| 11 | 4 | 67 | 101 | 9 | 13 | 12 | 34 | 12 | 336 | 46 | 28 | 241 |
| 12 | 4 | 6 | 7 | 26 | 47 | 63 | 50 | 36 | 199 | 32 | 5 | 204 |
| 13 | 18 | 8 | 43 | 38 | 38 | 57 | 30 | 7 | 86 | 19 | 4 | 167 |
| 14 | 80 | 53 | 37 | 7 | 8 | 8 | 53 | 182 | 69 | 34 | 4 | 131 |
| 15 | 5 | 7 | 7 | 41 | 48 | 29 | 8 | 175 | 805 | 5 | 4 | 111 |
| 16 | 5 | 7 | 58 | 7 | 34 | 60 | 53 | 63 | 3,660 | 26 | 4 | 64 |
| 17 | 5 | 62 | 7 | 38 | 48 | 15 | 11 | 20 | 4,760 | 28 | 4 | 72 |
| 18 | 33 | 8 | 46 | 27 | 9 | 31 | 49 | 25 | 5,380 | 5 | 16 | 48 |
| 19 | 5 | 8 | 6 | 38 | 34 | 52 | 28 | 28 | 6,700 | 12 | 29 | 47 |
| 20 | 36 | 50 | 42 | 35 | 47 | 25 | 38 | 5 | 2,215 | 12 | 173 | 9 |
| 21 | 4 | 7 | 7 | 16 | 40 | 16 | 6 | 5 | 615 | 29 | 44 | 82 |
| 22 | 4 | 7 | 54 | 67 | 40 | 29 | 20 | 5 | 653 | 4 | 31 | 3 |
| 23 | 4 | 44 | 44 | 32 | 7 | 42 | 37 | 30 | 885 | 21 | 7 | 7 |
| 24 | 37 | 8 | 5 | 37 | 49 | 58 | 28 | 17 | 786 | 5 | 25 | 47 |
| 25 | 3 | 35 | 5 | 17 | 6 | 8 | 27 | 5 | 825 | 5 | 20 | 34 |
| 26 | 3 | 7 | 39 | 45 | 6 | 26 | 25 | 29 | 507 | 9 | 7 | 4 |
| 27 | 5 | 7 | 12 | 9 | 36 | 36 | 36 | 35 | 476 | 22 | 7 | 4 |
| 28 | 50 | 9 | 18 | 27 | 28 | 53 | 16 | 374 | 244 | 4 | 5 | 40 |
| 29 | 5 | 59 | 46 | 48 | 6 | 50 | 4 | 244 | 177 | 5 | 133 | 36 |
| 30 | 5 | 8 | 6 | 6 | 9 | 9 | 28 | 126 | 139 | 10 | 211 | 2 |
| 31 | 5 | | 13 | 29 | | 55 | | 80 | | 18 | 61 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 80 | 3 | 17.2 | 1,060 | | |
| November | | | | | | | 67 | 5 | 22.3 | 1,320 | | |
| December | | | | | | | 182 | 5 | 44.1 | 2,710 | | |
| January | | | | | | | 67 | 5 | 25.7 | 1,580 | | |
| February | | | | | | | 49 | 6 | 29.2 | 1,620 | | |
| March | | | | | | | 63 | 8 | 37.1 | 2,280 | | |
| April | | | | | | | 87 | 4 | 36.1 | 2,150 | | |
| May | | | | | | | 374 | 4 | 55.0 | 3,380 | | |
| June | | | | | | | 6,700 | 3 | 991 | 58,950 | | |
| July | | | | | | | 117 | 4 | 36.1 | 2,220 | | |
| August | | | | | | | 211 | 2 | 28.8 | 1,770 | | |
| September | | | | | | | 1,670 | 2 | 249 | 14,830 | | |
| The year | | | | | | | 6,700 | 2 | 130 | 93,870 | | |

Solomon River at Niles, Kans.

Location.- Water-stage recorder in NW $\frac{1}{4}$ sec. 31, T. 12 S., R. 1 W., three-quarters of a mile west of Niles and 7 miles above mouth of river. Prior to Apr. 25, 1934, chain gage at same site and datum was used.

Drainage area.- 6,710 square miles.

Records available.- May 1897 to November 1903, May 1919 to September 1934.

Average discharge.- 15 years (1919-34), 387 second-feet.

Extremes.- Maximum discharge during year, 4,860 second-feet June 22 (gage height, 19.70 feet); minimum, 18 second-feet Oct. 6 (gage height, 2.20 feet).
1897-1903, 1919-34: Maximum discharge recorded, 10,600 second-feet June 3, 1903; minimum, 1 second-foot Sept. 4, 1926. Bank-full stage, 22 feet.

Remarks.- Records fair. Discharge estimated during periods of ice effect Dec. 26 to Jan. 12, Feb. 24 to Mar. 2. Chain gage used June 24 to July 4, Sept. 3-30.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | 23 | 32 | 27 | | 48 | | 74 | 56 | 185 | 230 | 37 | 52 |
| 2 | 22 | 33 | 26 | | 57 | 60 | 74 | 49 | 150 | 205 | 32 | 49 |
| 3 | 24 | 34 | 27 | | 73 | 73 | 69 | 47 | 122 | 165 | 59 | 132 |
| 4 | 22 | 36 | 98 | | 65 | 78 | 65 | 77 | 104 | 160 | 28 | 132 |
| 5 | 23 | 37 | 155 | | 48 | 67 | 65 | 56 | 96 | 160 | 31 | 658 |
| 6 | 19 | 34 | 150 | | 49 | 45 | 59 | 79 | 64 | 155 | 32 | 923 |
| 7 | 22 | 33 | 145 | 35 | 30 | 50 | 55 | 50 | 73 | 145 | 30 | 720 |
| 8 | 55 | 33 | 136 | | 42 | 59 | 59 | 54 | 54 | 140 | 37 | 578 |
| 9 | 46 | 34 | 132 | | 43 | 58 | 56 | 62 | 42 | 136 | 30 | 417 |
| 10 | 42 | 33 | 127 | | 48 | 64 | 54 | 56 | 43 | 127 | 26 | 286 |
| 11 | 38 | 34 | 122 | | 45 | 69 | 51 | 55 | 58 | 122 | 30 | 160 |
| 12 | 36 | 35 | 118 | | 43 | 145 | 50 | 42 | 54 | 103 | 36 | 136 |
| 13 | 35 | 34 | 85 | 44 | 50 | 53 | 49 | 72 | 41 | 87 | 47 | 140 |
| 14 | 35 | 31 | 69 | 42 | 45 | 61 | 48 | 215 | 145 | 85 | 40 | 122 |
| 15 | 35 | 29 | 64 | 45 | 45 | 62 | 45 | 297 | 432 | 175 | 33 | 114 |
| 16 | 35 | 28 | 59 | 45 | 42 | 64 | 45 | 109 | 520 | 81 | 31 | 89 |
| 17 | 34 | 26 | 59 | 45 | 46 | 61 | 67 | 67 | 653 | 91 | 27 | 104 |
| 18 | 35 | 26 | 56 | 45 | 63 | 61 | 65 | 118 | 2,860 | 53 | 34 | 136 |
| 19 | 34 | 24 | 58 | 44 | 60 | 59 | 55 | 132 | 3,980 | 51 | 31 | 109 |
| 20 | 34 | 23 | 50 | 44 | 69 | 52 | 72 | 101 | 4,540 | 50 | 24 | 77 |
| 21 | 34 | 26 | 61 | 59 | 66 | 61 | 42 | 92 | 4,820 | 45 | 21 | 66 |
| 22 | 34 | 26 | 38 | 52 | 66 | 57 | 36 | 79 | 4,770 | 77 | 23 | 50 |
| 23 | 34 | 25 | 34 | 50 | 50 | 59 | 53 | 45 | 1,700 | 51 | 28 | 42 |
| 24 | 32 | 27 | 28 | 47 | | 47 | 58 | 35 | 633 | 50 | 34 | 47 |
| 25 | 34 | 26 | 26 | 44 | | 45 | 64 | 32 | 633 | 51 | 72 | 56 |
| 26 | 34 | 28 | | | 55 | 44 | 82 | 45 | 699 | 42 | 83 | 205 |
| 27 | 32 | 27 | | 45 | | 46 | 42 | 33 | 764 | 36 | 58 | 136 |
| 28 | 34 | 28 | | 46 | | 47 | 36 | 27 | 465 | 37 | 50 | 114 |
| 29 | 34 | 27 | 30 | 42 | | 45 | 35 | 32 | 319 | 51 | 60 | 49 |
| 30 | 32 | 28 | | 39 | | 61 | 42 | 35 | 265 | 41 | 46 | 46 |
| 31 | 34 | | | 35 | | 69 | | 42 | | 37 | 52 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 55 | 13 | 32.8 | 2,020 | | | |
| November | | | | | | 57 | 23 | 29.3 | 1,760 | | | |
| December | | | | | | 155 | 25 | 69.7 | 4,920 | | | |
| January | | | | | | 59 | 35 | 41.2 | 2,530 | | | |
| February | | | | | | 73 | 30 | 52.2 | 2,900 | | | |
| March | | | | | | 145 | 44 | 80.9 | 3,750 | | | |
| April | | | | | | 82 | 35 | 55.6 | 3,510 | | | |
| May | | | | | | 237 | 27 | 75.4 | 4,940 | | | |
| June | | | | | | 4,820 | 41 | 975 | 57,880 | | | |
| July | | | | | | 250 | 35 | 83.8 | 5,080 | | | |
| August | | | | | | 83 | 21 | 39.8 | 2,390 | | | |
| September | | | | | | 963 | 42 | 199 | 11,860 | | | |
| The year | | | | | | 4,820 | 19 | 143 | 103,400 | | | |

Location.— Water-stage recorder in sec. 13, T. 1 N., R. 7 E., 1 mile southwest (revised) of Earleton. No important tributary between station and State line, 4 miles downstream.

Records available.- May 1932 to September 1934.

Extremes.—Maximum discharge during year, 2,100 second-feet Sept. 4 (gage height, 7.75 feet); minimum daily discharge, 5 second-feet Aug. 5.
1934-35: Maximum discharge, 7,410 second-feet June 4, 1935 (gage height, 16.25 feet); minimum daily discharge, that of Aug. 5, 1934.

Remarks.- Records good except those estimated for Feb. 23-28, which are fair. Low-water flow regulated by power plant at Beniston, which has pondage of about 1,500 acre-ft.

Zurcia et al. in review et. 1933-34

[illegible]

Big Blue River at Hull, Kans.

Location.- Water-stage recorder in NW $\frac{1}{4}$ sec. 3, T. 2 S., R. 7 E., a quarter of a mile west of Hull and 2 miles above Deer Creek.

Drainage area.- 4,430 square miles (revised).

Records available.- August 1919 to July 1925, August 1928 to September 1934.

Average discharge.- 11 years (1919-24, 1928-34), 510 second-feet.

Extremes.- Maximum discharge during year, 1,490 second-feet Sept. 4 (gage height, 7.00 feet); minimum, 10 second-feet July 30 (gage height, 1.70 feet).
1919-25, 1928-34: Maximum discharge, 14,500 second-feet Oct. 3, 1923 (gage height, 20.8 feet); minimum, 2 second-feet Sept. 8, 14, 1922 (gage height, 1.20 feet).
Maximum stage known, 31.7 feet in May 1903.

Remarks.- Records fair. Stage-discharge relation affected by ice at times during winter. Flow slightly regulated by power plants upstream.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | *600 | 117 | 122 | *190 | 188 | 222 | 162 | 201 | 103 | 92 | 29 | 330 |
| 2 | *300 | 112 | 158 | | 235 | 246 | 173 | 162 | 130 | 79 | 25 | 545 |
| 3 | *150 | 150 | 180 | | 164 | 228 | 192 | 149 | 132 | 78 | 23 | 1,040 |
| 4 | 121 | 113 | 235 | | 186 | 230 | 190 | 140 | 100 | 74 | 21 | 1,580 |
| 5 | 122 | 208 | 412 | | 169 | 220 | 179 | 149 | 99 | 75 | 24 | 1,260 |
| 6 | 121 | 124 | 218 | *190 | 195 | 277 | 195 | 175 | 119 | 77 | 21 | 1,070 |
| 7 | 142 | 162 | 212 | | 162 | 199 | 235 | 143 | 100 | 83 | 33 | 908 |
| 8 | 164 | 113 | 268 | | 155 | 210 | 208 | 199 | 94 | 60 | 29 | 674 |
| 9 | 124 | 135 | 164 | | 152 | 186 | 152 | 142 | 99 | 42 | 20 | 457 |
| 10 | 119 | 143 | 222 | | 154 | 208 | 260 | 122 | 67 | 66 | 22 | 565 |
| 11 | 129 | 164 | 180 | 235 | 171 | 188 | 215 | 169 | 87 | 59 | 57 | 289 |
| 12 | 121 | 208 | 212 | 208 | 140 | 147 | 206 | 157 | 88 | 45 | 39 | 122 |
| 13 | 117 | 130 | 133 | 210 | 175 | 228 | 150 | 178 | 87 | 44 | 44 | 203 |
| 14 | 155 | 171 | 143 | 301 | 137 | 164 | 129 | 157 | 76 | 72 | 35 | 186 |
| 15 | 171 | 138 | 142 | 159 | 142 | 201 | 145 | 178 | 86 | 86 | 39 | 182 |
| 16 | 125 | 121 | 206 | 225 | 218 | 154 | 149 | 145 | 81 | 63 | 47 | 197 |
| 17 | 113 | 164 | 169 | 162 | 175 | 192 | 203 | 160 | 87 | 60 | 35 | 133 |
| 18 | 105 | 149 | 169 | 215 | 263 | 157 | 162 | 155 | 88 | 42 | 29 | 164 |
| 19 | 166 | 122 | 199 | 167 | 142 | 122 | 155 | 145 | 103 | 45 | 31 | 189 |
| 20 | 127 | 110 | 175 | 147 | 201 | 188 | 143 | 140 | 86 | 71 | 16 | 164 |
| 21 | 130 | 179 | 150 | 222 | 142 | 160 | 162 | 105 | 79 | 36 | 23 | 94 |
| 22 | 129 | 167 | 228 | 186 | 162 | 143 | 206 | 119 | 114 | 36 | 25 | 103 |
| 23 | 110 | 157 | 178 | 212 | 184 | 147 | 162 | 107 | 85 | 22 | 25 | 90 |
| 24 | 160 | 186 | 195 | 155 | 169 | 162 | 184 | 107 | 114 | 32 | 27 | 69 |
| 25 | 129 | 167 | *180 | 129 | *180 | 154 | 173 | 116 | 108 | 31 | 27 | 135 |
| 26 | 121 | 147 | | 145 | | 155 | 166 | 149 | 152 | 26 | 30 | 955 |
| 27 | 116 | 166 | | 197 | | 164 | 162 | 132 | 124 | 27 | 29 | 1,140 |
| 28 | 164 | 263 | | 160 | | 166 | 149 | 95 | 84 | 28 | 47 | 750 |
| 29 | 114 | 177 | | 206 | | 159 | 206 | 107 | 84 | 30 | 28 | 562 |
| 30 | 103 | 147 | 184 | 372 | 140 | 140 | 132 | 104 | 82 | 18 | 31 | 275 |
| 31 | 188 | | *180 | 235 | 171 | | | 81 | | 35 | 35 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 600 | 103 | 153 | 9,430 | | |
| November | | | | | | | 263 | 110 | 154 | 9,140 | | |
| December | | | | | | | 412 | 122 | 190 | 11,700 | | |
| January | | | | | | | 372 | 129 | 200 | 12,270 | | |
| February | | | | | | | 263 | 137 | 175 | 9,720 | | |
| March | | | | | | | 277 | 122 | 183 | 11,240 | | |
| April | | | | | | | 260 | 129 | 177 | 10,520 | | |
| May | | | | | | | 201 | 81 | 142 | 8,700 | | |
| June | | | | | | | 152 | 67 | 97.9 | 5,280 | | |
| July | | | | | | | 92 | 18 | 52.4 | 3,220 | | |
| August | | | | | | | 57 | 16 | 30.5 | 1,870 | | |
| September | | | | | | | 1,380 | 69 | 473 | 28,170 | | |
| The year | | | | | | | 1,380 | 16 | 168 | 121,800 | | |

*Estimated.

Big Blue River at Randolph, Kans.

Location.- Water-stage recorder in SW $\frac{1}{4}$ sec. 12, T. 7 S., R. 6 E., at Randolph, half a mile above Fancy Creek. Prior to May 15, 1934 chain gage at same site and datum was used.

Drainage area.- 8,880 square miles (revised).

Records available.- April 1918 to September 1934.

Average discharge.- 16 years, 1,190 second-feet.

Extremes.- Maximum discharge during year, 2,200 second-feet May 15 (gage height, 5.96 feet); minimum, 31 second-feet Aug. 10 (gage height, 1.85 feet).

1918-34: Maximum discharge recorded, 29,900 second-feet May 8, 1930 (gage height, 22.79 feet); minimum discharge, that of Aug. 10, 1934. Bank-full stage, 20 feet.

Maximum stage known, 32.0 feet (revised) May 31, 1903.

Remarks.- Records good except those estimated, which are fair. Stage-discharge relation affected by ice Dec. 18, 20, Dec. 24 to Jan. 14, Feb. 25 to Mar. 2. Estimates based on comparison with combined discharge of Little Blue River at Waterville and Big Blue River at Hull.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-------|------|------|------|-------|
| 1 | 721 | 271 | 424 | | 344 | *375 | 371 | 332 | 228 | 145 | *80 | 105 |
| 2 | 549 | 356 | 292 | | 337 | *500 | 344 | 252 | 214 | 142 | *73 | 210 |
| 3 | 497 | 310 | 364 | | 325 | 524 | 344 | 325 | 214 | 142 | 66 | 514 |
| 4 | 404 | 289 | 310 | | 384 | 519 | 383 | 395 | 242 | 172 | 66 | 655 |
| 5 | 404 | 337 | 388 | | 344 | 542 | 399 | 363 | 192 | 157 | 59 | 1,440 |
| 6 | | 392 | 325 | 489 | 310 | 497 | 347 | 347 | 214 | 169 | 54 | 1,440 |
| 7 | | 344 | 372 | 514 | 307 | 528 | 383 | 285 | 295 | 124 | 54 | 1,330 |
| 8 | | 360 | 296 | 388 | 300 | 499 | 383 | 371 | 274 | 148 | 44 | 1,080 |
| 9 | | 412 | 368 | 384 | 303 | 455 | 383 | 274 | 367 | 133 | 42 | 930 |
| 10 | | 356 | 275 | 404 | 292 | 415 | 375 | 542 | 274 | 139 | 42 | 740 |
| 11 | 344 | 314 | 360 | | 303 | 419 | 371 | 495 | 256 | 118 | 56 | 605 |
| 12 | 314 | 352 | 400 | | 278 | 415 | 359 | 292 | 274 | 121 | 47 | 650 |
| 13 | 314 | 368 | 360 | | 307 | 379 | 367 | 491 | 221 | 127 | 42 | 497 |
| 14 | 310 | 348 | 348 | | 285 | 375 | 351 | 411 | 202 | 124 | 61 | 340 |
| 15 | 329 | 292 | 300 | 368 | 303 | 427 | 351 | 1,940 | 177 | *370 | 79 | 403 |
| 16 | 360 | 333 | 360 | 341 | 264 | 391 | 321 | 1,510 | 180 | *320 | 79 | 415 |
| 17 | 364 | 368 | 251 | 356 | 325 | 375 | 256 | 650 | 192 | *210 | 79 | 582 |
| 18 | 341 | 275 | *286 | 337 | 289 | 391 | 363 | 495 | 186 | *150 | 105 | 431 |
| 19 | 329 | 360 | 322 | 329 | 322 | 340 | 347 | 455 | 199 | *110 | 110 | 299 |
| 20 | 314 | 364 | *292 | 400 | 292 | 332 | 344 | 415 | 205 | *120 | 118 | 355 |
| 21 | 318 | 264 | 261 | 356 | 275 | 306 | 292 | 435 | 199 | *130 | 92 | 317 |
| 22 | 314 | 292 | 333 | 376 | 352 | 397 | 270 | 415 | 205 | 142 | 92 | 211 |
| 23 | 329 | 352 | 314 | 368 | 300 | 375 | 317 | 288 | 199 | *140 | 92 | 218 |
| 24 | 310 | 348 | | 348 | 234 | 363 | 288 | 245 | 208 | *135 | 89 | 228 |
| 25 | 282 | 352 | | 337 | | 371 | 336 | 263 | 241 | *132 | 92 | 180 |
| 26 | 368 | 341 | | 325 | | 310 | 351 | 238 | 172 | *130 | 87 | 415 |
| 27 | 300 | 348 | *320 | 289 | *300 | 371 | 270 | 238 | 207 | *130 | 92 | 1,440 |
| 28 | 322 | 310 | | 300 | | 363 | 427 | 245 | 179 | 124 | 97 | 1,650 |
| 29 | 289 | 333 | | 341 | | 371 | 355 | 228 | 181 | *110 | 89 | 1,170 |
| 30 | 307 | 567 | | 549 | | 363 | 263 | 242 | 142 | *98 | 89 | 1,040 |
| 31 | 341 | | | 493 | | 363 | | 211 | | 87 | 92 | |

| Month | Maximum | Minimum | Mean | Run-off in acre-feet |
|-----------|---------|---------|------|----------------------|
| October | 721 | 282 | 363 | 22,290 |
| November | 567 | 264 | 336 | 19,970 |
| December | 514 | 251 | 345 | 21,230 |
| January | 549 | 289 | 358 | 22,040 |
| February | 384 | 234 | 306 | 17,010 |
| March | 542 | 306 | 407 | 26,050 |
| April | 427 | 256 | 344 | 20,450 |
| May | 1,940 | 211 | 442 | 27,150 |
| June | 367 | 142 | 218 | 12,970 |
| July | | 87 | 148 | 9,100 |
| August | 118 | 42 | 76.1 | 4,680 |
| September | 1,650 | 105 | 669 | 39,830 |
| The year | 1,940 | 42 | 334 | 241,800 |

*Estimated.

Little Blue River near Endicott, Nebr.

Location.- Water-stage recorder in sec. 6, T. 1 N., R. 3 E., $1\frac{1}{2}$ miles northwest of Endicott and $1\frac{1}{2}$ miles above Rose Creek. Datum lowered 1.00 foot Oct. 1, 1933.

Drainage area.- 2,590 square miles.

Records available.- April 1929 to September 1934. At point several miles upstream May 1908 to September 1915.

Extremes.- Maximum discharge during year, 420 second-feet Sept. 27 (gage height, 3.01 feet); minimum daily discharge, 38 second-feet July 28, Aug. 5, 1908-15, 1929-34: Maximum discharge, 13,700 second-feet June 6, 7, 1908; minimum daily discharge, 16 second-feet Sept. 28, 1931 (discharge measurement).

Remarks.- Records good except those for periods of ice effect, Dec. 27 to Jan. 4, Jan. 7, 8, Feb. 20, 21, 23, Feb. 27 to Mar. 5, which were estimated on basis of temperature records. No diversions. Diurnal fluctuations caused by operation of power dams above.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|------|------|----------------------|------|-------|
| 1 | 121 | 122 | 132 | | 155 | 150 | 133 | 115 | 84 | 51 | 44 | 34 |
| 2 | 126 | 123 | 146 | | 178 | 110 | 132 | 118 | 80 | 55 | 42 | 36 |
| 3 | 123 | 122 | 190 | 110 | 171 | 500 | 129 | 118 | 77 | 50 | 41 | 200 |
| 4 | 122 | 126 | 169 | | 144 | 187 | 129 | 126 | 74 | 86 | 40 | 158 |
| 5 | 121 | 121 | 153 | 150 | 140 | 190 | 133 | 135 | 75 | 74 | 35 | 146 |
| 6 | 121 | 119 | 161 | 156 | 140 | 163 | 136 | 122 | 75 | 76 | 39 | 125 |
| 7 | 115 | 121 | 155 | 140 | 137 | 161 | 132 | 122 | 74 | 75 | 41 | 133 |
| 8 | 114 | 118 | 152 | 135 | 137 | 153 | 130 | 116 | 71 | 72 | 36 | 101 |
| 9 | 119 | 116 | 143 | 153 | 137 | 144 | 130 | 115 | 70 | 56 | 39 | 100 |
| 10 | 116 | 119 | 149 | 163 | 136 | 144 | 129 | 109 | 68 | 57 | 40 | 105 |
| 11 | 115 | 116 | 149 | 161 | 135 | 140 | 135 | 107 | 71 | 54 | 43 | 102 |
| 12 | 115 | 116 | 137 | 168 | 135 | 140 | 125 | 104 | 66 | 52 | 41 | 98 |
| 13 | 112 | 116 | 144 | 166 | 133 | 137 | 135 | 212 | 68 | 57 | 42 | 122 |
| 14 | 118 | 114 | 159 | 172 | 133 | 139 | 122 | 130 | 90 | 56 | 51 | 121 |
| 15 | 112 | 118 | 156 | 166 | 135 | 137 | 125 | 123 | 81 | 19 | 65 | 158 |
| 16 | 122 | 114 | 153 | 165 | 133 | 136 | 126 | 118 | 84 | 49 | 27 | 153 |
| 17 | 119 | 116 | 146 | 171 | 133 | 152 | 126 | 115 | 84 | 51 | 77 | 91 |
| 18 | 114 | 115 | 136 | 154 | 140 | 128 | 125 | 115 | 57 | 45 | 36 | 90 |
| 19 | 115 | 118 | 139 | 163 | 122 | 147 | 122 | 106 | 84 | 46 | 56 | 76 |
| 20 | 115 | 121 | 149 | 160 | 130 | 143 | 125 | 164 | 70 | 45 | 52 | 72 |
| 21 | 115 | 119 | 168 | 159 | 127 | 150 | 123 | 102 | 81 | 41 | 53 | 70 |
| 22 | 114 | 116 | 164 | 152 | 122 | 155 | 121 | 100 | 55 | 42 | 53 | 74 |
| 23 | 115 | 121 | 149 | 149 | 120 | 150 | 122 | 98 | 91 | 41 | 52 | 76 |
| 24 | 118 | 119 | 144 | 149 | 88 | 152 | 119 | 94 | 93 | 41 | 56 | 71 |
| 25 | 114 | 122 | 130 | 144 | 95 | 129 | 113 | 57 | 59 | 40 | 50 | 75 |
| 26 | 116 | 123 | 126 | 144 | 102 | 132 | 119 | 23 | 61 | 35 | 53 | 220 |
| 27 | 114 | 121 | | 147 | 110 | 129 | 118 | 91 | 50 | 40 | 53 | 356 |
| 28 | 118 | 123 | | 142 | 110 | 129 | 118 | 57 | 72 | 43 | 53 | 180 |
| 29 | 115 | 123 | 100 | 125 | | 130 | 119 | 98 | 57 | 45 | 56 | 123 |
| 30 | 122 | 122 | | 111 | | 132 | 121 | 90 | 65 | 42 | 53 | 112 |
| 31 | 115 | | | 122 | | 130 | | 87 | | 44 | 56 | |
| Month | | | | | | Maximum | Minimum | Mean | | Run-off in acre-feet | | |
| October | | | | | | 126 | 115 | 115 | | 7,240 | | |
| November | | | | | | 126 | 114 | 120 | | 7,110 | | |
| December | | | | | | 190 | | 142 | | 8,720 | | |
| January | | | | | | 152 | | 148 | | 9,000 | | |
| February | | | | | | 176 | 58 | 121 | | 7,300 | | |
| March | | | | | | 200 | 115 | 144 | | 8,860 | | |
| April | | | | | | 156 | 118 | 125 | | 7,460 | | |
| May | | | | | | 212 | 97 | 111 | | 6,840 | | |
| June | | | | | | 95 | 56 | 78.1 | | 4,650 | | |
| July | | | | | | 86 | 30 | 58.4 | | 3,410 | | |
| August | | | | | | 87 | 31 | 60.8 | | 3,120 | | |
| September | | | | | | 356 | 54 | 124 | | 7,370 | | |
| The year | | | | | | 396 | 30 | 112 | | 81,080 | | |

Little Blue River at Waterville, Kans.

Location.- Chain gage in SE $\frac{1}{4}$ sec. 16, T. 4 S., R. 6 E., half a mile north of Waterville and 1 mile below Corn Creek.

Drainage area.- 3,440 square miles (revised).

Records available.- June 1922 to June 1925, August 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 2,490 second-feet May 15 (gage height, 7.66 feet); minimum, 28 second-feet Aug. 12 (gage height, 1.68 feet).
1922-25, 1928-34: Maximum discharge recorded, about 13,200 second-feet July 13, 1923 (gage height, 15.4 feet); minimum, that of Aug. 12, 1934.

Remarks.- Records good except those estimated for periods of ice effect, Dec. 17-23, Dec. 25 to Jan. 17, Jan. 28-31, Feb. 22 to Mar. 3, which are fair.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|-------|----------------------|------|------|-------|
| 1 | 257 | 144 | 163 | 145 | 200 | 165 | 165 | 129 | 106 | 85 | 36 | 87 |
| 2 | 218 | 147 | 173 | 145 | 304 | | 161 | 127 | 104 | 85 | 38 | 74 |
| 3 | 195 | 147 | 185 | 150 | 250 | | 163 | 129 | 102 | 81 | 38 | 65 |
| 4 | 192 | 151 | 200 | 160 | 215 | | 159 | 145 | 100 | 71 | 35 | 131 |
| 5 | 190 | 156 | 274 | 175 | 180 | | 159 | 154 | 98 | 79 | 34 | 231 |
| 6 | 170 | 154 | 208 | 185 | 172 | 236 | 161 | 178 | 92 | 81 | 32 | 173 |
| 7 | 163 | 149 | 208 | 190 | 168 | 215 | 161 | 172 | 90 | 76 | 31 | 190 |
| 8 | 166 | 151 | 200 | 195 | 163 | 200 | 161 | 152 | 96 | 72 | 30 | 200 |
| 9 | 154 | 151 | 195 | 200 | 163 | 192 | 166 | 156 | 92 | 71 | 30 | 142 |
| 10 | 153 | 151 | 195 | 205 | 158 | 188 | 154 | 171 | 90 | 71 | 29 | 120 |
| 11 | 151 | 151 | 180 | 210 | 170 | 192 | 154 | 152 | 90 | 71 | 29 | 109 |
| 12 | 149 | 154 | 182 | 215 | 161 | 172 | 152 | 129 | 96 | 67 | 28 | 100 |
| 13 | 149 | 154 | 180 | 215 | 161 | 172 | 147 | 242 | 85 | 65 | 34 | 98 |
| 14 | 147 | 154 | 170 | 220 | 158 | 175 | 147 | 1,380 | 85 | 303 | 34 | 92 |
| 15 | 147 | 149 | 172 | 225 | 158 | 170 | 149 | 1,860 | 87 | 104 | 32 | 149 |
| 16 | 147 | 149 | 185 | 230 | 156 | 165 | 152 | 487 | 98 | 62 | 69 | 359 |
| 17 | 144 | 151 | 180 | 235 | 159 | 169 | 147 | 294 | 96 | 54 | 74 | 210 |
| 18 | 144 | 151 | 170 | 239 | 163 | 163 | 145 | 226 | 114 | 45 | 63 | 161 |
| 19 | 140 | 154 | 170 | 202 | 163 | 152 | 143 | 185 | 212 | 46 | 65 | 132 |
| 20 | 140 | 158 | 180 | 202 | 170 | 149 | 145 | 158 | 104 | 43 | 59 | 117 |
| 21 | 139 | 153 | 160 | 212 | 168 | 161 | 143 | 144 | 98 | 41 | 57 | 107 |
| 22 | 140 | 161 | 200 | 199 | 130 | 154 | 140 | 116 | 38 | 51 | 97 | 97 |
| 23 | 140 | 166 | 180 | 178 | 150 | 163 | 133 | 127 | 39 | 52 | 97 | 97 |
| 24 | 140 | 156 | 170 | 175 | 140 | 172 | 134 | 131 | 178 | 31 | 49 | 94 |
| 25 | 140 | 156 | 160 | 170 | 140 | 168 | 136 | 125 | 135 | 34 | 46 | 115 |
| 26 | 140 | 156 | 155 | 172 | 145 | 158 | 136 | 116 | 110 | 40 | 52 | 280 |
| 27 | 140 | 154 | 150 | 163 | 145 | 154 | 134 | 116 | 100 | 34 | 48 | 306 |
| 28 | 140 | 159 | 145 | 172 | 150 | 154 | 134 | 114 | 92 | 35 | 49 | 358 |
| 29 | 142 | 156 | 145 | | | 158 | 134 | 112 | 88 | 31 | 49 | 437 |
| 30 | 144 | 156 | 145 | 160 | | 165 | 132 | 110 | 85 | 34 | 46 | 517 |
| 31 | 142 | | 145 | | | 168 | | 108 | | 34 | 52 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 257 | 136 | 157 | 8,630 | | | |
| November | | | | | | 161 | 144 | 153 | 9,110 | | | |
| December | | | | | | 274 | | 179 | 11,020 | | | |
| January | | | | | | 279 | | 189 | 11,630 | | | |
| February | | | | | | 304 | | 171 | 9,520 | | | |
| March | | | | | | 214 | 149 | 177 | 11,000 | | | |
| April | | | | | | 165 | 132 | 148 | 8,110 | | | |
| May | | | | | | 1,860 | 106 | 260 | 1,000 | | | |
| June | | | | | | 178 | 36 | 102 | 6,090 | | | |
| July | | | | | | 363 | 31 | 65.2 | 4,110 | | | |
| August | | | | | | 53 | 28 | 44.2 | 2,760 | | | |
| September | | | | | | 517 | 65 | 190 | 10,650 | | | |
| The year | | | | | | 1,860 | 31 | 152 | 110,270 | | | |

Soldier Creek at Topeka, Kans.

Location.- Chain gage in NW $\frac{1}{4}$ sec. 18, T. 11 S., R. 16 E., at State Industrial School, in Topeka.

Drainage area.- 304 square miles.

Records available.- May 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 1,470 second-feet Sept. 27 (gage height, 10.22 feet); minimum, 1 second-foot for long periods during year.
1929-34: Maximum discharge recorded, 5,780 second-feet Nov. 17, 1931 (gage height, 19.36 feet); no flow July 29, 1931, and Aug. 1, 1933.

Remarks.- Records poor.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | | 25 | 1 | | 2 | | | | 2 | 1 | 1 | 1 |
| 2 | | 3 | *2 | | 2 | *2 | | | 2 | 1 | 1 | *2 |
| 3 | | 6 | | | 2 | | | | 2 | 1 | 1 | 3 |
| 4 | | 2 | | | 2 | 2 | | *2 | | 1 | 1 | 2 |
| 5 | | 1 | *1 | | 1 | 5 | | | 64 | 1 | *1 | 56 |
| 6 | | 2 | | | 2 | 2 | | | 25 | 2 | 1 | 36 |
| 7 | | 2 | 1 | | 2 | 2 | | 2 | 8 | 2 | 1 | 8 |
| 8 | | 1 | 2 | | 2 | 2 | | 2 | 3 | 2 | 1 | 3 |
| 9 | | 1 | 1 | | 2 | 2 | | 2 | 3 | 2 | 1 | *3 |
| 10 | | 1 | 1 | | 2 | 2 | | 2 | 5 | 1 | 1 | 2 |
| 11 | | 2 | | | 1 | *3 | | 2 | 43 | 1 | 1 | 2 |
| 12 | | 1 | | | 1 | *3 | | 2 | 5 | 1 | 1 | 2 |
| 13 | | *2 | | | 2 | *2 | | 12 | 3 | 1 | 1 | 2 |
| 14 | | *2 | | *3 | 2 | *2 | | 8 | 3 | 1 | 1 | 1 |
| 15 | | 4 | | | 2 | *2 | | 3 | 3 | 1 | 1 | 1 |
| 16 | | 1 | | | 2 | *2 | *3 | 3 | 2 | 1 | 1 | *1 |
| 17 | | 2 | | | 2 | *2 | | 3 | 2 | 1 | 1 | 1 |
| 18 | | 114 | *2 | | 2 | 2 | | 3 | 2 | 1 | 1 | 1 |
| 19 | | 114 | | | 2 | 2 | | 3 | 2 | 1 | *2 | 1 |
| 20 | | 24 | | | 2 | 2 | | 3 | 2 | 1 | 3 | 1 |
| 21 | | *14 | *1 | | 2 | 2 | | 2 | 2 | 1 | 2 | 2 |
| 22 | | 4 | | | 2 | *2 | | 2 | 2 | 1 | 2 | 1 |
| 23 | | | | | 2 | 2 | | 2 | 2 | 1 | 2 | *1 |
| 24 | | | | | | 2 | | 2 | 2 | 1 | 2 | 1 |
| 25 | | *4 | | | | *2 | | 2 | 1 | 1 | 2 | 1 |
| 26 | | | | | *1 | *2 | | 2 | 2 | 1 | *2 | 3 |
| 27 | | *3 | | | | *2 | | 2 | 1 | 1 | 1 | 1,470 |
| 28 | | 1 | | | | 2 | | 2 | 1 | 1 | 1 | 193 |
| 29 | | 1 | | *2 | | *2 | | 2 | 1 | 1 | 1 | 77 |
| 30 | | *1 | | | | *2 | | 2 | 1 | 1 | 1 | *64 |
| 31 | | 1 | | 2 | | *2 | | 2 | | 1 | 1 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 114 | 1 | 11.3 | 696 | | |
| November | | | | | | | | | 1.0 | 61 | | |
| December | | | | | | | | | 2.0 | 123 | | |
| January | | | | | | | | | 2.9 | 177 | | |
| February | | | | | | | | | 1.7 | 95 | | |
| March | | | | | | | 3 | | 2.1 | 129 | | |
| April | | | | | | | | | 3.0 | 179 | | |
| May | | | | | | | 12 | 2 | 2.7 | 167 | | |
| June | | | | | | | 64 | 1 | 6.5 | 387 | | |
| July | | | | | | | 2 | 1 | 1.1 | 69 | | |
| August | | | | | | | 3 | 1 | 1.3 | 79 | | |
| September | | | | | | | 1,470 | 1 | 64.7 | 3,850 | | |
| The year | | | | | | | 1,470 | | 8.3 | 6,010 | | |

*Estimated.

Delaware River at Valley Falls, Kans.

Location.- Chain gage in SW $\frac{1}{4}$ sec. 18, T. 8 S., R. 18 E., at Valley Falls, 500 feet below Walnut Creek.

Drainage area.- 922 square miles.

Records available.- June 1922 to September 1934.

Average discharge.- 12 years, 329 second-feet.

Extremes.- Maximum discharge recorded during year, 5,530 second-feet Sept. 26 (gage height, 12.49 feet); minimum, about 0.1 second-foot several days during June, July, and August.
1922-34: Maximum discharge recorded, 30,000 second-feet June 16, 1925 (gage height, 29.72 feet); minimum, that of June, July, and August 1934. Bank-full stage, 22 feet.

Remarks.- Records good except those for Oct. 1-15, which are fair.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|-------|
| 1 | *40 | 17 | 19 | 18 | 17 | 9 | 22 | *12 | 1 | 0.1 | 0.7 | 10 |
| 2 | 14 | 15 | 33 | 18 | 17 | 19 | 24 | 11 | 2 | *.1 | .8 | 187 |
| 3 | 20 | 14 | 57 | 18 | 17 | 56 | 24 | 12 | 2 | .1 | 1 | 2,430 |
| 4 | 16 | 14 | 44 | 19 | 19 | 144 | 29 | 22 | 2 | .1 | .9 | 522 |
| 5 | *15 | 14 | 30 | 23 | 17 | 98 | 25 | 52 | *2 | .4 | .9 | 48 |
| 6 | 14 | *14 | 21 | 25 | *17 | 62 | 22 | 64 | 3 | .9 | .4 | 27 |
| 7 | 14 | 14 | 18 | 24 | 17 | 40 | 19 | 40 | 3 | 2 | .1 | 13 |
| 8 | 14 | 14 | 18 | 19 | 17 | 27 | 19 | 24 | 5 | 1 | .1 | 8 |
| 9 | 16 | *14 | 18 | 22 | 17 | 19 | 18 | 17 | 24 | .9 | .4 | 6 |
| 10 | 19 | 14 | 19 | 22 | 17 | 12 | 18 | 12 | 144 | *.9 | *.4 | 8 |
| 11 | 30 | 14 | 17 | 23 | 17 | 19 | 16 | 10 | 45 | .9 | .4 | 13 |
| 12 | 24 | 14 | *17 | 24 | 16 | 20 | 16 | 10 | 14 | .9 | .7 | 16 |
| 13 | 20 | *14 | 17 | 22 | 16 | 19 | 16 | 37 | 16 | 1 | 1,870 | *16 |
| 14 | 15 | 14 | 16 | 22 | 14 | 19 | 20 | 72 | 15 | 2 | 366 | 17 |
| 15 | 19 | 14 | 15 | 20 | 13 | 19 | 14 | 32 | 8 | 1 | 579 | 13 |
| 16 | 158 | 12 | 16 | 22 | 17 | 19 | 14 | 22 | 9 | 1 | 128 | 19 |
| 17 | 121 | 14 | 16 | 26 | 14 | 19 | 14 | 17 | 9 | *1 | 25 | 15 |
| 18 | 48 | 12 | 17 | 24 | 12 | 18 | 12 | 12 | 9 | 1 | 12 | 14 |
| 19 | 30 | 12 | 19 | 24 | 14 | 17 | 12 | 10 | 8 | *1 | 6 | 15 |
| 20 | 19 | 12 | 32 | 23 | 14 | 14 | 12 | 9 | 9 | .9 | 6 | 23 |
| 21 | 16 | *12 | 26 | 22 | *14 | 18 | 10 | 8 | 9 | 1 | 4 | 119 |
| 22 | 17 | 12 | 19 | 22 | 14 | 18 | 10 | 6 | 11 | .7 | 3 | 121 |
| 23 | 15 | 14 | 19 | 19 | 14 | 17 | *11 | 6 | 11 | .4 | 1 | 22 |
| 24 | 13 | 16 | 15 | 16 | 14 | 17 | 12 | 6 | 12 | .1 | 1 | 15 |
| 25 | 12 | 16 | 14 | 17 | 14 | 17 | *12 | 4 | 7 | .2 | 3 | 9 |
| 26 | 12 | 14 | 9 | 16 | 4 | 17 | 12 | 4 | 3 | *.2 | 3 | 4,480 |
| 27 | 12 | 14 | 9 | 16 | 5 | 17 | *12 | 3 | 1 | .1 | 3 | 2,180 |
| 28 | 14 | 14 | 10 | 16 | 6 | 16 | 12 | *2 | .4 | .1 | 3 | 522 |
| 29 | 14 | 16 | 11 | 14 | 17 | 17 | 12 | 2 | .1 | .1 | 3 | 1,500 |
| 30 | 15 | 16 | 16 | 14 | 18 | 18 | 12 | *2 | .1 | .1 | 3 | 131 |
| 31 | 14 | 16 | 19 | 17 | | | | 2 | | .4 | 3 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 158 | 12 | 26.4 | 1,630 | | | |
| November | | | | | | 17 | 12 | 14.0 | 833 | | | |
| December | | | | | | 57 | 9 | 20.2 | 1,240 | | | |
| January | | | | | | 26 | 14 | 20.2 | 1,240 | | | |
| February | | | | | | 19 | 4 | 14.4 | 801 | | | |
| March | | | | | | 144 | 9 | 27.7 | 1,700 | | | |
| April | | | | | | 29 | 10 | 16.0 | 954 | | | |
| May | | | | | | 72 | 2 | 17.5 | 1,080 | | | |
| June | | | | | | 144 | .1 | 12.8 | 763 | | | |
| July | | | | | | | .1 | .68 | 41 | | | |
| August | | | | | | 1,870 | .1 | 97.7 | 6,010 | | | |
| September | | | | | | 4,480 | 6 | 417 | 24,800 | | | |
| The year | | | | | | 4,480 | .1 | 56.8 | 41,090 | | | |

*Interpolated.

Wakarusa River near Lawrence, Kans.

Location.- Chain gage in NW $\frac{1}{4}$ sec. 24, T. 13 S., R. 19 E., 4 miles southwest of Lawrence and 11 miles above junction with Kansas River.

Drainage area.- 458 square miles.

Records available.- April 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 2,470 second-feet May 14 (gage height, 18.03 feet); no flow for long periods.
1929-34: Maximum discharge recorded, 10,500 second-feet Nov. 24, 1931 (gage height, 27.62 feet); no flow at times. Bank-full stage, 22 feet.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|-------------------------|------|-------|
| 1 | | | | | | 0 | 0 | 0 | 0 | | | 0 |
| 2 | | | | | | 0 | 0 | 0 | 0 | | | 0 |
| 3 | | | | | | 1 | 0 | 0 | 0 | | | 0 |
| 4 | | | | | | 2 | 2 | 0 | 0 | | | 0 |
| 5 | | | | | | 2 | 15 | 258 | 0 | | | 0 |
| 6 | | | | | | 2 | 11 | 64 | 0 | | | 0 |
| 7 | | | | | | 2 | 1 | 27 | 0 | | | 0 |
| 8 | | | | | | 1 | 1 | 14 | 0 | | | 0 |
| 9 | | | | | | 0 | 1 | 2 | 0 | | | 0 |
| 10 | | | | | | 0 | 0 | 1 | 0 | | | 0 |
| 11 | | | | | | 0 | 0 | 0 | 0 | | | 0 |
| 12 | | | | | | 0 | 0 | 0 | 0 | | | 0 |
| 13 | | | | | | 0 | 0 | 533 | 0 | | | 0 |
| 14 | | | | | | 0 | 0 | 2,050 | 0 | | | 0 |
| 15 | | | | | | 0 | 0 | 1,490 | 0 | | | 0 |
| 16 | | | | | | 0 | 0 | 280 | 0 | | | 0 |
| 17 | | | | | | 0 | 0 | 122 | 0 | | | 0 |
| 18 | | | | | | 0 | 0 | 71 | 80 | | | 0 |
| 19 | | | | | | 0 | 0 | 43 | 54 | | | 0 |
| 20 | | | | | | 0 | 0 | 28 | 16 | | | 0 |
| 21 | | | | | | 0 | 0 | 18 | 2 | | | 0 |
| 22 | | | | | | 0 | 0 | 12 | 0 | | | 0 |
| 23 | | | | | | 0 | 0 | 7 | 0 | | | 0 |
| 24 | | | | | | 0 | 0 | 3 | 0 | | | 0 |
| 25 | | | | | | 0 | 0 | 2 | 0 | | | 0 |
| 26 | | | | | | 0 | 0 | 1 | 0 | | | 0 |
| 27 | | | | | | 0 | 0 | 0 | 0 | | | 0 |
| 28 | | | | | | 0 | 0 | 0 | 0 | | | 50 |
| 29 | | | | | | 0 | 0 | 0 | 0 | | | 37 |
| 30 | | | | | | 0 | 0 | 0 | 0 | | | 8 |
| 31 | | | | | | 0 | 0 | 0 | 0 | | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 0 | 0 | 0 | 0 | | |
| November | | | | | | | 0 | 0 | 0 | 0 | | |
| December | | | | | | | 0 | 0 | 0 | 0 | | |
| January | | | | | | | 0 | 0 | 0 | 0 | | |
| February | | | | | | | 0 | 0 | 0 | 0 | | |
| March | | | | | | | 2 | 0 | .3 | 20 | | |
| April | | | | | | | 15 | 0 | 1.0 | 61 | | |
| May | | | | | | | 2,050 | 0 | 162 | 9,960 | | |
| June | | | | | | | 50 | 0 | 5.1 | 301 | | |
| July | | | | | | | 0 | 0 | 0 | 0 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 50 | 0 | 3.2 | 188 | | |
| The year | | | | | | | 2,050 | 0 | 14.6 | 10,530 | | |

Note.- No flow during months left blank.

Stranger Creek near Tonganoxie, Kans.

Location.- Chain gage in NE $\frac{1}{4}$ sec. 13, T. 11 S., R. 21 E., 1 mile above mouth of Tonganoxie Creek, 4 miles east of Tonganoxie, and 9 miles above junction with Kansas River.

Drainage area.- 406 square miles.

Records available.- May 1929 to September 1934.

Extremes.-Maximum discharge recorded during year, 618 second-feet Sept. 28 (gage height, 11.55 feet); no flow at times.
1929-34: Maximum discharge recorded, 10,300 second-feet June 2, 1929 (gage height, 23.46 feet); no flow at times during 1934. Bank-full stage, 23 feet.
Maximum stage known, 27.31 feet Apr. 21, 1929 (discharge, 15,300 second-feet).

Remarks.- Records fair.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 2 | 1 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 1 | | 0 |
| 2 | 3 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 1 | | 0 |
| 3 | 2 | 1 | 2 | 2 | 2 | 3 | 4 | 2 | 18 | 1 | | 0 |
| 4 | 2 | 1 | 2 | 2 | 2 | 4 | 164 | 41 | 3 | 0 | | 0 |
| 5 | 2 | 1 | 2 | 2 | 2 | 8 | 21 | 127 | 2 | 0 | | 234 |
| 6 | 2 | 1 | 2 | 2 | 2 | 16 | 8 | 157 | 2 | 1 | | 87 |
| 7 | 2 | 1 | 2 | 2 | 2 | 17 | 6 | 55 | 2 | 1 | | 28 |
| 8 | 2 | 1 | 2 | 2 | 2 | 13 | 6 | 24 | 2 | 1 | | 10 |
| 9 | 2 | 1 | 2 | 2 | 2 | 10 | 6 | 15 | 2 | 1 | | 5 |
| 10 | 1 | 1 | 2 | 3 | 3 | 5 | 5 | 9 | 3 | 1 | | 3 |
| 11 | 1 | 1 | 2 | 3 | 3 | 4 | 5 | 6 | 77 | 1 | | 2 |
| 12 | 1 | 1 | 2 | 3 | 3 | 4 | 4 | 5 | 24 | 1 | | 2 |
| 13 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 92 | 16 | 1 | | 2 |
| 14 | 1 | 1 | 2 | 3 | 3 | 3 | 2 | 133 | 7 | 1 | | 22 |
| 15 | 1 | 1 | 2 | 3 | 3 | 3 | 2 | 37 | 4 | 1 | | 9 |
| 16 | 1 | 1 | 2 | 3 | 3 | 3 | 2 | 11 | 3 | 1 | | 2 |
| 17 | 1 | 1 | 2 | 3 | 3 | 3 | 2 | 6 | 4 | 1 | | 1 |
| 18 | 1 | 1 | 2 | 3 | 3 | 3 | 2 | 4 | 6 | 1 | | 1 |
| 19 | 1 | 1 | 2 | 3 | 3 | 2 | 2 | 4 | 6 | 1 | | 1 |
| 20 | 1 | 1 | 2 | 3 | 3 | 2 | 2 | 3 | 4 | 1 | | 1 |
| 21 | 1 | 1 | 3 | 3 | 2 | 2 | 2 | 4 | 2 | 0 | | 2 |
| 22 | 1 | 1 | 2 | 3 | 2 | 2 | 2 | 4 | 2 | 0 | | 2 |
| 23 | 1 | 1 | 2 | 3 | 2 | 2 | 2 | 3 | 4 | 0 | | 2 |
| 24 | 1 | 1 | 2 | 3 | 2 | 2 | 1 | 2 | 2 | 0 | | 1 |
| 25 | 1 | 1 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 0 | | 1 |
| 26 | 1 | 1 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 0 | | 2 |
| 27 | 1 | 1 | 3 | 3 | 2 | 2 | 2 | 2 | 1 | 0 | | 4 |
| 28 | 1 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 1 | 0 | | 391 |
| 29 | 1 | 2 | 2 | 3 | | 2 | 2 | 2 | 1 | 0 | | 333 |
| 30 | 1 | 2 | 2 | 3 | | 2 | 2 | 2 | 1 | 0 | | 164 |
| 31 | 1 | | | 2 | | 2 | | 2 | | 0 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 3 | 1 | 1.3 | 81 | | |
| November | | | | | | | 2 | 1 | 1.1 | 65 | | |
| December | | | | | | | 3 | 2 | 2.1 | 129 | | |
| January | | | | | | | 3 | 2 | 2.7 | 169 | | |
| February | | | | | | | 3 | 2 | 2.4 | 133 | | |
| March | | | | | | | 17 | 2 | 4.3 | 266 | | |
| April | | | | | | | 164 | 1 | 9.0 | 536 | | |
| May | | | | | | | 157 | 2 | 24.6 | 1,510 | | |
| June | | | | | | | 77 | 1 | 6.9 | 411 | | |
| July | | | | | | | 1 | 0 | .6 | 36 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 391 | 0 | 43.7 | 2,600 | | |
| The year | | | | | | | 391 | 0 | 8.2 | 5,940 | | |

Note.- No flow during August.

Grand River near Gallatin, Mo.

Location.- Chain gage in NW $\frac{1}{4}$ sec. 16. T. 59 N., R. 27 W., 1,000 feet above Chicago, Rock Island & Pacific Railway bridge and 2 miles northeast of Gallatin. Zero of gage is 712.95 feet (revised) above mean sea level.

Drainage area.- 2,250 square miles.

Records available.- June 1921 to September 1934.

Average discharge.- 13 years, 1,110 second-feet.

Extremes.- Maximum discharge recorded during year, 5,000 second-feet Apr. 4 (gage height, 14.25 feet); minimum, 3.6 second-feet Aug. 10 (gage height, 1.16 feet).
1921-34: Maximum discharge recorded, 56,800 second-feet June 2, 1929 (gage height, 37.38 feet); minimum, that of Aug. 10, 1934.
Maximum stage known, 39.3 feet in July 1909.

Remarks.- Records fair. Stage-discharge relation affected by ice Dec. 26-31, Feb. 27 to Mar. 1.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|------|---------|------|------|-------|-----------------|-------|---------|-----------|------|-------|
| 1 | 595 | 70 | 59 | 42 | 68 | 53 | 59 | 50 | 28 | 45 | 5 | 12 |
| 2 | 295 | 66 | 69 | 47 | 59 | 44 | 70 | 45 | 28 | 37 | 7 | 153 |
| 3 | 240 | 66 | 100 | 54 | 65 | 100 | 50 | 46 | 29 | 45 | 7 | 153 |
| 4 | 153 | 64 | 165 | 58 | 65 | 153 | 1,730 | 45 | 26 | 43 | 6 | 711 |
| 5 | 153 | 62 | 207 | 70 | 63 | 276 | 4,660 | 51 | 26 | 34 | 5 | 398 |
| 6 | 153 | 62 | 153 | 80 | 75 | 334 | 1,250 | 51 | 25 | 31 | 4.0 | 178 |
| 7 | 153 | 60 | 128 | 110 | 65 | 240 | 681 | 59 | 24 | 29 | 5 | 100 |
| 8 | 131 | 60 | 105 | 90 | 65 | 142 | 466 | 64 | 23 | 20 | 4.4 | 60 |
| 9 | 126 | 62 | 95 | 50 | 36 | 142 | 295 | 57 | 30 | 20 | 4.0 | 36 |
| 10 | 115 | 57 | 90 | 47 | 35 | 90 | 240 | 45 | 36 | 23 | 3.6 | 32 |
| 11 | 110 | 57 | 75 | 90 | 35 | 95 | 178 | 39 | 34 | 21 | 4.0 | 18 |
| 12 | 105 | 57 | 51 | 62 | 47 | 86 | 153 | 36 | 31 | 17 | 6 | 23 |
| 13 | 105 | 57 | 50 | 62 | 47 | 85 | 136 | 47 | 26 | 14 | 6 | 80 |
| 14 | 95 | 54 | 51 | 62 | 50 | 85 | 116 | 1,140 | 27 | 13 | 6 | 1,810 |
| 15 | 95 | 50 | 61 | 58 | 51 | 80 | 105 | 771 | 30 | 12 | 11 | 490 |
| 16 | 115 | 48 | 61 | 47 | 54 | 80 | 105 | 355 | 28 | 13 | 48 | 334 |
| 17 | 334 | 48 | 63 | 51 | 54 | 80 | 100 | 192 | 28 | 12 | 42 | 207 |
| 18 | 240 | 48 | 65 | 69 | 56 | 70 | 95 | 131 | 26 | 10 | 120 | 126 |
| 19 | 192 | 46 | 63 | 65 | 56 | 70 | 90 | 100 | 22 | 11 | 45 | 100 |
| 20 | 153 | 46 | 90 | 75 | 51 | 56 | 85 | 75 | 25 | 9 | 32 | 63 |
| 21 | 126 | 46 | 95 | 75 | 50 | 55 | 75 | 59 | 26 | 8 | 45 | 53 |
| 22 | 105 | 46 | 85 | 75 | 44 | 55 | 66 | 95 | 26 | 7 | 27 | 153 |
| 23 | 95 | 50 | 80 | 95 | 44 | 54 | 62 | 90 | 27 | 7 | 17 | 75 |
| 24 | 85 | 62 | 75 | 115 | 32 | 56 | 58 | 52 | 1,620 | 8 | 16 | 43 |
| 25 | 80 | 54 | 40 | 165 | 32 | 62 | 56 | 44 | 741 | 6 | 13 | 32 |
| 26 | 75 | 54 | 34 | 142 | 29 | 51 | 54 | 36 | 240 | 8 | 10 | 37 |
| 27 | 75 | 54 | 34 | 115 | 26 | 50 | 52 | 38 | 153 | 7 | 8 | 355 |
| 28 | 75 | 53 | 34 | 95 | 26 | 49 | 51 | 36 | 100 | 7 | 8 | 165 |
| 29 | 75 | 53 | 34 | 76 | | 49 | 61 | 35 | 67 | 8 | 7 | 1,060 |
| 30 | 75 | 53 | 34 | 75 | | 47 | 60 | 31 | 54 | 7 | 6 | 541 |
| 31 | 70 | | 40 | 69 | | 45 | | 32 | | 8 | | |
| Month | Maximum | | Minimum | | Mean | | Per square mile | | Run-off | | | |
| | | | | | | | | | Inches | Acre-feet | | |
| October | 595 | 70 | 59 | 42 | 148 | 0.066 | 0.066 | 0.08 | 9,110 | | | |
| November | 70 | 46 | 56.2 | 46 | 56.2 | .026 | .026 | .03 | 3,280 | | | |
| December | 207 | 34 | 76.9 | 34 | 76.9 | .034 | .034 | .04 | 4,730 | | | |
| January | 165 | 42 | 76.6 | 42 | 76.6 | .034 | .034 | .04 | 4,710 | | | |
| February | 75 | 26 | 49.2 | 26 | 49.2 | .022 | .022 | .02 | 2,740 | | | |
| March | 334 | 33 | 93.6 | 33 | 93.6 | .042 | .042 | .05 | 5,760 | | | |
| April | 4,660 | 50 | 376 | 50 | 376 | .167 | .167 | .19 | 22,550 | | | |
| May | 1,140 | 31 | 127 | 31 | 127 | .056 | .056 | .06 | 7,330 | | | |
| June | 1,520 | 22 | 117 | 22 | 117 | .052 | .052 | .06 | 6,950 | | | |
| July | 46 | 6 | 17.4 | 6 | 17.4 | .0077 | .0077 | .009 | 1,070 | | | |
| August | 120 | 3.6 | 17.2 | 3.6 | 17.2 | .0076 | .0076 | .009 | 1,060 | | | |
| September | 1,810 | 12 | 253 | 12 | 253 | .112 | .112 | .12 | 15,070 | | | |
| The year | 4,660 | 3.6 | 117 | 3.6 | 117 | .0520 | .0520 | .71 | 84,660 | | | |

Grand River near Sumner, Mo.

Location.- Chain gage in NE $\frac{1}{4}$ sec. 29, T. 56 N., R. 21 W., on county highway bridge 80 feet below Chicago, Burlington & Quincy Railroad bridge 2 miles southwest of Sumner. Zero of gage is 630.77 feet above mean sea level.

Drainage area.- 6,880 square miles.

Records available.- April 1924 to September 1934.

Average discharge.- 10 years, 4,020 second-feet.

Extremes.- Maximum discharge recorded during year, 8,280 second-feet Apr. 5 (gage height, 15.29 feet); minimum, 10 second-feet Aug. 12 (gage height, 2.26 feet).
1924-34: Maximum discharge recorded, 110,000 second-feet June 4, 1929; maximum gage height recorded, 35.35 feet Nov. 20, 1928; minimum discharge recorded, that of Aug. 12, 1934.
Maximum stage known, 36.7 feet July 9, 1909 (discharge, about 150,000 second-feet).

Remarks.- Records good except those for periods of ice effect, Dec. 25 to Jan. 9, Jan. 29 to Feb. 3, Feb. 21 to Mar. 4, which are poor.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|------|------|------|------|------|-------|-------|-------|------|-------|-------|
| 1 | 1,810 | 181 | 112 | 79 | 162 | 79 | 126 | 124 | 82 | 132 | 21 | 400 |
| 2 | 1,120 | 181 | 153 | 79 | 194 | 79 | 132 | 112 | 82 | 121 | 19 | 1,810 |
| 3 | 822 | 181 | 172 | 79 | 194 | 104 | 150 | 124 | 82 | 102 | 19 | 1,540 |
| 4 | 639 | 181 | 221 | 104 | 211 | 162 | 264 | 124 | 92 | 86 | 19 | 2,200 |
| 5 | 528 | 176 | 340 | 104 | 218 | 463 | 6,350 | 380 | 82 | 86 | 17 | 2,490 |
| 6 | 442 | 168 | 442 | 104 | 184 | 822 | 6,520 | 264 | 82 | 75 | 17 | 1,120 |
| 7 | 400 | 150 | 301 | 104 | 153 | 919 | 3,560 | 159 | 82 | 70 | 14 | 639 |
| 8 | 360 | 178 | 246 | 104 | 159 | 729 | 2,030 | 147 | 84 | 70 | 12 | 506 |
| 9 | 320 | 159 | 229 | 132 | 141 | 550 | 1,380 | 159 | 79 | 79 | 12 | 264 |
| 10 | 301 | 159 | 211 | 184 | 102 | 380 | 969 | 141 | 79 | 75 | 11 | 178 |
| 11 | 282 | 147 | 197 | 211 | 102 | 301 | 729 | 124 | 115 | 64 | 14 | 135 |
| 12 | 264 | 135 | 178 | 197 | 107 | 301 | 594 | 107 | 99 | 57 | 10 | 340 |
| 13 | 246 | 129 | 172 | 184 | 138 | 246 | 463 | 168 | 94 | 53 | 14 | 528 |
| 14 | 204 | 118 | 153 | 150 | 126 | 246 | 380 | 550 | 92 | 49 | 16 | 2,610 |
| 15 | 188 | 107 | 153 | 132 | 115 | 228 | 340 | 2,490 | 86 | 46 | 25 | 3,980 |
| 16 | 264 | 124 | 150 | 115 | 110 | 211 | 282 | 1,650 | 102 | 40 | 301 | 2,200 |
| 17 | 400 | 138 | 144 | 121 | 138 | 204 | 246 | 919 | 112 | 40 | 594 | 969 |
| 18 | 1,760 | 110 | 138 | 132 | 132 | 184 | 191 | 550 | 102 | 36 | 775 | 421 |
| 19 | 1,020 | 110 | 138 | 138 | 126 | 165 | 191 | 360 | 86 | 36 | 228 | 264 |
| 20 | 729 | 138 | 175 | 144 | 115 | 188 | 172 | 264 | 79 | 33 | 2,370 | 506 |
| 21 | 484 | 138 | 208 | 150 | 104 | 175 | 204 | 218 | 70 | 27 | 969 | 870 |
| 22 | 340 | 138 | 214 | 162 | 79 | 162 | 184 | 211 | 89 | 27 | 380 | 1,280 |
| 23 | 282 | 132 | 194 | 168 | 79 | 150 | 172 | 360 | 104 | 24 | 188 | 1,220 |
| 24 | 246 | 126 | 188 | 175 | 79 | 144 | 165 | 282 | 2,260 | 30 | 150 | 870 |
| 25 | 218 | 121 | 104 | 181 | 79 | 144 | 141 | 221 | 2,320 | 27 | 110 | 594 |
| 26 | 218 | 121 | 57 | 360 | 79 | 150 | 172 | 150 | 1,380 | 30 | 89 | 214 |
| 27 | 218 | 138 | 57 | 320 | 79 | 144 | 147 | 121 | 442 | 33 | 68 | 340 |
| 28 | 201 | 126 | 57 | 282 | 79 | 138 | 141 | 121 | 340 | 21 | 40 | 282 |
| 29 | 184 | 115 | 79 | 194 | 115 | 135 | 104 | 246 | 19 | 36 | 4,730 | |
| 30 | 184 | 115 | 79 | 132 | 121 | 129 | 99 | 184 | 21 | 48 | 4,580 | |
| 31 | 184 | | 79 | 132 | 121 | | 94 | | 27 | 51 | | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-----------|---------|---------|-------|-----------------|---------|-----------|
| | | | | | Inches | Acre-feet |
| October | 1,810 | 184 | 479 | 0.070 | 0.08 | 29,470 |
| November | 181 | 107 | 141 | .020 | .02 | 8,410 |
| December | 442 | 67 | 172 | .025 | .03 | 10,590 |
| January | 360 | 79 | 157 | .023 | .03 | 9,650 |
| February | 218 | 79 | 128 | .019 | .02 | 7,110 |
| March | 919 | 79 | 262 | .038 | .04 | 16,120 |
| April | 6,520 | 126 | 889 | .129 | .14 | 52,880 |
| May | 2,490 | 94 | 352 | .051 | .06 | 21,610 |
| June | 2,320 | 70 | 308 | .045 | .05 | 18,300 |
| July | 3,132 | 19 | 52.8 | .0977 | .099 | 3,240 |
| August | 2,370 | 10 | 214 | .031 | .04 | 13,160 |
| September | 4,730 | 135 | 1,269 | .184 | .21 | 75,530 |
| The year | 6,520 | 10 | 367 | .0533 | .73 | 286,000 |

Thompson River at Trenton, Mo.

Location.- Wire gage in SE $\frac{1}{4}$ sec. 20, T. 61 N., R. 24 W., 1 mile south of Trenton.
Chain gage at same site and datum prior to Sept. 5, 1934.

Drainage area.- 1,880 square miles.

Records available.- August 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 5,130 second-feet June 23 (gage height, 10.42 feet); minimum, 1.1 second-feet Aug. 10 (gage height, 4.24 feet).
1928-34: Maximum discharge recorded, 26,700 second-feet Nov. 18, 1928, Dec. 31, 1931; maximum gage height recorded, 22.31 feet (former location) Nov. 18, 1928; minimum discharge, that of Aug. 10, 1934.
Maximum stage known, 30.7 feet (former location) July 6, 1909, before new channel was dredged.

Remarks.- Records fair except those for periods of ice effect, Dec. 28 to Jan. 14, Jan. 30 to Feb. 1, Feb. 23 to Mar. 2, which are poor. Gage-height record collected in cooperation with the U. S. Weather Bureau.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | | |
|-----------|-------|------|------|---------|------|---------|-------|------|-------|-----------------|-------|------------|--|--------|
| 1 | 112 | 54 | 39 | 29 | 92 | 19 | 34 | 24 | 16 | 1 | 1.7 | 113 | | |
| 2 | 217 | 61 | 50 | 29 | 100 | 41 | 41 | 25 | 15 | 12 | 3.5 | 152 | | |
| 3 | 174 | 64 | 196 | 41 | 92 | 76 | 50 | 27 | 13 | 11 | 4.4 | 263 | | |
| 4 | 146 | 61 | 157 | 41 | 72 | 168 | 131 | 27 | 13 | 10 | 2.0 | 967 | | |
| 5 | 131 | 59 | 80 | 29 | 50 | 258 | 1,860 | 29 | 29 | 11 | 2.0 | 409 | | |
| 6 | 113 | 58 | 60 | 29 | 56 | 223 | 1,110 | 29 | 21 | 3 | 2.0 | 336 | | |
| 7 | 100 | 52 | 52 | 19 | 50 | 166 | 655 | 27 | 18 | 5 | 1.7 | 180 | | |
| 8 | 96 | 54 | 55 | 29 | 47 | 72 | 338 | 23 | 15 | 6 | 1.7 | 213 | | |
| 9 | 86 | 54 | 53 | 29 | 34 | 84 | 330 | 21 | 19 | 16 | 1.4 | 80 | | |
| 10 | 84 | 42 | 59 | 29 | 34 | 44 | 298 | 19 | 19 | 15 | 1.1 | 53 | | |
| 11 | 78 | 42 | 34 | 19 | 25 | 47 | 192 | 19 | 15 | 8 | 8 | 45 | | |
| 12 | 69 | 44 | 11 | 25 | 29 | 50 | 152 | 18 | 11 | 10 | 19 | 53 | | |
| 13 | 69 | 34 | 56 | 41 | 27 | 56 | 131 | 525 | 12 | 7 | 6 | 1,770 | | |
| 14 | 66 | 34 | 41 | 41 | 27 | 50 | 110 | 332 | 12 | 5 | 6 | 1,270 | | |
| 15 | 72 | 36 | 39 | 41 | 25 | 50 | 98 | 263 | 12 | 6 | 6 | 310 | | |
| 16 | 100 | 31 | 36 | 41 | 27 | 44 | 84 | 162 | 16 | 5 | 30 | 206 | | |
| 17 | 1,430 | 39 | 39 | 39 | 27 | 41 | 80 | 103 | 25 | 3.5 | 50 | 169 | | |
| 18 | 628 | 39 | 39 | 34 | 27 | 34 | 66 | 80 | 21 | 3.5 | 832 | 102 | | |
| 19 | 358 | 39 | 39 | 50 | 21 | 36 | 59 | 55 | 16 | 1.3 | 3,780 | 86 | | |
| 20 | 240 | 41 | 53 | 27 | 18 | 50 | 56 | 44 | 12 | 1.7 | 525 | 67 | | |
| 21 | 174 | 41 | 47 | 44 | 19 | 50 | 47 | 36 | 12 | 1.7 | 192 | 240 | | |
| 22 | 125 | 37 | 44 | 41 | 16 | 44 | 44 | 39 | 69 | 2.0 | 122 | 159 | | |
| 23 | 115 | 36 | 41 | 47 | 12 | 39 | 41 | 41 | 3,940 | 2.0 | 84 | 20 | | |
| 24 | 74 | 41 | 36 | 118 | 12 | 34 | 34 | 31 | 330 | 1.7 | 59 | 69 | | |
| 25 | 90 | 41 | 36 | 348 | 12 | 31 | 36 | 34 | 113 | 4.4 | 44 | 54 | | |
| 26 | 90 | 36 | 29 | 258 | 12 | 29 | 41 | 25 | 56 | 2.8 | 36 | 42 | | |
| 27 | 82 | 36 | 29 | 146 | 12 | 25 | 34 | 27 | 41 | 2.0 | 29 | 201 | | |
| 28 | 86 | 34 | 19 | 162 | 12 | 21 | 34 | 27 | 31 | 1.7 | 25 | 115 | | |
| 29 | 82 | 36 | 10 | 157 | | 23 | 31 | 23 | 21 | 1.7 | 19 | 997 | | |
| 30 | 74 | 36 | 12 | 72 | | 21 | 27 | 21 | 18 | 1.4 | 13 | 258 | | |
| 31 | 70 | | 19 | 56 | | 21 | | 27 | | 2.0 | 30 | | | |
| Month | | | | Maximum | | Minimum | | Mean | | Per square mile | | Run-off | | |
| | | | | | | | | | | Inches | | Acres-feet | | |
| October | | | | 1,430 | | 66 | | 133 | | 0.109 | | 0.13 | | 11,240 |
| November | | | | 84 | | 31 | | 44.2 | | .026 | | .03 | | 2,530 |
| December | | | | 136 | | 12 | | 51.0 | | .030 | | .03 | | 3,140 |
| January | | | | 349 | | 27 | | 63.9 | | .041 | | .05 | | 4,240 |
| February | | | | 100 | | 12 | | 35.4 | | .021 | | .02 | | 1,970 |
| March | | | | 258 | | 19 | | 62.9 | | .037 | | .04 | | 3,870 |
| April | | | | 1,860 | | 27 | | 207 | | .123 | | .14 | | 12,530 |
| May | | | | 832 | | 18 | | 86.8 | | .052 | | .06 | | 5,340 |
| June | | | | 3,940 | | 11 | | 166 | | .099 | | .11 | | 9,960 |
| July | | | | 6.12 | | 1.4 | | 6.00 | | .0036 | | .004 | | 369 |
| August | | | | 3,780 | | 1.1 | | 192 | | .114 | | .13 | | 11,510 |
| September | | | | 1,770 | | 46 | | 298 | | .177 | | .20 | | 17,710 |
| The year | | | | 3,940 | | 1.1 | | 117 | | .0896 | | .94 | | 84,510 |

Weldon River at Mill Grove, Mo.

Location.- Chain gage in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 28, T. 65 N., R. 24 W., at county highway bridge in Mill Grove.

Drainage area.- 494 square miles.

Records available.- April 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 2,280 second-feet Apr. 4 (gage height, 11.73 feet); minimum discharge, 0.3 second-foot July 28 to Aug. 4, Aug. 15, 28-31; minimum gage height, 1.16 feet July 31, Aug. 1.
1929-34: Maximum discharge recorded, 14,200 second-feet June 2, 1929 (gage height, 20.6 feet); minimum discharge, that of July 28 to Aug. 4, Aug. 15, 28-31, 1934; minimum gage height, 1.16 feet Sept. 14, 1931, July 31, Aug. 1, 1934.
Maximum stage known, about 23.5 feet in July 1909.

Remarks.- Records fair. Discharge estimated for Nov. 24-26, Jan. 26.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|------|------|---------|------|------|-------|-----|-------|-----------------|------------|-------|
| 1 | 44 | 14 | 10 | 4.7 | 4.4 | 6 | 14 | 7 | 3.5 | 5 | 0.3 | 1.7 |
| 2 | 27 | 12 | 14 | 10 | 5 | 16 | 18 | 7 | 3.5 | 4.4 | .3 | 1.4 |
| 3 | 20 | 12 | 37 | 10 | 5 | 14 | 19 | 6 | 3.5 | 3.8 | .3 | 321 |
| 4 | 14 | 13 | 39 | 10 | 5 | 146 | 1,650 | 7 | 2.6 | 3.5 | .3 | 154 |
| 5 | 12 | 12 | 25 | 10 | 9 | 170 | 894 | 8 | 2.9 | 3.2 | .5 | 71 |
| 6 | 11 | 12 | 17 | 10 | 9 | 84 | 265 | 10 | 2.6 | 2.6 | .5 | 45 |
| 7 | 10 | 11 | 12 | 10 | 8 | 45 | 138 | 9 | 2.3 | 2.0 | .5 | 21 |
| 8 | 8 | 10 | 12 | 7 | 9 | 32 | 100 | 8 | 2.9 | 2.0 | .5 | 13 |
| 9 | 7 | 10 | 11 | 7 | 7 | 14 | 88 | 7 | 2.6 | 1.8 | .5 | 9 |
| 10 | 6 | 10 | 10 | 8 | 3.2 | 8 | 67 | 7 | 2.6 | 1.6 | .4 | 4.7 |
| 11 | 7 | 10 | 9 | 8 | 5 | 14 | 53 | 6 | 2.6 | 1.4 | .4 | 302 |
| 12 | 7 | 12 | 6 | 7 | 5 | 12 | 39 | 6 | 2.6 | 1.2 | .4 | 894 |
| 13 | 6 | 11 | 7 | 7 | 7 | 14 | 27 | 450 | 2.9 | 1.2 | .4 | 642 |
| 14 | 5 | 11 | 9 | 7 | 8 | 30 | 23 | 170 | 2.9 | 1.2 | .4 | 440 |
| 15 | 6 | 9 | 8 | 6 | 9 | 17 | 20 | 76 | 2.9 | 1.2 | .3 | 78 |
| 16 | 1,360 | 7 | 9 | 5 | 9 | 18 | 18 | 42 | 2.6 | 1.0 | 1.1 | 42 |
| 17 | 380 | 7 | 9 | 6 | 9 | 16 | 22 | 21 | 2.9 | .6 | 3.8 | 52 |
| 18 | 115 | 8 | 7 | 9 | 8 | 10 | 17 | 19 | 2.9 | .6 | 1.1 | 42 |
| 19 | 50 | 7 | 7 | 9 | 7 | 8 | 16 | 10 | 2.9 | .5 | 47 | 14 |
| 20 | 37 | 7 | 8 | 5 | 4.7 | 11 | 13 | 9 | 2.3 | .5 | 58 | 8 |
| 21 | 35 | 11 | 8 | 12 | 4.4 | 14 | 10 | 7 | 2.6 | .4 | 17 | 12 |
| 22 | 33 | 11 | 7 | 18 | 6 | 13 | 9 | 7 | 810 | .4 | 10 | 14 |
| 23 | 17 | 10 | 10 | 100 | 4.7 | 12 | 10 | 9 | 1,020 | .4 | 1.7 | 10 |
| 24 | 14 | 10 | 8 | 108 | 2.9 | 10 | 10 | 8 | 60 | .4 | 2.0 | 7 |
| 25 | 14 | 10 | 7 | 91 | 5 | 10 | 9 | 9 | 37 | .4 | 1.1 | 4.7 |
| 26 | 12 | 10 | 4.7 | 50 | 4.1 | 9 | 10 | 7 | 29 | .4 | .4 | 3.5 |
| 27 | 15 | 9 | 3.5 | 35 | 4.7 | 8 | 9 | 6 | 18 | .4 | .4 | 17 |
| 28 | 18 | 9 | 3.5 | 33 | 3.5 | 7 | 9 | 6 | 12 | .3 | .3 | 36 |
| 29 | 15 | 10 | 3.2 | 10 | | 7 | 8 | 4.7 | 7 | .3 | .3 | 130 |
| 30 | 15 | 9 | 3.5 | 7 | | 9 | 8 | 2.9 | 7 | .3 | .3 | 38 |
| 31 | 15 | | 6 | 4.4 | | 7 | | 3.5 | | .3 | .3 | |
| Month | Maximum | | | Minimum | | | Mean | | | Per square mile | | |
| | | | | | | | | | | Run-off | | |
| | | | | | | | | | | Inches | Acres-feet | |
| October | 1,360 | | | 5 | | | 75.3 | | | 0.152 | 4,630 | |
| November | 14 | | | 7 | | | 10.1 | | | .020 | 603 | |
| December | 67 | | | 3.2 | | | 11.6 | | | .023 | 715 | |
| January | 108 | | | 4.4 | | | 20.1 | | | .041 | 1,240 | |
| February | 9 | | | 2.9 | | | 6.13 | | | .012 | 340 | |
| March | 170 | | | 6 | | | 25.2 | | | .051 | 1,550 | |
| April | 1,650 | | | 8 | | | 120 | | | .243 | 7,130 | |
| May | 450 | | | 2.9 | | | 30.8 | | | .062 | 1,890 | |
| June | 1,020 | | | 2.3 | | | 69.6 | | | .139 | 4,080 | |
| July | 5 | | | .3 | | | 1.40 | | | .0028 | 86 | |
| August | 58 | | | .3 | | | 4.86 | | | .0098 | 299 | |
| September | 894 | | | 1.4 | | | 114 | | | .231 | 6,800 | |
| The year | 1,650 | | | .3 | | | 40.6 | | | .0822 | 29,360 | |

Medicine Creek near Galt, Mo.

Location.- Chain gage in NW $\frac{1}{4}$ sec. 34, T. 62 N., R. 22 W., at Quincy, Omaha & Kansas City Railroad bridge 1 mile above West Medicine Creek and 1 $\frac{1}{2}$ miles east of Galt.

Drainage area.- 225 square miles.

Records available.- July 1921 to September 1934.

Average discharge.- 11 years (1921-24, 1925-28, 1929-34), 132 second-feet.

Extremes.- Maximum discharge recorded during year, 456 second-feet Sept. 13 (gage height, 5.56 feet): no flow July 15 to Aug. 12; minimum gage height, 1.42 feet Aug. 7, 8.

1921-34: Maximum discharge recorded, 7,760 second-feet Aug. 2, 1932; maximum gage height recorded, 15.60 feet Apr. 20, 1929; no flow July 15 to Aug. 12, 1934.

Remarks.- Records fair except those for days of rapidly changing stage and for periods of ice effect, Dec. 26 to Jan. 4, Jan. 8-19, Jan. 29 to Feb. 2, Feb. 8, 9, Feb. 21 to Mar. 1, Mar. 6-11, 19, which are poor. Discharge estimated for Apr. 22.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | | |
|-----------|------|------|------|---------|------|---------|------|------|------|-----------------|------|---------|-----------|-------|
| 1 | 23 | 3.2 | 2.9 | 3.3 | 3.3 | 3.3 | 5.5 | 2.8 | 1.8 | 2.7 | 0 | 3.1 | | |
| 2 | 16 | 3.2 | 4.4 | 2.1 | 5.5 | 90 | 7.5 | 2.8 | 1.8 | 2.5 | 0 | 43 | | |
| 3 | 9.3 | 4.4 | 3.2 | 3.3 | 7.8 | 49 | 7.2 | 2.6 | 1.9 | 2.0 | 0 | 2.3 | | |
| 4 | 8.5 | 3.2 | 2.9 | 5.5 | 5.3 | 27 | 86 | 2.3 | 1.7 | .8 | 0 | 7.5 | | |
| 5 | 7.8 | 2.9 | 2.7 | 9.6 | 8.8 | 18 | 52 | 4.2 | 1.7 | .8 | 0 | 2.0 | | |
| 6 | 6.5 | 3.2 | 2.5 | 6.5 | 5.1 | 14 | 226 | 3.3 | 1.7 | .8 | 0 | 1.7 | | |
| 7 | 5.3 | 2.9 | 2.8 | 7.2 | 3.3 | 8.8 | 68 | 2.8 | 1.6 | 1.5 | 0 | 31 | | |
| 8 | 7.8 | 2.9 | 3.3 | 3.3 | 2.1 | 8.8 | 40 | 2.6 | 1.4 | 1.5 | 0 | 15 | | |
| 9 | 5.3 | 3.2 | 2.8 | 3.3 | 2.1 | 5.5 | 31 | 2.6 | 2.3 | 1.3 | 0 | 8.1 | | |
| 10 | 4.4 | 2.9 | 4.6 | 2.1 | 2.8 | 5.5 | 20 | 2.6 | 2.6 | 1.1 | 0 | 3.5 | | |
| 11 | 4.0 | 2.9 | 2.6 | 2.1 | 3.1 | 5.5 | 16 | 2.3 | 1.9 | 1.1 | 0 | 1.8 | | |
| 12 | 4.4 | 2.5 | 3.1 | 2.1 | 3.1 | 5.8 | 7.8 | 2.3 | 1.6 | 1.1 | 0 | 5.3 | | |
| 13 | 4.4 | 2.5 | 4.6 | 2.1 | 5.5 | 7.8 | 6.5 | 21 | 1.4 | .8 | 1.1 | 369 | | |
| 14 | 4.4 | 2.5 | 3.3 | 2.1 | 3.3 | 6.5 | 5.3 | 110 | 1.4 | .5 | 1.1 | 48 | | |
| 15 | 7.2 | 2.0 | 4.2 | 2.1 | 2.8 | 8.5 | 5.5 | 72 | 1.7 | 0 | 1.1 | 272 | | |
| 16 | 10 | 2.0 | 2.6 | 2.1 | 2.8 | 12 | 5.5 | 26 | 1.7 | 0 | 2.9 | 66 | | |
| 17 | 103 | 1.6 | 3.1 | 2.1 | 3.1 | 12 | 5.1 | 11 | 1.9 | 0 | 1.8 | 30 | | |
| 18 | 6.5 | 2.9 | 3.1 | 2.1 | 3.3 | 6.5 | 4.2 | 7.8 | 1.7 | 0 | 1.3 | 15 | | |
| 19 | 5.3 | 2.7 | 2.6 | 2.1 | 2.8 | 5.5 | 4.0 | 6.5 | 1.6 | 0 | 1.3 | 7.2 | | |
| 20 | 4.0 | 2.7 | 6.8 | 3.5 | 2.8 | 6.5 | 3.2 | 4.8 | 1.6 | 0 | 1.3 | 5.3 | | |
| 21 | 5.3 | 2.5 | 4.2 | 5.3 | 2.1 | 5.3 | 3.5 | 4.4 | 4.0 | 0 | 1.3 | 27 | | |
| 22 | 4.4 | 2.6 | 3.3 | 5.3 | 1.2 | 4.6 | 3.4 | 4.0 | 8.5 | 0 | 1.3 | 18 | | |
| 23 | 4.0 | 2.7 | 3.1 | 4.8 | 1.2 | 3.7 | 3.2 | 3.5 | 5.3 | 0 | 1.1 | 6.8 | | |
| 24 | 4.0 | 2.9 | 1.9 | 4.8 | 1.2 | 2.8 | 2.7 | 2.9 | 157 | 0 | 1.1 | 5.1 | | |
| 25 | 2.7 | 2.5 | 1.6 | 7.2 | 1.2 | 4.6 | 2.9 | 2.9 | 32 | 0 | 1.1 | 2.8 | | |
| 26 | 3.2 | 2.7 | 1.2 | 19 | 1.2 | 4.4 | 4.0 | 2.2 | 13 | 0 | 1.2 | 2.6 | | |
| 27 | 3.2 | 2.5 | 1.2 | 23 | 1.2 | 4.4 | 2.7 | 2.5 | 5.3 | 0 | .7 | 2.6 | | |
| 28 | 3.2 | 2.5 | 1.2 | 12 | 1.2 | 4.8 | 2.5 | 2.5 | 3.2 | 0 | .7 | 2.1 | | |
| 29 | 3.2 | 2.5 | 1.2 | 2.1 | | 3.5 | 2.7 | 1.8 | 3.2 | 0 | .6 | 35 | | |
| 30 | 3.2 | 2.7 | 2.1 | 1.2 | | 3.1 | 2.8 | 1.8 | 2.9 | 0 | .6 | 4.2 | | |
| 31 | 2.9 | | 3.3 | 2.1 | | 3.1 | | 2.2 | | 0 | 1.4 | | | |
| Month | | | | Maximum | | Minimum | | Mean | | Per square mile | | Run-off | | |
| | | | | | | | | | | | | Inches | Acre-feet | |
| October | | | | 103 | | 2.7 | | 9.24 | | 0.041 | | 0.05 | | 568 |
| November | | | | 4.4 | | 1.6 | | 2.75 | | .012 | | .01 | | 183 |
| December | | | | 6.8 | | 1.2 | | 2.98 | | .013 | | .01 | | 183 |
| January | | | | 23 | | 1.2 | | 5.08 | | .023 | | .03 | | 313 |
| February | | | | 8.8 | | 1.2 | | 3.19 | | .014 | | .01 | | 177 |
| March | | | | 90 | | 2.8 | | 11.3 | | .050 | | .06 | | 696 |
| April | | | | 226 | | 2.5 | | 21.2 | | .094 | | .10 | | 1,260 |
| May | | | | 110 | | 1.8 | | 10.4 | | .046 | | .05 | | 641 |
| June | | | | 157 | | 1.4 | | 8.98 | | .040 | | .04 | | 534 |
| July | | | | 2.7 | | 0 | | .60 | | .0027 | | .003 | | 37 |
| August | | | | 2.9 | | 0 | | .74 | | .0033 | | .004 | | 46 |
| September | | | | 369 | | 1.7 | | 34.9 | | .155 | | .17 | | 2,080 |
| The year | | | | 369 | | 0 | | 9.25 | | .0411 | | .54 | | 6,700 |

Locust Creek near Linneus, Mo.

Location.- Main gage in NE $\frac{1}{4}$ sec. 34, T. 52 N., R. 21 W., on county highway bridge 5 miles northwest of Linneus.

Drainage area.- 500 square miles.

Records available.- April 1922 to September 1934.

Extremes.- Maximum discharge recorded during year, 900 second-feet Apr. 5 (gage height, 6.22 feet); no flow July 17 to Aug. 11.
1922-34: Maximum discharge recorded, 14,100 second-feet Apr. 21, 1929 (gage height, 20.99 feet); no flow July 17 to Aug. 11, 1934.

Remarks.- Records fail except those for periods of ice effect, Dec. 11-14, Dec. 24 to Jan. 15, Jan. 30 to Feb. 3, Feb. 9-13, Feb. 23 to Mar. 2, which are poor.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|---------|---------|------|-----------------|---------|------------|------|------|-------|
| 1 | 37 | 6 | 7 | 4 | 3 | 4 | 18 | 6 | 2.3 | 1.2 | 0 | 2.6 |
| 2 | 23 | 7 | 6 | 4 | 9 | 13 | 23 | 6 | 2.1 | 1.2 | 0 | 8 |
| 3 | 15 | 7 | 9 | 4 | 9 | 40 | 24 | 7 | 3.0 | .5 | 0 | 7 |
| 4 | 8 | 6 | 22 | 8 | 6 | 89 | 486 | 8 | 1.2 | .7 | 0 | 9 |
| 5 | 8 | 6 | 19 | 8 | 2 | 93 | 900 | 65 | .9 | .1 | 0 | 33 |
| 6 | 4.0 | 4.4 | 11 | 13 | 7 | 110 | 428 | 22 | 3.0 | 1.4 | 0 | 20 |
| 7 | 5 | 3.6 | 10 | 13 | 7 | 110 | 214 | 12 | 1.4 | 1.4 | 0 | 8 |
| 8 | 5 | 4.0 | 10 | 13 | 6 | 33 | 120 | 10 | 1.2 | .9 | 0 | 5 |
| 9 | 4.4 | 4.0 | 11 | 13 | 4 | 33 | 97 | 9 | 3.8 | 1.2 | 0 | 3.5 |
| 10 | 3.8 | 3.8 | 10 | 13 | 4 | 17 | 75 | 9 | 14 | .9 | 0 | 3.5 |
| 11 | 3.8 | 3.6 | 8 | 13 | 4 | 31 | 51 | 7 | 8 | 1.2 | 0 | 3.3 |
| 12 | 3.6 | 4.4 | 8 | 13 | 4 | 24 | 42 | 7 | 3.8 | .7 | .6 | 4.8 |
| 13 | 3.3 | 4.4 | 8 | 13 | 4 | 24 | 33 | 35 | 2.3 | .3 | .5 | 4.0 |
| 14 | 2.6 | 4.2 | 8 | 16 | 6 | 24 | 28 | 428 | 6 | .3 | .2 | 428 |
| 15 | 8 | 4.0 | 8 | 13 | 7 | 23 | 21 | 1.0 | 3.3 | .2 | .5 | 129 |
| 16 | 10 | 4.4 | 7 | 22 | 7 | 25 | 19 | 78 | 2.8 | .1 | 28 | 95 |
| 17 | 7 | 6 | 7 | 24 | 5 | 21 | 16 | 42 | 3.5 | 0 | 2.3 | 36 |
| 18 | 7 | 5 | 7 | 10 | 12 | 24 | 17 | 24 | 3.8 | 0 | 1.5 | 24 |
| 19 | 7 | 5 | 13 | 11 | 11 | 14 | 15 | 13 | 2.8 | 0 | 1.0 | 12 |
| 20 | 10 | 4.6 | 12 | 9 | 10 | 17 | 12 | 12 | 2.8 | 0 | 3.8 | 12 |
| 21 | 10 | 4.4 | 12 | 10 | 10 | 18 | 12 | 10 | 3.0 | 0 | 4.8 | 25 |
| 22 | 6 | 5 | 12 | 11 | 8 | 17 | 11 | 8 | 16 | 0 | 3.5 | 49 |
| 23 | 5 | 5 | 12 | 11 | 4 | 14 | 10 | 10 | 9 | 0 | 1.6 | 110 |
| 24 | 4 | 6 | 8 | 10 | 4 | 16 | 10 | 6 | 4.0 | 0 | 2.1 | 52 |
| 25 | 4.4 | 4.8 | 8 | 10 | 2 | 15 | 6 | 5 | 13 | 0 | 1.4 | 17 |
| 26 | 6 | 5 | 4 | 34 | 2 | 19 | 13 | 6 | 9 | 0 | 1.2 | 24 |
| 27 | 6 | 4.4 | 4 | 24 | 2 | 17 | 12 | 4.4 | 8 | 0 | 1.4 | 24 |
| 28 | 4.4 | 5 | 4 | 17 | 12 | 11 | 11 | 3.4 | 4.0 | 0 | 1.2 | 110 |
| 29 | 5 | 4.4 | 3 | 16 | 13 | 19 | 19 | 3.6 | 3.0 | 0 | 1.0 | 129 |
| 30 | 3.8 | 4.8 | 8 | 17 | 14 | 14 | 8 | 3.0 | 2.1 | 0 | 1.2 | 149 |
| 31 | 3.5 | | 15 | 15 | 15 | 15 | | | 1.3 | 0 | | |
| Month | | | | Maximum | Minimum | Mean | Per square mile | Run-off | | | | |
| | | | | | | | | Inches | Acres-foot | | | |
| October | | | | 37 | 2.8 | 7.67 | 0.014 | 0.02 | 471 | | | |
| November | | | | 23 | 3.5 | 4.52 | .0089 | .01 | 283 | | | |
| December | | | | 22 | 4 | 9.6 | .017 | .02 | 591 | | | |
| January | | | | 34 | 4 | 13.5 | .025 | .03 | 827 | | | |
| February | | | | 11 | 2 | 6.1 | .011 | .01 | 339 | | | |
| March | | | | 12 | 3 | 32.1 | .058 | .07 | 1,370 | | | |
| April | | | | 428 | 2.6 | 91.6 | .167 | .19 | 5,450 | | | |
| May | | | | 428 | 2.6 | 33.9 | .067 | .07 | 2,080 | | | |
| June | | | | 16 | 0.9 | 4.72 | .0036 | .01 | 281 | | | |
| July | | | | 1.4 | 0 | 0.40 | .00073 | .0008 | 24 | | | |
| August | | | | 28 | 0 | 1.91 | .0035 | .004 | 117 | | | |
| September | | | | 428 | 2.6 | 51.3 | .093 | .10 | 3,050 | | | |
| The year | | | | 900 | 0 | 21.4 | .0309 | .53 | 15,490 | | | |

Chariton River at Kovingar, Mo.

Location.— Chain gage in W $\frac{1}{2}$ sec. 27, T. 63 N., R. 16 W., at bridge on State highway 6, three-quarters of a mile east of Kovingar. Zero of gage is about 734.2 feet above mean sea level.

Drainage area.— 1,370 square miles.

Records available.— January 1931 to September 1934.

Extremes.— Maximum discharge recorded during year, 3,250 second-feet Sept. 12 (gage height, 16.96 feet); minimum, 6.5 second-feet July 30, Aug. 6, 9 (gage height, 2.34 feet).
1931-34: Maximum discharge, 15,400 second-feet Nov. 25, 1931 (gage height, 26.03 feet); minimum discharge, that of July 30, Aug. 6, 9, 1934; minimum gage height, 1.84 feet Jan. 19, 1931.
Maximum stage known, 2.8 feet in June 1917.

Remarks.— Records fair except those for periods of ice effect, Dec. 11-14, 19, Dec. 25 to Jan. 14, Jan. 25 to Feb. 2, Feb. 4-12, Feb. 18 to Mar. 2, Mar. 7-19, which are poor.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | |
|-----|------|------|------|------|------|------|-------|-------|------|------|------|-------|-----|
| 1 | 625 | 40 | 25 | 8 | 35 | 12 | 32 | 23 | 11 | 3 | 1.2 | 8 | |
| 2 | 297 | 37 | 26 | 12 | 41 | 23 | 52 | 22 | 16 | 1 | .7 | 129 | |
| 3 | 7 | 31 | 3 | 17 | 47 | 113 | 67 | 21 | 13 | 1 | .3 | 21 | |
| 4 | 123 | 31 | 33 | 17 | 28 | 167 | 2,770 | 22 | 10 | 10 | .7 | 71 | |
| 5 | 100 | 31 | 30 | 17 | 22 | 237 | 1,790 | 47 | 11 | 19 | 1.2 | 10 | |
| 6 | 9 | 30 | 34 | 23 | 30 | 133 | 2,420 | 33 | 9 | 6 | .5 | 14 | |
| 7 | 75 | 19 | 38 | 20 | 26 | 175 | 2,220 | 24 | 8 | 7 | .8 | 75 | |
| 8 | 27 | 16 | 37 | 22 | 12 | 110 | 1,210 | 25 | 10 | 3.6 | .5 | 47 | |
| 9 | 5 | 19 | 34 | 19 | 12 | 99 | 500 | 21 | 24 | 4.0 | .5 | 30 | |
| 10 | 4 | 27 | 31 | 19 | 6 | 72 | 327 | 25 | 24 | | .6 | 55 | |
| 11 | 1 | 19 | 26 | 25 | 12 | 79 | 238 | 23 | 13 | | 1.0 | 25 | |
| 12 | 79 | 21 | 10 | 29 | 12 | 79 | 175 | 17 | 9 | 6 | .5 | 2,130 | |
| 13 | 20 | 18 | 24 | 36 | 19 | 93 | 145 | 1,470 | 10 | 6 | 1.2 | 1,130 | |
| 14 | 2 | 18 | 17 | 35 | 16 | 67 | 112 | 31 | 5 | 2.6 | .2 | 327 | |
| 15 | | 15 | 1 | 32 | | 79 | 103 | 224 | | | .6 | 592 | |
| 16 | | 41 | 24 | | 19 | 67 | 49 | 227 | | 1.9 | 10 | 118 | |
| 17 | | 20 | 15 | 1 | 20 | 67 | 79 | 139 | 7 | 7.0 | 4.1 | 57 | |
| 18 | | 42 | 14 | 32 | 15 | 52 | 63 | 78 | 4.0 | 3.0 | .7 | 175 | |
| 19 | | | | 59 | 17 | 52 | 44 | 55 | 6 | 3.2 | 1.6 | 113 | |
| 20 | | 1 | 10 | | 17 | 52 | 48 | 40 | 9 | 3.1 | 1.7 | 79 | |
| 21 | | | 1 | | | | | | | | | | |
| 22 | | 1 | 47 | | 12 | 39 | 45 | 29 | 5 | 1.2 | 2.2 | 117 | |
| 23 | | | 10 | 44 | 16 | 39 | 45 | 16 | 3 | 1.9 | 2.7 | 239 | |
| 24 | | | 74 | 4 | 42 | 10 | 38 | 24 | 10 | 1.0 | 1.8 | 118 | |
| 25 | | | 14 | 52 | 36 | 1.0 | 42 | 37 | 35 | 1.0 | 10 | 67 | |
| 26 | | | 17 | 8 | 27 | 1.8 | 34 | 31 | 27 | 1.6 | 5 | 45 | |
| 27 | | | | | | | | | | | | | |
| 28 | | | 11 | 4.0 | 24 | 1.6 | 36 | 35 | 17 | 2.4 | 1.5 | 3.1 | 222 |
| 29 | | | 20 | 4.0 | 34 | 4.0 | 34 | 31 | 47 | 2.0 | 2.0 | 75 | |
| 30 | | | 40 | 20 | 48 | 10 | 30 | 31 | 35 | 2.6 | 1.6 | 20 | |
| 31 | 145 | 13 | 12 | 13 | 13 | 32 | 25 | 19 | 71 | 1.0 | 1.4 | 17 | |
| 1 | 88 | 16 | 23 | 13 | 13 | 26 | 27 | 13 | 21 | .6 | 1.2 | 39 | |
| 2 | 58 | | 23 | 26 | 26 | 27 | | 1 | | 1.2 | 4.0 | | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-----------|---------|---------|------|-----------------|---------|------------|
| | | | | | Inches | Acres-feet |
| October | 625 | 7 | 88.7 | 0.075 | 0.77 | 5,460 |
| November | 41 | 1 | 21.7 | .022 | .22 | 1,290 |
| December | 34 | 1.0 | 27.9 | .020 | .20 | 1,710 |
| January | 24 | 0 | 35.3 | .026 | .23 | 2,210 |
| February | 41 | 1.3 | 16.8 | .012 | .01 | 939 |
| March | 297 | 1 | 77.7 | .057 | .67 | 4,790 |
| April | 2,770 | 25 | 422 | .32 | .35 | 25,450 |
| May | 1,470 | 16 | 103 | .071 | .06 | 7,330 |
| June | 224 | 4.0 | 24.8 | .018 | .02 | 1,450 |
| July | 21 | .5 | 5.22 | .0033 | .004 | 321 |
| August | 12 | .5 | 2.10 | .0017 | .002 | 141 |
| September | 3,130 | | 246 | .180 | .20 | 14,630 |
| The year | 3,130 | .5 | 59.5 | .0653 | .59 | 64,770 |

Chariton River near Keytesville, Mo.

Location.- Chain gage in SE $\frac{1}{4}$ sec. 25, T. 54 N., R. 18 W., $4\frac{1}{2}$ miles northeast of Keytesville.

Drainage area.- 1,950 square miles.

Records available.- April 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 4,760 second-feet Apr. 5 (gage height, 15.78 feet); minimum, 4.6 second-feet Aug. 7, 9, 10 (gage height, 2.67 feet).

1929-34: Maximum discharge recorded, 18,700 second-feet Apr. 25, 1929 (gage height, 21.66 feet); minimum, that of Aug. 7, 9, 10, 1934.

Maximum stage known, 22.54 feet Nov. 18, 1928.

Remarks.- Records fair except those for periods of ice effect, Dec. 24-30, Jan. 28-31, Feb. 1, 2, 10, 20-28, Mar. 1-4, which are poor.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | |
|-----------|-------|------|------|---------|------|---------|-------|-------|------|-----------------|------|-----------------------|--|
| 1 | 2,330 | 113 | 41 | 74 | 46 | 30 | 63 | 51 | 36 | 36 | 5 | 232 | |
| 2 | 1,240 | 88 | 41 | 58 | 58 | 37 | 115 | 48 | 34 | 31 | 4.8 | 104 | |
| 3 | 558 | 74 | 45 | 46 | 64 | 46 | 57 | 47 | 32 | 28 | 5 | 325 | |
| 4 | 350 | 68 | 46 | 53 | 69 | 58 | 104 | 48 | 30 | 26 | 5 | 277 | |
| 5 | 254 | 59 | 48 | 57 | 64 | 101 | 4,240 | 115 | 28 | 24 | 5 | 170 | |
| 6 | 200 | 59 | 45 | 46 | 52 | 531 | 2,290 | 132 | 27 | 22 | 5 | 80 | |
| 7 | 170 | 57 | 44 | 50 | 46 | 427 | 2,240 | 98 | 26 | 20 | 4.6 | 64 | |
| 8 | 150 | 54 | 43 | 38 | 53 | 289 | 2,190 | 62 | 25 | 19 | 4.8 | 52 | |
| 9 | 141 | 51 | 43 | 34 | 22 | 232 | 1,740 | 52 | 22 | 18 | 4.6 | 43 | |
| 10 | 124 | 50 | 41 | 36 | 30 | 124 | 892 | 48 | 24 | 18 | 4.6 | 38 | |
| 11 | 110 | 47 | 46 | 62 | 40 | 160 | 585 | 36 | 31 | 18 | 5 | 41 | |
| 12 | 96 | 52 | 42 | 58 | 66 | 132 | 375 | 41 | 26 | 16 | 6 | 45 | |
| 13 | 90 | 48 | 47 | 48 | 66 | 109 | 243 | 40 | 22 | 13 | 7 | 892 | |
| 14 | 83 | 45 | 70 | 36 | 50 | 109 | 232 | 1,600 | 18 | 10 | 6 | 2,000 | |
| 15 | 84 | 42 | 56 | 39 | 48 | 115 | 200 | 1,030 | 25 | 8 | 4.8 | 1,670 | |
| 16 | 92 | 42 | 52 | 56 | 46 | 115 | 180 | 401 | 20 | 8 | 752 | 892 | |
| 17 | 81 | 42 | 47 | 43 | 43 | 102 | 150 | 325 | 18 | 8 | 427 | 612 | |
| 18 | 73 | 48 | 42 | 47 | 46 | 115 | 141 | 266 | 23 | 8 | 76 | 266 | |
| 19 | 76 | 44 | 42 | 58 | 25 | 86 | 141 | 160 | 22 | 8 | 60 | 141 | |
| 20 | 78 | 44 | 64 | 46 | 30 | 98 | 115 | 115 | 18 | 7 | 28 | 98 | |
| 21 | 81 | 45 | 62 | 50 | 30 | 87 | 113 | 86 | 18 | 7 | 31 | 780 | |
| 22 | 78 | 43 | 51 | 48 | 37 | 78 | 105 | 71 | 24 | 6 | 22 | 696 | |
| 23 | 71 | 44 | 53 | 50 | 30 | 76 | 81 | 71 | 19 | 6 | 17 | 864 | |
| 24 | 65 | 48 | 46 | 48 | 30 | 76 | 73 | 57 | 18 | 6 | 14 | 375 | |
| 25 | 64 | 45 | 37 | 47 | 30 | 69 | 69 | 50 | 16 | 6 | 15 | 180 | |
| 26 | 62 | 44 | 37 | 50 | 30 | 68 | 73 | 45 | 14 | 8 | 14 | 110 | |
| 27 | 60 | 43 | 37 | 47 | 30 | 74 | 78 | 43 | 14 | 7 | 14 | 132 | |
| 28 | 81 | 41 | 46 | 46 | 30 | 64 | 77 | 44 | 11 | 6 | 14 | 892 | |
| 29 | 80 | 39 | 46 | 46 | 46 | 64 | 64 | 41 | 80 | 6 | 13 | 4,120 | |
| 30 | 76 | 40 | 46 | 46 | 46 | 62 | 54 | 40 | 53 | 5 | 13 | 2,690 | |
| 31 | 150 | | 63 | 46 | 46 | 62 | 62 | 40 | | 5 | 12 | | |
| Month | | | | Maximum | | Minimum | | Mean | | Per square mile | | Run-off | |
| | | | | | | | | | | | | Inches Acre-feet | |
| October | | | | 2,330 | | 60 | | 234 | | 0.120 | | 0.14 | |
| November | | | | 113 | | 39 | | 52.0 | | .027 | | .03 | |
| December | | | | 70 | | 37 | | 47.4 | | .024 | | .03 | |
| January | | | | 74 | | 34 | | 48.7 | | .025 | | .03 | |
| February | | | | 69 | | 22 | | 43.2 | | .022 | | .02 | |
| March | | | | 531 | | 30 | | 122 | | .063 | | .07 | |
| April | | | | 4,240 | | 54 | | 569 | | .292 | | .33 | |
| May | | | | 1,600 | | 36 | | 171 | | .088 | | .10 | |
| June | | | | 80 | | 11 | | 25.8 | | .013 | | .01 | |
| July | | | | 36 | | 5 | | 13.4 | | .0069 | | .008 | |
| August | | | | 752 | | 4.6 | | 51.6 | | .026 | | .03 | |
| September | | | | 4,120 | | 38 | | 636 | | .326 | | .36 | |
| The year | | | | 4,240 | | 4.6 | | 167 | | .0856 | | 1.16 | |
| | | | | | | | | | | | | 121,100 | |

Lamine River at Clifton City, Mo.

Location.- Chain gage in NW $\frac{1}{4}$ sec. 16, T. 46 N., R. 19 W., on county highway bridge 300 feet above Missouri-Kansas-Texas Railroad bridge and three-quarters of a mile east of Clifton City. Zero of gage is 622.60 feet above mean sea level.

Drainage area.- 598 square miles.

Records available.- June 1922 to September 1934.

Average discharge.- 12 years, 425 second-feet.

Extremes.- Maximum discharge recorded during year, 5,190 second-feet Sept. 29 (gage height, 14.12 feet); no flow July 16-28; minimum gage height, 0.72 foot July 28. 1922-34: Maximum discharge, 33,000 second-feet May 19, 1929 (gage height, 29.0 feet); no flow July 16-28, 1934; minimum gage height, that of July 28, 1934. Maximum stage known, 35.3 feet Sept. 18, 1936.

Remarks.- Records good except those for days of rapidly changing stage, which are poor.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|-------|-----|------|------|------|-------|
| 1 | 77 | 46 | 13 | 21 | 17 | 23 | 211 | 24 | 5 | 3.2 | 12 | 4.8 |
| 2 | 52 | 38 | 13 | 22 | 17 | 64 | 160 | 20 | 4.6 | 3.0 | 7 | 4.4 |
| 3 | 41 | 32 | 13 | 22 | 18 | 586 | 127 | 20 | 6 | 3.0 | 4.8 | 3.3 |
| 4 | 35 | 30 | 59 | 25 | 18 | 444 | 109 | 18 | 3.6 | 3.0 | 3.7 | 3.6 |
| 5 | 25 | 28 | 42 | 27 | 18 | 254 | 2,180 | 60 | 3.0 | 3.2 | 3.1 | 3.2 |
| 6 | 21 | 26 | 37 | 40 | 18 | 168 | 550 | 700 | 5 | 3.0 | 2.5 | 3.0 |
| 7 | 17 | 24 | 29 | 50 | 17 | 127 | 299 | 131 | 5 | 2.4 | 1.9 | 2.6 |
| 8 | 14 | 22 | 24 | 50 | 17 | 101 | 197 | 99 | 5 | 1.8 | 1.5 | 2.4 |
| 9 | 12 | 18 | 21 | 47 | 17 | 82 | 143 | 62 | 7 | 1.6 | 1.3 | 1.8 |
| 10 | 11 | 19 | 18 | 52 | 14 | 68 | 131 | 47 | 8 | 1.4 | 1.1 | 1.3 |
| 11 | 11 | 17 | 17 | 46 | 14 | 62 | 550 | 40 | 314 | 1.0 | .7 | .9 |
| 12 | 9 | 15 | 16 | 44 | 14 | 56 | 240 | 31 | 150 | .8 | 79 | 378 |
| 13 | 9 | 13 | 15 | 41 | 15 | 50 | 140 | 29 | 79 | .6 | 11 | 700 |
| 14 | 8 | 12 | 14 | 46 | 15 | 46 | 92 | 40 | 53 | .4 | 4.8 | 330 |
| 15 | 10 | 11 | 14 | 52 | 14 | 44 | 80 | 45 | 35 | .2 | 3.7 | 4,390 |
| 16 | 86 | 11 | 14 | 52 | 15 | 41 | 70 | 53 | 25 | 0 | 225 | 514 |
| 17 | 75 | 11 | 14 | 49 | 14 | 38 | 64 | 65 | 22 | 0 | 97 | 184 |
| 18 | 155 | 10 | 62 | 47 | 15 | 36 | 54 | 59 | 18 | 0 | 90 | 107 |
| 19 | 90 | 11 | 50 | 45 | 17 | 38 | 50 | 44 | 17 | 0 | 42 | 70 |
| 20 | 240 | 11 | 346 | 45 | 19 | 41 | 45 | 32 | 22 | 0 | 28 | 49 |
| 21 | 240 | 11 | 254 | 40 | 19 | 41 | 37 | 28 | 17 | 0 | 269 | 143 |
| 22 | 700 | 11 | 131 | 37 | 21 | 40 | 31 | 23 | 10 | 0 | 168 | 52 |
| 23 | 197 | 12 | 93 | 33 | 22 | 37 | 26 | 17 | 8 | 0 | 80 | 44 |
| 24 | 107 | 12 | 72 | 33 | 25 | 35 | 23 | 15 | 6 | 0 | 41 | 41 |
| 25 | 67 | 12 | 53 | 29 | 24 | 30 | 23 | 14 | 6 | 0 | 25 | 31 |
| 26 | 74 | 12 | 44 | 28 | 25 | 31 | 30 | 13 | 5 | 0 | 26 | 25 |
| 27 | 211 | 12 | 34 | 26 | 26 | 40 | 26 | 10 | 4.0 | 18 | 17 | 17 |
| 28 | 240 | 11 | 28 | 25 | 25 | 152 | 31 | 9 | 3.7 | 75 | 12 | 362 |
| 29 | 129 | 12 | 25 | 21 | | 478 | 27 | 7 | 3.7 | 56 | 8 | 4,790 |
| 30 | 84 | 11 | 25 | 20 | | 362 | 29 | 6 | 3.7 | 40 | 7 | 780 |
| 31 | 60 | | 23 | 20 | | 269 | | 5 | | 19 | 6 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-----------|---------|---------|------|-----------------|---------|-----------|
| | | | | | Inches | Acre-feet |
| October | 700 | 8 | 100 | 0.167 | 0.19 | 6,160 |
| November | 46 | 10 | 17.4 | .029 | .03 | 1,030 |
| December | 346 | 13 | 52.0 | .087 | .10 | 3,200 |
| January | 52 | 20 | 36.6 | .061 | .07 | 2,250 |
| February | 26 | 14 | 19.2 | .030 | .03 | 1,010 |
| March | 586 | 23 | 125 | .209 | .24 | 7,700 |
| April | 2,180 | 23 | 192 | .321 | .36 | 11,450 |
| May | 700 | 5 | 57.0 | .095 | .11 | 3,500 |
| June | 314 | 3.0 | 28.5 | .048 | .05 | 1,690 |
| July | 76 | 0 | 7.63 | .013 | .01 | 469 |
| August | 269 | .7 | 41.5 | .069 | .08 | 2,540 |
| September | 4,790 | .9 | 435 | .727 | .81 | 25,650 |
| The year | 4,790 | 0 | 92.4 | .155 | 2.06 | 66,860 |

Osage River near Quenemo, Kans.

Location.- Chain gage in NW $\frac{1}{4}$ sec. 7, T. 17 S., R. 18 E., 2 $\frac{1}{2}$ miles below Dagoon Creek and 3 miles east of Quenemo.

Drainage area.- 1,050 square miles (revised).

Records available.- June 1922 to September 1934.

Average discharge.- 12 years, 309 second-feet.

Extremes.- Maximum discharge recorded during year, 7,140 second-feet May 15 (gage height, 28.22 feet); no flow at times.
1922-34: Maximum discharge recorded, 32,600 second-feet Nov. 17, 1928 (gage height, 38.38 feet); no flow at times. Bank-full stage, 27 feet.

Remarks.- Records fair. Stage-discharge relation affected by ice Dec. 25, 26, Jan. 11-13, Feb. 23-27; discharge estimated.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 46 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 8 | 2 | | 0 |
| 2 | 15 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 6 | 2 | | 5 |
| 3 | 11 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 6 | 2 | | 5 |
| 4 | 9 | 2 | 2 | 3 | 2 | 3 | 141 | 3 | 6 | 1 | | 3 |
| 5 | 7 | 2 | 2 | 3 | 2 | 3 | 206 | 59 | 5 | 2 | | 2 |
| 6 | 5 | 1 | 2 | 3 | 2 | 4 | 112 | 51 | 5 | 2 | | 1 |
| 7 | 4 | 1 | 2 | 3 | 2 | 4 | 150 | *40 | 4 | 2 | | 1 |
| 8 | 3 | 2 | 2 | 3 | 2 | 3 | 100 | *30 | 3 | 2 | | 1 |
| 9 | 2 | 1 | 2 | 2 | 2 | 3 | 54 | 19 | 2 | 2 | | 1 |
| 10 | 2 | 1 | 2 | 2 | 2 | 2 | 34 | 20 | 2 | 2 | | 1 |
| 11 | 1 | 1 | 2 | 1 | 2 | 2 | 27 | 496 | 2 | 1 | | 1 |
| 12 | 1 | 1 | 1 | | 2 | 3 | 18 | 196 | 2 | 1 | | 2 |
| 13 | 1 | 1 | 1 | | 2 | 3 | 11 | 64 | 3 | 1 | | 3 |
| 14 | 1 | 1 | 1 | 2 | 2 | 2 | | 3,050 | 4 | | | 12 |
| 15 | 1 | 1 | 1 | 2 | 2 | 2 | 8 | 6,480 | 3 | 1 | | 8 |
| 16 | 1 | 2 | 1 | 2 | 2 | 2 | 9 | 3,480 | 3 | 0 | | 5 |
| 17 | 1 | 2 | 1 | 2 | 2 | 1 | 7 | 516 | 3 | 0 | | 3 |
| 18 | 1 | 1 | 2 | 2 | 2 | 1 | 7 | 416 | 476 | 0 | | 2 |
| 19 | 1 | 2 | 2 | 2 | 2 | 1 | 6 | 358 | 216 | 0 | | 2 |
| 20 | 1 | 2 | 3 | 2 | 2 | 1 | 4 | 339 | 23 | 0 | | 2 |
| 21 | 1 | 1 | 3 | 2 | 2 | 2 | 3 | 263 | 13 | 0 | | 358 |
| 22 | 1 | 1 | 2 | 2 | 2 | 1 | 3 | 141 | 9 | 0 | | 85 |
| 23 | 1 | 1 | 2 | 2 | 2 | 1 | 3 | 36 | 6 | 0 | | 17 |
| 24 | 1 | 2 | 5 | 1 | 1 | 3 | 3 | 26 | 9 | 0 | | 11 |
| 25 | 1 | 2 | 1 | | 1 | 1 | 2 | 20 | 8 | 0 | | 6 |
| 26 | 1 | 2 | 1 | 2 | 1 | 1 | 3 | 13 | 5 | 0 | | 6 |
| 27 | 1 | 1 | 2 | 2 | | 1 | 3 | 11 | 4 | 0 | | 7 |
| 28 | 1 | 1 | 2 | 2 | | 1 | 3 | 11 | 3 | 1 | | 78 |
| 29 | 1 | 2 | 2 | 2 | | 1 | 2 | 9 | 2 | 1 | | 784 |
| 30 | 1 | 2 | 2 | 2 | | 1 | 2 | 11 | 2 | 1 | | 496 |
| 31 | 1 | | 2 | 2 | | 1 | | 9 | | 0 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 46 | 1 | 4.0 | 248 | | |
| November | | | | | | | 2 | 1 | 1.4 | 63 | | |
| December | | | | | | | 3 | 1 | 1.8 | 113 | | |
| January | | | | | | | 3 | | 2.1 | 127 | | |
| February | | | | | | | 2 | | 1.8 | 90 | | |
| March | | | | | | | 4 | 1 | 1.9 | 115 | | |
| April | | | | | | | 206 | 1 | 31.2 | 1,850 | | |
| May | | | | | | | 6,480 | 2 | 522 | 32,080 | | |
| June | | | | | | | 476 | 2 | 28.1 | 1,670 | | |
| July | | | | | | | 2 | 0 | .9 | 54 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 784 | | 63.4 | 3,770 | | |
| The year | | | | | | | 6,480 | 0 | 55.6 | 40,210 | | |

*Interpolated.

Note.- No flow during August.

Osage River near Ottawa, Kans.

Location.- Water-stage recorder in NW $\frac{1}{4}$ sec. 6, T. 17 S., R. 20 W., $1\frac{1}{4}$ miles southeast of Ottawa and three-quarters of a mile below Skunk Creek. Zero of gage is 852.6 feet above mean sea level.

Drainage area.- 1,260 square miles (revised).

Records available.- October 1918 to September 1934. August 1902 to October 1905 at Main Street Bridge, at Ottawa.

Average discharge.- 18 years (1902-5, 1919-34), 539 second-feet.

Extremes.- Maximum discharge during year, 7,180 second-feet May 15 (gage height, 17.78 feet); no flow at times.
1918-34: Maximum discharge, 58,400 second-feet Nov. 17, 1928 (gage height, 38.65 feet); no flow at times. Bank-full stage, 27 feet.

Remarks.- Records good except those estimated, which are fair. Stage-discharge relation affected by ice Feb. 18-28.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|-------|----------------------|------|-------|
| 1 | 74 | 2 | 9 | 2 | 9 | 4 | 3 | 0.9 | 6 | 0.7 | } #1 | 0.4 |
| 2 | 37 | 2 | 5 | 2 | 8 | 3 | 3 | 1 | 7 | .4 | | 1 |
| 3 | 21 | 4 | 3 | } #4 | 8 | 10 | 4 | 2 | 19 | .7 | | 1 |
| 4 | 17 | 4 | 3 | | 10 | .5 | 14 | 8 | 6 | .2 | | .7 |
| 5 | 12 | 5 | 3 | | 9 | .4 | 307 | 4 | 4 | .4 | | .9 |
| 6 | 9 | 6 | 2 | } #7 | 8 | 198 | 85 | 4 | 2 | 1 | 0 | |
| 7 | 6 | 6 | 3 | | 7 | 103 | 82 | 4 | 0 | 1 | 0 | |
| 8 | 5 | 5 | 3 | | 9 | 7 | 122 | 72 | 2 | 0 | .9 | 0 |
| 9 | 4 | 5 | 2 | | 10 | 7 | 77 | 44 | 2 | .2 | 1 | 0 |
| 10 | 3 | 5 | 2 | | 10 | 6 | .5 | 51 | 27 | 2 | 0 | .7 |
| 11 | 3 | 6 | 2 | 9 | } #3 | 31 | 638 | 2 | 0 | 2 | 0 | |
| 12 | 2 | 5 | 2 | 10 | | 5 | 19 | 180 | 2 | 0 | 2 | 0 |
| 13 | 2 | 5 | 2 | 10 | | 5 | 3 | 10 | 119 | 1 | 0 | 2 |
| 14 | 3 | 5 | 2 | 11 | | 5 | 2 | 6 | 1,770 | 4 | .2 | 2 |
| 15 | 4 | 6 | 2 | 10 | | 5 | 2 | 6 | 6,270 | 2 | 0 | 2 |
| 16 | 5 | 6 | 2 | 11 | 4 | 2 | 6 | 5,280 | 2 | .2 | 1 | 24 |
| 17 | 4 | 4 | 3 | 9 | 4 | 3 | 6 | 1,350 | 2 | .2 | .9 | 5 |
| 18 | 4 | 4 | 3 | 11 | | 2 | 5 | 535 | 205 | .9 | .4 | .4 |
| 19 | 6 | 4 | 9 | 11 | | 2 | 3 | 198 | 267 | .4 | .7 | 0 |
| 20 | 32 | 4 | 9 | 12 | | 2 | 2 | 131 | 95 | .7 | .2 | 2 |
| 21 | 10 | 4 | 5 | 11 | } #3 | 2 | 2 | 90 | 46 | 2 | 0 | 5 |
| 22 | 4 | 4 | 3 | 10 | | 2 | 2 | 63 | 24 | 1 | 0 | 307 |
| 23 | 3 | 5 | 3 | 11 | | 2 | 2 | 46 | 16 | 1 | 0 | 69 |
| 24 | 3 | 6 | 2 | 10 | | 2 | 1 | 32 | 7 | 1 | 0 | 25 |
| 25 | 2 | 5 | 3 | 14 | | 2 | 1 | 26 | 4 | 1 | 0 | 9 |
| 26 | 4 | 4 | 2 | 10 | 2 | 2 | 18 | 2 | 2 | 0 | | 11 |
| 27 | 4 | 4 | 2 | 8 | | 2 | 2 | 14 | 2 | 2 | 0 | 20 |
| 28 | 3 | 4 | 2 | 9 | | 2 | 2 | 13 | 1 | 2 | 0 | 457 |
| 29 | 3 | 5 | 2 | 10 | | 2 | .9 | 10 | .7 | 2 | 0 | 1,370 |
| 30 | 2 | 5 | 2 | 10 | | 2 | .9 | 8 | .2 | 1 | 0 | 515 |
| 31 | 2 | | 2 | 8 | | 2 | | 7 | | | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 74 | 2 | 9.5 | 581 | | |
| November | | | | | | | 6 | 2 | 4.6 | 276 | | |
| December | | | | | | | 9 | 2 | 3.2 | 194 | | |
| January | | | | | | | 14 | 2 | 8.6 | 532 | | |
| February | | | | | | | 10 | | 5.2 | 288 | | |
| March | | | | | | | 10 | 2 | 2.8 | 173 | | |
| April | | | | | | | 307 | .9 | 33.1 | 1,970 | | |
| May | | | | | | | 6,270 | .9 | 544 | 33,460 | | |
| June | | | | | | | 267 | .2 | 24.7 | 1,470 | | |
| July | | | | | | | 2 | 0 | .74 | 44 | | |
| August | | | | | | | 2 | 0 | .75 | 46 | | |
| September | | | | | | | 1,370 | 0 | 109 | 6,500 | | |
| The year | | | | | | | 6,270 | 0 | 63.0 | 45,530 | | |

*Estimated.

Osage River at Trading Post, Kans.

Location.- Chain gage in SE $\frac{1}{4}$ sec. 5, T. 21 S., R. 25 E., at Trading Post, 1 mile above mouth of Big Sugar Creek.

Drainage area.- 2,910 square miles (revised).

Records available.- August 1921 to December 1923, October 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 9,560 second-feet May 17 (gage height, 16.35 feet); no flow at times.
1921-23, 1928-34: Maximum discharge recorded, 120,000 second-feet Nov. 18, 1928 (gage height, 34.45 feet); no flow at times. Bank-full stage, 24 feet.

Remarks.- Records good except those for Oct. 5-31, Mar. 4 to May 17, which are fair.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|-------|----------------------|------|-------|
| 1 | 31 | 12 | 9 | 25 | 16 | 16 | 15 | 18 | 36 | 14 | | 0 |
| 2 | 141 | 11 | 11 | 25 | 15 | 22 | 14 | 18 | 33 | 12 | | 0 |
| 3 | 107 | 11 | 12 | 22 | 15 | 22 | 14 | 18 | 33 | 10 | | 0 |
| 4 | 73 | 14 | 13 | 22 | 15 | 22 | 15 | 19 | 31 | 9 | | 0 |
| 5 | 47 | 14 | 13 | 24 | 15 | 34 | 28 | 25 | 25 | 8 | | 0 |
| 6 | 36 | 14 | 16 | 24 | 14 | 60 | 145 | 27 | 22 | 11 | | 0 |
| 7 | 29 | 11 | 17 | 26 | 14 | 130 | 370 | 24 | 23 | 10 | | 0 |
| 8 | 23 | 11 | 20 | 25 | 14 | 88 | 290 | 23 | 22 | 9 | | 0 |
| 9 | 18 | 10 | 20 | 25 | 14 | 73 | 458 | 85 | 21 | 8 | | 0 |
| 10 | 17 | 9 | 19 | 22 | 15 | 62 | 342 | 79 | 20 | 8 | | 0 |
| 11 | 16 | 8 | 18 | 22 | 12 | 42 | 234 | 75 | 19 | 7 | | 0 |
| 12 | 15 | 8 | 17 | 22 | 12 | 43 | 187 | 265 | 18 | 6 | | 0 |
| 13 | 11 | 9 | 15 | 21 | 12 | 39 | 119 | 490 | 16 | 5 | | 0 |
| 14 | 10 | 8 | 14 | 21 | 14 | 32 | 107 | 342 | 16 | 5 | | 0 |
| 15 | 12 | 8 | 13 | 21 | 13 | 25 | 73 | 8,160 | 18 | 5 | | 5 |
| 16 | 12 | 7 | 13 | 20 | 13 | 24 | 62 | 9,210 | 21 | 4 | | 238 |
| 17 | 12 | 8 | 14 | 19 | 13 | 25 | 50 | 9,280 | 22 | 3 | | 130 |
| 18 | 11 | 8 | 14 | 20 | 14 | 23 | 58 | 6,020 | 16 | 2 | | 79 |
| 19 | 10 | 8 | 20 | 21 | 15 | 20 | 49 | 845 | 19 | 2 | | 37 |
| 20 | 9 | 7 | 46 | 21 | 15 | 21 | 42 | 555 | 165 | 1 | | 32 |
| 21 | 8 | 8 | 50 | 21 | 14 | 21 | 37 | 425 | 211 | 1 | | 54 |
| 22 | 8 | 8 | 54 | 21 | 14 | 18 | 23 | 290 | 104 | 1 | | 35 |
| 23 | 8 | 6 | 54 | 21 | 14 | 18 | 27 | 229 | 64 | 0 | | 2,080 |
| 24 | 33 | 9 | 79 | 21 | 14 | 18 | 25 | 165 | 44 | 0 | | 2,310 |
| 25 | 28 | 9 | 107 | 21 | 18 | 15 | 23 | 126 | 32 | 0 | | 115 |
| 26 | 24 | 8 | 88 | 21 | 17 | 16 | 22 | 104 | 23 | 1 | | 79 |
| 27 | 23 | 8 | 66 | 19 | 17 | 16 | 21 | 100 | 21 | 1 | | 50 |
| 28 | 19 | 8 | 44 | 19 | 17 | 16 | 20 | 75 | 19 | 0 | | 33 |
| 29 | 17 | 9 | 37 | 19 | 15 | 16 | 19 | 66 | 17 | 0 | | 1,010 |
| 30 | 15 | 9 | 32 | 18 | 15 | 15 | 18 | 58 | 15 | 0 | | 2,840 |
| 31 | 14 | | 28 | 19 | | 15 | | 50 | | 0 | | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 141 | 8 | 27 | 1,660 | | |
| November | | | | | | | 14 | 7 | 9.3 | 555 | | |
| December | | | | | | | 107 | 9 | 31.4 | 1,930 | | |
| January | | | | | | | 26 | 18 | 21.5 | 1,320 | | |
| February | | | | | | | 18 | 12 | 14.5 | 803 | | |
| March | | | | | | | 130 | 15 | 32.4 | 1,990 | | |
| April | | | | | | | 458 | 14 | 95.6 | 5,690 | | |
| May | | | | | | | 9,280 | 18 | 1,202 | 73,910 | | |
| June | | | | | | | 211 | 15 | 38.2 | 2,270 | | |
| July | | | | | | | 14 | 0 | 4.6 | 284 | | |
| August | | | | | | | 0 | 0 | 0 | 0 | | |
| September | | | | | | | 2,840 | 0 | 304 | 18,100 | | |
| The year | | | | | | | 9,280 | 0 | 150 | 108,500 | | |

Note.- No flow during August.

Osage River at Osceola, Mo.

Location.- Water-stage recorder in NE¼NE¼ sec. 17, T. 33 N., R. 25 W., 1 mile north-east of Osceola. Zero of gage is 679.7 feet above mean sea level.

Drainage area.- 8,220 square miles.

Records available.- November 1930 to September 1934, July 1921 to September 1928 at site 1 mile upstream.

Average discharge.- 10 years (1921-28, 1931-34), 5,230 second-feet.

Extremes.- Maximum discharge during year, 13,800 second-feet Sept. 13 (gage height, 11.30 feet); minimum, 9 second-feet Aug. 1, 2 (gage height, 0.44 feet); minimum daily discharge, 10 second-feet July 16, 19, 21-24, Aug. 1-3.
1921-28, 1930-34: Maximum discharge, 70,900 second-feet Apr. 11, 1927 (gage height, 30.4 feet at old location); minimum, that of Aug. 1, 2, 1934; minimum daily discharge, that of July 16, 19, 21-24, Aug. 1-3, 1934.

Remarks.- Records good. Flow regulated by hydroelectric plant of West Missouri Power Co. 1 mile upstream.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|------|-------|-------|-------|-------|------|------|--------|
| 1 | 6,510 | 747 | 351 | 392 | 445 | 519 | 2,270 | 903 | 356 | 16 | 10 | 83 |
| 2 | 6,280 | 536 | 289 | 537 | 409 | 846 | 2,000 | 885 | 257 | 299 | 10 | 126 |
| 3 | 5,720 | 597 | 222 | 626 | 374 | 1,460 | 1,790 | 880 | 260 | 197 | 10 | 125 |
| 4 | 3,800 | 925 | 223 | 562 | 400 | 2,940 | 1,740 | 958 | 255 | 275 | 66 | 92 |
| 5 | 1,880 | 437 | 228 | 398 | 351 | 3,360 | 2,610 | 1,840 | 490 | 123 | 21 | 617 |
| 6 | 1,020 | 1,240 | 231 | 427 | 428 | 2,640 | 7,310 | 2,070 | 443 | 115 | 12 | 169 |
| 7 | 523 | 1,600 | 339 | 672 | 373 | 2,070 | 9,070 | 2,610 | 345 | 116 | 12 | 165 |
| 8 | 471 | 1,350 | 74 | 658 | 371 | 1,760 | 8,950 | 2,080 | 310 | 135 | 13 | 102 |
| 9 | 482 | 823 | 217 | 957 | 323 | 1,580 | 6,740 | 1,200 | 280 | 143 | 13 | 96 |
| 10 | 321 | 782 | 206 | 1,530 | 374 | 1,320 | 4,400 | 1,080 | 236 | 162 | 181 | 104 |
| 11 | 307 | 648 | 215 | 1,500 | 246 | 976 | 4,180 | 761 | 201 | 22 | 51 | 1,750 |
| 12 | 682 | 582 | 145 | 1,370 | 404 | 966 | 4,070 | 691 | 140 | 59 | 13 | 9,740 |
| 13 | 556 | 591 | 221 | 1,070 | 316 | 893 | 2,790 | 930 | 218 | 27 | 14 | 12,700 |
| 14 | 553 | 490 | 204 | 1,210 | 288 | 893 | 2,130 | 1,400 | 501 | 82 | 13 | 7,860 |
| 15 | 667 | 483 | 218 | 1,280 | 251 | 790 | 1,860 | 1,250 | 455 | 27 | 18 | 7,650 |
| 16 | 1,250 | 454 | 197 | 1,180 | 309 | 602 | 4,400 | 4,970 | 1,100 | 10 | 22 | 6,210 |
| 17 | 1,310 | 447 | 124 | 1,090 | 275 | 785 | 5,630 | 8,860 | 1,600 | 31 | 22 | 5,200 |
| 18 | 1,680 | 409 | 243 | 898 | 321 | 654 | 4,540 | 9,810 | 2,240 | 20 | 368 | 3,710 |
| 19 | 1,490 | 173 | 798 | 895 | 329 | 845 | 3,200 | 8,590 | 1,610 | 10 | 419 | 2,030 |
| 20 | 1,170 | 413 | 1,200 | 901 | 355 | 480 | 2,560 | 4,510 | 648 | 26 | 135 | 1,160 |
| 21 | 785 | 289 | 3,680 | 751 | 540 | 660 | 2,150 | 2,020 | 434 | 10 | 215 | 1,200 |
| 22 | 1,550 | 294 | 4,570 | 636 | 277 | 570 | 1,840 | 1,210 | 470 | 10 | 152 | 1,390 |
| 23 | 1,580 | 291 | 2,750 | 853 | 259 | 630 | 1,710 | 889 | 388 | 10 | 23 | 1,480 |
| 24 | 1,660 | 303 | 1,710 | 602 | 613 | 908 | 1,670 | 817 | 359 | 10 | 110 | 783 |
| 25 | 1,200 | 303 | 1,080 | 655 | 223 | 497 | 1,460 | 719 | 306 | 12 | 262 | 965 |
| 26 | 1,460 | 194 | 764 | 581 | 422 | 539 | 1,410 | 601 | 198 | 14 | 149 | 858 |
| 27 | 934 | 292 | 689 | 599 | 865 | 1,040 | 1,400 | 367 | 121 | 14 | 137 | 572 |
| 28 | 953 | 237 | 523 | 456 | 582 | 1,500 | 1,120 | 436 | 123 | 93 | 21 | 791 |
| 29 | 875 | 242 | 533 | 522 | | 1,960 | 1,150 | 319 | 186 | 99 | | 2,580 |
| 30 | 883 | 222 | 576 | 481 | | 2,390 | 1,070 | 341 | 63 | 123 | 254 | 5,280 |
| 31 | 776 | | 308 | 459 | | 2,550 | | 267 | | 21 | 94 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-----------|---------|---------|-------|-----------------|---------|------------|
| | | | | | Inches | Acres-feet |
| October | 6,510 | 307 | 1,592 | 0.194 | 0.22 | 97,560 |
| November | 1,600 | 173 | 545 | .066 | .07 | 32,450 |
| December | 4,570 | 74 | 746 | .091 | .10 | 45,870 |
| January | 1,530 | 392 | 798 | .097 | .11 | 49,090 |
| February | 865 | 223 | 376 | .046 | .05 | 20,870 |
| March | 3,360 | 480 | 1,276 | .155 | .18 | 78,430 |
| April | 9,070 | 1,070 | 3,264 | .400 | .45 | 195,400 |
| May | 9,810 | 267 | 2,073 | .252 | .29 | 127,590 |
| June | 2,240 | 63 | 457 | .059 | .07 | 28,980 |
| July | 299 | 10 | 76.1 | .0093 | .01 | 4,680 |
| August | 419 | 10 | 94.8 | .012 | .01 | 5,830 |
| September | 12,700 | 83 | 2,620 | .319 | .36 | 155,900 |
| The year | 12,700 | 10 | 1,164 | .142 | 1.92 | 842,800 |

Osage River near Bagnell, Mo.

Location.- Water-stage recorder in N⁴SE¹ sec. 21, T. 40 N., R. 15 W., $\frac{1}{4}$ miles above Bagnell. Zero of gage is 549.75 feet above mean sea level.

Drainage area.- 14,000 square miles.

Records available.- May 1925 to September 1934.

Extremes.- Maximum discharge during year, 16,800 second-feet Mar. 15 (gage height, 11.00 feet); minimum, 238 second-feet July 15 (gage height, 2.10 feet); minimum daily discharge, 469 second-feet June 30.
1925-34: Maximum discharge, 106,000 second-feet Apr. 17, 1927, May 21, 1929; maximum gage height, 36.61 feet Apr. 17, 1927; minimum discharge, 220 second-feet June 12, 1932; minimum gage height, that of July 15, 1934; minimum daily discharge, 290 second-feet Feb. 21, 1931.
Maximum stage known, 43.1 feet in June 1844 (discharge, about 150,000 second-feet).

Remarks.- Records excellent. Flow regulated by hydroelectric plant of Union Electric Light & Power Co., 2 miles upstream.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|-------|-------|-------|-------|-------|---------|---------|-------|----------------------|-------|-------|
| 1 | 725 | 2,300 | 1,190 | 930 | 7,390 | 7,480 | 688 | 1,180 | 3,230 | 668 | 650 | 823 |
| 2 | 4,100 | 4,040 | 1,840 | 4,260 | 7,000 | 8,330 | 1,900 | 1,080 | 1,090 | 995 | 1,240 | 649 |
| 3 | 4,610 | 1,910 | 676 | 5,390 | 4,770 | 4,530 | 2,280 | 1,040 | 676 | 1,480 | 701 | 674 |
| 4 | 4,270 | 1,060 | 2,870 | 4,050 | 1,950 | 3,180 | 1,890 | 599 | 2,920 | 552 | 654 | 1,190 |
| 5 | 3,620 | 713 | 3,940 | 2,020 | 5,170 | 6,650 | 2,070 | 917 | 3,920 | 745 | 591 | 976 |
| 6 | 3,620 | 2,800 | 3,010 | 1,160 | 5,180 | 8,090 | 4,590 | 680 | 4,190 | 769 | 942 | 1,470 |
| 7 | 1,610 | 3,260 | 2,960 | 780 | 3,590 | 8,570 | 2,690 | 1,400 | 3,000 | 580 | 1,250 | 745 |
| 8 | 958 | 3,090 | 3,350 | 2,830 | 4,120 | 7,050 | 789 | 2,300 | 2,680 | 662 | 2,190 | 697 |
| 9 | 4,100 | 2,130 | 1,790 | 3,440 | 4,500 | 7,490 | 2,110 | 2,710 | 616 | 826 | 1,620 | 685 |
| 10 | 4,790 | 2,460 | 694 | 3,240 | 4,390 | 4,130 | 3,100 | 2,850 | 578 | 901 | 1,010 | 751 |
| 11 | 4,100 | 931 | 2,440 | 1,630 | 1,230 | 3,250 | 4,140 | 2,790 | 1,640 | 939 | 672 | 1,620 |
| 12 | 3,160 | 651 | 3,310 | 1,420 | 5,270 | 7,110 | 3,320 | 624 | 1,750 | 963 | 560 | 2,360 |
| 13 | 2,740 | 2,250 | 4,590 | 796 | 4,420 | 7,880 | 2,660 | 564 | 1,580 | 674 | 1,330 | 2,510 |
| 14 | 1,090 | 2,840 | 4,040 | 655 | 5,250 | 8,190 | 529 | 2,700 | 1,450 | 528 | 2,050 | 1,260 |
| 15 | 690 | 2,950 | 3,270 | 1,590 | 4,780 | 9,430 | 603 | 2,780 | 827 | 553 | 1,330 | 619 |
| 16 | 3,460 | 2,890 | 1,370 | 2,190 | 4,480 | 7,760 | 1,780 | 3,040 | 514 | 896 | 970 | 596 |
| 17 | 3,940 | 2,310 | 750 | 1,890 | 2,550 | 3,230 | 1,550 | 2,700 | 701 | 645 | 668 | 818 |
| 18 | 3,460 | 1,070 | 4,580 | 690 | 1,180 | 1,290 | 1,930 | 2,310 | 962 | 713 | 704 | 958 |
| 19 | 3,460 | 701 | 6,100 | 822 | 5,320 | 5,750 | 2,570 | 838 | 1,110 | 1,000 | 598 | 692 |
| 20 | 3,020 | 2,280 | 5,290 | 1,010 | 4,820 | 6,490 | 2,650 | 524 | 982 | 977 | 854 | 859 |
| 21 | 1,180 | 2,740 | 4,220 | 772 | 7,330 | 5,860 | 979 | 3,070 | 1,020 | 574 | 1,120 | 789 |
| 22 | 1,500 | 2,820 | 3,440 | 2,090 | 6,580 | 5,510 | 699 | 3,350 | 760 | 576 | 654 | 616 |
| 23 | 3,160 | 3,310 | 1,370 | 2,750 | 6,900 | 7,210 | 2,000 | 3,690 | 453 | 1,340 | 667 | 667 |
| 24 | 3,780 | 3,430 | 987 | 2,830 | 5,430 | 1,620 | 1,610 | 2,940 | 635 | 1,280 | 821 | 671 |
| 25 | 3,310 | 1,260 | 1,110 | 2,300 | 4,190 | 1,010 | 1,420 | 2,810 | 1,090 | 1,140 | 614 | 1,370 |
| 26 | 3,160 | 741 | 3,900 | 2,620 | 6,450 | 4,690 | 1,800 | 638 | 1,130 | 685 | 611 | 1,790 |
| 27 | 1,950 | 2,840 | 6,730 | 1,090 | 7,360 | 3,140 | 999 | 520 | 1,330 | 716 | 887 | 1,250 |
| 28 | 915 | 2,980 | 4,430 | 1,260 | 6,870 | 3,590 | 839 | 3,110 | 1,240 | 665 | 1,550 | 1,100 |
| 29 | 595 | 2,080 | 4,320 | 4,750 | 2,850 | 2,850 | 649 | 3,900 | 1,070 | 601 | 934 | 2,430 |
| 30 | 2,200 | 650 | 2,970 | 5,600 | 2,550 | 2,550 | 822 | 632 | 469 | 764 | 847 | 686 |
| 31 | 2,460 | | 1,260 | 6,620 | | 937 | | 3,720 | | 1,160 | 609 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 4,790 | 595 | 2,766 | 170,000 | | |
| November | | | | | | | 4,040 | 630 | 2,181 | 129,800 | | |
| December | | | | | | | 6,750 | 676 | 2,993 | 184,100 | | |
| January | | | | | | | 6,620 | 655 | 2,350 | 144,500 | | |
| February | | | | | | | 7,390 | 1,180 | 4,945 | 274,700 | | |
| March | | | | | | | 9,430 | 937 | 5,317 | 326,900 | | |
| April | | | | | | | 4,690 | 529 | 1,855 | 110,400 | | |
| May | | | | | | | 3,900 | 520 | 2,000 | 123,000 | | |
| June | | | | | | | 4,190 | 469 | 1,455 | 86,500 | | |
| July | | | | | | | 1,480 | 528 | 825 | 50,700 | | |
| August | | | | | | | 2,190 | 560 | 961 | 59,100 | | |
| September | | | | | | | 2,610 | 596 | 1,077 | 64,110 | | |
| The year | | | | | | | 9,430 | 469 | 2,381 | 1,724,000 | | |

Osage River near St. Thomas, Mo.

Location.— Water-stage recorder in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 35, T. 42 N., R. 12 W., half a mile below Sugar Creek and 2 $\frac{1}{2}$ miles south of St. Thomas. Zero of gage is 527.85 feet (revised) above mean sea level.

Drainage area.— 14,500 square miles.

Records available.— August 1931 to September 1934.

Extremes.— Maximum discharge during year, 13,500 second-feet Mar. 3 (gage height, 8.30 feet); minimum discharge, 520 second-feet Nov. 20, July 18; minimum gage height, 1.42 feet July 16; minimum daily discharge, 554 second-feet July 16.
1931-34: Maximum discharge, 59,900 second-feet May 26, 1933 (gage height, 21.30 feet); minimum, 420 second-feet Aug. 27, 1931 (gage height, 1.30 feet); minimum daily discharge, 420 second-feet Aug. 27, 1931.
Maximum stage known, about 39.7 feet in June 1844.

Remarks.— Records excellent. Flow regulated by hydroelectric plant of Union Electric Light & Power Co. near Bagnell.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|-------|-------|-------|-------|-------|---------|-------|-------|-------|----------------------|-------|
| 1 | 4,190 | 2,770 | 947 | 1,500 | 7,430 | 6,990 | 1,650 | 981 | 3,570 | 734 | 1,070 | 881 |
| 2 | 1,720 | 3,100 | 1,190 | 1,380 | 7,270 | 9,210 | 1,290 | 1,360 | 3,170 | 670 | 948 | 914 |
| 3 | 4,650 | 3,930 | 2,010 | 5,160 | 6,130 | 8,480 | 2,300 | 1,290 | 1,270 | 607 | 1,140 | 1,080 |
| 4 | 4,590 | 2,360 | 977 | 5,710 | 4,750 | 5,220 | 2,650 | 1,250 | 886 | 1,360 | 984 | 1,020 |
| 5 | 4,320 | 1,470 | 3,210 | 3,850 | 2,650 | 5,230 | 2,670 | 917 | 2,950 | 774 | 825 | 1,310 |
| 6 | 3,740 | 1,170 | 4,010 | 2,380 | 5,250 | 7,540 | 3,040 | 1,050 | 3,930 | 744 | 734 | 1,250 |
| 7 | 3,670 | 3,390 | 3,290 | 1,520 | 4,680 | 8,290 | 4,420 | 977 | 3,980 | 759 | 838 | 1,580 |
| 8 | 1,760 | 3,710 | 3,290 | 1,260 | 3,660 | 8,180 | 2,990 | 1,520 | 3,080 | 654 | 1,300 | 1,110 |
| 9 | 1,290 | 3,390 | 3,520 | 3,460 | 4,470 | 7,140 | 1,250 | 2,520 | 2,860 | 621 | 2,170 | 821 |
| 10 | 4,340 | 2,510 | 1,980 | 4,080 | 4,500 | 6,980 | 2,500 | 2,950 | 1,270 | 766 | 2,130 | 836 |
| 11 | 4,800 | 2,770 | 938 | 3,490 | 4,320 | 4,160 | 3,790 | 2,960 | 938 | 820 | 1,260 | 930 |
| 12 | 4,100 | 1,230 | 2,640 | 2,020 | 1,980 | 4,290 | 4,170 | 2,850 | 1,610 | 920 | 944 | 2,570 |
| 13 | 3,270 | 892 | 3,670 | 1,730 | 5,560 | 7,330 | 3,430 | 965 | 1,750 | 998 | 701 | 5,100 |
| 14 | 2,910 | 2,500 | 4,800 | 1,050 | 4,630 | 7,780 | 2,750 | 797 | 1,570 | 744 | 1,220 | 6,500 |
| 15 | 1,300 | 3,150 | 4,060 | 874 | 5,360 | 8,460 | 981 | 2,730 | 1,460 | 583 | 2,170 | 4,820 |
| 16 | 1,100 | 3,210 | 3,430 | 1,830 | 4,690 | 8,970 | 887 | 2,930 | 1,010 | 554 | 2,840 | 3,410 |
| 17 | 3,850 | 3,060 | 1,610 | 2,330 | 4,210 | 6,630 | 2,180 | 3,110 | 669 | 744 | 2,010 | 1,400 |
| 18 | 4,010 | 2,300 | 1,030 | 2,140 | 2,920 | 3,400 | 1,940 | 2,790 | 737 | 718 | 1,100 | 1,170 |
| 19 | 5,090 | 872 | 5,310 | 920 | 2,070 | 2,480 | 2,320 | 2,410 | 1,000 | 685 | 937 | 1,190 |
| 20 | 4,210 | 556 | 6,460 | 900 | 5,490 | 6,280 | 2,880 | 1,060 | 1,130 | 687 | 779 | 983 |
| 21 | 4,120 | 1,890 | 5,300 | 1,060 | 5,920 | 6,460 | 2,740 | 770 | 1,090 | 983 | 910 | 958 |
| 22 | 4,990 | 2,360 | 4,390 | 881 | 7,290 | 5,710 | 1,290 | 3,050 | 1,080 | 731 | 1,330 | 902 |
| 23 | 3,020 | 2,440 | 3,600 | 2,240 | 7,020 | 6,440 | 1,010 | 3,460 | 922 | 627 | 965 | 832 |
| 24 | 3,970 | 3,030 | 1,650 | 2,820 | 6,390 | 6,330 | 2,050 | 3,540 | 708 | 1,160 | 801 | 769 |
| 25 | 4,160 | 3,250 | 1,180 | 2,370 | 5,300 | 1,910 | 1,800 | 2,960 | 688 | 1,510 | 857 | 753 |
| 26 | 3,910 | 1,550 | 1,310 | 2,520 | 5,340 | 2,710 | 1,640 | 2,870 | 1,060 | 1,240 | 800 | 1,250 |
| 27 | 3,680 | 1,040 | 4,920 | 2,690 | 7,140 | 7,730 | 2,050 | 946 | 1,150 | 1,080 | 737 | 1,680 |
| 28 | 2,500 | 3,170 | 6,010 | 1,310 | 7,340 | 5,820 | 1,410 | 699 | 1,370 | 912 | 907 | 1,450 |
| 29 | 1,300 | 3,190 | 4,620 | 2,270 | | 5,580 | 1,160 | 3,190 | 1,320 | 763 | 1,480 | 3,640 |
| 30 | 957 | 2,370 | 2,700 | 5,220 | | 3,970 | 995 | 3,560 | 1,190 | 658 | 1,230 | 3,830 |
| 31 | 2,210 | | 3,330 | 6,250 | | 3,300 | | 1,030 | | 755 | 1,010 | |
| Month | Maximum | | | | | | Minimum | | Mean | | Run-off in acre-feet | |
| October | 4,990 | | | | | | 957 | | 3,346 | | 205,700 | |
| November | 3,930 | | | | | | 586 | | 2,422 | | 144,100 | |
| December | 6,460 | | | | | | 938 | | 3,141 | | 193,100 | |
| January | 6,250 | | | | | | 874 | | 2,401 | | 153,200 | |
| February | 7,430 | | | | | | 1,960 | | 5,156 | | 286,400 | |
| March | 9,210 | | | | | | 1,910 | | 6,097 | | 374,900 | |
| April | 4,420 | | | | | | 887 | | 2,208 | | 131,400 | |
| May | 3,560 | | | | | | 699 | | 2,045 | | 125,700 | |
| June | 3,980 | | | | | | 669 | | 1,647 | | 98,020 | |
| July | 1,360 | | | | | | 554 | | 701 | | 51,100 | |
| August | 2,840 | | | | | | 701 | | 1,198 | | 73,640 | |
| September | 6,500 | | | | | | 753 | | 1,834 | | 109,100 | |
| The year | 9,210 | | | | | | 554 | | 2,688 | | 1,946,000 | |

Marmaton River near Fort Scott, Kans.

Location.- Chain gage in NW $\frac{1}{4}$ sec. 21, T. 25 S., R. 25 E., 2 miles northeast of Fort Scott and 2 $\frac{1}{2}$ miles west of Kansas-Missouri State line.

Drainage area.- 411 square miles.

Records available.- August 1921 to June 1925, April 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 3,480 second-feet Apr. 5 (gage height, 23.16 feet); no flow at times.
1921-25, 1929-34: Maximum discharge recorded, 24,400 second-feet May 12, 1929 (gage height, 37.04 feet); no flow at times during summer of 1934. Bank-full stage, 34.0 feet.
Maximum stage known, 42.34 feet in 1915.

Remarks.- Records good.

Discharge, in second-feet, 1935-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|------|-------|------|-------|---------|---------|------|----------------------|------|------|-------|
| 1 | 1,390 | 40 | 32 | 84 | 38 | 36 | 188 | 42 | 1 | 0 | 0 | 1 |
| 2 | 658 | 40 | 25 | 74 | 38 | 526 | 221 | 35 | 2 | *0 | 0 | 1 |
| 3 | 265 | 51 | 24 | 69 | 40 | 454 | 186 | 37 | 79 | 0 | *0 | 1 |
| 4 | 186 | 232 | 24 | 84 | 38 | 287 | 155 | 155 | 69 | 0 | 0 | 1 |
| 5 | 134 | 502 | 25 | 124 | 38 | 199 | 3,020 | 682 | 69 | 0 | 0 | 1 |
| 6 | *104 | 232 | 22 | 124 | 36 | 144 | 1,380 | 243 | 40 | 5 | 0 | 0 |
| 7 | 74 | 155 | 24 | 166 | 34 | 124 | 1,380 | 124 | 25 | 2 | 0 | 0 |
| 8 | 54 | 119 | 21 | 243 | 32 | 99 | 508 | 69 | 13 | 1 | 0 | 1 |
| 9 | 52 | 99 | 21 | 210 | 32 | 64 | 342 | 54 | 6 | 0 | 0 | 1 |
| 10 | 47 | 79 | 19 | 199 | 31 | 74 | 794 | 69 | 8 | 0 | 0 | 7 |
| 11 | 45 | 64 | 18 | 199 | 27 | 64 | 353 | 79 | 8 | 0 | 0 | 2 |
| 12 | 69 | 59 | 18 | 210 | 29 | 59 | 210 | 61 | 265 | 0 | 1 | 2 |
| 13 | 40 | 50 | 16 | 210 | 27 | 54 | 177 | 40 | 104 | 0 | 0 | 1 |
| 14 | 31 | 46 | 16 | 166 | 25 | 52 | 155 | 69 | 114 | 6 | 0 | 2 |
| 15 | 254 | 48 | 16 | 144 | 26 | 49 | 144 | 386 | 124 | 0 | 0 | 820 |
| 16 | 254 | 44 | 14 | 119 | 25 | 44 | 134 | 243 | 820 | 0 | *0 | 210 |
| 17 | 119 | 35 | 15 | 109 | 25 | 43 | 124 | 119 | 364 | 0 | 0 | 79 |
| 18 | 74 | 35 | 15 | 94 | 31 | 41 | 124 | 74 | 144 | 0 | 1 | 26 |
| 19 | 114 | 35 | 1,030 | 89 | 34 | 41 | 109 | 51 | 64 | 0 | 0 | 18 |
| 20 | 109 | 37 | 1,330 | 89 | 36 | 43 | 89 | 44 | 37 | 0 | 1 | 18 |
| 21 | 69 | 37 | 397 | 84 | 36 | 45 | 79 | 37 | 21 | 0 | 1 | 17 |
| 22 | 45 | 35 | 265 | 79 | 34 | 43 | 69 | 32 | 17 | 0 | 0 | 23 |
| 23 | 36 | 32 | 210 | 74 | 34 | 41 | 64 | 25 | 13 | 0 | 1 | 25 |
| 24 | 32 | 33 | 166 | 69 | } †30 | 38 | 59 | 20 | 8 | 0 | 1 | 17 |
| 25 | 29 | 30 | 134 | 59 | | 40 | 59 | 16 | *7 | 0 | 1 | 12 |
| 26 | 31 | 26 | 109 | 54 | } 32 | 49 | 50 | 13 | 6 | 0 | 1 | 10 |
| 27 | 144 | 25 | *92 | 52 | | 114 | 54 | 13 | 4 | 0 | 1 | 6 |
| 28 | 104 | *24 | 74 | 50 | | 199 | 54 | 6 | 1 | 0 | 1 | 8 |
| 29 | 84 | 23 | 69 | 49 | | 466 | 49 | 6 | 1 | 0 | 0 | 299 |
| 30 | 74 | 40 | 74 | 45 | | 232 | 53 | *4 | 0 | 0 | 1 | 188 |
| 31 | 64 | | 84 | 40 | | 221 | | 1 | | 0 | 1 | |
| Month | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October | | | | | | 1,390 | 29 | 154 | 9,490 | | | |
| November | | | | | | 502 | 23 | 76.9 | 4,580 | | | |
| December | | | | | | 1,330 | 14 | 142 | 8,730 | | | |
| January | | | | | | 243 | 40 | 112 | 6,860 | | | |
| February | | | | | | 40 | 25 | 32.1 | 1,780 | | | |
| March | | | | | | 526 | 36 | 129 | 7,940 | | | |
| April | | | | | | 3,020 | 48 | 345 | 20,650 | | | |
| May | | | | | | 682 | 1 | 31.6 | 5,640 | | | |
| June | | | | | | 820 | 0 | 81.2 | 4,830 | | | |
| July | | | | | | 6 | 0 | .5 | 28 | | | |
| August | | | | | | 1 | 0 | .4 | 24 | | | |
| September | | | | | | 820 | 0 | 59.9 | 3,560 | | | |
| The year | | | | | | 3,020 | 0 | 102 | 74,010 | | | |

*Interpolated. †Estimated.

Sac River near Stockton, Mo.

Location.- Chain gage in W $\frac{1}{2}$ sec. 11, T. 34 N., R. 28 W., at bridge on State highway 54, 2 $\frac{1}{2}$ miles east of Stockton.

Drainage area.- 1,160 square miles.

Records available.- July 1921 to September 1934.

Average discharge.- 13 years, 1,140 second-feet.

Extremes.- Maximum discharge recorded during year, 20,600 second-feet Sept. 12 (gage height, 20.50 feet); minimum, 7 second-feet Aug. 17 (gage height, 1.86 feet).
1921-34: Maximum discharge, 34,800 second-feet Apr. 1, 1927 (gage height, 24.95 feet); minimum discharge, that of Aug. 17, 1934; minimum gage height, 1.62 feet Sept. 10, 1925.

Maximum stage known, 29.3 feet July 1909.

Remarks.- Records good except those for days of rapidly changing stage, which are generally fair. Discharge estimated for Dec. 12, 31, Jan. 28, July 4, 21, Sept. 30.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|------|------|------|------|-------|-------|-----|------|------|-------|--------|
| 1 | 388 | 370 | 181 | 169 | 230 | 332 | 835 | 523 | 146 | 351 | 29 | 65 |
| 2 | 569 | 351 | 175 | 169 | 230 | 411 | 785 | 500 | 146 | 262 | 24 | 79 |
| 3 | 432 | 332 | 175 | 169 | 214 | 1,370 | 688 | 454 | 140 | 169 | 22 | 98 |
| 4 | 370 | 370 | 175 | 181 | 214 | 1,150 | 640 | 477 | 230 | 128 | 17 | 45 |
| 5 | 332 | 546 | 175 | 193 | 214 | 535 | 2,340 | 500 | 199 | 88 | 14 | 296 |
| 6 | 279 | 616 | 175 | 181 | 199 | 785 | 2,200 | 454 | 175 | 79 | 14 | 181 |
| 7 | 262 | 546 | 167 | 181 | 187 | 569 | 1,960 | 432 | 163 | 70 | 14 | 164 |
| 8 | 230 | 600 | 169 | 296 | 181 | 562 | 1,600 | 411 | 162 | 65 | 14 | 124 |
| 9 | 214 | 454 | 169 | 582 | 181 | 623 | 1,420 | 370 | 129 | 85 | 12 | 103 |
| 10 | 214 | 411 | 169 | 546 | 181 | 477 | 1,200 | 351 | 118 | 61 | 12 | 88 |
| 11 | 181 | 332 | 169 | 500 | 175 | 454 | 1,040 | 314 | 129 | 61 | 11 | 5,920 |
| 12 | 181 | 332 | 160 | 454 | 175 | 390 | 935 | 296 | 129 | 61 | 9 | 20,300 |
| 13 | 169 | 332 | 152 | 454 | 175 | 390 | 935 | 296 | 124 | 57 | 27 | 10,100 |
| 14 | 230 | 296 | 135 | 454 | 175 | 332 | 785 | 279 | 124 | 45 | 22 | 5,920 |
| 15 | 199 | 279 | 152 | 454 | 175 | 314 | 835 | 390 | 113 | 45 | 9 | 3,750 |
| 16 | 230 | 279 | 152 | 432 | 163 | 314 | 4,800 | 370 | 477 | 42 | 8 | 1,540 |
| 17 | 736 | 279 | 124 | 411 | 169 | 314 | 2,720 | 332 | 370 | 35 | 7 | 1,040 |
| 18 | 454 | 262 | 152 | 370 | 169 | 314 | 1,720 | 314 | 214 | 32 | 2,530 | 785 |
| 19 | 390 | 262 | 230 | 370 | 175 | 314 | 1,370 | 262 | 214 | 32 | 296 | 898 |
| 20 | 351 | 246 | 546 | 332 | 181 | 296 | 1,260 | 246 | 163 | 32 | 157 | 523 |
| 21 | 1,310 | 230 | 370 | 332 | 181 | 279 | 1,090 | 230 | 140 | 34 | 98 | 885 |
| 22 | 987 | 230 | 314 | 332 | 199 | 279 | 987 | 230 | 118 | 35 | 74 | 885 |
| 23 | 1,900 | 230 | 296 | 296 | 193 | 279 | 885 | 332 | 118 | 29 | 74 | 640 |
| 24 | 835 | 214 | 262 | 279 | 199 | 279 | 835 | 296 | 108 | 27 | 163 | 546 |
| 25 | 688 | 199 | 246 | 279 | 230 | 262 | 736 | 230 | 98 | 24 | 108 | 390 |
| 26 | 616 | 199 | 230 | 279 | 296 | 262 | 688 | 230 | 124 | 45 | 88 | 351 |
| 27 | 736 | 199 | 214 | 262 | 279 | 1,040 | 736 | 214 | 88 | 45 | 88 | 332 |
| 28 | 562 | 199 | 199 | 254 | 262 | 1,480 | 785 | 181 | 79 | 65 | 98 | 314 |
| 29 | 500 | 187 | 193 | 246 | | 1,200 | 640 | 169 | 70 | 45 | 246 | 6,340 |
| 30 | 432 | 187 | 193 | 230 | | 987 | 592 | 169 | 65 | 39 | 88 | 3,690 |
| 31 | 390 | | 181 | 230 | | 886 | | 169 | | 32 | 79 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-----------|---------|---------|-------|-----------------|---------|-----------|
| | | | | | Inches | Acre-feet |
| October | 1,900 | 169 | 506 | 0.436 | 0.50 | 31,130 |
| November | 616 | 187 | 318 | .272 | .30 | 18,790 |
| December | 546 | 124 | 206 | .178 | .21 | 12,670 |
| January | 592 | 169 | 320 | .276 | .32 | 19,690 |
| February | 296 | 163 | 200 | .172 | .18 | 11,110 |
| March | 1,480 | 262 | 574 | .495 | .57 | 35,320 |
| April | 4,800 | 592 | 1,265 | 1.09 | 1.22 | 75,260 |
| May | 523 | 169 | 323 | .278 | .32 | 19,890 |
| June | 477 | 65 | 155 | .134 | .15 | 9,250 |
| July | 351 | 24 | 71.0 | .061 | .07 | 4,360 |
| August | 2,530 | 7 | 144 | 1.124 | .14 | |
| September | 20,300 | 65 | 2,219 | 1.91 | 2.13 | 132,100 |
| The year | 20,300 | 7 | 523 | .451 | 6.11 | 379,400 |

Pomme de Terre River at Hermitage, Mo.

Location.- Chain gage in SW $\frac{1}{4}$ sec. 24, T. 37 N., R. 22 W., at bridge on State highway 54 at Hermitage. Zero of gage is 727.91 feet above mean sea level.

Drainage area.- 655 square miles.

Records available.- July 1921 to September 1934.

Average discharge.- 13 years, 642 second-feet.

Extremes.- Maximum discharge recorded during year, 5,530 second-feet Apr. 16 (gage height, 12.14 feet); minimum discharge, 0.2 second-foot Aug. 13, 15; minimum gage height, 1.28 feet Aug. 15.
1921-34: Maximum discharge, about 70,000 second-feet, revised, Aug. 8, 1927 (gage height, 36.45 feet, from flood mark); minimum discharge, that of Aug. 13, 15, 1934; minimum gage height, that of Aug. 15, 1934.

Remarks.- Records good except those for days of rapidly changing stage and those estimated for periods of ice effect, Jan. 30 to Feb. 1, Feb. 28 to Mar. 1, which are fair.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | | |
|-----------|-------|------|------|---------|------|---------|-------|------|------|-----------------|------|---------|-----------|---------|
| 1 | 250 | 131 | 93 | 59 | 55 | 90 | 195 | 371 | 34 | 451 | 1.0 | 12 | | |
| 2 | 153 | 117 | 89 | 55 | 54 | 560 | 170 | 355 | 25 | 131 | 1.0 | 14 | | |
| 3 | 135 | 113 | 78 | 55 | 47 | 1,900 | 146 | 355 | 22 | 67 | .8 | 485 | | |
| 4 | 97 | 97 | 67 | 59 | 50 | 1,040 | 135 | 355 | 28 | 43 | .8 | 520 | | |
| 5 | 78 | 105 | 64 | 55 | 60 | 680 | 680 | 158 | 22 | 28 | .8 | 451 | | |
| 6 | 74 | 264 | 60 | 62 | 57 | 451 | 1,120 | 144 | 50 | 22 | .8 | 419 | | |
| 7 | 60 | 264 | 57 | 72 | 57 | 387 | 1,120 | 323 | 37 | 16 | .8 | 99 | | |
| 8 | 54 | 208 | 57 | 120 | 54 | 323 | 1,040 | 195 | 25 | 13 | .7 | 69 | | |
| 9 | 50 | 182 | 54 | 195 | 54 | 264 | 900 | 153 | 22 | 9 | .6 | 57 | | |
| 10 | 43 | 140 | 54 | 222 | 50 | 235 | 680 | 131 | 13 | 10 | .5 | 46 | | |
| 11 | 40 | 126 | 52 | 195 | 47 | 195 | 640 | 109 | 16 | 25 | .3 | 62 | | |
| 12 | 43 | 117 | 48 | 170 | 47 | 170 | 600 | 101 | 19 | 19 | .3 | 3,530 | | |
| 13 | 140 | 109 | 48 | 158 | 50 | 158 | 560 | 93 | 13 | 13 | .2 | 600 | | |
| 14 | 135 | 97 | 45 | 158 | 54 | 153 | 455 | 89 | 10 | 8 | .3 | 4,990 | | |
| 15 | 93 | 93 | 42 | 170 | 47 | 140 | 451 | 105 | 13 | 9 | .2 | 2,460 | | |
| 16 | 105 | 82 | 45 | 158 | 47 | 131 | 5,530 | 208 | 451 | 4.0 | .5 | 1,120 | | |
| 17 | 1,300 | 85 | 59 | 144 | 50 | 122 | 3,670 | 170 | 135 | 5 | .4 | 485 | | |
| 18 | 387 | 78 | 62 | 126 | 47 | 117 | 2,050 | 137 | 67 | 4.0 | 1.6 | 308 | | |
| 19 | 208 | 71 | 195 | 122 | 64 | 126 | 1,500 | 109 | 57 | 3.4 | 371 | 208 | | |
| 20 | 158 | 74 | 182 | 117 | 71 | 131 | 1,300 | 86 | 37 | 2.8 | 117 | 161 | | |
| 21 | 1,700 | 74 | 222 | 109 | 78 | 135 | 485 | 82 | 25 | 2.8 | 71 | 133 | | |
| 22 | 900 | 71 | 208 | 105 | 85 | 135 | 419 | 67 | 19 | 2.2 | 50 | 250 | | |
| 23 | 1,170 | 69 | 126 | 101 | 97 | 126 | 339 | 64 | 13 | 1.6 | 40 | 195 | | |
| 24 | 520 | 69 | 109 | 97 | 105 | 144 | 323 | 64 | 10 | 1.0 | 28 | 156 | | |
| 25 | 323 | 66 | 89 | 93 | 100 | 117 | 235 | 57 | 8 | 1.6 | 89 | 126 | | |
| 26 | 235 | 62 | 85 | 89 | 90 | 122 | 222 | 50 | 6 | 1.9 | 60 | 95 | | |
| 27 | 208 | 59 | 74 | 78 | 90 | 355 | 451 | 47 | 4.0 | 2.8 | 37 | 60 | | |
| 28 | 308 | 62 | 67 | 82 | 90 | 1,800 | 560 | 42 | 4.0 | 2.2 | 38 | 72 | | |
| 29 | 235 | 59 | 64 | 71 | | 1,400 | 387 | 40 | 3.4 | 1.3 | 25 | 451 | | |
| 30 | 182 | 55 | 107 | 65 | | 945 | 371 | 34 | 264 | 1.0 | 19 | 2,210 | | |
| 31 | 144 | | 60 | 60 | | 600 | | 32 | | .8 | 16 | | | |
| Month | | | | Maximum | | Minimum | | Mean | | Per square mile | | Run-off | | |
| | | | | | | | | | | | | Inches | Acre-feet | |
| October | | | | 1,700 | | 40 | | 307 | | 0.469 | | 0.54 | | 18,900 |
| November | | | | 264 | | 55 | | 107 | | .13 | | .15 | | 5,350 |
| December | | | | 222 | | 42 | | 85.9 | | .131 | | .15 | | 5,280 |
| January | | | | 222 | | 55 | | 110 | | .138 | | .19 | | 6,790 |
| February | | | | 105 | | 47 | | 64.2 | | .098 | | .10 | | 3,560 |
| March | | | | 1,900 | | 90 | | 427 | | .652 | | .75 | | 26,280 |
| April | | | | 5,530 | | 135 | | 892 | | 1.36 | | 1.52 | | 53,090 |
| May | | | | 371 | | 32 | | 140 | | .214 | | .25 | | 8,580 |
| June | | | | 451 | | 3.4 | | 48.4 | | .074 | | .08 | | 2,880 |
| July | | | | 451 | | .8 | | 29.1 | | .044 | | .05 | | 1,790 |
| August | | | | 371 | | .2 | | 31.4 | | .048 | | .06 | | 1,830 |
| September | | | | 4,990 | | 12 | | 659 | | 1.01 | | 1.13 | | 39,230 |
| The year | | | | 5,530 | | .2 | | 241 | | .368 | | 5.00 | | 174,700 |

South Grand River near Brownington, Mo.

Location.- Chain gage in NW $\frac{1}{4}$ sec. 17, T. 40 N., R. 25 W., 500 feet below Deepwater Creek and 1 mile north of Brownington. Zero of gage is 677.1 feet above mean sea level.

Drainage area.- 1,660 square miles.

Records available.- June 1921 to September 1934.

Average discharge.- 13 years, 851 second-feet.

Extremes.- Maximum discharge recorded during year, 1,990 second-feet Sept. 30 (gage height, 7.07 feet); no flow July 21-25, Aug. 21 to Sept. 13; minimum gage height, 0.08 foot July 25, Sept. 10-13.
1921-34: Maximum discharge, 40,000 second-feet Nov. 19, 1928 (gage height, 39.9 feet, from flood mark); minimum, that of July 21-25, Aug. 21 to Sept. 13, 1934.

Remarks.- Records good except those for days of rapidly changing stage and those estimated for July 12-27, which are fair.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|------|------|------|------|------|------|-------|------|------|------|-------|
| 1 | 172 | 26 | 1.9 | 7 | 2.6 | 2.1 | 63 | 2.2 | 3.6 | 2.6 | 18 | 0 |
| 2 | 520 | 22 | 2.8 | 6 | 2.6 | 3.5 | 58 | 2.1 | 3.2 | 9 | 8 | 0 |
| 3 | 116 | 16 | 4.6 | 6 | 2.5 | 16 | 40 | 1.9 | 2.3 | 6 | 5 | 0 |
| 4 | 53 | 11 | 3.3 | 8 | 2.5 | 132 | 36 | 2.0 | 2.2 | 3.6 | 2.8 | 0 |
| 5 | 28 | 9 | 3.0 | 13 | 2.5 | 235 | 172 | 520 | 6 | 2.8 | 2.2 | 0 |
| 6 | 20 | 7 | 2.8 | 12 | 2.3 | 141 | 609 | 137 | 8 | 2.0 | 1.7 | 0 |
| 7 | 13 | 6 | 2.2 | 14 | 2.0 | 87 | 318 | 132 | 5 | 1.9 | 1.6 | 0 |
| 8 | 8 | 5 | 2.0 | 15 | 2.0 | 53 | 520 | 132 | 3.3 | 1.6 | 1.0 | 0 |
| 9 | 4.9 | 4.4 | 1.9 | 16 | 1.9 | 36 | 220 | 63 | 2.5 | 1.3 | 1.0 | 0 |
| 10 | 3.5 | 3.0 | 1.9 | 17 | 1.7 | 26 | 137 | 37 | 2.0 | 1.3 | .6 | 0 |
| 11 | 2.8 | 2.1 | 1.7 | 18 | 1.7 | 23 | 77 | 22 | 1.7 | 1.0 | .6 | 0 |
| 12 | 2.1 | 1.7 | 1.6 | 14 | 1.6 | 20 | 184 | 16 | 1.6 | .9 | .5 | 0 |
| 13 | 1.6 | 1.3 | 1.6 | 18 | 1.6 | 15 | 77 | 16 | 1.4 | .8 | .4 | 0 |
| 14 | 1.3 | 1.5 | 1.6 | 18 | 1.6 | 12 | 50 | 24 | 1.3 | .7 | .2 | 70 |
| 15 | 1.8 | 1.4 | 1.6 | 16 | 1.6 | 9 | 37 | 29 | 38 | .6 | .2 | 656 |
| 16 | 9 | 1.7 | 1.6 | 14 | 1.4 | 8 | 27 | 1,940 | 35 | .5 | .2 | 273 |
| 17 | 1,600 | 2.0 | 2.0 | 14 | 1.3 | 7 | 21 | 950 | 97 | .4 | .2 | 135 |
| 18 | 702 | 1.9 | 1.9 | 13 | 1.3 | 7 | 18 | 331 | 55 | .3 | .2 | 32 |
| 19 | 287 | 1.8 | 33 | 12 | 1.7 | 7 | 16 | 184 | 31 | .2 | .1 | 18 |
| 20 | 478 | 1.7 | 382 | 12 | 1.7 | 5 | 14 | 112 | 26 | .1 | .1 | 13 |
| 21 | 564 | 1.7 | 609 | 10 | 1.6 | 5 | 12 | 68 | 25 | 0 | 0 | 24 |
| 22 | 235 | 1.6 | 516 | 10 | 2.0 | 4.4 | 10 | 45 | 21 | 0 | 0 | 195 |
| 23 | 94 | 1.6 | 161 | 8 | 1.9 | 3.6 | 7 | 29 | 14 | 0 | 0 | 196 |
| 24 | 53 | 1.6 | 80 | 7 | 1.8 | 3.5 | 5 | 35 | 6 | 0 | 0 | 161 |
| 25 | 29 | 1.6 | 48 | 6 | 2.8 | 3.2 | 5 | 24 | 6 | 0 | 0 | 71 |
| 26 | 22 | 1.6 | 35 | 4.9 | 3.0 | 4.3 | 3.6 | 22 | 4.9 | 30 | 0 | 36 |
| 27 | 90 | 1.5 | 23 | 4.4 | 2.3 | 6 | 4.4 | 18 | 3.6 | 100 | 0 | 24 |
| 28 | 132 | 1.5 | 16 | 4.2 | 2.1 | 7 | 3.5 | 13 | 2.5 | 850 | 0 | 18 |
| 29 | 65 | 1.5 | 14 | 3.5 | 9 | 9 | 3.2 | 8 | 2.0 | 132 | 0 | 702 |
| 30 | 39 | 1.8 | 11 | 2.8 | 9 | 9 | 2.8 | 6 | 2.2 | 61 | 0 | 1,990 |
| 31 | 33 | | 9 | 2.8 | | 40 | | 5 | | 30 | 0 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-----------|---------|---------|------|-----------------|---------|-----------|
| | | | | | Inches | Acre-feet |
| October | 1,600 | 1.3 | 174 | 0.105 | 0.12 | 10,670 |
| November | 26 | 1.3 | 4.75 | .0029 | .003 | 283 |
| December | 609 | 1.6 | 57.3 | .035 | .04 | 3,520 |
| January | 18 | 2.8 | 10.5 | .0063 | .007 | 646 |
| February | 3.0 | 1.3 | 1.99 | .0012 | .001 | 110 |
| March | 235 | 2.1 | 50.2 | .013 | .02 | 1,860 |
| April | 609 | 2.6 | 91.9 | .055 | .06 | 5,470 |
| May | 1,940 | 1.9 | 159 | .096 | .11 | 9,770 |
| June | 97 | 1.3 | 13.8 | .0053 | .009 | 824 |
| July | 860 | 0 | 40.0 | .024 | .03 | 2,460 |
| August | 18 | 0 | 1.45 | .00087 | .001 | 89 |
| September | 1,990 | 0 | 184 | .093 | .10 | 9,150 |
| The year | 1,990 | 0 | 62.0 | .037 | .50 | 44,850 |

Niangua River near Decaturville, Mo.

Location.- Water-stage recorder in SE $\frac{1}{4}$ sec. 18, T. 37 N., R. 17 W., 8 miles west of Decaturville. Zero of gage is about 665.9 feet above mean sea level.

Drainage area.- About 627 square miles.

Records available.- April 1930 to September 1934.

Extremes.- Maximum discharge during year, 4,410 second-feet Apr. 17 (gage height, 8.73 feet); minimum discharge, 15 second-feet Oct. 9, 10; minimum gage height, 1.90 feet Sept. 28; minimum daily discharge, 32 second-feet Aug. 5, 1930-34; Maximum discharge, 22,000 second-feet June 28, 1932 (gage height, 17.00 feet); minimum, 9 second-feet Nov. 28, 1932 (gage height, 1.84 feet); minimum daily discharge, 18 second-feet Oct. 4-6, 1930.

Remarks.- Records excellent. Flow regulated by hydroelectric plant of Missouri Electric Power Co. half a mile upstream.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|---------|------|------|---------|------|-------|-------|-----|------|-----------------|--------|------------|
| 1 | 650 | 284 | 217 | 214 | 167 | 190 | 711 | 491 | 149 | 112 | 165 | 221 |
| 2 | 490 | 272 | 250 | 156 | 181 | 382 | 474 | 234 | 152 | 128 | 217 | |
| 3 | 435 | 264 | 157 | 155 | 224 | 507 | 556 | 440 | 375 | 148 | 146 | 384 |
| 4 | 276 | 445 | 182 | 278 | 164 | 670 | 507 | 441 | 577 | 145 | 187 | 427 |
| 5 | 195 | 239 | 198 | 158 | 173 | 810 | 535 | 484 | 281 | 141 | 32 | 373 |
| 6 | 235 | 225 | 176 | 154 | 186 | 631 | 686 | 340 | 220 | 154 | 128 | 360 |
| 7 | 203 | 269 | 183 | 151 | 172 | 567 | 719 | 328 | 201 | 154 | 95 | 219 |
| 8 | 186 | 318 | 182 | 199 | 185 | 418 | 596 | 243 | 205 | 135 | 93 | 245 |
| 9 | 150 | 324 | 225 | 199 | 172 | 462 | 665 | 270 | 198 | 146 | 87 | 128 |
| 10 | 205 | 311 | 154 | 261 | 191 | 439 | 647 | 232 | 156 | 182 | 119 | 166 |
| 11 | 138 | 312 | 183 | 242 | 130 | 326 | 668 | 320 | 169 | 139 | 132 | 186 |
| 12 | 206 | 259 | 179 | 262 | 184 | 348 | 753 | 307 | 167 | 144 | 60 | 169 |
| 13 | 198 | 261 | 179 | 272 | 152 | 279 | 674 | 251 | 181 | 139 | 125 | 497 |
| 14 | 536 | 235 | 177 | 182 | 168 | 273 | 589 | 289 | 169 | 128 | 123 | 824 |
| 15 | 371 | 259 | 235 | 275 | 203 | 267 | 464 | 298 | 268 | 104 | 131 | 958 |
| 16 | 423 | 238 | 219 | 293 | 168 | 272 | 1,650 | 304 | 368 | 141 | 132 | 1,120 |
| 17 | 440 | 238 | 155 | 293 | 182 | 286 | 3,690 | 421 | 125 | 136 | 262 | 776 |
| 18 | 688 | 247 | 173 | 285 | 187 | 340 | 1,890 | 435 | 154 | 141 | 369 | 591 |
| 19 | 574 | 217 | 226 | 238 | 176 | 434 | 1,280 | 451 | 173 | 122 | 62 | 543 |
| 20 | 495 | 228 | 248 | 236 | 171 | 277 | 969 | 296 | 197 | 123 | 299 | 322 |
| 21 | 648 | 210 | 238 | 193 | 233 | 270 | 826 | 318 | 225 | 131 | 175 | 417 |
| 22 | 1,060 | 245 | 246 | 281 | 166 | 271 | 619 | 257 | 204 | 62 | 329 | 290 |
| 23 | 942 | 215 | 312 | 209 | 198 | 294 | 608 | 216 | 183 | 203 | 228 | 65 |
| 24 | 802 | 210 | 336 | 209 | 300 | 267 | 596 | 152 | 174 | 102 | 123 | 153 |
| 25 | 620 | 245 | 144 | 247 | 318 | 234 | 467 | 191 | 174 | 120 | 210 | 153 |
| 26 | 503 | 166 | 176 | 202 | 167 | 376 | 477 | 215 | 150 | 105 | 171 | 225 |
| 27 | 435 | 220 | 172 | 233 | 83 | 479 | 546 | 164 | 166 | 183 | 168 | 152 |
| 28 | 442 | 212 | 183 | 147 | 147 | 901 | 642 | 193 | 149 | 139 | 173 | 260 |
| 29 | 338 | 221 | 205 | 203 | | 1,590 | 515 | 223 | 148 | 133 | 145 | 615 |
| 30 | 294 | 189 | 180 | 146 | | 1,220 | 566 | 174 | 182 | 147 | 144 | 593 |
| 31 | 295 | | 165 | 182 | | 951 | | 241 | | 138 | 132 | |
| Month | Maximum | | | Minimum | | | Mean | | | Run-off | | |
| | | | | | | | | | | Per square mile | Inches | Acres-foot |
| October | 1,060 | | | 138 | | | 440 | | | 0.702 | 0.81 | 27,080 |
| November | 445 | | | 166 | | | 253 | | | .404 | .45 | 15,030 |
| December | 338 | | | 144 | | | 202 | | | .322 | .37 | 12,410 |
| January | 293 | | | 146 | | | 218 | | | .348 | .40 | 13,400 |
| February | 318 | | | 83 | | | 184 | | | .295 | .31 | 10,210 |
| March | 1,590 | | | 190 | | | 465 | | | .774 | .89 | 29,810 |
| April | 3,690 | | | 464 | | | 833 | | | 1.33 | 1.48 | 49,580 |
| May | 491 | | | 152 | | | 306 | | | .488 | .56 | 18,840 |
| June | 377 | | | 125 | | | 204 | | | .325 | .36 | 12,130 |
| July | 205 | | | 62 | | | 137 | | | .219 | .25 | 8,430 |
| August | 569 | | | 32 | | | 187 | | | .250 | .29 | 9,670 |
| September | 1,120 | | | 65 | | | 390 | | | .622 | .69 | 23,200 |
| The year | 3,690 | | | 32 | | | 317 | | | .506 | 6.86 | 229,800 |

Bennett Spring at Brice, Mo.

Location.- Staff gage in NW $\frac{1}{4}$ sec. 1, T. 34 N., R. 18 W., at Brice. Staff gage 1,780 feet downstream above different control used prior to Apr. 12, 1934, with datum 2.30 feet lower than present gage.

Records available.- October 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 273 second-feet Apr. 16 (gage height, 1.51 feet); minimum, 76 second-feet Apr. 27.

1928-34: Maximum gage height, 4.35 feet, former gage, May 6, 1929 (discharge not determined); minimum discharge, 75 second-feet Nov. 14, 15, 1932.

Maximum stage known, about 7 feet during June 1928.

Remarks.- Records poor. Discharge estimated for Nov. 10 to Dec. 30, Jan. 2-14, Feb. 1-12, Apr. 2-4, May 27 to June 9, Aug. 31. Occasional run-off from small valley above spring included in records.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|------|------|------|------|------|------|---------|---------|------|----------------------|------|-------|
| 1 | 152 | 111 | 89 | 90 | 83 | 81 | 143 | 83 | 93 | 78 | 84 | 116 |
| 2 | 146 | 111 | 89 | 90 | 83 | 116 | 137 | 78 | 94 | 78 | 83 | 146 |
| 3 | 141 | 107 | 88 | 90 | 83 | 125 | 131 | 80 | 95 | 78 | 84 | 141 |
| 4 | 136 | 95 | 88 | 90 | 83 | 130 | 124 | 84 | 95 | 78 | 86 | 141 |
| 5 | 128 | 118 | 87 | 90 | 82 | 120 | 118 | 83 | 95 | 84 | 91 | 141 |
| 6 | 123 | 120 | 87 | 90 | 82 | 118 | 116 | 98 | 96 | 81 | 88 | 128 |
| 7 | 120 | 109 | 87 | 90 | 81 | 118 | 113 | 93 | 96 | 81 | 91 | 113 |
| 8 | 118 | 111 | 87 | 90 | 81 | 113 | 113 | 81 | 96 | 78 | 91 | 111 |
| 9 | 116 | 107 | 87 | 102 | 81 | 113 | 116 | 80 | 96 | 78 | 88 | 107 |
| 10 | 113 | 105 | 87 | 100 | 81 | 109 | 118 | 81 | 95 | 81 | 88 | 106 |
| 11 | 111 | 102 | 87 | 92 | 81 | 93 | 116 | 86 | 91 | 81 | 88 | 107 |
| 12 | 125 | 100 | 86 | 95 | 80 | 90 | 141 | 84 | 86 | 81 | 91 | 113 |
| 13 | 120 | 98 | 86 | 100 | 80 | 88 | 141 | 80 | 86 | 78 | 88 | 136 |
| 14 | 116 | 97 | 86 | 100 | 80 | 88 | 141 | 78 | 90 | 78 | 88 | 228 |
| 15 | 123 | 96 | 86 | 98 | 80 | 88 | 169 | 141 | 90 | 78 | 88 | 210 |
| 16 | 182 | 95 | 86 | 95 | 80 | 88 | 267 | 133 | 90 | 78 | 86 | 138 |
| 17 | 172 | 94 | 86 | 91 | 80 | 88 | 233 | 130 | 91 | 78 | 88 | 130 |
| 18 | 149 | 93 | 87 | 91 | 86 | 88 | 186 | 109 | 93 | 81 | 120 | 125 |
| 19 | 143 | 93 | 87 | 88 | 86 | 91 | 143 | 95 | 93 | 78 | 118 | 118 |
| 20 | 162 | 93 | 98 | 88 | 86 | 96 | 120 | 93 | 93 | 78 | 113 | 111 |
| 21 | 202 | 92 | 100 | 88 | 81 | 96 | 105 | 88 | 86 | 81 | 111 | 107 |
| 22 | 233 | 92 | 100 | 86 | 81 | 96 | 102 | 90 | 83 | 81 | 107 | 102 |
| 23 | 214 | 92 | 97 | 86 | 81 | 90 | 96 | 91 | 83 | 78 | 102 | 105 |
| 24 | 168 | 91 | 92 | 86 | 78 | 86 | 88 | 90 | 83 | 81 | 98 | 96 |
| 25 | 156 | 90 | 90 | 84 | 80 | 96 | 80 | 91 | 81 | 81 | 98 | 95 |
| 26 | 141 | 90 | 90 | 84 | 80 | 123 | 78 | 86 | 78 | 81 | 95 | 88 |
| 27 | 141 | 90 | 90 | 84 | 78 | 202 | 78 | 90 | 77 | 81 | 91 | 88 |
| 28 | 125 | 90 | 90 | 84 | 78 | | 267 | 91 | 91 | 78 | 81 | 86 |
| 29 | 123 | 90 | 90 | 84 | | 247 | 90 | 91 | 78 | 81 | 95 | 90 |
| 30 | 120 | 90 | 90 | 83 | | 194 | 88 | 92 | 78 | 81 | 91 | 125 |
| 31 | 116 | | 91 | 86 | | 194 | | 92 | | 81 | 91 | |
| Month | | | | | | | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October | | | | | | | 233 | 111 | 143 | 8,800 | | |
| November | | | | | | | 120 | 90 | 98.7 | 5,880 | | |
| December | | | | | | | 100 | 86 | 89.4 | 5,500 | | |
| January | | | | | | | 102 | 83 | 90.2 | 5,640 | | |
| February | | | | | | | 86 | 78 | 81.3 | 4,510 | | |
| March | | | | | | | 267 | 81 | 120 | 7,400 | | |
| April | | | | | | | 267 | 76 | 126 | 7,480 | | |
| May | | | | | | | 141 | 78 | 92.3 | 5,680 | | |
| June | | | | | | | 96 | 77 | 88.6 | 5,270 | | |
| July | | | | | | | 88 | 78 | 79.7 | 4,900 | | |
| August | | | | | | | 120 | 85 | 93.9 | 5,780 | | |
| September | | | | | | | 228 | 86 | 122 | 7,230 | | |
| The year | | | | | | | 267 | 76 | 102 | 73,970 | | |

Gasconade River near Hazlegreen, Mo.

Location.- Chain gage in SE $\frac{1}{4}$ sec. 15, T. 35 N., R. 14 W., at bridge on State highway 66, 1 mile below Osage Fork and 1 $\frac{1}{2}$ miles west of Hazlegreen.

Drainage area.- 1,250 square miles.

Records available.- April 1929 to September 1934.

Extremes.- Maximum discharge recorded during year, 3,100 second-feet Mar. 29 (gage height, 6.09 feet); minimum discharge, 28 second-feet Aug. 5-7, 10; minimum gage height, 1.03 feet Aug. 6, 7, 10.
1929-34: Maximum discharge, 43,100 second-feet May 15, 1933 (gage height, 25.75 feet, from flood mark); minimum discharge, that of Aug. 5-7, 10, 1934; minimum gage height, that of Aug. 6, 7, 10, 1934.
Maximum stage known, 51.8 feet in January 1916.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----------|-------|---------|------|---------|------|-------|-------|-----------------|------|---------|------------|-------|
| 1 | 503 | 283 | 160 | 170 | 194 | 187 | 1,450 | 503 | 176 | 67 | 31 | 201 |
| 2 | 732 | 266 | 157 | 163 | 190 | 369 | 1,240 | 446 | 160 | 63 | 29 | 287 |
| 3 | 503 | 250 | 157 | 157 | 180 | 534 | 1,040 | 420 | 160 | 61 | 27 | 565 |
| 4 | 503 | 254 | 160 | 170 | 180 | 765 | 866 | 393 | 180 | 60 | 27 | 698 |
| 5 | 393 | 345 | 150 | 176 | 180 | 968 | 900 | 393 | 153 | 56 | 26 | 832 |
| 6 | 322 | 369 | 150 | 170 | 173 | 832 | 1,170 | 369 | 138 | 65 | 26 | 765 |
| 7 | 283 | 420 | 147 | 197 | 170 | 698 | 1,310 | 393 | 129 | 58 | 26 | 565 |
| 8 | 250 | 420 | 147 | 227 | 166 | 598 | 1,240 | 503 | 123 | 54 | 28 | 446 |
| 9 | 227 | 393 | 144 | 242 | 160 | 503 | 1,170 | 420 | 120 | 54 | 28 | 369 |
| 10 | 205 | 369 | 144 | 279 | 163 | 446 | 1,040 | 393 | 115 | 42 | 26 | 345 |
| 11 | 190 | 345 | 138 | 369 | 153 | 363 | 968 | 345 | 112 | 44 | 28 | 322 |
| 12 | 369 | 322 | 138 | 420 | 160 | 369 | 900 | 322 | 106 | 42 | 30 | 250 |
| 13 | 393 | 322 | 138 | 446 | 147 | 345 | 798 | 300 | 101 | 41 | 29 | 246 |
| 14 | 322 | 275 | 138 | 503 | 144 | 322 | 698 | 393 | 96 | 40 | 29 | 664 |
| 15 | 420 | 242 | 129 | 565 | 141 | 292 | 798 | 503 | 101 | 35 | 29 | 1,590 |
| 16 | 393 | 242 | 129 | 565 | 141 | 279 | 1,940 | 503 | 104 | 34 | 45 | 2,410 |
| 17 | 345 | 225 | 132 | 503 | 156 | 266 | 3,010 | 503 | 135 | 34 | 138 | 1,730 |
| 18 | 322 | 215 | 135 | 446 | 147 | 282 | 2,650 | 474 | 160 | 34 | 1,450 | 1,170 |
| 19 | 446 | 208 | 160 | 420 | 147 | 254 | 1,670 | 420 | 208 | 37 | 1,100 | 832 |
| 20 | 474 | 201 | 173 | 369 | 141 | 296 | 1,450 | 369 | 160 | 34 | 598 | 631 |
| 21 | 474 | 201 | 183 | 345 | 141 | 420 | 1,100 | 345 | 157 | 32 | 446 | 534 |
| 22 | 474 | 201 | 208 | 322 | 144 | 698 | 900 | 446 | 157 | 31 | 345 | 534 |
| 23 | 1,100 | 194 | 262 | 300 | 147 | 798 | 798 | 322 | 144 | 29 | 446 | 474 |
| 24 | 968 | 187 | 271 | 283 | 147 | 664 | 698 | 279 | 120 | 30 | 420 | 420 |
| 25 | 765 | 180 | 254 | 271 | 157 | 565 | 598 | 266 | 109 | 29 | 565 | 369 |
| 26 | 598 | 173 | 238 | 262 | 173 | 698 | 565 | 258 | 98 | 30 | 631 | 322 |
| 27 | 474 | 170 | 223 | 246 | 170 | 1,240 | 732 | 235 | 88 | 33 | 420 | 287 |
| 28 | 420 | 170 | 215 | 238 | 160 | 2,410 | 664 | 215 | 83 | 33 | 345 | 258 |
| 29 | 369 | 170 | 201 | 223 | | 3,010 | 631 | 208 | 76 | 32 | 283 | 292 |
| 30 | 322 | 166 | 190 | 212 | | 2,110 | 565 | 197 | 71 | 31 | 250 | 322 |
| 31 | 300 | | 176 | 201 | | 1,670 | | 187 | | 30 | 223 | |
| Month | | Maximum | | Minimum | | Mean | | Per square mile | | Run-off | | |
| | | | | | | | | | | Inches | Acres-feet | |
| October | | 1,110 | | 190 | | 447 | | 0.358 | | 0.41 | 27,490 | |
| November | | 420 | | 166 | | 259 | | .207 | | .23 | 15,420 | |
| December | | 271 | | 129 | | 172 | | .138 | | .16 | 10,590 | |
| January | | 565 | | 157 | | 305 | | .244 | | .28 | 18,760 | |
| February | | 194 | | 135 | | 188 | | .126 | | .13 | 8,790 | |
| March | | 3,010 | | 187 | | 766 | | .613 | | .71 | 47,130 | |
| April | | 3,010 | | 565 | | 1,125 | | .900 | | 1.00 | 66,960 | |
| May | | 503 | | 167 | | 365 | | .292 | | .34 | 22,460 | |
| June | | 208 | | 71 | | 129 | | .103 | | .11 | 7,660 | |
| July | | 67 | | 29 | | 41.8 | | .033 | | .04 | 2,570 | |
| August | | 1,450 | | 26 | | 262 | | .210 | | .24 | 16,110 | |
| September | | 2,410 | | 201 | | 624 | | .499 | | .66 | 37,150 | |
| The year | | 3,010 | | 26 | | 388 | | .310 | | 4.21 | 281,100 | |

Gasconade River near Waynesville, Mo.

Location.- Chain gage in SE $\frac{1}{4}$ sec. 3, T. 36 N., R. 12 W., at bridge on county highway (formerly State highway 17) 4 miles north of Waynesville. Zero of gage is 739.40 feet above mean sea level.

Drainage area.- 1,680 square miles.

Records available.- June 1921 to September 1934 in reports of U.S. Geological Survey; August 1914 to June 1921 in reports of University of Missouri and Missouri Bureau of Geology and Mines.

Average discharge.- 13 years (1921-34), 1,370 second-feet.

Extremes.- Maximum discharge recorded during year, 3,940 second-feet Apr. 18 (gage height, 6.35 feet); minimum, 61 second-feet Aug. 8-10, 15, 16 (gage height, 1.87 feet).

1921-34: Maximum discharge, 52,200 second-feet May 15, 1933 (gage height, 19.95 feet); minimum, that of Aug. 8-10, 15, 16, 1934.

Maximum stage known, 24.3 feet Aug. 22, 1915.

Remarks.- Records fair.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|------|------|------|------|-------|-------|-----|------|------|-------|-------|
| 1 | 738 | 391 | 211 | 232 | 254 | 237 | 2,030 | 770 | 233 | 116 | 67 | 344 |
| 2 | 872 | 368 | 205 | 224 | 245 | 250 | 1,650 | 707 | 228 | 113 | 67 | 298 |
| 3 | 678 | 344 | 200 | 215 | 245 | 439 | 1,390 | 678 | 205 | 115 | 65 | 298 |
| 4 | 592 | 344 | 203 | 228 | 237 | 770 | 1,140 | 592 | 196 | 110 | 63 | 592 |
| 5 | 592 | 368 | 192 | 220 | 233 | 945 | 1,140 | 566 | 211 | 108 | 63 | 648 |
| 6 | 464 | 391 | 181 | 224 | 224 | 1,140 | 1,060 | 539 | 173 | 108 | 63 | 906 |
| 7 | 391 | 439 | 173 | 245 | 207 | 1,020 | 1,390 | 539 | 169 | 102 | 63 | 804 |
| 8 | 368 | 514 | 173 | 241 | 200 | 908 | 1,480 | 837 | 153 | 100 | 63 | 678 |
| 9 | 321 | 514 | 173 | 298 | 200 | 770 | 1,390 | 648 | 153 | 99 | 61 | 566 |
| 10 | 276 | 488 | 173 | 321 | 203 | 707 | 1,300 | 592 | 245 | 92 | 61 | 488 |
| 11 | 259 | 464 | 166 | 344 | 200 | 620 | 1,390 | 539 | 149 | 86 | 63 | 770 |
| 12 | 258 | 439 | 163 | 415 | 196 | 592 | 1,140 | 514 | 140 | 88 | 63 | 539 |
| 13 | 415 | 391 | 169 | 488 | 196 | 514 | 1,020 | 464 | 139 | 88 | 63 | 368 |
| 14 | 344 | 368 | 166 | 539 | 188 | 468 | 945 | 464 | 127 | 88 | 63 | 770 |
| 15 | 368 | 344 | 159 | 592 | 168 | 439 | 908 | 514 | 133 | 85 | 61 | 1,840 |
| 16 | 321 | 321 | 163 | 648 | 184 | 415 | 1,390 | 678 | 124 | 83 | 122 | 1,740 |
| 17 | 285 | 321 | 159 | 648 | 173 | 415 | 2,890 | 707 | 153 | 79 | 184 | 2,490 |
| 18 | 321 | 298 | 173 | 620 | 200 | 415 | 3,940 | 678 | 321 | 76 | 391 | 1,840 |
| 19 | 391 | 280 | 188 | 566 | 184 | 391 | 2,750 | 648 | 203 | 70 | 1,840 | 1,300 |
| 20 | 439 | 276 | 203 | 514 | 188 | 391 | 2,030 | 592 | 177 | 70 | 1,060 | 1,060 |
| 21 | 539 | 272 | 207 | 566 | 200 | 415 | 1,650 | 514 | 245 | 67 | 770 | 837 |
| 22 | 566 | 263 | 211 | 488 | 189 | 566 | 1,390 | 539 | 211 | 70 | 620 | 707 |
| 23 | 804 | 254 | 224 | 439 | 192 | 945 | 1,220 | 566 | 211 | 74 | 539 | 707 |
| 24 | 1,140 | 250 | 237 | 391 | 207 | 982 | 1,060 | 439 | 173 | 72 | 566 | 620 |
| 25 | 992 | 245 | 272 | 368 | 207 | 872 | 908 | 391 | 161 | 70 | 620 | 539 |
| 26 | 604 | 228 | 298 | 344 | 207 | 837 | 837 | 391 | 153 | 67 | 620 | 488 |
| 27 | 648 | 220 | 269 | 344 | 207 | 1,650 | 982 | 321 | 139 | 67 | 770 | 464 |
| 28 | 592 | 203 | 280 | 298 | 188 | 1,930 | 1,140 | 321 | 127 | 67 | 620 | 415 |
| 29 | 514 | 203 | 272 | 307 | | 3,330 | 908 | 272 | 119 | 67 | 514 | 982 |
| 30 | 488 | 203 | 263 | 298 | | 3,480 | 872 | 250 | 116 | 67 | 439 | 592 |
| 31 | 415 | | 254 | 280 | | 2,490 | | 245 | | 67 | 391 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-----------|---------|---------|-------|-----------------|---------|-----------|
| | | | | | Inches | Acre-feet |
| October | 1,140 | 258 | 522 | 0.311 | 0.36 | 32,100 |
| November | 514 | 203 | 353 | .198 | .22 | 19,840 |
| December | 298 | 156 | 206 | .123 | .14 | 12,650 |
| January | 648 | 215 | 385 | .229 | .26 | 23,690 |
| February | 254 | 173 | 205 | .122 | .13 | 11,390 |
| March | 3,480 | 237 | 947 | .564 | .65 | 58,240 |
| April | 3,940 | 637 | 1,445 | .860 | .96 | 85,960 |
| May | 837 | 245 | 533 | .317 | .37 | 32,760 |
| June | 321 | 116 | 177 | .106 | .12 | 10,580 |
| July | 116 | 67 | 84.8 | .050 | .06 | 5,210 |
| August | 1,840 | 61 | 355 | .211 | .24 | 21,850 |
| September | 2,490 | 298 | 823 | .490 | .55 | 49,980 |
| The year | 3,940 | 61 | 502 | .299 | 4.06 | 363,200 |

Gasconade River at Jerome, Mo.

Location.- Staff gage in S¹ sec. 13, T. 37 N., R. 10 W., at Jerome, half a mile below Little Piney Creek. Zero of gage is 658.12 feet above mean sea level.

Drainage area.- 2,840 square miles.

Records available.- January 1923 to September 1934, April 1903 to July 1906 at Arlington, Mo.

Average discharge.-11 years (1923-34), 2,490 second-feet.

Extremes.- Maximum discharge recorded during year, 8,530 second-feet Sept. 13 (gage height, 7.28 feet); minimum, 298 second-feet Aug. 7-11 (gage height, 1.28 feet). 1903-6, 1923-34: Maximum discharge, 62,600 second-feet May 16, 1933 (gage height, 23.40 feet); minimum, that of Aug. 7-11, 1934. Maximum stage known, 29.0 feet Jan. 6, 1897.

Remarks.- Records good.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|------|------|-------|------|-------|-------|-------|------|------|-------|-------|
| 1 | 1,180 | 755 | 550 | 588 | 625 | 550 | 3,310 | 1,510 | 588 | 414 | 308 | 755 |
| 2 | 1,130 | 710 | 550 | 588 | 625 | 668 | 2,670 | 1,340 | 588 | 402 | 308 | 710 |
| 3 | 1,130 | 710 | 550 | 550 | 588 | 938 | 2,310 | 1,240 | 588 | 391 | 308 | 710 |
| 4 | 1,130 | 710 | 550 | 625 | 588 | 1,340 | 2,070 | 1,180 | 538 | 385 | 303 | 710 |
| 5 | 985 | 755 | 550 | 588 | 588 | 1,510 | 1,840 | 1,080 | 550 | 367 | 303 | 985 |
| 6 | 890 | 710 | 550 | 588 | 550 | 1,730 | 1,840 | 1,080 | 550 | 373 | 303 | 1,080 |
| 7 | 800 | 800 | 516 | 668 | 550 | 1,730 | 1,840 | 1,340 | 550 | 367 | 298 | 1,340 |
| 8 | 755 | 845 | 516 | 668 | 550 | 1,510 | 2,310 | 1,180 | 516 | 356 | 298 | 1,240 |
| 9 | 710 | 890 | 516 | 668 | 550 | 1,400 | 2,310 | 1,130 | 516 | 350 | 298 | 1,040 |
| 10 | 625 | 890 | 516 | 755 | 588 | 1,240 | 2,190 | 1,130 | 588 | 340 | 298 | 938 |
| 11 | 625 | 845 | 516 | 800 | 550 | 1,180 | 2,070 | 1,040 | 588 | 340 | 298 | 1,950 |
| 12 | 668 | 800 | 516 | 845 | 550 | 1,040 | 1,840 | 938 | 516 | 340 | 313 | 2,430 |
| 13 | 710 | 755 | 516 | 938 | 516 | 985 | 1,730 | 890 | 481 | 334 | 329 | 4,370 |
| 14 | 668 | 755 | 516 | 985 | 516 | 938 | 1,620 | 1,040 | 481 | 329 | 319 | 5,770 |
| 15 | 755 | 710 | 516 | 1,040 | 516 | 890 | 1,620 | 1,240 | 481 | 334 | 319 | 4,800 |
| 16 | 755 | 668 | 516 | 1,080 | 516 | 845 | 1,950 | 1,340 | 481 | 329 | 1,840 | 5,600 |
| 17 | 710 | 668 | 516 | 1,130 | 516 | 800 | 3,570 | 1,400 | 450 | 324 | 1,820 | 4,370 |
| 18 | 668 | 625 | 516 | 1,130 | 550 | 800 | 4,510 | 1,400 | 588 | 319 | 1,180 | 3,700 |
| 19 | 755 | 625 | 550 | 1,080 | 550 | 800 | 4,090 | 1,240 | 550 | 313 | 1,240 | 2,790 |
| 20 | 800 | 625 | 588 | 985 | 550 | 938 | 3,180 | 1,130 | 516 | 319 | 2,070 | 2,190 |
| 21 | 845 | 625 | 588 | 938 | 516 | 1,080 | 2,670 | 1,080 | 516 | 313 | 1,510 | 1,950 |
| 22 | 1,080 | 588 | 625 | 890 | 550 | 1,240 | 2,190 | 985 | 588 | 308 | 1,400 | 1,730 |
| 23 | 1,080 | 588 | 668 | 845 | 550 | 1,400 | 1,950 | 985 | 516 | 319 | 1,130 | 1,510 |
| 24 | 1,180 | 588 | 668 | 800 | 550 | 1,620 | 1,730 | 985 | 481 | 329 | 1,080 | 1,400 |
| 25 | 1,620 | 588 | 668 | 755 | 550 | 1,510 | 1,510 | 890 | 481 | 319 | 1,340 | 1,240 |
| 26 | 1,340 | 588 | 668 | 755 | 550 | 1,510 | 1,400 | 800 | 450 | 319 | 1,290 | 1,130 |
| 27 | 1,180 | 550 | 668 | 710 | 588 | 2,790 | 2,310 | 755 | 450 | 319 | 1,240 | 1,080 |
| 28 | 1,040 | 550 | 668 | 710 | 550 | 3,440 | 1,950 | 710 | 420 | 319 | 1,240 | 985 |
| 29 | 985 | 550 | 625 | 668 | | 4,090 | 1,840 | 668 | 420 | 313 | 1,040 | 2,920 |
| 30 | 890 | 550 | 625 | 625 | | 4,800 | 1,620 | 668 | 450 | 308 | 890 | 1,840 |
| 31 | 800 | | 625 | 625 | | 4,090 | | 625 | | 308 | 800 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-----------|---------|---------|-------|-----------------|---------|-----------|
| | | | | | Inches | Acre-feet |
| October | 1,620 | 625 | 919 | 0.324 | 0.37 | 56,510 |
| November | 890 | 550 | 687 | .242 | .27 | 40,890 |
| December | 668 | 516 | 572 | .201 | .23 | 35,160 |
| January | 1,130 | 550 | 794 | .280 | .32 | 48,850 |
| February | 625 | 516 | 554 | .195 | .20 | 30,740 |
| March | 4,800 | 550 | 1,694 | .561 | .65 | 97,990 |
| April | 4,510 | 1,400 | 2,268 | .799 | .89 | 135,000 |
| May | 1,510 | 625 | 1,065 | .375 | .43 | 65,490 |
| June | 588 | 420 | 518 | .182 | .20 | 30,800 |
| July | 414 | 308 | 339 | .119 | .14 | 20,830 |
| August | 2,070 | 298 | 823 | .290 | .33 | 50,600 |
| September | 5,770 | 710 | 2,109 | .745 | .83 | 125,500 |
| The year | 5,770 | 298 | 1,020 | .359 | 4.86 | 738,300 |

Gasconade River near Rich Fountain, Mo.

Location.- Water-stage recorder in SE $\frac{1}{4}$ sec. 16, T. 42 N., R. 8 W., at highway bridge just above Swan creek and 4 miles east of Rich Fountain. Wire gage at same site and datum prior to Mar. 9, 1934. Zero of gage is 554.24 feet above mean sea level.

Drainage area.- 3,180 square miles.

Records available.- October 1921 to September 1934.

Average discharge.- 13 years, 2,810 second-feet.

Extremes.- Maximum discharge during year, 17,700 second-feet Sept. 12 (gage height, 12.87 feet); minimum, 276 second-feet Aug. 12, 13 (gage height, 0.93 foot).
1921-34: Maximum discharge, 80,600 second-feet May 17, 1933 (gage height, 24.05 feet); minimum discharge, that of Aug. 12, 13, 1934.

Remarks.- Records good. Discharge estimated for Feb. 21, 22, Aug. 23-31.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|------|------|-------|------|-------|-------|-------|-------|------|-------|--------|
| 1 | 2,450 | 915 | 610 | 675 | 675 | 610 | 4,490 | 1,930 | 675 | 485 | 354 | 950 |
| 2 | 2,780 | 880 | 610 | 642 | 675 | 845 | 3,620 | 1,830 | 675 | 455 | 342 | 950 |
| 3 | 1,630 | 880 | 675 | 675 | 675 | 915 | 3,140 | 1,630 | 642 | 425 | 337 | 915 |
| 4 | 1,560 | 915 | 642 | 708 | 675 | 1,030 | 2,670 | 1,540 | 642 | 425 | 315 | 880 |
| 5 | 1,270 | 950 | 642 | 740 | 708 | 1,640 | 2,450 | 1,360 | 610 | 398 | 298 | 810 |
| 6 | 1,190 | 915 | 610 | 740 | 708 | 1,830 | 2,230 | 1,360 | 610 | 398 | 298 | 990 |
| 7 | 1,030 | 880 | 610 | 775 | 708 | 1,930 | 2,130 | 1,270 | 610 | 398 | 298 | 1,190 |
| 8 | 915 | 880 | 610 | 845 | 675 | 1,930 | 2,230 | 1,450 | 610 | 398 | 293 | 1,360 |
| 9 | 880 | 915 | 545 | 880 | 642 | 1,730 | 2,560 | 1,360 | 642 | 370 | 288 | 1,270 |
| 10 | 845 | 950 | 515 | 915 | 642 | 1,540 | 2,560 | 1,270 | 1,490 | 354 | 282 | 1,190 |
| 11 | 810 | 950 | 485 | 950 | 610 | 1,360 | 2,450 | 1,190 | 915 | 359 | 282 | 1,320 |
| 12 | 740 | 950 | 485 | 990 | 578 | 1,270 | 2,230 | 1,110 | 740 | 359 | 276 | 14,500 |
| 13 | 740 | 880 | 515 | 1,110 | 545 | 1,190 | 2,030 | 1,030 | 610 | 359 | 276 | 9,110 |
| 14 | 740 | 810 | 545 | 1,110 | 545 | 1,110 | 1,930 | 1,030 | 678 | 354 | 288 | 14,800 |
| 15 | 845 | 775 | 578 | 1,110 | 545 | 1,030 | 1,830 | 1,190 | 545 | 354 | 293 | 11,400 |
| 16 | 810 | 740 | 578 | 1,190 | 545 | 950 | 2,230 | 1,360 | 545 | 354 | 7,040 | 7,320 |
| 17 | 810 | 740 | 578 | 1,190 | 545 | 915 | 2,670 | 1,450 | 545 | 348 | 4,040 | 6,250 |
| 18 | 810 | 740 | 610 | 1,270 | 545 | 915 | 3,980 | 1,540 | 515 | 348 | 2,340 | 5,370 |
| 19 | 990 | 708 | 642 | 1,190 | 675 | 950 | 4,880 | 1,450 | 545 | 342 | 1,540 | 4,160 |
| 20 | 1,110 | 675 | 675 | 1,190 | 675 | 990 | 4,490 | 1,360 | 675 | 332 | 1,450 | 3,260 |
| 21 | 1,030 | 675 | 708 | 1,110 | 650 | 1,190 | 3,620 | 1,190 | 610 | 326 | 3,190 | 2,670 |
| 22 | 1,540 | 675 | 740 | 1,080 | 630 | 1,360 | 3,020 | 1,110 | 642 | 315 | 2,030 | 2,340 |
| 23 | 1,450 | 675 | 740 | 950 | 610 | 1,630 | 2,560 | 1,030 | 880 | 310 | 1,730 | 2,030 |
| 24 | 1,450 | 675 | 740 | 915 | 642 | 1,730 | 2,230 | 1,030 | 642 | 304 | 1,540 | 1,830 |
| 25 | 1,450 | 675 | 775 | 880 | 675 | 1,830 | 2,030 | 1,030 | 610 | 315 | 1,540 | 1,630 |
| 26 | 1,730 | 642 | 775 | 845 | 708 | 3,490 | 1,930 | 950 | 545 | 348 | 1,830 | 1,540 |
| 27 | 1,540 | 642 | 775 | 740 | 642 | 6,780 | 2,030 | 845 | 545 | 515 | 1,630 | 1,360 |
| 28 | 1,560 | 642 | 740 | 675 | 642 | 4,880 | 2,670 | 810 | 545 | 675 | 1,540 | 1,360 |
| 29 | 1,190 | 610 | 740 | 708 | | 4,750 | 2,450 | 775 | 485 | 455 | 1,270 | 5,340 |
| 30 | 1,110 | 610 | 708 | 708 | | 5,150 | 2,130 | 740 | 485 | 398 | 1,190 | 4,050 |
| 31 | 990 | | 675 | 675 | | 5,290 | | 740 | | 359 | 1,030 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-----------|---------|---------|-------|-----------------|---------|-----------|
| | | | | | Inches | Acre-feet |
| October | 2,780 | 740 | 1,213 | 0.381 | 0.44 | 74,570 |
| November | 950 | 610 | 786 | .247 | .28 | 46,750 |
| December | 775 | 485 | 641 | .202 | .23 | 39,420 |
| January | 1,270 | 642 | 907 | .285 | .33 | 55,800 |
| February | 708 | 545 | 635 | .200 | .21 | 35,290 |
| March | 6,780 | 610 | 2,021 | .636 | .73 | 124,300 |
| April | 4,880 | 1,830 | 2,716 | .854 | .95 | 161,600 |
| May | 1,930 | 740 | 1,225 | .385 | .44 | 75,290 |
| June | 1,490 | 485 | 647 | .203 | .23 | 38,500 |
| July | 675 | 304 | 385 | .121 | .14 | 23,690 |
| August | 7,040 | 276 | 1,273 | .400 | .46 | 78,250 |
| September | 14,800 | 810 | 3,738 | 1.18 | 1.32 | 222,400 |
| The year | 14,800 | 276 | 1,548 | .424 | 5.76 | 975,900 |

Piney Creek near Big Piney, Mo.

Location.- Chain gage in NE $\frac{1}{4}$ sec. 8, T. 34 N., R. 10 W., at Ross highway bridge 3 miles east of Big Piney.

Drainage area.- 560 square miles.

Records available.- October 1921 to September 1934.

Average discharge.- 13 years, 532 second-feet.

Extremes.- Maximum discharge recorded during year, 1,240 second-feet Mar. 28, Sept. 16; maximum gage height, 4.10 feet Sept. 16; minimum discharge recorded, 75 second-feet Aug. 6, 7 (gage height, 1.66 feet).
1921-34: Maximum discharge recorded, 16,500 second-feet May 14, 1933 (gage height, 17.20 feet); minimum discharge recorded, that of Aug. 6, 7, 1934; minimum gage height, 1.60 feet July 30, 31, 1926.

Remarks.- Records good except those for days of rapidly changing stage, which are fair.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | |
|-----------|------|------|------|---------|------|---------|-------|------|------|-----------------|------|--------------|------------|
| 1 | 196 | 133 | 124 | 138 | 136 | 126 | 512 | 208 | 126 | 91 | 87 | 122 | |
| 2 | 164 | 143 | 129 | 143 | 136 | 136 | 435 | 208 | 122 | 91 | 84 | 126 | |
| 3 | 158 | 143 | 124 | 143 | 136 | 186 | 387 | 196 | 146 | 87 | 80 | 146 | |
| 4 | 148 | 148 | 129 | 143 | 136 | 410 | 344 | 189 | 131 | 91 | 124 | 140 | |
| 5 | 148 | 153 | 133 | 143 | 131 | 387 | 324 | 196 | 122 | 87 | 87 | 183 | |
| 6 | 143 | 164 | 124 | 143 | 126 | 305 | 324 | 305 | 122 | 91 | 75 | 175 | |
| 7 | 148 | 153 | 124 | 164 | 131 | 286 | 541 | 387 | 118 | 95 | 75 | 153 | |
| 8 | 133 | 158 | 124 | 199 | 126 | 251 | 600 | 305 | 113 | 93 | 82 | 138 | |
| 9 | 129 | 153 | 120 | 199 | 126 | 218 | 541 | 251 | 105 | 86 | 82 | 111 | |
| 10 | 129 | 148 | 120 | 251 | 126 | 218 | 460 | 189 | 131 | 86 | 82 | 124 | |
| 11 | 133 | 148 | 120 | 234 | 126 | 199 | 344 | 189 | 118 | 89 | 86 | 129 | |
| 12 | 138 | 148 | 120 | 234 | 126 | 192 | 344 | 178 | 109 | 86 | 87 | 126 | |
| 13 | 133 | 138 | 120 | 234 | 126 | 180 | 305 | 172 | 105 | 89 | 87 | 512 | |
| 14 | 133 | 138 | 120 | 251 | 126 | 169 | 286 | 268 | 109 | 86 | 87 | 344 | |
| 15 | 153 | 138 | 120 | 234 | 126 | 164 | 541 | 435 | 101 | 93 | 84 | 1,020 | |
| 16 | 164 | 138 | 120 | 234 | 122 | 158 | 600 | 410 | 105 | 86 | 186 | 1,240 | |
| 17 | 180 | 133 | 120 | 208 | 122 | 153 | 1,090 | 344 | 109 | 66 | 251 | 600 | |
| 18 | 180 | 133 | 124 | 208 | 122 | 175 | 810 | 268 | 109 | 78 | 305 | 435 | |
| 19 | 175 | 133 | 153 | 189 | 122 | 251 | 541 | 234 | 113 | 89 | 189 | 324 | |
| 20 | 164 | 133 | 153 | 189 | 120 | 410 | 460 | 208 | 109 | 86 | 146 | 286 | |
| 21 | 168 | 143 | 192 | 183 | 118 | 660 | 387 | 202 | 107 | 82 | 251 | 268 | |
| 22 | 158 | 129 | 218 | 172 | 122 | 435 | 344 | 178 | 103 | 105 | 161 | 268 | |
| 23 | 164 | 133 | 175 | 166 | 118 | 410 | 305 | 215 | 103 | 101 | 305 | 212 | |
| 24 | 163 | 133 | 175 | 166 | 131 | 344 | 268 | 208 | 111 | 93 | 212 | 199 | |
| 25 | 148 | 133 | 153 | 161 | 122 | 286 | 234 | 189 | 99 | 87 | 218 | 189 | |
| 26 | 148 | 120 | 158 | 161 | 122 | 387 | 234 | 161 | 99 | 87 | 199 | 178 | |
| 27 | 143 | 124 | 153 | 156 | 136 | 410 | 268 | 156 | 95 | 91 | 169 | 172 | |
| 28 | 143 | 129 | 148 | 146 | 131 | 1,240 | 268 | 146 | 95 | 91 | 153 | 161 | |
| 29 | 158 | 129 | 143 | 140 | 136 | 1,020 | 234 | 136 | 95 | 91 | 143 | 172 | |
| 30 | 138 | 129 | 143 | 140 | 136 | 720 | 218 | 136 | 95 | 87 | 151 | 172 | |
| 31 | 138 | | 143 | 140 | | 660 | | 136 | | 87 | 122 | | |
| Month | | | | Maximum | | Minimum | | Mean | | Per square mile | | Run-off | |
| | | | | | | | | | | | | Inches | Acres-foot |
| October | | | | 186 | | 129 | | 151 | | 0.270 | | 0.31 9,260 | |
| November | | | | 164 | | 120 | | 139 | | .246 | | .28 8,270 | |
| December | | | | 218 | | 120 | | 139 | | .248 | | .29 8,570 | |
| January | | | | 251 | | 138 | | 181 | | .323 | | .37 11,130 | |
| February | | | | 136 | | 118 | | 127 | | .227 | | .24 7,040 | |
| March | | | | 1,240 | | 126 | | 360 | | .643 | | .74 22,130 | |
| April | | | | 1,090 | | 218 | | 418 | | .746 | | .83 24,890 | |
| May | | | | 435 | | 136 | | 226 | | .404 | | .47 13,990 | |
| June | | | | 148 | | 95 | | 111 | | .198 | | .22 6,600 | |
| July | | | | 105 | | 78 | | 89.3 | | .159 | | .18 5,490 | |
| August | | | | 305 | | 75 | | 143 | | .255 | | .29 8,790 | |
| September | | | | 1,240 | | 111 | | 281 | | .502 | | .56 16,710 | |
| The year | | | | 1,240 | | 75 | | 197 | | .352 | | 4.78 142,800 | |

Little Piney Creek at Newburg, Mo.

Location.- Chain gage in SE $\frac{1}{4}$ sec. 22, T. 37 N., R. 9 W., at highway bridge in Newburg. Zero of gage is 696.99 feet above mean sea level.

Drainage area.- 200 square miles.

Records available.- October 1928 to September 1934.

Extremes.- Maximum discharge recorded during year, 6,700 second-feet Sept. 13 (gage height, 6.98 feet); minimum discharge recorded, 28 second-feet on several days from June to August; minimum gage height, 0.70 foot Aug. 5, 9-11.
1928-34: Maximum discharge recorded, 8,860 second-feet May 6, 1929; maximum gage height recorded, 7.58 feet May 13, 1933; minimum discharge, that of June to August 1934; minimum gage height, that of Aug. 5, 9-11, 1934.
Maximum stage known, 13.7 feet Aug. 20, 1915.

Remarks.- Records fair except those for days of rapidly changing stage, which are poor.
Discharge estimated for Jan. 30.

Discharge, in second-feet, 1933-34

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|-------|-------|
| 1 | 41 | 37 | 37 | 35 | 36 | 37 | 106 | 93 | 37 | 29 | 28 | 50 |
| 2 | 37 | 37 | 39 | 35 | 36 | 66 | 93 | 80 | 37 | 28 | 27 | 54 |
| 3 | 35 | 41 | 39 | 34 | 36 | 122 | 79 | 72 | 33 | 28 | 26 | 60 |
| 4 | 35 | 40 | 36 | 43 | 35 | 130 | 74 | 68 | 34 | 28 | 27 | 54 |
| 5 | 34 | 48 | 36 | 43 | 35 | 74 | 74 | 63 | 34 | 28 | 26 | 50 |
| 6 | 34 | 44 | 37 | 38 | 35 | 62 | 92 | 62 | 34 | 32 | 26 | 50 |
| 7 | 34 | 41 | 36 | 50 | 35 | 51 | 92 | 55 | 32 | 26 | 26 | 50 |
| 8 | 33 | 40 | 36 | 48 | 35 | 51 | 86 | 52 | 32 | 26 | 26 | 48 |
| 9 | 34 | 41 | 35 | 44 | 35 | 46 | 80 | 48 | 34 | 27 | 26 | 47 |
| 10 | 34 | 41 | 36 | 42 | 33 | 44 | 80 | 48 | 60 | 27 | 26 | 47 |
| 11 | 33 | 41 | 36 | 41 | 35 | 44 | 79 | 48 | 37 | 27 | 26 | 1,130 |
| 12 | 36 | 42 | 35 | 41 | 35 | 42 | 76 | 45 | 32 | 27 | 28 | 922 |
| 13 | 37 | 40 | 35 | 42 | 34 | 41 | 69 | 46 | 32 | 26 | 28 | 3,230 |
| 14 | 34 | 40 | 37 | 42 | 35 | 41 | 59 | 53 | 31 | 26 | 26 | 1,000 |
| 15 | 35 | 39 | 37 | 42 | 35 | 38 | 68 | 217 | 32 | 29 | 28 | 1,340 |
| 16 | 45 | 39 | 36 | 40 | 34 | 39 | 213 | 137 | 31 | 26 | 2,660 | 464 |
| 17 | 40 | 38 | 39 | 40 | 34 | 38 | 160 | 109 | 33 | 26 | 1,000 | 316 |
| 18 | 38 | 37 | 36 | 40 | 44 | 44 | 124 | 86 | 31 | 28 | 221 | 232 |
| 19 | 50 | 35 | 48 | 40 | 37 | 40 | 106 | 69 | 29 | 28 | 120 | 179 |
| 20 | 41 | 38 | 42 | 40 | 36 | 51 | 90 | 59 | 29 | 27 | 89 | 148 |
| 21 | 38 | 45 | 40 | 38 | 35 | 71 | 84 | 56 | 31 | 27 | 85 | 176 |
| 22 | 48 | 39 | 38 | 37 | 38 | 63 | 74 | 51 | 28 | 27 | 73 | 137 |
| 23 | 42 | 38 | 38 | 37 | 35 | 58 | 66 | 60 | 28 | 27 | 66 | 118 |
| 24 | 41 | 39 | 36 | 37 | 36 | 50 | 60 | 46 | 29 | 27 | 60 | 106 |
| 25 | 40 | 37 | 35 | 36 | 36 | 49 | 55 | 45 | 28 | 28 | 674 | 96 |
| 26 | 39 | 38 | 35 | 37 | 32 | 56 | 55 | 42 | 26 | 29 | 92 | 92 |
| 27 | 39 | 37 | 36 | 37 | 40 | 452 | 512 | 39 | 26 | 31 | 72 | 83 |
| 28 | 39 | 37 | 35 | 37 | 36 | 311 | 208 | 40 | 26 | 29 | 62 | 82 |
| 29 | 38 | 37 | 35 | 36 | | 217 | 140 | 40 | 31 | 28 | 60 | 362 |
| 30 | 38 | 37 | 35 | 36 | | 160 | 117 | 37 | 29 | 28 | 54 | 193 |
| 31 | 37 | | 35 | 35 | | 127 | | 37 | | 27 | 52 | |

| Month | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-----------|---------|---------|------|-----------------|---------|-----------|
| | | | | | Inches | Acre-feet |
| October | 56 | 33 | 38.7 | 0.194 | 0.22 | 2,380 |
| November | 48 | 37 | 39.5 | .193 | .22 | 2,350 |
| December | 48 | 35 | 37.0 | .185 | .21 | 2,270 |
| January | 50 | 34 | 39.5 | .198 | .23 | 2,430 |
| February | 44 | 32 | 35.6 | .178 | .19 | 1,980 |
| March | 452 | 37 | 87.5 | .438 | .50 | 5,380 |
| April | 512 | 55 | 109 | .545 | .61 | 6,490 |
| May | 217 | 37 | 64.6 | .323 | .37 | 3,970 |
| June | 60 | 26 | 32.2 | .161 | .18 | 1,920 |
| July | 32 | 26 | 27.6 | .138 | .16 | 1,700 |
| August | 2,660 | 26 | 188 | .940 | 1.08 | 11,580 |
| September | 3,230 | 47 | 364 | 1.82 | 2.03 | 21,650 |
| The year | 3,230 | 26 | 88.5 | .442 | 5.00 | 64,100 |

In addition to the records of stream flow obtained at gaging stations and reported in the preceding pages, measurements of flow were made at a number of other points as shown by the following table:

Miscellaneous discharge measurements in the Missouri River drainage basin during the year ending September 30, 1934

| Date | Stream | Tributary to- | Locality | Discharge Sec.-ft. |
|----------|--------------------------|------------------------|---|-----------------------|
| Mar. 18 | Shotgun Creek.... | Missouri River..... | T. 28 N., R. 58 E., at Great Northern Railway bridge 2.4 miles northwest of Bainville, Mont. | *1.0 |
| Mar. 21 |do..... |do..... |do..... | *2.0 |
| Apr. 5 |do..... |do..... |do..... | *1.5 |
| Apr. 19 |do..... |do..... |do..... | *.2 |
| Apr. 21 |do..... |do..... |do..... | *1.0 |
| May 3 |do..... |do..... |do..... | 0 |
| May 13 |do..... |do..... |do..... | 0 |
| May 21 |do..... |do..... |do..... | 0 |
| June 5 |do..... |do..... |do..... | 0 |
| Aug. 16 |do..... |do..... |do..... | 0 |
| Sept. 10 | Gardiner River.... | Yellowstone River.... | 150 feet above pipe line intake on Swan Lake Flats south of Mammoth Hotel, Yellowstone National Park, Wyo. | 11.0 |
| Sept. 10 | Panther Creek.... | Gardiner River..... | 100 feet above mouth Indian Creek diversion canal about 6 miles southwest of Mammoth Hotel, Yellowstone National Park, Wyo. | 4.46 |
| Sept. 10 |do..... |do..... | 200 feet above intake to pipe line and below confluence with Indian Creek diversion canal about 8 miles southwest of Mammoth Hotel, Yellowstone National Park, Wyo. | 11.1 |
| Sept. 10 | Indian Creek..... |do..... | 10 feet above diversion dam and about 6½ miles southwest of Mammoth Hotel, Yellowstone National Park, Wyo. | 7.23 |
| Sept. 10 | Glen Creek..... |do..... | 100 feet above Rustic Falls and 3 miles southwest of Mammoth Hotel, Yellowstone National Park, Wyo. | 17.4 |
| Sept. 11 |do..... |do..... | 10 feet above intake to pipe line near Mammoth Hotel, Yellowstone National Park, Wyo. | 16.4 |
| Sept. 11 | Power plant tail-race. |do..... | 100 feet below Mammoth power plant near Mammoth Hotel, Yellowstone National Park, Wyo. | 12.7 |
| Oct. 27 | Wind River..... | Yellowstone River.... | Sec. 32, T. 42 N., R. 107 W., near Dubois, Wyo. | 72 |
| Jan. 15 |do..... |do..... |do..... | 80 |
| Oct. 28 | Warm Spring Creek | Wind River..... | Sec. 32, T. 42 N., R. 107 W., near Dubois, Wyo. | 17.5 |
| Jan. 28 |do..... |do..... |do..... | 3.8 |
| Oct. 28 | Warm Spring power canal. | Warm Spring Creek.... | Sec. 32, T. 42 N., R. 107 W., near Dubois, Wyo. | 20.5 |
| Jan. 28 |do..... |do..... |do..... | 4.3 |
| Oct. 5 | Niobrara River.... | Missouri River..... | Sec. 8, T. 32 N., R. 6 E., at mouth, at Niobrara, Nebr. | 1,230 |
| Oct. 11 |do..... |do..... |do..... | 1,320 |
| Oct. 16 |do..... |do..... |do..... | 1,290 |
| Oct. 21 |do..... |do..... |do..... | 1,400 |
| Oct. 28 |do..... |do..... |do..... | 1,460 |
| Nov. 1 |do..... |do..... |do..... | 1,560 |
| Nov. 6 |do..... |do..... |do..... | 1,420 |
| Nov. 13 |do..... |do..... |do..... | 1,440 |
| Nov. 22 |do..... |do..... |do..... | 1,560 |
| Nov. 27 |do..... |do..... |do..... | 1,470 |
| Nov. 3 | Baillie Creek.... |do..... | Sec. 17, T. 32 N., R. 6 E., near Niobrara, Nebr. | 31.4 |
| Nov. 29 |do..... |do..... |do..... | 39.9 |
| Apr. 22 |do..... |do..... |do..... | 39.4 |
| June 17 |do..... |do..... | Sec. 17, T. 32 N., R. 6 E., near Niobrara, Nebr. | 70 |
| July 21 |do..... |do..... |do..... | 13.2 |
| Aug. 7 |do..... |do..... |do..... | 6.7 |
| Sept. 18 |do..... |do..... |do..... | 14.4 |
| Aug. 18 | Floyd River..... |do..... | Sec. 34, T. 91 N., R. 46 W., near Merrill, Iowa. | 33.9 |
| Aug. 18 | Little Sioux River |do..... | Site of former gaging station at Correctionville, Iowa. | 78.9 |
| Aug. 18 | Maple River..... | Little Sioux River.... | Mapleton, Iowa. | 21.6 |
| Aug. 17 | Soldier Ditch.... | Missouri River..... | Sec. 13, T. 80 N., R. 45 W., near Mandamin, Iowa. | *7.5 |
| Aug. 17 | Boyer River..... |do..... | Site of former gaging station at Logan, Iowa. | 11.3 |
| Oct. 27 | Cole Creek..... |do..... | Sec. 1, T. 14 N., R. 12 E., near Omaha, Nebr. | 3.9 |
| Nov. 27 |do..... |do..... |do..... | 4.1 |
| Feb. 3 |do..... |do..... |do..... | 4.9 |
| May 26 |do..... |do..... |do..... | 2 |
| June 18 |do..... |do..... |do..... | 2.1 |
| July 26 |do..... |do..... |do..... | 2.5 |

*Estimated.

Miscellaneous discharge measurements in the Missouri River drainage basin during the year ending September 30, 1934-- Continued.

| Date | Stream | Tributary to- | Locality | Discharge Sec.-ft. |
|----------|--------------------|------------------------|--|-----------------------|
| Aug. 10 | Cole Creek..... | Missouri River..... | Sec. 1, T. 14 N., R. 12 E., near Omaha, Nebr. | 1.4 |
| Oct. 4 | Middle Loup River. | Loup River..... | Sec. 1, T. 19 N., R. 20 W., near Sargent, Nebr. | 888 |
| Nov. 4 |do..... |do..... |do..... | 885 |
| Nov. 30 |do..... |do..... |do..... | 830 |
| Mar. 21 |do..... |do..... |do..... | 892 |
| Apr. 21 |do..... |do..... |do..... | 791 |
| May 25 |do..... |do..... |do..... | 788 |
| June 11 |do..... |do..... |do..... | 703 |
| July 19 |do..... |do..... |do..... | 647 |
| Aug. 8 |do..... |do..... |do..... | 707 |
| Sept. 30 |do..... |do..... |do..... | 816 |
| Oct. 4 | Dismal River..... | Middle Loup River..... | Sec. 4, T. 21 N., R. 24 E., at Dunning, Nebr. | 349 |
| Nov. 4 |do..... |do..... |do..... | 326 |
| Nov. 30 |do..... |do..... |do..... | 323 |
| Apr. 20 |do..... |do..... |do..... | 322 |
| May 22 |do..... |do..... |do..... | 325 |
| June 12 |do..... |do..... |do..... | 314 |
| July 19 |do..... |do..... |do..... | 317 |
| Aug. 8 |do..... |do..... |do..... | 298 |
| Sept. 30 |do..... |do..... |do..... | 318 |
| Oct. 3 | Mud Creek..... | Loup River..... | Sec. 22, T. 13 N., R. 15 W., near Hazard, Nebr. | 14.2 |
| Nov. 4 |do..... |do..... |do..... | 18.4 |
| Nov. 30 |do..... |do..... |do..... | 19.0 |
| Apr. 20 |do..... |do..... |do..... | 26.6 |
| May 25 |do..... |do..... |do..... | 13.4 |
| June 2 |do..... |do..... |do..... | 9.8 |
| July 24 |do..... |do..... |do..... | 5.7 |
| Aug. 9 |do..... |do..... |do..... | 4.8 |
| Sept. 30 |do..... |do..... |do..... | 11.1 |
| Oct. 4 | North Loup River.. |do..... | Sec. 23, T. 21 N., R. 18 W., at Taylor, Nebr. | 467 |
| Nov. 4 |do..... |do..... |do..... | 518 |
| Nov. 30 |do..... |do..... |do..... | 490 |
| Mar. 21 |do..... |do..... |do..... | 485 |
| Apr. 21 |do..... |do..... |do..... | 458 |
| May 23 |do..... |do..... |do..... | 375 |
| June 11 |do..... |do..... |do..... | 341 |
| July 19 |do..... |do..... |do..... | 337 |
| Aug. 8 |do..... |do..... |do..... | 295 |
| Sept. 29 |do..... |do..... |do..... | 396 |
| Oct. 4 | Calamus River..... | North Loup River..... | Sec. 24, T. 23 N., R. 18 W., near Harrop, Nebr. | 200 |
| Nov. 3 |do..... |do..... |do..... | 195 |
| Nov. 29 |do..... |do..... |do..... | 202 |
| Mar. 21 |do..... |do..... |do..... | 219 |
| Apr. 21 |do..... |do..... |do..... | 198 |
| May 23 |do..... |do..... |do..... | 176 |
| June 11 |do..... |do..... |do..... | 180 |
| July 19 |do..... |do..... |do..... | 184 |
| Aug. 8 |do..... |do..... |do..... | 175 |
| Sept. 29 |do..... |do..... |do..... | 192 |
| Oct. 2 | Cedar River..... | Loup River..... | Sec. 32, T. 17 N., R. 6 W., near Fullerton, Nebr. | 184 |
| Nov. 7 |do..... |do..... |do..... | 180 |
| Dec. 2 |do..... |do..... |do..... | 610 |
| Feb. 9 |do..... |do..... |do..... | 204 |
| Mar. 23 |do..... |do..... |do..... | 220 |
| Apr. 17 |do..... |do..... |do..... | 203 |
| May 25 |do..... |do..... |do..... | 128 |
| June 15 |do..... |do..... |do..... | 131 |
| July 23 |do..... |do..... |do..... | 72 |
| Aug. 9 |do..... |do..... |do..... | 100 |
| Sept. 17 |do..... |do..... |do..... | 150 |
| Oct. 2 | Timber Creek..... | Cedar River..... | Sec. 17, T. 17 N., R. 7 W., near Belgrade, Nebr. | 1.5 |
| Nov. 7 |do..... |do..... |do..... | 3.0 |
| Dec. 2 |do..... |do..... |do..... | 200 |
| Mar. 23 |do..... |do..... |do..... | 4.3 |
| Apr. 17 |do..... |do..... |do..... | 4.1 |
| May 24 |do..... |do..... |do..... | 2.2 |
| June 15 |do..... |do..... |do..... | 1.2 |
| July 23 |do..... |do..... |do..... | 4 |
| Aug. 9 |do..... |do..... |do..... | .7 |
| Sept. 17 |do..... |do..... |do..... | .6 |
| Oct. 2 | Beaver Creek..... | Loup River..... | Sec. 15, T. 20 N., R. 6 W., at Albion, Nebr. | 45.4 |
| Nov. 7 |do..... |do..... |do..... | 51 |
| Dec. 2 |do..... |do..... |do..... | 85 |
| Feb. 9 |do..... |do..... |do..... | 68 |
| Apr. 17 |do..... |do..... |do..... | 56 |
| May 24 |do..... |do..... |do..... | 329 |
| June 15 |do..... |do..... |do..... | 56 |
| July 23 |do..... |do..... |do..... | 17.9 |
| Aug. 9 |do..... |do..... |do..... | 24.4 |
| Sept. 17 |do..... |do..... |do..... | 33.4 |
| Nov. 2 | Elkhorn River..... | Platte River..... | Sec. 31, T. 29 N., R. 11 W., at O'Neill, Nebr. | 21.4 |

Miscellaneous discharge measurements in the Missouri River drainage basin during the year ending September 30, 1934-- Continued.

| Date | Stream | Tributary to-- | Locality | Discharge Sec.-ft. |
|----------|--------------------------------|------------------------|--|-----------------------|
| Nov. 28 | Elkhorn River.... | Platte River..... | Sec. 31, T. 29 N., R. 11 W., at Q'Neill, Nebr. | 29.6 |
| Apr. 21 |do..... |do..... |do..... | 34.5 |
| May 21 |do..... |do..... |do..... | 22.9 |
| June 17 |do..... |do..... |do..... | 26.1 |
| July 20 |do..... |do..... |do..... | 8.8 |
| Aug. 7 |do..... |do..... |do..... | 5.0 |
| Sept. 17 |do..... |do..... |do..... | 12.6 |
| Oct. 27 | Wahoo Creek..... | Salt Creek..... | Sec. 36, T. 13 N., R. 9 E., near Ashland, Nebr. | 20.9 |
| Nov. 25 |do..... |do..... |do..... | 21.9 |
| Apr. 7 |do..... |do..... |do..... | 30.1 |
| June 19 |do..... |do..... |do..... | 16.0 |
| July 26 |do..... |do..... |do..... | 4.9 |
| Aug. 11 |do..... |do..... |do..... | 12.3 |
| Sept. 22 | Upper Clear Creek..... | Wahoo Creek..... |do..... | 12.4 |
| Oct. 27 |do..... |do..... |do..... | 5.3 |
| Nov. 25 |do..... |do..... |do..... | 6.2 |
| Apr. 7 |do..... |do..... |do..... | 10.8 |
| May 25 |do..... |do..... |do..... | 4.1 |
| June 19 |do..... |do..... |do..... | 4.5 |
| July 26 |do..... |do..... |do..... | .8 |
| Aug. 11 |do..... |do..... |do..... | 2.0 |
| Sept. 22 |do..... |do..... |do..... | 2.3 |
| Oct. 27 | Oak Creek..... | Salt Creek..... | Sec. 15, T. 10 N., R. 6 E., near Lincoln, Nebr. | 4.0 |
| Nov. 25 |do..... |do..... |do..... | 7.6 |
| Feb. 3 |do..... |do..... |do..... | 6.5 |
| Apr. 16 |do..... |do..... |do..... | 7.4 |
| May 28 |do..... |do..... |do..... | .76 |
| June 19 |do..... |do..... |do..... | 3.7 |
| July 27 |do..... |do..... |do..... | 1.0 |
| Aug. 24 |do..... |do..... |do..... | 1.3 |
| Sept. 26 |do..... |do..... |do..... | 24.2 |
| Aug. 17 | West Nishnabotna River..... | Nishnabotna River..... | Sec. 13, T. 72 N., R. 41 W., near Hastings, Iowa. | 5.9 |
| Aug. 17 | East Nishnabotna River..... |do..... | Site of former gaging sta- tion in Red Oak, Iowa. | 16.0 |
| Aug. 16 | Nodaway River..... | Missouri River..... | Site of former gaging sta- tion at Clarinda, Iowa. | 4.8 |
| Aug. 16 | West Nodaway River | Nodaway River..... | Site of former gaging sta- tion near Villisca, Iowa. | 6.3 |
| Aug. 16 | Middle Nodaway River..... |do..... | Villisca, Iowa..... | 0 |
| Feb. 1 | Little Blue River | Big Blue River..... | Sec. 20, T. 3 N., R. 4 W., near Deshler, Nebr. | 106 |
| Mar. 29 |do..... |do..... |do..... | 80 |
| Apr. 25 |do..... |do..... |do..... | 71 |
| May 29 |do..... |do..... |do..... | 59 |
| June 21 |do..... |do..... |do..... | 87 |
| July 28 |do..... |do..... |do..... | 34.1 |
| Aug. 23 |do..... |do..... |do..... | 16.5 |
| Sept. 28 |do..... |do..... |do..... | 7.3 |
| Aug. 6 | Grand River..... | Missouri River..... | NW $\frac{1}{4}$ sec. 14, T. 57 N., R. 24 W., 2 $\frac{1}{2}$ miles south of Chil- licothe, Mo. | 18.6 |
| Mar. 12 | Big Creek..... | Grand River..... | NW $\frac{1}{4}$ sec. 20, T. 63 N., R. 28 W., 1 $\frac{1}{2}$ miles southwest of Bethany, Mo. | 11.5 |
| Aug. 16 | Thompson River.... |do..... | Site of former gaging station at Davis City, Iowa. | 0 |
| Aug. 15 | Chariton River.... | Missouri River..... | Sec. 27, T. 69 N., R. 17 W., near Centerville, Iowa. | .6 |
| Apr. 7 | Osage River..... |do..... | On line between secs. 20 and 21, T. 58 N., R. 29 W., 2 $\frac{1}{2}$ miles north of Shell City, Mo. | 6,850 |
| Nov. 9 | South Dry Sac Creek..... | Little Sac River..... | NW $\frac{1}{4}$ sec. 35, T. 50 N., R. 22 W., 5 miles north of Spring- field, Mo. | 9.93 |
| Jan. 5 |do..... |do..... |do..... | 4.10 |
| Aug. 3 | Roubidoux Spring... | Roubidoux River..... | Sec. 26, T. 36 N., R. 12 W., at Waynesville, Mo. | 5.34 |
| Aug. 18 |do..... |do..... |do..... | 159 |
| Aug. 14 | Piney Creek..... | Gasconade River..... | Sec. 24, T. 32 N., R. 10 W., just above Boiling Spring, 8 miles southwest of Licking, Mo. | 15.6 |
| Aug. 14 | Boiling Spring.... | Piney Creek..... | Sec. 24, T. 32 N., R. 10 W., 8 miles southwest of Lick- ing, Mo. | 31.0 |
| Aug. 14 | Hasleton Spring... |do..... | Sec. 34, T. 33 N., R. 10 W., at Hasleton, Mo. | 7.43 |
| Aug. 14 | Slabtown Spring... |do..... | Sec. 15, T. 33 N., R. 10 W., 3 miles north of Hasleton, Mo. | 12.6 |
| Aug. 14 | Prewett Spring.... |do..... | Sec. 32, T. 34 N., R. 10 W., 7 miles north of Hasleton, Mo. | 15.6 |

Miscellaneous discharge measurements in the Missouri River drainage basin during the year ending September 30, 1934-- Continued.

| Date | Stream | Tributary to- | Locality | Discharge Sec.-ft. |
|---------|----------------------|------------------------|--|-----------------------|
| Aug. 2 | Stone Mill Spring... | Piney Creek..... | Sec. 21, T. 35 N., R. 10 W., 2 miles southeast of Spring Creek, Mo. | 16.8 |
| Aug. 2 | Coppedge Spring..... |do..... | Sec. 36, T. 35 N., R. 10 W., at Relfe, Mo. | 15.4 |
| Aug. 3 | Shanghi Spring..... |do..... | SW $\frac{1}{4}$ sec. 25, T. 36 N., R. 11 W., 7 miles east of Waynes- ville, Mo. | 7.67 |
| Aug. 18 |do..... |do..... |do..... | 54.2 |
| Aug. 2 | Yancy Mills Spring.. | Little Piney Creek.... | SW $\frac{1}{4}$ sec. 32, T. 36 N., R. 8 W., at Yancy Mills, Mo. | 1.0 |
| Aug. 2 | Lane Spring..... |do..... | NW $\frac{1}{4}$ sec. 32, T. 36 N., R. 8 W., three-quarters of a mile north of Yancy Mills, Mo. | 4.82 |
| July 21 | Wilkins Spring..... | Mill Creek..... | SE $\frac{1}{4}$ sec. 17, T. 36 N., R. 9 W., 7 miles southwest of Newburg, Mo. | 4.31 |
| Aug. 18 |do..... |do..... |do..... | 9.12 |

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| Waterloo, Nebr., Elkhorn River at..... | 260 | | |
| Waterton, Colo., South Platte River at..... | 220 | | |
| Waterville, Kans., Little Blue River at..... | 297 | | |